



**Nottinghamshire
Wildlife Trust**

The Old Ragged School
Brook Street
Nottingham
NG1 1EA
Tel 0115 958 8242
Fax 0115 924 3175

Email
info@nottswt.co.uk

Website
www.nottinghamshirewildlife.org

30 October 2020

Dear Anna and Alan,

Re: Habitat Enhancements for Woodland Cottage

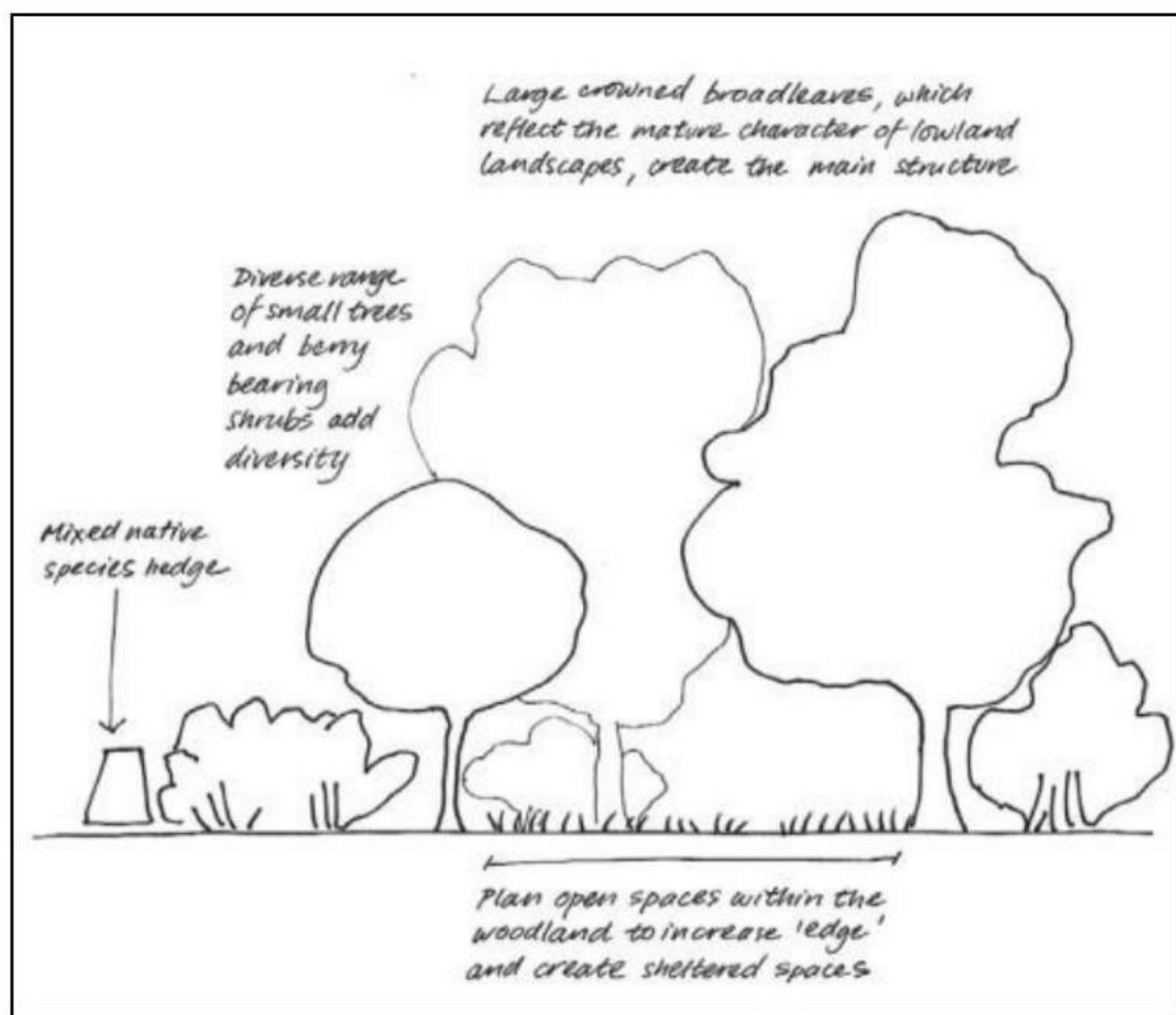
It was good to meet you both recently and thank you for involving me in your exciting plans. You requested advice on how to manage the woodland for the benefit of wildlife. I have the following suggestions.

