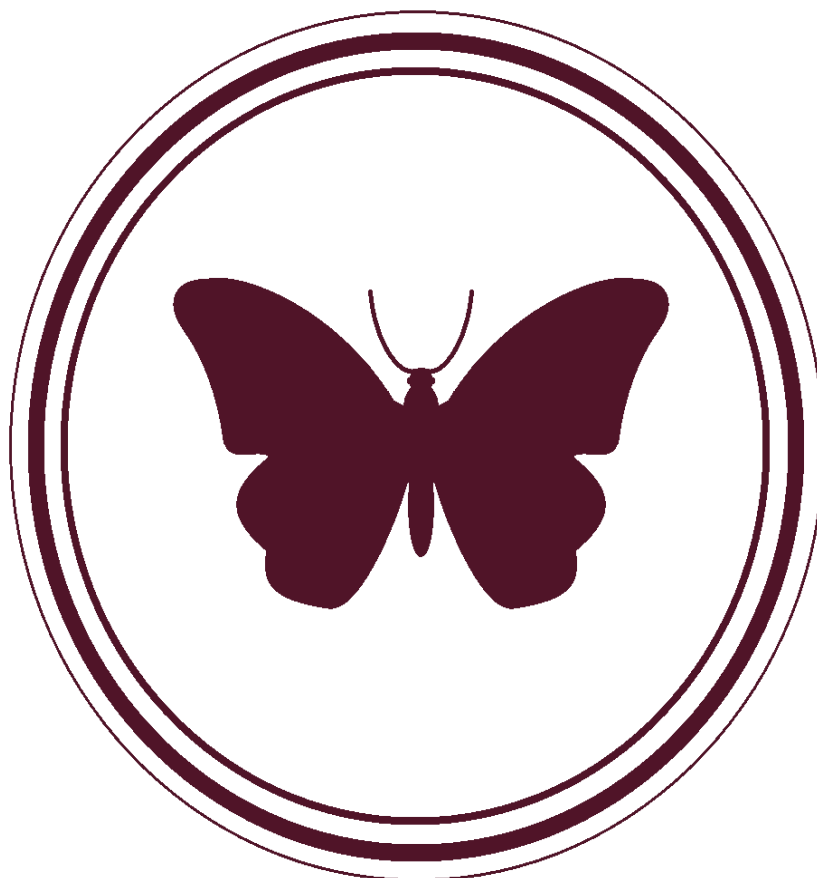


NTEP

National Training Estate Prime

A partnership between DIO and Landmarc.

Management Plan



| Document Control | |
|---|-----------------------------|
| Bourley Training Areas Natural Environment & Designated Ecological Sites Plan | |
| South East – Bourley & Long Valley Training Areas | |
| Draft: | V1.2 - 2020 Review and HRA |
| Date: | 2/7/2020 |
| Author: | |
| Reviewed by: | |
| Distribution | HQ DTE SE & Natural England |

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Introduction

It is MOD policy to ensure that natural environment issues are fully integrated with operational and training requirements and safety issues. All military and estate management activities must comply with all current UK conservation legislation. Through this compliance it aims, in so far as is compatible with operational requirements, to fulfil MOD obligations with all relevant International Conventions. All biodiversity and conservation management should be managed through the relevant establishments EMS, Integrated Estate Management Plan (IEMP) or IRMP (JSP 362 Vol 2, Leaflet 7).

Current (2018) MOD natural environment targets are:

- to be an exemplar in the management of designated sites where compatible with military requirements
- to ensure natural environment requirements and best practice are fully integrated into the estate management
- to contribute, as appropriate, to the Country Biodiversity Strategies for England, Scotland, Wales and NI

The MoD has also committed to the Government Biodiversity 2020 targets for SSSI condition in England which are to achieve 50% favourable condition and at least 95% unfavourable recovering condition by 2020 with no slippage in condition from the 2010 position.

Similar targets exist for Scotland, Wales and Northern Ireland.

This plan has been developed by Landmarc Support Services Ltd in partial fulfilment of the National Training Estate Prime (NTEP) contract and has been reviewed and approved by DIO Environmental Support & Compliance and DIO Service Delivery Training.

As part of the Integrated Rural Management Plan for Aldershot this plan is owned by the Head of Establishment supported and advised by the DIO Environmental Support & Compliance Ecology Team who are responsible for ensuring that all policy is adhered to.

The DIO Senior Ecologist is the Designated Officer (DO) on behalf of the Secretary of State for Defence for all matters relating to Natural Environment Policy delivery and should be consulted on all matters relating to Natural Environment on the MOD Estate.

Aim & Objectives

Aim

This plan ensures that management of the natural environment on Bourley Training Areas is commensurate with MOD priorities for operational and training commitments, complies with government commitments to sustainable development and biodiversity. It clearly identifies a range of management actions required to maintain and enhance the natural environment.

This plan is intended to function as an agreed management plan and consenting document with Natural England and is subject to annual review.

Objectives

This plan forms part of the Aldershot Integrated Rural Management Plan. It provides a brief overview of the key features and identifies the management actions required to maintain and, where applicable, enhance the resource.

The objectives in Table 1 are the standard natural environment objectives used in all IRMPs. They are based on the high level objectives from the MOD's Sustainable Operations on the Government Estate Biodiversity and nature conservation statement against which MOD reports.

Table 1: Objectives

| Objectives |
|--|
| NE1: To maintain and, where appropriate, enhance the special features of designated sites where compatible with military requirements. |
| NE2: To conserve populations of all legally protected species. |
| NE3: To conserve and, where appropriate, enhance species and habitats identified as a priority for conservation action, as identified by the relevant Country Biodiversity Strategy). |
| NE4: To conserve and, where appropriate, enhance features of local nature conservation importance, subject to other constraints. |
| NE5: To maintain and where appropriate consider opportunities to enhance natural capital and ecosystem services |
| NE6: To, where appropriate, consider opportunities for biodiversity offsetting and habitat banking |
| NE7: To implement any ecological impact avoidance, mitigation, compensation, monitoring and adaptive management measures agreed with regulators (especially conditions and commitments relating to Protected Species Licences, SSSI Assents, Habitats Regulations Assessments, and/or Planning Permissions) |

Contractual Requirements

The National Training Estate Prime (NTEP) contract requires the contractor (Landmarc Support Services Ltd) to carry out the following duties in relation to the management of biodiversity and nature conservation.

Table 2:

| Module | Requirement |
|--------------------------|--|
| Module A 6.8.1 | The Contractor shall develop and provide management plans required to maintain statutorily designated nature conservation sites in consultation with the sustainability SMR. |
| Module C | <p>Deliver statutory and mandatory inspections in accordance with the schedules set down in relation to natural environment contained on the Environmental tab of Hard FM Standards & Tasks V1.1 Job Plan element 30.</p> <p>Remedial Works identified that are required to maintain the integrity of the site and its features should be delivered as a Reactive Maintenance task subject to the Inclusive Repair Limit (IRL).</p> |
| Module D – 9.2.4 - 9.2.6 | <p>Where a current management plan for the Establishment states the maintenance standards to be observed, delivery will be as per the management plan. All such work will be carried out under the CIDP.</p> <p>Where no such management plan exists, delivery will be carried out as Remedial Works under Reactive Maintenance up to the value of the IRL. Any additional work required over the value of the IRL will be carried out under the CIDP or transferred to the Service Register as appropriate.</p> |
| Module D 9.2.4.5 & 9.4.1 | Where works to a designated feature require consent from a statutory body, this will be obtained by the Contractor. The Contractor will retain written evidence of this consent and comply fully with any conditions imposed by the statutory body. |
| Module G 5.2.1.11 | Artificial, semi-natural and natural habitats. To include but not limited to: unimproved grassland, heath land, moor land, coastlines, cliffs, otter holts and stone curlew plots as agreed with the SM in accordance with the management plan for the Establishment |

Potential Additional Works required over and above the reactive maintenance measures identified above will be incorporated into the Command Infrastructure Development Plan (CIDP).

The CIDP is submitted, developed and delivered in accordance with Module I of the NTEP contract as amended by the requirements of the Conservation Stewardship Fund (CSF) process.

Description of the Resource – Designated Sites (Objective NE1)

The Bourley Training Areas falls within the Bourley and Long Valley and Heath Brow Sites of Special Scientific Interest (SSSI) and Thames Basin Heaths Special Protection Area (SPA). It is bordered by the Basingstoke Canal SSSI and a number of its units affect the DIO SD Trg Estate.

See Annexes A, B, C & D for the full citations with maps in Appendix A & B.

Bourley and Long Valley SSSI – summary of interests

The site comprises a diverse mosaic of heathland, woodland, mire, scrub and grassland habitats. Such habitat diversity supports a rich flora and fauna including nationally scarce plants, nationally rare insects and three bird species listed in Annex 1 of the EC Directive on the Conservation of Wild Birds.

Notified Features:

- Aggregations of breeding birds - Dartford Warbler, *Sylvia undata*
- Aggregations of breeding birds - Hobby, *Falco subbuteo*
- Aggregations of breeding birds - Nightjar, *Caprimulgus europaeus*
- Aggregations of breeding birds - Woodlark, *Lullula arborea*
- H2 - *Calluna vulgaris* - *Ulex minor* heath
- Invertebrate assemblage
- M16 - *Erica tetralix* - *Sphagnum compactum* wet heath
- M21 - *Narthecium ossifragum* - *Sphagnum papillosum* mire
- M25 - *Molinia caerulea* - *Potentilla erecta* mire

Heath Brow SSSI – summary of interests

Heath Brow provides exposures in one of the recent Pleistocene gravel aggradations of southern England. The Caesar's Camp Gravel was probably deposited by a braided river in flood events during a cold, periglacial period. This relates to one of the earliest periglacial deposits and thus the site is of vital importance to reconstructions of the environmental history of southern.

Basingstoke Canal SSSI – summary of interests

The Basingstoke Canal, together with associated "flashes" and heathland, is nationally important for aquatic plants and invertebrates. The transition from calcareous spring water to slightly acidic conditions produces an extremely England diverse flora, containing approximately half (87) of Britain's native aquatic higher plant species, including 5 nationally scarce species. The Basingstoke Canal is botanically the most species-rich aquatic system in England

Notified Features

- H2 - *Calluna vulgaris* - *Ulex minor* heath
- Invertebrate assemblage
- M16 - *Erica tetralix* - *Sphagnum compactum* wet heath
- Outstanding dragonfly assemblage
- S10 - *Equisetum fluvatile* swamp
- S12 - *Typha latifolia* swamp
- S13 - *Typha angustifolia* swamp
- S14 - *Sparganium erectum* swamp
- S16 - *Sagittaria sagittifolia* swamp
- S19 - *Eleocharis palustris* swamp
- S22 - *Glyceria fluitans* water-margin vegetation
- S26 - *Phragmites australis* - *Urtica dioica* tall-herb fen
- S28 - *Phalaris arundinacea* tall-herb fen
- S4 - *Phragmites australis* swamp and reed-beds
- S5 - *Glyceria maxima* swamp

- S6 - *Carex riparia* swamp
- S7 - *Carex acutiformis* swamp
- S8 - *Scirpus lacustris* ssp. *lacustris* swamp
- Standing waters
- Vascular plant assemblage

Thames Basin Heaths SPA

The Thames Basin Heaths SPA is a composite site that is located across the counties of Surrey, Hampshire and Berkshire in southern England. The open heathland habitats overlie sand and gravel sediments which give rise to sandy or peaty acidic soils, supporting dry heathy vegetation on well-drained slopes, wet heath on low-lying shallow slopes and bogs in valleys.

The site consists of tracts of heathland, scrub and woodland, once almost continuous, but now fragmented into separate blocks by roads, urban development and farmland. Less open habitats of scrub, acidic woodland and conifer plantations dominate, within which are scattered areas of open heath and mire.

