Net biodiversity benefit

Welsh Government Planning Policy Wales and subsequent letter to LPAs requires development to provide a net benefit for biodiversity (NBB) i.e. a better outcome than if the site was left undeveloped. Failing to provide such a benefit is a valid reason for refusal.

Every application regardless of size must not only mitigate any negative impacts of the development, but also have a positive benefit for biodiversity which will be in place for the lifetime of the development.

This document provides potential ways for applicants to achieve NBB within their proposals, and important factors to consider. It is not an exhaustive list but ideas for applicants struggling to demonstrate NBB. In addition to these measures applicants could consider enhancement or improved management of habitats on site and strengthening connectivity between wildlife habitats. Details of the enhancements should be shown on any submitted/approved documents.

Bird boxes

Wherever possible bird boxes should be built into new builds or new extensions, rather than attached externally. Woodcrete boxes (such as those built by Vivara or Schwegler) provide the most longevity and best conditions, wooden boxes should only be used in specific circumstances when woodcrete is not suitable.

- Bird boxes should be a minimum four metres up a tree or a wall.
- Unless there are trees or buildings which shade the box during the day, face the box between north and east, thus avoiding strong sunlight and the wettest winds.
- Make sure that the birds have a clear flight path to the nest without any clutter directly in front of the entrance. Tilt the box forward slightly so that any driving rain will hit the roof and bounce clear.
- House sparrows and starlings will readily use nest boxes placed high up under the eaves. Since these birds nest in loose colonies, two or three can be sited spaced out on the same side of the house. Keep these away from areas where house martins normally nest.
- Within a housing development a minimum of 75% of properties should have a bird nesting feature built in. For a single house, either an integral bird or bat feature can be chosen.

Boxes suitable for buildings -

House Sparrow terrace






Swift






House Martin



Swallow (in garages/log stores/lean-to)



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In agricultural sites, provision of a barn own nest box on a hedgerow tree or pole is appropriate. Good quality wooden boxes are available from the Barn Owl Trust. Commercially sold boxes very massively in quality, only pressure treated or marine ply are suitable materials.

Bat boxes

There is a preference for integrated bat boxes and tubes which can be matched and built into the walls and facade of a building, for instance Green & Blues Bat Block, Vivara pro build-in and Schwegler woodstone bat tube. They have the advantage of offering a secure, permanent space for bats with little maintenance and potentially better thermal properties. If integral boxes cannot be used boxes should be long-lasting woodcrete such as Schwegler 2F or Beaumaris.

Bat boxes are more likely to be used if they are located where bats are known to feed. Ideally, several boxes should be put up facing in different directions on sunny aspects to provide a range of warm conditions. Boxes should be put as high as possible to try and avoid predation from cats on the ground or nearby structures. On buildings, boxes should be placed as close to the eaves as possible. Bats use dark tree lines or hedgerows for navigation, so putting boxes near these features could help bats find the box.

The use of raised ridge tiles or access to roof spaces is only acceptable if the roofing membrane is a non- fibrous traditional bitumen based one. Breathable membranes can cause entanglement issues for bats which is damaging for both the bats and the roof.

Within a housing development a minimum of 30% of properties should have a bat roost feature built in. For a single house, either an integral bird or bat feature can be chosen.

Locate boxes:

- Where bats are known to feed and navigate (close to hedges and tree lines);
- Ideally at least 4m above the ground (where safe installation is possible);
- Away from artificial light sources (to protect them from predation); and
- Sheltered from strong winds and exposed to the sun for part of the day (usually south, south-east or south-west).

Wildflower Grassland

Many of our pollinating insects are in decline with figures suggesting a loss, over the past 40 years, of around 70% of our native bee population alone.

Installing an area of wildflower grassland creates an attractive floral display and immediately increases the food source for a wide range of pollinating insects, birds, amphibians and mammals. It can also reduce management costs through reduced mowing.

