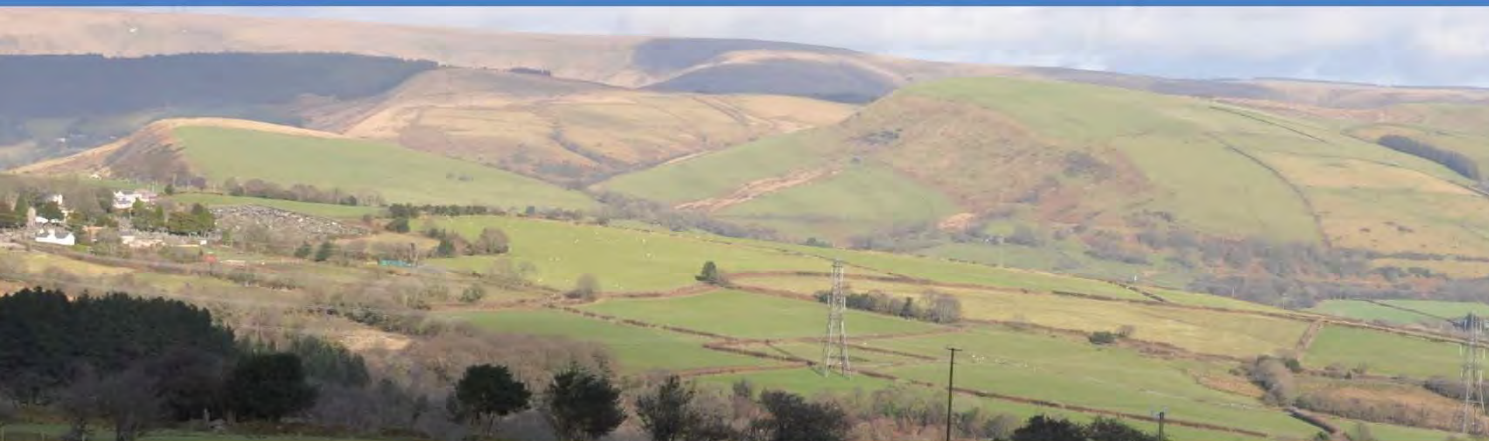


APPENDIX 1

BIODIVERSITY AND DEVELOPMENT: A GREEN INFRASTRUCTURE APPROACH SUPPLEMENTARY PLANNING GUIDANCE



Biodiversity & Development: A Green Infrastructure Approach Supplementary Planning Guidance



Contents

Biodiversity & Development: A Green Infrastructure Approach Supplementary Planning Guidance		i
Executive Summary		ii
Glossary of terms		ii
A.	The Green Infrastructure Approach	1
1	Introduction	1
2	Who should use this SPG?	2
3	Structure of SPG	3
4	Key SPG Policies	5
5	What is Green Infrastructure?	7
6	Green Infrastructure Assets	8
7	The Benefits of Green Infrastructure	9
8	How do I capitalise on Green Infrastructure?	11
9	Information to include in the planning proposal	12
10	Funding Green Infrastructure	21
11	Other Considerations	22
B.	Biodiversity Design Guidance	25
1	Purpose	25
2	Recognising the full value of biodiversity	25
3	Areas subject to particular protection	25
4	Species subject to particular protection	278
5	Incorporating biodiversity into developments	27
6	Initial assessment checklist for protected species and habitats	32

Executive Summary

The purpose of this Supplementary Planning Guidance (SPG) is to expand upon the Council's existing planning policies on biodiversity and green infrastructure contained within the adopted Local Development Plan (LDP).

It outlines how the Council will expect habitats to be considered as part of development proposals within the County Borough of Bridgend. It also introduces the concept of adopting a Green Infrastructure approach to development.

This document has been formulated as a result of close cooperation between the Planning and Countryside & Tourism departments of the Council and Natural Resources Wales, all of which will be involved in the negotiations for protecting and enhancing green infrastructure through the planning system.

Glossary of terms

BCBC:	Bridgend County Borough Council
GI:	Green infrastructure
LCA:	Landscape Character Area/Landscape Character Assessment
LDP:	Local Development Plan
PPW:	Planning Policy Wales
SINC:	Site of Importance for Nature Conservation
SPG:	Supplementary Planning Guidance
TAN:	Technical Advice Note
TCPA:	Town and Country Planning Association

A. The Green Infrastructure approach



A. The Green Infrastructure Approach

1 Introduction

1.1 The purpose of this Supplementary Planning Guidance (SPG) is two-fold:

1. It expands on Policy Guidance contained within the [Bridgend Local Development Plan](#)ⁱ (LDP) 2006-2021 providing detailed guidance on biodiversity issues

2. It provides an introduction to the 'Green Infrastructure (GI) Approach' to development which the Council is adopting as best practice.

1.2 The Bridgend Local Development Plan (LDP) has a housing delivery target of 9690 new dwellings up to 2021 to accommodate anticipated population growth and provide housing for all of those wishing to live and work in the County Borough. This housing growth is supported by planned targets to provide employment opportunities, schools for education, community buildings, health facilities and road infrastructure.

1.3 However, we are also reliant on the natural environment and the services in providing us with clean air, water, food and opportunities for recreation etc.

1.4 Therefore, the LDP also contains policies to ensure the protection and enhancement of our natural environment through managing climate change, water management,

safeguarding, enhancing, restoring, and creating wildlife habitats and the landscape as well as protecting and enhancing recreational facilities.

1.5 Notwithstanding the obvious reliance that the human population has on the built and the natural environment, they have historically been viewed as conflicting with one-another.

1.6 The Green Infrastructure (GI) concept reconciles these seemingly 'competing' objectives and introduces a new approach to the way that the 'natural environment' and 'development' are perceived and how they interact. It provides an approach which moves away from the historical view of the environment and development being in conflict to viewing the natural environment as an 'asset' which developers can capitalise on in the development process allowing the County Borough to benefit from the economic prosperity of growth whilst protecting and enhancing the natural environment.

2 Who should use this SPG?

Developers

Note 1: All major and sensitive developments will be expected to make a positive contribution toward enhancing Green Infrastructure.

- 2.1 The main audiences for this SPG are those individuals and organisations planning new development within Bridgend County Borough. This development fall into two categories;
1. **Major developments**, where professional expertise should be sought on GI and topics such as ecology.
 2. **Minor developments**, where the applicant is unlikely to require professional expertise. Minor developments are defined by the Council as those involving fewer than 10 houses, all other development covering less than 1,000 m² or less than 0.5 ha, house extensions and changes of use.
- 2.2 However, where a minor development is located within a sensitive location (**Sensitive Developments**), Bridgend Council recommends that professional expertise should be sought on GI/ecology. For the purpose of this guidance, sensitive locations include the following:
- Adjacent or close to a sites designated for nature conservation

- Directly affecting existing GI features important to biodiversity such as mature hedgerows; barns; watercourses; and protected sites.

- 2.3 This information can be accessed via the Councils [Green Infrastructure Online tool](#), the Council adopted [Local development Plan Proposals Maps](#) or by contacting the Council. Contact details provided at Appendix A.

Decision Makers and Landowners

- 2.4 The SPG will also be used as a point of reference by decision makers within BCBC and its partner organisations. Land owners and managers across the County Borough are encouraged to use the information to guide land management activity.