The site supports important breeding populations of a number of birds of lowland heathland, especially Nightjar *Caprimulgus europaeus* and Woodlark *Lullula arborea*, both of which nest on the ground, often at the woodland/heathland edge, and Dartford Warbler *Sylvia undata*, which often nests in gorse *Ulex* sp. Scattered trees and scrub are used for roosting.

For further details about the SPA site and features see Annex D or refer to

<http://jncc.defra.gov.uk/page-2050-theme=default>

Condition Assessment (Bourley and Long Valley SSSI)

This section is taken from the most up to date published information on the Natural England (NE) website.

Table 3:

| Main Habitat | Unit Number | Area (ha) | Last Assessment Date | Condition & reason for adverse condition | Comments on Assessed Condition & Objectives | DIO Ecology comments |
|-----------------------------|-------------|-----------|----------------------|--|---|---|
| DWARF SHRUB HEATH - Lowland | 001 | 113.754 | 02/12/2011 | Unfavourable Recovering | Tree and scrub removal over recent years has been successful in extending the area of open heath on this site. The cover of gorse in the heathland area is slightly above target as was the cover of negative indicator species. The cover of dwarf shrubs, particularly in the newly cleared areas, is low and overall does not meet the 40-90% required for the open heath. The cover of trees and scrub on the open heath exceeds targets. The frequency of grasses, sedges and rushes met the SSSI target, although Molinia cover exceeded target. The frequency of positive indicator species on the open heath did not meet the target, although several species (eg Potentilla erecta and Galium saxatile) were classed as occasional to rare, showing potential for the future. There was a higher proportion of heather at the pioneer stage than desirable, but building, mature, degenerate and dead heather were all within standards. The cover of bracken and bracken litter is within target. The cover of bare ground is acceptable, and evidence of disturbance (other than on paths) is within standards, being less than 1%. Cattle are grazing the HLS area, leading to a reduction in biomass and leaf litter as well as small areas of bare ground beneficial to floral diversity and invertebrates. Nightjar and woodlark numbers are in excess of target. Dartford Warbler numbers have declined in the last 2 years due to adverse weather, but over the last 6 years the average is above target at 23 pairs. Hobby is present on the SSSI but not confirmed as breeding. | Needs updated NE assessment. DIO Ecology expect this unit to be in favourable or near favourable condition after 10 years of HLS & annual work plans discussed & agreed between HWT, MOD & NE & wider Conservation Group input with the objectives and management prescriptions in the new Countryside Stewardship agreement started 1 Jan 2019. For other areas managed in -house eg Norris Hill on east part see Woodland CMP |

| | | | | | | |
|--------------------------------------|-----|----------|------------|----------------------------|---|--|
| DWARF SHRUB HEATH - Lowland | 002 | 364.9828 | 02/12/2011 | Unfavourable Recovering | <p>This unit is partly covered by an HLS agreement. Although the HLS agreement is only 3 years old, the effects of positive management are already visible. The non-HLS area also shows signs of management that will benefit the SSSI, particularly felling and birch scrub clearance. The cover of dwarf shrubs in the heathland area is within target. There are large areas where the heather is present at only one or two growth stages, but over the whole unit, all stages are present at target levels. There were a good number of positive indicator species, such as <i>Potentilla erecta</i>, <i>Rumex acetosella</i>, <i>Illecebrum verticillatum</i> and <i>Galium saxatile</i> in some areas. However harder grazing would increase the diversity of the heathland, reducing leaf litter and reducing scrub cover. The cover of Common Gorse is higher than 5%. Although negative indicator species were present, these were well within the SSSI target of 1%. The cover of dwarf shrubs on the open heath was within target. The cover of trees and scrub on the open heath was in excess of target, being over 10% cover, further work will be required to meet SSSI targets. The frequency of graminoids was found to be within target. <i>Molinia</i> cover was acceptable being less than 50% overall. Bracken cover was within target for the HLS indicator of success at the 5 year point. Taking the driver training areas and established tracks out of the calculation, over the whole unit the cover of bare ground is within target, although on the high side. Areas of disturbance including trampling, and burning and were in excess of SSSI targets, particularly outside of the HLS area. Nightjar and woodlark numbers are in excess of target. Dartford Warbler numbers have declined in the last 2 years due to adverse weather, but over the last 6 years the average is above target at 23 pairs. Hobby is present on the SSSI but not confirmed as breeding.</p> | <p>Needs updated NE assessment. DIO Ecology expect this unit to be in favourable or near favourable condition after 10 years of HLS & several years of MOD in-house annual habitat management works in areas outwith Agri Scheme areas. As discussed & agreed between HWT, MOD & NE with wider Conservation Group input. See objectives and management prescriptions in the new Countryside Stewardship agreement started 1 Jan 2019</p> |
|--------------------------------------|-----|----------|------------|----------------------------|---|--|

| | | | | | | |
|-----------------------------|-----|----------|------------|---|---|---|
| DWARF SHRUB HEATH - Lowland | 003 | 220.8284 | 30/08/2012 | Unfavourable Recovering - | The heath varies across the site with some areas of recent tree clearance still establishing and other areas of more mature heath. Areas of pioneer heather are restricted to recently cleared areas, but lacking in areas of more mature stands where often single age groups dominate. In some areas Molinia is fairly dominant, while in other areas it has been reduced by the grazing animals on site to more favourable levels. Gorse cover is appropriate and has a wide range of structures, favourable to birds such as Dartford Warblers. Trees and scrub are also maintained at appropriate levels across the whole unit. Bracken is restricted to certain areas of the heath where in some cases it should be prevented from becoming too dominant. Heathland plants such as heath bedstraw, heath milkwort, tormentil, bilberry, dwarf gorse, lousewort, common cotton grass and pill sedge are found in good numbers across the site. Species such as bog myrtle and sundews are frequent in the areas of mire. There are also good amounts of bare ground and south facing sandy banks, providing good reptile basking sites and good areas for invertebrates. | Needs updated NE assessment. DIO Ecology expect this unit to be in favourable or near favourable condition after 10 years of HLS & annual work plans discussed & agreed between HWT, MOD & NE & with wider Conservation Group input. See the objectives and management prescriptions in the new Countryside Stewardship agreement started 1 Jan 2019 . |
| DWARF SHRUB HEATH - Lowland | 004 | 32.0926 | 26/06/2013 | Unfavourable Declining Reasons - AGRICULTURE INAPPROPRIATE CUTTING MOWING LACK OF CORRECTIVE WORKS IN APPROPRIATE SCRUB CONTROL | A site visit was carried out to assess reports of damage to the SSSI and also to assess the condition of the unit on 1st May 2012. There are large areas of the site where vegetation has been lost leaving bare, soft sand, not suitable for invertebrates due to disturbance. These areas appear to be expanding. Much of the grassland and heather has been mown very short, this may lead to loss of more vegetation. In particular, the heather which is not part of the few remaining large blocks, is tending to thin. Areas suitable for woodlark and nightjar have declined in recent years although a few birds do still succeed in fledging young. An area to the east of the site which was cleared of all heather and gorse in 2012 is showing scant signs of heather regeneration. The sections which were not scraped too deeply have some pioneer Calluna but most of the area is either bare or becoming dominated by too weedy species and European gorse. | Needs updated NE assessment in light of new Countryside Stewardship agreement started 1 Jan 2018 and the associated extensive habitat management works done by new tenant. NE advised from site visit meeting with TBH SPA wardens, 2J's, NE & MOD in May 2019 that condition upgrade will be done at end of 2019 bird breeding season with data from 2 J's. It is very likely the updated condition will be unfavourable recovering with favourable status after 1-2 more bird breeding seasons. |

| | | | | | | |
|-----------------------------|-----|---------|------------|---------------------------|--|--|
| ACID GRASS LAND - Lowland | 005 | 7.0473 | 05/09/2012 | Favourable | The area has a population of Adders, Common Lizards and Grass Snakes, with appropriate habitat to support them including tall grasses and open basking areas. The area consists of species-poor grassland surrounded by trees and scrub, providing good cover for reptiles. There are patches of bracken around the edges of the grassland. The sward itself is dominated with grasses with some herbs including stitchwort, sheep's sorrel, meadow buttercup, germander speedwell, birds-foot-trefoil and ribwort plantain. | Needs updated NE assessment. from annual work plan reviews of the HLS between HWT, MOD & NE & should still be favourable |
| DWARF SHRUB HEATH - Lowland | 006 | 84.7767 | 31/08/2012 | Unfavourable - Recovering | This unit is dominated by areas of woodland with open areas of heath within the woodlands. Areas of heath are often dominated by Bell heather and Bilberry. These areas are also dominated by birch and pine scrub, often with a bracken understory. Bracken is dominant in some areas of open heath. There are recently cleared areas of scrub which are in early successional stages, but have a good assemblage of species such as Caluna, tormentil and graminoids such as Carex binervis and Carex panacea. Areas of mire are currently dominated by Molinia and are species poor, however grazing is helping to open up these areas and they will improve in time. There is one area dominated by Molinia and Bog myrtle. There are some patches of Rhododendron in areas of woodland and scrub. | Needs updated NE assessment in light of extensive renegotiated HLS to deliver biodiversity gain whilst protecting military woodland training resource as agreed via annual work plans between HWT, MOD & NE. For other areas managed in -house see Woodland CMP |

Condition assessment Heath Brow SSSI

This section is taken from the most up to date published information on the Natural England (NE) website.

Table 4

| Main Habitat | Unit Number | Area (ha) | Last Assessment Date | Condition | Comments on Assessed Condition & Objectives | DIO Ecology comments |
|----------------|-------------|-----------|----------------------|------------|--|---|
| Earth heritage | 1 | 1.89 | 16/02/2016 | Favourable | The Northern face of the unit which represents the key feature of the site is partially exposed and can practically be re-exposed if required. There is a moderate amount of vegetation growing on the face but these are shallow rooted herbaceous plants that are currently not damaging the feature. There is no evidence of damage to the deposits from other sources such as tipping or landfill, tree planting or engineering works. The pit itself was flooded and so the base of the pit could not be accessed. This is normal for the winter months and the rain fall has been exceptionally high this year, and so was viewed as acceptable. | Lies within the previous HLS and since 1 Jan 2019 new Countryside Stewardship agreement held by HWT DIO Ecology agree with the findings and there has been a recent assessment by NE |

Condition Assessment (Basingstoke Canal SSSI)

This section is taken from the most up to date published information on the Natural England (NE) website.

