

planning for a healthy
environment –

**good practice guidance for
green infrastructure and
biodiversity**

annex C

**model policies and
approaches**

**Town & Country Planning Association
The Wildlife Trusts**

July 2012

annex C

model policies and approaches

C.1 South Lakeland Local Development Framework Core Strategy. October 2010

South Lakeland District Council

<http://www.southlakeland.gov.uk/documentBrowser/Local%20Development%20Framework/Core%20Strategy/01%20Core%20Strategy%20October%202010.pdf>

CS8.4 Biodiversity and Geodiversity

All development proposals should:

- Protect, enhance and restore the biodiversity and geodiversity value of land and buildings;
- Minimise fragmentation and maximise opportunities for restoration, enhancement and connection of natural habitats (including links to habitats outside South Lakeland); and
- Incorporate beneficial biodiversity and geodiversity conservation features, including features that will help wildlife to adapt to climate change where appropriate.

Proposals should particularly seek to contribute towards the UK priority habitats and species in South Lakeland, and any additional Cumbria Biodiversity Action Plan species.

Development proposals that would have a direct or indirect adverse effect on nationally, sub-regional, regional and local designated site and non-protected sites that are considered to have geological and biodiversity value, will not be permitted unless:

- They cannot be located on alternative sites that would cause less or no harm;
- The benefits of the development clearly outweigh the impacts on the features of the site and the wider network of natural habitats; and
- Prevention, mitigation and compensation measures are provided.

Development proposals where the principal objective is to conserve or enhance biodiversity or geodiversity will be supported in principle.

South Lakeland District Council's Ecosystem Services Performance Indicator

'Increase the resilience of ecosystem services by protecting against harm to biodiversity and taking opportunities to enhance and create ecologically-diverse habitats in all locations.'

C.2 Black Country Core Strategy. February 2011

Dudley Metropolitan Borough Council, Sandwell Metropolitan Borough Council, Walsall Council, Wolverhampton City Council

<http://blackcountrycorestrategy.dudley.gov.uk/>

Env 1 Nature Conservation

Development within the Black Country will safeguard nature conservation, inside and outside its boundaries by ensuring that:

- development is not permitted where it would harm internationally (Special Areas of Conservation), nationally (Sites of Special Scientific Interest and National Nature Reserves) or regionally (Local Nature Reserve and Sites of Importance for Nature Conservation) designated nature conservation sites;
- locally designated nature conservation sites (Sites of Local Importance for Nature Conservation), important habitats and geological features are protected from development proposals which could negatively impact upon them;

- the movement of wildlife within the Black Country and its adjoining areas, through both linear habitats (e.g. wildlife corridors) and the wider urban matrix (e.g. stepping stone sites) is not impeded by development;
- species which are legally protected, in decline, are rare within the Black Country or which are covered by national, regional or local Biodiversity Action Plans will not be harmed by development.

Adequate information must be submitted with planning applications for proposals which may affect any designated site or any important habitat, species or geological feature to ensure that the likely impacts of the proposal can be fully assessed. Without this there will be a presumption against granting permission.

Where, exceptionally, the strategic benefits of a development clearly outweigh the importance of a local nature conservation site, species, habitat or geological feature, damage must be minimised. Any remaining impacts, including any reduction in area, must be fully mitigated.

Compensation will only be accepted in exceptional circumstances. A mitigation strategy must accompany relevant planning applications.

Current designated nature conservation sites including Local Nature Reserves will be carried forward from existing Proposals Maps, subject to additions and changes arising from further studies. Local Authorities will look to designate additional nature conservation sites as necessary in conjunction with the Local Sites Partnership and consequently sites may receive new, or increased, protection over the Plan period.

All appropriate development should positively contribute to the natural environment of the Black Country by:

- extending nature conservation sites;
- improving wildlife movement; and/or

- restoring or creating habitats/geological features which actively contribute to the implementation of Biodiversity Action Plans (BAPs) and/or Geodiversity Action Plans (GAPs) at a national, regional or local level.

Details of how improvements (which are appropriate to the location and scale) will contribute to the natural environment and their ongoing management for the benefit of biodiversity and geodiversity will be expected to accompany planning applications. Local authorities will provide additional guidance on this in Local Development Documents.

