



REVISED PLAN APRIL 2019

REED BEDS

1. INTRODUCTION

Reed beds are wetlands dominated by, but not necessarily composed purely of, stands of the common reed (*Phragmites australis*). They can include areas of reed which are both wet and dry at their base but usually the water table is at or above ground level for much of the year. They tend to be a complex of vegetation, ditches and open water, with the largest stands associated with flat land, seasonally or permanently flooded by fresh water. However, important components of the wider habitat that may be present are small areas of wet grassland and carr woodland, a waterlogged terrain that represents a successional stage between the original reedy swamp and the eventual formation of forest ([JNCC, 2008](#)).



Brandon Marsh © Steven Falk

Whilst reed beds tend not to be species-rich, they often have diverse structures and include a wide range of micro-habitats. The majority of their biodiversity interest is specialised and reed beds are home to a diverse mix of freshwater, brackish and terrestrial species; they typically have few fish species and a low total biomass (Sears et al. 2013); wet reed beds have more importance for biodiversity priority species.

Ideally, wet reed beds should be managed to grade into dry reed beds, tall swamp and carr or wet woodland, as some species require specific parts of the transition zones or require habitat mosaics that incorporate reed beds. As much successional variation as possible should be maintained, with additional structure and variation within the different stages, to create an intimate mosaic of varying conditions. The rotational management of the pools and ditches to maintain openness and diversity is as important as managing the reed itself, to achieve the right mix of wet reed and open water.

In the United Kingdom, four species of birds are highly dependent on reed beds for their survival: bearded titmouse (*Panurus biarmicus*), marsh harrier (*Circus aeruginosus*), bittern (*Botaurus stellaris*) and reed warbler (*Acrocephalus scirpaceus*); the latter is a favourite host for the increasingly scarce cuckoo (*Cuculus canorus*). Reed beds can also provide nesting, roosting or feeding sites for various songbirds, waders, rails and wildfowl; the hen harrier (*Circus cyaneus*), uses reed beds for roosting in winter. Reed beds appear to be important refugia from predation by mink (*Neovison vison*).

Reed beds support a wide range of invertebrate species irrespective of their successional state, diversity being associated with plant species richness, scrub and structural variation. A variety of [Red Data Book](#), Nationally Scarce and Regionally Scarce invertebrate species are closely associated with reed beds in the sub-region: this includes the flies *Lipara rufitarsis* and *Anthomyza collini* and various wainscot moths including silky wainscot (*Chilodes maritima*) and brown-veined wainscot (*Archanara dissoluta*). Dead wood within the sites can be frequent, its association with water providing specialised habitats not found in dry woodland types; e.g. the fly, *Lipsothrix nigristigma*, is associated with log jams in streams ([JNCC, 2008](#)).

However, the relatively small and fragmented nature of the reed beds in the sub-region and their isolation from larger UK reed beds mean that their biodiversity value, although still very rich, is less than reed beds in counties like Norfolk and Suffolk. Warwickshire sites are of value as roosting sites for yellowhammer, corn bunting and starling and support breeding sites for water rail (*Rallus aquaticus*), snipe (*Gallinago gallinago*) and our few Cetti's Warblers (*Cettia cetti*). One or two non-breeding bitterns (approximately 2% of the British population) also inhabit reed beds at two sites during most winters, particularly at [Brandon Marsh](#), where reed beds are being enlarged (see the [Bittern Action Plan](#)). Anticipated problems with coastal reed beds due to rising sea levels may result in the value of inland sites becoming of increased importance.

Several conservation bodies, including the [Royal Society for the Protection of Birds](#), (RSPB) are working together to produce an alternative proposal to agricultural use for quarry restoration with the creation of reed beds; [Middleton Lakes](#) in the north of the county is one such example.

| 2. | OBJECTIVES* | TARGETS* |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|----------|
| Some targets have been reset in the light of progress 2011-2018 | | |
| Associated Action Plans are: 'Rivers & Streams', 'Quarries & Gravel Pit', 'Marsh & Swamp', 'Lakes & Reservoirs', 'Bats', 'Bittern' and 'Otter' | | |
| PLEASE CONSULT THE '<i>GENERIC HABITATS</i>' ACTION PLAN IN CONJUNCTION WITH THIS DOCUMENT FOR OBJECTIVES COMMON TO ALL HABITAT PLANS | | |
| A. | To maintain in favourable condition the 42ha of existing reed beds by appropriate management. | ongoing |
| B. | To expand the area of the habitat by creating an additional 100ha of wet reed bed. | 2026 |
| *Derived from Regional Spatial Strategy Phase 3 Technical Report (2009) and based on a minimum mapping unit of 0.25ha. Numerical targets have been incorporated into section 6. See Generic Habitats Plan for rationale for derivation of targets and definitions of favourable and unfavourable condition ('Habitats overview' in 'State of the Natural Environment' (NE,2008, p49). | | |

3. NATIONAL BAP OBJECTIVES & TARGETS

Reed beds are on the current UK Biodiversity Action Plan (BAP) list of Priority Habitats, published in 2007 ([Joint Nature Conservation Committee](#)) and updated in 2010-11.

