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Submitted to **Local Development Plan Main Issues Report 2019 Consultation**
Submitted on **2019-05-13 16:23:47**

About You

What is your name?

Name:
Hywel Maggs

What is your organisation?

Organisation:
RSPB Scotland

On behalf of:

How can we contact you?

Email:
[redacted]

Telephone:

Address:

1 Introduction

Section 1 provides a context for the Main Issues Report Do you have any comments in relation to this section?

Do you have any comments in relation to this section?:
no

2 Settlement Strategy

Question 1 New Housing Sites

Do you agree with our preferred housing sites? Are there any other sites that would be suitable for housing?:
Development should be focussed in existing settlements. This will help to minimise the impact on the wider countryside and will reduce the need for new infrastructure.

Question 2 Housing Allowances Beyond 2032

Is there a need for us to identify further Housing Allowances or sites for the period beyond 2032?:
no comment

Question 3 Brownfield and other Opportunity Sites

Are there any further brownfield or other opportunity sites which would be suitable for redevelopment?:
no comment

Question 4 New Healthcare Facilities

Do you have any comments on these sites? Are there any other sites in these areas that we should be considering?:
no comment

3 Aberdeen City Centre and the Network of Centres

Question 5 City Centre Boundary

Do you agree the Local Development Plan should modify its City Centre boundary to match the City Centre boundary shown in the City Centre Masterplan?:
no comment

Question 6 City Centre Masterplan Intervention Areas

Do you agree that the City Centre Masterplan intervention areas should be identified as opportunity sites within the Local Development Plan?:
no comment

Question 7 City Centre Retail Core

Should the retail core be reduced to focus on a more compact area of Union Street and the existing shopping centres?:
no comment

Question 8 Union Street Frontages

Should the Union Street Frontages percentages be reviewed? Do the current target percentages ensure there is a balance between a strong retail focus and allowing for other uses? What other uses should we allow on the retail core area of Union Street:
no comment

Question 9 Out of Town Retailing

Should we direct high footfall uses to existing centres including the City Centre? Should we consider new out of town retail parks? What would the impact of these be on Union Street and the City Centre, and Aberdeen's network of centres?:
Development and high footfall should be focussed in existing retail areas. This will help to minimise the impact on the wider countryside and will reduce the need for new infrastructure.

Question 10 Commercial Leisure Uses

Should we continue to direct commercial leisure uses towards existing centres and the beach and leisure area?:
no comment

Question 11 City Centre Living

How can we encourage more people to live in the City Centre? Would a document outlining the principles which need to be applied in converting a building into residential use be helpful?:
no comment

MAIN ISSUE 1 Living in the City Centre

Should we include a policy in the Local Development Plan supporting residential development in the City Centre, including the conversion of upper and basement floors of premises to provide residential accommodation?:
no comment

Not Answered

Question 12 Residential Development in the City Centre

Are there any other locations within the City Centre where residential accommodation could be provided?:
no comment

MAIN ISSUE 2 A 24-Hour City

Should 24-hour activities in Aberdeen be supported and encouraged to grow, especially in the City Centre? Could this be achieved through policy?:
no comment

Not Answered

Question 13 Encouraging the Creative Arts

What can we do to support and encourage the creative sector to ensure a range of distinctive experiences so that Aberdeen City Centre is like no other place?:
no comment

Question 14 Proposals for Creative Arts

Are there other buildings or areas within Aberdeen that could accommodate the existing, and support an emerging creative sector for desk-based and studio-based artists?:
no comment

Question 15 Percent for Art

To ensure Aberdeen City Centre retains its distinctiveness, should developments with construction costs of £1 million or over be required to allocate at least 1% of construction costs for the inclusion of art projects in a publicly accessible/ visible place or places within the development?:
no comment

MAIN ISSUE 3 Support for Visitor Attractions

To support our existing visitor attractions should Aberdeen have a policy about protecting and growing visitor attractions?:
no comment

Not Answered

4 Quality Places

MAIN ISSUE 4 Minimum Internal Space Standards for New Residential Development

How can we ensure that new residential development delivers an adequate amount of internal floor space for future occupants?:
no comment

Not Answered

Question 16 External Space Standards

Do you think that the amenity spaces currently delivered are of a sufficient quality? Should we strive for a better quality/ quantity of private/ semi-private residential amenity space across the city and refuse planning permission to proposals which do not meet our high standards? What standards would you like to see set for new dwellings, flats, and conversions in respect of quality and quantity of external amenity space?:
Ensure that gardens and communal spaces add to the overall green infrastructure network. Developers, communities and homeowners should be encouraged to maintain permeability and connectivity between gardens and the surrounding green space, by adopting gardening principles that create and provide a network of appropriate habitat.
Wildlife beneficial landscape and other features (eg: 'hedgehog highways' in fences and walls) are incorporated within street and plot landscaping and not restricted to peripheral green space and 'wildlife corridors'.
Create green infrastructure in advance of residents moving in. Make it accessible to all and see it as a community resource. New communities should be made aware of what green infrastructure exists through appropriate information.

