

Ash Ranges – Supporting Ecological Information for proposed new fence around Technical Area.

1. Introduction

This Report provides supporting information regarding the habitats and species likely to be affected by the proposed works in line with relevant ecological and planning policy and legislation. The CIEEM guidelines 2018 are broadly followed but the report is not a full Ecological Assessment.

The aim is to identify, quantify and evaluate likely significant effects on habitats and species with recommendations to minimise and mitigate such impacts. This covers those which may be present on, or in the immediate vicinity of the site, and any likely direct or indirect effects of the proposed works (construction and longer term operation) to on-site and off-site habitats.

A Phase 1 and 2 habitat survey (JNCC 2010) with reference to the new 2020 UK Habitat Classification was carried out by Sarah Jupp DIO Ecologist on 6 and 26 August and 7 September 2021. The Tables below do not include all plant species found during the surveys in wet and dry warm weather eg due to difficulties in vegetative Identification in mown swards or early flowering / senescence.

Map 1 shows the MOD boundary, approximate line of the new fence and the zones called Range Technical Area (RTA) encompassing the range floors and the Public Access Area (PPA).

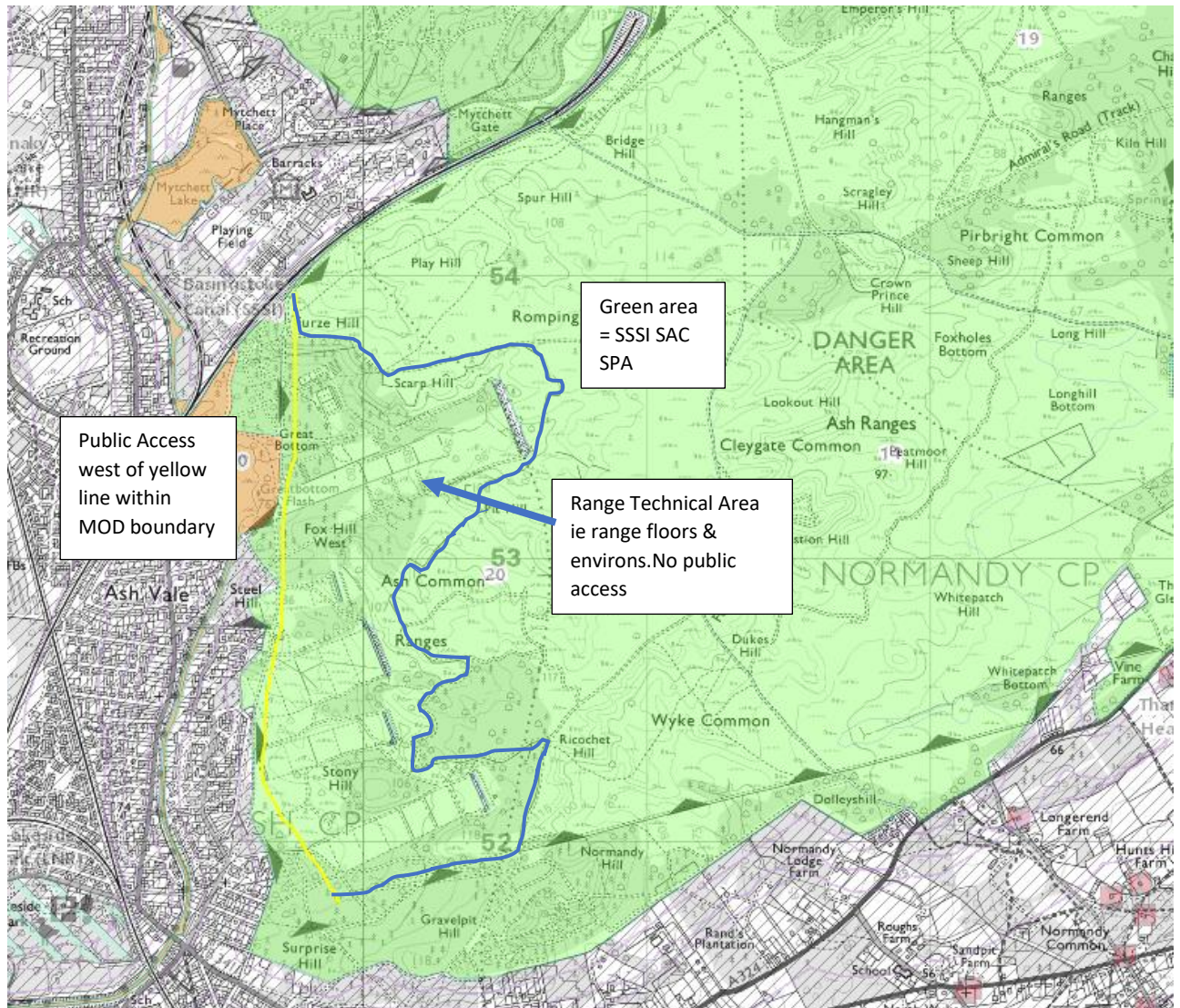
Maps 2-4 and Tables 1 & 2 show approximate line of new fence, main working methodology and opportunities for enhancement for public use, landscape and wildlife and approximate position of Target Note features. These are discussed in further detail below.

