GREENHAM AND CROOKHAM COMMONS

SMALL BLUE BUTTERFLY HABITAT MANAGEMENT ON THE COMMON AND THE BUND ALONG THE NORTH SIDE OF THE NEW GREENHAM BUSINESS PARK

Notes on habitat, photos of bund and summary of management advice provided by Grahame Hawker (Butterfly Conservation)

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Photographs

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1. General notes on habitat management of the Small Blue Butterfly on Greenham Common.

(Summarised from Butterfly conservation species leaflet and 'Butterflies of Britain and Ireland'-Thomas and Lewington 1991)

- Aim to create a 'sun-baked sheltered terrain of rough and broken ground' (Thomas, J: 1991) with a mosaic of short and tall vegetation with good proportion of Kidney Vetch.
- Deter proliferation of course grasses that would out-compete Kidney Vetch.
- Periodic/patchy ground disturbance is best. Use of flail or hand tools most practical along steep banks of bund along north edge of New Greenham Business Park.
- Grazing not relevant to bund but amount of grazing on Greenham Common especially in the spring/summer could be detrimental. This is because three is a risk that all the kidney vetch flower heads could be eaten. As Small Blues lay their eggs in between the flower buds and their larvae feed on the seeds this would be disastrous for the colony.
- Ground disturbance on main part of Common could utilise more mechanised means.
- Shelter is essential so the presence of some scrub is beneficial. This explains the species' absence on the 'fields' of Kidney Vetch NE of the Business Park.

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2. Notes from preliminary field visit to the New Greenham Park bund (with Lloyd Garvey): Habitat description/discussion.

(19 January 2009)

The Western half

- Probably responsibility of New Greenham park Ltd
- North side of bank, where most Small Blue sightings are from, consists of alternating sections of varying lengths (approx 30-75m) of grassland and scrub.
- Some of the grassy sections contain many planted whips in rows (native species: Birch, Oak etc).
- Several of these wooded sections have sparsely vegetated, gravelly areas mixed in with taller grass and sheltered by nearby scrub and are therefore currently suitable for Kidney Vetch and Small Blues (albeit only until the scrub takes over).
- At least some of the trees are probably dead. With permission from the owner, these could be removed. This will go *some way* to preventing the shading out of existing habitat and

opening up more grassland areas. Whips have also been planted along the entire length of the top of the bank

- The south side of the bund is covered mostly by well established matted and thick, course grasses, areas of scrub (bramble, broom, occasional gorse, some holly etc) and many whips planted in rows (many birch!). Few areas of more open grassland. Currently, largely unsuitable for Small Blues.

Photo 1: Western half of bund, north side, showing planted whips and trees on top of bank. Note open gravelly areas amongst grass.

Photo 2: Western half of bund, north side, showing one of regular patches of scrub along bank.

The Eastern half (Prologis end)

- Unsure if responsibility of **New Greenham Park Ltd** or **Prologis**. Need to establish.

- Most of north facing bank different in character to the western half with no planted trees and long sections of course grass and scrub (bramble, broom etc). May be easier to implement management without presence of trees? There are trees planted along the top all the way along. Some gravelly, sparsely vegetated areas are present along this section but Kidney Vetch is scarce.

- Virtually no Small Blue sightings along this half of bund.

- The south side of this half of the bund is covered mostly by well established matted and thick, course grasses, areas of scrub (bramble, broom, occasional gorse plants, some holly etc) and many whips planted in rows (many Birch!). Few areas of more open grassland. Currently unsuitable for Small Blues.

- Along entire length of assumed Prologis section of bund is what is believed to be a 'mitigation' barrier (reptiles/amphibians?). This is constructed of heavy duty black plastic sheeting held in place by wooden stakes driven deep into the top of the bank so that only about 30cm remains above the surface. Many discarded reptile mats found (20?), probably left from reptile survey carried out previously. Underneath two mats, two *probable* Field voles were found.

Photo 3: Eastern half of bund, north side. Note line of trees on top of bank but no planted whips on the slope and extensive sections of grassland and scrub.

Photo 4: Eastern (Prologis) half of bund looking east, showing black 'mitigation' barrier. Note course and matted grassland on near/south side.

3. Notes from field visit to Greenham Common with Grahame Hawker advising on Small Blue habitat management.

(Ade Wallington, Lloyd Garvey and John Lepinière also present):

20 January 2009

3.1 Summary of advised management and recommended options

- Implement measures to improve Small Blue habitat on the Common as well as the bund situated along the northern boundary of the New Greenham business park. **Aim to create a sheltered mosaic habitat of broken ground with tall and short vegetation suitable for Kidney Vetch to flourish without being out-competed by more vigorous species.**

- 'Sell' any funding request on the basis of the benefit to a range of wildlife rather than just the Small Blue.