Question 17 Natural Environment

Do you agree that the proposed list of policies for Natural Environment gives a clearer and more coherent structure than at present?:
RSPB Scotland would welcome the strengthening of the policy of the current LDP which seeks to protect and enhance the natural environment (Policy NE8 – point 4). The proposed change to incorporate this policy in 'NE3 Protecting Our Natural Assets' could offer an opportunity to do this. For further information on how this policy could be strengthened, see our comments submitted as part of the Pre-MIR Questionnaire 2018 (Q 2.11).

Question 18 Food Growing

How can the Local Development Plan support the delivery of food growing projects in the City? Do you think food growing should be included in the next Plan by way of a new policy, or through existing policy and guidance?:
RSPB Scotland is supportive of local food growing projects and supportive of food growing being included in the new local development plan. Food growing is important for nature for a number of reasons including providing greenspace and often urban wildlife habitat, and for connecting people to how food is produced and the impact on wildlife in a way that has been lost in recent generations. In addition, it can have positive mental and physical health benefits, and be important for social inclusion.
We feel that this should be included as part of a suite of local food policies under the proposed Good Food Nation agenda, whereby we begin to consider our food in the round, and building a fair, healthy and sustainable food system. Local food growing is very much a part of that, alongside consideration of the local circumstances that can support healthier diets, environmentally friendly food production and consumption, fairness and equality in the food system when it comes to access to food and conditions for workers, the quality of our imports, and so on.

5 Transport and Infrastructure

Question 19 City Centre Parking

Should we reduce car parking in the City Centre to support the City Centre Masterplan? If so, how?:
no comment

MAIN ISSUE 5 Electric Vehicle Charging Infrastructure

How best can we encourage the provision of infrastructure to support changes in transport technologies? :
no comment

Not Answered

Question 20 Digital Infrastructure

Should high speed broadband be mandatory in all new residential developments with 5 or more units? Do you wish to suggest any other proposed changes to the Digital Infrastructure and Telecommunications Infrastructure policies?:
no comment

Question 21 Developer Obligations and Infrastructure Delivery

Do we need to change our approach to securing developer obligations for future development proposals?:
Planning authorities have a duty under the Nature Conservation (Scotland) Act 2004 to further the conservation of biodiversity. Scottish Planning Policy states (at paragraph 194) that the planning system should seek benefits for biodiversity from new development where possible, including the restoration of degraded habitats and the avoidance of further fragmentation or isolation of habitats.
The mitigation hierarchy – to avoid, minimise and as a last resort compensate for the impacts of development – needs to be strictly enforced for all development occurring outwith designated sites, where a more robust legal framework is already in place. This will help to halt cumulative small-scale losses of biodiversity from development and achieve 'no net loss' of biodiversity. Major developments should deliver a 'net gain' for biodiversity, which can be defined as development that leaves biodiversity in a better state than before.
Seeking financial or in-kind contr butions from developers towards off-site habitat creation, enhancement or restoration could also help the council to fulfil the above statutory biodiversity duty and policy obligation, and help to address the cumulative impacts of development on biodiversity. Examples of such practice elsewhere include the Scottish Borders Council, whose Local Development Plan, adopted in 2016, states in its Policy IS2 that contr butions may be required towards the protection, enhancement and promotion of environmental assets either on-site or off-site. Similarly, the Angus Local Development Plan (2016) Policy DS5 states that developer contributions may be sought for biodiversity enhancement (amongst other things). We recommend that Aberdeenshire Council explores the possibility of introducing requirements for such contributions, following the examples of the Scottish Borders and Angus Councils (and others). We would be pleased to discuss this matter with you.
The collapse of the opencast coal industry in Scotland in 2013 demonstrated the importance of securing appropriate financial guarantees for the restoration and aftercare of sites with significant long-term liabilities. Financial guarantees might be required to secure ongoing and long-term mitigation, for example measures required by planning conditions or in site aftercare schemes, as well as to secure restoration of sites. We recommend that the council should set out clear policy/supplementary guidance along the lines of guidance that has been developed by East Ayrshire Council which gives details and risk ratings for different types of financial guarantees.
We also recommend that consideration is given to the approach by East Ayrshire Council to compliance monitoring - the council is now undertaking quarterly compliance monitoring of major development in the region, including quarries, landfill, onshore windfarms and electrical transmission lines. Results are reported to the planning committee and published on the council website. We recommend that the council follows this approach and conducts annual reviews of the provision of financial guarantees for major developments with significant restoration and aftercare liabilities. This will help avoid a situation where liabilities pass to planning authorities in the case of failure of the developer to make adequate financial provision.

