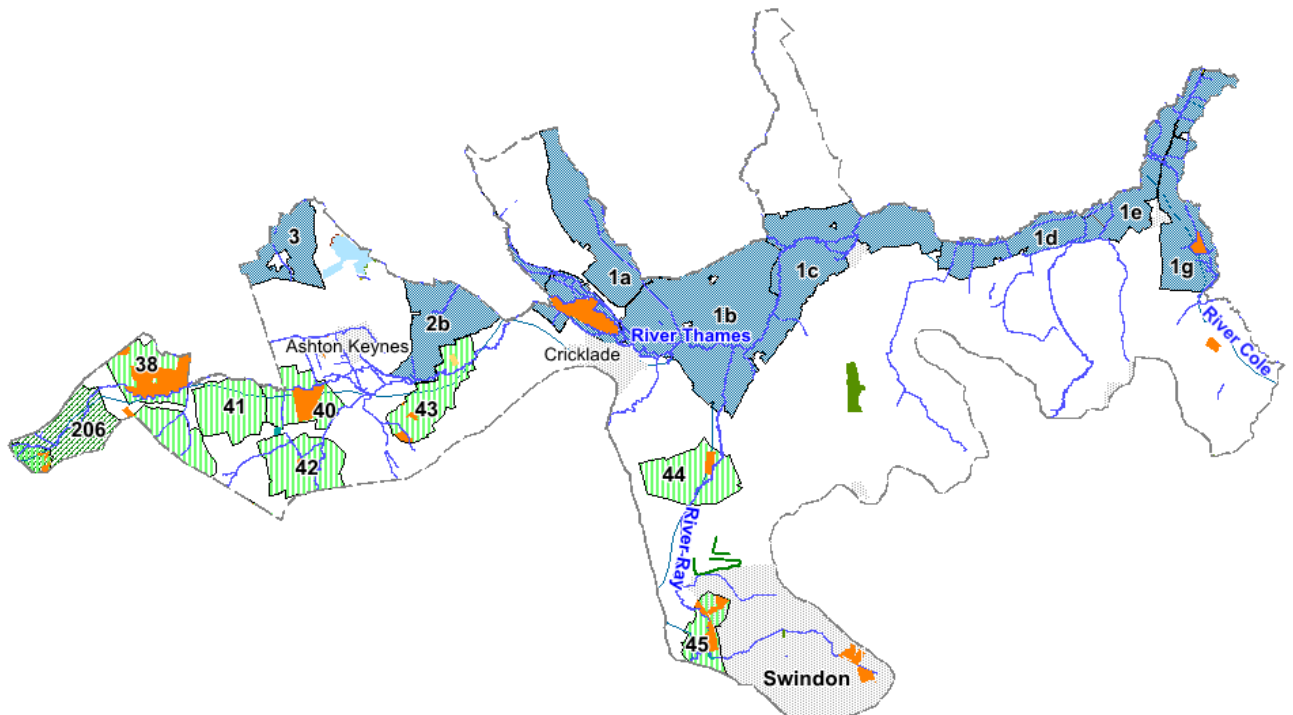


Area 01 –Wiltshire Upper Thames Clay Vale



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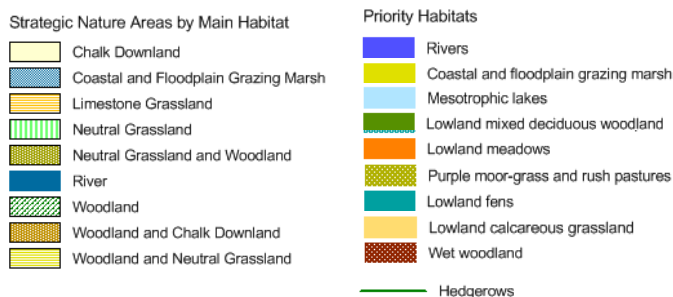


Figure 4.1 The Wiltshire Upper Thames Clay Vale Landscape Biodiversity Area indicating priority habitats and the labelled, numbered Strategic Nature Areas within this Area.