The woodland is currently dark with little light penetrating. Consequently, the shrub and ground layer is poor. Its wildlife value could be enhanced by restructuring it. This could be achieved by selective tree removal. That means choosing the trees you wish to retain, both semi-mature and their long-term replacements and removing competitors. In addition, a shrub layer should be established through coppicing of shrub and tree species that will respond to that treatment. In areas where shrubs have been unable to establish due to the significant shade I recommend introducing native shrubs such as holly and yew that will tolerate shaded conditions. The objective is to establish a woodland of varied structure. This will create better conditions for invertebrates and the birds that prey on them. Felled trees and brash could be used to create habitat stacks/dead hedging to benefit nesting birds and amphibians. The woodland area should combine tall and small trees and shrubs, and dense cover with sheltered open spaces to provide the maximum range of habitats (see drawing below). It would be beneficial to have a small woodland management plan produced. I suggest that you contact EMEC Ecology:

<http://www.emec-land-management.co.uk/>

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If in the years following management the ground flora lacks diversity then the botanical interest could be enhanced by introducing plug plants of species that are tolerant of shade or partial shade.

April - Plug plants appropriate for planting in this area could include:

1. Nettle Leaved Bellflower *Campanula trachelium*
2. Wild Primrose *Primula vulgaris*
3. Wild Foxglove *Digitalis purpurea*
4. Hedge Bedstraw *Galium album*
5. Greater Stitchwort *Stellaria holostea*
6. Red Campion *Silene dioica*
7. Native bluebell *Hyacinthoides non-scripta* – Spring flowering
8. Snowdrop *Galanthus nivalis* – Early flowering
9. Hedge cranesbill *Geranium pyrenaicum*
10. Winter Aconite *Eranthis hyemalis*

November – Further autumn bulb/plug planting could include the following:

1. Star of Bethlehem *Ornithogalum umbellatum*
2. Wild cyclamen *Cyclamen hederifolium*
3. Wild Daffodil *Narcissus pseudonarcissus*
4. Ransoms/Wild Garlic *Allium ursinum*



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We recommend that all plant stock used should be of native genetic origin and ideally of local provenance. Naturescape Wildflower Farm can supply all of the above and can be contacted at Tel: 01949 860 592 or Web:

www.naturescape.co.uk

Dead Wood

Every effort should be made to increase amounts of standing and fallen deadwood where it is considered safe to do so. The following provides some useful background information on the importance of deadwood:

"All forms of deadwood are valuable for invertebrates, and the more varied the deadwood resource the better. Deadwood on trees is overwhelmingly more valuable than deadwood on the ground, and large pieces of deadwood are more valuable than small pieces. Good deadwood sites are characterised by trees living into old age, dying natural deaths, and being left." (Kirby1998).



Avoid impacting on the ground layer where there is known botanical interest. Standing dead wood provides excellent habitat for invertebrates and foraging and nesting habitat for woodpeckers and nuthatch.

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Great Spotted Woodpecker © John Smith

Try not to be over tidy unless trees are a potential hazard. Felling may have to take place where there is a safety hazard, but only if remedial surgery (pollarding, crown reduction, etc.) proves to be impractical or unsuccessful. Felled and naturally fallen trees should be retained in situ, or, if it has to be moved e.g. where it falls across a pathway, it should be stacked in habitat stacks nearby. Habitat stacks provide nesting habitat for birds and shelter for a variety of wildlife.