Annex F of the accompanying **HRA New Fencing Around Ash Ranges Technical Area dated 20 October 2021** includes these best practice and intrinsic Project measures to protect and enhance SSSI features and notable / protected species and to deliver biodiversity net gain. These are complementary, but are not considered necessary, to avoid likely significant effects on the conservation objectives of the SAC & SPA Designated Features.

Map 1- proposed new fence line between Range Technical Area & Public Access Area

Approximate new fence line in yellow.

Approximate blue line showing the eastern boundary of the Range Technical Area along existing stock fence



Map 2 Furze Hill south to ETR range road junction



Map 3 ETR range road junction south to Range 1 / Range HQ



Map 4 From Range HQ south to existing perimeter fence on southern boundary



1. New Fence Line Features – ecological and likely working methods

TN = Target Note

General locations A -S and Target Notes in Maps 2-4 above

Location	Target Notes – ecological comments	Fencing line	Intrinsic working methods to avoid / minimise adverse damage to Designated features or protected -notable species. Opportunities for enhancement
		General aspects	100mm gap at bottom to allow movement of small animals; some gaps on similar fencing at Ash have been enlarged by eg fox or small deer. No badger setts have been found along the survey corridor but animals are probably present and can / do make access holes. This is acceptable regarding security measures. Deer can safely jump chain link fence with one top wire.
		General	New fence aims to follow lines which allow good blending into the landscape eg on existing lines or softened by trees/ shrubs
		General	New fence line will require a fairly clear zone of vegetation for security / maintenance. This will be managed via eg strimming back of bramble or young scrub & if appropriate & required, targeted spraying
		Verges / mown areas	Maintain the mowing with the more relaxed regime where compatible with wider MOD needs eg Range Safety & new fencing eg continue to only cut in early spring and late summer to allow more flowering and structural sward diversity. Arisings currently left on ground which seem to be fairly 'thin' and do not form a 'thatch'. May be beneficial to collect arisings in future on some areas if the quantity increases or detrimental thatch etc starts to develop
A	TN 1 Furze Hill – Range Road – 2 x lowland dry heath banks which in total equate to approx 10m wide & 28m long = 0.028ha	Approx 28m length of new fencing New 1.8m high fence replaces the existing stock fence along top of heathland bank. Fence line down steep slope into woodland	Removal of existing fence & installation of new fence by hand; minor digging to put straining posts onto concrete. Vehicles remain on existing tracks. Continue to maintain heathy banks with varied sward heights by Maintenance Contract mowing. Regular removal of buddleia & other scrub if becomes too dense - MOD CSF Ecology
B	TN 2 Dry mixed woodland with extensive bracken in places; old boundary bank; occasional wider foot only paths with grassy verge. Occasional large rhododendron. TN3 Couple patches of dwarf shrubs approx 10m x 10m TN 4 – road verge to pistol & ETR ranges with a bank of dwarf shrubs & species diverse grassland TN5 Furze Hill range road – woodland – mown verge TN 6 – Damper scrubby woodland	New fence lies approx 15m in to the woodland from existing road for approx 500m = 0.75ha Public Access space Approx 5m wide timber gate across roads to Ranges with fencing over drains & culverts on adjacent trackside verges	New fencing line through woodland will take the best practical course eg regarding topography such as slopes, banks & ditches and minimise the felling of semi mature-mature trees with the removal of some denser holly under-storey. Requires assessment of trees for eg bat roost features and removal outside bird breeding season. Work with mix of machinery and by hand to best fit practicalities & avoid / minimise adverse impacts on notable features eg heathy patches or damp woodland Opportunity to promote a high quality woodland of varying tree ages including mature-veteran trees' with some scrub understorey of eg birch, rowan, willow & hazel for wildlife and 'high quality public space' whilst maintaining a 'safe environment' (eg dense scrub can invite anti social behaviour) Requires : a) removal of most of the denser holly scrub and rhododendron within the 15m wide woodland strip b) removal of leggier gorse and some scrub along existing road side verge including creation / management of scallops and eg coppice within the woodland c) spray/ cut & collect / scrape some bracken stands to promote a heathy flora d) retention of dead-dying wood where safe e) on -going habitat management via MOD Forestry Plan