Table 5:

| Main Habitat | Unit Number | Area (ha) | Last Assessment Date | Condition | Comments on Assessed Condition & Objectives | DIO Ecology comments |
|--------------------------------|-------------|-----------|----------------------|---------------------------|--|--|
| DWARF SHRUB HEATH - Lowland | 006 | 6.1129 | 26/03/2009 | Unfavourable - Recovering | Tree and scrub clearance has been agreed in this unit for 2009/2010. After which the area will be fenced to allow for grazing by HWT in 2010. | Needs updated NE assessment. See file note 9 Nov 2018 with map from NE/DIO Ecologist site visit to review SSSI condition and recent and planned MOD works in 5 year rolling works plan |
| STANDING OPEN WATER AND CANALS | 007 | 2.1443 | 17/07/2017 | Favourable | The area was visited with a representative of Landmarc to review management. The area is in good condition. The central area of marshy ground is occupied by tall fen vegetation with a wide diversity of plant species and with good habitat structure for wetland invertebrates associated with fens. A large number of damselflies and dragonflies were in flight. Plants noted include hop sedge, bottle sedge, yellow sedge, marsh horsetail, yellow loosestrife, meadowsweet and water dock. There are shorter areas of vegetation surrounding the flash with plants typical of short mire including an abundance of sundew, as well as many-stalked spike rush, cotton grass, carnation sedge, bog pondweed, lesser spearwort, marsh pennywort and tormentil. The vegetation is clear of large trees and bushes but there are frequent young grey willow and some alder is regenerating from stumps. Work to clear the scrub had already been planned for later this year but it was proposed that this would be brought forward to take place in August to take advantage of the current low water levels. Nevertheless, habitat quality for specialised plants of mire and tall fen is good, and there is good habitat structure for odonata. | Agree with 2017 NE assessment. Rotational scrub management and small scale ditch-scraper works etc in 5 year MOD works plan |
| STANDING OPEN WATER AND CANALS | 008 | 4.4224 | 26/03/2009 | Unfavourable - Recovering | Scrub and tree clearance has been agreed and funding put in place for it to be undertaken in 09/10. Crassula helmsii control is also continuing to take place | Not MOD management responsibility |

| | | | | | | |
|---|-----|--------|------------|------------|--|-----------------------------------|
| STANDING OPEN WATER AND CANALS | 009 | 3.8574 | 25/10/2010 | Favourable | is is a small area of shallow open water connected to the canal but 'off-line' so it provides a refuge for plants which are otherwise uncommon in the canal system. Levels of shading from surrounding trees are perhaps higher than desirable but there is a wide range of aquatic plants present nevertheless and water quality appears to be good. The invasive, non-native plant New Zealand stonecrop is present but it does not currently appear to be adversely affecting overall plant diversity. The aquatic flora includes the locally uncommon plants maretail, bogbean and water violet, as well as the more common water forget-me-not, water mint and water starwort. Part of the pond has a fringe of emergent vegetation consisting of reedmace and reed sweet-grass with smaller amounts of water dock. Conditions appear suitable for odonata and other wetland invertebrates. | Not MOD management responsibility |
|---|-----|--------|------------|------------|--|-----------------------------------|

Implementation

The highest priority natural environment objective is the maintenance and enhancement of designated site features where compatible with military use of the Training Areas (TA's). The overarching approach for the management of the site is the maintenance of a diverse landscape supporting both the high biodiversity of the heathland ecosystems and military training.

Roles and responsibilities

Maintenance of the Training Estate is contracted by DIO's to Landmarc Support Services (LSS). However, the majority of Bourley's DTA's (Dry Training Areas) is occupied by agricultural tenants Hampshire & Isle of Wight Wildlife Trust (HIWWT) with participation in agri-environment schemes. The agreements in place at 2020 are shown in Table 6:

Management of Bourley & Long Valley and Heath Brow SSSI's

Summary of Unit Management

Table 6:

| Unit No. | Managed by | Leased / licenced to |
|----------|------------------|----------------------|
| 001 | HIWWT / DIO /LSS | In part to HIWWT |
| 002 | HIWWT / DIO /LSS | In part to HIWWT |
| 003 | HIWWT | HIWWT |
| 004 | Tweseldown Ltd | Tweseldown Ltd |
| 005 | HIWWT | HIWWT |
| 006 | HIWWT and MOD | HIWWT |

Much of the management of the Bourley & Long Valley SSSI and the Heath Brow SSSI is carried out by Hampshire & Isle of Wight Wildlife Trust under a Countryside Stewardship agreement with Natural England from 1 January 2019 covering the 'open heathland' parts of Units 001, 002, 003 and 005. There is also a Higher Level Stewardship Agreement No. AG00339139 covering unit 5 and parts of 6. The areas under Licence to HIWWT are shown in Appendix D – 181129 Licence area map of BLV for IRMP.

The remaining areas comprising of the eastern end of Unit 001 (around Norris Hill West), the centre & eastern end of Unit 2 (Long Valley), part of Unit 6 and all of Unit 7 are managed "in house" by the Defence Infrastructure Organisation (DIO) and their industry partner Landmarc Support Services (LSS).

Unit 4 is managed by Tweseldown Ltd as part of their tenancy of Tweseldown Racecourse. They have a Countryside Stewardship agreement No AG00728616 started 1 January 2018 on 33.2 ha.

Within Units 1 & 2 of the Bourley & Long Valley SSSI are a series of silt control measures installed following a report by Entec UK Ltd (2007) into the management and control of sediment run-off into Fleet Pond SSSI from the vehicle testing area in Long Valley. The measures include silt ponds, semi permeable dams and settlement areas. A formal review of their effectiveness has been requested in 2019 by NE. (ref Sustainable Sediment Management of Long Valley – Phase 2 final report Nov 2007 Entec UK Ltd).

Management of Basingstoke Canal SSSI

Summary of Unit Management

Table 7:

| Unit No. | Managed by | Leased / licenced to |
|----------|-----------------|----------------------------------|
| 006 | DIO/LSS & HIWWT | HIWWT |
| 007 | DIO/LSS | |
| 008 | BVCMP | Leased to the Land Trust as SANG |
| 009 | BVCMP | Leased to the Land Trust as SANG |

Units 8 & 9 are on long lease to the Land Trust as SANGs (Suitable Alternative Natural Greenspace) as part of the Aldershot Urban Extension (AUE). They are currently managed by the Blackwater Valley Countryside Partnership.

The works listed below in “Works Programme & Identified Actions” are compiled through a series of meetings and site visits involving both the military users, DIO, LSS and other stakeholder’s including Natural England and Surrey Wildlife Trust.

Funding for works is bid for on an annual basis and allocated on a priority basis across the whole of the MOD estate.

These works are guided by on the requirements of a number of previous plans, most notably:

- Aldershot Training Area ILMP 2004 – *Auth. DTE Various*

Description of the Resource – Protected species (Objective NE2)

International - European protected species (EPS)

Herptiles

Great Crested Newt *Triturus cristatus* is present at Bourley / Long Valley DTA on parts of B6 (SSSI units 3 & 6) with historic records from the gravel pits. Three water bodies in SSSI units 3 and 6 around the Reservoir(s) were reported as having positive eDNA results in 2107 (Ref Hale Service Reservoir Off Site Reinforcement Main Jacobs Oct 2017 with wider distribution as to presence by later pers comms DIO Ecology / Ecological consultants.

Historic records exist of Smooth Snake *Coronella austriaca* but none have been recorded recently. There is a proposal from ARC to MOD May 2016 about possible re-introduction of sand lizard and / or smooth snake to B&LV.

Bats

Bat species use the area for roosting, foraging and commuting. There are no comprehensive site wide survey records. A 2007 scoping survey for Rushmoor Arena (TASD B5) identified 7 species of bat as being recorded within 10km square including, Daubentons *Myotis daubentonii*, Noctule *Nyctalus noctula*, Common pipistrelle *Pipistrellus pipistrellus* and Soprano pipistrelle *Pipistrellus pygmaeus*), though their distribution and numbers are unknown. Trees with moderate to high roost potential have been identified near Tweseldown / B2 with 2 confirmed as roosts and overall of low to moderate potential habitat value. (Ref Esso Pipeline 2018-19).

A number of redundant Pillboxes were converted to hibernacula in 2011/12 in TASD B7. A survey of the Beacon Hill Pill Boxes by Johns Associates in July – September 2019, found evidence of use by at least one bat in one of the pill boxes with high activity by common and soprano pipistrelles in the immediate and nearby woodland and indicators that common pipistrelle (unknown number) are likely roosting in one of the boxes. A drive through transect around this western woodland area recorded mainly common and soprano pipistrelle activity with one location by nyctaloid spp.

National Mammals

Badgers *Meles meles* occur in patches of suitable habitat throughout the site.

Dormice have been recorded as present in B2. (Ref Esso Pipeline surveys 2018-19 Fig A7.9.1)

Birds

All nesting birds are protected in the breeding season. Birds listed on Schedule 1 of the Wildlife & Countryside Act (WCA 1981 as amended) that have been recorded on the TAs, include the Dartford warbler, Woodlark and it should be noted it is an offence to: *Intentionally or recklessly disturb any wild bird listed on Schedule 1 while it is nest building, or at a nest containing eggs or young, or disturb the dependent young of such a bird.*

Other birds recorded on site include, Stonechats *Saxicola torquata*, Tree Pipit *Anthus trivialis*, Stonechat *Saxicola rubicola*, Whitethroat *Sylvia communis*, Linnet *Linaria cannabina*, and Reed Bunting *Emberiza schoeniclus*. Little Ringed plover *Charadrius dubius* and skylark *Alauda arvensis* returned to breed on B&LV near the driver test circuit in 2019 (MOD Conservation group Minutes September 2018) with snipe and other bird species using the Jack Snipe area in B&LV during winter. Lapwing were observed displaying breeding behaviour in Eelmoor Flash in 2018 (Ref DIO staff) and DEFRA MAGIC maps show a small area targeted for lapwing which likely corresponds to damper parts of B&LV and Eelmoor Flash.

Species recorded visiting or possibly breeding on Bourley Lake include mallard, *Anas platyrhynchos* great crested grebe, *Podiceps cristatus* moorhen *Gallinula chloropus* and little grebe *Tachybaptus ruficollis*. The Fishing Club report a reduction in wild fowl and river fly numbers and discussions as to possible remedial options have (re) started 2018 between HIWWT, DIO, LSS and the Fishing Club. Signal crayfish *Pacifastacus ieniusculus* are present with the advice from the Environment Agency to not trap and destroy as the bigger animals can keep the population 'from growing'. (MOD Conservation Group Minutes March 2018 and 2019).

Bird surveys were carried out in Long Valley for a number of years until 2016 paid for by TAG Farnborough. Electronic records exist from 2007 until 2016 and older paper versions are also available. Further surveys have been carried out on behalf of Natural England as part of their ongoing monitoring of the SPA. An assessment as to breeding success of the 3 SPA bird species and other heathland -scrub bird species plus habitat condition are reported upon regularly. See Johns Associate Heathland Restoration Scheme in the B&LV 2016 Breeding Bird Survey Report by 2J's Ecology.

Herptiles

All reptiles and amphibian species that are not EPS are partially protected under the WCA.1981 as amended. The Esso Pipeline Surveys 2018 reported HBIC records for adder *Vipera berus*, common lizard *Zootoca vivipara* and grass snake *Natrix natrix*. In B3 area with most of the pipeline corridor between Tweseldown and B2 having low habitat potential for reptiles with small patches of moderate to high potential.

Surrey and Amphibian Group website show recent records for adder, grass snake, common lizard smooth newt and common frog although records for amphibians are very sparse. MOD Conservation Group Minutes Sept 2017 report a poor season for common frog and common toad. Slow worm and adder plus suitable hibernation features were found during surveys in 2017 in and around SSSI unit 3 B&LV (Ref Hale Service Reservoir Off Site Reinforcement Main Jacobs Oct 2017).

Invertebrates

Invertebrates present on the site, include the nationally rare (Red Data Book) insects Ruby-tailed wasp *Chrysis fulgida* and Hoverfly *Pelecocera tricincta*; nationally scarce heathland insects such as the Silver-studded blue butterfly *Plebejus argus*, Mottled bee fly *Thyridanthrax fenestratus* and the Heath potter wasp *Eumenes coarctatus*.

HIWWT have commissioned surveys to help assess habitat condition and management and work with Conservation Group specialist Stephen Miles to advise on locations of suitable bare ground including for mottled bee fly (Conservation Group Minutes eg Sept 20-17) . The dry-wetter bare ground scrapes have held 18 species including key heathland species of small red damselfly *Ceragrion tenellum* (nationally scarce) , keeled skimmer *Orthetrum coerulescens*, black darter *Sympetrum danae* (Ref *Odonata monitoring at new pools within B&LV Summer 2016* by C Hall) A diverse and species rich assemblage was also found at Hale Gravel Pits of small red damselfly, nationally uncommon downy emerald *Cordulia aenea*, emerald damselfly *Lestes sponsa* and black darter plus wetland plants of conservation significance such as shoreweed *Littorella uniflora* & bog St Johns wort *Hypericum anagalloides* (Ref Survey of Odonata of Hale Gravel Pits by C Hall Sept 2012).