The General Public/Community Groups

- 2.5 In addition, this SPG also provides information to the local communities of Bridgend; through providing guidance on what they should expect from new development in their community, and creating a sense of pride and ownership in working together to improve Bridgend's green infrastructure for the future.
- 2.6 For more information and ideas on how you can contribute to the Green Infrastructure Approach in your community please visit the Councils [Green Infrastructure Online tool](#).

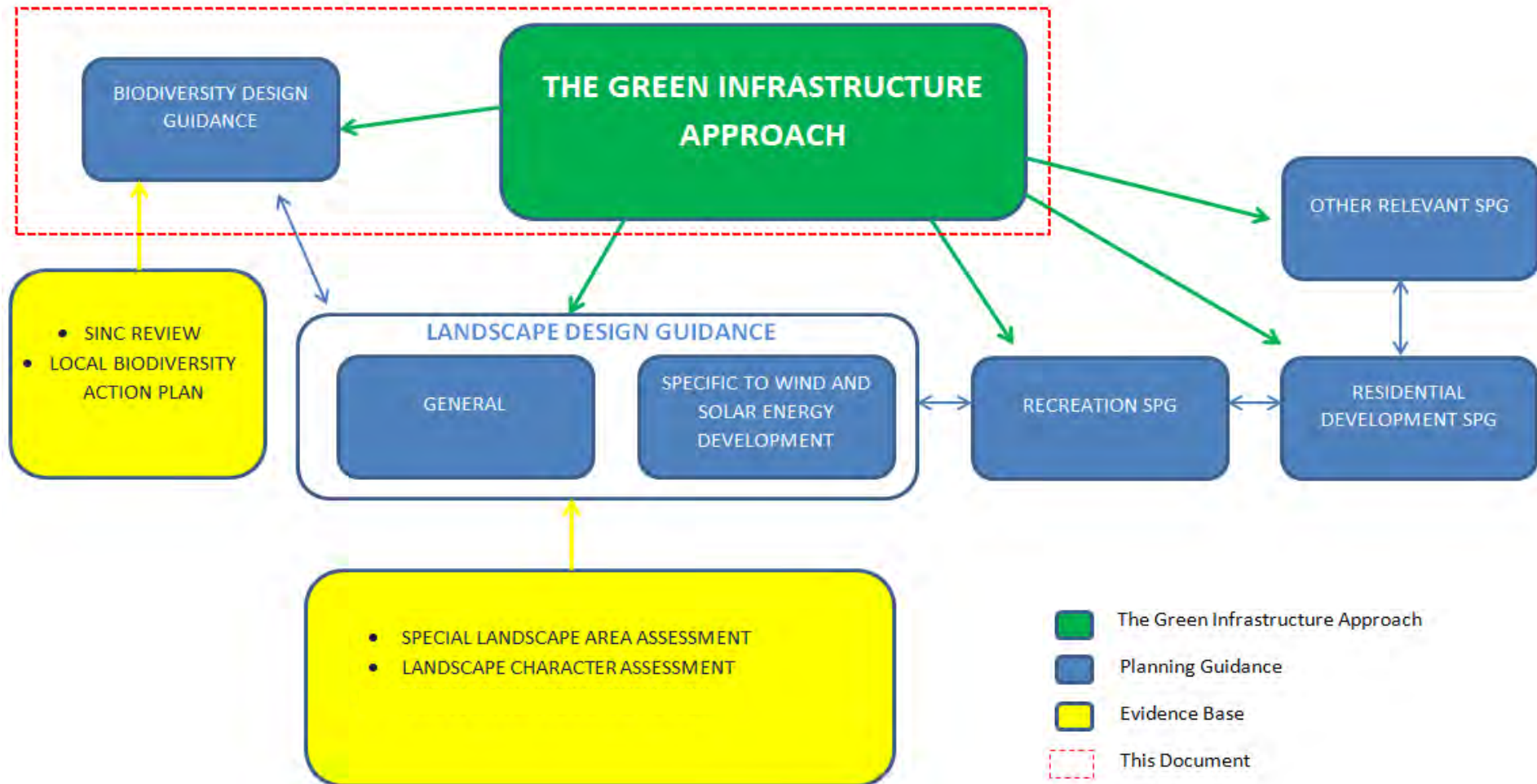
3 Structure of SPG

- 3.1 Section A sets the strategic framework for the delivery of the GI Approach in Bridgend. It defined what is meant by GI and outlines the benefits of adopting the approach as an integral part of development projects. It describes the local and national policy context within which the GI Approach is set. Section A also provides practical advice for developers on meeting the policy objectives of the Council in relation to GI and capitalising on the GI assets that may exist/could be introduced into their development proposals with cross-references to other SPG where relevant.
- 3.2 Sections 2 applies the GI approach to practical guidance on protecting and enhancing the biodiversity in the County Borough. It is informed by a range of evidence including the Sites of Importance for Nature Conservation Report and the Local Biodiversity Action Plan (LBAP).
- 3.3 This SPG is the first of a suite of Green Infrastructure led SPG which will collectively contribute to driving forward the agenda in Bridgend. In this regard the Council is also in the process of developing further work which will build upon the work already undertaken. These elements of work include:
- 3.4 **Detailed Landscape Design Guidance** - This document will provide detailed landscape design

guidance incorporating the results from the Special Landscape Area Assessment as defined in the adopted LDP and the Landscape Character Assessment.

- 3.5 **Renewable Energy in the Landscape design guidance**– This document will provide landscape design guidance specifically relevant to developments for renewable energy (wind turbines/farms and solar development) incorporating the results from the Special Landscape Area Assessment as defined in the adopted LDP and the Landscape Character Assessment.
- 3.6 It is envisaged that the GI approach can be applied to a broad range of SPG which the Council is producing including guidance on recreation facilities and residential development etc.
- 3.7 This SPG and its links to other guidance and evidence base material are detailed in Figure 1.1 which shows that the GI approach can be applied to a broad range of guidance and the guidance is inter-linked. The connection between these documents will become clearer in Section A.

Figure 1.1 SPG Linkages



4 Key SPG Policies

4.1 This SPG provides additional guidance to policies contained in the Bridgend LDP which was adopted in September 2013.

4.2 LDP policy SP2 introduces 15 criteria which will be applied to all development proposals across the County Borough and specifically, Criteria 10 states that all development proposals should:

Safeguard and enhance biodiversity and green infrastructure.

4.3 Additionally, Strategic Policy SP4 of the LDP states:

Development which will conserve and, wherever possible, enhance the natural environment of the County Borough will be favoured.

Development proposals will not be permitted where they have an adverse impact upon:

- *The integrity of the County Borough's countryside;*
- *Its biodiversity and habitats; and*
- *The quality of its natural resources including water, air and soil.*

4.4 These policies are supplemented by additional policies which provide more detailed information in relation to

landscape and biodiversity issues where relevant. Specific to this SPG are:

- Policies ENV4: Local/Regional Nature Conservation Sites and ENV6: Nature Conservation provides more detailed policy guidance in relation to biodiversity and habitats
- Policy ENV5: Green Infrastructure promotes the Green Infrastructure approach through the multi-functional use of natural assets.