C	Mesotrophic regularly mown grassland	New fence runs approx 1m in from road along narrow mown grass verge & then widens to approx 2m to the rear of ETR firing point across a small ditch to the range side of flag pole 4. Approx 110m	Vehicles for fencing works can be mainly from road-side with most works by hand Limited opportunity for wildlife enhancement along new fence. More opportunity as wider biodiversity and landscape features to adjacent woodland as part of MOD Forestry Plan
D	Hard-standing	ETR Workshop and hard-standing – new fence & ~ 5m wide gate to be on the hard-standing	Fencing works from road side & hard-standing
E	TN9 - Narrow approx 3m wide frequently mown, short sward mesotrophic grass verge	New fence runs along woodland / verge edge approx 3m back from Road, for 260m to behind flag pole 2 by Range 1 road entrance. New timber gate across range road	See C above
F	TN 10 – mosaic of acid grassland with dwarf shrubs & more mesotrophic towards the road.	New fence runs approx 3m in from road along mown verge rear of Range 1. Approx 113m	Possible more relaxed mowing regime on part of <u>east</u> side of new fence at rear of Range 1 (ie between new fence & firing points) – provided meets range floor safety requirements. Undertaken via Maintenance Contract
G TN 11	TN 11 Hillock of good quality dry lowland heath ~ 0.57ha. Just north of Range Control HQ to west of main range road	Fencing line avoids this area Lies within new Public Access Area	Currently occasionally mown, dry lowland heath 15-40cm tall, with a more frequently mown & shorter road-side verge. Provides seasonal flowering and micro diversity in sward height & density for eg invertebrates & minimise succession to more dominant tussocky grasses / bracken etc. Offers an attractive landscape and place for people to wander across or sit. Area is adjacent to mixed woodland outside the Perimeter fence where public access all year. On-going military activity on eastern edge along main Range road, nearby Range floors & around HQ No SPA bird presence recorded in this locality from annual SPA bird monitoring. Probably due to small size, proximity to woodland, activity levels. Possibly occasionally used as a small patch of foraging habitat for nearby SPA breeding birds. Focus habitat management on SSSI / SAC features for invertebrates and flora. Continue to maintenance mow as above. Occasional gorse coppicing may be required via CSF Ecology funds
H	TN 7 Buildings – Workshop & mesotrophic/ acid grassland bund TN8 Mixed, dry, open woodland with bracken and occasional dwarf shrubs	LSS Buildings Erect 1.4m high prevention fence on 3 sides to tie in with existing perimeter fence. Run fence line at top of a mown grassy bank to SW side / rear of buildings and across road to the perimeter fence. Approx 99m	Possibly require felling of 1-2 trees at south edge for practical line on bund / tree edge across to perimeter fence. Allows for continued grassland mowing where the current regime allows some diversity in grassland height and flowering whilst maintaining security visibility.
I	TN 11 a - Short sward mainly mesotrophic and dry – sandy with value for some flora / inverts	New fence line approx 2-3m to rear of car parking area for Range Control on mown grassland verge; new timber gate across track to DCCT buildings. Approx 97m Sections I, J & K	Vehicles for fencing works can be mainly from road-side with most works by hand. Limited opportunity or requirement to alter or enhance for wildlife and meet user requirements – current mowing regime and some ground disturbance provides ~ short sward with some flowering as species diverse grassland including for annuals or those associated with bare, dry poor soil.