C.3 St Helen's Council Local Development Framework Core Strategy (Re-Publication Core Strategy Tracked Changes Version). January 2011

St Helen's Council

<http://www.sthelens.gov.uk/media/94676/ldf43a.pdf>

Policy CQL 3 Biodiversity and Geological Conservation

The Council will protect and manage species and habitats, as well as enhancing and creating habitats and linkages between them by:

1. Identifying the location of sites of importance for biodiversity and geological conservation differentiating between SSSIs, Local Nature Reserves, Ancient Woodlands, Local Wildlife and Geological Sites through the Allocations DPD and AAPs on the Proposals Map and bringing sites into active conservation management;
2. Requiring that, where harm to protected species or habitats is unavoidable, developers ensure suitable mitigation measures are implemented to enhance or recreate the features, either on or off-site, and bring sites into positive conservation management;

3. Ensuring that any development affecting nationally and locally important sites and protected species will only be acceptable if there is clear evidence that the development outweighs the nature conservation interest;
4. Reducing habitat and species fragmentation by developing a functioning ecological framework for the Borough;
5. Requiring all development proposals to be based on ~~ecological site appraisals~~ ecological assessments, where appropriate, including where sites are derelict, vacant or previously developed land. Surveys must be undertaken at appropriate times of year for the relevant habitats, species, flora and fauna;
6. Requiring developers, where appropriate, to incorporate habitat features, which will contribute to the Borough's ecological and geological resource; and
7. Ensuring the creation, extension and better management of Biodiversity Action Plan priority habitats, including the further designation of Local Nature Reserves.

impact on the natural environment. It allows developers to identify and address any nature conservation issues before a planning application is submitted.

C.4 Brighton & Hove City Council Local Development Framework, Supplementary Planning Document: Nature Conservation and Development. March 2010

Brighton & Hove City Council

http://www.brighton-hove.gov.uk/downloads/bhcc/ldf/Annexes_-_SPD11_Nature_Conservation_and_Development.pdf

The Biodiversity Checklist (Indicators for carrying out a 'first impressions' survey of a development site)

The Biodiversity Checklist [on page C5] is designed to identify those developments which may have an

good practice guidance for
green infrastructure and biodiversity

| 1: Biodiversity Indicators – do any of the following features apply to the application site? | 2: Please answer yes or no to the indicator | 3: Notes (indicators of:) |
|---|--|---|
| 1. Development involves clearance of shrubs/scrub or woodland of more than 100 m ² (about the size of half a tennis court) | | Nesting birds |
| 2. Modification, conversion, demolition or removal of barns or farm buildings of brick or stone construction, or with exposed wooden beams, whether derelict or in use | | Barn Owl, Bats, Swallow |
| 3. Change to coastal shingle east of the Palace Pier or west of Hove Lagoon | | Coastal vegetated shingle |
| 4. Removal or modification of hanging tiles or weather boarding on buildings of any age within 50 m (about the width of a football pitch) of woodland or mature trees | | Bats |
| 5. Change to pre-1914 roof structures with opportunities for access into the eaves (missing tiles, cracks in brickwork, missing bricks or missing soffit boards) but not to roofs made with metal or prefabricated sheeting. | | Sparrow, Starling, Swift, Bats |
| 6. Proposals involving external floodlighting of churches and listed buildings within 50 m (about the width of a football pitch) of a green space or woodland | | Bats |
| 7. Change to derelict areas with exposed soil, brambles, piles of rubble, etc. of more than 100 m ² (about the size of half a tennis court) | | Reptiles (Adder, Viviparous Lizard, Slowworm), invertebrates, plants of value |
| 8. Application site is inside or within 10 m (about the width of a tennis court) of a Site of Special Scientific Interest, Local Nature Reserve or Site of Nature Conservation Importance. | | Indirect effects on sites designated for their nature conservation importance. The boundaries of these sites are shown on the development plan proposals map or see www.CityWildlife.org.uk , 'special sites' section. |
| 9. Loss of modification of grassland grazed by horses, cattle or sheep, of more than 100 m ² (about the size of half a tennis court) | | Hornet Robberfly, Red Star-Thistle |
| 10. Loss of a hedge (including garden hedges) of 10 m or more (about the width of a tennis court or more) | | Nesting birds. Dormouse (Waterhall area only) |
| 11. 'Veteran' trees on or overhanging the development site, 'Veteran' trees, are trees with holes, cracks or cavities, or with peeling bark, or with large dead branches, or which support well established Ivy growth. | | Bats, Stag Beetle, nesting birds, veteran trees. Trees adjacent to a development may still be affected by it. |
| 12. Loss of grassland of more than 100 m ² (about the size of half a tennis court), typically abandoned allotments, which is cut infrequently, or which supports a variety of flowers, particularly on south-facing slopes or close to the sea | | Sunny, open rough grass sites which do not receive regular management often support reptiles, Glow Worm and (on the coast) Hoary Stock. This indicator also detects chalk grassland plant communities. |
| 13. Any of the following observed on the application site: Narrow paths passing under thick vegetation or fences; small soil excavations; burrows of a diameter greater than 20 cm | | Badger setts can occur almost anywhere in Brighton and Hove. Even single sett entrances benefit from full protection under the Protection of Badgers Act 1992. |
| 14. Ponds of all types (including garden ponds) on the application site | | Great Crested Newt. Note that the terrestrial habitat may be inside the development site even if its breeding pond is outside it. |

