

Protecting and Enhancing Marple's Natural Environment



Cheshire
Wildlife Trust

November 2017

Introduction

Neighbourhood Planning has provided an important opportunity for communities to shape their local environment for future generations. Identifying and evaluating opportunities and constraints will mean that communities are in an informed position and therefore better able to protect their valuable natural assets.

In 2011 the government published their Biodiversity 2020 '*strategy for England's Wildlife and Ecosystem services*' which built on the recommendations of the earlier Natural Environment white paper. The mission of the Biodiversity 2020 strategy is to '*halt overall biodiversity loss, support healthy well-functioning ecosystems and establish coherent ecological networks, with more and better places for nature for the benefit of wildlife and people.*'

The National Planning Policy Framework (NPPF), published in 2012 drew on these principles and protecting and enhancing biodiversity and creating ecological networks are central to this framework. Indeed 'biodiversity' is mentioned 15 times in the NPPF with protection and improvement of the natural environment as core objectives of the planning system. Planning policies specifically designed to address the overall loss of biodiversity are known as 'no net loss policies'. Most Local Plans now have 'no net loss' policies or similarly worded policies in place.

According to Biodiversity 2020 there are numerous ways to work towards achieving these aims, with landowners, conservation charities and individuals playing a part. However, the planning system has a central role in achieving the aims of Biodiversity 2020, particularly strategic planning, but also development control. At a local level Neighbourhood Planning has the potential to be a key factor in determining whether the aims of Biodiversity 2020 are realised, by identifying local priorities for nature conservation and ensuring these are taken into consideration in the planning process.

Objectives of the study

The first stage to protecting and enhancing the natural environment is to identify the natural assets that exist within the neighbourhood. This report aims to identify the core, high ecological value sites for nature conservation in Marple, as well as sites deemed to be of medium ecological value. The high value sites are recommended for protection through the neighbourhood planning process and the medium value sites could be considered as biodiversity opportunity areas subject to further evaluation. Medium and high value sites should also act as an alert in the planning system triggering full evaluation should they be proposed for future development.

The report also aims to identify key local and regional ecological networks within the neighbourhood planning area and recommends that these are protected through the neighbourhood plan. It also identifies key characteristics associated with the landscape character of the Marple area so these can be referenced in planning policies.

Background – ecological networks

In 2010 Professor Sir John Lawton submitted a report to DEFRA entitled ‘Making Space for Nature: A review of England’s Wildlife Sites and Ecological Network’. The report identified that we need a step change in our approach to wildlife conservation from trying to hang on to what we have, to one of large-scale habitat restoration and recreation, underpinned by the re-establishment of ecological processes and ecosystem services, for the benefits of both people and wildlife. The report also identified that this vision will only be realised if we work at local scales in partnership with local people.

The natural environment is fundamental to our well-being, health and economy, and provides us with a range of ecosystem services such as food, water, materials, flood defences and carbon sequestration – and biodiversity underpins most, if not all, of them. The pressures on our land and water are likely to continue to increase and we need to learn how to manage these resources in ways which deliver multiple benefits, for example, achieving profitable and productive farming while also adopting practices which enhance carbon storage, improve flood water management and support wildlife.

England’s wildlife habitats have become increasingly fragmented and isolated, leading to declines in the provision of some ecosystem services, and losses to species populations. Ecological networks have become widely recognised as an effective way to conserve wildlife in environments that have become fragmented by human activities.

Ecological networks generally have five components (see Figure 1) which reflect both existing and potential ecological importance and function.

- *Core areas*

These are areas of high nature conservation value which form the heart of the network. They contain habitats that are rare or important because of the wildlife they support or the ecosystem services they provide. They generally have the highest concentrations of species or support rare species. They include protected wildlife sites and other semi-natural areas of high ecological quality.

- *Corridors and stepping stones*

These are spaces that improve the functional connectivity between core areas, enabling species to move between them to feed, disperse, migrate or reproduce. Connectivity need not just come from linear, continuous habitats; a number of small sites may act as ‘stepping stones’ across which certain species can move between core areas.

- *Restoration areas*

These are areas where measures are planned to restore or create new high value areas (which will ultimately become ‘core areas’) so that ecological functions and species populations can be restored. They are often situated so as to complement, connect or enhance existing core areas.

- *Buffer zones*

These are areas that closely surround core areas, restoration areas, 'stepping stones' and ecological corridors, and protect them from adverse impacts from the wider environment.

- *Sustainable use areas*

These are areas within the wider landscape focussed on the sustainable use of natural resources and appropriate economic activities, together with the maintenance of ecosystem services. Set up appropriately, they help to 'soften the matrix' outside the network and make it more permeable and less hostile to wildlife, including self-sustaining populations of species that are dependent upon, or at least tolerant of, certain forms of agriculture. There is overlap in the functions of buffer zones and sustainable use areas, but the latter are less clearly demarcated than buffers, with a greater variety of land uses.

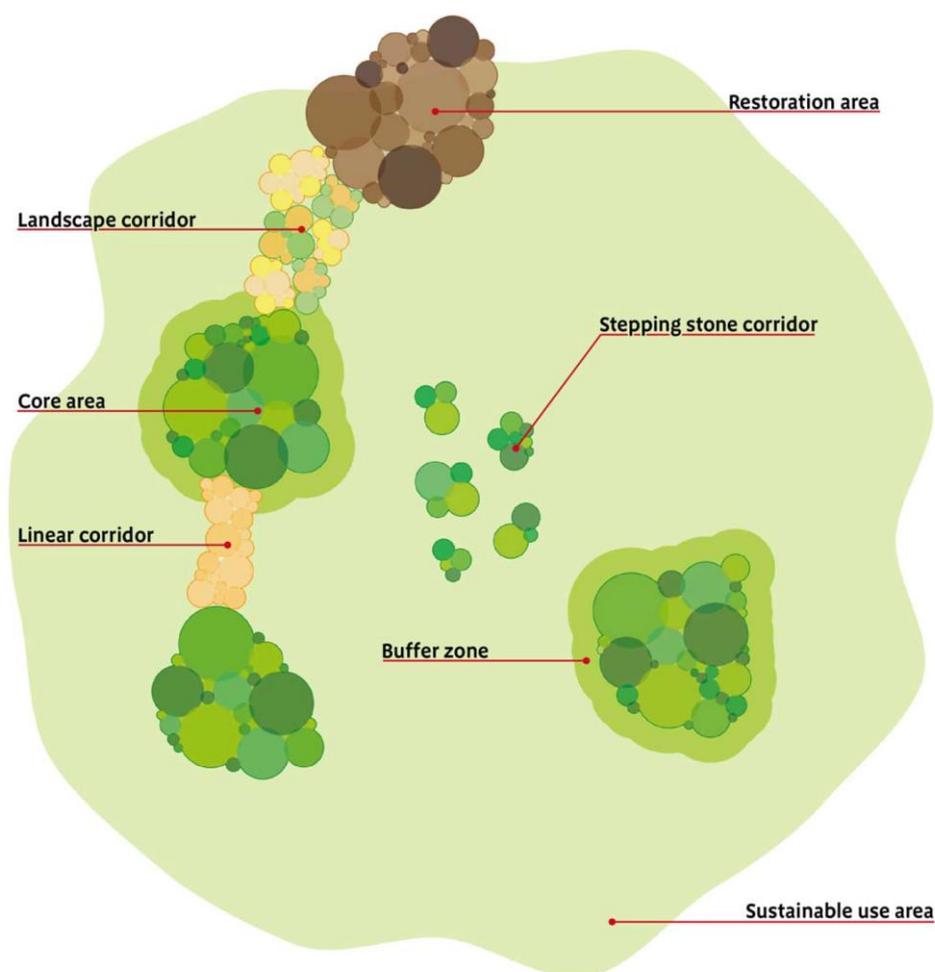


Figure 1. The components of ecological networks (Making Space for Nature report)

The principles of creating coherent ecological networks have since been embedded within many planning and policy documents. The Natural Environment White Paper 'The Natural Choice', which was published in 2011, reiterated a Government commitment to move from net biodiversity loss to net gain, by recognising the importance of supporting healthy, well-functioning ecosystems and establishing more coherent ecological networks.

The National Planning and Policy Framework published in 2012 also includes the establishment and conservation of a coherent ecological network as a core principle including:

- The planning system should contribute to and enhance the natural and local environment by establishing coherent ecological networks that are more resilient to current and future pressures.
- Local planning authorities should set out a strategic approach in their Local Plans, planning positively for the creation, protection, enhancement and management of networks of biodiversity and green infrastructure.
- To minimise impacts on biodiversity, planning policies should identify and map components of the local ecological networks including the hierarchy of sites of importance for biodiversity, wildlife corridors and stepping stones that connect them and areas identified by local partnerships for habitat restoration or creation; and promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations.

