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The following paper was submitted by the Deputy Clerk to the Parish Council at its meeting of 16th October 2024/2023

Agenda Item: Precis of Thurston Biodiversity Audit June 2024

Received 6th September 2024 in DRAFT copy.

The report provides the council with a biodiversity audit of the council landholdings and an evaluation of the specific habitats and ecological networks within the entire parish.

The report provides recommendations regarding the management of its local green spaces.

The report outlines elements of the current planning system that are relevant to this audit including

- Localism Act 2011 and Neighbourhood Development Plan
- NPPF particularly Paragraph 180, 181 and 185 'Conserving and Enhancing the Natural Environment'
- The Joint BMSDC Local Plan SP09, LP16 and LP17
- Thurston PC Biodiversity Policy
- Biodiversity Net Gain

Field Survey carried out 19th June 2024

Biodiversity Assets -

SSSI, SAC, SPA and Ramsar	No sites within Thurston
County Wildlife Sites (CWSs)	Black Bourn Valley – River valley including floodplain and grazing marsh. Priority Habitat and arable reversion (rewilding) Suffolk Wildlife Trust nature reserve
Suffolk Priority Habitats	Hedgerows – spread across the parish, associated with old field boundaries, small lanes, species rich with some veteran and ancient trees. Hawthorn, hazel, elm, dogwood, cherry and crab apple, English oak and ash. Yellowhammer, linnets, grey partridge, bullfinch, western barbastelle bat. Suffolk hedgerow survey 2012 – 296 hedges surveyed, 79 contained 4 species or fewer, 70 contained 5, 6 or 7 species, 147 contained over 8, result at least 70% can be deemed species rich
	Mixed Deciduous Woodland – no known ancient woodland recorded. Priority Habitat on MAGIC recorded at Skeleton Plantation, Coronation Belt and Grove Belt. Oak, ash, Scots pine, field maple, hazel, holly. Several smaller areas of similar aged woodland some recorded.
	Ponds – Aerial photographs indicate approximately 57 ponds, higher density in the east where Black Bourn has had significant new pond creation. Density of 6.6 pond/square km (lower than Mid Suffolk at 9.6 but higher than Suffolk at 5.9) current google map data suggests most of these still exist. Of note Black Bourn Valley, Thurston Park SUD's, noted wildlife garden pond dry now and in previous years. Recommendation – apparently neglected ponds are of great interest for biodiversity. Carry out a pond survey which can do much to inform management decisions.
	Coastal and Floodplain Grazing Marsh – low lying grassland within the valley of River Black Bourn, managed by Suffolk Wildlife Trust with cattle grazing. New scrapes created to attract waders and wildfowl. Teal, snipe, southern marsh-orchid, ragged robin, water vole, otter, great crested newt.
	Wood Pasture and Parkland – Nether Hall and Thruston House listed on Natural England MAGIC