Flora

Flora identified on site include some nationally scarce plants marsh clubmoss *Lycopodiella inundata* pale dog-violet *Viola lactea*, mossy stonecrop *Crassula tillaea*; green-flowered helleborine *Epipactis phyllanthes*. (Ref A survey of the past & current status of marsh clubmoss in NE Hampshire & East Berkshire Dec 2005 by C Hall)

Bryophytes

Limited survey work on three pools in TASD B6 in 2011/12 by Johns Associates identified approximately 36 species of bryophyte.

Actions

There are no specific actions for protected species in the works programme. However, all IRMP works programme activities must consider whether there is potential for negative impacts on protected species; and SSSI and SNCI works will substantially benefit national and international protected species.

Description of the Resource –Habitats and Species of Principal Importance (Objective NE3)

A number of NERC Act section 41 Habitats of Principal Importance are present at Bourley:

Table 8:

| Habitat of Principal Importance | Bourley DTA -SSSI |
|--|--------------------------|
| Lowland heathland | Yes |
| Lowland dry acid grassland | Yes |
| Lowland fens | Yes |
| Ponds | Yes |
| Oligotrophic and dystrophic lakes | - |
| Hedgerows | - |
| Purple moor grass and rush pastures | Yes |
| Lowland mixed deciduous woodland | Yes |
| Wet woodland | Yes |
| Wood-pasture and parkland | Yes |

The Bourley & Long Valley DTA also support a number of NERC Act s41 Species of Principal Importance, summarised below:

- Woodland lichens;
- Bryophytes;
- Bats;
- Birds - e.g. skylark,
- Rare flora;eg marsh clubmoss
- Butterflies and moths. Silver-studded blue
- Flies & Bees
- Herptiles e.g. adder

Actions

The only specific actions for priority habitats and species in the Works Programme are control of invasive species outside designated sites. However SSSI and SNCI works will take account of and substantially benefit priority habitats and species throughout the site.

Description of the Resource – Local Wildlife Sites (Objective NE4)

There are currently limited details of SNCI sites on or adjacent to the DIO SD Trg estate at Bourley available to the authors.

There are 9 SINC's that are either within or adjacent to Bourley & Long Valley DTA's; a map of these will be produced and included as an annex when the relevant data becomes available. A short summary is provided below in Table 8.

Table 8:

| MOD Owned | TASD | SINC Name and area (ha) | SINC Criteria | Species supported (SINC selection criteria 6) |
|-----------|------|-------------------------------------|------------------|--|
| Yes | B5 | Claycart Bottom / Rushmoor Hill | 3Bii 1Cii (?) | Bristle bent Heather Small Heath Bell heather Cross-leaved Heath Small Cudweed Mat-grass Wood-sorrel Tomentil Goldenrod Wild service tree Heath Speedwell |
| Yes | B5 | Claycart Hill | 2B 3A | |
| No | SANG | Claycart Hill Wood (SANG) | | |
| Yes | B6 | Pavillion Hill | | Heather Bell heather Heath speedwell |
| No | SANG | Puckridge Hill | | |
| Yes | B1 | Pyestock hill / Pondtail Heath SINC | | |
| No | SANG | Rushmoor Bottom | 1Cii | |
| Yes | B5 | Rushmoor Arena | | Common cudweed |
| Yes | B6 | Skirmishing Hill | 2B 3A 3Bii | Bristle bent Heather Bell heather Mat-grass Tomentil Common Frog Heath Speedwell |

Actions

There are no specific actions for Local Wildlife Sites in the Works Programme.

Natural Capital and Ecosystem Services (Objective NE5)

Natural Capital is defined as the stock of our physical natural assets (such as soil, forests, water and biodiversity) which provide goods and benefits to people (such as crops, protection from flooding, climate regulation or the health benefits of recreation). The four countries of the UK are preparing reports on the state of natural capital and developing frameworks for national and corporate natural capital accounting and for incorporating natural capital assessment into decision-making.

Ecosystem services are the goods and benefits provided by ecosystems that contribute to making human life both possible and worth living. Examples include products such as food and water; regulation of floods, soil erosion and disease outbreaks; and non-material benefits such as recreational and spiritual well-being in natural areas.

MOD policy is that biodiversity, natural capital and ecosystem services shall be given appropriate consideration in estate management and estate change, in accordance with government policy, UK and national strategies and industry best practice. The principal current MOD tools for this are, for estate management: IEMP, EMS and IRMP; and for estate change: Sustainability Appraisal and related assessments and approvals.

An initial, high level review of key ecosystem services provision, constraints and opportunities is set out in the Table below, following the approach of the UK National Ecosystem Assessment (2012-14):

| Ecosystem Service | Relevance | Constraints and Opportunities |
|--|---|--|
| Provisioning Services | | |
| Crops, Wild Fish, Aquaculture, Water, Peat, Wild game, Honey, Ornamentals, Genetic Resources | No significant direct exploitation. Local honeybees probably forage on the TAs. Some culling of wild deer takes place through Defence Deer Management Potential pheasant, partridge and other wild game hunting by licenced shoots Fishing occurs at Bourley Lake (stocked) | Extent and productivity is limited by military training and conservation objectives |
| Livestock | Conservation grazing on SSSI and SNCI sites produces high quality, low quantity beef products | Extent and productivity is limited by military training and conservation objectives |
| Timber, vegetation and wood fibres | Extensive plantation and semi-natural woodlands throughout the Bourley estate. Commercial timber Harvesting and Marketing. Some small scale firewood collection licenced. Habitat management arisings, eg Heather, gorse, bracken | Extent and productivity is limited by military training and conservation objectives Opportunity for forestry and habitat management arisings to be fed to biomass fuel production |
| Regulating Services | | |
| Climate Diseases & Pests Pollination Noise Water Quality Air Quality | Significant area and biomass of open and wooded habitats affecting gas exchange, absorbing and regulating dust, nutrients, noise, water and erosion Silt traps and other measures on B&LV driver training area contribute to water quality protection 'downstream' eg Fleet Pond | Balance of habitat types and other land uses is generally optimised for military training and conservation objectives. Noise regulation enhanced by woodland retention around ranges |

| | | |
|---|---|--|
| Hazard - Fire regulation | Potential for wildfires from military, public or natural causes | Fire management plans, pyrotechnic restrictions, firebreaks, Standing Orders, Byelaws, Military and SSSI objectives |
| Cultural Services | | |
| Environmental settings for eg recreation and tourism | Extensive use of training areas and ranges (when not in use) by members of the public and for licenced activities | Extent, intensity and frequency is limited by military training and conservation objectives. Controlled by MOD Byelaws and SSSI legislation. |
| Supporting Services | | |
| Biodiversity, habitats and species | Much of the site is internationally important for lowland heathland habitats and species, remainder is designated SNCI, with substantial protected species and wider biodiversity value. | Extent and quality / condition is limited by military training and public access objectives Opportunity for further enhancement through MOD Conservation Stewardship Fund, tenants and agri-environment schemes |
| Soil formation, nutrient cycling, water cycling, primary production | Extensive areas of natural and semi-natural habitats contribute to local / regional carbon storage and water cycling. Heathland habitats can act as a nutrient sink, absorbing airborne nitrates and suffering eutrophication | Maintain habitats and environmental protection – Standing Orders, Sustainability Appraisals. Avoid drainage of wet / humid heaths Continue to remove nutrients through grazing and tree / scrub clearance |

Actions

Subject Matter Expert review and development of the above Table - To a large extent the MOD's IRMP process already provides a framework for identifying, integrating and optimising ecosystem service provision across the defence estate, but occasional targeted review may identify opportunities for enhancement.

There are no specific actions for Natural Capital and Ecosystem Services in the IRMP Works Programmes.

MOD Habitat Banking & Biodiversity Offsetting (Objective NE6)

To facilitate developments at sites with European designations (Special Area for Conservation or Special Protection Area) MOD has agreed to use Habitat Banking as a way of identifying and undertaking ecological improvements that can be counted as mitigation or compensation in advance of damage occurring to habitat that qualifies as a designated site feature.

A 'MOD Habitat Banking Principles' document has been developed in consultation with DEFRA and the national nature conservation agencies and published in the [MOD SEAT Handbook](#). Key aspects of the principles are that Habitat Banking measures can be on designated or undesignated land, but must be:

- above and beyond what is required to meet MOD statutory commitments to manage designated sites and achieve Favourable condition targets
- agreed with military users, DIO LMS and statutory bodies
- recorded in Integrated Rural Management Plans (IRMPs) and/or Habitat Banking Trackers

In conjunction with military staff and commercial partners the DIO Ecologists will identify and develop MOD Habitat Banking opportunities across the estate, through targeted studies at priority sites and routine IRMP reviews elsewhere. Once agreed in principle with all stakeholders, relatively small and/or low cost measures may be delivered using the MOD Conservation Stewardship Fund, while larger schemes may require project-specific business cases and funding.

Biodiversity Offsetting can be used to improve or create wildlife habitat as a way of compensating for the impacts of MOD development on habitats and/or species outside of designated sites. In accordance with the National Planning Policy Framework and BS 42020:2013 (Biodiversity- Code of practice for planning and development) biodiversity offsetting can only be used to compensate for impacts where the mitigation hierarchy has been followed and there is no other option. Biodiversity offsets are distinguished from other forms of ecological compensation by the requirement for measurable outcomes with the losses incurred and gains achieved through an offset being measured in the same way. The approach to biodiversity offsetting at each site may depend on the Local Planning Authority policy on offsetting.

Actions

In general DIO Ecologists are responsible for identifying biodiversity offsetting opportunities where they may be required to support development. These must be agreed with military staff and other colleagues using the same process established for Habitat Banking. Where opportunities have been identified they should be recorded on the Habitat Banking Tracker and it is expected that project funding will be used to deliver biodiversity offsetting measures via an industry partner.

Longmoor Ranges (Hampshire) has been used as a pilot for the MOD Habitat Banking approach, and much of the mitigation and compensation works for the A new ETR and replacement GZR were delivered in advance of planning permission being granted. All of the banked measures have been allocated and committed to the new range development and so are recorded in the Planning Conditions and Other Commitments section of its CMP.

Example Record of Habitat Banking & Offsetting Measures:

| Mitigation Option Name and Grid reference | Designations (e.g. SSSI / CWS / None) | Current and Potential; Habitat Type | Area (ha) | Potential Biodiversity Offsetting / Net Gain Credits | Cost Estimate to Implement, including long term monitoring and adaptive management if appropriate | Status (1. Identified - Provisional; 2. Agreed - Unallocated; 3. Agreed Allocated; 4. Complete -Unallocated; 5. Complete - Allocated) | Project Allocation | General Comments including monitoring and adaptive management | SDT / LMS / ES&C Comment / Approval (incl date & reference) | Statutory Body Comment / Approval (incl date & reference) |
|--|---------------------------------------|---|-------------|--|---|--|-------------------------|--|---|---|
| <i>Eg Brimstone Enclosure SU 7950 3240</i> | <i>SSSI / SPA / SAC</i> | <i>Was conifer plantation, cleared in 2016 and reverting to dry heath</i> | <i>2.73</i> | <i>This area will provide supporting habitat for SPA bird species, and SAC dry heath habitat (including for associated plants, birds, invertebrates, and herptiles) as well as a small extent of wet heath and lichen grassland habitats</i> | <i>[Works complete, maintenance incorporated into core IRMP / SSSI works programme]</i> | <i>Complete - Allocated</i> | <i>Longmoor Range 4</i> | <i>Previous coniferous plantation has been cleared, rhododendron removed and expansion on the small scale mosaic of wet heath-mire, timber stacked to increase reptile refugia, new horseshoe shaped pond and ring barked a small number of remaining coniferous trees to create standing dead wood.</i> | <i>Approved as part of mitigation / compensation package for new ranges</i> | <i>Approved and endorsed by NE and SDNPA as part of project HRA & Planning permission</i> |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

Planning Conditions and other Commitments (Objective NE7)

A summary of ongoing natural environment planning conditions and other commitments is given in the table below. Short-term conditions and commitments are not shown.

