

7.3 Small Blue Butterfly (*Cupido minimus*) – Lead Partner Butterfly Conservation

Main Objectives & Key Actions:

- 1) **Maintain viable population at Lummaton Quarry.**
 - Ongoing.
- 2) **Maintain/increase favourable management of sites with potential for re-colonization.**
 - Bring Wall's Hill and other historic sites into favourable status by 2012.
- 3) **Ensure no net loss of habitat suitable for breeding colonies of Small Blue within Torbay**
 - Ongoing.
- 4) **Encourage establishment of new colonies/restoration of former colonies at suitable sites within Torbay.**
 - When favourable management is achieved look to reintroduce colonies at appropriate sites – ongoing.
- 5) **Maintain a viable network between populations.**
 - Establish and map potential networks between known colonies and seek to implement favourable management by 2012.
- 6) **Continue monitoring to maintain accurate knowledge of numbers and distribution within Torbay**
 - Carry out yearly counts at Lummaton Quarry and sites where reintroductions have taken place – ongoing.
- 7) **Raise awareness of Small Blue and habitat requirements with the community and land owners/managers**
 - Ongoing.

7.3.1 Background and Current Status

The small blue has declined severely since the 1950s. The species has shown a reduction in range of over 50% in the 20th century (Bourn & Warren, 2000), becoming extinct in many areas of northern England and becoming increasingly isolated in some Southern strongholds. A recent study by Butterfly Conservation for DEFRA (2006) highlighted the decline in many British butterfly species, including the small blue.

The small blue is restricted to habitats where the kidney vetch (*Anthyllis vulneraria*) grows, as this is the sole food source for larvae. These include calcareous grassland, dunes and man-made habitats such as disused railways, road embankments and quarries. Research has shown that the most suitable habitats will contain a mosaic of short and tall vegetation and patches of light scrub (Bourn & Warren, 2000). Such habitats can provide shelter required by adults and suitable conditions for growth of kidney vetch. The small blue is a

sedentary species, colonies tend to be small and fluctuate in numbers possibly related to variable flower production in kidney vetch.

Torbay holds one of only three small blue sites in Devon, at the disused Lummaton Quarry; the other known sites in North and East Devon. In the past there have been colonies recorded at other sites in Torbay such as Walls Hill, Daddyhole, Berry Head and Ilsham Valley, but Lummaton Quarry is at present the only existing colony (Figure 9). **The current Torbay site is not accessible to the public.**

Since the discovery of the Lummaton Quarry colony in 1999, TCCT has worked alongside Butterfly Conservation and Torbay Council to manage this site, including scrub clearance to maintain suitable conditions for kidney vetch growth. Transect counts at Lummaton Quarry since 2003 have shown numbers of up to 75 adults present in this colony. However, an area of habitat inside the quarry was lost to industrial development in 2005.

In 2005, TCCT in conjunction with Butterfly Conservation moved approximately 80 small blue larvae from Lummaton Quarry to Wall's Hill with the aim of re-introducing a colony to Walls Hills. TCCT have been working to clear scrub on Walls Hill and improve conditions for kidney vetch. However there have been no confirmed sightings of small blue butterflies in 2006 at Wall's Hill since the reintroduction, and therefore it appears it has been unsuccessful.