	<p>Rivers and Streams – River Black Bourn along eastern boundary and meets two criteria for Rivers BAP – Presence of specific vegetation communities and Presence of priority BAP Species or other indicator species.</p> <p>Otter, water vole, various bat species particularly soprano pipistrelle.</p> <p>Smaller tributary of Black Bourn known at Pakenham Fen Stream which runs to the east of the village and joins the Black Bourn north of Pakenham at Mickle Mere CWS. Identified as a chalk stream and therefore considered a Priority Habitat. Environment Agency highlights high levels of phosphates which are identified as being caused by sewage discharge. During the field survey the stretch of Pakenham Fen Stream which runs through Thurston was assessed as being in poor condition for wildlife. Inappropriate management can affect priority habitat by way of extensive dredging or channel re-alignment, extensive removal of bankside trees, pollution events</p>
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Local Green Spaces	<p>New Green Open Space- modified grassland, species poor due to regular mowing – common chickweed, dove’s-foot cranesbill, yarrow, rough meadow grass</p> <p>Sycamore, lime, horse chestnut, rowan, silver birch all of a similar age providing limited breeding and roosting opportunities.</p>	<p>Relax the mowing regime. Areas not used regularly leave uncut between April and August.</p> <p>10 – 20-meter strip through the middle where the line of trees crosses from east to west. Cut paths through and erect signage. 2 – 5 metre strip along fence line to the south of the site or along the hedgerow surrounding bowls pitch. Avoid pesticide use.</p> <p>Erect bird boxes across the site high and north facing.</p>
	<p>Wildlife Garden – provides improved opportunities with grassland and several wildflower species, mixed native hedgerow, trees and bug hotel.</p> <p>Two indicator species, oxeye daisy and ragged robin.</p> <p>Pond completely dry and evidence shows rarely holds water due to soil type.</p> <p>Hedge row excellent, dense, limited gaps and allowed to grow wide and tall. Alder, cherry, hawthorn, hazel, dogwood, long tailed tits, blackbirds, greenfinch (rare)</p>	<p>Only carry out work in late autumn and winter. Maintain hedgerow to keep it dense by coppicing small sections if it becomes gappy at the base.</p>
	<p>The Recreation Ground, Church Road – species poor grassland, regularly mown due to recreation se. Daisy, yarrow, annual meadow grass, oak, horse chestnut, sycamore. Several veteran oaks along Church Road.</p>	<p>1 – 5 metre strip around the perimeter to be left uncut between April and late August. No pesticide use. Erect bird boxes high and north facing.</p>
	<p>Genesta Drive Open Space – grassland and scattered trees. Mown regularly and species poor. Oxeye daisy (positive indicator species) creeping buttercup, yarrow and germander speedwell.</p> <p>Sycamore, cherry, oak, larch, acacia (non-native)</p> <p>Several mature trees covered in ivy provide good nesting/bat roost opportunities. Scrub mix laurel, bramble, rowan, sycamore, silver birch. Blue tits, blackbirds, suggest they nest on site.</p>	<p>Positive indicator species shows mowing regime April – August would be particularly valuable to introduce. Allow dense scrub to extend this beneficial habitat. Leave edges uncut away from the road. Leave any tree work arisings to create wood piles.</p>

	Scrub provides good habitat for hedgehog.	
	<p>Heather Close Open Space – Two areas of grassland and scattered trees. Southern end is regularly mown and therefore species poor with a small area of scrub. Ribwort plantain, daisy, doves foot cranesbill, sycamore, horse chestnut, snowberry, elder, hazel. Scrub suitable habitat for nesting birds. Northern section – great example of how local green space can be managed for people and wildlife. Defined areas left uncut with other areas mown, signs erected. Pyramidal orchids, lesser stitchwort, yarrow, sheep’s sorrel, timothy, common bent, Yorkshire fog. If positive management continues species diversity will continue. Oak, ash, horse chestnut, lime, cherry, silver birch, holly, rowan, broom, red currant. Chaffinch heard and likely to breed on site. Forage and commuting ideal for bats.</p>	<p>Southern and northern areas should be managed in order to maintain areas of grassland and mown paths for people. The signage used here should be used elsewhere in the parish to explain reasoning for maintenance regimes. Northern section provides excellent wildlife habitat and should become one of the flagship biodiversity areas within the parish and used as an example of how local green space managed for wildlife can benefit local people as well. Enhance this area with bird boxes, bug hotel, wood piles, wildlife pond (there is a lack of water provision for wildlife in urban Thurston) Tree planting, small fruit species, apple, pear, plum, rowan, hazel, whitebeam, elder. Picnic benches.</p>
	<p>Furze Close Open Space – grassland, scrub and scattered trees. Scots Pine, Oak, cherry, silver birch, gorse, laurel, holly. Several ivy-covered trees beneficial for wildlife. Grassland species poor, red dead nettle, herb Robert and doves foot cranesbill. Spring bulbs</p>	<p>Increase cover of the scrub to provide nesting habitat, create more of an understorey similar to woodland in the centre area, fruit and nut bearing such as hawthorn, blackthorn and hazel. Or relax the mowing to allow gorse and holly to spread naturally. Create wood piles. Plant more bulbs, snowdrops, crocus, winter aconite (avoid grape hyacinth)</p>
	<p>Hambros Open Space – secluded grassland scattered trees managed positively for wildlife with relaxed mowing and pathways cut. Not particularly species rich. More typical of woodland as higher density of trees. Stinking Iris, ground ivy, nettle, yarrow, ribwort plantain, rough meadow grass, timothy. Apple, plum sycamore, silver birch, lime.</p> <p>To the west of this area along The Hambros is managed less positively and is species poor. Red fescue is dominant, perennial rye and wall barley frequent. Ribwort plantain, creeping buttercup, white beam, rowan.</p>	<p>Continue to manage as left uncut April – August. Erect bird boxes.</p> <p>Planting of scattered trees along this area would benefit wildlife and local people. Native rowan, crab apple, cherry, whitebeam, silver birch, hazel. Manage the grassland as the other area, leaving uncut April – August and introduce signage similar to Heather Close.</p>
	<p>Maltings Garth Open Space – Great example of how local green space can be managed for wildlife and people. Grassland here is the most species rich within the village. Several positive</p>	<p>This area should also become a flagship for the village with excellent wildlife habitat. Continue to manage in this way, cut pathways for people and leave open areas for grassland. Extend the regime to</p>