4.5 These and other relevant policies are listed in Table 1.1. More information about the requirements that these policies place on developers, in relation to Green Infrastructure, is provided later in this Section.

Table 1.1. Policies in the Local Development Plan that refer or relate to Green Infrastructure

Policy Number	Title
Strategic Policy SP2	Design and Sustainable Place Making
Strategic Policy SP4	Conservation and Enhancement of the Natural Environment
Strategic Policy SP5	Conservation of the Built and Historic Environment
Strategic Policy SP14	Infrastructure
Policy PLA4	Climate Change and Peak Oil
Policy PLA7	Transportation Proposals

Policy Number	Title
Policy ENV3	Special Landscape Areas
Policy ENV4	Local / Regional Nature Conservation Sites
Policy ENV5	Green Infrastructure
Policy ENV6	Nature Conservation
Policy ENV7	Natural Resource Protection and Public Health
COM11-COM13	Recreation Policies
COM14	Provision of Allotments and Community Food Networks

4.6 A broader context to provided by national policies such as the following:

[The UK Climate Change Act](#)ⁱⁱ became law in 2008. One of the key provisions of the Act is for the Government to report on climate change adaptation at minimum 5 yearly intervals. GI forms a key element of this climate change adaptation response.

[Planning Policy Wales \(PPW\)](#)ⁱⁱⁱ (Edition 5, November 2012): Supports ‘sustainable development’ which must ‘enhance the natural and cultural environment and respect its limits’. PPW defines this further through describing the key elements of good design for new developments. The environmental sustainability, character and community safety components are particularly relevant to green infrastructure.

[The 2010 Natural Living Framework](#)^{iv} “A Living Wales” further emphasises the importance of the natural environment, and commits Wales to adopting an ecosystems approach which will ‘focus on the value of the environment as a whole, delivering positive environmental, social and economic outcomes’.

4.7 The Welsh Government has published a number of [Technical Advice Notes \(TANs\)](#) which are of relevance to GI delivery, as follows:

[TAN 5 Nature Conservation and Planning \(2009\)](#)^v: defines how development should contribute to protecting and enhancing biodiversity and geological conservation.

[TAN 15 Development and Flood Risk](#)^{vi} (2004): advises on development and flood risk and “provides a framework within which risks arising from both river and coastal flooding, and from additional run-off from development in any location, can be assessed”.

[TAN 16 Sport, Recreation and Open Space \(2009\)](#)^{vii}: guides local authorities in meeting the PPW requirement to “provide a framework for well-located sport, recreation and leisure facilities which should be sensitive to the needs of users, attractive, well designed, well maintained, safe and accessible to all”.

[TAN 22 Sustainable Buildings \(2010\)](#)^{viii}: encourages the integration of Green Infrastructure in building design.

5 What is Green Infrastructure?

- 5.1 Green Infrastructure (GI) is a network of multifunctional green spaces, natural features and environmental management systems which help to provide a natural life support system for people and wildlife.
- 5.2 GI provides the spatial framework for a range of natural functions and uses. By adopting the GI approach, development schemes may be adapted or designed to provide a range of important benefits to people such as improved connectivity through footpaths and cycle routes; space for nature that contributes to the local or sub-regional pattern of connected habitat; imaginative recreational facilities that give educational and physical health benefits to local people; and places that will be more resilient to the impacts of a changing climate.
- 5.3 The purpose of this section is to outline the benefits of GI and adopting a GI approach to development, for both developers and future occupiers of the schemes.

The natural character of Bridgend

Bridgend County Borough is a small but remarkably diverse area, demonstrating centuries of human interaction with the natural environment. The northern half of the County Borough comprises the steep-sided valleys and commons which form part of the wider coalfield plateau of South Wales, with pockets of pastoral farmland and rough grazing land. To the south the landscapes of the County Borough meet the sea, including part of the Glamorgan Heritage Coast. This dramatic and wild coastline provides a stark contrast to the nearby settlements with their strong human influence (including the tourist centre of Porthcawl and nearby steelworks at Neath Port Talbot). The coast includes the highest sand dunes in Britain at Merthyr Mawr, part of an internationally important network of coastal habitats which provide a scenic frontage to the County Borough.

The market town of Bridgend itself has evidence of settlement dating back to the Prehistoric period, but the discovery of coal in the valleys north of the town had a dramatic impact on its development. Like other parts of South Wales, the decline of the coal mining and other primary industries had a significant impact on the local economy and the communities which relied on them. In recent years, much investment has been injected into the area, with regeneration projects and new development breathing new life into the area, including both within the town and the nearby mining settlements in the valleys.

Bridgend County Borough Council is preparing an online Green Infrastructure tool which will support those submitting planning applications. This tool will incorporate maps of features and topics which should be considered when planning for green infrastructure, and should be utilised when designing Green Infrastructure within planned development.

6 Green Infrastructure Assets

6.1 Most natural and semi-natural features in the landscape can be considered to be green infrastructure, and many can perform one or more Green Infrastructure functions. Examples of green infrastructure assets (following the terms defined by the Town and Country Planning Association's '*The essential role of Green Infrastructure – eco-towns green infrastructure worksheet*' (2008)) are as follows:

Parks and gardens – urban parks, country and regional parks, formal and private gardens (permeable paving, trees, rainwater collection, ponds) and institutional grounds (e.g. at schools and hospitals) for example Bryngarw Country Park;

Amenity green space – informal recreation spaces, play areas, outdoor sport facilities, housing green spaces, domestic gardens, village greens, urban commons, other incidental space, green roofs, hedges, civic squares and spaces, and highway trees and verges, for example Newbridge Fields and Pandy Park sports fields;

Productive spaces - Allotments, community gardens, city farms, orchards, roof gardens, and urban edge farmland;

Cemeteries and churchyards;

Natural and semi-natural features - woodland and scrub, trees, hedgerows, grassland (for example meadows), heath and moor, wetlands, open and running water (rivers Llynfi, Garw, Ogmore) brownfield sites, bare rock habitats (for example cliffs and quarries), coast, beaches;

Green corridors - rivers (e.g. Llynfi, Garw, Ogmore) including their banks, road and rail corridors (verges), access networks, cycling routes, and rights of way, for example the All Wales Coastal Path, Bridgend Circular Walk, the Ogwr Ridgeway Walk and the Afon Llynfi;

Existing national and local nature reserves and locally designated sites for nature conservation for example Kenfig NNR, Craig-y-Parcau LNR and Parc Slip Nature Reserve , Merthyr Mawr SSSI;

Archaeological and historic sites, for example Y Bwlwarcu Scheduled Ancient Monument; Coity castle, Parc Tondu Ironworks;

Functional green space, such as sustainable urban drainage schemes and flood storage areas;

7 The Benefits of Green Infrastructure

7.1 There is a growing body of evidence and best practice that shows how GI can create places that provide tangible benefits to businesses, local residents and the broader public good. The Council would like to see the inclusion of GI in developments contributing to all these benefits. These benefits can be summarised as follows:

Increased property values and inward investment:

Features such as street trees and views of greenery increases property values by 6-18%

Research conclusively shows that investment in GI at the development outset accrues financial benefits to the developer in terms of increased sale prices, as well as increased health and motivation levels for employees where GI is part of the landscape ([Northwest, 2008](#))^x. For example, [researchhttp://www.tcpa.org.uk/data/files/bd_biodiversity.pdf](http://www.tcpa.org.uk/data/files/bd_biodiversity.pdf) by the TCPA indicates that an attractive surrounding landscape and green features such as street trees and views of greenery increases property values by 6-18% (TCPA, 2004). The Commission of Architecture and the Built Environment (CABE) conducted similar [research](#) which concludes that property values increase near green spaces, with

houses close to parks averaging 8% higher prices than similar properties further away (CABE, 2005^x). There is also evidence to suggest that Green Infrastructure can provide a more attractive environment for inward investment ([Michelle de Roo, 2011](#))^{xi}, and are more likely to retain staff for longer periods (Northwest, 2008).