4. CURRENT STATUS

The UK reed bed resource is put at c.5000ha but of the 900 or so sites contributing to this total, only about 50 (5.5%) are greater than 20ha, and these make a large contribution to the total area. As much as 45% of the reed bed resource existing in 1945 may have since been lost. Some large new reed beds are now being created in the UK following aggregate quarrying.

Reed beds are not common or extensive in the sub-region, being mainly associated with sand and gravel extraction within certain river valleys (e.g. the Tame and Avon), some

water-filled limestone quarries, a few mining subsidence pools and formal lakes in country house estates, and occasionally as narrow fringes of reed along rivers, canals and ditches. There are dozens of small reed beds, though large ones are few in number.

The main area of reed bed / swamp remains at the former quarry sites including Brandon Marsh with more swamp areas (reed beds and emergent vegetation) identified mostly along the canals. The area of wetland identified by the Habitat Biodiversity Audit (2017) covers swamp, marsh and reed beds, with no distinction made between these habitats in Phase 1 survey. The Phase 1 categories for these habitats are:

- F1 – Swamp – bands of tall vegetation wider than 5m
- F2.1 Marginal/inundation – marginal
- F2.2 Marginal/inundation – inundation

The total known area of reed beds is a minimum of 42ha, including the 24ha created since 2015; the largest area, of 18ha, is at Brandon Marsh ([Warwickshire Wildlife Trust](#), WWT).

4.1 Legal and Policy Status

A wide range of species and habitats are protected under international and domestic laws, including the [Wild Birds Directive](#) (1979), the [Wildlife and Countryside Act](#) (1981), the [Conservation Regulations](#)(1994) and [EC Habitats Directive](#) (1992). Protection of sites is afforded nationally through [Sites of Special Scientific Interest](#) (SSSI), [Special Areas of Conservation](#) (SAC) and [Local Nature Reserve](#) (LNR) statutory status. Other sites are offered recognition of their value through Local Wildlife Site status (LWS), Local Character Areas and identified Landscape Scale Areas. The [National Planning Policy Framework](#) (2012) chapter/section 11 states conditions with regard to any development negatively affecting biodiversity, including protected sites, ancient woodland and other irreplaceable habitats (paragraph 118). The Wildlife & Countryside Act and schedule 2 of the [Conservation of Habitats & Species Regulations](#) (2010) make it an offence to intentionally kill, injure, take, possess, sell, buy or transport a range of species.

Reed bed sites notified as SSSIs are at Brandon Marsh (17ha), [Coombe Country Park](#) , [Claybrookes Marsh](#), the [Alvecote Pools](#) complex and [Ufton Fields](#), an important site for wainscot moths.

Other important reed beds designated as LWSs are [Ladywalk Reserve](#), [Kingsbury Water Park](#), Bishops Bowl Quarry and New Waters within [Warwick Castle Park](#).

4.2 Current Factors Affecting the Habitat

- **Small total area of habitat** and small population sizes of several key species dependent on the habitat
- **Small size and often isolated nature of individual reed beds** can limit the number of unusual and specialist species present and reduce their ability to colonise other reed beds or survive adverse conditions such as drought (many of which require larger reed beds).

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- **Lack of or inappropriate management** of some of the existing reed beds leading to drying out, scrub encroachment and unwanted succession to woodland.
- **Loss of areas of carr woodland** due to lack of awareness of its importance for breeding birds and the specialist insects of wet dead wood.
- **Recreational pressure** can reduce bird populations, either through noise or physical disturbance; litter and arson have also been problems at some sites.
- **Development pressure** and land use change.

5. LOCAL ACTION

- An accurate digitised database of reed-beds in the sub-region has been established by the Habitat Biodiversity Audit (HBA) and is updated annually.
- Further new reed bed creation schemes are possible based on present or proposed nature reserves, flood control projects in river floodplains, as a result of sand and gravel extraction and urban surface water drainage schemes.
- The records of various invertebrate groups and birds collected at many reed-bed sites through the activities of [Warwickshire Museum](#), and [Herbert Art Gallery & Museum](#), Coventry and amateur naturalists, especially ornithologists are held by [Warwickshire Biological Record Centre](#).
- [Friends of Brandon Wood](#): the large Green Pool was cleared of surrounding vegetation in 2017 and planted with reeds on its arable edge to trap the run-off of nitrate.