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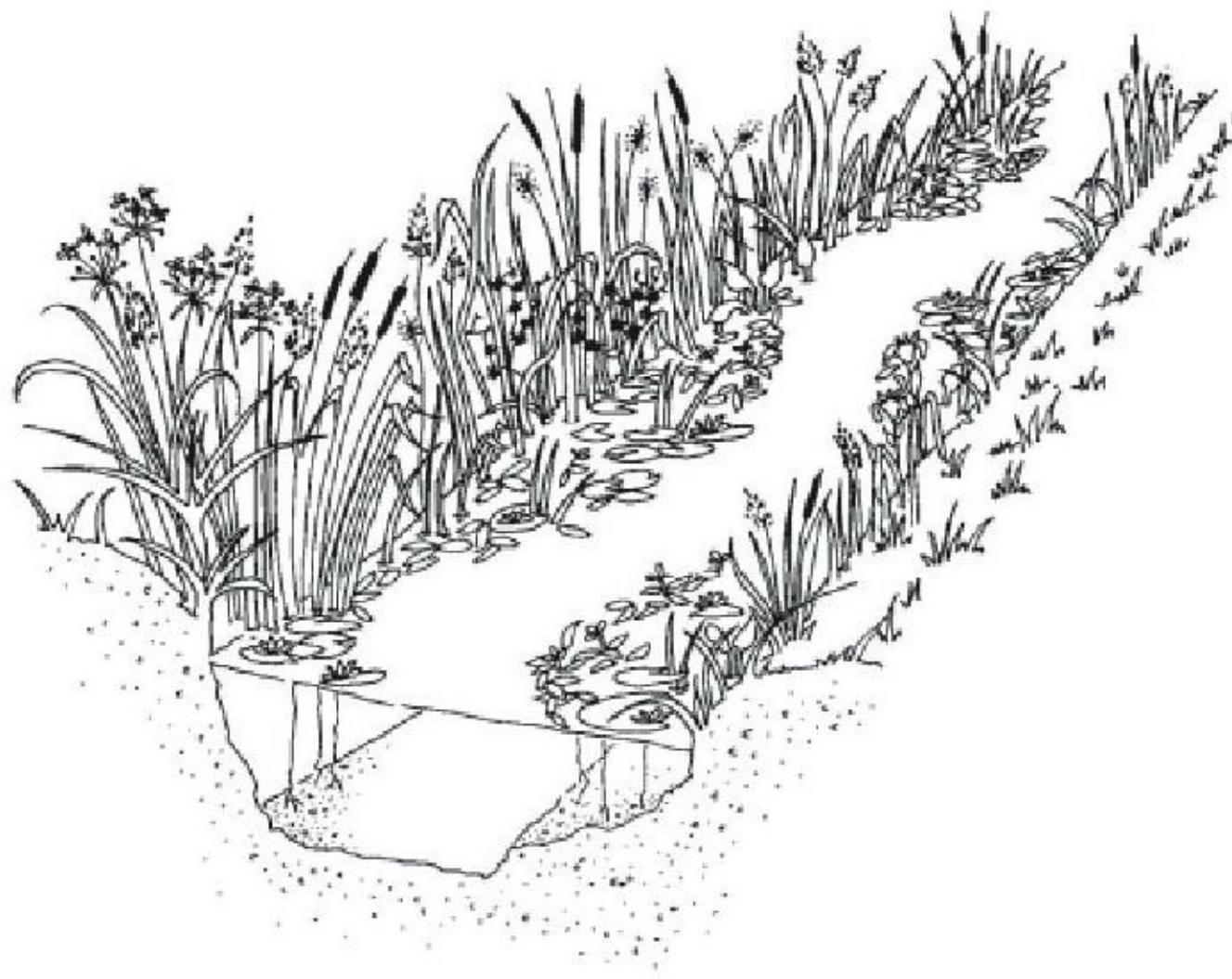
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Drainage Channel

The illustration below indicates the ideal profile for a drainage ditch to maximize its wildlife value. Ditches should be at least 1m deep, with sides sloping at an angle of 30-45°. Create gently sloping margins and include a shelf with areas of water 30cm deep or less.