Healthier, happier communities

Residents and workers are happier and healthier when they live in green surroundings. This is attributed to the physiological benefits of being more at ease in green rather than grey surroundings, but also because of shade, air quality and increased likelihood of informal recreation when access to green space is nearby. Green space around the work place and leads to enhanced well-being improves the health of workers resulting in increased productivity and less sick days (Michelle de Roo, 2011). In addition, attractive green landscapes create space for communities to interact and evolve (TCPA, 2004), and building stronger communities in this way improves social cohesion and helps to bring down the social costs such as crime (Michelle de Roo, 2011).

Not only do studies suggest that employees work better and more productively in greener, more attractive environments, but health benefits such as lower stress levels can reduce sickness and absenteeism.

In 2011 the government published the [National Ecosystems Assessment \(NEA\)](#)^{xii} to try and estimate the value of the UK's biodiversity and ecosystems services. The report recognised that much more work is required to understand the economic benefits and costs of ecosystems services. However, it was able to quantify some of the benefits of ecosystems services.

These include:

- Pollination – provides £430 million of services to agriculture for free.
- Living close to green space – this provides a benefit of £300/person/year.

Clean green environments for living

The natural landscape can be designed to deliver water, air and climate management functions which can reduce the need for costly engineered infrastructure. Areas of green space around a built development provide space for water to attenuate, and small features such as swales, Sustainable Drainage Systems (SuDS) and rain gardens can be incorporated to look attractive whilst providing this function (Michelle de Roo, 2011). Green infrastructure elements such as [street trees](#)^{xiii}, [green roofs](#)^{xiv} and walls, parks and gardens all contribute to moderating the impacts of the urban heat island effect recognised as a significant cause of premature death in cities. In addition plants and trees remove dust (particulate matter) and gaseous

pollution including ozone, nitrogen dioxide and volatile organic compounds from the air.

Green infrastructure elements such as street trees, green roofs and walls, parks and gardens all contribute to moderating the impacts of the urban heat island effect recognised as a significant cause of premature death in cities.

Biodiversity gain

Landscape-scale connections will be necessary to reduce fragmentation, improve connectivity, and secure functioning ecosystems. In delivering these functions, GI also creates space for nature, enhancing and creating wildlife habitat and integrating biodiversity into the built environment, bringing nature into cities and enabling urban residents to enjoy nature ([TCPA & WT, 2012](#)^{xv}).

Biodiversity is also a significant source of leisure activities. It is a focal point for tourism and all kinds of recreational activity...People value such areas for a variety of recreational pursuits: film, photographs or literature based on or using wildlife, natural habitats and natural features; bird watching; and ecological field study and other scientific pursuits ([McNeely, 1988](#)^{xvi})

8 How do I capitalise on Green Infrastructure?

- 8.1 All developments can contribute to GI by improving existing resources or by improving local provision (RICS, 2011). Some general examples of ways that developments can contribute to the GI approach in development proposals is highlighted in Box 1.1.
- 8.2 The scale and cost of GI delivered should reflect the scale and type of development proposed. **Small schemes** such as a single house development could contribute by providing an adequately sized garden, nest boxes for birds and bats, or a green roof. **Mid to high density** housing schemes could include the provision of food growing areas and other green space for healthy recreation. The location of the development will also determine the extent of GI which the Council would expect to see within a proposed development. Residential developments, and those proposed within residential areas which are currently deficient in accessible open space will be expected to provide a greater quantity of open space than those in rural areas where GI functions are already being achieved.
- 8.3 The provision, character and distribution of GI opportunities depends on the nature of the location, the type of development, the contribution it can make to eco-connectivity and regulatory and provisioning services.

Box 1.1 Examples of Green Infrastructure design within development

Taken from [Good practice Guidance for Green Infrastructure and Biodiversity - TCPA & WT, 2012](#)

- Include bat boxes, bricks or lofts and bird boxes on all housing, to reflect the species within the area (see birds and development)
- Ensure where possible streets and roads are tree-lined or contain hedgerows appropriate to local character, habitats and species within the area.
- Avoid impermeable surfaces where possible. SUDS can be focal to every scheme and enhanced for biodiversity.
- Harvest, store and re-use rainwater in low carbon systems.
- Create natural green spaces and wild or free play areas in the urban setting.
- Create an extensive viable network of green and blue corridors and natural habitat throughout development which connects larger or more expansive open spaces for both people and wildlife utilising designed around existing site assets (including dark corridors for bats).
- Protect, enhance and buffer waterways both in-channel and along the banks.
- Create a network of streets, open spaces and parks, with safe routes linking them to homes and schools
- Provide pleasant, safe and linear routes for non-motorised transport such as walking and cycling for utility, recreation and health promotion
- Enhance the transport system and help reduce effects of air pollution through the provision of verges of priority habitat, hedgerow, wildflower rich or rough grassland.
- Provide garden space
- Provide public access to green infrastructure assets where appropriate.
- Incorporate insect attracting plants, hedgerows, log piles, loggaries and other places of shelter for wildlife refuge/hibernation within structural landscaping and open spaces.

8.4 Bridgend CBC together with Natural Resources Wales (NRW) have developed ecosystem services maps which indicate what areas in the County Borough currently have the best water regulation provision, habitat connectivity, contribute to pollination or recreation provision. These maps can be used to identify how your development can best utilise and contribute to GI functionality within the County Borough. Bridgend's Online Green Infrastructure Tool provides more information on ecosystem services and ecosystem service maps in Bridgend.



9 Information to include in the planning proposal

9.1 Bridgend Council expects applicants to have considered the functions of GI within their planning application and at earlier stages in the process.

Landscape (See policies SP2, SP4 and ENV3): Detailed guidance on how to address landscape issues within development proposals is provided in a separate Landscape SPG.

Biodiversity and nature conservation (See policies SP2, SP4, ENV4 and ENV6): Detailed guidance on how to address biodiversity and nature conservation issues within development proposals is provided in Section B of this document.

Natural Resource Protection and Public Health (See policy ENV7): Bridgend Council requires development proposals to demonstrate how any impacts on natural resources and their ecosystem services have been minimised. Policy ENV7 of the LDP provides more detail on the potential impacts of development which should be minimised through design and mitigation.

Open space and recreation (See policies COM11-COM13 and Provision of Outdoor Sports, Playing Spaces and Public Open Spaces SPG): Bridgend Council expects all new residential development to contribute to open space provision. Detailed guidance on how to address open space provision within

development proposals is provided in Bridgend Council's Open Space and Recreation SPG.