Seed

Seed should be native and from a trusted and reputable supplier such as Wild Flower Habitat Seed Mixes | 100% UK Native Wildflower Seed - Landlife Wildflower or Mixtures | Emorsgate Seeds – (01553) 829 028 (wildseed.co.uk) where mixes can be bought for various sites and soil conditions.

The suppliers advice on ground preparation should be followed or general instructions can be found;

Wildflower meadow: establishment / RHS Gardening

Turfs

In some circumstances turfs can be purchased and give a more instant result. However, these are expensive and many are backed with plastic to hold the turfs together. Like any turf, they will require regular watering until established.

Management

Management of wildflower grassland is key, and this should be given appropriate consideration prior to installation. Grasslands should be cut a maximum of twice per year (early March and mid-late August) and then all arising removed to reduce fertility and provide improved conditions for wild flowers.

Trees

Native trees and woodland provide habitat for a variety of plants and animals as well as storing carbon which helps to combat climate change. Tree planting in groups is especially valuable.

Native trees which are considered to have biodiversity benefits are listed below.

Alder	Dog wood	Field maple
Beech	Wych elm	Oak (English or sessile)
Birch (silver or downy)	Hawthorn	Black poplar
Blackthorn	Hazel	Rowan/mountain ash

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Cherry (bird or wild)	Holly	Wild service
Crab apple	Lime (common or small leaved)	Willow (grey or goat)

- The tree planting season is considered to be from November to March.
- Trees should be protected from damage from livestock or rabbits by fencing or guards if necessary.
- Watering may be required in periods of dry weather.
- The size and species of any trees should be clearly marked on plans.

Orchards

Traditional orchards are havens for biodiversity. They offer both food and shelter to thousands of species some of which have high conservation priority. A traditional orchard which contains fruit species such as apple, pear, plum, cherry and damson can make an excellent contribution to biodiversity.

Information on how to plant and manage an orchard is available from PTES.

Planting fruit trees - People's Trust for Endangered Species (ptes.org)

Urban Tree Planting

Planting trees in urban areas is particularly valuable in terms of reducing pollution and mitigating the impact of climate change. Due to the complexity of urban tree planting it is suggested that applicants approach a professional who can recommend particular species that will fit in the available space and prepare a plan to protect the rooting area of the new trees to ensure they have a long lifespan.

Native Hedgerows

Hedges are a better choice of boundary for wildlife than fences or walls, especially if native trees and shrubs are used. Hedges allow wildlife to move about between gardens and other spaces, and provide feeding and breeding opportunities. If hedges exist but are patchy (defunct) hedgerow restoration is an option including some fencing as protection.

Choosing The Right Species

- Take a look at other hedgerows in the local area and choose species that you can see to retain local distinctiveness.
- Use a minimum of 5 species.
- The 2 species in column 1 should make up 80-85% of your species, choose additional species from the other 2 columns.
- Choose 60cm+ bare-rooted transplants or pot grown for some species such as Holly

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80-85% Combined		5-15%		0-5%	
Blackthorn	*Prunus spinosa*	Hazel	*Corylus avellana*	Holly	*Ilex aquifolium*
Hawthorn	*Crataegus monogyna*	Field Maple	*Acer campestre*	Field Rose	*Rosa arvensis*
				Goosberry	*Ribes uva-crispa*
				Bird Cherry	*Prunus padus*
				Dog Rose	*Rosa canina*

