

Sustainability Matters

Protecting and enhancing Larkhill's habitats

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This *Sustainability Matters* is the complete copy of an article written by Mike Lockwood, our Dimensional Control Manager. Mike's article was recently published in condensed form in the latest copy of Sanctuary, the Ministry of Defence Sustainability Magazine (page 78 ref: <https://www.gov.uk/government/publications/sanctuary>). Mike's research, involvement in local conservation projects and articles for Sanctuary magazine have helped the Army Basing Programme (ABP) recently secure two Sanctuary magazine sustainability awards.

Larkhill Garrison attracts a wide variety of wildlife and is particularly rich in insect fauna. Four UK Butterfly Monitoring Scheme transects have been monitored on the garrison since 2010 and produced no less than 37 different species of butterfly; the highlight being the Duke of Burgundy, first seen along the edge of a small wood in May 2011 and annually since.



Plate 1: The Duke of Burgundy

Following the announcement of the ABP and proposals to redevelop a former motocross site, a Species Action Plan was drawn up in November 2014 with the principal aims of conserving the prime locality of the Duke of Burgundy butterfly and creating a new habitat nearby which would remain undisturbed.

Work began in August 2015 on cutting three large scallops (10-12m diameter bays) into invasive cherry saplings on the north-west facing border of a wood in Horne Barracks. During the next few months around 300 cowslip plants were rescued from areas of the garrison due to be developed for ABP and transplanted into the scallops.



Plate 2: Newly formed scallop in woodland

Over fifty Duke of Burgundy eggs were found at the motocross site in 2016 and in July four turves containing around twenty eggs were dug up from a threatened part of the site and relocated in the Horne scallops. During May 2017 two Dukes were observed in the central scallop and later three eggs found on the underside of cowslip leaves. The spring of 2017 was dry and many of the cowslip plants became distressed but some larval feeding damage was evident on at least one clump. Further cowslip planting is planned in autumn, especially in the adjacent grassland which was used for a reptile translocation scheme the previous year when 550 common lizards and 80 grass snakes were captured and rehomed.

Another new feature of the woodland at Horne is a variety of different bat boxes. When a large pipistrelle maternity roost was discovered during a routine survey of a nearby building earmarked for demolition, Aspire applied to Natural England who granted a Protected Species Mitigation Licence. One of the conditions of the licence was compensation for the loss of the roost and Aspire immediately fitted six general purpose Schwegler bat boxes to trees in the area. These versatile boxes are made from 'woodcrete', a mixture of wood, concrete and clay, which is a breathable material that maintains a stable temperature inside the box and lasts for up to 25 years so it is ideal for long-term projects.

Due to the size of the roost, larger boxes were required, so in June 2017 three pole-mounted maternity boxes were erected on woodland edge between the scallops in unshaded locations to maximise solar gain and provide a clear flight path to the entrances. These included a Miramare box, which has four separate internal compartments and is designed to replicate a natural roost in a hollow tree, plus a pair of smaller boxes made by 'Nestboxes' from exterior grade birch plywood. The boxes are painted black to absorb heat and provide warm roosting spaces.

Pipistrelle and brown long-eared bats are the main resident bats at Larkhill but others have been recorded during surveys, including the larger serotine and noctule bats.

Elsewhere on the camp, mitigation measures ensured that a clan of badgers were provided with a new home where a proposed car park fell within 30m of their extensive sett in the northern woodland. In order to satisfy planning conditions an artificial badger sett was constructed nearby in August 2016 consisting of seven chambers on different levels connected by a series of tunnels. The mound of the sett was subsequently planted with native mix shrubs including hazel, wayfarer and blackthorn, which will ultimately provide cover and an autumnal food source for the animals.

Although badgers are notoriously slow to occupy made-made setts, generally preferring to excavate their own, one of the local foxes had no such problems taking up early residence, its presence given away by discarded food wrappers. The first signs of badger activity at the sett were recorded after six months of construction (confirmed by hair samples) with further evidence of use at one of the front entrances noted in July 2017.

The original setts were closed under licence from Natural England and part of the area they occupied is now being prepared for a wildflower meadow and nursery for disease resistant elms. Adjacent to this meadow is a group of mature cherry plum trees which, by careful planning, have been saved from removal to maintain biodiversity in the area. Not only are the trees aesthetically pleasing, bearing masses of white blossom early in spring, the plums are of considerable benefit to the local wildlife. Foxes have been observed feasting on the windfalls and badgers also clearly enjoy the fruits since numerous plum saplings grow around the unmanaged woodland edges, spread by pits in the animal droppings.

In 2016 it was discovered that the brown hairstreak was using these cherry plum as an alternative food-plant to the more usual blackthorn and plenty of the butterflies' eggs were found during the winter months. Some of the plum saplings were saved when the badger setts were closed and transplanted in the Horne scallops. Another project is now underway to propagate cherry plum from pits gathered from the summer fruit and plant at various locations along woodland borders elsewhere on the garrison.

Despite pressure on existing habitats within the camp it is hoped that enough new ones will be created to help sustain the wildlife that has chosen to make Larkhill Garrison its home.



Plate 3: Cherry Plum at Larkhill. Inset, a female brown hairstreak

Plate 4: Artificial badger sett before burial