- **ROTATIONAL SCRAPING** advised as main management technique for the bund. The aim would be to provide disturbed ground conditions, sheltered by nearby taller grass and scrub, suitable for Kidney Vetch. Hand tools and use of volunteers probably most practical as the bund is too inaccessible and steep to use machines. (Involve employees of relevant local companies?).

- On the Common create a series of **CRESCENT BUNDS**. These would potentially benefit the Small Blue by providing a sheltered micro climate and disturbed ground suitable for Kidney Vetch to flourish. They would also be of benefit to a whole range of other wildlife including many invertebrates such as ants, mining Bees/wasps etc. May also encourage the establishment of Bell Heather which together with the increase in ant habitat, would be good for the SSB project

- Desirable to take advantage of the 'warmer' **south facing slope** of the bund and manage this for butterflies (and other wildlife) in general: Where possible open up grassland areas. If acceptable to Owners consider opening up lower ¼-⅓ of bund by removing a good proportion of scrub and most of the trees. The remaining grassland can be scraped in sections or at least cut to improve flower diversity.

- South side of extreme eastern end of bund (c70m) very promising section for management intervention. No trees present. South facing, warm. Adjacent to brown-field site. Easily accessible for bulldozer or other vehicles, so thick covering of scrub (including much bramble) could be removed relatively easily. Large amount of dumped rubble in situ could be utilised to create dry 'calcareous' conditions?

- Kidney Vetch is vulnerable to over grazing especially in spring/summer when all the flower heads could be eaten. On the Common consider fencing off areas containing the newly created crescent bunds at this time of year.

- However, a certain amount of grazing is desirable as it helps to create less competitive conditions for Kidney Vetch, so grazing at other times of the year is fine.

- Consider seeding newly scraped areas with KV seeds. Large seed bank available on Common in open areas on e.g. old runway E of runway cross and NE of business park. Consider paying someone like Charles Flower to collect the seeds.

- If gravel not widespread on bund consider importing 'calcareous' rubble/chippings to spread over surface of some areas to enhance conditions for Kidney Vetch.

3.2 Preliminary/preparatory action

- Find out history of bund (probably about 9 years old?). Ascertain composition (any chalk/limestone element?). Was it topped with soil? Soil sampling kit would be useful.

- Find out if the patches of exposed gravel are an indication that gravel is present along full length of the bund but mostly hidden by grass and scrub?

- Establish depth of top toil and if gravel present by scraping of top layer with hand tools at a selection of locations along the bund.

- Find out number and location of trees (planted whips) that can be removed without compromising the owner's plans to screen the industrial units from the Common. Many are already dead so will have to be removed anyway. Walk bank and remove plastic tubes to establish which trees are dead.

- Find out where the owners plan to position the 'gaps' in the tree screen. See if it is possible to influence position of gaps to better suit the Small Blue management objectives. Incorporate these gaps into the management plan as these will be the least shady sections and therefore the most worthwhile prospect for maintaining Small Blue habitat.

- Walk southern bank of the Prologis section to identify any areas of more open grassland that could be enhanced for butterflies.

- Establish if Prologis has green policy and if so see how it may benefit the project.

3.3 Management techniques

- After consultation with owners remove all superfluous trees.

- Subdivide the bund into sections of broad habitat type: e.g., a) scrub, b) grassland, c) young woodland (?)

- Further sub divide the main sections into smaller manageable strips (5-15m width?). Aim for relatively short term rotation (5 years?) of scraping different strips.

- Consider carrying out trial where, for example, one strip could just be scraped, another could be scraped *and* topped with gravel and another, scraped *and* seeded with Kidney Vetch seeds etc. Monitor Kidney Vetch establishment and Small Blue numbers.

- Carry out scraping on a rotational basis probably using volunteer base and hand tools.

- On the Common, excavate a series of crescent shaped bunds within or close to, areas with Small Blues present, i.e. the interface between the gorse and neutral grassland just N of the business park bund. Use a digging machine.

- Position the crescent bunds with the convex (steeper?) side facing the prevailing wind so that the opposite, concave side, is sheltered. Pile up scraped soil to a height of up to 1m in the middle and taper the ends down to ground level so that the whole thing is like a banana shaped croissant!

- On south side of last 70m of extreme east end of bund remove proportion (amount to be discussed) of scrub from bank using machine (roadway present). Implement scraping regime to improve flower diversity/encourage Kidney Vetch.

3.4 Monitoring

- Monitor establishment of Kidney Vetch on scraped areas. Lloyd Garvey may carry out University project on population structure of Kidney Vetch which would be very useful to Small Blue project.

- Continue single species Small Blue transect along *full* length of bund. Consider doing zigzag transect route as well to effectively monitor any population change. Timed?

- Consider carrying out Small Blue egg counts to further monitor the population.

- Consider public (?) 'Caterpillar crawl' event to look for 'brown' butterfly larvae along sections of grassland (Gatekeepers, Meadow Browns and Marbled Whites). Use torch after dark as they ascend grass stems at night.

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