Productive landscapes (See policy COM14) Bridgend Council would like to create productive landscapes in appropriate locations within the Borough. Policy COM14 of the LDP identifies locations which are considered to be particularly suitable for this land use.

Climate change (See policy PLA4): Bridgend Council requires development proposals to make a positive contribution towards adapting to the impacts of Climate Change. Policy PL4, of the Bridgend LDP and SPG12: Sustainable Energy provides guidance on how development can contribute to this.

Transport (See policy PLA7): Bridgend Council would like to enhance and extend sustainable transport networks including footpaths and cycle ways within the Borough. Policy PLA7 of the LDP provides more detail on how development can contribute to this.

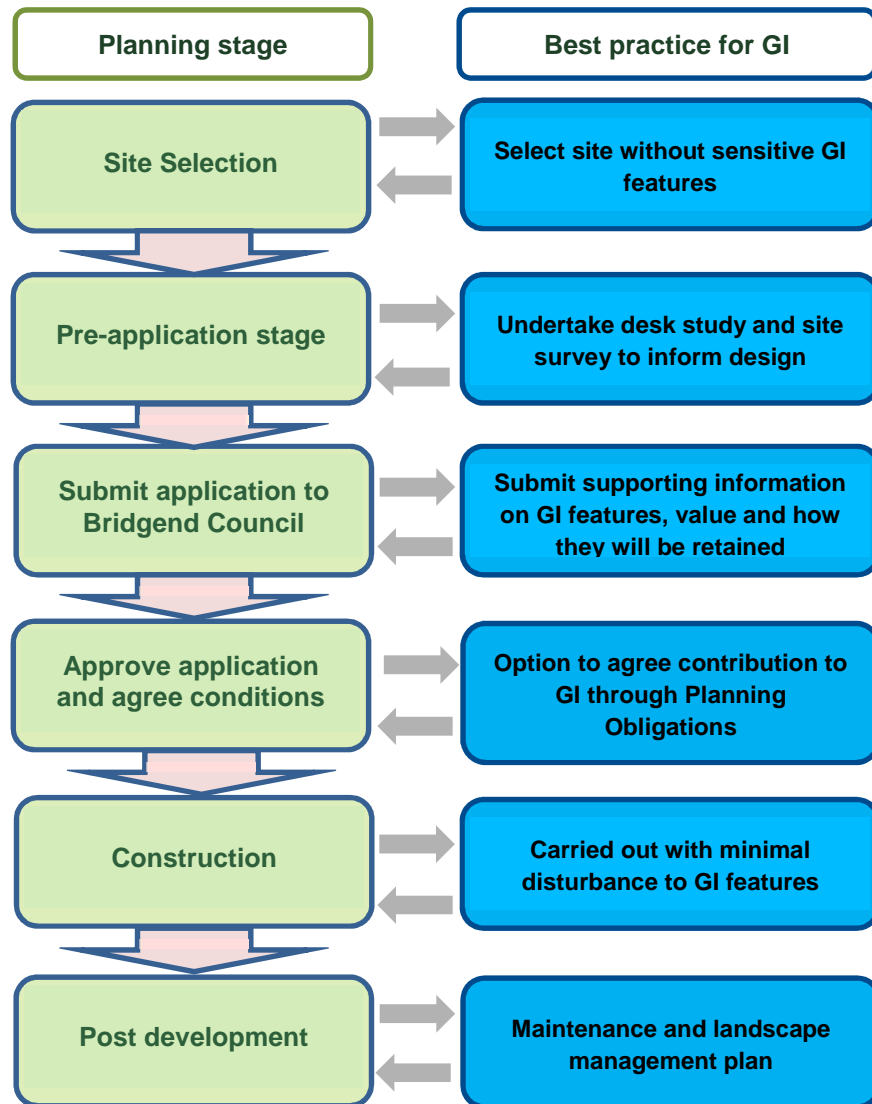
- 9.2 For smaller developments it may not be necessary to provide a detailed response regarding the issues listed above. However, all major or sensitive development will be expected to give detailed consideration to the impact of their proposal on the Green Infrastructure network. In this regard, specific consideration should be given the **Policy ENV5: Green Infrastructure**.

Note 2: All Major and Sensitive Developments will be expected to consider the multi-functional use of Green Infrastructure in their development proposal in the development design and supporting Design and Access Statement.

- 9.3 As highlighted above, Green Infrastructure has multiple functions in terms of its benefits. The early identification of existing and required green infrastructure assets on site will allow the developer to identify opportunities to design the site in a way which will take advantage of the multiple benefits that they offer. For example, all developments must consider site drainage due to increased burden on the land drainage systems and the likely effects of increased storm events in the future. Sustainable drainage systems (SUDS) – the creation of ponds, wetlands, swales and basins that mimic natural drainage – can be a cost-effective way to prevent surface flooding while creating valuable public amenities. In addition to flood risk management SUDS schemes can contribute to water resource management e.g. storage of flood water for reuse in meeting demand for water for agricultural and domestic uses while at the same time taking the pressure off existing infrastructure by reducing the amount of water entering the sewers. These features should be integrated into the design of developments to provide attractive liveable landscapes.

- 9.4 Climate change must be a consideration of any development and green infrastructure is seen as one of the tools which can provide the most cost effective solutions.
- 9.5 To achieve the above, the Council recommends that to identify and design GI within development, applicants for major and sensitive developments should follow a four stage process set out below. These four stages feed into steps 1-3 of Figure 1.2 below. Initiating these steps early in the planning process makes it more likely that the Council's requirements for planning proposals will be met and that the application process can be undertaken efficiently. An iterative approach to design should be adopted, where the built and natural elements of the scheme are developed in tandem and are well integrated.
- 9.6 Applicants for minor developments are expected to complete stage 1, and should also aim to incorporate small scale Green Infrastructure features within the scheme as appropriate. The list in Box 1.1 above provides some useful examples of Green Infrastructure features, including those that can be delivered within single dwellings and other minor schemes.
- 9.7 For all major development, it is recommended that planning, landscape, arboricultural and ecological consultants should be used to provide guidance on the type and location of green infrastructure appropriate within the proposal. For minor schemes within sensitive locations, it may also be appropriate to seek specialist expertise.
- 9.8 These specialists need to work with the engineers, architects and planners, also engaged with the same development project, to ensure that landscape & biodiversity aspects are fully considered throughout the development process. Using this approach will help ensure landscape and biodiversity aspects of the development are fully considered and successfully integrated with all other aspects of the development.
- 9.9 As part of the information gathering phase process specific surveys may need to be undertaken such:
- Extended Phase I Habitat Survey,
 - Protected Species Survey
 - Tree Survey
 - Landscape Character and Visual Impact Appraisals
- 9.10 If a designated site of international importance (Special Area of Conservation) falls within the zone of influence, a separate assessment under the Habitat Regulations 1994 may be required.
- 9.11 Guidance on ecology surveys can be found in Section B of the SPG, Guidance Sheet 9 Ecological Survey Requirements and individual species guidance sheets.

Figure 1.2: Green infrastructure and the planning process



1. Identify what Green Infrastructure is present on and around site

The first step for any development proposal should be the completion of a site survey and desk study to determine what Green Infrastructure features are present on and around the site. This will also help in deciding the scope of surveys required. Developers/applicants should refer both Sections A and B of this guidance which will enable the developer and Council to determine which features are of value, and provides specific guidance on how important features can be retained/enhanced within the development proposal. Sections 2 and 3 provide specific guidance in relation to Biodiversity and landscape assets.