6 Resource and Business Policy

MAIN ISSUE 6 Low and Zero Carbon Generating Technologies and Water Efficiency

Should the requirement of existing Policy R7 be changed?:
no comment

Not Answered

Question 22 Low and Zero Carbon Generating Technologies and Water Efficiency

What methodology should the Council use in calculating compliance with Policy R7, specifically how should the target of reducing carbon dioxide levels be calculated?:
no comment

Question 23 Solar Farm Developments

Do you agree that Solar Farms should be supported within the Council's policy on Renewable and Low Carbon Energy developments, and should specific guidance be included within Policy R8?:
no comment

MAIN ISSUE 7 Heat Networks

Should we include a policy in the Local Development Plan supporting the development of Heat Networks within the City?:
no comment

Not Answered

Question 24 Supporting Business and Industrial Development

Should we carry forward our current policy approach to safeguarding existing business and industrial areas from other development pressures into the next Local Development Plan?:
no comment

MAIN ISSUE 8 West End Office Area

Should the policy support a mix of uses in the West End Office Area? If so, what types?:
no comment

Not Answered

7 Affordable Housing

Question 25 Affordable Housing

Do you agree with the Local Development Plan's current affordable housing approach being carried forward? What other measures could the Council consider in order to assist with the delivery of affordable housing units via the Plan? Should the threshold of not applying affordable housing requirements to developments smaller than 5 units remain in place?:
no comment

Question 26 Private Rented Accommodation and Build to Rent

Are there ways that the Local Development Plan can facilitate Build to Rent development, through policy?:
no comment

8 Sustainable Mixed Communities

MAIN ISSUE 9 Inclusive Housing Mix (Housing for the Elderly and Accessible Housing)

How can the Local Development Plan ensure a greater mix of housing types is achieved in new developments?:
no comment

Not Answered

MAIN ISSUE 10 Residential Care Facilities

How should the Local Development Plan cater for proposals relating to Residential Care Facilities?:
no comment

Not Answered

MAIN ISSUE 11 Student Accommodation

How can the Local Development Plan cater to proposals relating to student accommodation?:
no comment

Not Answered

MAIN ISSUE 12 Houses in Multiple Occupation

How can the Local Development Plan support sustainable mixed communities, with regards to HMOs?:
no comment

Not Answered

Percentage limit of HMOs in each area:

Please explain why you chose your answer:

Geographical boundary of each area:

Please explain why you chose your answer:

Threshold for when planning permission is required for a HMO:

Please explain why you chose your answer:

Question 27 Community Planning

Is there anything else that the Local Development Plan can do to support the objectives of the LOIP or the aims of Community Planning?:
no comment

Question 28 Changing Places Toilets

Should large new developments that require public access provide Changing Places toilets? What types of venues should provide them?:
no comment

Appendix 1 Proposed Draft New Policies

Policy D2 Amenity

Do you have any comments on the policy?:
no comment

Policy D5 Advertisements and Signage

Do you have any comments on the policy?:
no comment

Policy D8 Shopfronts

Do you have any comments on the policy?:
no comment

Policy D9 Windows and Doors

Do you have any comments on the policy?:
no comment

Policy H4 Housing Mix and Housing for Particular Needs

Do you have any comments on the policy?:
no comment

Policy H8 Residential Care Facilities

Do you have any comments on the policy?:
no comment

Policy H9 Student Accommodation Developments

Do you have any comments on the policy?:
no comment

Policy H10 Houses in Multiple Occupation

Do you have any comments on the policy?:
no comment

Policy NC9 City Centre Living

Do you have any comments on the policy?:
no comment

Policy NC10 24-hour City

Do you have any comments on the policy?:
no comment

Policy NC11 Visitor Attractions and Facilities

Do you have any comments on the policy?:
no comment

Policy NC12 Public Art Contribution

Do you have any comments on the policy?:
no comment

Additional Documents

Please include comments on other documents below:

Please include comments on other documents below::
no comment

Additional Files

If you have further information you would like to provide you may upload it here.:
BCT+Biodiversity+A2+poster_final.pdf was uploaded

Biodiversity features and interventions for landscape design

(excerpt from "Designing for Biodiversity: a technical guide for new and existing buildings" RIBA Publishing, 2013)