Management /restoration of reed bed:

- WWT:
 - manages the largest reed bed in the county at [Brandon Marsh](#) and smaller reed beds at other reserves: Claybrookes Marsh, Ufton Fields and Alvecote Pools.
 - In 2013 restored a small area of reed bed at [Longford Community Nature Park](#).
 - through Heritage Lottery Funding (HLF) of the [Tame Valley Reed Bed Project](#) 2014-18:
 - has improved a small reed bed at Borrowpit Lakes in the Tame Valley.
 - has enhanced the reed bed at Kingsbury Water Park (WCC) with the planting of 12480 more reeds.
 - has improved the reed bed at Middleton Lakes (RSPB) through additional wet features and the thinning of dense older reed stands
- Coventry City Council (CCC): manages the Fisheries reed bed at Coombe Country Park and extended it with fringe reed beds around parts of the larger water.
- Warwickshire County Council (WCC) manages the reed bed created at Kingsbury Water Park in 2013 (in partnership with the [Environment Agency](#) when 22000 reeds were planted with the help of volunteers into Hemlingford Water.

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- [West Midland Bird Club](#): attempts to rewet the reed bed at Ladywalk Reserve have been unsuccessful; ongoing further work may encourage reed growth in suitably wet areas.

Creation of reed bed:

- WWT has:
 - created open water and reed bed in the Tame Valley scheme.
 - doubled the area of reed bed at Brandon Marsh.
 - improved 200m of the R. Sowe with reed bed creation in 2013.
 - through HLF funding of the Tame Valley Reed Bed Project 2014-18:
 - trebled the area of reedbed at Kingsbury Water Park, (WCC) with new reed beds at Otter Pool and Mitchells Pool.
 - more than doubled the area of reed bed at Middleton Lakes.
- **CCC**: at Coombe Country Park a second smaller reed-bed is establishing, currently unmanaged but gradually expanding into top pool, creating a breeding area for reed bunting (*Emberiza schoeniclus*), a pair of water rails (*Rallus aquaticus*) and several pairs of reed warblers (*Acrocephalus scirpaceus*).
- Warwick District Council (WDC):
 - manages the wetlands created in 2000 at the [Leam Valley Local Nature Reserve](#), a mosaic of habitats including reed beds, in partnership with WWT.
 - manages the 1ha SUDS reed bed at Alder Meadow in Warwick.

6. PROPOSED LOCAL ACTIONS

| ACTION | Lead | Partner | By |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------------------------------------------------------------------|-----------|
| Some objectives have been reset in the light of progress 2011-2018 | | | |
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| Policy, Legislation & Protection | | | |
| PL1. Ensure that any site meeting the relevant criteria is considered for designation as an SSSI. | NE | EA WWT BC HBA WMBC WCC ACs STW LWSP RSPB RBC SDC CCC NWBC WDC | ongoing |
| PL2. Continue to select all qualifying reed-bed sites as LWSs and enter onto database. | LWSP | WWT HBA LAs | ongoing |
| PL3. Ensure that the protection of all reed beds is included in Local Development Plans, Neighbourhood Plans and any other relevant strategies. | WCC | NE WWT RBC SDC CCC NWBC WDC | ongoing |

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| ACTION Some objectives have been reset in the light of progress 2011-2018 | Lead | Partner | By |
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| PL4. Ensure that new minor or major developments aim for net biodiversity gain through adherence to the mitigation hierarchy. | WCC | NE WWT LPAs NWBC NBBC | ongoing |
| Site / Species Safeguard & Management | | | |
| SM1. Maintain favourable condition of the existing 42ha of reed bed by appropriate management. | CSG | NE EA WWT RSPB WCC RBC SDC CCC NWBC WDC WMBC NAM CCP | ongoing |
| SM2. Expand the area of wet reed-bed by 31 ha by 2015 and a further 69 ha by 2026, including 2 sites of over 10ha. | CSG | RSPB WWT WMBC ACs LOs RBC SDC CCC NWBC WDC | 2015-2026 |
| SM3. Implement the national requirement for Sustainable Urban Drainage Schemes (SUDS) in all new housing schemes of more than 10 dwellings as well as commercial and industrial developments, using the opportunity to create new habitats. | WCC | NE EA WWT LAs CCC SMBC CCP | ongoing |
| SM4. Create reed beds to act as filter for nitrate removal. | EA | NE WCC WWT SRT STW FoBW LOs TRT | ongoing |
| Advisory | | | |
| A1. Inform landowners on the management of their reed bed resource and advise accordingly. | NE | NE EA RSPB WCC WWT | ongoing |
| A2. Signpost Best Practice Guidelines to appropriate landowners via agri-environment schemes. | NE | WWT CFE | ongoing |
| Research & Monitoring | | | |
| RM1. Determine priority sites for reed bed extension including the proposal to extend the Ladywalk Nature Reserve reed bed. | WWT | WMBC | 2015 |
| RM2. Establish appropriate survey and research work to identify potential opportunities for reed bed creation, e.g. | WWT | WCC RSPB EA NAM LWSP RBC SDC CCC | 2015 |