National Character Area

On a national level Marple lies within National Character Area 54 – Manchester Pennine Fringe. National Character Areas are areas with similar landscape characteristics which don't necessarily follow administrative boundaries. The character areas are determined by aspects such as geology, landform, soils, vegetation and landuse. The assessment is intended to be used as a basis for planning and the creation of future landscape strategies as well as raising public awareness of landscape character and creating a sense of place.

The Manchester Pennine Fringe NCA occupies the transitional zone between the upland moors of the Dark Peak/Southern Pennines and the populated conurbations of Manchester. The character area arcs around the north and east of the city of Manchester running from Bolton in the north-west curving east and southwards towards Hazel Grove.

The Manchester Pennine Fringe has been shaped by the industries that developed here from the 19th century onwards, particularly the mills and canals associated with the cotton trade, but also stone quarrying, coal mining and engineering. Although this area today is 46% urban it is its distinctive landform that gives this area its character, with deeply incised river valleys and woodlands and the proximity to the open moorland to the north and east. In some places the stone walls and narrow lanes at the edge of the moorland abruptly give way to the stone terraces of the urban landscape. In other areas there is a more gradual change with lower lying sheep or cattle grazed pasture land bounded by hawthorn hedges. These lower lying areas are very often impacted by the adjacent conurbations with large swathes of land transformed into golf courses, liveries and haulier businesses for example. The canals and disused railways are now used for walking, horse riding and cycling and several of them are important areas for wildlife. However it is the river corridors which are the most significant for wildlife, with ancient woodland and fast flowing rivers that have benefitted from improvements in water quality over recent decades. Other wildlife habitats are rather fragmented with isolated patches of acid and neutral grassland, heathland and

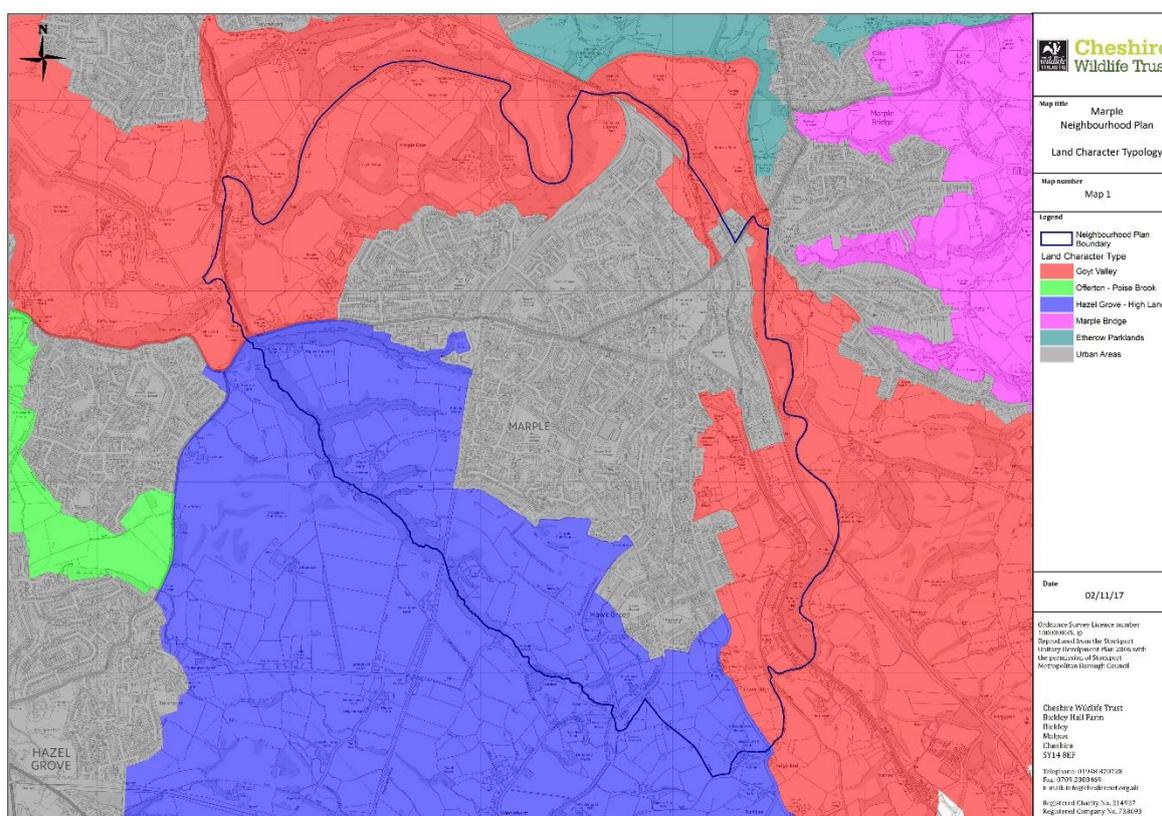
rush pasture; however there are a number of post-industrial areas which have developed as valuable wildlife sites including several abandoned quarries and areas that were once used for industrial or domestic rubbish dumping.

Local Landscape Character Areas (Stockport)

The Landscape Character Assessment for Stockport (Map 1) identifies two recognisable landscape character areas within the Marple Neighbourhood planning area, namely:

G: The Goyt Valley

I: Hazel Grove/High Lane



Map 1: Landscape Character Typology

The Goyt Valley

This large LCA follows the Goyt valley from the Derbyshire/Cheshire border at Strines through to the edge of Stockport town centre. The valley contains a mixture of agricultural land, woodland (including ancient woodland) and developed sites including schools, factories and mineral workings.

Hazel Grove/High Lane

This is another large Landscape Character Area which lies between the Ladybrook and Goyt Valleys. A number of brooks drain westwards from the direction of Marple Ridge on higher land to the east.

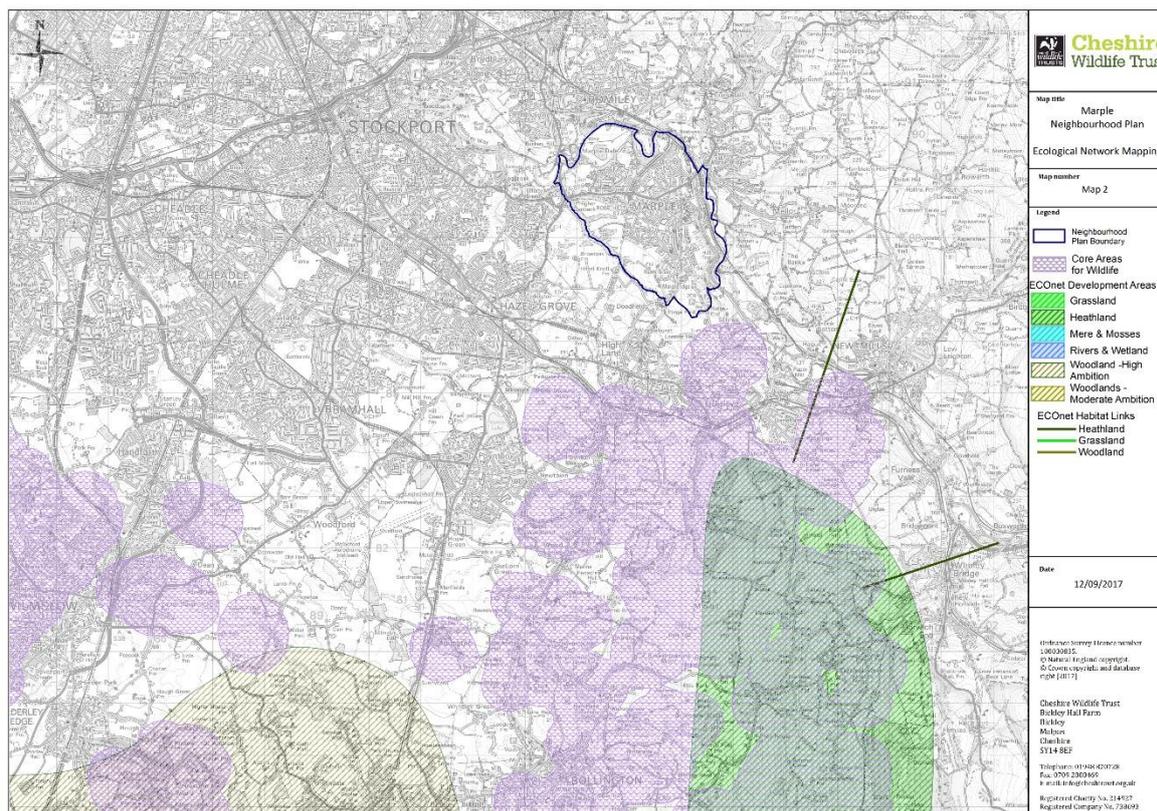
Although the land is largely open countryside with scattered farmsteads and hamlets there are two major golf courses which have influenced the character of the area in recent years. The area is crossed by two major recreation routes, the Macclesfield Canal and the Middlewood Way and there are significant areas of ancient woodland along the Torkington and Marple Brooks.