Feature	Action/How to do it	Benefit
Trees and woodlands	• Mature and veteran trees are important throughout the landscape. Retain and manage sympathetically and encourage continuity through appropriate management of younger trees. • Retain standing and fallen dead and decaying wood, where safe to do so • Encourage or retain dense understory within woodland. • In some places, deer browsing can impact on woodland understory and regeneration. Where this occurs, control browsing or protect shrubs and saplings. • Maintain woodlands and seek opportunities to create new woodlands where appropriate. • Create or retain lines of trees, these help link up fragmented habitats and can be used by wildlife as corridors. • When planting new trees, select native species of UK provenance and appropriate to the location. • Use a variety of species to provide different height and structure through their growth characteristics and a protracted supply of pollen, nectar and fruit. • For informal tree planting, avoid straight lines and use irregular spacing of between 3-4 m centres. • Trees planted in hard surfacing should make use of tree pits or tree trenches. • Do not artificially light trees or tree-lines.	• Trees and shrubs provide shelter and foraging opportunities for a range of wildlife. • Their flowers provide nectar for bees and other insects and their fruits, food for birds and mammals. • Native and veteran trees support more insects than non-native and immature trees. • Mature trees with holes, dead and decaying wood are particularly valuable for wildlife such as bats, birds, insects and fungi. • Trees provide a number of ecosystem services including carbon capture, surface run-off capture, regulation of temperature, filtering pollutants and acting as noise barriers.
Scrub and shrub	• Plant native species of UK provenance and appropriate to the location. • To create natural spacing between plants and to increase structural diversity, avoid planting in rows and space shrubs irregularly. Avoid replacing all shrubs that die in the first years after planting. • A variety of age and physical structure in scrub and shrub beds will maximise the potential wildlife values. Rotational management of scrub and informal areas of shrubs is important. • Manage over an eight to twelve year cycle. For example, cut a third of a stand every four years or a quarter every three. In formal shrub beds, some species such as dogwood may require a shorter rotation. • Where appropriate and there is a good seed source, encourage natural generation of scrub for example adjacent to existing wildlife rich habitat. • To maximise the wildlife potential, vary the shape (sinuous edges), size (small groups of bushes to large continuous blocks) and density of stands (scattered, open and closed canopy), avoiding straight rides which can cause wind tunnelling.	• Provides somewhere for wildlife to feed, shelter and breed. • Invertebrates will feed on the foliage and nectar from flowers, while birds and mammals will feed on the foliage, fruits and seeds and also on the insects and invertebrates living on the foliage and among the leaf litter beneath the bushes. • Meanwhile, using the sheltered sinuous edges of stands, bats will forage at night on insects
Climbing plants	• Locate climbers to cover otherwise bare walls and fences on all aspects. • Where appropriate, incorporate climbers into hedge and shrub planting • Native climbers include ivy, clematis, honeysuckle and wild rose.	• Climbers can provide nesting sites for birds as well as fruit and insect food. • They are a haven to insects for year-round shelter and as a source of nectar.
Hedges	• Include hedges even in built up areas as they are important linking features. 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. • Provide a variety of hedge structure throughout a site. Height and width are important and utilised in different ways by different wildlife. • Fill gaps with native deciduous species. • Use a range of hedgerow species, preferably native, to provide food throughout the year. • Hedges should be cut every 3 or 4 years – annual flailing severely impacts some species of butterfly and moth. It also reduces the amount of flowers and fruits and creates gaps. • Cut only a proportion of hedges in any one year, preferably in late winter (February) after fruits have been eaten and before birds begin nesting in March. • Place standard trees within hedgerows. • Encourage flowers and grasses at the base and margins of hedgerows.	• Many bat and bird species use hedges as commuting flight paths. • Frogs, toads, newts and lizards like dense growth at the base of hedgerows for food, cover and places to hibernate. • Many invertebrate species overwinter in hedges and in associated grass margins. • Thick, dense hedges provide safe roosting and nesting places for birds like thrushes and finches.
Grassland	• Varying sward height is important. Maintain a mosaic of grasslands over a site. In local parks and green spaces this could mean a mix of short, intermediate and long grass. Where possible, maintain areas of grass cut on a three or four year rotation. • Retain areas of long grass over winter, particularly where adjacent to hedges, shrub and scrub, and beneath trees. • Amenity grassland may be enhanced with spring flowering bulbs, planted in the preceding autumn, re-seeding with wildflowers, plug-planting, green-hay strewing or other appropriate techniques applicable to the site. • Create new flower-rich grasslands by seeding low-fertility substrates. • Avoid cutting flower-rich grassland until after the plants have dropped their seed. Remove cuttings and do not apply any fertilisers. • Compartmentalise grassland areas and stagger rotations to ensure a permanent mosaic of sward structures. Ensure that these mosaics include areas of permanent rough grassland with a litter-layer of 'thatch' at least 7cm deep.	• Long grass provides habitat for invertebrates in which to shelter and breed as well as a refuge for the eggs, larvae or pupae of some insects such as butterflies and moths to over-winter. • Wildflowers provide nectar and aesthetic value. • It provides a source of insect and seeds for birds and small mammals as well as insects for amphibians and reptiles • Patches of sparse, open vegetation are important for many insect species as somewhere to bask and for other insects, birds and mammals to forage. • It can protect shrubs and scrub from drying winds, maintaining humidity within and beneath the bushes as well as provide insects that have been feeding on the foliage of bushes somewhere to pupate and complete their life-cycles. • Beneath trees, grass protects the roots from drying, maintains humidity and somewhere for insects to pupate after feeding on the foliage of the trees above.