Maintenance work would maintain an open central channel but retain the emergent vegetation along the broadened channel on at least one side each year.

Hedgerow Planting

The existing hedgerow to the southern boundary is species poor and is 'gappy' at the base reducing its value for wildlife, particularly nesting birds. To accommodate your plans for the site the hedgerow would need to be removed. You do however, intend to plant another hedgerow along the newly established boundary. A new, species diverse hedgerow that is managed for wildlife will, within a few years, provide a significantly better habitat. The following shrubs are characteristic of the landscape character area; blackthorn *Prunus spinosa*, hawthorn *Crataegus monogyna*, holly *Ilex aquifolium* and hazel *Corylus avellana*, rose *Rosa canina*, common buckthorn *Rhamnus cathartica* and wild privet *Ligustrum ovalifolium*. Ideally, the plants

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should be of local provenance and of 45-60cm in height. Plant at a density of eight plants per/m using a staggered double row with about 25cm between plants in the row and 20-30cm between rows. Plant groups of the same species together to reduce the risk of less competitive species being crowded out by more competitive adjacent plants. Planting should be carried out in good weather conditions between October and March. Growth alongside plants should be strimmed initially, to reduce competition. I would recommend well-rotted bark chippings to suppress competition and retain moisture to allow the plants to establish successfully. If rabbits are likely to browse the establishing trees then they should be protected by 'rabbit fencing' rather than tree guards, which produce leggy specimens lacking cover at the base.

Hedgerow Management

A good wildlife hedgerow is ideally 2m in height and width. Hedgerows should be cut during January-February to allow winter thrushes such as redwing that we noted on my visit, to take advantage of the berry resource. I recommend cutting one side of the hedge in a particular year then cut the other side the following year. This will leave an uncut section every year for flower and berry production. Ideally, brash should not be stored in the hedgerow bottoms if they have botanical interest. Creating a habitat stack within the woodland could provide benefits for amphibians near waterbodies.



The value of the hedgerow for wildlife can be increased by including a substantial margin (2-4m) of tall, ruderal herbs and grasses, which are an important habitat for the wildlife of the hedge (e.g., provide egg-laying sites for a number of butterfly species).



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Value of Ivy

Ivy is a native evergreen climber that has an outstanding value for birds and other wildlife. It is not parasitic, only using the tree for support, nor harmful to healthy trees. There should rarely be any reason for removing it from trees. If ivy encroaches into the tree canopy it can act like a sail and cause branches to break but the resulting dead wood and cavities provide additional habitat and would be a part of semi-natural woodland. Ivy provides nesting opportunities for spotted flycatcher, hawfinch, robin and wren. Its abundant berries ripen in early spring, which is valuable to thrushes when other food can be scarce. It flowers in the autumn, when few other species do, is rich in nectar and attracts many late flying insects, which are valuable prey for insectivorous birds. It is also valuable for roosting bats. However, where ivy is dominating the ground layer it will prevent establishment of other woodland plants and therefore it should be removed by hand. This is a labour intensive method but is preferable to using chemicals that could have a negative impact on other flora.

Bramble

Wildlife thrives in untidy, tangled corners where food and shelter can be found. Areas of bramble provide good habitat for nesting birds and the fruits and seeds are eaten by a variety of wildlife. The aim should be to create varied age stands so that there is always some new growth through to mature stands that provide a range of invertebrate habitat.