ECONet – Integrated vision of the Cheshire County Ecological Network

Between 1999 and 2003 the then Cheshire County Council were a partner within the Life ECONet Project. This was a project supported by the Life-Environment Programme of the European Commission to demonstrate in Cheshire and in Emilia-Romagna and Abruzzo (Italy) how ecological networks can help achieve more sustainable land use planning and management, as well as overcome the problems of habitat loss, fragmentation and species isolation.

The ECONet study is an integrated vision of a Cheshire County Ecological Network of ecological cohesion. The vision acts as a framework for nature conservation in the region by identifying areas of strategic importance for wildlife. It is intended as a guideline for making decisions in local and strategic planning in relation to biodiversity.

The 2003 study identified numerous core areas of key importance for wildlife. It also identified development areas which were assessed as having the greatest potential to contribute to the viability of the core areas through habitat restoration and creation schemes. The aim of any future work related to the county ecological network should be to expand the core areas and to provide better habitat connectivity (wildlife corridors). Marple sits just outside the ECONet study area but as ecological networks cross administrative boundaries it was considered important to include the mapping work in this report so the natural environment and wildlife of Marple can be considered in a wider context.



Map 2: Ecological Network Mapping (EONet 2003)

Methodology

Creating a habitat distinctiveness map

In line with current Defra methodologies to determine ‘no net loss’ in biodiversity, habitat data from the sources listed below was attributed to one of three categories listed in the table:

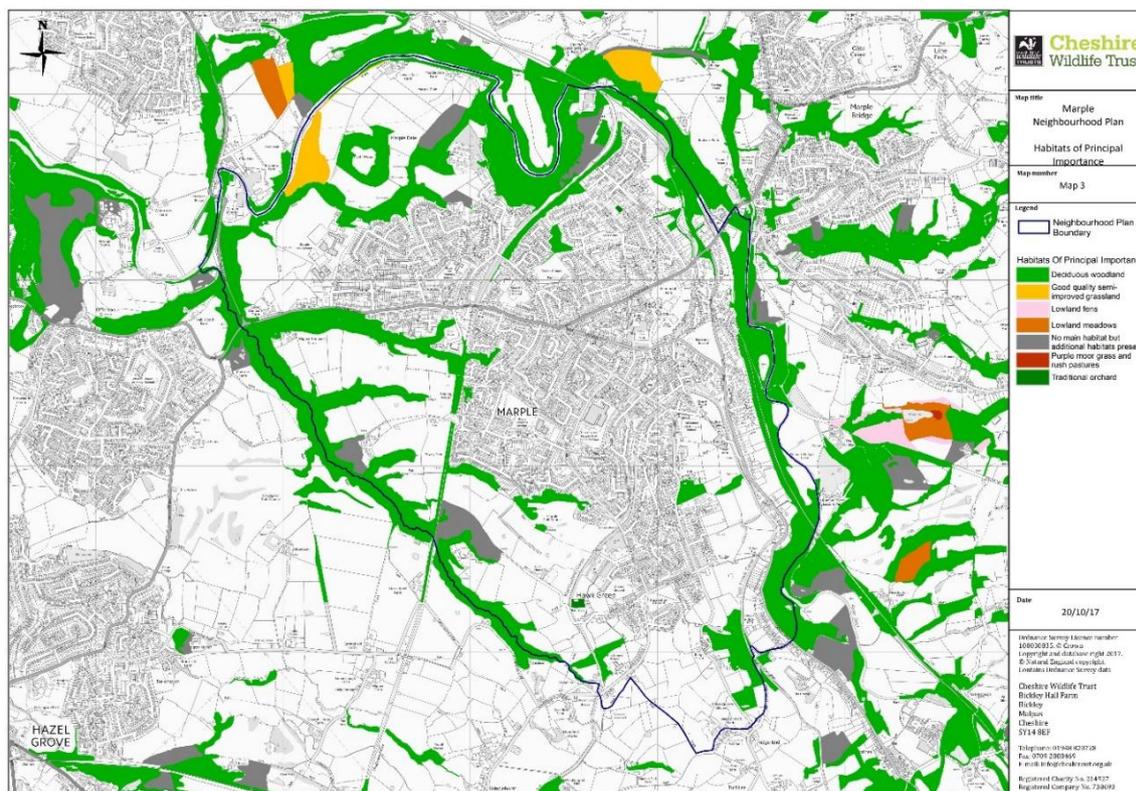
Habitat type band	Distinctiveness	Broad habitat type covered	Colour on map
High ecological value	High	Priority habitat as defined in section 41 of the NERC Act, Designated nature conservation sites (statutory and non-statutory)	Red
Medium ecological value	Medium	Semi-natural habitats and habitats with potential to be restored to Priority quality. Includes field ponds.	Orange
Low ecological value	Low	E.g. Intensive agricultural but may still form an important part of the ecological network in an area.	n/a

Habitat type bands (Defra March 2012)

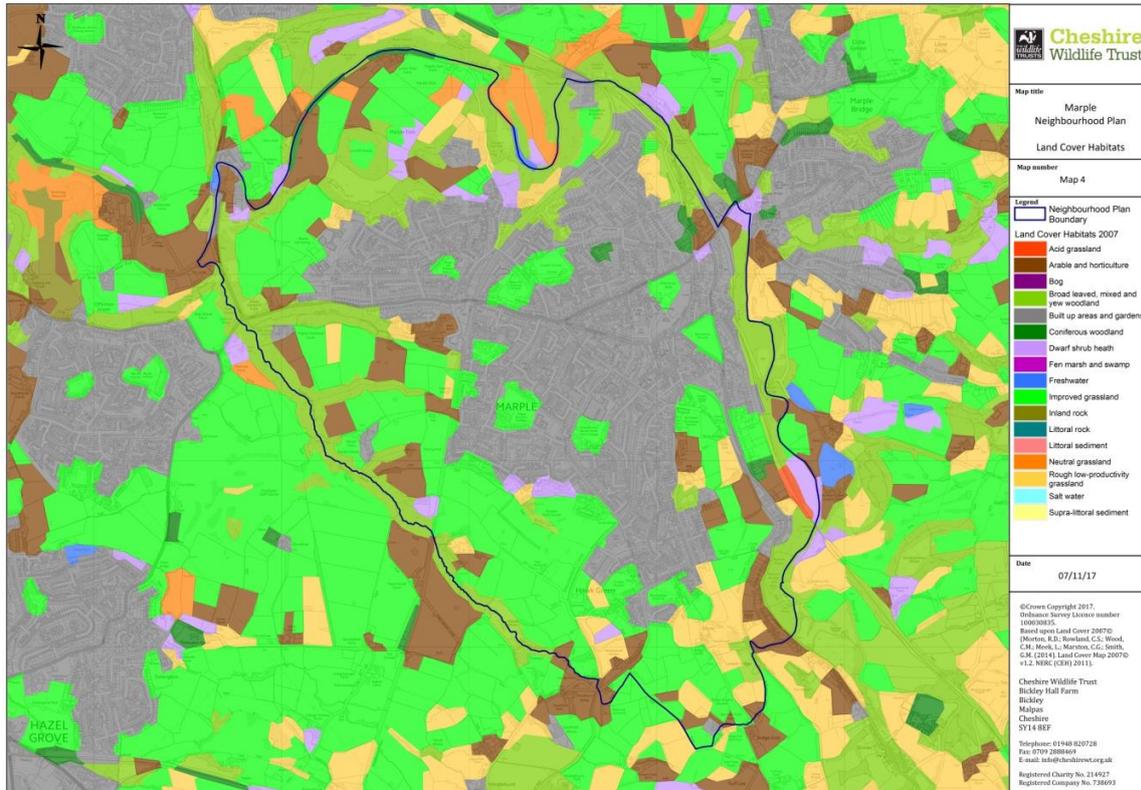
1. Several published data sets were used to produce the habitat distinctiveness maps:
 - Priority habitat Natural England 2016 – High/medium confidence coded as high distinctiveness, and low confidence coded as medium distinctiveness unless other data is available.
 - Landcover data, Centre for Ecology and Hydrology 2007. Priority habitats (principal importance) and semi-natural habitats coded as medium distinctiveness (data in Appendix 1)
 - Agricultural land classification, Natural England - grade 4 medium distinctiveness, grade 5 high distinctiveness (adjusted where other data is available).
 - Protected sites (International Sites, European Sites, Sites of Special Scientific Interest, Sites of Biological Importance and Local Nature Reserves), Natural England, Greater Manchester Ecology Unit – coded as high distinctiveness.
 - Ancient woodlands – Natural England 2015 – coded as high distinctiveness.
2. Aerial photography (Microsoft Bing™ Imagery) was used to validate the results by eye.
3. The Marple Neighbourhood Plan area Land Character Assessment and EConet categories were mapped and the results were used to inform the conclusions.
4. Habitat data from recent planning applications in Marple were researched and incorporated where appropriate.