Ponds, lakes, rivers and wetlands	• Avoid development and hard landscaping adjacent to watercourses. • Where required and appropriate, enhance and restore the naturalness of an existing water course. Re-profile steep sides (but see below), buffer with flower rich grassland, marginal vegetation, trees and shrubs planting and remove culverts. • Manage adjacent trees and shrubs appropriately to provide shelter and prevent them from excessive shading of extensive stretches of the main water body. Consider introducing a suitable management programme for existing tree and shrub cover if required • Manage marginal and submerged vegetation on a rotational basis, removing about a third each year. • Ditch sides should be cut alternately in a 2 year rotation • On larger areas, encourage development of wet grassland, wet woodland and reed beds where appropriate • Provide dead wood piles as a habitat for invertebrates, reptiles and small mammals. Replenish as required but do not remove existing material • Some wildlife such as water vole and kingfisher, require steeper banks in which to breed. This should be taken into consideration when designing or enhancing wetlands. Where these species occur in an area appropriate work can be targeted. • Restrict or remove artificial lighting from river footpaths as many bat species associated with water avoid light.	• Water features provide important feeding areas for birds, bats and other wildlife. • They have an important role to play as corridors linking the built environment with the surrounding landscape and allowing wildlife to move freely. Restrict or remove artificial lighting from river footpaths as many bat species associated with water avoid light. • Buffer strips and marginal vegetation, reduces leaching and run-off of pollutants. In conjunction with submerged vegetation, they help maintain water quality.
Gardens	• Managing gardens 'extensively' retains their aesthetic value while being relaxed enough to provide more niches for wildlife • Reduce reliance on, or avoid the use of insecticides, herbicides and fertilisers (except see below) • Select flowers, shrubs and trees that are the most useful pollen and nectar sources and provide a long foraging season with something in flower for much of the year. • Preferentially use native species, and a selective variety of non-native plants with documented value to wildlife, taking care to avoid invasive species such as cotoneaster and buddleia likely to cause damage by spreading to sensitive habitats in the wider countryside • Avoid hybrid cultivars where the effort has been put into producing colourful, long lasting showy flowers at the expense of pollen and nectar. • On a limited budget, scattering a cheap packet of mixed flower seeds onto bare ground can provide a make-shift nectar source and insect rich addition to the garden with minimal effort and skill required. • Create ponds and small wetlands for the many invertebrates that like water, wet mud or wetland plants • If and where possible, create different lengths of grass to encourage more insects. • Retain dead and decaying wood where possible. Consider creating ornate horizontal or vertical landscape features from logs around which may be planted nectar rich flowers and shrubs. Other features that can provide breeding, overwintering sites and year-round shelter include rubble piles and compost heaps • Where possible plant native hedges as boundaries and avoid the use of fences. • Make use of containers and planters on paved areas such as patios, balconies or terraces. Cluster in groups of different height and shapes and preferably adjacent or near to a water butt. Plant with a mix of nectar rich flowers and shrubs into peat-free compost. Tubs will need to be fertilised regularly.	• Helps wildlife move safely through the landscape and better links public green space • Can provide a prolonged source of nectar for insects • If managed well can provide somewhere safe to nest for some species of bird
Sustainable Drainage Systems (SuDS) – management train includes biodiverse green roofs, living walls, rain gardens, filter strips, bioretention planters, detention, retention basins and wetlands, swales	**SuDS manage rainfall by replicating natural processes of slowing and cleaning water flows and allowing natural percolation into the ground, preventing flooding and pollution** • The underlying principle to SuDS is its management train which is a series of stages (see left hand column) mimicking natural processes to incrementally reduce pollution and slow flow rates. • SuDS should be created above ground where they are cheaper to create and manage. Each stage of the train is linked by a conveyance feature such as a swale or in hard landscape an ornamental rill	• SuDS can benefit the local environment by preventing flooding and pollution, provide healthy living space of high wildlife value.