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Value of Nettles for Wildlife

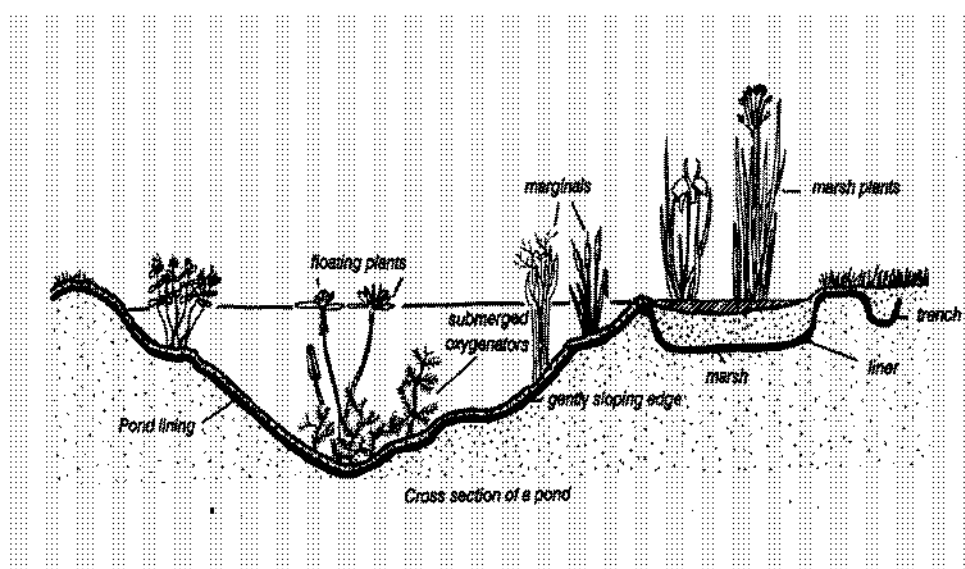
Stinging nettles support more than 40 kinds of insects, for whom the sting can form a protective shield against grazing animals. Many nettle patches hold overwintering insects which swarm around fresh spring nettles and provide early food for ladybirds. These same aphids are eaten by blue tits and other woodland birds. In late summer the seeds produced are food for many seed-eating birds, such as house sparrows, chaffinches, and bullfinches. Nettles are also a magnet for other insect-eaters like hedgehogs, shrews, frogs and toads, at all times of year. Certain moths like nettles, as do many of the UK's most colourful and best known butterflies, such as the Small Tortoiseshell and Peacock butterflies. Their larvae feed in large groups in silken tents at the top of the nettle stems. Nettles are often regarded as a weed, and are removed as soon as they appear, but they are excellent for many different types of wildlife.

Pond Creation

Please see attached document.

Pond Management

Providing a good variety of plants is very important because each plant will play a role in attracting animals and invertebrates. It is important to have variety in the structure and density of the plants to stop one species from becoming dominant. Leave about one third of your pond as open water, and allow some dense vegetation where tadpoles and other invertebrates can shelter. Ensure that the bank-side vegetation is continuous right up to the pond edge so that wildlife can access the water under cover. A couple of logs will provide a habitat for many invertebrates. Logs sloping into the pond encourage dragonflies to bask. The logs can be secured in place by building turves up around them and filling in gaps with large stones. These make effective hiding places for amphibians.





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Plants to go in the deepest water

Oxygenators

Spiked Water Milfoil *Myriophyllum spicatum*
Hornwort *Ceratophyllum demersum*

Floating-leaved plants

Amphibious bistort *Polygonum amphibium*
Fringed water lily *Nymphoides peltata*

Strappy-leaved emergent plants

Flowering rush *Butomus umbellatus*
Branched burr reed *Sparganium erectum*
Common Water-plantain *Alisma plantago-aquatica*
Yellow Iris *Iris pseudacorus*

Marginal plants

To be planted in shallow water& along water's edge

Water mint (*Mentha aquatica*)
Water forget-me-not (*Myosotis scorpiodes*)
Marsh marigold (*Caltha palustris*)
Water avens (*Geum rivale*)