C.5 City of York Local Development Framework, Core Strategy Submission (Publication). September 2011

City of York Council

http://www.york.gov.uk/content/45053/64877/64880/Local_development_framework/CD1_CoreStrategySubmission.pdf

Policy CS20: Strategic Green Infrastructure

The LDF will conserve and enhance York's landscapes, geodiversity, biodiversity and natural environment, recognising the role of Green Infrastructure in supporting healthy communities, cultural value, a buoyant economy and aiding resilience to climate change. This will be achieved through the production of a Green Infrastructure Strategy, and by ensuring that development proposals relate to current and emerging guidance, and do not compromise York's Green Infrastructure network.

1. As a part of the LDF process, the Council will adopt a Green Infrastructure Strategy which addresses and incorporates the following:
 - the findings of an up to date Biodiversity Audit and Action Plan;
 - the findings of a Lower Derwent Valley Plan;
 - management plans to describe, protect and enhance the biodiversity of Council owned sites, with priority given to those designated as Sites of Importance for Nature Conservation (SINCs);
 - protecting and enhancing existing open space in York, and seeking to increase provision in areas where a deficiency has been identified. This includes the provision of strategic open space in connection with areas of search for urban extensions, if urban extensions are required; ongoing work with landowners, and through the development process, to help safeguard nature conservation sites, whether locally, regionally, nationally or internationally identified, including the potential to create buffer zones. The extent of buffers would be variable, but should be commensurate to the need;
2. The LDF will support development which:
 - delivering the aspirations of partner strategy documents and action plans, such as the Regional Biodiversity Strategy, Regional Forestry Strategy and Action Plan, River Basin Management Plans, Priority Woodland Habitat Management Plans;
 - safeguarding, managing and enhancing York's existing tree and woodland; resource in line with the current Regional Forestry Strategy, particularly urban; tree planting and street trees;
 - maintaining and enhancing the rivers, banks, floodplains and settings of the Rivers Ouse, Derwent and Foss, and other smaller waterways for their biodiversity, cultural and historic landscapes, as well as recreational activities; and
 - supporting allotments and productive land, to encourage local food production, and its benefits to education and healthy living.

should provide for the quantity, quality and accessibility of open space and ancillary facilities as set out in the current assessment of open space, and improve the provision where required. Development which results in the loss of open space will be refused; and

- protects and enhances existing rights of way, national trails and open access land.

C.6 Teignbridge District Council Core Strategy – Development Plan Document, Preferred Options. January 2012

Teignbridge District Council

<http://www.teignbridge.gov.uk/CHttpHandler.ashx?id=31922&p=0>

WE 11 Green Infrastructure

To achieve the expansion and maintenance of a comprehensive green infrastructure network, the following will be promoted through determination of planning applications and by partnership working;

- a) protecting, enhancing and extending existing green infrastructure assets and providing new or replacement facilities;
- b) establishing a network of accessible, multi-functional green corridors for movement of people and species, as identified in the Teign Green Network and future Green infrastructure strategies;
- a) promoting good accessibility to green infrastructure for all;
- d) requiring provision of at least 60 square metres of public open space within or near to new housing developments in the following approximate proportions:
 - children’s play 5%
 - young persons’ areas 5%
 - parks 30%
 - playing pitches 50%
 - allotments or community gardens 10%; and

- e) public open space should be designed as part of the overall green infrastructure and layout of the site, taking advantage of the potential for multiple benefits including wildlife, sustainable urban drainage, tree planting and landscaping.

C.7 Green Infrastructure Study for the Stratford-on-Avon District: Vol. 1 – Main Report. August 2011

UE Associates for Stratford-on-Avon District Council

<http://www.stratford.gov.uk/files/seealsodocs/12449/District%20Green%20Infrastructure%20Study%20-%20Main%20Report%20-%20Aug%202011.pdf>

The GI Framework

The table on the page C8 illustrates the GI Framework that has been developed for the Stratford on-Avon district, taken from a district-wide GI Study that has been prepared to form part of the Local Development Framework evidence base. The GI Framework is designed to ensure that future requirements and need for GI across the district will be supported and met successfully. The study also includes nine district-wide strategic recommendations that seek to act as overarching principles to ensure that a strong, robust GI network is recognised and realised – these cover: green work place design; woodland management; access and recreational network; allotments and orchards; awareness, education and involvement; water quality and river corridors; ponds and gardens; tree planting; and standards. The study’s recommendations for woodland management are outlined on page C8.