Mapping

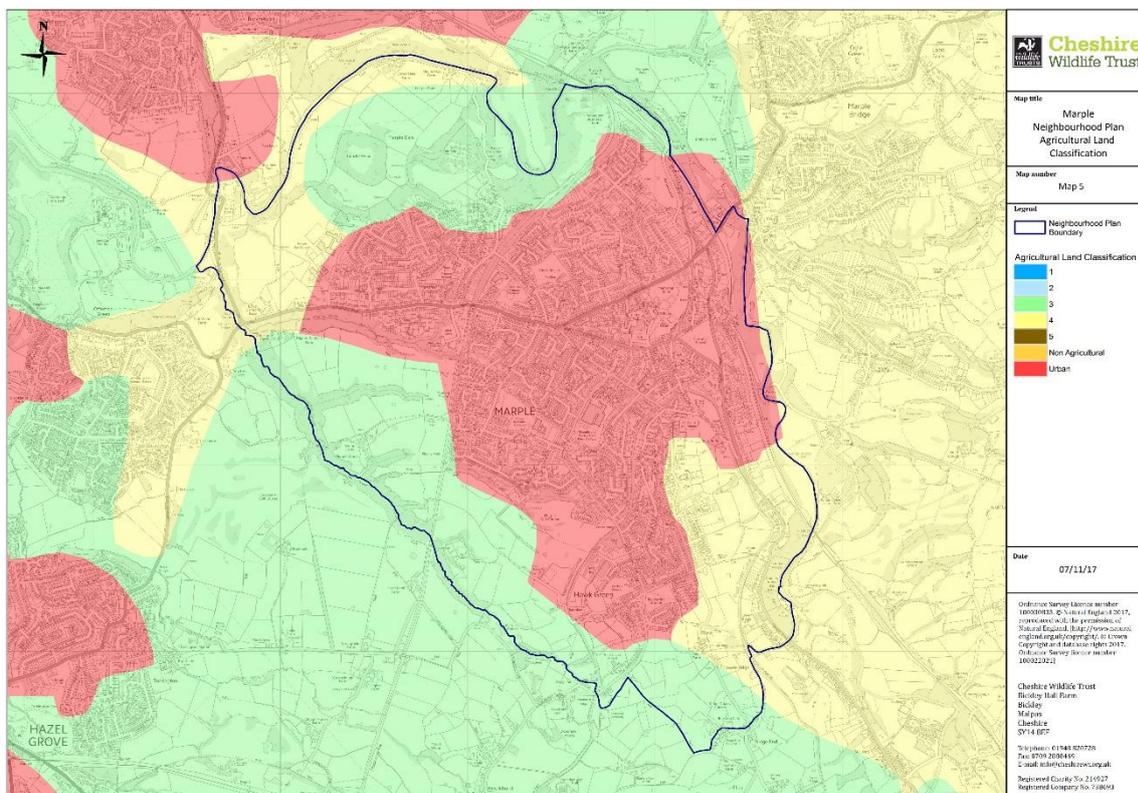
Map 3: Terrestrial habitats of Principal Importance – Natural England 2016



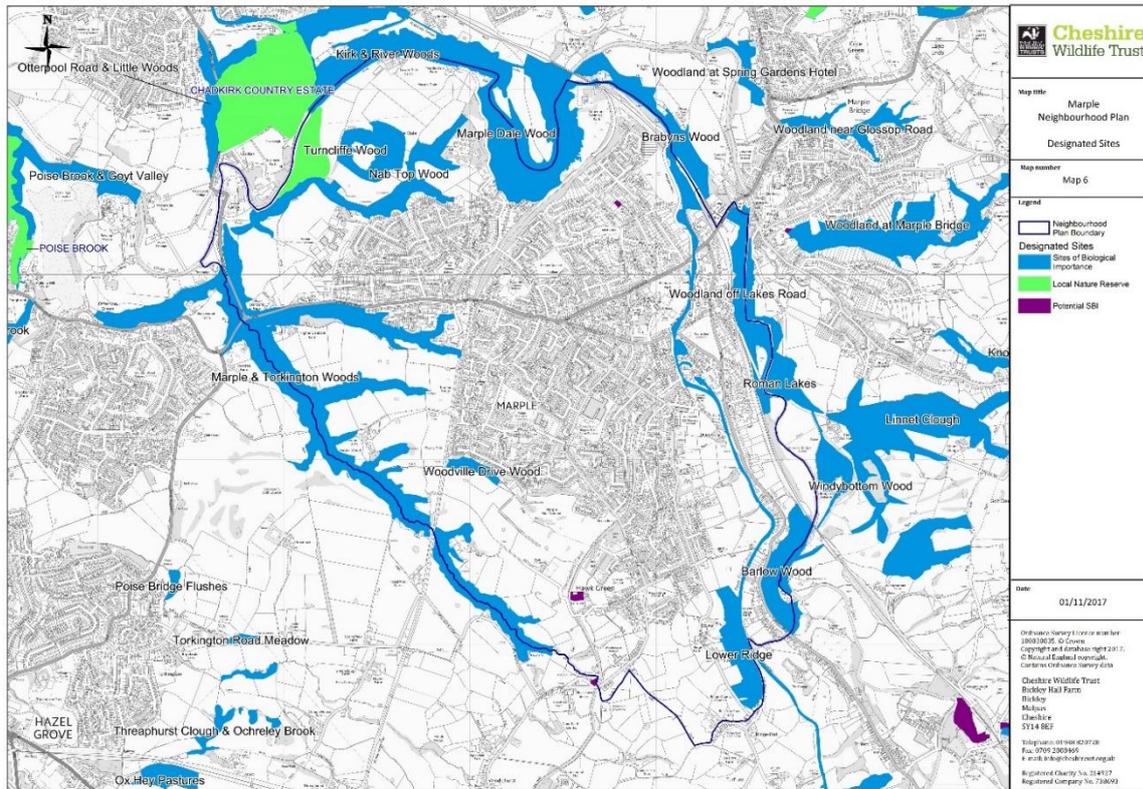
Map 4: Land Cover Map 2007 (LCM2007) parcel-based classification of satellite image data showing land cover for the United Kingdom derived from a computer classification of satellite scenes obtained mainly from the Landsat sensor