	Biodiverse green roofs: • Developments should where feasible, incorporate green roofs. Retrofitting existing green roofs is also sometimes possible (subject to approval by a structural engineer). The design and planting of green roofs should be informed by local conditions and species of interest. • It should be noted that green roofs provide a different type of habitat to trees and some other habitats and therefore do not directly compensate for their loss. • Roof gardens can also attract wildlife in the way gardens do. Think carefully about the plant species used.	• Biodiverse green roofs provide 'Open Mosaic' pioneer and dry grassland habitats as well as a feeding and foraging area for birds and invertebrates. They provide habitat for breeding invertebrates and a stepping stone habitat in urban areas. There is also potential for small water features to be included
	Living walls: • Living walls are usually irrigated or are designed to receive run-off from roofs. Living walls should be irrigated by rainwater or grey water and not potable water. • Climbers and creepers on a trellis or cable system often make a more cost efficient and flexible form of living wall which may not require irrigation. • Careful consideration of aspect (orientation) is important as walls planted in sunny locations are prone to drying out rapidly	• Living walls provide cover for nesting birds. Their flowers can attract nectar feeding insects which in turn provides foraging for bats and birds. Bird, bat and invertebrate boxes and chambers can be located among the vegetation
	Rain gardens: • Are shallow depressions with free-draining soil, or planter box. They receive rainfall from downpipes or paved areas (but not car parks; see bioretention planters) • Slows rainfall run-off and improves water quality • Planted with species able to tolerate short periods of inundation • Variety of scales and locations from domestic to public realm • Plants selected for rain gardens must be able to tolerate extremes. Most perennial native plants will do well in rain gardens, including wildflowers, sedges, rushes, ferns and shrubs	• Flowers can attract nectar feeding insects. Invertebrate "hotels" can be added along with other habitat features. Acts as a "stepping stone" habitat in urban areas
	Filter strips: • Vegetated areas of broad, flat and gently sloping land that intercept rainfall run-off from a site as overland sheet flow. Can be used anywhere except over vulnerable groundwater aquifers • Can be sown with native plants to create wildflower meadows, with tussocky grassland.	• Provides habitat for invertebrates, reptiles and amphibians
	Bioretention street planters: • Landscaped shallow depression to capture and bio-remediate polluted run-off from paths roads and car parks • Can be formally landscaped with colourful shrubs and herbaceous plants	• Provide invertebrate cover and nectar for insects when landscaped with suitable plants as well as foraging areas for birds and other wildlife
	Detention basins: • Vegetated depressions which temporarily hold water • Some designs may hold water longer than others • Can be sown with native wildflowers and wetland plants	• Provide habitat for wetland plants and nectar source for insects if seeded with suitable wildflower mix. Will benefit those plants and animals that require ephemeral water bodies as part of their life cycle
	Swales: • Swales are linear, shallow channels that transport water from one part of the SuDS management train to the next • Shallow pools within swales can be created by using small check dams • Can be under drained • Can be incorporated into hard landscape as a rill or other concrete channel • Can be sown with native plants to create wildflower meadows, with tussocky grassland • Can be planted with native wetland plants, taking care not to impede storm water passage and visibility	• Provides shelter, food, foraging and breeding opportunities for a variety of wildlife species including amphibians, plants, invertebrates, birds, bats and other mammals. Contributes to local BAP targets including opportunities to create wet woodland, reedbed, open water and wet grassland. • Provides shelter, somewhere to forage and breed for invertebrates, birds and mammals. Shallow pools upstream of check dams provide opportunities for wetland plants
Artificial nesting and roosting sites	• Incorporate a range of artificial nesting and roosting sites, with the number reflecting the size and scale of the development. • Integrated or built-in features such as roosting or nesting bricks are preferable in new developments; as well as blending in with the structure they provide longer lasting benefits and require minimal maintenance. • Target species should be selected based on the ecological survey and in liaison with the local authority and wildlife trust Ensure the size and type box/brick is appropriate for the target species. • Ensure the location is right for the species; birds have different requirements to bats. Think about the height from the ground, direction of sunlight and wind, and ensuring the box/brick is away from disturbance. • Buildings over 7m high should include a band of swift and/or bat bricks around the top of the building. • Buildings over 3m high with easy access to open countryside should include an internal nesting space for Barn Owls unless two such places already exist within 200m • Invertebrate features can be incorporated through the use of 'bug hotels' or habitat walls. These are discreet features that are easy and inexpensive to install. • Where appropriate, developments near to watercourses should install kingfisher and/or sand martin features in the watercourse. • Provide habitat for the target species. It is particularly important to provide foraging areas for bats and bees in the landscape design.	• Artificial nesting/roosting boxes provide opportunities for shelter and breeding for wildlife in areas which may have few/reduced options due to habitat disturbance, lack of mature trees/vegetation or changes in building use/practices.