Bourley & Long Valley Dry Training Areas – None applicable.

Survey, Assurance Monitoring and Adaptive Management

This section sets out how the objectives in this plan will be monitored, to align with statutory obligations and the DIO audit and assurance process EM02

Ongoing monitoring is undertaken by MOD and contractor staff, consultants (where employed for specific tasks), MOD Conservation Group members such as county bird and plant recorders, NGOs such as HIWWT, SARG and RSPB, as well as Natural England.

Adaptive management is achieved by feedback of monitoring results to MOD site-management staff and, where appropriate changes to the above controls. Feedback can be via informal liaison, or via more formal MOD Conservation Groups, Environmental Steering Groups or direct liaison with external regulators.

Survey and Monitoring specific to particular objectives is summarised below:

Designated Sites (Objective NE1)

- NE SSSI Integrated Site Assessments, based on a 6 year cycle
- NE monitoring of tenancy implementation of ELS and HLS and CS options
- DIO/LSS annual monitoring of the condition of rural assets, which includes natural environment features where there is a retained MOD maintenance liability

Protected species (Objective NE2)

- Amphibian and reptile distribution and population monitoring by SARG / HWT
- SPA and other notable bird spp by 2 J's Ecology

Habitats and Species of Principal Importance (Objective NE3)

- Conservation Group and consultancy surveys

Description of the Resource – Local Wildlife Sites (Objective NE4)

- DIO/LSS annual monitoring of the condition of rural assets, which includes natural environment features where there is a retained MOD maintenance liability

Natural Capital and Ecosystem Services (Objective NE5)

- All IRMP CMPs contribute to Natural Capital and Ecosystem Services – No specific monitoring planned / proposed.

Biodiversity Offsetting & Habitat Banking (Objective NE6)

- All measures are incorporated into NE7

Planning Conditions and Other Commitments (Objective NE7)

- Sets out detailed annual monitoring conditions for the new ranges and mitigation areas (which are also summarised in the Works Programme).

Works Programme & Identified Actions

Works will be undertaken in accordance with generic prescriptions (see MU CMP Appendix R / NEDES CMP Annex D) and checks will be made for protected species etc as part of legal compliance processes and best practice standards.

Maps showing proposed works to be funded by DIO SD Trg over next 5 years are attached to this document. They show some of the areas described below and / or in a particular year. The maps and programme are subject to change with on-going amendments at annual reviews to ensure integration with other land uses especially military training; evolving work proposals based on habitat condition; supporting ecological data & funding options where some proposed works in a F/Y are carried forward etc.

SE_SSSI_Works_20182019_

SE_SSSI_Works_20192020_

SE_SSSI_Works_20202021_

SE_SSSI_Works_20212022_

SE_SSSI_Works_20222023_

| Objective / Feature | Unit Feature | Works Description | Core or Additional Works | Works (Financial Years) | HRA Conclusion |
|--|--------------|--|--------------------------|-------------------------|--|
| 2018-19 Completed (2016-18 available on record as part of rolling 5 year plan of works) | | | | | |
| Bourley and Long Valley | 2 | Heathland / scrub management. Bourley B4a – Jubilee Hill GR 840/512 (south of TDU circuit) - clear scrub from West Block of 2.9ha | Additional | 2018 - 2019 | Exempt – Activity in support of SPA management |
| Bourley and Long Valley | 2 | Heathland / scrub management – scrub removal, bare ground creation and fire break management North of Outer Test Circuit | Additional | 2018 - 2019 | Exempt – Activity in support of SPA management |
| Basingstoke Canal SSSI | 7 | Wetland & grassland management B4b - Eelmoor Flash - GR 842/527 - From bridge scrape off bracken litter into a roadside bund removing enriched material & clearing litter. Create 10 no. 2mx5m scrapes in wet marginal area as part of ongoing rotational management. Arisings deposited on bund. Forage harvest grassland area (NB – grassland area to west is NOT SSSI) | Additional | 2018 - 2019 | Off-site – Benefit for SPA supporting habitat / Eliminated from HRA (No possibility of significant negative effect on SPA off-site supporting habitat) |
| 2019-20 Completed | | | | | |
| Bourley and Long Valley | 2 | Heathland / scrub management. Bourley B4a – Jubilee Hill GR 840/512 (south of TDU circuit) - clear scrub from East Block of 3.3ha. | Additional | 2019 - 2020 | Exempt – Activity in support of SPA management |
| Bourley and Long Valley | 2 | Heathland / scrub management. Bourley B4a – Jubilee Hill GR 840/512 (south of TDU circuit) – additional 1 ha scrub in 3 blocks 30m x 30m – LSS to provide map / Grid Ref & Compt Refs | Additional | 2019 - 2020 | Exempt – Activity in support of SPA management |
| Bourley and Long Valley | 2 | Heathland / scrub management. Bourley B4a – Cocked Hat wood – Moto Cross area 2.1ha. clear scrub from open heath | Additional | 2019 - 2020 | Exempt – Activity in support of SPA management |
| Bourley and Long Valley | 2 | Heathland / scrub management. Bourley B4a – North of Outer Test Circuit and Between the Test Circuits Eelmoor Hill West. West End of Compt GR 839/527 clear scrub over part of 3ha (plus smaller area of scrub nearby); bare ground scrapes & new fire breaks | Additional | 2019 - 2020 | Exempt – Activity in support of SPA management |
| Bourley and Long Valley | 2 | Heathland / scrub management. Bourley B4a – S&W of Long Valley in 'woodlark area' GR 835/516 -clear scrub over part of area | Additional | 2019 - 2020 | Exempt – Activity in support of SPA management |

| Objective / Feature | Unit Feature | Works Description | Core or Additional Works | Works (Financial Years) | HRA Conclusion |
|---------------------------------------|--------------|---|--------------------------|-------------------------|--|
| Bourley and Long Valley | 2 | Heathland / scrub management. Bourley B4a – Outriden Firs. In Compt OUT2 GR834/510 clear scrub & create bare ground scrapes & Compt OUT 3 GR 836/510 clear scrub. NB – part of OUT 4 done too. | Additional | 2019 - 2020 | Exempt – Activity in support of SPA management |
| Adjacent to Basingstoke Canal SSSI | 7 | Wetland & grassland management B4b - Eelmoor Flash - GR 842/527 - Forage harvest grassland area ie cut & collect (NB – grassland area to west is NOT SSSI) | Additional | 2019-20 | Off-site – Benefit for SPA supporting habitat / Eliminated from HRA (No possibility of significant negative effect on SPA off-site supporting habitat) |
| Other areas / SINC | | Species Survey Bourley B7 - Carry out inspection of converted pillboxes on T ASD B7 to establish presence or absence of bats. Hibernacula conversion funded under REES in 2006. To include daylight inspection and dusk emergence survey and basic report detailing findings inc species detected. | Additional | 2019-2- | N/A - inspection |
| Other sites or non SSSI works eg SINC | | No other submitted works eg Claycart Stream area approved for funding 19-20 | Additional | N/A | N/A |
| 2020-21 Funding bids approved | | | | | |
| Bourley and Long Valley | 2 | Heathland / gorse management. Bourley B4a – on & around Miles Hill. Cut 2 blocks of gorse ~ 0.1ha to manage for age diversity as part of wider heathland mosaic & reduce fire risk. Nice patches of dwarf shrub – either on poor / disturbed soil & sparsely vegetated or mature growth as part of mosaic with Molinia etc. Parts recently burnt & dense even aged gorse regen. For 20/21 a) flail approx 30m x 30m (1 block) by cut & collect on younger gorse growth b) another 30m x 30m block in total (but spread over the ‘middle plateau’) hand cut & remove arisings & treat to knock back dense gorse encroaching onto dwarf shrub patches in ‘middle’ & retain ‘gorse’ screens around network of paths / tracks to help reduce further fragmentation. Some patches cut 2017-18 | Additional | 2020-21 | Exempt – Activity in support of SPA management |

| Objective / Feature | Unit Feature | Works Description | Core or Additional Works | Works (Financial Years) | HRA Conclusion |
|-------------------------|--------------|---|--------------------------|-------------------------|--|
| Bourley and Long Valley | 2 | Heathland / scrub management. Bourley B4a – Jubilee Hill (south of TDU circuit) – 50% thin of scrub incl gorse from South East Block GR 841/511 of 3.2ha | Additional | 2020-21 | Exempt – Activity in support of SPA management |
| Bourley and Long Valley | 2 | Heathland / scrub management. Bourley B4a – Jubilee Hill (south of TDU circuit) – 1 day of spraying recently cut ‘mono culture’ gorse bocks to control re-growth & allow dwarf shrubs / acid grassland spp opportunity to develop + break up extent & ages of gorse regen. 1 day of bare ground scrape creation across areas recently cut of dense gorse & other heathland / scrub mosaics in locality | Additional | 2020-21 | Exempt – Activity in support of SPA management |
| Bourley and Long Valley | 2 | Heathland / scrub management. Bourley B4a – Cocked Hat wood area and Eelmoor Hill West – create bare ground scrapes on dry- wetter ground (do similar work in B&LV over 1 day with same machine for cost efficiencies) | Additional | 2020-21 | Exempt – Activity in support of SPA management |
| Bourley and Long Valley | 2 | Heathland / scrub management. Bourley B4a – North of and between Test Circuits Eelmoor Hill West – East end of Compt GR 839/527 -clear as much of scrub as monies permit over other part of ~3ha block (roll f/wd non funded works) | Additional | 2020-21 | Exempt – Activity in support of SPA management |
| Bourley and Long Valley | 2 | Heathland / scrub management. Bourley B4a – S&W of Long Valley in another part of ‘woodlark area’ GR 838/517 -clear scrub over 3ha | Additional | 2020-21 | Exempt – Activity in support of SPA management |
| Bourley and Long Valley | 2 | Heathland / scrub management. Bourley B4a – Outridden Firs. In Compt OUT4 GR834/508 - clear remaining part of dense scrub & gorse (part done previous year) | Additional | 2020-21 | Exempt – Activity in support of SPA management |
| Bourley and Long Valley | 2 | Wetland management – ground disturbance over 1.9ha of jack snipe area as follow – up to HIWWT scrub management works Dec 2019 as discussed & agreed with Cons Grp J Eyre | Additional | 2020-21 | Exempt – Activity in support of SPA management |
| Basingstoke Canal SSSI | 6 | Pondtail – B1. Heathland / scrub management. Cut scrub -trees to reduce heathland habitat fragmentation & part along canal edge; bracken management by scrapes / spray; create small scrapes to protect & enlarge sphagnum moss ‘pools’ & mow small strips in mature heather (may be done over 2 years) | Additional | 2020-21 | Exempt – Activity in support of SPA management |