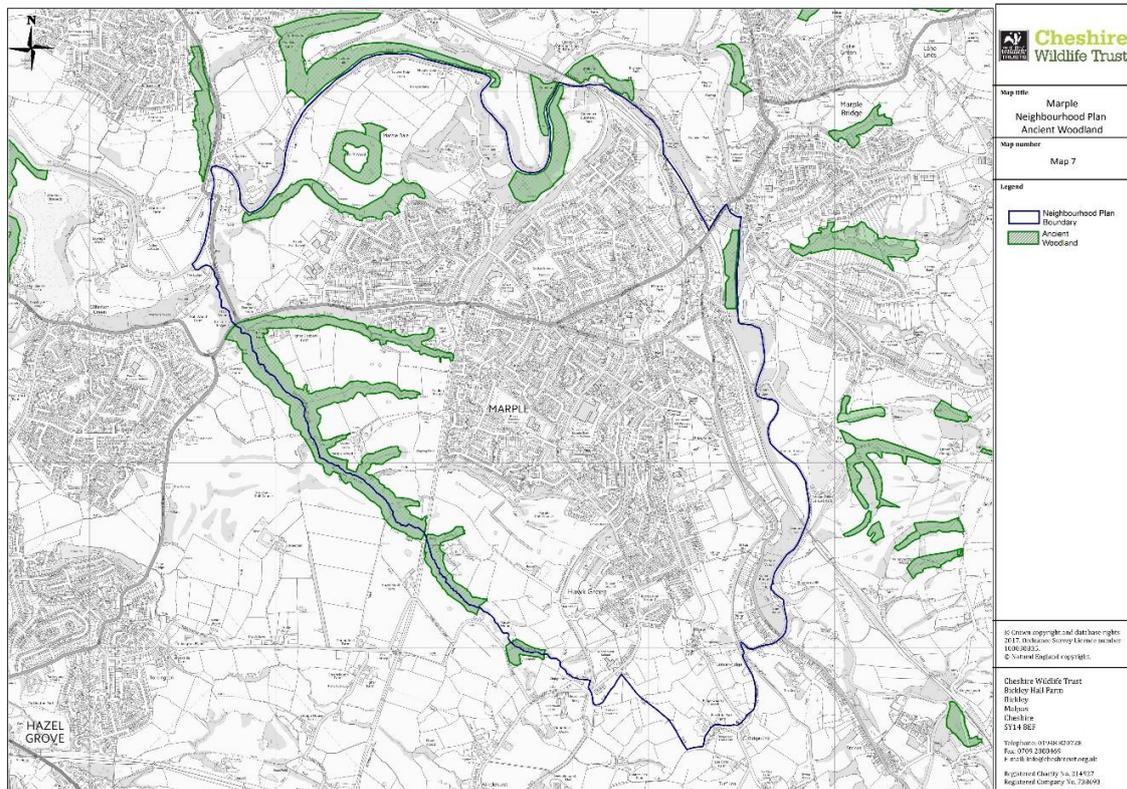
Map 5: Agricultural Land Grading – Natural England 2013



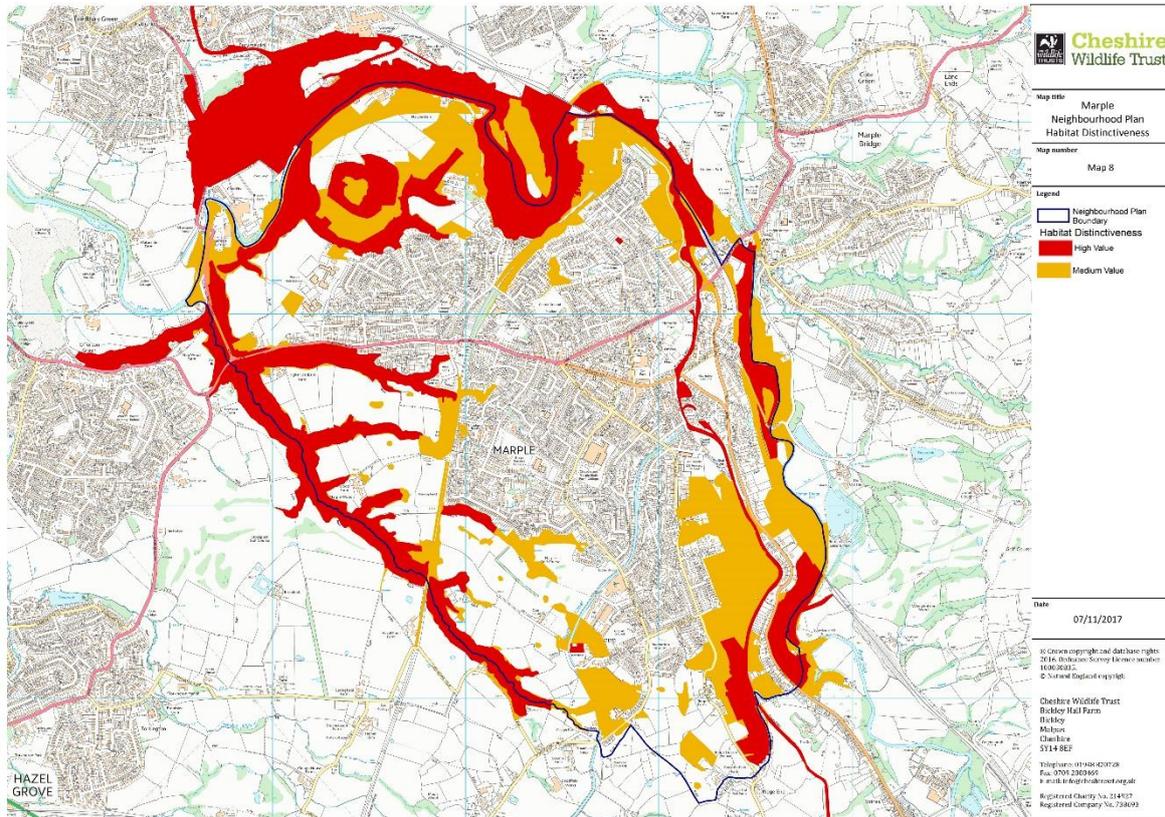
Map 6: Nature Conservation Sites, including designated Sites of Special Scientific Interest, Local Nature Reserves, European designated sites (SAC, SPA), Ramsar sites, Site of Biological Importance and non-designated Potential Site of Biological Importance



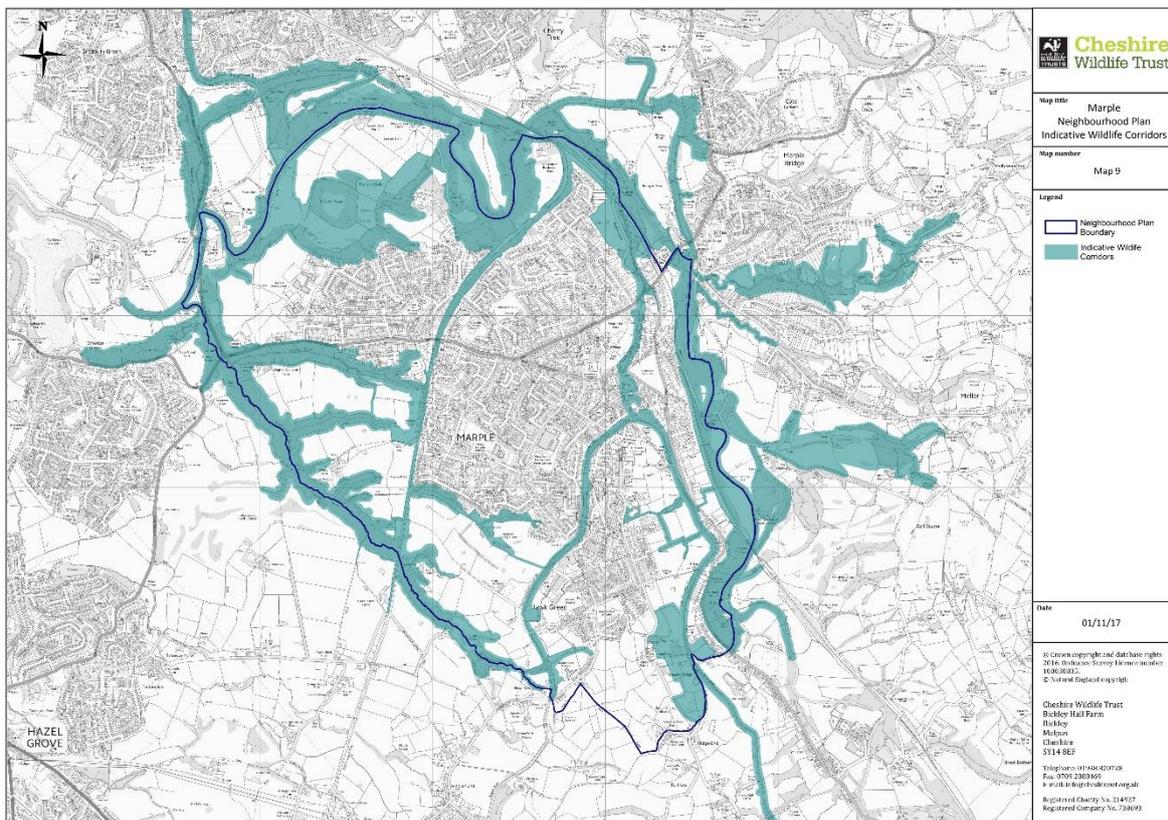
Map 7: Ancient woodland – Natural England 2015



Map 8: Habitat Distinctiveness



Map 9: Indicative Wildlife Corridor Network



Results and discussion

High distinctiveness habitat

1. Woodland

The Marple area is particularly notable for its numerous riparian woodlands that cover the steep valley slopes along the river Goyt and its tributaries. Although many woodlands in the Greater Manchester and Cheshire area are fragmented and impoverished, the woodland along the Goyt and its tributaries is an exception. Many of these woodlands are ancient (i.e. thought to be at least 400 years old) and are listed on the ancient woodland inventory (Map 7 Natural England 2015).