4.1.1 Area Profile

National Character Areas – [Upper Thames Clay Vales \(108\)](#)

Landscaper Character Types – Open Clay Vale (12)

Landscape Character Areas – Thames Open Clay Vale (12A)

AONBs – None

Strategic Nature Areas – There are 17 SNAs and the Rivers Thames and Ray. See [here](#) for SNA targets for Area 01

Related BAPs - [Cotswolds Water Park BAP](#)

Geology – The northern half of the Area is dominated by River Alluvia & River Terrace Gravels laid down by the river Thames and its tributaries. Oxford Clays cover the slightly higher marginal areas in the southern section towards Swindon where it then meets the limestone ridge comprised of ancient corals upon which the town sits.

Community Area Boards – Royal Wootton Bassett & Cricklade Area Board, Malmesbury Area Board and Swindon Borough covering the eastern half.

4.1.2 Background

Wiltshire Upper Thames Clay Vale is a low lying area centred on the River Thames and its floodplain. It is a largely rural landscape, predominantly level, with lines of willow and other wetland trees. The agricultural use of the area combines arable and wet pasture, with open water ditches as well as hedgerows defining boundaries. A major feature of the area is the large extent of standing open water, with over a hundred lakes, resulting from gravel extraction undertaken since the 1940s. These pits have subsequently been flooded and some have been designated for leisure use. These water bodies with their varied vegetation are of national significance because of the lime rich waters which have flooded them, creating the scarce marl lakes of the Cotswold Water Park SSSI. The series of lakes that form the SSSI include a range of plant communities including those of open water (including those associated with marl waters), reed beds and surrounding grassland habitats. The area supports a wide range of notable species including wintering bittern and breeding birds such as pochard and gadwall; as well as water vole, otter, freshwater white clawed crayfish, and the lesser bearded stonewort *Characurta*, all of which have specific targets outlined in Cotswold Water Park BAP.

There are also a considerable number of unimproved lowland hay meadows, and floodplain meadows, of high ecological interest within the Area. Clattinger Farm SAC is one of the only lowland farms in Britain known to have never received agricultural chemicals. North Meadow near Cricklade is an exceptional example of lowland hay meadow and has been designated as a SAC and National Nature Reserves in recognition of its traditional management, habitat structure and species diversity. It has the largest UK population of Snake's head fritillary *Fritillaria meleagris*, a species highly characteristic of damp lowland meadows in Europe and now rare throughout its range. Drainage and agricultural improvement of its floodplain habitats, as well as more recently gravel extraction, has seen dramatic declines in this species within the UK. Other important hay meadows within the Area include Pike Corner SSSI, Sutton Lane Meadows SSSI, Upper Waterhay Meadow SSSI, Haydon Meadow SSSI, Acres Farm Meadow SSSI and Cricklade SSSI¹.

4.1.3 Priority Habitats

Priority Habitats	Area (ha)
Lowland meadows	206.66
Rivers	82.96
Mesotrophic lakes/Ponds	35.05
Lowland mixed deciduous woodland	25.76
Lowland calcareous grassland	3.22
Lowland fens	2.8
Wet woodland	1.51
Purple moor-grass and rush pastures	1.43
Coastal and floodplain grazing marsh	0.56
Total	359.95

¹ Wiltshire Landscape Character Assessment, 2005

4.1.4 Priorities and opportunities for conservation

1. **Neutral Grassland**
 - Lowland meadows
2. **Coastal and floodplain grazing marsh**
 - Mesotrophic Lakes
3. **Rivers**
 - Rivers and streams
4. **Woodland**
 - Ancient and semi-natural mixed deciduous woodland

1. Neutral Grassland – SNAs: 38, 39, 40, 41, 42, 43, 44, 45

Lowland Meadows

Lowland meadows are floristically rich and provide an important habitat for ground nesting birds such as skylarks and a rich diversity of invertebrate fauna. Of the 900ha of neutral grassland identified in this Area, 200ha has been designated as lowland and floodplain meadows of high ecological interest. While much of this receives statutory or non-statutory protection as SAC, SSSIs and County Wildlife Sites, there is a need to buffer existing habitat areas against the effects of climate change, agricultural improvement and the residual effects of previous gravel extraction. Priorities in relation to this habitat include:

- Targeted surveys of neutral grassland areas to identify whether they meet priority lowland meadow habitat status.
- Protect and secure favourable management of known lowland neutral meadows through agri-environment schemes
- Restore degraded meadows by reinstating appropriate grazing and hay-cutting regimes, and where necessary, application of green hay or seeds of local provenance.
- Identify clusters of lowland meadow sites and target action on areas within and between cluster sites to act as stepping stones.
- Enlarge and connect existing neutral sites through habitat creation and enhancement.
- Consider floodplain meadows as flood storage areas adjacent to rivers and remove barriers that reduce flood capacity
- Consider inclusion of lowland hay meadows in mineral site restoration plans

Existing conservation initiatives and projects

- The **Floodplain Meadows Partnership** has been monitoring plants, soils and water of key floodplain meadows for a number of years, including those at Clattinger Farm SAC, developing our understanding of how these rare plant assemblages change in response to wider environmental factors.

2. Coastal and Floodplain Grazing Marsh – SNAs: 1a, 1b, 1c, 1e, 1g, 2b, 3

Mesotrophic Lakes

The lakes of the Cotswolds Water Park SSSI support a range of plant and animal communities including those of open water (including those associated with marl waters), reed beds and surrounding grassland habitats. However, only around 10% of the roughly 300ha of standing open water within this Area has been designated as priority habitat. Smaller and more recent lakes, or those receiving excessive nutrient input, may have less species diversity than the established marl lakes and these should receive on-going monitoring to determine their status as priority habitats. Recent Natural England assessments of the lakes within the Cotswolds Water Park SSSI have found them to be in unfavourable declining condition due to issues including poor water quality - indicating eutrophication and high sediment loads, presence of invasive plant and animal species, and loss of high quality plant species. Priorities in relation to this habitat include:

- Maintain water quality of water bodies by reducing sources of eutrophication such as agricultural run-off or contamination from sewage.
- Buffer lakes with appropriate planting and reed beds to reduce run-off causing turbidity and decreased water quality.
- Ensure the on-going monitoring of lakes to determine their status as priority habitats.
- Design of new water bodies within mineral restoration plans should seek to create lakes with shallow sloping banks, indented shorelines, reed beds and shallow wetlands which provide habitat for wintering and breeding birds and support adjacent wet woodland and wet grazing meadows.
- Ensure that a landscape scale perspective is taken to restoration projects within the CWP to ensure that projects complement the surrounding natural environment and that measures are taken to allow the benefits of these projects to be filtered throughout the CWP.

Existing conservation initiatives and projects

- The [Cotswolds Water Park BAP 2007 – 2016](#) integrates with the Landscape Scale Framework for Wiltshire and Swindon but addresses many issues at a very local level. The CWP BAP should be consulted for details of further initiatives. A priority within the CWP BAP is to take steps to maintain the quality of water bodies within the Park. The condition of some of the important marl lakes has declined due to eutrophication from boat traffic and run-off from fields. Reducing agricultural runoff and ensuring there is no contamination from sewage are important to maintaining the diversity of these lakes. The Environment Agency and Natural England are currently working together with farmers to encourage the inclusion of Entry Level options under the Environmental Stewardship scheme where there are diffuse pollution problems.

3. Rivers and streams – SNAs: 756, 761, 763, 764, 766, 767 – Thames; 768 - Ray

The Thames and its tributaries are vital in supporting the associated wet pasture, open water ditches, lines of willow and wetland trees which characterise this Area. The river and these associated habitats support a wide range of rare and endangered species including otters, water voles, white clawed crayfish, snake's head fritillaries and bats. The effects of climate change may substantially increase flood levels and duration of inundation which may pose significant threats to rare plant communities of floodplain meadows and their associated fauna. Point and diffuse sources of pollution are an issue along rivers with run-off from agricultural fields, urban areas and treatment works all factors that negatively influence water quality in this area. In addition to this there are issues with non-native invasive plant and animal species including Himalayan balsam and American signal crayfish. Rising to the south of Swindon and flowing north into Area 01, the River Ray is a key riparian corridor between the Swindon Urban Area and its confluence with the River Thames. Although extensive efforts have been made to open up sections of the river to enhance the riparian habitat it is under increasing development pressure as the urban area expands. Priorities in relation to this habitat include:

- Maintain connectivity of riparian habitat throughout urban areas as essential wildlife corridors
- Buffer the effects of climate change by increasing areas of wet pasture and open water ditches.
- Increase planting of wet woodland along Thames corridor, including Black Poplar, where appropriate
- Support measures to control non-native invasive plant and animal species associated with the river system.
- Increase width of riparian vegetation strips to buffer the effects of siltation and chemical run-off from arable farming practices
- Support actions outlined in the Upper Thames Catchment Management Plan to help achieve Water Framework Directive objectives and attain 'good ecological status' for the Upper Thames.

