

Bourne Brook Local Community Nature Reserve.



**A proposal by the Bishops Stortford Natural History
Society.**

The proposal.

The proposal from the BSNHS is that a Local Community Nature Reserve be formed comprising a green corridor following the line of the Bourne Brook, leading from the River Stort area at the Red, White and Blue, crossing the road at Rye Street and connecting with the countryside beyond at Farnham. The nature reserve would include a section of the disused allotment site where it fronts on to the Brook. The Local Nature Reserve would be developed in the spirit of the Living Landscape Vision for the whole of the Stort Valley and it would join the chain of nature reserves and countryside forming the green corridor down through Sawbridgeworth, Harlow and Roydon connecting up with the Lea Valley Regional Park. Many of the species of butterflies, birds and reptiles have all suffered large-scale national decline through a variety of causes of which loss of habitat is one of the main reasons. By creating a Local Nature Reserve on the proposed site this would not only give an opportunity to reverse the loss of habitat locally but also as a means of informing and educating local people and schoolchildren about our special local wildlife resources. Please see Fig.1. Fig 2.

Fig 1. Map showing green corridor in context of the whole development.
Shaded area is the green corridor.

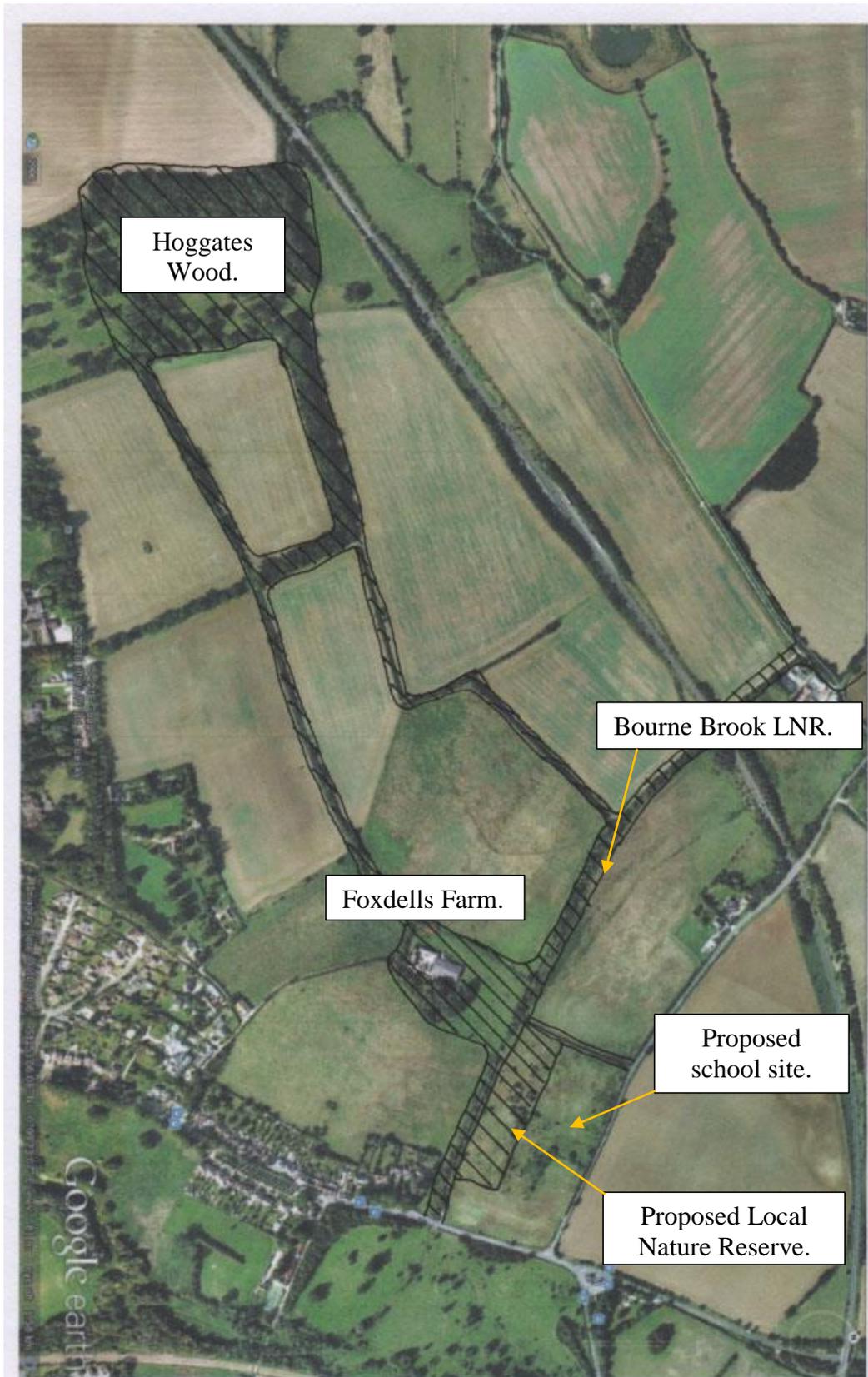
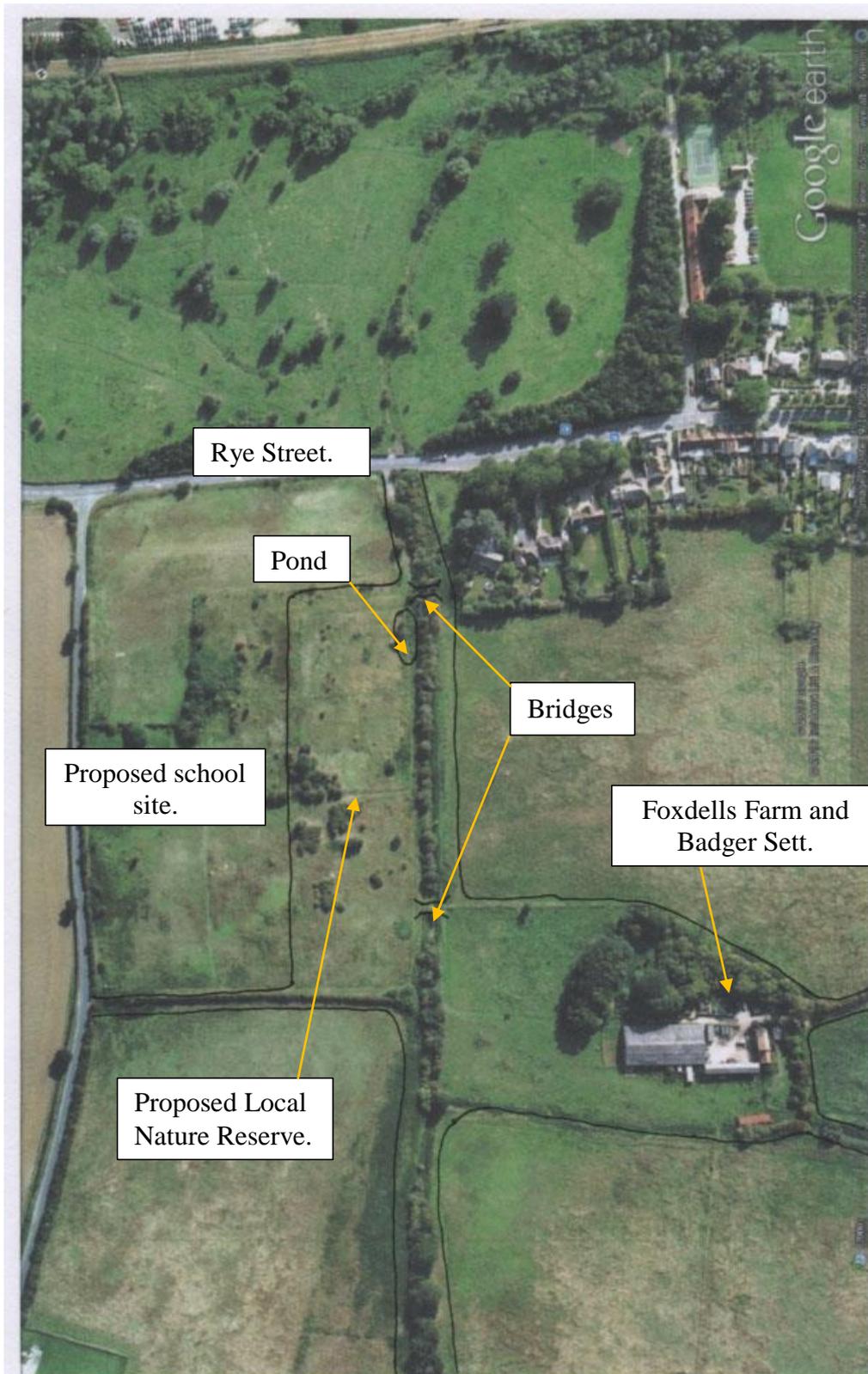