Typically these riparian woodlands support oak, sycamore, ash and birch, with alder and willows in the wetter areas. The ground flora is remarkably diverse compared to many other local woodlands with species such as wood anemone, ramsons, dog's mercury, yellow archangel and extensive tracts of native bluebells. There are several species which are normally only found in ancient woodland including sanicle, toothwort, wood millet and wood melick (class 1 ancient woodland indicators). The woodlands are also notable for their lichens, fungi and particularly their bryophytes with over 80 species recorded. These ancient woodlands are considered irreplaceable habitats due to time taken for them to acquire their diverse flora and fauna.

There are several secondary woodlands that, although not ancient, are still important wildlife habitats including one at Barlow Wood and one at Lower Ridge. Both sites are likely to have developed on pre-existing grassland or heathland habitats as the ground flora includes species such as wavy hair grass and bilberry.

The presence of high quality woodland in Marple means that this area is likely to be important for red listed¹ woodland birds including song thrush, lesser redpoll and lesser spotted woodpecker, which have all been recorded in the area in recent years. These three are also UK species of Principal Importance (S41 species)².

The native woodland is highly likely to support roosts of bat species which will forage for insect prey along the woodland edges, hedgerows and watercourses. Daubentons and pipistrelle bats have been recorded in 2013/14 foraging along the river Goyt to the east of the town. There are older records of whiskered bats roosting in woodland to the west of the town. All bats are European Protected Species (EPS) and many are also UK species of Principal Importance (S41 species).

The damp woodlands along the watercourses provide perfect conditions for the spread of the invasive non-native Himalayan balsam (*Impatiens glandulifera*), which is present in abundance along the river Goyt particularly to the north and north-west of the town. This species is probably currently the biggest threat to the integrity of these woodlands as its vigorous growth will outcompete native flora. This can have a devastating impact on the native flora and a knock on effect on groups of species such as birds, invertebrates and mammals. Himalayan balsam is an annual plant that dies back in the winter leaving bare soil which can then wash away in heavy rain causing soil erosion

¹ Birds of Conservation Concern 2017

² Listed on section 41 of the NERC Act 2006 or UK Biodiversity Action Plan species

issues. This is particularly concerning on the steep banks of watercourses as soil runoff can badly affect water quality.

Japanese Knotweed is also present in the vicinity of the river to the north west of the town, this is an extremely invasive species that is difficult to eradicate and will spread rapidly if left untreated. Invasive non-native rhododendron is present in Kirk and River woods and should be controlled to prevent its spread.

2. *Species-rich grasslands/lowland heathland*

The Marple area supports a few pockets of species-rich grassland, the fastest disappearing habitat in the UK. There are also small areas of lowland heath which is recognised as an internationally important habitat because it is rapidly disappearing across much of Europe. It is now one of the rarest inland broad habitat types in Cheshire and is likely to be even less common in the Greater Manchester area.

Lower Ridge SBI is particularly important as it has both acid and neutral species-rich grassland and a small area of lowland heath. Species present at Lower Ridge SBI include tormentil, harebell, heath grass, betony, sheep's fescue, mat grass with bilberry and heather (*Calluna*) in parts of the site including the old quarry. There are areas of species-rich marshy grassland within both Turncliffe Wood and Marple Dale Wood with wetland flora that includes marsh marigold, angelica, cuckoo flower, greater birdsfoot trefoil, marsh bedstraw and meadowsweet.

Any areas of species-rich grassland will support populations of declining pollinators including moths, specialist grassland butterflies such as small skipper or common blue and solitary bees and hoverflies. Where species-rich grasslands are located close to waterbodies dragonflies and damselflies are likely to be present as these feed on other invertebrates but require waterbodies to breed.

3. *Watercourses*

The Goyt is a major river that marks the northern boundary of the Marple NP area. Not only is it important for the woodland and wetlands along its banks, but the river and its tributaries support notable bird populations including red listed grey wagtail and amber listed kingfisher and dipper. The ecological quality of the river improved between 2009 and 2016 and is now categorised as 'moderate' (Sett to Etherow section 2016). There are a number of notable species of fish in the Marple section of the river Goyt including European bullhead, grayling, brown trout and salmon (Environment Agency 2009). Brown trout and Atlantic salmon are species of Principal Importance (S41 species).

Medium distinctiveness habitat

Areas of medium distinctiveness habitat are shown on map 8 (displayed as orange) and provide important wildlife habitats in their own right as well as acting as ecological stepping stones and corridors. Because the methodologies used to produce the maps are desk based rather than field

survey based, there is a possibility that some of the medium distinctiveness areas have been undervalued and an ecological survey may indicate they should be mapped as 'high distinctiveness' priority habitat (which would be displayed as red in map 8). Conversely there may be areas which have been overvalued, particularly if recent management has led to the deterioration of the habitat; in which case these areas should be removed from the habitat distinctiveness map.

Some of the 'medium distinctiveness' habitats identified in map 8 are thought to be semi-natural grassland, particularly on less productive waterlogged areas, the margins of watercourses including the canals and areas of the Middlewood Way. Semi-natural grasslands are invaluable for wildlife as they can support large populations of invertebrates and a variety of mammals, including brown hare which has been recorded to the west of the town. Red listed/S41 linnet, which has also been recorded in the Marple area, will feed on insects present in semi-natural grassland. Over wintering birds such as red listed fieldfare and redwing, (both recorded locally) will forage on areas of semi-natural grassland in the colder months.

South-west of Marple parish there are a scattering of field ponds which contribute to the permeability of the landscape for wildlife. Ponds have been highlighted as habitat of medium distinctiveness in map 8 and should always be retained where possible when land is developed. Where ponds are stocked with high numbers of fish the wildlife value is decreased. This is because introduced fish (such as bottom feeding non-native carp) can deplete the pond of invertebrate larvae and amphibian eggs/larvae as well as water plants. Despite this, even low value ponds can help increase landscape permeability for species such as birds and terrestrial invertebrates. The ponds and ditches on the Middlewood Way are likely to be particularly important for their contribution to ecological connectivity.

Although the hedgerow network in the Marple area is variable in quality it remains fundamental to landscape permeability and provides habitat for numerous species including declining farmland bird populations such as red listed mistle thrush, song thrush and amber listed bullfinch. Many invertebrates and small mammals also inhabit hedgerows, particularly those with adjacent wide field margins or those which lie adjacent to semi-natural grassland. Small mammal populations are prey for birds such as tawny owl and kestrel which consequently do best in areas where the traditional farmland landscape is intact; both species have been recorded in the local area in recent years.

Several parcels of woodland have been flagged up as medium distinctiveness but may well be high distinctiveness priority habitat if semi-natural (non-plantation) and native. These include woodland along the Middlewood Way, a parcel in the vicinity of Marple Locks and woodland on the golf course.

The wildlife value of the canal network is highest where there are soft edges that support wetland vegetation such as common reed. It is these areas which will provide a food source and shelter for other specialist species such as warblers, dragonflies and habitat for fish to breed in. The wildlife value of the canal is likely to be high where it runs through areas of adjacent semi-natural habitat such as the land at Marple Locks near Cranford Gardens.

Wildlife corridor network

Wildlife corridors are a key component of wider ecological networks as they provide connectivity between core areas of high wildlife value/distinctiveness enabling species to move between them to feed, disperse, migrate or reproduce. Taking into account the results of the EConet analysis (2003), this study has identified a wildlife corridor network (shown in map 9) with ecological connectivity within and beyond the Marple Neighbourhood Planning area.

The corridor closely follows the watercourses and hedgerows and incorporates woodlands and semi-natural grasslands and includes the canals and the Middlewood Way. It has good ecological connectivity along most of its length and the maximum break in the corridor is approximately 30 metres. One weak spot is where the river Goyt runs under the A626 by Brabyn's Brow and under the railway line near the Roman Lakes, however there is still likely to be some ecological connectivity for more mobile species. The same is true of the culvert at Danbank Bridge where Torkington Brook runs under the A626. Further weak spots where ecological connectivity is compromised are the numerous weirs on the river Goyt. Weirs pose a barrier to aquatic invertebrates and fish, although adjacent woodland at all these sites provides connectivity for other species.

The area between Windlehurst Road and Ridge Road could potentially be incorporated into the wildlife corridor network if the hedgerow network was strengthened or if new semi-natural habitat was created to improve ecological connectivity in this locality.