Current species and associated Habitat Protection

UK BAP status: Species of Conservation Concern

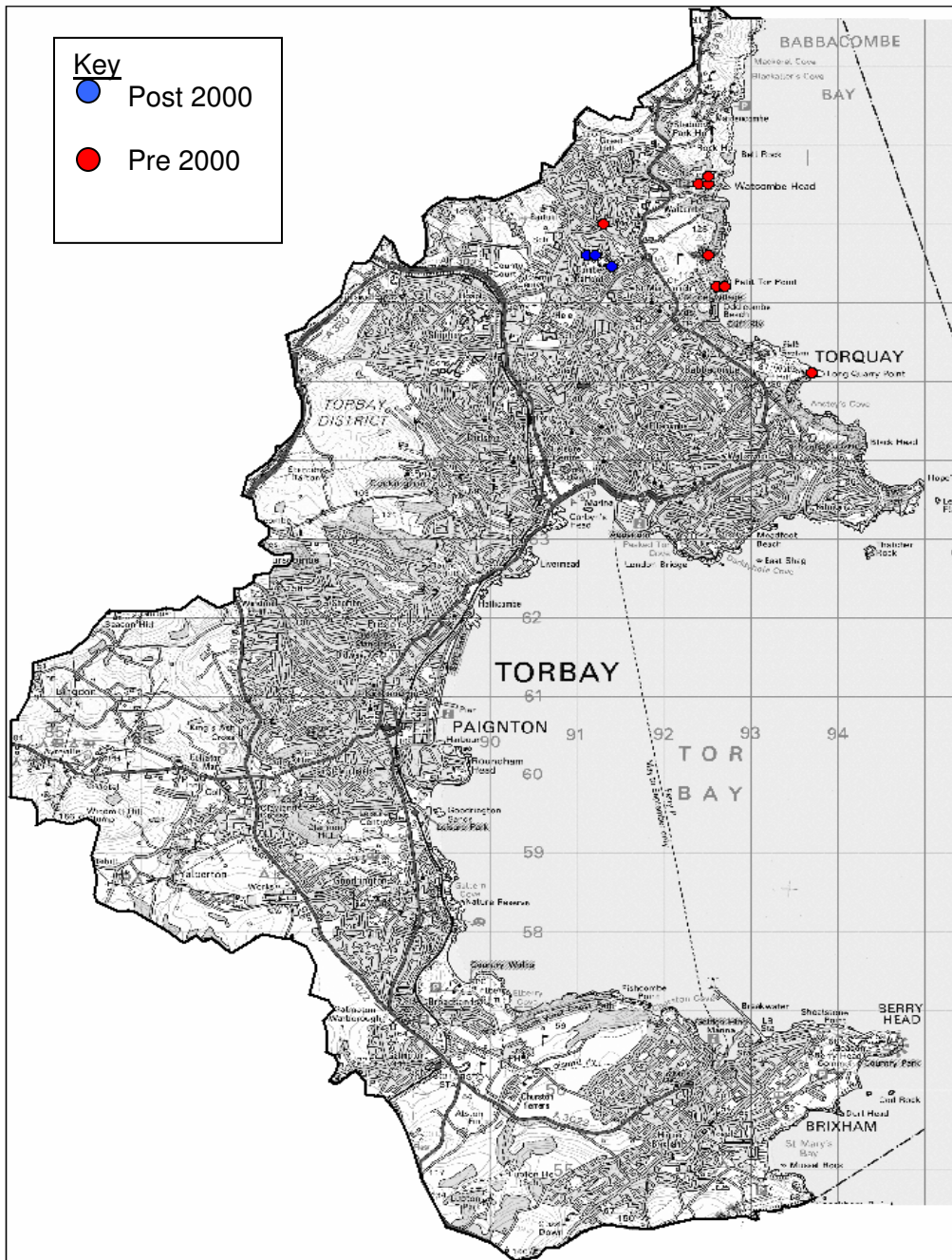
European threat status: not threatened

Listed under Schedule 5 of the Wildlife and Countryside Act (1981) for sale only
Fully protected under the Wildlife (Northern Ireland) Order (1985) which makes it a criminal offence to kill, injure or take the species as well as own or sell it.

Butterfly Conservation priority: medium (National SAP produced by Butterfly Conservation trust in 2000)

7.3.2 Current problems/threats to this species:

- Habitat loss through scrub encroachment
- Overgrazing – inappropriate grazing regimes at managed sites and grazing from rabbits can lead to removing flower heads of kidney vetch
- Habitat fragmentation and isolation of colonies
- Development pressure on sites
- Habitat destruction from vandalism and fires (these are issues at Lummaton Quarry)
- Human disturbance e.g. through littering, trampling, dog fouling
- Small size of colonies combined with fluctuations in larval food plant kidney vetch can make colonies prone to localised extinctions
- Low dispersal ability of this sedentary species in combination with habitat fragmentation and isolation can restrict recovery and ability to re-colonize



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Figure 9: Map to show Small Blue Butterfly records pre and post 2000. Additional data was kindly provided by Devon Biodiversity Records Centre. The current Torbay site is not accessible to the public.

Table 15: Small Blue Action Plan. Actions shaded in grey require further funding.
High priority actions are proposed for completion within the next 3 years (to end of 2009).
Medium priority actions are proposed for completion within the next 6 years (to end of 2012).
Low priority actions are proposed for completion within the next 10 years (to end 2016).

Actions for Small Blue Priority Action Plan	Priority (High, Medium and Low)	Meets Objective	Partners	Ongoing Action
Policy & Legislation				
SB1 - Seek protection of potential Small Blue sites that are not already designated as SSSI or CWS.	H	2	TCCT, TC, NE	
SB2 - Seek to include habitat requirements for Small Blue in any new/revised Environmental Stewardship agreements covering existing or potential habitats	H	1,3,4,7	TCCT, DEFRA, NE, FWAG, BC	✓
Species & Site Management				
SB3 - Continue favourable management of existing site at Lummaton Quarry and Wall's Hill to encourage growth of Kidney Vetch.	H	2, 4	TCCT	✓
SB4 - Incorporate requirements of small blue into appropriate site management plans/statements.	H	3,4,7	TC, TCCT, NE, BC	✓
SB5 - Restore more suitable habitats within Torbay (e.g. through scrub clearance and applying appropriate grazing regimes) concentrating on areas close to existing population where there is potential for natural colonization.	M	3, 4, 5	TC, TCCT, BC	
Communication & Publicity				
SB6 - Use of public/volunteer effort to identify potential areas for re-colonization and link into other surveying projects e.g. Lowland Calcareous Grassland.	L	7	TCCT, BC	✓
SB7 - Raise public awareness of Small Blue population by publicising management work carried out at Lummaton and Walls	H	7	TCCT, BC	✓

Hill, and reporting on success of re-colonization at Walls Hills.				
SB8 - Provide advice on habitat requirements and practical habitat management.	M	1,3,4,7	BC, TCCT, FWAG, NE	✓
Research & Monitoring				
SB9 - Utilise volunteer effort for monitoring of colonies where appropriate	M	7	BC, TCCT	✓ (Yearly)
SB10 - Ensure data on distribution, abundance and habitat requirements available to all relevant authorities/organisations. Data exchange with DBRC.	H	6,7	BC, TCCT, EN, DBRC	✓ (Yearly update)
SB11 - Continue to monitor existing transects and collate results annually	M	6	BC, TCCT, volunteers	✓ (Yearly)
SB12 - Survey work to assess potential for re-colonisation of other sites in Torbay.	M	3	BC, WWCT, PZ, TCCT	
SB13 - Identify potential corridors between habitats (e.g. road embankments, disused railways)	M	5	BC	

Abbreviations: Torbay Coast & Countryside (TCCT), Torbay Council (TC), Natural England (NE), Butterfly Conservation (BC), Paignton Zoo (PZ), Whitley Wildlife Conservation Trust (WWCT).