SR2: Woodland management

Many of the woodlands around the district are fragmented and isolated. In particular many of the ancient semi-natural woodlands have seen a decline in quality over the past century through a combination of neglect, illegal felling, non-native plantations and

Theme I: A sustainable, competitive and prosperous economy

Objectives

1.1: Support the revitalisation of the Stratford-on-Avon economy by ensuring new and existing places of work are affordable and attractive. These should be characterised by green open space, street trees and smart green design that contribute to a healthy motivated workforce.

1.2: Support the growth of a sustainable tourism industry by utilising green infrastructure features to enhance the setting of key tourist destinations and the district's outstanding heritage resource such as canals, historic buildings, archaeological remains and town centres. Recognise and maximise the potential of green infrastructure assets, such as nature reserves, woodlands and rivers, as alternative visitor destinations.

1.3: Investigate and promote the commercial opportunities of green infrastructure that uphold the principles of sustainable development, for example wood fuel and food production.

1.4: Draw on green infrastructure theory and assets to help support and develop a strong knowledge based economy that facilitates the development of key skills concerning green technologies, green infrastructure asset management and design.

Theme II: A healthy, active and involved community

Objectives

2.1: Promote and maintain a strong network of linear and circular routes that encourages active travel and recreation, supporting the physical and mental health of the district's population.

2.2: Maintain a high quality network of playing fields, pitches and sporting venues that are easily accessible and safe, to encourage recreation and sporting activities amongst all aspects of society.

2.3: Promote and increase awareness of green infrastructure and its benefits. Encourage, support and facilitate neighbourhood involvement in maintaining and managing local green spaces through a sense of community ownership, pride and responsibility.

2.4: Expand and develop a strong PRow network that improves the connections between settlements and facilitates the use of non-motorised modes of transport. The development of off-road routes and greenways that benefit biodiversity and offer safe recreational opportunities should be encouraged.

Theme III: Flooding and a changing climate

Objectives

3.1: Respond to the effects of climate change by maximising the potential of green infrastructure to reduce CO₂ emissions, facilitate species migration and combat temperature rise by encouraging urban cooling.

3.2: Promote natural river corridor management by maintaining, restoring and increasing extent of floodplains where appropriate whilst maximising the multifunctional benefits of river corridors for recreation, biodiversity, landscape and flood defence.

3.3: Recognise the importance of, and encourage the use of, green infrastructure to increase natural storage capacity, reduce storm water run-off rates and increase water purification. Permeability of settlements should be maximised, utilising sustainable drainage systems and where possible maximising multifunctionality.

3.4: Investigate the role of green infrastructure in reducing Stratford-on-Avon's carbon footprint through wood fuelled renewable energy, non-motorised transport and other carbon offsetting initiatives.

Theme IV: Biodiversity and natural resources

Objectives

4.1: Ensure the protection, enhancement and expansion of existing biodiversity by supporting the priorities of the Local Biodiversity Action Plan. In addition, improve the connectivity of habitats and ecological networks at all levels of scale and designation.

4.2: Ensure that urban extensions and other new developments incorporate multifunctional green infrastructure features that meet need, contributing to and maintaining the character and sense of place of the district and settlements.

4.3: Recognise the multifunctional importance of gardens and allotments for recreation, biodiversity and water retention. Encourage and support individual and neighbourhood allotment uptake and community gardening.

a decline in traditional management. Although areas of woodland have increased over the past decade through woodland creation there is still a need to coordinate efforts and conserve the district's woodlands. This project aims to protect and maximise the multifunctional potential of the district's woodlands as a high quality resource. Efforts should seek to explore the diverse range of uses for woodlands specifically:

- Investigate the viability of developing local markets and supply chains across the district to utilise woodfuel as part of the district's energy mix;
- Encourage the re-introduction of traditional woodland management techniques such as coppicing;
- Explore and promote the tourism and recreational potential of woodlands; and
- Reverse the fragmentation of woodlands to support recreation, biodiversity and species migration by raising awareness of woodland importance and opportunities to landowners and managers, regenerating derelict woodlands, and encouraging the use of woodland buffers to protect woodland fringes.

C.8 GI planning policies from former Regional Strategies – Example 1: North West Regional Spatial Strategy – Green Infrastructure Policy

<http://www.greeninfrastructurenw.co.uk/climatechange/doc.php?docID=79>

Policy EM3 Green Infrastructure

Plans, strategies, proposals and schemes should aim to deliver wider spatial outcomes that incorporate environmental and socio-economic benefits by:

- conserving and managing existing green infrastructure;
- creating new green infrastructure;
- enhancing its functionality, quality, connectivity and accessibility.

