



## **WILDER STATIONS PROJECT**

# **GREAT BENTLEY TRAIN STATION ECOLOGICAL ENHANCEMENT PLAN**

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This report has been compiled in accordance with BS 42020:2013 Biodiversity – Code of practice for planning and development, as has the survey work to which it relates.

The information, data, advice and opinions which have been prepared and provided are true, and have been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct. We confirm that the opinions expressed are our true and professional *bona fide* opinions.

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**GREAT BENTLEY TRAIN STATION**  
**ECOLOGICAL ENHANCEMENT PLAN**

**1. Introduction**

1.1 General Introduction

Great Bentley Station is one of four stations in Essex which have been selected to become part of the Wilder Stations Project, started by Norfolk Wildlife Trust in 2021. The aim of the Wilder Stations Project is to create new habitat opportunities for wildlife and to enhance existing areas.

Great Bentley Station (GRB, Station Road, Great Bentley, Essex CO7 8LH) is located in the civil parish of Great Bentley, in the Tendring District. The area of the station itself is XXX. The whole area is surrounded by fields and agricultural land, and the closest area of coastline is Clacton-on-Sea, approx. 9.8km (6m) away. The station comprises part of the Sunshine Coast Line, which runs from Colchester to Walton-on-the-Naze.

1.1.1 Notes

Plants referred to as ‘ornamental’ or ‘garden’ plants are usually non-native species that are grown for decorative purposes. Any plants marked with an asterisk ‘\*’ indicate a provisional, not confirmed, identification. Species are referred to by both common and binomial name where applicable, but omissions have been made for key species (e.g. hedgehog, wren, robin) which are unmistakable.

1.2 Description of Site

The site includes two station buildings (both not in use), the larger on the north side of the track (Platform 2), the other on the south side (Plat. 1) next to a newer timber-framed ticket and seating area. The site is contained on the north side by part of Station Road and a car park leading on to a construction site, with fences and a brick wall between, and on the south by a combination of wooden and wire fencing between the platform and a private garden, car park, and warehouse buildings belonging to Plough Road Business Centre.