2. Map key Green Infrastructure features and conserve within design

Once the key Green Infrastructure features present on and around the site have been identified, these should be mapped, and this 'context map' should be used to inform the design and layout of the development. The Green Infrastructure features should act as a framework or 'green print' within which the development can be planned. Examples of the features which should be identified on the 'context map' are listed under the heading of Green Infrastructure assets earlier in this document. The 'context map' should aim to identify both the location and the value of the Green Infrastructure features on site, as some may have greater importance than others. Early consideration and

inclusion of site assets into the design will maximise their multifunctional benefits and provide the opportunity to ensure compliance with related legislation and policy. Consideration of site assets and careful design may negate the requirement for additional surveys and mitigation later in the planning process. Drawings, specifications and method statements for overall design concept, soft and hard landscaping, land drainage, proposed use allocations, phasing of developments etc. should be provided. For Development Control purposes a site survey plan should include the following:

- Date of survey.
- Site measurements, suitably scaled for plotting at up to 1:200.
- Boundary location and type (e.g. fence, wall, hedge). This should include land proposed for development and other nearby land within the owner's or applicant's control.
- Ground levels at boundaries and on a grid pattern across the site and at base of trees, culvert/manhole inverts etc. Plotting of contours is extremely helpful.
- Current land use, including relevant adjacent land.
- Water courses and water bodies, including rivers, streams, ditches and ponds (even if dry at time of survey).
- Geological or geomorphological features (e.g. rock exposures).
- Existing buildings and structures.
- Existing utility services (above and below ground), evident way-leaves and evidence of former or buried services (e.g. manholes, lamp-posts, junction boxes).
- Gates, access points, roads, paths, bridleways and cycleways, including any obstructions.
- Approximate boundaries of major vegetation types (e.g. trees, grassland, scrub, heath, ornamental shrubs) and areas of bare ground or hard-standing.
- All individual and grouped trees with a stem diameter (measured at 1.5m above ground) greater than 7.5 cm should be included.
- Woodlands should be plotted with an outline depicting the outer canopy edge. The trunks of the outer edge trees should be individually plotted along all sides that are within, or face, the site.
- Significant patches of smaller saplings, newly-planted trees and ornamental shrubs should also be shown, typically as groups.
- Invasive species (e.g. Japanese knotweed, giant hogweed) should be plotted if possible.
- Where copyright allows, inclusion of extracts from recent aerial photographs and historic Ordnance Survey maps can provide insights into recent and former land uses that can stimulate creative landscape proposals.

3. Consider local issues and challenges and how development can respond through Green Infrastructure

Bridgend Council expects development proposals to contribute to addressing social, environmental and economic issues within the Borough. Green infrastructure assets and their benefits are listed in sections 5 and 6 of this SPG. The applicant should also refer to the Online Green Infrastructure Tool and the LDP to determine which issues may be particularly relevant to the location where the development is proposed. The context map should then be reviewed with the local issues and type of development in mind, to identify what issues can be addressed through Green Infrastructure within the proposal.

4. Development design, ensuring connectivity with surrounding Green Infrastructure network

Once the existing Green Infrastructure features have been mapped, and local issues identified, these should be used to inform the development design. Green Infrastructure should be designed in an integrated way, alongside the built elements of the proposal. The Green Infrastructure should also be designed in the context of the surrounding area, relative to the scale of the proposal and, where appropriate, links should be incorporated to enable sustainable transport around or through the site, as well as ecological connectivity. Further guidance on this is provided in the LDP, Bridgend's Open Space and Recreation SPG, Walking

and Cycling Strategy (Sustainable Transport), Landscape Design Guidance and Section B of this document (Biodiversity). Where it is not possible to deliver appropriate features and functions within the site, this should be highlighted as an issue for discussion with the Council. In these cases, the Council may suggest that off-site mitigation or contribution to nearby Green Infrastructure features should be provided. Box 1.1 provides example of Green Infrastructure design elements, taken from a Good Practice Guide published by the Town and Country Planning Association and Wildlife Trusts (2012).

Post-development, management of GI features within major developments should be outlined through a Landscape Management Plan. Funding the delivery and maintenance of GI is also an important issue for discussion with Bridgend Council during the planning process. Some guidance is provided below.

- 9.12 Figure 1.3 below, taken from the landscape Institute provides a visual context for considering GI assets and design solutions in both the urban and rural environment.
- 9.13 Appendix B also includes an example of local best practice in relation to the GI approach based on a development proposal within the County Borough & South Wales.

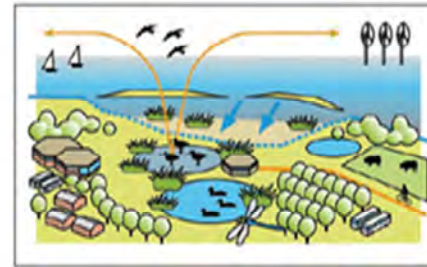
Figure 1.3: Local green infrastructure: making the most of our landscape





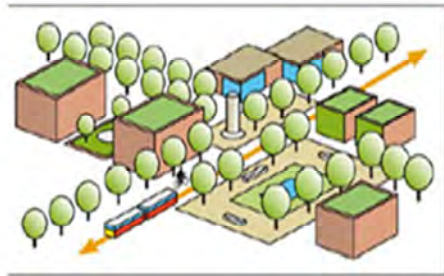
A Main green spine

Trees, green spaces, river valleys and waterways, pedestrian and cycle routes connecting places, reflecting local character, enabling wildlife to flourish, offering sustainable transport routes and reducing the impact of climate change.



F Coastal zones

Managed coastal realignment reducing risk of flooding, providing potential sites for renewable energy and creating connected habitats for wildlife. Coastal areas provide opportunities for learning and leisure and deliver economic benefits through the creation of distinctive places for tourism.



B Urban areas

Boulevards, plazas, green roofs and walls making attractive settings for shopping and leisure, improving the vibrancy of local economy. Street trees and green space making our settlements more liveable, providing cooling, shade and cleaner air, giving us spaces for relaxation and healthy living, creating distinctive places and delivering multiple economic benefits.



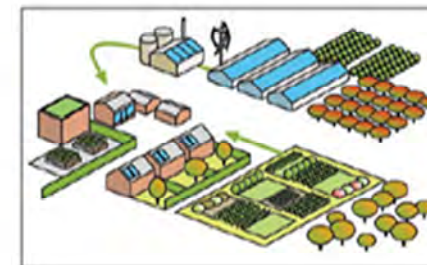
G Country park

Range of accessible habitats and green spaces managed for wildlife to flourish and people to enjoy, also giving spaces for relaxation and active recreation. Learning and employment opportunities via interpretation and events and jobs as rangers, green space managers and education outreach.



C Business park

Attractive settings encouraging inward investment, incorporating sustainable transport, sustainable urban drainage, rainwater collection and waste water cleansing. Creating attractive and distinctive workplaces, contributing to a vibrant local economy and economic benefits, reducing flood risk and climate change impacts and creating space for nature.