J	TN11 a	New fence joins NE corner of existing fence around toilet block. Ensure access to water man holes	As for I
K	TN 11a	New fence line approx 10m in from road, to the east side of a small bund & ditch adjacent to DCCT car parking / hard-standing.	As for I
L		5m timber gate across road to Range 2 & DCCT; set well back (~ 10m) from road junction for turning vehicles	Fencing works mainly from road-side
M	TN 12 approx 2m wide short mown mesotrophic grassland road verge, blending to a taller ~ 30cm flowering sward and into acid grassland & dry heath	New fence line at angle across to mown verge at flag pole 34. 4 mature oak trees will be outside the new fence & within the Technical Area. Approx 27m across a taller mesotrophic sward	Vehicles for fencing works can be mainly from road-side with most works by hand. Fencing will run along short mown edge with limited to nil footprint on the larger area of more acid grassland / dry heath. This heath patch at Rear Range 2 is mown less frequently to allow flowering to ~ 30cm tall whilst maintaining safe / secure firing range environs and road side visibility. TN12 will lie inside the Technical Area but be easily visible to the public as an attractive 'flowering' sward and open vista. This less frequent mowing can continue with more frequent mowing and shorter sward immediately along the new fence line and new gate way at L
N	TN 12 as above	New fence line approx 3m in from road along mown verge. Approx 198m	Vehicles for fencing works can be mainly from road-side with most works by hand. Road side mowing regime will continue – as for M.
O TN13	TN 13 Hillock of good quality dry lowland heath ~ 0.7ha. South of Range Control HQ	Approx 0.7ha of good quality, dry lowland heath / acid grassland on a hillock. See notes for G	No fencing works See G for features & applicability for SPA birds and proposed habitat management targeted at SSSI / SAC invertebrates and flora
P		Run new fence line from flag pole 33 to road to Range 3, approx 15m into woodland for 107m	Requires removal of some of the understorey of sweet chestnut, holly and ash for the fence line; probably no need to remove any semi mature-mature canopy trees. See B above regarding wildlife checks & future management ideas. Clear up dog waste bags left in woodland & ensure appropriate future management
Q	TN 14 Rear Range 3 – mosaic of mesotrophic to acid grassland with dwarf shrubs. Some species diversity. Old firing point bund faces east	New fence lines runs approx 4m on level grassland, to east side of old firing point. Approx 107m	Fence line will allow continued mowing management of the level grassland and by side arm to the firing point. Arisings are not currently collected. Opportunity to relax Maintenance mowing regime eg just cut early spring and late summer to allow more flowering but manage dominance by the more tussocky grasses. Collection of arisings is likely to enhance species and sward diversity & probably funded MOD CSF Ecology High quality acid grassland / dry heath to east at rear of Range 3 within the Technical Area, which will be easily visible to the Public.

R	<p>TN 15 Dry mixed woodland with varied under-storey and ground flora from sparse to denser scrub clumps. Well used paths</p> <p>TN 16 Couple patches of dwarf shrubs approx 10m x 10m</p> <p>TN17 - Dry mixed woodland with denser under-storey of eg holly. Well used paths. Litter area</p>	<p>New fence line runs from old firing point of Range 3, down firing point slope, through woodland to rear of Range 4, approx 100m in from Range Road, to perimeter fence on south boundary at approx start of slope & Fence Gate</p> <p>Approx length 272 m.</p> <p>Provides Public Access Area (with Q area) of approx 5ha of woodland</p> <p>New pedestrian gate in perimeter fence and linkage to existing path outside the perimeter fence to Gate 7 & Normandy Hill</p>	<p>Fencing work with machinery/ hand as best suits ground conditions; practicalities</p> <p>See P.</p> <p>Holes in firing point are likely fox</p> <p>Opportunity to create new -enhance existing informal paths eg by mowing / scrub management</p>
S	<p>TN 18 Narrow ~ approx 4m wide frequently mown, short sward mesotrophic grass verge; short section dry ditch and woodland edge</p>	<p>Existing grassland mown verge to perimeter road and woodland edge.</p>	<p>Retain mowing management of existing 2-3m wide verge for road side visibility.</p> <p>As for B regarding opportunity to enhance the grassland / woodland edge eg by creating and managing scallops and a more structurally diverse 'edge' with native shrubs and a taller, flowering grassy layer</p>

2. Main Vegetation communities and habitats.

2.1 Mown grassland verges with occasional ditches and banks – mix of Phase 1 (B1.2/ D1.1 & B2.2 & B6) UK Habitat (g1a & g3c)

Verges are a mix of semi improved, acidic to mesotrophic, dry to occasional damper, grassland with forbs and patches of dry heath. Mix of coarser to finer grasses. Regularly mown 2-5cm tall verges are usually 1-2m wide to ensure safe visibility along roads and at junctions.