	indicator species occurring frequently. Oxeye daisy, common knapweed, birds foot trefoil. Bee orchids, pyramidal orchids, field madder, selfheal, knotted hedge parsley, silver birch, whitebeam.	some of the verge along Maltings Garth to increase connectivity for wildlife. Use the wildlife signage to explain the reasoning. Put up bird boxes, bug hotel, wood piles, create a pond. Picnic bench.
	Barton Road Chalk Pit – not possible to access this site, fenced off and seemingly used as a residential garden.	Find out the status of this area.
	School Road Old Gravel Pit Open Space – grassland species poor, scattered trees, regularly mown. Common chickweed, ground ivy, daisy, oak, white beam, lime, silver birch. To the west along St Peters Way are a couple of small areas of grassland being managed positively for wildlife, grassland left uncut and signs erected.	Change grassland management regime to April – August uncut. Create pathways to ensure the area looks deliberately maintained and erect signage.
	St Peters Church and Churchyard – Varied mosaic of habitats, grassland, mature trees, dense scrub. Grassland is species rich non fertilised or reseeded. Positive indicator species rich, Lady's bedstraw, oxeye daisy, common knapweed, selfheal, common sorrel, ribwort plantain, dense stands of nettle to benefit red admiral butterfly. Variety of trees, horse chestnut, oak, yew. Several covered with ivy which provides additional benefit for wildlife. Deadwood and holes present, patches of bramble scrub beneficial for house sparrow. Chiffchaff heard and are likely to breed on site. Church itself provides valuable habitat, lichen on stonework, bat roosts and potential for starling and house sparrow to breed.	Continue to mow regularly where graves are visited. Older grave areas to be defined and managed for wildlife, left uncut April – August. Some areas could be managed as rough grassland and be allowed to overwinter without cutting. Many insects, including butterfly spend life cycle in dead stems and seed heads. Beneficial to allow areas of rough grassland to develop adjacent to bramble scrub and along the edges of hedgerows and trees. Manage more areas in this way. Valuable for hedgehog, small mammals, reptiles. Add swift boxes
	Heath Road Play Area – Grassland species poor due to regular mowing. Yarrow, common storks bill, dove foot cranes bill, ribwort plantain. Limited opportunity for biodiversity. Surrounding hedge is mixed native with trees. Dense structure good for nesting and foraging. Hawthorn, bramble, crab apple, holly, elder, rowan, ivy, honeysuckle, horse chestnut, oak, sycamore.	Relax mowing in some areas to improve biodiversity. 1 – 2 metre strip along the base of hedgerows where access is not required for play equipment. This will improve the condition of hedgerows as well as grassland for biodiversity. Create a wildlife area in the western corner. Grassland uncut with pathways cut through to create an area for children to explore. Create a small orchard, apple, plum., pear, rowan, hawthorn, hazel, whitebeam. Trim hedgerows outside nesting season (March – August) ideally delay until late December to allow for fruiting. Trim only one side of the hedge row each year. Consider coppicing small sections to retain the density at base.
	Thurston Park Open Space and SUD's lagoon – Southern section is grassland, dense scrub and scattered trees with	Currently providing good habitat for range of species including dragonflies, common frog, smooth newt. May need

