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Case study: Untidy Industries, Basildon

Untidy Industries is a 7.5ha former vehicle wrecking yard in Basildon, Essex, which supports an outstanding assemblage of invertebrates. Previous disturbance has created both wet and dry areas, with pockets of introduced substrates and varied topography across the site. The site supports a diverse mosaic of nectar-rich wildflowers and varied vegetation structures. After being threatened by succession, the future of the site has now been secured through long-term management for its invertebrate interest.

The western side of Untidy Industries has been strongly influenced by historical industrial activity, with scattered introduced substrates including rubble and chalk. Thin, free-draining soils with drought-stressed vegetation include extensive stands of Stonecrops (*Sedum* spp.) over tarmac and concrete. Large areas of low nutrient clay, contaminated with hydrocarbons and heavy metals have effectively delayed succession. Many other localised features including areas of dry reed, drought-stressed bramble, diversify this small site.

Varied topography, underlying materials and an absence of management have allowed a structurally diverse vegetation mosaic to develop. Untidy Industries supports diverse forage including valuable species such as Wild carrot (*Daucus carota*), Common knapweed (*Centaurea nigra*), Narrow-leaved bird's foot trefoil (*Lotus glaber*) and Red bartsia (*Odontites vernus*). The east of the site represents remnant coastal grazing marsh which has developed into extensive scrub with only small pockets of rough grazing marsh grassland remaining.

Over 590 invertebrate species have been recorded, including 59 Essex Red Data Book species and the UK Priority Brown-banded carder bee (*Bombus humilis*) and Shrill carder bee (*Bombus sylvarum*).

Prior to Buglife's involvement in 2009, scrub encroachment was threatening the long-term future of the open habitats.

Key species of the site

- Bees and wasps: Brown-banded carder bee (*Bombus humilis*), Shrill carder bee (*Bombus sylvarum*), Horned yellow-faced bee (*Hylaeus cornutus*), cuckoo bees *Sphecodes niger* & *Stelis ornatula*, sphecid wasp *Passaloecus clypealis*.
- Flies: Tachinid fly *Gymnosoma nitens*, long-legged fly *Dolichopus signifier*.
- Shieldbug *Sciocoris cursitans*.
- Spider *Phrurolithus minimus*.



Diverse wildflowers on introduced substrates © Jamie Robins



Horned yellow-faced bee (*Hylaeus cornutus*) © Steven Falk

Key features for invertebrates

- Diverse unmanaged flora providing forage for a range of species including, root, stem, flower and seed feeding species.
- Mosaic of bare, friable ground including chalk, sand and clay, with early successional vegetation supporting active beetles and spiders.
- Drought-stressed bramble offers opportunities for stem-nesting bees and flies.
- Topographical and microclimate variation from past disturbance, creating conditions for both wet and dry loving species.
- Scrub edge providing localised shelter.

Buglife habitat work undertaken

Over 2ha of scrub was cleared to restore wildflower-rich short swards and bare ground, using both contractors and volunteer teams, with stumps treated to prevent re-growth and material burnt on site. Buglife have worked with Essex County Council and Basildon Council to secure long-term management as part of a compensation package for impacts of development on the Canvey Wick SSSI, and an ambitious master plan is now in place.

- A mosaic of early successional habitats and open mixed sward grassland will be created to compensate for losses at Canvey Wick. The work aims to maintain and enhance a diverse habitat mosaic, retaining all elements valuable to the existing invertebrate assemblage.
- 70% of scrub on the eastern half of the site, will be cleared, creating a mosaic of bare ground and early successional

habitats required by key rare species.

- New sand and chalk areas will be created, ensuring variation in topography, south-facing slopes, mounds and hollows, to develop a rich early successional mosaic. Scraped material will be used to create adjacent bee banks.
- A periodic disturbance regime will be instated, creating scrapes and stripping topsoil to expose underlying low nutrient substrates. Over time a successional mosaic will develop to benefit a large range of rare and scarce species, while scrapes with gently sloping edges will be encouraged to create ephemeral wet areas and pools.
- Natural regeneration, plug planting and seeding of key forage plants for rare bumblebees will all be used.
- Additional small scale habitat features are planned such as creating standing dead wood by ring barking selected trees, and laying brash piles for the site's reptile interest.
- Public access will be permitted with visitor infrastructure and interpretation, as an example of how to manage brownfields as valuable wildlife and community spaces.

Monitoring and management

Long-term management has been secured, with periodic disturbance regimes of open areas to create a mosaic of successional habitats. Scrub clearance and sapling pulling will help maintain an open scrub and grassland resource.

Invertebrate surveys are planned to gauge the success of work relative to control surveys at Canvey Wick. Vegetation surveys will examine the success of scrub clearance, introducing substrates to diversify communities, and the results of natural regeneration, seeding and plug planting.

References

Mouchel (2011) Roscommon Way extension: Untidy Industries management plan. Mouchel, London.



Left to right: The scarce bare ground-dwelling shieldbug *Sciocoris cursitans*, and its parasite the tachinid fly *Gymnosoma nitens* © Tristan Bantock

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