Local authorities should work with partners to:

- identify partnerships at an appropriate scale to take forward green infrastructure planning, in the context of relevant environmental and socio-economic objectives. Green infrastructure should include the identification, development and management of new areas of open space. This should be complemented by the retention, enhancement and adaptation of existing sites;
- ensure that a key aim of green infrastructure is the maintenance and improvement of biodiversity;
- protect the integrity of sites of national and international importance including the historic environment;
- use existing strategies and frameworks to develop consensus on green infrastructure priorities and associated data needs;
- promote physical and mental health benefits through access to and usage of open spaces by disadvantaged groups and communities;
- set out the significant green infrastructure needs across the spectrum of economic, environmental and social objectives;
- identify and secure opportunities for delivery and put in place implementation plans;
- integrate proposals to improve green infrastructure in the delivery of new developments, particularly through area based regeneration initiatives and major proposals and schemes;
- maximize the role of green infrastructure in mitigating and adapting to climate change;
- provide new areas of appropriate greenspace where development would otherwise cause unacceptable recreational pressure on sites of international ecological importance, for example where new housing is proposed close to such sites.

Local Delivery of Green Infrastructure Plans should seek first to make use of existing delivery mechanisms supplemented by bespoke delivery mechanisms where necessary.

C.9 GI planning policies from former Regional Strategies – Example 2: South East Plan – GI and Biodiversity

http://webarchive.nationalarchives.gov.uk/20100528142817/http://www.gos.gov.uk/497648/docs/171301/815607/815696/Pages_from_RSS-3_Section_B.pdf

Policy NRM5: Conservation and Improvement of Biodiversity

Local planning authorities and other bodies shall avoid a net loss of biodiversity, and actively pursue opportunities to achieve a net gain across the region.

- i. They must give the highest level of protection to sites of international nature conservation importance (European sites (6)). Plans or projects implementing policies in this RSS are subject to the Habitats Directive. Where a likely significant effect of a plan or project on European sites cannot be excluded, an appropriate assessment in line with the Habitats Directive and associated regulations will be required.
- ii. If after completing an appropriate assessment of a plan or project local planning authorities and other bodies are unable to conclude that there will be no adverse effect on the integrity of any European sites, the plan or project will not be approved, irrespective of conformity with other policies in the RSS, unless otherwise in compliance with 6(4) of the Habitats Directive.
- iii. For example when deciding on the distribution of housing allocations, local planning authorities should consider a range of alternative distributions within their area and should distribute an allocation in such a way that it avoids adversely affecting the integrity of European sites. In the event that a local planning authority concludes that it cannot distribute an allocation accordingly, or otherwise avoid or adequately mitigate any adverse effect, it should make provision up to

- the level closest to its original allocation for which it can be concluded that it can be distributed without adversely affecting the integrity of any European sites.
- iv. They shall avoid damage to nationally important sites of special scientific interest and seek to ensure that damage to county wildlife sites and locally important wildlife and geological sites is avoided, including additional areas outside the boundaries of European sites where these support the species for which that site has been selected.
 - v. They shall ensure appropriate access to areas of wildlife importance, identifying areas of opportunity for biodiversity improvement and setting targets reflecting those in the table headed 'Regional Biodiversity Targets – Summary for 2010 and 2026' below. Opportunities for biodiversity improvement, including connection of sites, large-scale habitat restoration, enhancement and re-creation in the areas of strategic opportunity for biodiversity improvement (Diagram NRM3) should be pursued.
 - vi. They shall influence and apply agri-environment schemes, forestry, flood defence, restoration of mineral extraction sites and other land management practices to:
 - deliver biodiversity targets
 - increase the wildlife value of land
 - reduce diffuse pollution
 - protect soil resources.They shall promote policies that integrate the need to accommodate the changes taking place in agriculture with the potential implications of resultant development in the countryside.
 - vii. They shall require green infrastructure to be identified, developed and implemented in conjunction with new development.

Policy CC8: Green Infrastructure

Local authorities and partners will work together to plan, provide and manage connected and substantial networks of accessible multi-functional green space. Networks should be planned to include both existing and new green infrastructure. They need to be planned and managed to deliver the widest

range of linked environmental and social benefits including conserving and enhancing biodiversity as well as landscape, recreation, water management, social and cultural benefits to underpin individual and community health and ‘well being’. They will be created and managed as a framework of green spaces and other natural features that will boost the sustainable development of settlements and increase the environmental capacity of the locality and region as a whole, helping communities to be more resilient to the effects of climate change.

The provisions of this policy apply region-wide. However, the successful designation and management of green infrastructure will be particularly important in areas designated as regional hubs, where growth may impact on sites of international nature conservation importance) or where there is a need to enhance the existing environmental capacity of an area.