Fig 2. Local Nature Reserve area.



Introduction and background.

It is assumed that at some stage in the future the development at Stortford North will take place. As part of the development there exists a Green Infrastructure Plan of which it is proposed the green corridor be part. The green corridor would allow free access for wildlife and people between the River Stort area at Grange Paddocks and the area of the development and the countryside beyond. It would aid connectivity between areas on the development such as Hoggates Wood, conserved hedge lines and green wedges. It would enable a green corridor to be established between the badger sett at Foxdells Farm thus allowing these animals access to countryside for feeding, bedding collection and interchange of animals between other setts in the area. The disused allotment site which it is understood may be earmarked for development as a Primary School appears to have been established as 'Allotment Gardens' in the 1960's. It is understood that the site was never very successful for growing vegetables because the soil is dry, thin and poor. From the mid-1970s onwards it was customary for members of our Society to visit the increasingly disused plots as the area had become well-known for its population of reptiles, butterflies and wildflowers most of the records given in the appendix are pre 2010 when there was much more open access to the site than at present. As far as can be seen there has been very little change on the allotment site with the exception of some scrub removal therefore these records are as valid today as they were when they were made. The Society is not making objection to the construction of a Primary School but suggest that a small nature reserve established along the southern side of the site where there is quite a steep bank which would make development difficult, this would both preserve the wildlife interest on the site as well as providing an educational facility for schoolchildren.

How does the proposed site for the Local Community Nature Reserve fulfil the required criteria.

Geology.

The term "bourne" is an Anglo Saxon word describing a stream which runs intermittently. In this case the Bourne Brook runs when the water table in the underlying Chalk rises to the surface, usually in winter time. Bishops Stortford is the point where the Chalk outcrops for the first time as it rises from the London Basin. See Fig 2,3. The water table in the Chalk gives rise to the aquifer which is tapped for drinking water in the boreholes at Hazel End nearby, there are also strong natural springs in the

area. The other items of interest geologically are erratic boulders such as Herts Pudding Stone which have already been found in the area. Glacial erratics are an indication of the intense action of ice sheets during the last Ice Age.

The Bourne Brook green corridor.

The line of the Brook gives the opportunity to create a green corridor connecting the parkland by the side of Canons Mill Lane and the River Stort with the Stortford North development area and the countryside beyond. It would give the opportunity to link in to significant sites of wildlife interest on the main development area such as Foxdells Farm and the large badger sett in the old gravel pit and the ancient woodland of Hoggates Wood. Animals, birds and insects especially butterflies make use of green corridors of this kind to travel through the countryside.

The site with special reference to the disused allotment area.

This area is of special wildlife interest for several reasons. Firstly, adjacent to the Brook is a south facing slope which is fully exposed to the sun giving warm conditions which particularly favour a population of reptiles including Slow Worms and Common Lizards. Secondly, the habitat is open and unshaded, the thin, dry soil over Chalk creates a specific set of conditions resembling heathland resulting in a high and varied insect population. Thirdly, the nature of the soil means that drought tolerant plants survive and these frequently provide a good supply of nectar for insects which in turn sustain a range of reptiles and amphibians.

Wild flowers on the allotment site. (See Appendix for species lists).