<p>pathway cut through. Bramble, dog rose, cherry, buddleia, oak, field maple. Scrub supports nesting birds, Linnets were seen. Northern section recently sown grassland. Throughout the area grassland is developing from the bare ground left by the development. Creeping thistle, ragwort, teasel, birds foot trefoil, salad burnet, vipers bugloss, hedge bedstraw. This range of species will support pollinators, invertebrates seed eating birds including goldfinch and linnet. SUD's area has range of aquatic plants which indicates good water quality. Broad leaved pondweed, common spike rush, great reedmace(Bulrush) Several Dragonfly species including emperor and four spotted chaser. Several damselfly species, common blue, azure, banded demoiselle.</p>	<p>management in the future to keep it open. Great reedmace can spread quickly and cause choking with little open water. Digger will be needed to clear this out. Caution if great crested newts are found. Work only Nov – Jan to avoid impact to amphibians. Dog seen swimming – regular use will be detrimental to water quality, use signage to discourage dog owners from allowing swimming. North scrub either side of the surfaced path should be allowed o develop into a grassland and scrub mosaic, leave unmanaged for several years to develop natural scrub patches for yellowhammer and linnet.</p>
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Suffolk Priority species found in the area – listed as protected or priority

	<p>Mammals – Hedgehog, western barbastelle, noctule, serotine, soprano pipistrelle and brown long-eared bats. Otter and water vole at BBV CWS. Brown hare</p> <p>Birds – Swift, house sparrow, dunnock, linnet, song thrush, greenfinch, starling. Farmland – skylark, nightingale, bullfinch, yellowhammer, yellow wagtail, turtle dove, grey partridge, lapwing, barn owl. Spotted flycatcher and marsh tit at BBV</p>	<p>Invertebrates – Small heath, white admiral, purple emperor, white letter hairstreak butterflies. Grey dagger, beaded chestnut, green brindled crescent, brown spot pinion, large nutmeg, deepbrown dart, sprawler, centre-barred sallow, mottled rustic, latticed heath, small square-spot, small phoenix, dusty thorn, white-line dart, small emerald, rustic, rosy rustic, shoulder-striped wainscot, powdered quaker, hedge rustic moths. Scarce emerald damselfly at BBV</p>
	<p>Amphibians and reptiles – Grass snake, smooth newt, common frog, common toad, great crested newt. GCN is protected species and been recorded in newly created ponds at BBV</p>	<p>Plants – Black poplar. Marsh Ragwort, early marsh orchid, fine leaved water dropwort, shepherds needle, spiny restharrow at BBV.</p> <p>New Zealand Pygmyweed - Invasive</p>

<p>Ecological Networks and connectivity – Maintaining and improving connectivity between habitats is important for ensuring the longer-term survival of biodiversity in an increasingly fragmented landscape with a changing climate. Natural infrastructure enables habitats and species to become reestablished if damaged or in decline and help them become resilient to the impacts of climate change. Biodiversity provides vital “ecosystem services”</p>	<p>Major components of ecological networks</p> <p>Core areas – existing features and resources of importance</p> <p>Corridors – existing linear features connecting core areas with the wider landscape.</p> <p>Stepping Stones – existing habitat patches providing functional connectivity between core areas and wider landscape.</p> <p>Restoration Areas – features and resources with the potential to become future Core Areas or to improve connectivity if they are enhanced or restored.</p>
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	<p>Buffer Zones – can be included around all these areas to lessen the likelihood of direct or indirect impacts on them.</p>
<p>NPPF 2023 states that plans should conserve and enhance the natural environment and includes a range of requirements to approach biodiversity.</p> <p>“promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species”</p>	<p>Key ecological networks in Thurston – Hedgerows, in particular where there are associated trees and grassland along the footpaths, small lanes and field boundaries which connect larger block of semi natural habitat.</p> <p>To the east – old byways with hedgerow and wide grass margins – help to link BBV CWS with the wider countryside. Particularly good are small lane to west of BBV, Oak Road and Barrells Road</p> <p>To the South – several smaller lanes with hedgerows and trees which are well managed for wildlife. Birds Road, Pepper Lane, Church Road and Beyton Road.</p> <p>To the North – Important ecological network associated with the footpath heading north along Meadow Lane to join Sheep Lane.</p>
	<p>Rivers and Streams – Pakenham Feb stream bordered by semi natural habitats.</p> <p>Black Bourn River key part of the ecological network of the parish. Provide connectivity to Pakenham, Norton and Tostock.</p>
	<p>Railway Line – habitats along the length include grassland, hedgerows, woodland and trees. Connectivity between BBV and wider landscape.</p>
	<p>Local Green space – Church Road connects Thurston Park and St Peers Churchyard.</p>