| Objective / Feature | Unit Feature | Works Description | Core or Additional Works | Works (Financial Years) | HRA Conclusion |
|--|--------------|--|--------------------------|---|---|
| Adjacent to Basingstoke Canal SSSI | 7 | Wetland & grassland management B4b - Eelmoor Flash - GR 842/527 - Forage harvest grassland area ie cut & collect (NB – grassland area to west is NOT SSSI) | Additional | 2020-21 | Off-site – Benefit for SPA supporting habitat / Eliminated from HRA (No possibility of significant negative effect on SPA off-site supporting habitat) |
| SINC | | Heathland management Claycart Stream B5 - GR 843/511 clear scrub to restore / create more open heathy corridor across Claycart Stream to link open heaths to the east & west. West side is Bourley & Long Valley SSSI / SPA | Additional | 2020-21 | Off-site – Benefit for adjacent SPA supporting habitat |
| SSSI / SPA / SINC | | Annual review by MOD with NE & HIWWT of agri environmental schemes | Additional | 2020-21 | N/A |
| 2021-25/26 Proposed. Compartment mapping & location title with central Grid Ref to be updated by LSS. To include areas where TAG monies plan to do / have done tree/scrub works, Current locality references: | | | | | |
| Jubilee Hill locality – south of TDU circuit B4a Split in to 4 blocks total area approx 4 ha. GR 839/509 | | | | | |
| Bourley and Long Valley | 2 | Scrub management.. On rotation in earlier years as above. SW block - 50% scrub thin 2022-23. Link with gorse regen control below | Additional | 2022-23 Thereafter every 1-2 years on rotation | Exempt – Activity in support of SPA management |
| Bourley and Long Valley | 2 | Gorse regeneration control -Ongoing management to maintain / improve heathland mosaics & control previous dense gorse monoculture over parts. 2022-23 – follow up spray gorse regen across recently cut gorse areas + 1 day scrapes for bare ground creation | Additional | 2022-23 Thereafter as required | Exempt – Activity in support of SPA management |

| Objective / Feature | Unit Feature | Works Description | Core or Additional Works | Works (Financial Years) | HRA Conclusion |
|--------------------------------|--------------|--|--------------------------|----------------------------------|--|
| Bourley and Long Valley | 2 | Scrape / bare ground management. – On going management to maintain / improve heathland mosaics incl % of bare – semi bare ground 1 day machine work across B&LV incl here for scrapes Thereafter every 2-3 yrs as required | Additional | 2022-23 2025-26 | Exempt – Activity in support of SPA management |
| Miles Hill locality B4b | | | | | |
| Bourley and Long Valley | 2 | Top Plateau & slopes -Gorse/pine -birch management – probably split area into 2-3 smaller compartments & rotationally cut every 4-5 years to manage for age diversity as part of wider heathland mosaic & reduce fire risk. Works done on parts 16-17 & 17/18 | Additional | 2022-23 Thereafter as agreed | Exempt – Activity in support of SPA management |
| Bourley and Long Valley | 2 | Top plateau – northern slope towards main road & ditch at bottom. Bracken management Faces north; has old foxholes. Extensive bracken; patches dwarf shrubs. a) Spray bracken around heathy edges eg near top b) on hillside, where practicable regarding machinery, trial spray ? & scraping off biggish patch(s) of bracken / bramble & litter layer down to mineral soil & put spoil at base (south aspect) to try & regenerate dwarf shrub patches. Some spraying 16-17 Proposed for 20/21 but unfunded so roll f/wd | Additional | 2021-22 2024-25 | Exempt – Activity in support of SPA management |
| Bourley and Long Valley | 2 | Middle plateau & slopes mainly to NE Mainly gorse management. Nice patches of dwarf shrub – either on poor / disturbed soil & sparsely vegetated or mature growth as part of mosaic with Molinia etc. Parts recently burnt & dense even aged gorse regen. Small scale rotational works to keep on top of gorse regen; knock back gorse from dwarf shrub patches in ‘middles’ & probably retain ‘gorse’ screens around network of paths / tracks to help reduce further fragmentation. Some patches cut 2017-18 & 20/21 | Additional | 2022-23- every 2 years as needed | Exempt – Activity in support of SPA management |
| Bourley and Long Valley | 2 | Top & Middle Plateau & slopes (except North slope listed above) – bracken / other management – as needed | Additional | 2022-23 As needed | Exempt – Activity in support of SPA management |
| Bourley and Long Valley | 2 | Other management –Pole Barrier - small scale scrub / scrape / bund repair to ‘shallow pond & bare – semi bare sunny banks’ created CSF 2017/18 | Additional | 2024-25 or as agreed | Exempt – Activity in support of SPA management |

| Objective / Feature | Unit Feature | Works Description | Core or Additional Works | Works (Financial Years) | HRA Conclusion |
|--|--------------|--|--------------------------|---|--|
| Cocked Hat Wood / Long Hill locality B4 | | | | | |
| Bourley and Long Valley | 2 | Scrub management. Includes a) heathy glade at Moto Cross compensation area also called Long Hill 0.6ha GR 833/519. b) open heathy area on NE slope to Cocked Hat Wood GR832/52 approx 6ha. This needs to cover all of open heathland area North of CH/Long Hill Wood extending northwards towards test circuits – may be useful to split into 2-3 Compartments . Overall ~ 6ha (check figure) of on-going rotational pine / other scrub regen management as & where agreed over the area with large part done CSF 2015/16 & another area 2019/20. Treat broadleaf stumps, arisings burnt or disposed off on/ near site | Additional | Part 2021-22 Part 2024/25 & / or 2025-26 | Exempt – Activity in support of SPA management |
| Bourley and Long Valley | 2 | Bracken management usu after scrub clearance – on rotation. Sprayed CSF 2016-17 & proposed 2020/21 for Eastern side bracken spray GR 836/530 1.5ha (or larger TBC from June 2020 visit & DIO / LSS review) but no funds so roll f/ wd to 2021/22. Follow -up 3- 5yrs as needed | Additional | 2021-22 Priority 1 2024-25 | Exempt – Activity in support of SPA management |
| Bourley and Long Valley | 2 | Scrape management- create bare ground scrapes every 2-3 years (do similar work in other B&LV localities over 1 day with same machine for cost efficiencies machine but try to keep diversity in condition too) | Additional | 2022-23 | Exempt – Activity in support of SPA management |
| Test Circuit(s) / Eelmoor Hill West North of Outer Test Circuit AND between the 2 Test Circuits locality B4 | | | | | |
| Bourley and Long Valley | 2 | Scrub management. North of Outer Test Circuit. Compartments to be updated / mapped Rotational scrub management around this locality. Next 1-2 years of works include: a) other parts of East end of Compt GR 839/527 not cleared by CSF funds 2020/21 b) GR 837/527 at NW end 1ha. | Additional | 2021-22 2022-23 Annual thereafter as & where agreed | Exempt – Activity in support of SPA management |
| Bourley and Long Valley | 2 | Bracken management North of Outer Test Circuit. Linked to & often follows scrub management as above. | Additional | 2022-23/ 2023-24 | Exempt – Activity in support of SPA management |

| Objective / Feature | Unit Feature | Works Description | Core or Additional Works | Works (Financial Years) | HRA Conclusion |
|-------------------------|--------------|--|--------------------------|--|--|
| Bourley and Long Valley | 2 | Bare ground / wetland management North of Outer Test Circuit – recently done 17/18 & 20/21 in locality (to be mapped) / older circular scrapes in shallower damp hollow Linked to scrub / bracken control as above. May be done during such works as best fits with habitat mosaic & cost efficiencies eg do similar work in B&LV over 1 day with same machine but try to keep diversity in condition too | Additional | 2024/25 d | Exempt – Activity in support of SPA management |
| Bourley and Long Valley | 2 | Scrub management. Between Test Circuits Compartments to be updated / mapped Rotational scrub management around this locality Probably - 5.3ha 2022-23 | Additional | 2022-23 | Exempt – Activity in support of SPA management |
| Bourley and Long Valley | 2 | Bracken management Between Test Circuits. Linked to & often follows scrub management as above. | Additional | 2022-23/ 2023-24 | Exempt – Activity in support of SPA management |
| Bourley and Long Valley | 2 | Bare ground / wetland management Between Test Circuits – recently done 17/18 & 20/21 in locality (to be mapped) + older circular scrapes in shallower damp hollows Linked to scrub / bracken control as above. May be done during such works as best fits with habitat mosaic & cost efficiencies eg do similar work in B&LV over 1 day with same machine but try to keep diversity in condition too | Additional | 2024/25 d | Exempt – Activity in support of SPA management |
| Bourley and Long Valley | 2 | Scrub management. South, West & East of test circuit tracks- ‘woodlark areas GR 835/516 rotational works to keep good as ‘woodlark area’. These comprise a series of areas eg alongside the tracks or ‘at corners etc with lot of regenerating pine but otherwise poor soil / sparsely vegetated dwarf shrub/ acid grassland. To be mapped Eg Area 2 GR 841/517- 2.6ha – 2022/23. | Additional | 2022-23 Every 1-2 years on rotation | Exempt – Activity in support of SPA management |
| Bourley and Long Valley | 2 | Scrub management – Woodlark ‘North’ – by Green Route. As above Works TBC | Additional | 2022-23 or as needed every ~ 2 years TBC | Exempt – Activity in support of SPA management |
| Bourley and Long Valley | 2 | Heathland / Wetland management Balancing Pond area GR 836/524 - 3. ha. Snipe habitat; rotational manage scrub regen; consider if scrape ‘management / creation may be beneficial | Additional | 2021-22 May be 2024-25 | Exempt – Activity in support of SPA management |

| Objective / Feature | Unit Feature | Works Description | Core or Additional Works | Works (Financial Years) | HRA Conclusion |
|-------------------------|--------------|---|--------------------------|--|--|
| Bourley and Long Valley | 2 | Scrub management - on corner of outer TDU track GR 843/526. 1 ha. | Additional | 2021 - 2022 | Exempt – Activity in support of SPA management |
| Claycart Stream | | | | | |
| Bourley and Long Valley | 2 | Scrub management. 9.5ha Compartment -GR 844/ 515. Thin by 50% over whole area 2022-23 or split into 2 compartments over 2 yrs TBC On rotation as needed thereafter. Significant scrub works done CSF 2017-18 | Additional | 202/22 and / or 2022-23 Thereafter as agreed | Exempt – Activity in support of SPA management |
| Outridden Firs | | | | | |
| Bourley and Long Valley | 2 | Scrub management. Split into 5 Compartments for rotational heathland works. 2021-22 Compt OUT 5 2.3ha 2022-23 Compt OUT 1- 8.7ha- 1 ha gorse mgt from the drier edges £2500 & Compt OUT 2 -2.9ha Scrub mgt | Additional | 2020-21 2022-23 Thereafter annual or as agreed | Exempt – Activity in support of SPA management |
| Bourley and Long Valley | 2 | Scrape management. Split into 5 Compartments as above 2022-23 - Scrapes in Compt OUT 1 Thereafter every 1-3 years around the Compts | Additional | 2022-23 Thereafter every 1-3 yrs | Exempt – Activity in support of SPA management |
| Bourley and Long Valley | 2 | Bracken management- split into 5 compartments as above. 2022-23 - all areas as reqd say 4ha Thereafter as needed | Additional | 2022-23 Thereafter annual or as agreed | Exempt – Activity in support of SPA management |
| Outridden Copse | | | | | |
| Bourley and Long Valley | 2 | Scrub management -Triangle 830/515 1ha | Additional | 2022-23 | Exempt – Activity in support of SPA management |
| Bourley and Long Valley | 2 | Bracken management Triangle 830/515 1ha Bracken sprayed CSF 2016-17. Follow up bracken control (after next round of scrub mgt) - 2023-24 | Additional | 2023-24 | Exempt – Activity in support of SPA management |
| Jack Snipe area | | | | | |
| Bourley and Long Valley | 2 | Wetland management – ground disturbance & perhaps scrub regen cutting over 1.9ha of Jack Snipe area on recommendation from Cons Grp J Eyre | Additional | Annual | Exempt – Activity in support of SPA management |