| ACTION Some objectives have been reset in the light of progress 2011-2018 | Lead | Partner | By |
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| Tame Valley Wetlands Living Landscape, including wetland habitat in after-use schemes as a condition of mineral extraction licensing where appropriate. | | NWBC WDC | |
| RM3. Monitor the scale of succession in key reed beds, especially those of SSSI quality, including monitoring of water levels. | NE | WWT WCC | RSPB LOs ongoing |
| Communication, Education & Publicity | | | |
| CP1. Organise and deliver reed bed management training days to reed bed owners in order to illustrate best management techniques. | RSPB | EA WWT LOs NAM | ongoing |

Abbreviations: ACs – Aggregate Companies, BC – Butterfly Conservation, CCC – Coventry City Council, CFE – Campaign for the Farmed Environment, CSG – LBAP Core Steering Group, EA - Environment Agency, FoBW – Friends of Brandon Wood, HBA – Habitat Biodiversity Audit partnership, LAs – Local Authorities, LOs – landowners, LPAs – Local Planning Authorities, LWSP – Local Wildlife Sites Project, NAM – Nature after Minerals, NE – Natural England, RBC – Rugby Borough Council, RSPB – Royal Society for the Protection of Birds, SDC – Stratford District Council, SRT – Severn Rivers Trust, STW - Severn Trent Water, TRT – Trent Rivers Trust, WBRC – Warwickshire Biological Record Centre, WCC – Warwickshire County Council, WDC – Warwick District Council, WMBC - West Midlands Bird Club, WWT – Warwickshire Wildlife Trust.

7. PROGRESS WITH ACTIONS

From 2015–2020 there will be a rolling programme of reporting on progress, of 10 action plans per year with an annual summary of results. Progress with this plan up to 2018 can be seen at www.warwickshirewildlifetrust.org.uk/LBAP.

8. BIBLIOGRAPHY

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Falk, S.J. (2009) [Warwickshire's Wildflowers](#) - provides habitat-specific species lists, and explanations of habitats from a botanical viewpoint.

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Treweek Environmental Consultants (2009) Regional Spatial Strategy (R.S.S.) Phase 3 Regional Habitats Targets Review, Technical Report pp.71-94, prepared for the W. Midlands Regional Assembly

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Lawton, J.H. (2010) [Making Space for Nature](#): a review of England's wildlife sites and ecological network. Report to Defra, advocating a landscape-scale approach guided by four key principles, summarised as '*more, bigger, better and joined*'.

DEFRA (2011) [Biodiversity 2020](#): A strategy for England's wildlife and ecosystem services.

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RSPB (2016) [State of Nature](#) – a stocktake of all our native wildlife by over 50 wildlife organisations.

Natural England (2016) [Conservation Strategy for the 21st Century](#). Sets out how NE will help deliver DEFRA's ambitions for the environment to reverse biodiversity loss, sustain distinctive landscapes and enhance engagement with nature.

RSPB (2017) Rejuvenating reed bed to early successional habitat. British Wildlife, vol.28, no 3, pp173-4

Worldwide Fund for Nature (2018) [The Living Planet Report: aiming higher](#). Published in collaboration with the Zoological Society of London.

9. FURTHER INFORMATION

Habitat Biodiversity Audit (HBA) for Warwickshire, Coventry & Solihull – mapping data set and associated information. Phase 1 ([JNCC](#)) 1996-2002 and Phase 2 (Local Wildlife Sites) ongoing.

Biodiversity Planning Toolkit - a new online resource to help incorporate biodiversity and geodiversity into the planning system and new development.

[Nature after Minerals](#) - advises on the creation of reed beds.

[Warwickshire CC Mineral Strategy](#) - the minerals development framework consists of a number of documents.

MineralsUK - the British Geological Survey's [Centre for Sustainable Mineral Development](#) website has a wealth of information on mineral resources, mineral planning, policy and legislation, sustainable development, statistics and exploration.

[Buglife](#) - the Invertebrate Conservation Trust (2004) – provides information on the habitat-management requirements of key invertebrates. (CD-Rom available).

RSPB, [Natural England](#), [Broads Authority](#) & [British Reed Growers Association](#): Reed bed Management for Bitterns, available online.

[Plantlife](#) - a charity which carries out plant species and habitat conservation, owns and manages nature reserves, campaigns, and raises awareness through education.

[Wildfowl & Wetlands Trust](#) (2015) – the Wetland Manifesto is a 10 point plan to look after the UK's remaining wetlands.

10. CONTACT

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