Wider areas are also mown for safety such as to the rear of range floors where a less frequent mowing regime can occur giving a taller, flowering sward approx 20-75cm. Such taller swards and parts with some bracken, bramble or other scrub and bank-ditches with bare earth patches provide additional structural diversity and sheltered sunnier-shadier habitat niches for invertebrates and herptiles as well as some such as some 'woodland' birds such as robin eg saw butterflies such as several meadow browns, bees, grasshoppers, small frog and ant nests.

Occasional ditches – in summer usually dry with leaf litter and carrying water in winter / heavier rainfall. Examples of grassland types are given below, linked to Locations / TN with photographs

Table 3 – mown verges

Common name	Latin	Comments
Perennial rye grass	<i>Lolium perenne</i>	
Yorkshire fog	<i>Holcus lanatus</i>	
Purple moor grass	<i>Molinia caerulea</i>	Damper grassland
Cocksfoot	<i>Dactylis glomerata</i>	Occasional tussocks
Red fescue	<i>Festuca rubra</i>	
Mat grass	<i>Nardus stricta</i>	With dwarf shrubs & PMG
Tufted hair grass	<i>Deschampsia cespitosa</i>	Occasional tussocks
Common bent	<i>Agrostis capillaris</i>	
Annual meadow grass	<i>Poa annua</i>	Track edges
Jointed rush	<i>Juncus articulatus</i>	Damper parts of track edges
Heath grass	<i>Danthonia decumbens</i>	
Ribwort plantain	<i>Plantago lanceolata</i>	
Common cats ear	<i>Hypochoeris radicata</i>	
Mouse-ear hawkweed	<i>Pilosella officinarum</i>	
Creeping buttercup	<i>Ranunculus repens</i>	
Doves foot cranesbill	<i>Geranium molle</i>	
Common Birds foot trefoil	<i>Lotus corniculatus</i>	
Red clover	<i>Trifolium pratense</i>	
White clover	<i>Trifolium repens</i>	
Daisy	<i>Bellis perennis</i>	
Greater plantain	<i>Plantago major</i>	Track edges
Knotgrass	<i>Polygonum aviculare</i>	Track edges
Pineapple weed	<i>Matricaria discoidea</i>	Track edges
Eyebright	<i>Euphrasia nemorosa</i>	
Lesser hawkbit	<i>Leontodon taraxacoides</i>	
Autumn hawkbit	<i>Leontodon autumnalis</i>	
Sweet vernal grass	<i>Anthoxanthum odoratum</i>	Not ID but seen on previous visits
Common mouse ear	<i>Cerastium fontanum</i>	
Black knapweed	<i>Centaurea nigra</i>	
Common fleabane	<i>Pulicaria dysenterica</i>	
Dandelion	<i>Taraxacum officinale agg</i>	
Self heal	<i>Prunella vulgaris</i>	
Yarrow	<i>Achillea millefolium</i>	
Field horsetail	<i>Equisetum arvense</i>	
Creeping cinquefoil	<i>Potentilla reptans</i>	Track edges
Ragwort	<i>Senecio jacobaea</i>	

Marsh thistle	<i>Cirsium palustre</i>	Damper grassland
Sheep's sorrel	<i>Rumex acetosella</i>	
Black medic	<i>Medicago lupulina</i>	
Bird's foot	<i>Ornithopus perpusillus</i>	Shorter – barer dry sward
Willow, silver birch, Scots pine		Damper patches and / or from nearby woodland edge as young seedlings ~ 25cm tall
Bracken	<i>Pteridium aquilinum</i>	
Heather	<i>Calluna vulgaris</i>	Occas patches eg in swards rear of Range 1 & 2 – mown to ~ 25-75mm
Bell heather	<i>Erica cinera</i>	

a) Frequently mown verges - mesotrophic & less species diverse grassland

TN 9 & 18 as along C & E and S sections. Note straight woodland -verge edges. **Photos 1-3**



b) Less frequently mown and mix of acid grassland with occasional dwarf shrubs or taller mesotrophic sward

TN 2 & 5 in Furze Hill woodland locality **and 7** by LSS Buildings. Greater variation in height than the more closely mown verges. Mix of dry to damper conditions. Other species such as common vetch and perforate St Johns wort amongst the taller grass sward with some variation in structure to the woodland scrubby edge. **Photos 4-6**

Taller sward mainly mesotrophic TN 7 by LSS Buildings





TN5 Furze Hill Track (above RHS & LHS below) which will be within the Public Access Area. A taller sward with occasional dwarf shrubs. This type of verge can be managed to different regimes with the woodland /scrub edge to provide an attractive and flowering 'landscape'. Opportunities to create a few 'pathways' (and across ditch) from this track 'into' the woodland for easier access.

c) Ditch and south facing bank with some dwarf shrubs.