C.10 Exeter City Council's Residential Design Supplementary Planning Document (SPD). September 2010 Exeter City Council

<http://www.exeter.gov.uk/index.aspx?articleid=12730>

Appendix 1 Provision for Biodiversity in New Development

The following table [below and on page C12] lists actions that should wherever possible be incorporated into the **built fabric** to conserve and enhance key species that rely on nesting opportunities within buildings and ancillary developments. Provision of artificial nest sites is required due to the lack of nesting opportunities in modern building design.

| Species | Actions | Notes |
|----------------------|---|--|
| Common swift | <ul style="list-style-type: none"> ● Install internal (swift) boxes at soffits/eaves level | <ul style="list-style-type: none"> ● Any suitable buildings, proximity of existing Colony reinforces need for new nest sites. ● At least five metres above ground level with unimpeded access. ● A northerly or well shaded aspect is essential, avoid southerly elevations and the immediate vicinity of windows. ● Nest sites should be reasonably close as Swifts usually nest in colonies. ● Broadcasting recorded calls throughout the breeding season will increase likelihood of occupation. See www.swift-conservation.org. |
| House Sparrow | <ul style="list-style-type: none"> ● Install internal boxes at soffits/eaves level | <ul style="list-style-type: none"> ● Suitable buildings within close foraging range of open spaces & green infrastructure. ● At least two metres above ground level with somewhere to perch in the immediate vicinity. ● Needs to be shaded. Easterly aspect is best, avoid southerly elevations. ● Sparrows prefer nesting in loose groups (10-20 pairs) and boxes can be adjacent to each other, ideally in groups of six or more |
| Starling | <ul style="list-style-type: none"> ● Install internal boxes at soffits/eaves level | <ul style="list-style-type: none"> ● Suitable buildings within close foraging range of open spaces & green infrastructure. ● At least three metres above ground level with somewhere to perch in the immediate vicinity. Needs to be shaded, easterly aspect is best, avoid southerly aspect ● Ideally install a group of nests each >1.5m apart. ● Starlings can be noisy so their nests are best sited where they won't be a nuisance. |

| Species | Actions | Notes |
|---|---|---|
| Barn swallow | <ul style="list-style-type: none"> ● Create purpose built ledges, inside buildings where they will be secure from predation by cats, rats etc. ● Install pre-formed nest cups to encourage establishment | <ul style="list-style-type: none"> ● Open sided buildings, e.g. carports, porches & bin and cycle stores etc. within close proximity to green infrastructure, valley parks & other open space. ● Swallows will need access to their principal nesting material which is mud collected from, puddles & the edges of standing water or slow flowing streams. ● Avoid situations where droppings might become a nuisance |
| House martin | <ul style="list-style-type: none"> ● Install pre-cast nest cups to encourage establishment | <ul style="list-style-type: none"> ● Buildings with wide soffits/eaves in close proximity to, green infrastructure, the Valley Parks & other open space. ● At least five metres of clear space above ground level. Adequate shelter from sun and prevailing weather, avoid South elevations. ● House martins breed in close knit groups and provided there is an adequate supply of mud from the edges of standing water or slow flowing streams will build clusters of nests. ● Fixing over doors and windows is best avoided. |
| Garden birds (Such as robin, wren, thrush blackbird, and finches & tits) | <ul style="list-style-type: none"> ● Install appropriate nest boxes | <ul style="list-style-type: none"> ● Where there is access to adequate public and private open space including gardens. ● Sheltered from direct sunlight and the prevailing weather |
| Tawny owls, barn owls and kestrels | <ul style="list-style-type: none"> ● Install appropriate nest boxes | <ul style="list-style-type: none"> ● The interface between town and country. ● Direct access to suitable hunting grounds. ● The site must be at low risk of disturbance. ● Seek specialist advice on site suitability |
| Crevice-dwelling bats* (such as Common Pipistrelle, Soprano Pipistrelle, Nathusius' Pipistrelle, Brandt's and Whiskered Bat) * These bats may not be visible in existing buildings | <ul style="list-style-type: none"> ● Leave or create spaces in the wall or behind the cladding ● Install ready-made bat boxes into the walls or under the eaves ● Create sandwich boards of at least 3 layers with a 1 inch gap to place inside the roof void, against the battens | <ul style="list-style-type: none"> ● Crevice dwelling bats can crawl into the smallest spaces although areas of about 1 sqm would be useful for summer nursery roosts. ● The height of entry can be from 2-7 m above ground level. ● Generally the summer nursery roosts will have a southerly or westerly aspect for solar heating. Male roosts and winter hibernation roosts have a northerly aspect. ● Materials for the roosts should be rough (for grip), non-toxic or corrosive, with no risk of entanglement. ● The access should not be lit by artificial lighting. ● Maintain or enhance linear features in the landscape such as tree-lines and hedgerows that the bats can use for cover and flight paths. |
| Roof-void dwelling bats* (such as Noctule, Serotine, Leisler's, Daubenton's, Greater Mouse-eared, Barbastelle and Bechstein's) * These bats may be visible on roof timbers in existing buildings | <ul style="list-style-type: none"> ● Leave timber joists and/or beams exposed ● Install access points such as spaces under the eaves or specially-made holes in the roof tiles | <ul style="list-style-type: none"> ● The height of entry should be from 2-7 m above ground level. ● Generally the summer nursery roosts will have a southerly or westerly aspect for solar heating. Male roosts and winter hibernation roosts have a northerly aspect. ● Materials for the roosts should be rough (for grip), non-toxic or corrosive, with no risk of entanglement. ● The access should not be lit by artificial lighting. ● Maintain or enhance linear features in the landscape such as tree-lines and hedgerows that the bats can use for cover and flight paths. |
| Bats that need flight space (such as Natterer's, and Brown and Grey Long-eared) | <ul style="list-style-type: none"> ● Keep roof space untrussed to allow flight | <ul style="list-style-type: none"> ● The height of entry should be over 2m above ground level. ● Roosting/nesting dimensions of untrussed roof space should be 2-2.8 m (h) x 5 m (w) x 5 m (l) ● Maintain or enhance linear features in the landscape such as tree-lines and hedgerows that the bats can use for cover and flight paths. |
| Living (Green) roofs | <ul style="list-style-type: none"> ● Design in green or brown roofs wherever suitable | <ul style="list-style-type: none"> ● Green/Living roofs can enhance the wildlife of urban areas and can also replace habitat lost at ground level to building work; for example brown roofs can recreate brownfield habitat features which are important to site biodiversity. ● Can be particularly useful when the development site is too small to incorporate biodiversity enhancement at ground level |