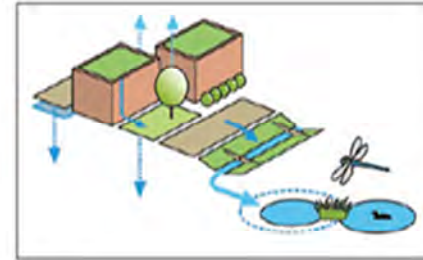


H Allotments, smallholdings and orchards

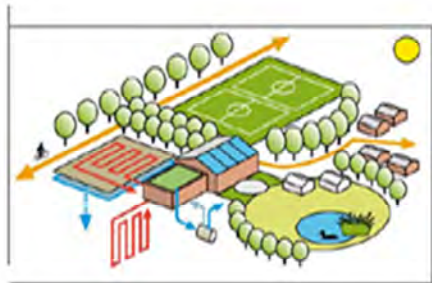
Providing space to restore locally sourced and distinctive food production and to connect urban populations with the rural economy. Opportunities to learn about and gain apprenticeships in gardening, vegetable and fruit growing, bee-keeping and horticulture, as well as providing for outdoor places and activities that help bring communities together and provide an active lifestyle.



D Suburban housing
 Spaces for relaxation and healthy living, encouraging social interaction, neighbourhood events and food growing, building community cohesion, making the settlement comfortable and liveable. Improving property values and reducing effects of climate change through natural drainage, renewable energy use and building orientation which maximise solar gain and daylight.



I Sustainable Drainage Systems (SuDS)
 Attenuation ponds, swales and reed beds, providing natural ways to reduce flood risk, provide temporary storage and improve water quality, while creating wetland habitats for wildlife in an attractive aquatic setting with additional potential for accessible leisure facilities.



E Community centre
 Sustainable building with green roof, geothermal heating and cooling and rainwater collection helping reduce climate change impacts and acting as a neighbourhood hub. Associated green space caters for healthy living activities including sports and opportunities for learning through connecting with nature and food growing, and employment in green space management.



J Upland areas
 Agriculture, pasture, timber production and timber products, including biomass for local CHP plant and renewable power generation all providing multiple economic benefits and contributing to reducing climate change impact. Areas set aside for extreme sports, relaxation and activities that contribute to a healthy lifestyle whilst protecting vulnerable wildlife habitats and retaining the essential natural character of the landscape.

Images © [landscape Institute](http://landscapeinstitute.com)^{xvii} reproduced with permission

The role of the Landscape Management Plan

- 9.13 The detailed planning, delivery and subsequent management of Green Infrastructure design elements in schemes is done through the Landscape Management Plan.
- 9.14 For any scheme it is essential to have on-going maintenance and management to ensure its long term contribution to the environment. A management plan should provide the overall functional and aesthetic objectives of a landscape scheme. It should also provide the actions required following implementation to ensure that the scheme becomes successfully established and reaches maturity.
- 9.15 Establishing biodiversity on site through habitat creation may require initial investment. However, this has the potential to reduce maintenance costs over the long term. Provision of a management plan and the forecast of reduced management cost will be more desirable for scheme adoption by the Local Authority. A management plan is important for areas of new public open space, communal external areas to be managed by third parties, and sensitive and historic landscapes. Further information on landscape management can be found in the Landscape Design Guide being prepared for the Council.

10 Funding Green Infrastructure

Financial costs of delivering Green Infrastructure

- 10.1 Bridgend Council expects the financial costs of delivering green infrastructure to be borne by the developer. This will be either through designing and delivering Green Infrastructure as part of the overall scheme, or through financial contributions via Planning Obligations including Section 106 agreements and the Community Infrastructure Levy.
- 10.2 Guidance on the use of planning obligations is provided in Planning Policy Wales (2012) and Welsh Office Circular 13/97 'Planning Obligations'. In line with this guidance and the Community Infrastructure Levy Regulations 2010 planning obligations can only be sought where they are:
- necessary to make the proposed development acceptable in land use planning terms;
 - directly related to the proposed development;
 - fairly and reasonably related in scale and kind to the proposed development
- 10.3 The approach to ongoing maintenance of the green infrastructure should be discussed with the Council during the planning application process. The type of Green Infrastructure delivered and access provision will determine whether the applicant or the Council will take

responsibility for maintaining the Green Infrastructure features. Further information is provided in Section 6 of the Bridgend LDP.

Return on investment in Green Infrastructure

- 10.4 The cost to the developer is often attributed to the loss of undeveloped land. However, when considering costs it is important to consider the benefits that a single or interlinked network of green infrastructure assets can yield. In some cases the land may be unsuitable for development such as an identified risk of flooding. This highlights the importance of identifying site assets before any development and even purchase of the land. Identification of the site assets and requirements of green infrastructure provision can be used as a tool in negotiating the price when purchasing the land.
- 10.5 Developers investing in open space and structural landscaping in a residential scheme may be able to offset these initial costs by charging a premium on those properties that overlook, or take some benefit, from the provision. Developers and their project teams should aim to keep maintenance costs as low as practically possible, but in a way that allows for the original intention of the proposal to be fully realised. This can be done through careful thought about the design and choice of facilities provided.
- 10.6 To facilitate the up-keep and maintenance of green space prior to the transfer over to the local authority in

which the development is located, early liaison with the local authority (planning, parks, countryside, highways departments) is recommended. Green infrastructure assets may also be capable of supporting income streams such as playing fields or allotment space where residents are charged for their use.

11 Other Considerations

Community Engagement

- 11.1 Where proposed development affects an existing community, by virtue of its scale or location, the open space design should consider community aspirations and needs. Information on this can be gathered from the Council's own open space and recreational assessments, from existing community partnerships and from bespoke consultation exercises such as Spaceshaper: A User's Guide (CABE Space, 2007, as updated from time to time). The need for community engagement should be agreed with the Council.

Inclusive Access

- 11.2 Good landscape design ensures that everyone can move through the site and enjoy its open spaces, regardless of age, disability, ethnicity or social grouping. Particular consideration should be given to:

- the design of footways, pathways, ramps, seating, steps and playgrounds.
- avoiding barriers for pedestrians, including those with wheelchairs, pushchairs and prams
- positioning of signs and vistas at a height readable or viewable by all site users, including small children

Crime and Anti-Social Behaviour

- 11.3 The design of external environments can significantly affect opportunities for crime and anti-social behaviour, as well as people's fear of these activities, and the ability to detect them. Initial site assessment should identify existing problem areas. Design should avoid creating leftover areas that are difficult to maintain and/or serve no function. These usually become neglected and attract undesirable behaviour.
- 11.4 Good practice advises that external environments, including paths, should be overlooked by occupied buildings or roads, where possible, to increase natural surveillance and deter anti-social behaviour.
- 11.5 At times the objective of enhancing visibility of maintaining important trees or habitats. These natural features have an important role to play in creating high quality environments, in which residents can be proud to live. Good design should aim to retain and manage such features, while maximising surveillance.

- 11.6 Similarly, natural and relatively unsupervised open space can provide opportunities for creative play, where children learn how to deal with risk. Natural areas can also be used by the whole community to enjoy and engage in the stewardship of their local environment. These can help create a sense of community ownership and responsibility, making these areas less likely to attract undesirable behaviour.
- 11.7 Further detailed guidance in relation to crime and anti-social behaviour can be found in the Councils Community Strategy SPG.