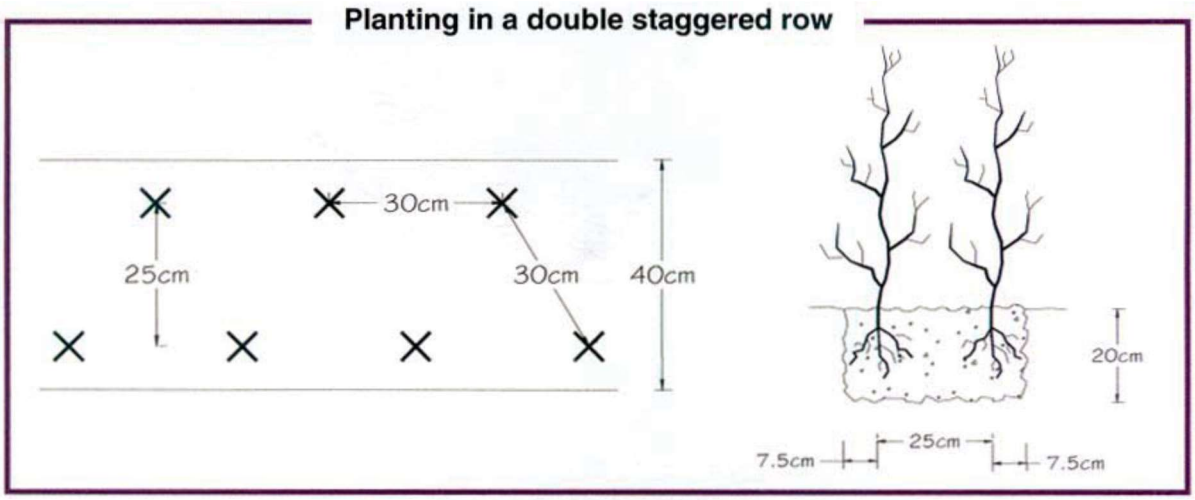
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Preparation

- The best time for planting is late autumn, after mid-November, although anytime between October and March is acceptable, provided the ground is not frozen or flooded.
- Create a 1m wide, weed free strip either by ploughing, digging or in limited cases, treating with a systemic herbicide.
- Ensure the bare roots of the plants do not dry out before planting.

Planting

- Plants should be supplied in accordance with the Horticultural Trade Association's National Plant specification and be sourced from a nursery that is a Member of the Horticultural Trades Association Nursery Certification Scheme.
- Plant in trenches large enough to take full spread of roots (20cm depth x 40cm width). Back fill with a previously prepared mixture of topsoil excavated from the pit, together with suitable compost and additional topsoil as required.
- Plant in a double staggered row approximately 30cm apart.
- Set out plants evenly using the plan below as a guide, 6 plants per m.
- The base of the hedge should be mulched with a 50-75mm layer of composted bark to stop weed growth and retain moisture in the soil.
- Where necessary, protect plants from damage and grazing by using protective tubes or spiral guards.



Maintenance

- Water the hedge for the first summer or any dry period in the 1st 12 months.
- Maintain weed control for at least 2 seasons.
- Replace any stock that dies within the first year.
- To encourage wildlife, trim the hedgerow no more than every 2nd year. This allows the shrubs and trees to produce more flowers, nuts and berries.
- Never trim the hedgerow between the beginning of March and the end of August when it would be harmful to invertebrates and nesting birds. The ideal time to trim the hedgerow is between January and February.

Pollinator shrub planting

In urban areas provision of trees may be difficult. In these situations carefully chosen flower/shrub species which are used by insects are appropriate. IMPORTANT these non-native horticultural or ornamental plants can be good sources or nectar or pollen but should not be used in semi-natural habitats or farmlands.

There is a preference for perennial plants which are a better source of pollen than annuals and are more cost effective.

Ground preparation – soil should be well drained not compacted, a slow release fertiliser and organic (peat free) compost can be added. March and April are the best months for planting and all newly planted shrubs must be watered during dry periods.

Suitable species can be found at the following web link:

Wales Biodiversity Partnership - Guides to help (biodiversitywales.org.uk)

Wildlife Ponds

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Wrexham County Borough is classed as an important pond landscape due the soils and geology providing excellent conditions. Previous farming techniques have resulted in field systems with a pond density far greater than the national average.

As part of an application it may be possible to restore an old pond, enhance an existing pond or provide a new wildlife pond.

Guidance on the above can be found at - Ponds - Freshwater Habitats TrustFreshwater Habitats Trust

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