TN 4. A sunny and sheltered habitat mosaic of bare earth patches and acid grassland with dwarf shrubs adjacent to woodland and a mown more mesotrophic grassland verge of varied height. On road to Pistol & ETR Ranges. The proposed fence line will cross this bank -ditch. **Photos 7 & 8**

Table 4 - Bank and ditch

Common name	Latin	Comment
Bracken	<i>Pteridium aquilinum</i>	
Sweet chestnut	<i>Castanea sativa</i>	Seedlings / small saplings
Pedunculate oak	<i>Quercus robur</i>	Seedlings / small saplings
Silver birch	<i>Betula pendula</i>	Seedlings / small saplings
Scots pine	<i>Pinus Sylvestris</i>	Seedlings / small saplings
Hazel	<i>Corylus avellane</i>	Seedlings / small saplings
Willow eg grey	<i>Salix cinerea agg</i>	
Bramble	<i>Rubus fruticosus agg</i>	
Tormentil	<i>Potentilla erecta</i>	
Soft rush	<i>Juncus effuses</i>	
Purple moor grass	<i>Molinia caerulea</i>	
Bell heather	<i>Erica cinereal</i>	
Rough meadow grass	<i>Poa trivialis</i>	
Common cats ear	<i>Hypochoeris radicata</i>	
Common ragwort	<i>Senecio jacobaea</i>	
Common gorse	<i>Ulex europaeus</i>	
Perforate St John's wort	<i>Hypericum perforatum</i>	



d) Closely mown mainly dry heath / acid grassland

TN 10 – a 20m wide strip rear of Range 1 with a mown height 2.5-7.5cm. **Photos 9, 10 & 11**



Photo 11 below. Looking east to Range 1 and the mown dwarf shrub – acid grassland sward. Most of this habitat will be within the Technical Area and where possible to fit with Range safety requirements, opportunity to mow less frequently to allow a taller and more flowering sward.



e) Taller mixed sward

TN 12 – at rear Range 2. Mosaic of mesotrophic to acidic grassland with occasional dwarf shrubs. Closely mown 1-2m wide verge by road and junction with less frequent mowing and thus taller to approx 45cm & more flowering sward 'back' from road. **Photos 12-15** below

Looking north to Range HQ & Range 2 entrance – closely mown verge and taller more mesotrophic grassland.



Looking south from Range 2 entrance. The 4 oaks will be outside the new fence line within the Technical Area, with an extensive patch of good quality, flowering dry heath at the rear of Range 2. New fence will follow the approximate line between closely mown verge and flowering taller heathland in the **Photo 15**. Thus, this area of heathland will be within the Technical Area and will continue to be managed to allow a taller and more flowering sward within Range safety requirements.



- f) Mosaic of less species diverse mesotrophic grassland, grading into acidic grassland with dwarf shrubs

TN 9 at rear of Range 3 – level ground and old firing point bund. **Photos 16-18**

Mown grassland and side arm mowing on bund.

Mesotrophic grassland on level ground adjacent to the bund (eg common sorrel, white clover, germander speedwell, common knapweed, cocksfoot & false oat grass) to acidic with purple moor grass and tormentil and occasional dwarf shrubs of heather and bell heather. The area grades eastwards into good quality, flowering dry heathland which will be within the Technical Area.

The bund has parts with a sparser sward of finer grasses and forbs with other parts taller and more tussocky sward with false oat grass.



2.2 Mixed Woodland. Phase 1 (A1.3.2), UK Habitat w1h 12(bracken) & 13 (scattered dwarf shrubs) and occasional w1d

Widely spaced semi – mature predominantly dry woodland with pedunculate oak, sweet chestnut, Scots pine and silver birch. Occasional damper patches of young willow scrub eg near ditches by tracks. Varied under-storey from dense holly and suckering poplar scrub to sparsely vegetated and quite open with young tree seedlings multi stemmed from deer browsing; occasional dwarf shrubs, dead – dying standing or prostrate trees and large rhododendron bushes and features such as an old boundary bank. Informal paths through the woodland – some well worn. Some litter eg dog waste bags and drink cans.