Protection of the wildlife corridor and other high and medium distinctiveness habitat

Map 9 incorporates an indicative boundary for the wildlife corridor network; however this is likely to require refinement following detailed survey work. The corridor should be wide enough to protect the valuable habitats identified in Map 8 and for this reason we have incorporated a 15 metre buffer zone around any high distinctiveness habitat. The buffer is necessary to help protect vulnerable habitat from factors such as light pollution, ground water pollution, predation by domestic pets and invasive garden species if adjacent land is developed.

A 15m buffer zone is also appropriate for any land lying outside the corridor network that, following an ecological appraisal, is subsequently found to be high distinctiveness Priority habitat³. Any potential development proposals adjacent to a high distinctiveness habitat or a wildlife corridor should incorporate substantial mitigation and avoidance measures to lessen impacts on wildlife. For example low spillage (bat/otter sensitive) lighting should be used on the outside of buildings or in car-parks and along pathways and watercourses. Developers should be asked to install hedgehog-friendly fencing, purposely designed to allow the passage of hedgehogs from one area to another. Other measures could include the incorporation of bee bricks and bat/bird boxes into the design of buildings, ideally made of highly durable material such as woodcrete. Surface drainage water from developed areas should always be directed away from sensitive areas due to the risk of pollution

³ Includes S41 Habitat of Principal Importance. This may currently be mapped as medium distinctiveness due to lack of information

unless the source of the water is clean, such as rainwater collected from roofs. Sustainable Drainage Schemes (SuDS) are useful in providing additional wildlife habitat and preventing flooding, but they may still hold polluted water so should not drain directly into existing wildlife habitat unless the filtration system is extensive.

Not all sections of the wildlife corridor provide high quality habitat and measures to improve its ability to support the movement of species is desirable⁴. Enhancement of the corridor may be facilitated by opportunities arising through the planning process (e.g. Section 106 agreements, biodiversity offsetting/compensation) or through the aspirations of the local community.

In addition to the 'wildlife corridor network' this study has identified further areas of high or medium 'habitat distinctiveness' (map 8) which, although sit outside the wildlife corridor network, nevertheless may provide important wildlife habitats acting as ecological stepping stones. These areas comprise semi-natural/species-rich grassland, ponds and semi-natural woodlands.

The network of field boundary hedgerows provides habitat connectivity between high distinctiveness areas, which would otherwise be separated by extensive areas of land predominantly of low habitat distinctiveness with restricted potential for wildlife to disperse. Not all the hedgerows are identified as key components of the Marple ecological network, however collectively these hedgerows provide linear connectivity through the neighbourhood and beyond. In addition to their intrinsic ecological value a good hedgerow network also adds to the landscape character value.

Meadows supporting species-rich neutral or marshy semi-natural grassland are the fastest disappearing habitats in the UK. These grasslands are particularly important for pollinating insects and insectivorous birds and mammals. It is extremely important that the highlighted 'medium distinctiveness' areas should be thoroughly evaluated in the development control process. If they are found to support species-rich grassland they should be re-classified as 'high distinctiveness' (Priority/principal importance) habitat and there is a presumption that they should not be built on (as stipulated in the NPPF). In order to achieve no 'net loss' in biodiversity, compensation may be required should these areas be lost to development when avoidance and mitigation strategies have been applied in line with the guidance set out in the National Planning Policy Framework.

Conclusion

This study has highlighted that the habitats of Principal Importance in Marple are mainly associated with the River Goyt, Torkington Brook, Marple Brook and other tributaries of the Goyt. These habitats include the ancient woodland, species-rich grassland and the river itself. Away from the river the species-rich grassland and heathland at Lower Ridge are both habitats of Principal Importance and the canal network and Middlewood Way are also likely to support pockets of priority habitat. Additional areas of native woodland are likely to be habitat of Principal Importance for example the ancient woodland at Tuncliffe Wood.

⁴ Refer to Recommendations section

By attributing habitat distinctiveness values to all land parcels in the Neighbourhood Plan area the study has provided important evidence that should be taken into consideration when planning decisions are made. However we recommend that further (phase 1) habitat survey work is undertaken at the appropriate time of year, in particular to verify that 'medium distinctiveness' habitats have not been over or under-valued. If 'medium distinctiveness' habitats are put forward for development it is strongly recommended that a full botanical species list is submitted as part of the ecological appraisal to determine if compensation/mitigation is required should the habitat be subsequently lost.

Most notably the study has highlighted a 'wildlife corridor network' which provides ecological connectivity between woodland, wetland, grassland and riparian habitats within and beyond the Neighbourhood Planning area. The wildlife corridor network is likely to support a range of species that are in rapid decline both locally and nationally (listed as species of Principal Importance); examples of these include red listed birds such as the grey wagtail, song thrush, lesser redpoll and lesser spotted woodpecker and the soprano pipistrelle bat. The brown trout and salmon are also species of Principal Importance and the bullhead is considered important at a European level (Annex 2 species). Several rare plants have been recorded in the area; Birds nest (*Hypopitys monotropa*) is nationally endangered and was recorded on the Middlewood Way in 2010, having spread there from adjacent woodland; Killarney fern (*Trichomanes speciosum*) is nationally scarce and was found in the Marple area in 2013; Melancholy thistle, Upland enchanter's nightshade and Monk's rhubarb are all locally rare (i.e. present in less than four 1 Km squares in Vice County 58) and present in the Marple area.

Daubenton and common pipistrelle bats are local priority species (LBAP) due to their declines in the Greater Manchester Area. Rare or scarce species (which are not necessarily in rapid decline) include amber listed dipper and the ancient woodland specialist flora including sanicle and toothwort (both listed as locally scarce) and the rarer bryophytes. Also notable is the flora and fauna associated with the species-rich grassland and lowland heath at Lower Ridge SBI. It is likely that some of the invertebrates or plants on this site may be rare or in decline locally.

We recommend that the corridor network shown in map 9 is identified in the Neighbourhood Plan and protected from development so that the guidance relating to ecological networks set out in the NPPF (paragraphs 114 and 117) may be implemented at a local level. The wildlife corridor network includes a buffer zone of up to 15 metres in places to protect the notable habitats shown in map 8. If new areas of high distinctiveness habitat are subsequently identified these should also be protected by a 15 metre non-developable buffer zone.

Any development proposals relating to land which lies adjacent to high distinctiveness habitat or a wildlife corridor should demonstrate substantial mitigation and avoidance measures to lessen any potential impacts on wildlife. This should include measures such as installing bat/otter sensitive lighting schemes, installing durable bat/bird boxes and hedgehog-friendly fencing and ensuring surface water is directed away from sensitive areas and into SUDS schemes.

To summarise, future development of Marple should respect the natural environment. The most intact landscapes, in terms of biodiversity, landform and historical/cultural associations should be valued highly when planning decisions are made. Protection and enhancement of Marple's natural assets is of crucial importance for nature conservation and ecosystem services but it is also important for the enjoyment of future generations.

Recommendations for improving and protecting habitat in order to create a coherent ecological network

Following adoption of the neighbourhood plan, CWT advises that the following recommendations should be actioned:

- 1. Improve the quality of the 'wildlife corridor network' and assess against the Sites of Biological Importance selection criteria**

The areas highlighted as 'wildlife corridor network' in Map 10 incorporates numerous designated Sites of Biological Importance, however it is possible that other land would meet also the criteria for Site of Biological Importance selection. These areas (some of which are identified as potential Site of Biological Importance in map 6) should be designated if the selection criteria are met, as SBI designation is likely to provide a greater level of protection within the planning system.

The wildlife corridor network should be in ‘favourable condition’⁵ to provide breeding, foraging and commuting habitat for the native species that live there and native species which may subsequently colonise. Ideally these areas should be surveyed by a qualified ecologist to identify management priorities.

Possible Management activities for the wildlife corridor network:

- The top management priority should be to control species that are listed on schedule 9 of the Wildlife and Countryside Act 1981 (as amended), particularly where these species are present in areas of ancient woodland. It is illegal to plant or to otherwise cause to grow in the wild species listed on schedule 9. A summary conviction can carry a penalty of up to £5000 and/or up to 6 months imprisonment.

The following Schedule 9 species are all present on wildlife habitats in Marple: Japanese Knotweed (*Fallopia japonica*), Himalayan balsam (*Impatiens glandulifera*), New Zealand pigmyweed (*Crassula helmsii*), monbretia (*Crocasmia x crocosmiliflora*), rhododendron (*Rhododendron ponticum* and *Rhododendron ponticum x Rhododendron maximum*), cotoneaster (*Cotoneaster* sp.) and variegated yellow archangel (*Lamium galeobdolon* subsp. *argentatum*).