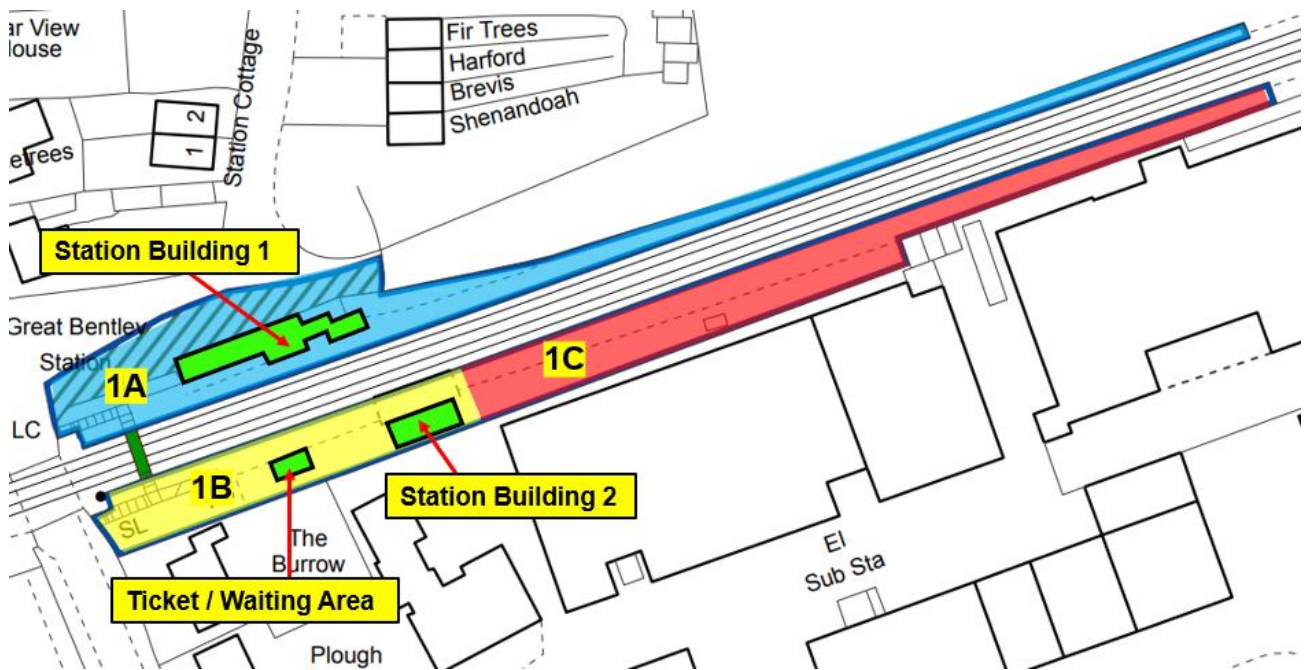


Figure 1: Map of Great Bentley Station, adapted from maps provided by Greater Anglia.

The areas highlighted on the map are as follows:

1A: North side, “Station Building 1”, garden and platform edge

1B: South side, area from Plough Road to timber-framed waiting area and “Station Building 2”

1C: South side, area from Station Building 2 to platform end

- 1.2.1 1A: The old station building provides the entrance to the platform from the free car park and Station Road. The building itself is not in use, and the back courtyard, between the building and platform, is overgrown with Buddleia (*Buddleja davidii*\*), Nettle (*Urtica* sp.) and large patches of a likely ornamental broad-leaved species.



Figure 2: Bee hotel (L), garden area as viewed from opposite platform (R)

On Platform 2, there is a small planted garden (Fig. 2) which is comprised of a single bed populated with Pampas Grass (*Cortaderia* sp.), *Phormium* sp., Cherry Laurel (*Prunus laurocerasus*\*), Buddleia, Beech (*Fagus* sp.), two large standalone roses (*Rosa* sp.), *Hylotelephium spectabile*, Broom (*Cytisus scoparius*) and Wild Carrot (*Daucus carota*). Trees identified were Acer sp., Dogwood (*Cornus sanguinea*), Hawthorn (*Crataegus monogyna*), Hazel (*Corylus avellana*), and Holly (*Ilex aquifolium*). Behind the garden is a brick wall and wooden fence almost entirely covered in an Ivy (*Hedera helix*) hedge.

In this bed is also a wooden beehive-style insect hotel (Fig. 2) containing sticks, bamboo cane, and blocks of wood.

From the end of the wall to the end of the platform, a distance of approximately 40 metres, is a small gravelled area approx. 2 feet wide between the fence and the platform, inhabited by Wild Rocket (*Diplotaxis* sp.) and small Ivy shoots growing through the gravel.

Between the north and south sides of the platform is a metal railway bridge which crosses over the line.

- 1.2.2 1B: On the western side of the ticket and seating area is a 'Help Yourself Herb Garden' planter, provided by The Beefriendly Trust and funded by ESSCRP and the Community Rail Network, which is planted and labelled with *Salvia* 'Hot Lips', Curry Plant (*Helichrysum italicum*) and Mint (*Mentha* sp.). Behind the seating structure is a small, rectangular area of grass (Fig. 3). Running parallel to the fence behind the area of grass is a low metal barrier. The sloping path finishes at Plough Road (Fig. 3); on one side of the path is the train line and railway bridge, on the other is an approximately one metre strip of land bordering the path, which has a conifer tree and some branches laid inside it. There is also some Bamboo growing on this side of the platform.



Figure 3: The area of grass behind the ticket/waiting area (L), the path leading to Plough Rd. ®

1.2.3 1C: From the other side of Station Building 2 is a wire fence which runs from the back of the business park to the platform end. Between the area of the fence and the path is a strip of earth, which has numerous Ash (*Fraxinus excelsior*) trees growing on it, some of which are well-established. There are also several more Rose bushes along this section, and Japanese Honeysuckle (*Lonicera japonica*) growing over some of the scrub underneath the trees.