Society members have recorded a minimum of 91 different species of plants on the site. Some of these are garden escapes, the majority are native plants. It is significant that no rarities have been recorded which means that public use of the site including schoolchildren would not do significant damage to rare plant populations. What is of particular interest are the very large areas of Marjoram which when in bloom provide a huge nectar source for butterflies of which 18 different species have been recorded. On the flatter areas near to Farnham Road there are large areas of Cowslips which should be relocated before the development goes ahead as it would be considered environmentally unacceptable to destroy such a large number of this attractive native plant. It would be hoped that the same would apply to other plants of interest in the area where the proposed school is to be constructed.

Slow worms and Common Lizards are both found in some numbers on the site. Nationally they are in decline and this would be a great opportunity to set up a reserve for them.



Birds recorded.

13 species of birds have been recorded over the years. The majority of these are birds of open farmland and scrub, they will be attracted to the site by 'weed' seeds. Of particular note are the Linnet and Bullfinch both of which have suffered significant decline nationally. Skylarks are present which have become a rarity away from coastal marshland areas. Both Barn Owl and Kestrel are known to hunt over the site, probably feeding on small mammals and in the case of the Kestrel, Common lizards. The hedges surrounding the site are known to be frequented by Chaffinch, Yellowhammer and Whitethroat. Red -legged Partridges feed and dust bath on the area.

Reptiles.

Both **Slow worms and Common Lizards** are present in some numbers. Both these species have suffered national declines due to loss of habitat. The site is ideal for them especially in terms of the warm soil conditions and abundant insect life.

Butterflies.

18 different species of butterfly has been recorded. Significant among these are the Marbled White and the Small Heath. The remaining species on the list are what might have been considered 'common' some years ago but as with all butterfly species they are in marked decline for a variety of reasons including habitat loss. The allotment site provides ideal habitat for them in terms not only of nectar feeding but also in the provision of food plants for caterpillars.

Access to the LNR.

Currently, there are no public rights of way either on the green corridor or the allotment site although there are some unofficial paths probably used by local people for the dog walking. There is an access point in Rye Street from the meadows at the Red, White and Blue where there is a kissing gate opening out onto the road. Opposite this gate there is a path following the line of the Brook which could be developed as an access point. There would need to be some bridge access from the Stortford North development allowing people to walk on the allotment area of the green corridor. These bridges would need to be wheelchair friendly and it is suggested that they are gated to deter scramble biking and mountain biking which would be inappropriate for the site. It is suggested that a small network of paths be maintained to direct people walking.

Management Plan.

Management of the site would be minimal with the following suggestions:-

- Paths be mown on a two or three weekly basis, litter collection similarly. Any mowings arising be made into compost piles for reptiles.
- Six monthly check on interpretive boards, fences etc.
- Every three years carry out a programme of scrub maintenance and clearance if necessary to maintain open aspect of the site. This would include some clearance of any Blackthorn, Hawthorn scrub or Bramble.
- Every two years carry out hedge trimming and maintenance.

Costs.

Initial costs for interpretive boards and bridges. It is possible that the Primary School children could have an input into the interpretive boards. The Primary School would need security fencing with gated access to their nature reserve, otherwise there may be some other boundary fencing required. Some additional hedge planting of species for wildlife could be undertaken.

Costs as set out in the management plan. Mowing of paths may be undertaken as part of grounds maintenance for the school. Shrubs for hedge planting could be raised from seeds by the children. Scrub clearance and general checking of site could be undertaken by a Friends of the Bourne Brook LNR group may be supplemented by the Countryside Management Service.

Educational opportunities for visitors and schoolchildren.

- Develop area for 'Forest School" with a range of appropriate activities.
- Mini-beasts. Pitfall traps using plastic drinking cups, sweep netting, butterfly life cycles, study of a particular invertebrates such as grasshoppers and spiders.
- Make a formicarium as part of a study on Ants.
- Study of Chalk and lime. Where does our drinking water come from. Affinity water may have an input here.
- An opportunity to raise awareness of reptiles and amphibians. Schoolchildren could keep, look after and study slow worms.
- Bird feeding station within the school grounds to avoid interference.
- Create a pond at the southern edge of the site near to the Brook. It would need to be lined due to the porous nature of the soil but could

take the surface and roof run-off from the site. The pond would be available for pond dipping and would encourage amphibians, dragonflies etc.