| Objective / Feature | Unit Feature | Works Description | Core or Additional Works | Works (Financial Years) | HRA Conclusion |
|-------------------------------|--|---|--------------------------|--|---|
| Bourley and Long Valley | 2 | Heathland / Wetland management Balancing Pond area GR 836/524 - 3.ha. Snipe habitat; rotational manage scrub regen; consider if scrape 'management / creation may be beneficial | Additional | 2021-22 May be 2024-25 | Exempt – Activity in support of SPA management |
| Other areas / features | | | | | |
| Bourley and Long Valley | All SSSI units where in-house management | Scrub / other heathland management. Other priority areas & habitat works not picked up by other line entries Eg manage scattered scrub on islands on edge(s) of test track so suitable for SPA birds. Eg a)GR 835/527. 0.7 Ha. | Additional | Annual as & where required & not picked up by other line entries | Exempt – Activity in support of SPA management |
| Bourley and Long Valley | 3 | Scrub / other heathland management –B6 South edge along line of 2018/19 water mains work. No longer in Agri envt Scheme with HWT. Kept open / short sward by external fence for visibility & maintenance. HWT cattle access this area to help manage. Good area for herptiles eg develop a wide scruffy edge to remaining trees - south facing - & keep sward short for 2m along fence & if so, some intervention management via CSF required. Needs site visit to see how stony for eg machine use | Additional | 2022-23 Thereafter as agreed | Exempt – Activity in support of SPA management |
| Bourley and Long Valley | | Woodland management - B3 Bickley Woods - halo oaks GR 829/518. Fund and undertake as part of MOD forestry works in locality– see Woodland CMP | Additional | As per forestry work plan | Exempt – Activity in support of SPA management / see Forestry Plan & approval |
| Pondtail B1 | | | | | |
| Basingstoke Canal SSSI | 6 | Heathland / scrub / wetland scrape management. Follow up 2020-21 works as to any outstanding works to be rolled f/wd to 2021-22. See DIO Ecologist work plan from site visit with NE 9 Nov 2018 Rotational scrub / bracken / scrape management – every 4-5 years | Additional | 2022-22 2025-26 | Exempt – Activity in support of SPA management |

| Objective / Feature | Unit Feature | Works Description | Core or Additional Works | Works (Financial Years) | HRA Conclusion |
|---|--------------|--|--------------------------|-------------------------|---|
| Eelmoor Flash GR 842/527 | | | | | |
| Adjacent to Basingstoke Canal SSSI | 7 | Grassland management – annual forage harvest grassland area ie cut & collect (NB – grassland area to west is NOT SSSI) | Additional | Annual | Off-site – Benefit for SPA supporting habitat / Eliminated from HRA |
| Basingstoke Canal SSSI | 7 | Wetland / scrub management - Cut & treat scrub, willow and gorse every 3 years along canal bank and road side. 1ha.NB – the bracken area to east & the wetland of scrapes IS SSSI | Additional | 2021-22 | Off-site – Benefit for SPA supporting habitat / Eliminated from HRA |
| Basingstoke Canal SSSI | 7 | Wetland management - Occasional small scrape management ~ every 3 years. Done 2018-19 so re-do eg 2022-23 unless more cost efficient to do with larger scrape below in same year Extend wetland scrape by creating large scrape on west edge 2021-22 | Additional | 2021-22 or 2022-23 | Off-site – Benefit for SPA supporting habitat / Eliminated from HRA (No possibility of significant negative effect on SPA off-site supporting habitat) |
| Non SSSI | | | | | |
| Adjacent to Bourley and Long Valley Unit 6 & SINC – Gelvert Catchment | | Wetland management Fence off small sections of Bourley Lake bank edge to encourage marginal vegetation to grow as part of larger scale development of refuges for flora & fauna – as discussed 2018 with Fishing Club & HIWWT | Additional | 2021-22 | Off site – no possibility of significant negative effect on SPA off-site supporting habitat |
| Adjacent to Bourley and Long Valley | | Claycart Stream GR 844/511 Bracken spray hill side 2ha on east side of stream & scrape patch(es) of thick bracken litter to mineral soil away from path towards slope. Linked with enhancement of heathland habitat corridor above | Additional | 2021-22 | Off-site – Benefit for SPA supporting habitat / |

| Objective / Feature | Unit Feature | Works Description | Core or Additional Works | Works (Financial Years) | HRA Conclusion |
|---|--------------|---|--------------------------|-------------------------|---|
| Near Bourley & Long Valley SSSI / SINC | | B7 pill box bat hibernaculum – follow up roost features works to 2019 Johns Associates Report | Additional | 2021-23 | Off site – no possibility of significant negative effect on SPA off-site supporting habitat |
| SINC | NE 2 & 4 | Pyestock Hill B1 Management of 2 glades 2h & 1.5ha - cleared of most scrub & bracken sprayed / 2 scrapes made to mineral soil CSF 2017-18 Follow up with similar works as & when needed probably ~ 5 year. | Additional | 2022-23 | Off-site – Benefit for SPA supporting habitat / |
| SSSI/ SPA/SINC | NE 1-6 | Undertake annual review of Agri Environment Scheme by NE/ HWT/DIO & ensure annual work plans are produced, discussed & agreed by MOD | Additional | Annual DIO/ NE / HIWWT | N/A |
| | NE2 & 3 | Undertake / support surveys to improve knowledge of presence & distribution of protected or notable /S41 species eg bats, herptiles; other mammals; butterflies (eg re-visit SSB records & for Bourley Fields & Tweseldown 1993/4) – via CGroup | Additional | 2021-25 | N/A |
| SINC / other areas in-house or features of interest | NE4 | SINC sites – review condition, any habitat management proposals as and when during annual reviews by DIO / LSS / other C Grp parties | Additional | 2021-25 | N/A |

Record of Consultation & Agreement

| Plan Prepared by: | Date | Signature |
|-------------------|------|-----------|
| P Austoni | | |

The following confirms that this management plan is considered accurate and appropriate to the management of the Natural Environment and Designated Sites on Bourley & Long Valley Training Areas for the period 2020-2025.

| Date | Position | Name | Signature |
|-------------------|---|-------------|----------------|
| | Commander: SDT SE Region | | |
| 02.07.2020 | Environmental Support & Compliance HRA | | Esigned |
| | Statutory Body (where applicable) | (NE) | |

| | |
|-----------------------|------------------|
| Review due on: | July 2021 |
|-----------------------|------------------|

References - For further information

General

- Aldershot Training Area ILMP 2004 – *Auth. DTE Various*
- Investigation of Diesel Spillage at Area B6 – Final Ecological Report – *Auth. Johns Associates*
- Draft Wetland Restoration for Training Area B7 -Gelvert Catchment 2011/12 & Phase 1 Restoration of Fleet Pond SSSI Draft Environmental Appraisal Report by Johns Associates for Hart District Council Feb 2011
- Hale Service Reservoir Off Site Reinforcement Main Jacobs Oct 2017).
- MOD Bourley Conservation Group Minutes e.g. September 2018 & March 2019
- Johns Associate Heathland Restoration Scheme in the B&LV 2016 Breeding Bird Survey Report by 2J's Ecology
- Odonata monitoring at new pools within B&LV Summer by C Hall 2016
- Survey of Odonata of Hale Gravel Pits by C Hall Sept 2012
- A survey of the past & current status of marsh clubmoss in NE Hampshire & East Berkshire by C Hall Dec 2005
- 2018 Ecological Surveys for the Esso pipeline by Jacobs consultants
- Defence Estates Sustainable Sediment Management of Long Valley – Phase 2 2012 Entec UK Ltd

Annex A

Bourley and Long Valley SSSI Citation Description and Reasons for Notification:

The site comprises a diverse mosaic of heathland, woodland, mire, scrub and grassland habitats. Such habitat diversity supports a rich flora and fauna including nationally scarce plants, nationally rare insects and three bird species listed in Annex 1 of the EC Directive on the Conservation of Wild Birds. The majority of the site is underlain by gently undulating deposits of gravels and sands from the Tertiary era, with Quaternary gravel deposits forming a high ridge to the south of the site and Quaternary Barton sand deposits exposed in Long Valley. Wetter areas such as Bourley Bottom and Long Bottom are underlain by Bagshot Beds. The dry heathland areas are dominated by heather *Calluna vulgaris*, bell heather *Erica cinerea* and dwarf gorse *Ulex minor* with bilberry *Vaccinium myrtillus* a frequent associate. Extensive patches of dodder *Cuscuta epithymum* occur on dense heather areas. Cross-leaved heath *Erica tetralix* is found in more humid heathland areas, with purple moor-grass *Molinia caerulea* dominating locally. The acidic grassland includes areas dominated by bristle bent *Agrostis curtisii*, a grass with a restricted distribution in south-east England. Scrub, dominated by gorse *Ulex europaeus*, forms part of this habitat mosaic. Springs and ditches, and valleys where drainage is impeded, support valley mire communities. Here, cross-leaved heath and bog mosses *Sphagnum* spp., dominate, with other typical bog plants occurring including common cottongrass *Eriophorum angustifolium*, round-leaved sundew *Drosera rotundifolia* and the nationally scarce marsh clubmoss *Lycopodiella inundata*. The nationally scarce pale dog-violet *Viola lactea* is also found on the site. The rich invertebrate fauna includes three nationally rare species,* ruby-tailed wasp *Chrysis fulgida* and the heathland flies *Pelecocera tricincta* and *Thyridanthrax fenestratus*. Three nationally scarce heathland insects include the potter wasp *Eumenes coarctatus*, silver studded blue butterfly *Plebejus argus* and downy emerald dragonfly *Cordulia aenea*. The mixture of open heathland, scrub, sandy areas and clearings in the coniferous woodland provide habitat for heathland birds including three particularly vulnerable species on Annex 1 of the Birds Directive; woodlark *Lullula arborea*, nightjar *Caprimulgus europaeus* and Dartford warbler *Sylvia undata*. The site also supports a small breeding population of hobby *Falco subutteo* which is important in a British context,** and on a European basis as a migratory species. Nationally important populations of the adder *Vipera berus* are also found.

Annex B

Heath Brow SSSI citation

Description and Reasons for Notification:

File ref: County: Hampshire Site Name: Heath Brow SSSI Status: Site of Special Scientific Interest (SSSI) notified under Section 28 of the Wildlife and Countryside Act, 1981 Local Planning Authority: Hampshire County Council, Hart District Council National Grid Reference: SU 823494 Ordnance Survey Sheet 1:50,000: 186 1:10,000: SU 84 NW Area: 1.93 (ha) 4.76 (ac) Date Notified (Under 1949 Act): – Date of Last Revision: – Date Notified (Under 1981 Act): 26 January 1995 Date of Last Revision: – Date Confirmed: 17 August 1995 Other Information: GCR (Geological Conservation Review) Block – Quaternary of the Thames.