Figure 4: Area of trimmed brush and branches

### 1.3 Objectives of Survey

The objective of the survey was to assess the site's biodiversity, including flora and fauna, and to suggest methods by which the potential of the site can be enhanced for the benefit of wildlife.

## 2. Enhancement Recommendations

### 2.1 General Recommendations

The fields, agricultural land and roads such as the A133 are likely to present potential limitations for local wildlife access to the village. However, to the south and south-west of Great Bentley can be seen several areas of woodland and Bentley Brook, while 2.5 kilometres to the south-west lies a network of woodlands around Thorrington.

These nearby factors signify the potential of this site to make a local difference to biodiversity. Generally, the advice is structured around enhancing the site for the benefit of local pollinators such as bees, other insects, garden birds, bats and hedgehogs.

An additional benefit of the area is in the facilitation of a corridor between sites such as gardens or waste plots, and in the accessibility of the site to the public for infographics or other information about the local area's biodiversity. The station's close proximity to local community hubs such as the village hall and Great Bentley Primary School create additional opportunities for community-level involvement.

### 2.2 Area-specific Recommendations

1A: The primary recommendations for this area include the use of the building and the adjoining garden. The building could easily host one or several signs or infographics highlighting themes such as local biodiversity, wildlife-friendly gardening and plants, common pollinators, or garden birds. Themes of wildlife connectivity through green spaces, perhaps by comparison with the connectivity of rail services for people, may also be engaging for users of the railway station. The garden itself would benefit from being replanted – removal of non-native species, and replacement with native ones, would be of the most benefit for pollinating insects such as bees, wasps, hoverflies, flies and beetles. Table 1 (below) presents an assessment of the plants in Area 1A based on their native status, position in the garden, and proposed actions for their removal or management.



PLANT	ACTION
Large Buddleia	Cut back seasonally – the large Buddleia is overshadowing the smaller Hazel tree and potentially stunting its growth. Cutting back the longer stems of the Buddleia will ensure the bush stays more compact, and may promote more flowering.
Ivy Hedge	Targeted management such as cutting back if it begins to overshadow the garden plants or becomes a safety issue for users of the road or car park. Otherwise, leaving it to flower creates a valuable source of nectar and pollen for autumn-active pollinators such as wasps, mining bees and flies. Keep an eye on the underlying fence/wall in case the plant begins to cause damage.
Trees: <i>Acer</i> , Beech, Hazel, Holly	These can be kept as they are – they are several feet away from each other so are unlikely to compete for nutrients or space.
<i>Phromium</i> , Laurel, Pampas	These species should be removed, as they are non-native and of no benefit to pollinators, birds, or mammals.
<i>Hylotelephium spectabile</i>	This plant, while non-native, can be a source of nectar for pollinating insects and can be retained in the garden without issue. It can spread, so focus should be on ensuring that it does not overgrow and outcompete more important (native) flora.

Table 1: Garden plant breakdown and management suggestions

The insect hotel in this garden is well-made, fit-for-purpose, and should be retained – its position in the garden against a south-facing wall is also optimal. Other insect hotels, perhaps of different styles and including different materials, could be added in different areas of the garden to provide more diverse habitats for invertebrates and small vertebrates such as mice, voles, reptiles, and amphibians. This could include wooden frames filled with leaf litter, pine

cones, log sections of varying diameters, or rocks and rubble – the final category could even be repurposed from the station building site, where some brick rubble was observed. Figure 5 (below) provides an example of one style of effective invertebrate hotel, but there is wide scope for variation on this design.