Bankside plants

Tall plants to be planted on pond bank

Meadowsweet *Filipendula ulmaria*
Yellow loosestrife *Lysimachia vulgaris*

Low growing / creeping for pond bank

Creeping Jenny *Lysimachia nummularia*
Ragged Robin *Lychnis flos-cuculi*

Plants appropriate to the area can be sourced from Naturescape at Langar,
www.naturescape.co.uk, Tel: 01949 860592

Many of the animals that use ponds also live on land so it is important to
consider the surrounding area:

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- Create a pile of logs, branches or rocks near the edge of the pond to provide a foraging area and a nesting site for mammals, amphibians and reptiles, such as grass snakes and slow worms.
- Leave vegetation to grow long on at least one edge of the pond where regular access is not required. This will provide shelter for invertebrates and mammals.
- Leaving long grass "corridors" around the pond enables creatures to get to other habitats, for instance, amphibians need ponds for breeding and drier ground for hibernation.
- Flowering plants provide roosting sites for dragonflies and damselflies, as well as nectar for butterflies.
- Provide a kingfisher 'post' from where this species can forage from.



Kingfisher © Mike Vickers

Bird Boxes

I think the site is suitable for a tawny owl box like the one shown at the link below. This could be attached to a mature tree in a quieter area of the site.

<https://www.barnowltrust.org.uk/product/tawny-owl-box/>

I have provided a plan if you wish to construct your own.



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Tree Sparrow is on the red list of birds of conservation concern. They are gregarious and like to nest in loose colonies. They require a nest box with a 32mm nest hole.



<http://www.nhbs.com/title/view/163264>

I suggest that you mount individual boxes on mature trees along the boundary of the site or mount them on wooden posts within the hedgerow once it is established.

Spotted flycatcher is a Red List Bird of Conservation Concern due to a long-term decline in all regions and habitats; 70% decline since the 1960's. This species is a summer visitor to the UK, arriving from Africa in May to breed and leave again in July and August. In order to help this species, I suggest installing 4 open-fronted bird boxes (see example below) at different aspects within and on the edge of the woodland.

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Spotted Flycatcher © Sean Browne

The nest box should be positioned so that there is a clear outlook, but partially concealed by a climbing plant such as ivy. It should be located at the edge of the woodland or on a mature tree within the woodland and overlooking an open area set at a height of between 5-9 feet. Ideally, the location should have suitable perches nearby for adults and young to feed from.