The reduction in available nesting and roosting sites is implicated in the decline of these species. The following table [below and on page C14] lists actions that should be incorporated, wherever

possible, into the **landscaping** of the proposed residential proposal to enhance its biodiversity value.

| Biodiversity feature | Actions | Notes |
|------------------------------|---|--|
| Hedges | <ul style="list-style-type: none"> ● Plant hedges consisting of a number of wildlife friendly species so that fruit, seed and nectar will be provided throughout most of the year. (see List 1) ● Provide sufficient space for dense hedges to grow to at least 2 metres wide with a wide margin on each side for long grasses to grow at their base. ● Locate new hedges so that they will contribute towards forming a local wildlife habitat network with neighbouring hedges, trees, shrubs, scrub, wildflower rich grassland and watercourses. ● Plant native hedges, such as hawthorn, blackthorn and holly, along boundaries where security is important. | <ul style="list-style-type: none"> ● Hedges provide shelter, breeding, nesting and foraging sites for a wide variety of species and act as wildlife corridors if they are dense and wide enough. In Devon, hedges are traditionally planted on banks and this network should be enhanced. |
| Trees and shrubs | <ul style="list-style-type: none"> ● Provide wildlife friendly tree and shrub species of varying height and structure, as a diverse structure will be beneficial to more wildlife species. A variety of species will also provide a protracted supply of pollen, nectar and fruit. (see List 2) ● Locate trees and shrubs so that they provide, as far as possible, continuity with nearby existing habitat. ● Retain trees with holes and dead wood as these are particularly valuable for wildlife such as bats, birds, insects and fungi. Also retain woody cuttings, stumps and fallen branches on site. ● Herbaceous plants and/or long grass in front of shrub/tree areas will provide additional wildlife interest and maintain moisture and humidity beneath. ● Retain patches of bare earth for invertebrates to bask, nest and forage. | <ul style="list-style-type: none"> ● Trees and shrubs provide shelter, nesting sites and fruit for birds. Their flowers provide nectar for bees and other insects. ● Provision on dead and decaying wood is valuable to a range of invertebrates which depend upon it to complete all or part of their life cycles. |
| Climbing plants | <ul style="list-style-type: none"> ● Locate climbing plants so that they cover otherwise bare walls and fences. ● Locate climbing plants close to existing hedges, trees, shrubs and flowering grassland, so they will help to connect the local wildlife habitat network. | <ul style="list-style-type: none"> ● Climbing plants such as ivy, clematis and honeysuckle provide nesting, shelter and berries for birds and nectar for insects. |
| Scrub | <ul style="list-style-type: none"> ● Consider generating scrub habitat adjacent to existing wildlife rich habitat. | <ul style="list-style-type: none"> ● Dense scrub provides good cover and food for birds, insects and reptiles but should not be allowed to develop at the expense of other wildlife rich habitats. |
| Wildflower-rich grass | <ul style="list-style-type: none"> ● Provide wildflower rich grassland as part of informal landscaping, on areas of poor soil or areas of poor drainage. (see Lists 3, 4 and 5) ● Embed spring flowering bulbs and plugs of nectar rich flowering plants. ● Maintain patches of long grass, enabling plants to flower and seed, and providing habitat for grasshoppers and other invertebrates, and a food source for birds, amphibians and mammals. ● Remove cuttings. | <ul style="list-style-type: none"> ● Wildflower rich grassland provides cover for small mammals and invertebrates and the wildflowers supported are a nectar source for insects. Short grass can be enhanced by adding flowering species tolerant of frequent mowing and trampling. Cutting and/or collecting will be required at appropriate intervals to achieve optimum results. ● Structure is crucial to most grassland invertebrates, areas of long grass will benefit a range of species. Areas of undisturbed grassland, cut on a 2 or 3 year cycle will provide additional value. |