Basic principles for biodiversity enhancing landscape design in developments

Bat Conservation Trust

1. Retain existing vegetation and habitats where appropriate

- Find out what exists on the site already. It is uncommon to find sites that have no biodiversity value at all. For all sites, a survey for habitats and protected species should be undertaken by a suitably qualified and experienced person and a search by the local biological records centre should be commissioned.
- Retain mature trees (they provide potential nest sites for birds and can support roosting bats), hedges and vegetation of value to wildlife. In some situations it may be advisable to protect soils in situ or store and reuse soil.

2. Create new habitats

- Mimic natural habitats by using native species in natural associations. Non-native species should be avoided unless they have documented value for wildlife and are not invasive. Match planting to soils and avoid the use of rich topsoils, which depress species diversity.
- Types of habitat include woodland, wetland, grassland and sparsely vegetated stony communities.
- Some habitats, such as woodlands, need to be large in order to support the full range of species. Depending on the site it may be better to create a few large habitats than many small ones.
- Utilise otherwise wasted space, such as roofs, walls, balconies, road verges, cycle and footpaths, and parking areas.
- Increase roosting and nesting opportunities by providing artificial wildlife homes, such as bird/bat boxes/bricks, insect hotels and hives.

3. Connectivity

- Connectivity refers to the size and distribution of patches of habitat and the relative ease with which particular species can move through the landscape between the patches.
- Often, built structures or the artificial lighting associated with built areas can create unnecessary barriers to the movement of animals, so be aware of this and try to create routes for wildlife to move or disperse through the site. Aim to create 'dark green corridors' and unlit areas, especially in and around parks and tree-lined lanes, roads, and bridges that cross streams and rivers (see Section 5.2 for further information on lighting).
- Green corridors should be included to link habitats. Linking features include tree networks, stepping stone habitats (like green roofs) and effective road crossings, such as wildlife overpasses and underpasses (eco-passages).
- A small, isolated site is likely to have lower value than a larger site that forms part of a mosaic of green space.
- Linear features such as treelines, hedges, waterways, vegetated railway corridors, gardens and woodland edges are particularly important for bats and other mammals, birds and many of the more mobile invertebrates, e.g. butterflies, which use them as commuting routes.

4. Target species

- Check whether there are any particular species or habitats of which you should be aware in the local area (refer to the ecological survey, local experts and the local Biodiversity Action Plans). It may be that you can provide new habitats for endangered or priority species or protect or expand important habitats. As well as helping the local authority to meet its biodiversity duty and targets, this could become an attractive feature of the new development.
- Bat and bird populations are considered to be a good indicator of the broad state of wildlife and landscape quality because they utilise a range of habitats across the landscape and are sensitive to pressures in urban, suburban and rural environments. Targeting bats and birds as beneficiaries of landscape design will benefit a host of other wildlife and will ensure there is a biodiverse, multi-functional green infrastructure.

5. Incorporate tree planting

- Species should be predominantly native and, where possible, of local provenance or climate-adapted provenance. It is also recommended that diseaseresistant strains are considered.
- 30% of trees to be planted should be large tree species as they provide greater wildlife benefits and ecosystem services.
- Create lines and groups of trees to create 'woodland patches' and woodland edge habitat.

6. Wildlife-friendly planting

- Planting should benefit a wide array of wildlife by providing larval food plants, food (nectar, pollen, fruit/ berries, leaves) and/or shelter in the form of cover or nesting habitats, with flowering occurring from spring to autumn.
- Native species are often more beneficial for wildlife, but there are non-natives with documented value to wildlife, some of which may provide benefits for a longer time period. Avoid the use of non-native invasive species (www.defra.gov.uk/wildlife-pets/ non-native).
- Wherever possible, ensure that new areas of planting are next to existing vegetation. The connectivity and quality of habitat are more important than the total area.
- If there are opportunities for new planting on the scheme, consider making some of the plants edible for both humans and wildlife. This includes fruit trees (which require soft landscape below), nut trees, berry bushes and salad and vegetable plants.
- Diversify grassland areas by reducing the fertility of the soil and re-seeding with suitable native mixes or plugplanting with wildflowers.
- Gardens not only play an incredibly important role in biodiversity protection, but also reduce the likelihood of flooding by retaining rainfall.

Excerpt from **Designing for Biodiversity: A technical guide for new and existing buildings.**
Kelly Gunnell, Brian Murphy and Dr Carol Wliams. RIBA Publishing 2013.

7. Multi-functional green infrastructure (GI)

- GI is the network of natural and man-made green (land) and blue (water) spaces that sustain natural processes. GI includes playing fields, parks, gardens, squares, verges, rivers, canals and street trees as well as vegetation on buildings, such as green roofs and living walls.
- GI should be designed and managed as a multifunctional resource that provides a full range of ecosystem services, as well as quality of life benefits for society. GI will not be biodiverse unless designers and managers design it in by considering the setting for and situation of each scheme as well as the planting and management.