Figure 5: Example of a good, multi-purpose insect hotel. Image: stock image (iStock.com / Peplow), via Wesley (2019)

Owing to Great Bentley's proximity to Colchester, and the extremely high potential for Stag Beetle (*Lucanus cervus*) and Lesser Stag Beetle (*Dorcus paralellapipidus*) (NBN Gateway [1, 2]) in the area, adding dead deciduous logs and stumps to the garden will help to create further suitable habitat for these species. Addition of deadwood, leaf litter, and rubble also helps facilitate the establishment of other groups such as longhorn beetles, woodlice, millipedes and centipedes, which are important detritivores.

There is a single barrel-style planter currently in the garden area, which does not have anything growing in it. This could be moved to a site on the platform itself in order to free up more space in the garden. Suggestions for native species to replace non-natives in the garden area and planters: Betony (*Stachys officinalis*), Campanula sp., Forget-me-not (*Myosotis sylvatica*), Foxglove (*Digitalis purpurea*), Hemp Agrimony (*Eupatorium cannabinum*), Oxeye Daisy (*Leucanthemum vulgare*), Common Dog-violet (*Viola riviniana*), Common Toadflax

(*Linaria vulgaris*), Red Valerian (*Centranthus ruber*) Fennel (*Foeniculum vulgare*) and Red Campion (*Silene dioica*).

These species and more can also be grown from seed. The best resource for wildflower and pollinator-friendly species seems to be British Wildflower Seeds, which advertise seeds of native species with UK provenance, harvested in a sustainable manner. *Butterfly and Moth Seed Mix* and *Neutral Soils Meadow Seed Mix* are two mixes which would suit the grounds of the railway station well.

Species such as Broadleaf Plantain (*Plantago major*), Creeping Buttercup (*Ranunculus repens*), Dandelion (*Taraxacum sp.*), Flatweed (*Hypochaeris radicata*), Hawkbit (*Leontodon sp.*), Ribwort Plantain (*P. lanceolata*) and White Clover (*Trifolium repens*), are also useful pollinator plants which would be well-suited to growing within the boundaries of the station, but these species are likely to establish naturally. The smaller size of these plants would also mean that they can be planted between the trees and shrubs kept within the garden without issue.

Station Building 1, being the highest point on site, would suit the installation of swift boxes. The boxes should be installed at least five metres from the ground, under the eaves of buildings, preferably facing north-east or north-west to protect from glare (Wildcare, no date). An example of a wooden swift box can be seen in Fig. 6, although alternative designs are also available.



Figure 6: example of a swift box. Image: RSPB.

The fence on this side of the platform is already open underneath, so access for mammals and other small vertebrates is already facilitated. However, if the advertisement of nature-friendly features is implemented, a hole to create a hedgehog highway could be added. The British Hedgehog Preservation Society offers small signs made of recycled plastic which highlight where specific holes made for the passage of hedgehogs are (see Fig. 7 below).



Figure 7: Hedgehog Highway sign. Image: British Hedgehog Preservation Society.

1B: The primary enhancement recommendations for this section are with the wooden ticket/waiting area, and the area of grass behind. The small building, with its timber framing and sloping roof, lends itself well to the installation of green roofing. The Grass Roof Company has information and a DIY guide on how to make your own green roof which can be found at: <https://www.grassroofcompany.co.uk/>

The rectangular lawn area behind the building is particularly suited to the wildflower seed mixes introduced in the previous section. The grass can be removed, seeds sown, then the area fenced off temporarily while the seeds and shoots establish, to prevent members of the public walking on the area. Sowing is best done in the spring.

To the east of the lawn area is a large swathe of dead Ivy, which should be removed. Depending on the underlying structure, this could provide an extension to the proposed

wildflower meadow, but this would need to be assessed once the foliage has been removed. The Bamboo should definitely be removed, as the species is invasive and spread can be uncontrollable. The whole of the plant including the roots, should be taken out.

To the west, running parallel to the path, is an area of unused land with a conifer tree on it. The environment created underneath the conifer would be challenging to establish a garden area in, but could host planters with flowering pollinator plants (see Section 2.2.1 above).