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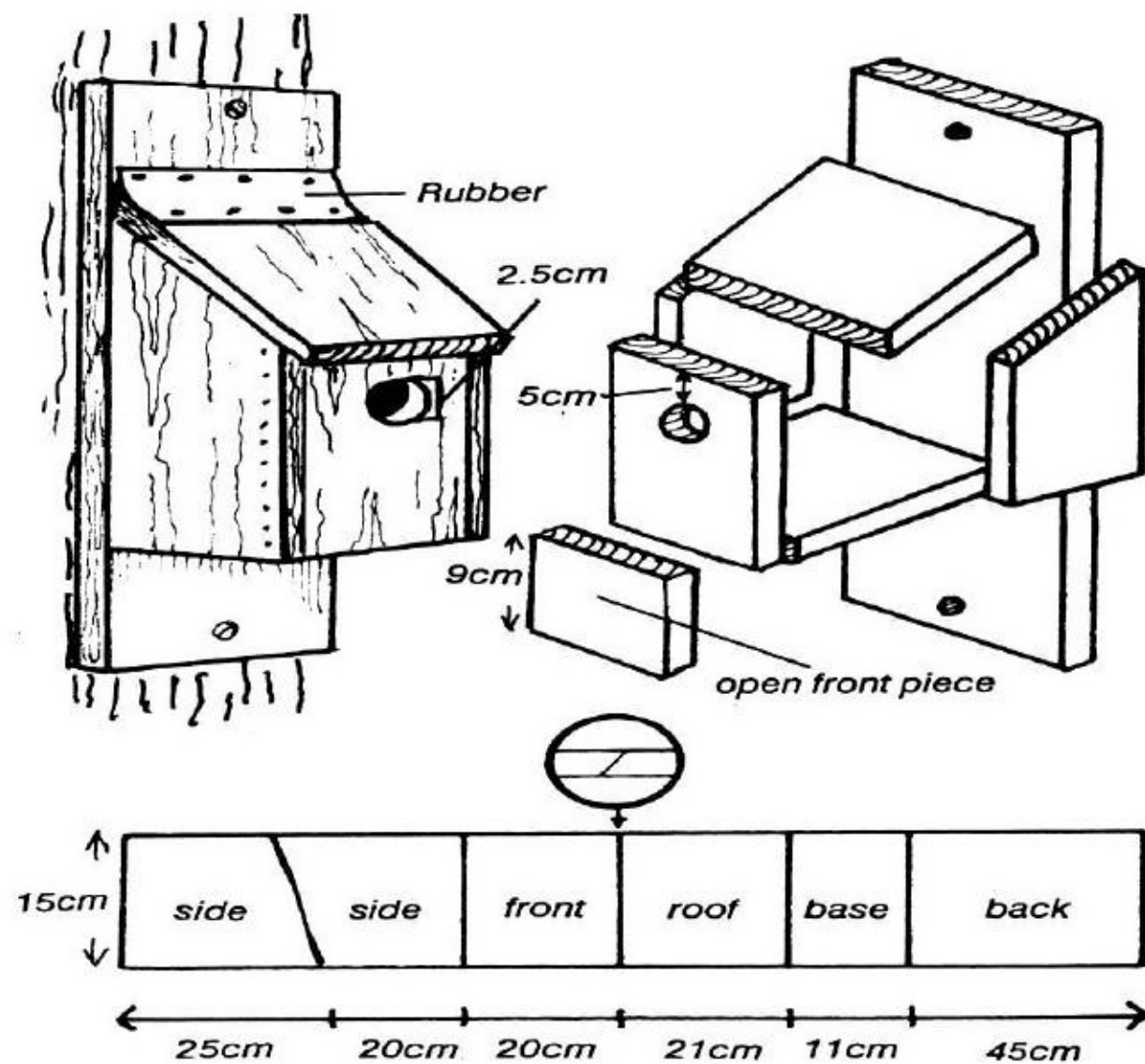
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In order to provide protection to a brood of eggs and nestlings you may wish to cover the nest box in heavy gauge wire mesh that will allow access for spotted flycatcher but prevent predation by squirrels and crows. The mesh should radiate out from the box so that predators cannot reach through to predate the young in the box.

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Please note that the above plan can be adapted to make an open-fronted bird box.

Bat Boxes

The biodiversity of the site could be further enhanced by the installation of bat boxes. Four boxes should be erected in close proximity on mature trees. They should face different directions to allow bats the opportunity to change roost sites according to weather conditions at the time. The boxes should also be situated so bats have a clear flight path to them





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<http://www.nhbs.com/title/195745/nhbs-kent-bat-box>



1FF Schwegler Bat Box with Built-in Wooden Rear Panel

<http://www.nhbs.com/title/158636/1ff-schwegler-bat-box-with-built-in-wooden-rear-panel>

I have attached instructions to make a Kent bat box. I would be happy to advise on their location.

Monitoring

My colleague Michael Walker is the Nottinghamshire Mammal Recorder and he may wish to install a static bat detector within the site to monitor which species are in the area. If this is something you are interested in I suggest contacting Michael at the following email address:

mwalker@nottswt.co.uk

I hope you find the report useful and if you wish to discuss any of the content do not hesitate to contact me on 0115 9588542 or mspeck@nottswt.co.uk. I am happy to visit you again in the future to help

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you implement any of my suggestions. I am keen to hear about any progress that is made.

Yours sincerely,

A solid black rectangular box redacting the signature of Mark Speck.

Mark Speck
Senior Conservation Officer (North)
Conservation Team

A solid black rectangular box redacting contact information, likely a phone number or email address.