As described above, the woodland / mown grass verge edges vary from ‘straight’ to more diverse.

Table 5 – woodland species

Common name	Latin	
Sweet chestnut	<i>Castanea sativa</i>	Mature trees & seedlings
Pedunculate oak	<i>Quercus robur</i>	Mature trees & seedlings
Silver birch	<i>Betula pendula</i>	Mature trees & seedlings
Scots pine	<i>Pinus sylvestris</i>	Mature trees & seedlings
Holly	<i>Ilex aquifolium</i>	Mainly as shrub layer
Hazel	<i>Corylus avellana</i>	Mature trees & scrub & seedlings
Willow eg grey	<i>Salix 15inereal agg</i>	Damper patches
Rowan	<i>Sorbus acuparia</i>	Occasional usually near edge
Beech	<i>Fagus sylvatica</i>	
Poplar - hybrid	<i>Populus spp</i>	Semi mature trees with adjacent suckering young scrub
False brome	<i>Brachypodium sylvaticum</i>	
Tufted hair grass	<i>Deschampsia cespitosa</i>	
Ivy	<i>Hedera helix</i>	Approx 1-3m tall
Bracken	<i>Pteridium aquilinum</i>	
Honeysuckle	<i>Lonicera periclmenum</i>	
Bramble	<i>Rubus fruticosus agg</i>	
Wavy hair grass	<i>Deschampsia flexuosa</i>	
Red fescue	<i>Festuca rubra</i>	
Soft rush	<i>Juncus effusus</i>	Damper patches
Sharp flowered rush	<i>Juncus acutiflorus</i>	Damper patches
Tormentil	<i>Potentilla erecta</i>	Occasional
Purple moor grass	<i>Molinia caerulea</i>	Damper patches
Bell heather	<i>Erica cinerea</i>	Occasional / mini glades
Heather	<i>Calluna vulgaris</i>	Occasional / mini glades
Common gorse	<i>Ulex europaeus</i>	Occasional / mini glades

a) Mixed woodland of well spaced canopy trees

TN 2, 15, 16 & 17 – with some scrub such as birch and holly and extensive bracken. **Photos 19-22** show typical habitat eg around **TN2** Furze Hill woodland, rear of pistol range with a former boundary bank and possible track over a culvert that may provide a ‘good’ fencing line’ and an informal public access route.



Photo 23 - Bracken in holly thickets at South end of Site **TN 16**

b) Occasional patches of dry heathland.

Comprising leggy gorse 1-3m tall as single stands or small clumps with bell heather and heather eg TN 3, 8 & 15. **Photos 24-27**



c) Drier ground flora of bramble and grasses with some scrub under-storey.
Rhododendron eg TN 2 locality. **Photos 28-29**



d) Damper woodland

Willow, birch and poplar scrub with purple moor grass & rushes eg TN6. **Photos 30-31**



e) Dense holly thickets

For example, **TN 15 & 17** localities, slope from old firing point at rear of Range 3 and woodland rear of Ranges 3 & 4. Well used informal path. **Photos 32-34**



F) More open woodland

TN16, parts of woodland rear of Ranges 3 & 4 have a more open 'space' with sparse ground flora and scattered thin birch regen. Occasional heathy patches as shown above. **Photo 35**



3.3 Lowland dry Heath. Phase 1 (D1.1). UK Habitat h1a5

Comprises of 4 features within the Public Access Area

- Furze Hill road banks **TN 1**
- Occasional small heathy patches in the woodland **TN 3 & 16**
- 2 small hillocks to east of main Range road **TN 11& 13**
- Edges of main Range Road and to Range floors **TN 10, 12 & 14**

a) Furze Hill TN1

High quality, flowering dwarf shrubs, grasses & forbs with semi bare ground on steep banks with varied west-east aspects. A grassier mown verge along the track edge with more disturbed semi bare ground of annuals / ruderals. Very open & sunny at top of bank / plateau along stock fence.