8. Sustainable drainage systems (SuDS)

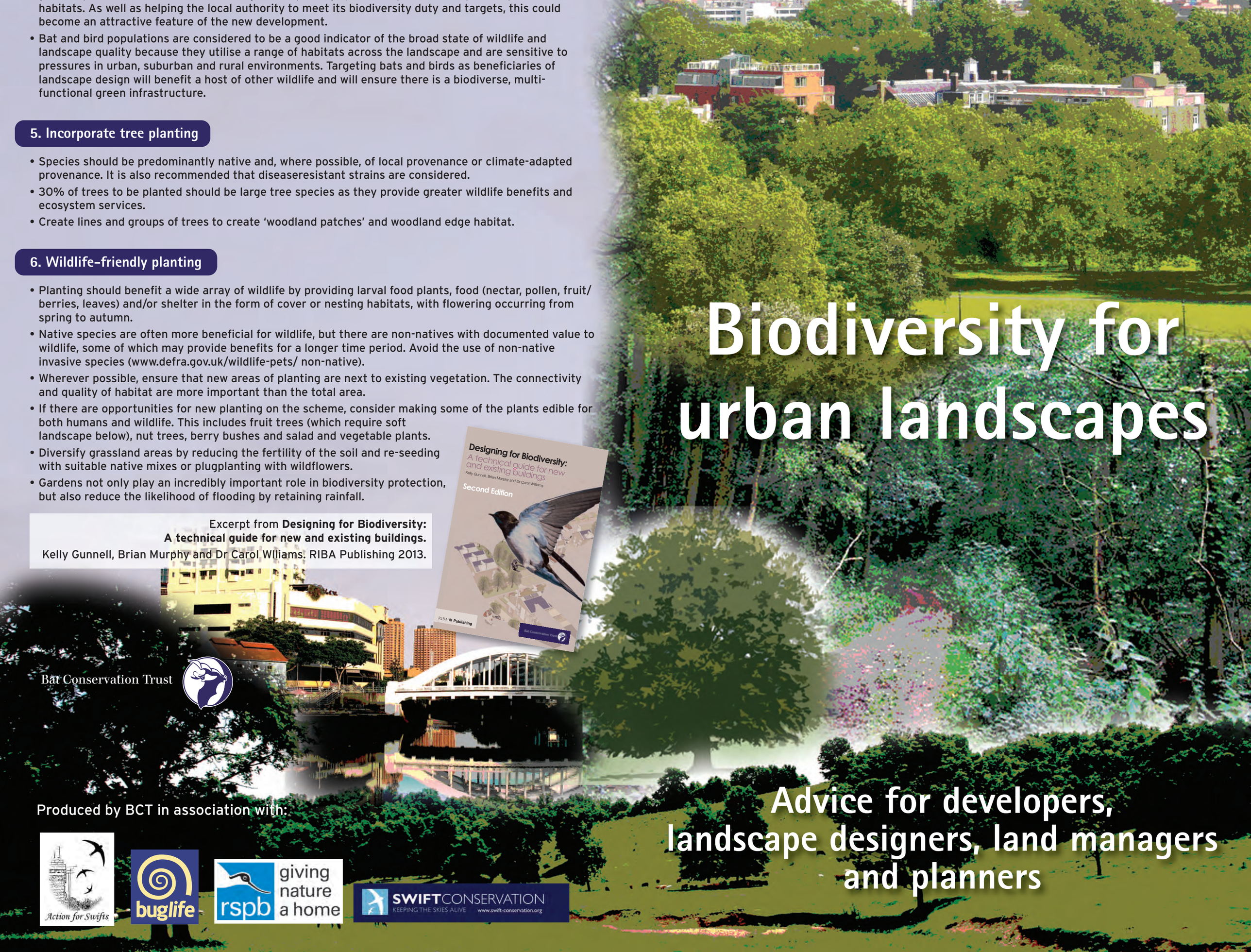
- SuDS is an approach to surface water drainage that takes account of water quantity, water quality and amenity issues by mimicking nature.
- All new development should use SuDS.
- SuDS can improve a development by creating habitats that encourage biodiversity and simultaneously provide open space while delivering features to filter and store water.
- The biodiversity value of SuDS will be greatest in schemes that utilise green roofs, swales, ponds and wetlands as these provide wildlife habitats.
- Remove or reduce the amount of impermeable surfaces by using permeable paving, gravel, sections of lawn or flower beds. This mediates flood risk and restores natural processes, such as nutrient cycling.

9. Artificial lighting

- Outdoor lighting is disturbing to a wide range of wildlife, including bats, birds, invertebrates and amphibians.
- Designing wildlife-sensitive lighting schemes has knock-on benefits, including decreased light pollution, increased energy efficiency, lower carbon emissions and reduced maintenance.

10. Community involvement

- Involve local communities in the monitoring and management of their wildlife. Experience shows that not only does this help with community cohesion, but it is also a healthy outdoor activity which improves mental and physical well-being. Increasing awareness of wildlife could also result in valuable information being collected on species found in an urban environment.



Biodiversity for urban landscapes

Bat Conservation Trust

Advice for developers, landscape designers, land managers and planners

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