The second, smaller Station Building 2 is currently disused. Depending on which authority is responsible for the condition of the building, it could be opened or repurposed. Suggestions for this include a wildlife photography gallery (possibly using photographs from local photographers), or another wildlife poster or information hub. Bures station has done something similar, with the building a waiting area with a gallery of local images on the walls.

1C: The Ash trees and Rose bushes along this stretch of platform are in good condition, and recommendations for these should focus on ensuring the roses do not grow out of control, and checking the Ash trees for ash dieback. The Japanese Honeysuckle in this area should be removed, it could be replaced with native honeysuckle. The area of scrub and branches underneath the trees (Fig. 4) is already highly suitable for the passage of small mammals, so there are two courses of action which could be taken regarding this area:

1. Leave the area completely unmodified, keeping the branches where they are. This will provide foraging, commuting and hiding benefits for mammals such as mice, voles, and hedgehogs, as well as potentially creating nesting sites for species such as Blackbirds, Wrens, Robins, and other garden scrub-nesting species. This could be enhanced by the addition of hedgehog, bat and bird boxes. The Japanese Honeysuckle and dead Ivy should still be removed. This course of action is low-intensity and simple to implement, but it carries the risk of appearing unmanaged or neglected to the public. This could be offset by the installation of signs or infographics explaining the reason for leaving the area alone.

2. Clear and organise the scrub area, separating the felled branches into piles of different sizes, and establishing shade-loving wild plants underneath (see section 2.2.1). Hedgehog, bat

and bird boxes can also be installed, the latter two of which could be installed on the larger Ash trees; the area being generally shady would be suitable for positioning the boxes out of direct sunlight. The Japanese Honeysuckle and dead Ivy should still be removed. This would provide equal benefit for foraging and hiding mammals, but provides a public image which is in line with expectations of urban wildlife management. Similarly, signs and infographics could use the divided sections to explain each benefit to local wildlife.

The specifics of bird and bat boxes in the area depends on which species are already present or could be encouraged to the area. Two styles of bird boxes which could attract a variety of garden species are illustrated below in Fig. 8. The open-fronted boxes suit Wrens and Robins, while the hole-entrance boxes suit a number of common tits, such as Blue Tit and Great Tit.



Figure 8: Open-fronted (L) and typical (R) nest boxes for birds. Images: RSPB.

Bats most likely to be attracted to the area around the station are Common Pipistrelle (*Pipistrellus pipistrellus*), with a chance of Soprano Pipistrelle (*P. pygmaeus*) and Brown Long-eared Bat (*Plecotus auritus*). Both station buildings are positioned in areas which would suit the installation of bat boxes, suitable examples of which can be seen in Fig. 9, below. Bat boxes should be installed at least four metres from the ground on a south, south-east or south-west facing eaves; buildings close to tree lines or hedges where bats are likely to forage are particularly suitable (Bat Conservation Trust, no date). This makes Station Building 2 the most

suitable place to install a bat box. There are several styles of box available, including woodcrete and woodstone and more.



Figure 9: Woodcrete bat box. Image: Bat Conservation Trust.

Some of the exposed areas of wire fencing between the platform and Plough Road Business Centre would be suitable for growing native climbing species around, provided that this is suitable from a health and safety perspective and does not compromise the integrity of the fence. Native Honeysuckle (*Lonicera periclymenum*) would be a very suitable candidate for this, as it is an annual grower and would make checking of the fences easier during winter.

### 3. Summary

#### 3.1 Key points

- Remove non-native plants from the garden area and replace with native, pollinator-friendly species.
- Add additional insect hotels and invertebrate-friendly features.
- Utilise the station buildings to host bat and swift boxes.
- Add infographics and signs to advertise the wildlife friendly modifications made to the station.
- Add bird and hedgehog boxes to Area 1C, keeping the Ash trees and scrub.



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