| Biodiversity feature | Actions | Notes |
|---------------------------------------|--|--|
| Watercourses and their banks | <ul style="list-style-type: none"> ● Enhance and restore the naturalness of an existing water course, by buffer planting, soft contouring of steep sides, and removal of culverts. (see List 6) ● Avoid development and hard landscaping adjacent to the watercourse. | <ul style="list-style-type: none"> ● Streams, wet ditches and seasonal watercourses, and their banks, are important wildlife habitats but many are degraded in urban areas. |
| Reptiles | <ul style="list-style-type: none"> ● Provide areas of long grass, interspersed with sheltered sunny areas of bare ground and rocks where reptiles can bask. ● Provide rockeries where reptiles can hibernate in cavities below ground. ● Locate these habitat features so that they provide continuity with nearby existing habitat. | <ul style="list-style-type: none"> ● Reptiles likely to be encountered include the slow worm, common lizard, adder and grass snake. |
| Amphibians | <ul style="list-style-type: none"> ● Provide wildlife friendly ponds, water channels and wetland areas, with associated vegetation, independently and as part of Sustainable Urban Drainage Systems. ● Locate these features so that they provide, as far as possible, continuity with nearby existing habitat | <ul style="list-style-type: none"> ● Amphibians likely to be encountered include frogs, common toads, smooth newts and palmate newts. The most important factor in pond creation is ensuring clean water. It is therefore important to ensure some ponds/ water features are created separately from SUDS systems which may be contaminated by road or other potentially polluted run-off |
| Invertebrates | <ul style="list-style-type: none"> ● Provide flower rich grassland with areas of long or undisturbed grassland. ● Provide wildlife friendly hedges, native trees and shrubs. ● Provide wildlife-friendly ponds with buffer zones and good water quality. ● Retain/create 'brownfield' open mosaic habitats within landscaping featuring bare ground and early successional pioneer habitats. | <ul style="list-style-type: none"> ● Invertebrates cover a wide range of species including bees, butterflies, moths, ants, flies, beetles, spiders, molluscs etc. Many rely on brownfield sites |
| Small mammals | <ul style="list-style-type: none"> ● Provide long grass and habitats which provide a variety of fruit and seeds for small mammals | <ul style="list-style-type: none"> ● Small mammals include mice, voles, shrews and hedgehogs. |
| Bird nest sites and bat roosts | <ul style="list-style-type: none"> ● Provide hedges, shrubs and trees, which will provide natural nesting sites as the plantings mature. ● Install bird boxes and bat roosts on suitable existing trees, avoiding southerly elevations. | <ul style="list-style-type: none"> ● Bird nest sites and bat roosts can be provided as part of landscape planting design. |

C.11 Guidance for Local Authorities on Accessing Biodiversity Information

National Biodiversity Network, Association of Local Environmental Records Centres, and Association of Local Government Ecologists

http://www.alerc.org.uk/uploads/7/6/3/3/7633190/guidance_for_local_authorities_on_biodiversity_data.pdf

The National Biodiversity Network (NBN), the Association of Local Environmental Records Centres (ALERC) and the Association of Local Government Ecologists (ALGE) have produced a guidance document for local authority staff on how to access biodiversity information. It is a valuable tool for

Local Record Centres who have local authority clients and is designed to make sure people are going to the right places to access the right information.

C.12 Local Records Centres

<http://www.alerc.org.uk/>

Local Records Centres (LRCs) are organisations that collect, collate, manage and disseminate information relating to the biodiversity and geodiversity of a region on a not-for-profit basis. This information plays an essential role in decision-making at all levels, helping to protect and improve biodiversity and geodiversity within the region and beyond. Further information about LRCs is available from the ALERC website, at <http://www.alerc.org.uk/>

Planning for a Healthy Environment – Good Practice Guidance for Green Infrastructure and Biodiversity
Published by the Town and Country Planning Association and The Wildlife Trusts
July 2012

Printed with vegetable-based inks on chlorine-free paper from sustainably managed sources by RAPSiderweb Ltd, Oldham



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