Existing conservation initiatives and projects

- **Upper Thames Catchment Management Plan** - A [Catchment Management Plan](#) is in preparation for the Upper Thames which identifies the actions needed to achieve the objectives of the Water Framework Directive in the Cherwell catchment as soon as possible. It translates the Thames River Basin Management Plan (RBMP), published in December 2009, into actions required on the round to achieve Good Ecological Status. The Catchment Management Plan outline priorities for the whole catchment relating to non-native invasive species, urban and transport pressures, phosphorus levels in rivers and stream, and the physical modification of river channels.
- **Wiltshire Invasive Plants Project** - The project aims to control invasive plants in the north of Wiltshire, especially along rivers such as the Thames and its tributaries where they can

spread rapidly. The main plant targeted is Himalayan balsam, which is controlled by organising volunteer tasks to pull it. The project also tackles other invasive plants, particularly giant hogweed and Japanese knotweed. This is mainly done by raising awareness with landowners, but the project officer and some volunteers are trained to use pesticides.

4. Woodland – SNAs: 206





The main concentrations of ancient woodland in North Wiltshire are associated with the former hunting forest of Braydon to the south of Area 01. Flittridge wood, Oaksey Nursery and Maskelyne’s Copse to the west of Upper Minety are mixed deciduous woodlands situated in the far south west corner of Area 01 which form an important link with the Braydon Forest Woodlands to the south and the woodlands located in the Cotswolds to the east. It is important to maintain the area of woodland, implement appropriate woodland management regimes and to buffer existing sites from environmental stressors including climate change. Priorities from woodland in this area include:

- Secure favourable management of existing ancient woodland sites, supported where possible by appropriate woodland grant schemes such as the England Woodland Grant Scheme.
- Buffer / extend ancient woodland sites with appropriate new woodland planting
- Improve connectivity between ancient woodland sites through hedgerow and woodland planting, particularly where it would help to link woodlands in a north – south axis.

Existing conservation projects and initiatives

- **Rebuilding Biodiversity** – the 30 square miles of the Braydon Forest is the focus of the Wiltshire Wildlife Trust’s Rebuilding Biodiversity Living Landscape project. This project aims to promote species and habitat conservation on the Trust’s reserves, as well as to influence and improve the management of land not owned by the Wildlife Trust. The project helps to deliver practical restoration works, for example, re-establishing wildlife meadows, planting trees, creating ponds and hedge planting to establish wildlife corridors which enable wildlife to move between biodiversity rich areas. It is important to continue the momentum of this project and maintain relationships with landowners within the area to promote opportunities for extending the scope of the project and increasing biodiversity gains outside of the reserves.

4.1.5 Conservation Initiatives

	Bees for Everyone!	A project to raise public awareness of the importance of bumblebees and the problems that they face, and conducting active habitat management to safeguard, restore and create valuable bumblebee habitats.	8, 9, 10	Click folder for project details	Bumblebee Conservation Trust website
	Meadow research project	Floodplain Meadows Partnership (based at the Open University) has been monitoring the plants, soils and water of key floodplain meadows for many years. This information is used to develop our understanding of how these rare plant communities change in response to wider environmental factors and help guide the management of floodplain meadows elsewhere.	1: North Meadow and Clattinger Farm sites	Click folder for project details	Floodplain Meadows Partnership research site
	Great Western Community Forest	The purpose of GWCF is to create a multi-purpose forest throughout Swindon from the centre of the town and into the surrounding countryside. Multi-purpose forestry encompasses the creation and use of a diverse natural and built environment including trees and woodland, grassland, wetlands, hedgerows, ponds and rivers.	1, 2, 3 & 5	Click folder for project details	Click icon for GWCF webpage 

Please see the attached table of current conservation initiatives within the particular Landscape Biodiversity Areas