- A study of animals living in hedges.
- Recognition, naming and parts of wildflowers.
- Introduce the idea of nature conservation and how it can be done on the LNR.
- Observe and recognise slow worms and common lizards.
- Create habitat piles and log piles for reptiles to hibernate and sunbathe.
- Make a sand bank for solitary wasps to nest in.
- Understand what "erratics" are and how they got there during the Ice Age.
- Record the changing seasons in art and photography.
- Study and recognise a range of fruits and seeds.
- Know about grasses and understand how we get our modern cereals.
- Collect soil from the site and carry out tests back in school.

Appendix.

List of plant species.

Buddleia.	Creeping Thistle.
Broad-Leafed Dock.	Hogweed.
Stinging Nettle.	Bramble.
Hedge Mustard.	Ivy.
Goose Grass.	Nipplewort.
Herb Robert.	Forget-me-not.
Ground Ivy.	Red Campion.
Hawthorn.	Alkanet.
Sycamore.	Hoary Cress.
Oak.	Herb Bennett.
Sallow.	Comfrey.
Veronica persica.	Ribwort plantain.
Pendulous Sedge.	Bee Orchid.
Dog Rose.	Spindle.
Small leaved Elm.	Greater Plantain.
White Bryony.	Cocksfoot Grass.
Common Mallow.	Cow Parsley.
Creeping Buttercup.	
Common Ragwort.	
Common Catsear.	Purging Buckthorn.
Lawn Daisy.	Teasel.

Epilobium tetragonium.

Field Maple.

Oxeye Daisy.

White Campion.

Mouseear Chickweed.

Speedwell.

Prickly Lettuce.

Hedge Bedstraw.

Elder.

Smooth Tare.

Rosebay Willow Herb.

Mullein.

Bristley Oxtongue.

Silver Birch.

Foxtail Grass.

Old Man's Beard.

Hemlock.

Mosses and Lichens.

33 different species of moss and 5 species of lichens have been recorded of which a moss

Thuidium assimile is a local rarity.

Wild Raspberry.

Black Horehound.

Meadow Buttercup.

Marjoram.

Wetted Thistle.

Wild Strawberry.

Cowslip.

Musk Mallow.

Bloody Cranesbill.

Meadow Cranesbill.

Red Fescue.

Cut -leaved Geranium.

Bittersweet.

Curly Dock.

Dewberry.

Soft Brome.

Yarrow.

Hedge Parsley.

Geranium molli.

Lesser Trefoil.

Birdsfoot Trefoil.

Bladder Campion.

Hardhead.

Greater Knapweed.

Ash.

Garden Escapes from the old allotments.

Star of Bethlehem.

Sweet Violet.

Lupin.

Bearded Iris.

Peony.

Cut leaved Bramble.

Asparagus.

Chervil.

Horseradish. 10.

Golden Hop.

Bird Species.

Linnet.
Chaffinch.
Green Woodpecker.
Great Spotted Woodpecker.
Kestrel.
Barn Owl.

Red legged Partridge.
Common Whitethroat.
Long-tailed Tit.
Bullfinch.
Goldfinch.
Yellowhammer.
Skylark.

Butterfly species.

Small Tortoiseshell.
Marbled White.
Brimstone.
Orange Tip.

Small Copper.
Brown Argus.
Meadow Brown.
Gatekeeper.
Common Blue.

Reptiles.

Slow Worm.
Common Lizard.

Large White.
Small White.
Green-veined White.
Holly Blue.
Peacock.
Comma.
Red Admiral.
Painted Lady.
Small Heath.
Clouded Yellow.

This proposal has been prepared by Bob Reed (Chairman) on behalf of and using the past records of members of the Bishops Stortford Natural History Society.

The proposal is fully supported by the Herts and Middlesex Badger Group.