Good habitat patches for invertebrates (dragonfly, bees & speckled wood seen) and potentially herptiles (disturbance / dogs) as adjacent to heathland within the RDA (other side of tracks)
Varied mowing regime gives habitat diversity & helps control bracken, gorse, silver birch and buddleia

Table 6 – Furze Hill Top – lowland heath banks

<u>Common name</u>	<u>Latin</u>
Silver birch	<i>Betula pendula</i>
Purple moor grass	<i>Molinia caerulea</i>
Bell heather	<i>Erica cinerea</i>
Heather	<i>Calluna vulgaris</i>
Wavy hair grass	<i>Deschampsia flexuosa</i>
Common cats ear	<i>Hypochoeris radicata</i>
Common ragwort	<i>Senecio jacobaea</i>
Common gorse	<i>Ulex europaeus</i>
Perforate St John's wort	<i>Hypericum perforatum</i>
Bracken	<i>Pteridium aquilinum</i>
Cocksfoot	<i>Dactylis glomerata</i>
False oat grass	<i>Arrhenatherum elatius</i>
Black medic	<i>Medicago lupulina</i>
Perforate St John's wort	<i>Hypericum perforatum</i>
Common Birds foot trefoil	<i>Lotus corniculatus</i>
Bramble	<i>Rubus fruticosus agg</i>
Lesser hawkbit	<i>Leontodon taraxacoides</i>
Common fleabane	<i>Pulicaria dysenterica</i>
False brome	<i>Brachypodium sylvaticum</i>
Creeping cinquefoil	<i>Potentilla reptans</i>
Self heal	<i>Prunella vulgaris</i>
Yarrow	<i>Achillea millefolium</i>
Ribwort plantain	<i>Plantago lanceolata</i>
Sheep's fescue	<i>Festuca ovina</i>
Red fescue	<i>Festuca rubra</i>
Barren strawberry	<i>Potentilla sterilis</i>
Creeping thistle	<i>Cirsium arvense</i>
Buddleia	

Photos 36-38 . New fence line to replace existing stock fence, working from track.

Looking south. West side / HLS within Agri Environmental Scheme area with SWT. Some grazing / browsing by cattle/ deer. Taller sward to RHS is not in Agri Scheme and managed by MOD where dwarf shrubs adjacent to fence are left uncut with occasional management of scrub regen with more frequent mowing towards the main track. High quality mosaic of bare, sunny ground to taller dwarf shrubs.



Photos Looking a) north & b) south along Furze Hill road.

This eastern bank has been recently mown



Ash Ranges – new fence Technical Area 20 October 2021

b) Occasional small heathy patches in woodland TN 3 & 16

See above under Woodland & Photos 24-27. Leggy gorse as single stands or small clumps; bell heather and heather.

c) Hillocks east of main Range Road TN 11 & 13

Two larger patches of dry heath / acid grassland on west side of main Range Road; **TN11** approx 0.57ha at rear of Range 1 on a small hillock and **TN 13** approx 0.7ha rear of Range 2 on level ground and a small hillock. The dwarf shrubs tend to be one the flatter 'tops' with grassier slopes with patches of semi / bare ground including along a low bank.

The mowing regime was relaxed ~ 5 years ago to allow most of the sward to grow to varied heights, between 5- 45cm, allowing more flowering and attracting more butterflies. Saw butterflies eg meadow brown and bees. The arisings are left on the ground which seem to be fairly 'thin' and do not seem to adversely affect the dwarf shrub habitat. There are shorter mown strips approx 2m wide along track side edges. Mowing controls dominance by eg bracken, gorse and more dominant grasses and helps retain the lowland heath.

Table 7 – 2 main lowland heath areas within the Public Access Area

Common name	Latin	Comments
Purple moor grass	<i>Molinia caerulea</i>	
Mat grass	<i>Nardus stricta</i>	
Wavy hair grass	<i>Deschampsia flexuosa</i>	
Common bent	<i>Agrostic capillaris</i>	
Red fescue	<i>Festuca rubra</i>	
Sheep's fescue	<i>Festuca ovina</i>	May be fine leaved fescue
Bell heather	<i>Erica cinerea</i>	
Heather	<i>Calluna vulgaris</i>	
Mouse-ear hawkweed	<i>Pilosella officinarum</i>	
Common cats ear	<i>Hypochoeris radicata</i>	
Common gorse	<i>Ulex europaeus</i>	
Bracken	<i>Pteridium aquilinum</i>	
Heath rush	<i>Juncus squarrosus</i>	
Tormentil	<i>Potentilla erecta</i>	
Lichens / mosses		





d) Parts of Range floors at rear or near firing points
See above eg TN 12 & Photo 15

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