- Other highly invasive garden species which are not listed on schedule 9 but require control are non-native daffodils, snowberry and Spanish/hybrid bluebells
- Hedgerows that form part of the wildlife corridor should be restored using locally native species such as hawthorn, blackthorn, hazel and holly (plant 60-90cm high ‘whips’ which have a good rate of survival and use tree guards to protect from rabbits and stock fence where necessary). New sections of hedgerow should ideally incorporate a tree every 30m (on average) which are demarked so as not to be inadvertently flailed.
- All species-rich grassland should be cut or grazed each year to maintain its wildlife value.
- Areas of heathland should be restored by measures to control tree and scrub cover (professional advice should be sought first).
- Watercourses in farmland should be buffered by semi-natural areas to provide riparian habitat and help prevent pollution runoff.
- *Managing tow paths and footpaths along the canals and Middlewood Way.* These areas are likely to contain a mosaic of different valuable habitats including scrub, semi-natural native woodland, grassland, wetland and open habitats such as railway ballast or other loose materials (early successional habitats). Before significant improvements or resurfacing is undertaken it is crucial that ecological appraisals are undertaken to highlight the important habitat features and to identify populations of notable, protected or priority species (for example the nationally endangered birds nest *Hypopitys monotropa*). Managing these sites for a mix of different habitats is likely to provide the highest biodiversity value and help with ecological connectivity. The importance of early successional open habitats should not be overlooked as these areas are particularly important for species such as pollinators and wildflowers.
- Where possible reduce the length of engineered canal banks and encourage colonisation by wetland flora, particularly common reed. This may require some tree removal to allow light to penetrate. The Canal and Rivers Trust should be consulted before any work is undertaken.

⁵ The definition of ‘favourable condition’ for Site of Biological Importance is provided in Appendix 3

- Removal of weirs on the river Goyt – this should be undertaken by the Environment Agency.

2. Protect, enhance and connect areas of high/medium value which lie outside the wildlife corridor

Opportunities should be explored to restore or create more wildlife rich habitat especially where connectivity with other areas of valuable habitat can be achieved or where important sites can be buffered. Larger areas of better connected habitat support larger and healthier species populations and help prevent local extinctions.

Ways to enhance connections or to buffer sites could include the restoration of hedgerows, creation of low maintenance field margins and sowing locally sourced (local genetic stock) wildflower meadows⁶.

Woodland expansion is desirable to buffer existing woodlands, but may be of limited value if new plantations are isolated from existing woodland due to slow colonisation by woodland species. In these areas it may be preferable to allow natural succession to woodland to take place as this is likely to result in a higher value habitat being created. It is vitally important that any tree planting should only occur on species-poor (low value) habitats and away from the edges of watercourses including ditches and ponds. Professional advice should always be sought when creating new habitat particularly when designing the layout, position and composition of new woodland and how to use local woodlands as a 'reference'. Well-designed new woodlands contain up to 40% open space (glades and rides) and up to 25% shrub species. For maximum benefit biodiversity rides should be east-west oriented (so that sunlight is maximised) and at least 30 metres wide to avoid over-shading when the canopy closes. It is recommended that trees and shrubs should be sourced from the Forestry Commission seed zone or from seed collected from local stands or from the local seed zone (collections should be made under the Voluntary Scheme for Certification of Native Trees and Shrubs, endorsed by the Forestry Commission).

3. Protect existing hedgerow network

Hedgerows which meet certain criteria are protected by *The Hedgerow Regulations, 1997*. Under the regulations it is against the law to remove or destroy 'Important' hedgerows without permission from the Local Planning Authority. Removal of a hedgerow in contravention of *The Hedgerow Regulations* is a criminal offence. The criteria used to assess hedgerows relate to its value from an archaeological, historical, landscape or wildlife perspective. The regulations exclude hedgerows that have been in existence for less than 30 years, garden hedges and some hedgerows which are less than 20 metres in length. The aim of the regulations is to protect 'Important' hedgerows in the countryside by controlling their removal through a system of notification.

⁶ Cheshire Wildlife Trust can provide advice and seeds for locally sourced wildflower meadow creation.

Any proposals that involve the removal of hedgerows or sections of hedgerows or their associated features (e.g. ditches, banks, standard trees) should be supported by an assessment to ascertain their status in relation to *The Hedgerow Regulations*. Should the Local Planning Authority grant permission for removal, compensatory hedgerows should be provided; however it is good practice to compensate for the loss of all hedgerows whether the hedgerow regulations apply or not. Like-for-like replacement is probably the minimum level of compensation that would be asked for, but it is likely that good condition high value hedges will require a 3:1 replacement ratio.

Any new sections of hedgerow should be created following the guidance provided above (point 1).

4. Phase 1 habitat mapping

It is strongly recommended that Marple Neighbourhood Planning area is phase 1 habitat mapped. This will provide a high level of habitat detail and could be used to verify the results of the habitat distinctiveness mapping (map 8). Phase 1 mapping may identify further areas of medium or high distinctiveness habitat not identified by this assessment (Priority/S41 habitat of Principal Importance). Areas identified as having medium value habitat in this report should be targeted for survey as a priority. Phase 1 mapping should also be used to determine the exact position of the wildlife corridor network.

Appendices

Appendix 1

Habitats, LCM2007 classes⁷ and Broad Habitat subclasses for LCM2007 CEH

LCM2007 class	LCM2007 class number	Broad Habitat sub-class	Broad habitat sub-class code	Habitat Score

⁷ No habitat scores higher than 'medium distinctiveness' due to the reliability of the data

Broadleaved woodland	1	Deciduous	D	Medium
		Recent (<10yrs)	Dn	Medium
		Mixed	M	Medium
		Scrub	Sc	Medium
'Coniferous Woodland'	2	Conifer	C	Low
		Larch	Cl	Low
		Recent (<10yrs)	Cn	Low
		Evergreen	E	Low/Medium
		Felled	Fd	Medium
'Arable and Horticulture'	3	Arable bare	Aba	Low
		Arable Unknown	Aun	Low
		Unknown non-cereal	Aun	Low
		Orchard	O	Medium
		Arable barley	Aba	Low
		Arable wheat	Aw	Low
		Arable stubble	Ast	Low
Improved Grassland'	4	Improved grassland	Gi	Low
		Ley	Gl	Low
		Hay	Gh	Low

Rough Grassland	5	Rough / unmanaged grassland	Gr	Medium
'Neutral Grassland'	6	Neutral	Gn	Medium
'Calcareous Grassland'	7	Calcareous	Gc	Medium
Acid Grassland	8	Acid	Ga	Medium
		Bracken	Br	Medium
'Fen, Marsh and Swamp'	9	Fen / swamp	F	Medium
Heather	10	Heather & dwarf shrub	H	Medium
		Burnt heather	Hb	Medium
		Gorse	Hg	Medium
		Dry heath	Hd	Medium
Heather grassland	11	Heather grass	Hga	Medium
'Bog'	12	Bog	Bo	Medium
		Blanket bog	Bb	Medium
		Bog (Grass dom.)	Bg	Medium
		Bog (Heather dom.)	Bh	Medium
'Montane Habitats'	13	Montane habitats	Z	Medium
Inland Rock'	14	Inland rock	lb	Medium

		Despoiled land	Ud	Medium
Salt water	15	Water sea	Ws	Medium
		Water estuary	We	Medium
Freshwater	16	Water flooded	Wf	Medium
		Water lake	Wl	Medium
		Water River	Wr	Medium
'Supra-littoral Rock'	17	Supra littoral rocks	Sr	Medium?
'Supra-littoral Sediment'	18	Sand dune	Sd	Medium
		Sand dune with shrubs	Sds	Medium
		Shingle	Sh	Medium?
		Shingle vegetated	Shv	Medium
'Littoral Rock'	19	Littoral rock	Lr	Medium
		Littoral rock / algae	Lra	Medium
Littoral sediment	20	Littoral mud	Lm	Medium
		Littoral mud / algae	Lma	Medium
		Littoral sand	Ls	Medium
Saltmarsh	21	Saltmarsh	Sm	Medium
		Saltmarsh grazing	Smg	Medium
Urban	22	Bare	Ba	Low

		Urban	U	Low
		Urban industrial	Ui	Low
Suburban	23	Urban suburban	Us	Low

Appendix 2

In order for a Site of Biological Importance to be recorded as in positive management all of the following should be met:

- The conservation features for which the site has been selected are clearly documented.
- There is documented evidence of a management plan/management scheme/advisory document which is sufficiently targeted to maintain or enhance the above features.
- The management requirements set out in the document are being met sufficiently in order to maintain the above features. This should be assessed at 5 year intervals (minimum) and recorded 'not known' if the interval is greater than 5 years.