Reasons for Notification: Heath Brow provides exposures in one of the recent Pleistocene gravel aggradations of southern England, the Caesar's Camp Gravel. The origin of this deposit has been widely disputed; marine, glacial and fluvial processes have all been invoked at various times to explain their depositional environment. The sediments have been keenly researched since the early part of the century and active study continues. This recent research suggests that the Caesar's Camp Gravel was deposited by a braided river in flood events during a cold, periglacial period. This conclusion is supported by the large size (up to 350 mm in diameter) of the flint cobbles present in the deposit. Despite the detailed environmental history now established for the Caesar's Camp Gravel their stratigraphical position is still uncertain. The elevation of the gravel precludes correlation with the river terraces of the London Basin, making the Caesar's Camp Gravel one of the earliest periglacial deposits in southern England. The site is therefore of vital importance to reconstructions of the environmental history of southern England

Annex C

Basingstoke Canal SSSI Citation

Description and Reasons for Notification:

The Basingstoke Canal, together with associated “flashes” and heathland, is nationally important for aquatic plants and invertebrates. The transition from calcareous spring water to slightly acidic conditions produces an extremely diverse flora, containing approximately half (87) of Britain’s native aquatic higher plant species, including 5 nationally scarce* species. The Basingstoke Canal is botanically the most species-rich aquatic system in England. Twenty-four species of dragonfly occur on the Canal and other insects, including two nationally rare** (Red Data Book) species, are well represented. Two sections of the Basingstoke Canal are of SSSI status. The western section lies between Greywell in Hampshire and Hermitage Bridge in Surrey; the eastern section lies between Monument Bridge and Scotland Bridge in Surrey. The relative lack of pollution in the Canal and the variation in water chemistry throughout its length have given rise to a diversity of plant species and communities that has no parallel elsewhere in Britain. This, together with a rich and varied invertebrate fauna, makes the Basingstoke Canal a waterway of exceptional value to nature conservation: The Canal is largely supplied by calcareous water from springs situated at the junction of the chalk and Reading Beds (clays) at Greywell. Moving downstream, it is supplemented by progressively more acidic spring and stream water from the Aldershot heathland district. Due to a slight west-east gradient, which gives rise to a definite water movement, the overall system is analogous to a slow-flowing river with initially alkaline water which gradually becomes more acidic and less charged with calcium. Such a combination is a rare feature in Britain.

The vegetation types reflect this gradual change in water chemistry. At Greywell the flora is typical of that of a nutrient-rich southern chalk stream. Here it is dominated by the moss *Fontinalis antipyretica*, the starworts *Callitriche obtusangula* and *C. stagnalis*, Fool’s watercress *Apium nodiflorum*, lesser water-parsnip *Berula erecta* and the water crowfoot *Ranunculus pencillatus* subspecies *pseudofluitans* var. *vertumnus*, the latter here in its *locus classicus*, from which it was formally studied and described. As the calcareous water moves across the London Clays the flora changes, with locally abundant mare’s tail *Hippuris vulgaris*, river water dropwort *Oenanthe fluviatilis*, arrowhead *Sagittaria sagittifolia*, the pondweeds *Potamogeton alpinus* and *P. berchtoldii* and stoneworts including *Nitella flexilis* and several varieties of *Chara vulgaris*.

The Canal then passes onto the Bracklesham Beds and Bagshot Sands of the Aldershot heathland district. In the downstream stretch some of the species abundant upstream disappear, to be replaced by a very species-rich flora which comprises a remarkable assemblage combining both nutrient-rich and acidic elements. Amongst the characteristic plants of this long stretch are the pondweeds *Potamogeton natans* and *P. perfoliatus*, water soldier *Stratiotes aloides*, Canadian and Nuttall’s pondweeds *Elodea canadensis* and

E. nuttallii and greater bladderwort *Utricularia australis*. Frogbit *Hydrocharis morsus-ranae* and greater duckweed *Spirodela polyrrhiza* occur amongst the emergent vegetation.

Plants typical of acidic waters, which occur in this stretch, are bulbous rush *Juncus bulbosus*, floating club-rush *Eleogiton fluitans* and alternate-flowered water-milfoil *Myriophyllum alterniflorum*. The Monument Bridge-Scotland Bridge stretch at Sheerwater to the east of Woking, is rich in open water and emergent species characteristic of the main part of the Canal such as the pondweed *Potamogeton natans*, frogbit *Hydrocharis morsus-ranae*, greater duckweed *Spirodela polyrrhiza*, water plantain *Alisma plantago-aquatica*, and narrow leaved water plantain *Alisma lanceolatum*. Of particular note within the Monument Bridge-Scotland Bridge stretch are the nationally scarce pondweed *Potamogeton trichoides* and the nationally scarce tasteless water pepper *Persicaria laxiflora*. Certain stretches of the Canal are less species-rich, due to shading by overhanging trees, or very localised pollution problems, but these stretches have been included in the SSSI because they enable the continuum from calcareous to acidic water to be expressed within the SSSI: Ninety species of aquatic plants, including a number of native stoneworts (charophytes) and the aquatic moss *Fontinalis antipyretica*, have been recorded in 1992 and 1993 from the main line of the canal and its extensions (or “flashes”); an additional 16 native wetland species have been recorded on the Canal system since 1986: Of the 90 plants recorded in 1992 and 1993, 5 are nationally scarce* being river water dropwort *Oenanthe fluviatilis*, the pondweed *Potamogeton trichoides*, tasteless water pepper *Persicaria laxiflora*, the horsetail *Equisetum 3 litorale* and the water crowfoot *Ranunculus pencillatus* subspecies *pseudofluitans* var. *vertumnus*. The nationally scarce water soldier *Stratiotes*

aloides and fringed water lily *Nymphoides peltata* have been introduced. Other noteworthy plants include needle spike rush *Eleocharis acicularis* and variousleaved pondweed *Potamogeton gramineus*.

The invertebrate fauna is correspondingly rich. Twenty-four species of Odonata (dragonfly and damselfly) have been recorded on the Canal in 1992 and 1993, making the Canal one of the most important sites for Odonata in terms of species diversity in Britain.

Surveys undertaken during 1992 and 1993 revealed evidence of breeding of 19 species. Of particular note are populations of the nationally scarce brilliant emerald *Somatochlora metallica*, the hairy dragonfly *Brachytron pratense* and the downy emerald *Cordulia aenea*. In addition to the Odonata fauna, the Canal supports a wide range of other insects, associated particularly with the rich emergent and bank vegetation. Hoverflies are well represented. About eighty-five species have been recorded along the Canal, including the nationally scarce *Anasimyia contracta*, *Didea intermedia*, *Epistrophe diaphana*, *Volucella inanis* and *Xylota tarda*. The scarce snail-killing fly *Psacadina verbeckei*, the nationally rare (Red Data Book)** solitary bee *Macropis europaea* and the scarce dentated pug moth *Anticollix sparsata* are also present. The Canal also supports populations of water birds such as little grebe, kingfisher and grey wagtail which are of considerable local importance.

Several off-line ÔflashesÕ have been included in the site, as they are an integral part of the hydrological system and provide shallow-water conditions which are rare in the restored main line of the Canal. Of particular significance are Eelmoor Flash, the extensive Mytchett Lake and Great Bottom Flash and the small, shallow Potter's Pool. Great Bottom Flash is fringed on the eastern side with reed *Phragmites australis* and supports a rich marginal flora including water violet *Hottonia palustris* and royal fern *Osmunda regalis*. Mytchett Lake is an extensive area of open water with abundant white water lily *Nymphaea alba* and common bulrush *Schoenoplectus lacustris* and is notable for its fringing colony of purple willow *Salix purpurea* which is rare in Surrey. The lake supports a large colony of red-eyed damselfly *Erythromma najas*. Potter's Pool, adjacent to open heathland, is an excellent site for dragonflies and supports a rich flora dominated by greater bladderwort *Utricularia australis*, with bottle sedge *Carex rostrata* in the emergent fringe of vegetation. Adjacent to the Canal, but not linked to it, is New Pond at Pirbright, which supports an acid bog marginal flora including a number of plants not recorded from the Canal, for example marsh St John's wort *Hypericum elodes*, bog myrtle *Myrica gale*, many-stalked spike-rush *Eleocharis multicaulis*, cotton grass *Eriophorum angustifolium* and lesser bladderwort *Utricularia minor*. Of additional note are the sedges *Carex rostrata*, *C. vesicaria* and *C. curta* and floating club-rush *Eleogiton fluitans*. Dogmersfield Lake is included within the SSSI as it forms part of the Canal's water catchment, and supports a rich flora including some species which are very rare in or extinct from the remainder of the Basingstoke Canal system, for example lesser water plantain *Baldellia ranunculoides*, bogbean *Menyanthes trifoliata* and water purslane *Lythrum portula*. The lake also has strong populations of needle spike rush *Eleocharis acicularis* and fan-leaved water crowfoot *Ranunculus circinatus*. The hinterland of woodland, heath, unimproved meadows and fens through which the Canal flows increases the value of the aquatic habitats. Pondtail Heath (Fleet) has been included within the SSSI since it is of direct importance to invertebrates such as the dragonflies which hawk over this area. Pondtail Heath comprises an area of largely wet heath dominated by ling *Calluna vulgaris*, cross-leaved heath *Erica tetralix* and purple moor-grass *Molinia caerulea*. The flora is rich, with species such as oblong-leaved sundew *Drosera intermedia*, meadow thistle *Cirsium dissectum*, petty whin *Genista anglica* and blunt-flowered rush *Juncus subnodulosus*, the latter in an atypical acidic locality. The invertebrate fauna includes the nationally rare** (Red Data Book) hoverfly *Pelecocera tricincta* and a population of the keeled skimmer *Orthetrum coerulescens*, which breeds in small bog pools on the heath.

*Nationally scarce species occur in 16Ð100 of 10 3 10km squares in Britain.

**Nationally rare species are listed in the relevant Red Data Book, i.e. British Red Data Book 2: Insects.

Annex D

SPA description

(information as published 2001)

Thames Basin Heaths

| | |
|----------------------|--|
| Country | England |
| Unitary Authority | Bracknell Forest, Hampshire, Surrey |
| SPA status | not yet available |
| Latitude | 15 18 18 N |
| Longitude | 00 45 06 W |
| SPA EU code | UK9012141 |
| Area (ha) | to be confirmed upon site classification |
| | Ash to Brookwood Heaths |
| | Bourley and Long Valley |
| | Bramshill |
| | Broadmoor to Bagshot Woods and Heaths |
| | Castle Bottom to Yatley and Hawley Commons |
| | Chobham Common |
| Component SSSI/ASSIs | Colony Bog and Bagshot Heaths |
| | Eelmoor Marsh |
| | Hazeley Heath |
| | Horsell Common |
| | Ockham and Wisley Commons |
| | Sandhurst to Owlsmoor Bogs and Heaths |
| | Whitmoor Common |



The Thames Basin Heaths SPA is a composite site that is located across the counties of Surrey, Hampshire and Berkshire in southern England. The open heathland habitats overlie sand and gravel sediments which give rise to sandy or peaty acidic soils, supporting dry heathy vegetation on well-drained slopes, wet heath on low-lying shallow slopes and bogs in valleys. The site consists of tracts of heathland, scrub and woodland, once almost continuous, but now fragmented into separate blocks by roads, urban development and farmland. Less open habitats of scrub, acidic woodland and conifer plantations dominate, within which are scattered areas of open heath and mire. The site supports important breeding populations of a number of birds of lowland heathland, especially Nightjar *Caprimulgus europaeus* and Woodlark *Lullula arborea*, both of which nest on the ground, often at the woodland/heathland edge, and Dartford Warbler *Sylvia undata*, which often nests in gorse *Ulex* sp. Scattered trees and scrub are used for roosting.

Together with the nearby Wealden Heaths SPA and Ashdown Forest SPA, the Thames Basin Heaths form part of a complex of heathlands in southern England that support important breeding bird populations.

Qualifying species

For individual species accounts visit the [Species Accounts section](#)

This site qualifies under **Article 4.1** of the Directive (79/409/EEC) by supporting populations of European importance of the following species listed on Annex I of the Directive:

During the breeding season;

Dartford Warbler *Sylvia undata*, 445 pairs representing at least 27.8% of the breeding population in Great Britain (Count as at 1999)

Nightjar *Caprimulgus europaeus*, 264 pairs representing at least 7.8% of the breeding population in Great Britain (Count mean (1998-99))

Woodlark *Lullula arborea*, 149 pairs representing at least 9.9% of the breeding population in Great Britain (Count as at 1997)