Masterplan Outputs

- 11.8 As part of a submission in accordance with this SPG, applicants will be required to submit the following outputs:
- Masterplan drawings.
 - Landscape character and visual impact appraisal (where required).
 - Approach to landscape and biodiversity with the design and access statement.
 - Relevant surveys outlined in the Information section from paragraph 9.9.
 - Ecological surveys and method statements.

B. Biodiversity Design Guidance



B. Biodiversity Design Guidance

1 Purpose

This Section of the Supplementary Planning Guidance outlines how biodiversity should be considered as part of development proposals within the County Borough.

It identifies the sites and areas which are of particular value or sensitivity for biodiversity and where special provisions will be expected in development proposals. It provides guidance on when developers are likely to encounter priority and protected species and habitats and what to do when they are encountered.

2 Recognising the full value of biodiversity

2.1 The variety of wildlife (biodiversity) that lives in the County Borough provides a wide range of benefits to local people and businesses and to humankind more generally. For instance, the presence of nature in our local environment improves people's physical and spiritual well-being; proximity to wildlife and attractive habitats can attract businesses to locate in the area; healthy ecosystems provide the clean air and water and productive soils that we rely on; and wild plants can provide a source of renewable energy and materials (such as woodfuel and timber). Biodiversity also has

intrinsic value which we have a responsibility to protect for future generations. It is the responsibility of everyone in the County Borough to care for this biodiversity and the responsibilities on those wishing to develop sites are recognised by the planning system.

3 Areas subject to particular protection

3.1 There are three tiers of sites that recognise the international, national and regional or local importance of habitats for nature conservation. Developers should be aware of these sites in relation to their proposed development and be able to show how they have included the protection and enhancement of any sites that would be affected directly or indirectly by their proposals.

Sites of international importance

3.2 LDP policy SP4 states that particular protection will be afforded to sites that have been designated for their international importance for biodiversity. These are Natura 2000 Network Sites including Special Areas of Conservation (SACs).

3.3 Special legal requirements apply to development proposals affecting sites of international importance (SACs). An Assessment under the Habitats Regulations will be required by the local planning authority to determine whether a proposal is likely to have a significant direct or indirect impact (on its own or

cumulatively with other proposals) on internationally important sites, and the comments of Natural Resources Wales as the statutory advisor on nature conservation matters will be material to its consideration.

3.4 Where it is determined that development would have an adverse effect upon those sites, the Council is not able to grant planning consent for such a proposal, but must either refer it to the Welsh Government, or refuse it.

Sites of national importance

3.5 LDP policy SP4 also provides protection to sites of national importance for biodiversity. These are Sites of Special Scientific Interest (SSSI) and National Nature Reserves (NNR). Development proposals will be subject to special scrutiny to establish any potential or indirect effects upon those sites.

3.6 Where potential impacts remain unknown, a 'pre cautionary approach' will be followed by the Council weighted in favour of the preservation of those sites.

3.7 Full regard will be given to Government advice and policies relevant to a site's status, its intrinsic value, and its value to the national network of such sites.

Sites of regional and local importance

3.8 In addition, LDP policy ENV4 recognises the value of a third tier of sites of regional or local importance for biodiversity. These are Local Nature Reserves (LNR)

and Sites of Importance for Nature Conservation (SINC). Under the Town and Country Planning System, these sites are a material consideration when determining planning applications.

3.9 Where the need for development is considered to outweigh protection of these regionally and locally important sites, developers must demonstrate that every attempt has been made to minimise impact on the site and/or to provide compensatory or mitigation measures for any loss of the site, its biodiversity or its scientific interest.

3.10 Proposals must also include measures for the longer term maintenance of the site (including any habitats) to ensure that they remain sustainable. Further information on the management of SINCs is provided in the Council's adopted [Local Biodiversity Action Plan^{xviii}](#) (LBAP). Sites classified as SINCs have been subject to a recent review by the Council.

3.11 More information is contained in the [Guidance Sheets on Protected Areas](#) prepared by the Council. In addition, the location and boundaries of these areas can be viewed on the Local Development Plan Proposals map, SINC Review and the Council's online Green Infrastructure tool.

4 Species subject to particular protection

- 4.1 The main Acts for protection of biodiversity in England and Wales are the Wildlife and Countryside Act 1981, and the Countryside and Rights of Way Act 2000. However, there is another layer of legislation produced at a European level. The Conservation (Natural Habitats, &c) Regulations 1994 (the Habitats Regulations) implement the requirements of the Habitats Directive in relation to species listed in Annexes IV and V of the Directive. The Conservation of Habitats and Species Regulations 2010 consolidate all the various amendments made to the 1994 Regulations in respect of England and Wales.
- 4.2 This legislation allows for penalties to be imposed on people disturbing habitats containing these species. The protection of these species is not confined to designated areas, but must be taken into account wherever a planning application may affect those species and their habitats.
- 4.3 In addition, there are legal obligations to prevent the spread of certain invasive species that are listed in Schedule 9 of the Wildlife and Countryside Act 1981.
- 4.4 The initial assessment checklist provided at the end of this section references a series of Guidance Sheets that state the legal requirements for protected and invasive species that have been prepared by the Council. Information about the known locations of species is held

by the [South East Wales Biological Records Centre](#)^{xix}. It may also be necessary to undertake an ecological field survey to record the presence of protected species.

There are estimated to be between 5–50 million species on earth, but only 1.5 million have so far been properly identified.



Credit: David Green

5 Incorporating biodiversity into developments

5.1 It is recommended that developers should follow a four stage process. Initiating these steps early in the planning process makes it more likely that the Council's requirements for planning proposals will be met and that the application process can be undertaken efficiently.

5.2 The Council recommends that the expertise of ecological professionals should be used to inform and enhance major or 'sensitive' development proposals as recommended in the British standard BS 42020:2013 'Biodiversity – Code of practice for planning and development'.

1. Knowing what biodiversity the site already supports

5.3 When determining a planning application where biodiversity could be a material consideration the Council requires adequate ecological information from the developer. This is needed to establish whether the development proposal is likely to have a significant effect on biodiversity and to identify any measures necessary for compliance with all relevant statutory obligations and national and local planning policy.

5.4 This means that developers must record important biodiversity features within a site prior to their displacement and ongoing management. The proximity of significant habitats and species neighbouring the site

or (in the case of designated sites) that will be directly or indirectly affected by the development should also be recorded.

5.5 The desk study will review existing sources of information, which will help in deciding the scope of surveys required. The desk study will need to establish the presence of features such as designated sites, records of notable wildlife species within the zone of influence, historic and archaeological features, to avoid any conflict with any proposed landscape and biodiversity measures, contamination risk.

5.6 Accommodating important existing site features at the start of the development process is essential to avoid a piecemeal approach after the development layout has been prepared. For all sites, a measured survey at 1:200 scale, recording the key information, such as; boundaries, ground levels, building footprints, structures and trees.

5.7 The spatial extent for different types of survey may extend beyond the development site itself and will depend on the extent of potential impacts from the proposed development. As the details of the proposals will not be known at this pre-planning stage, the zone of influence should be defined on a precautionary basis. This must include all areas that might be affected given the type of development envisaged and the size and location of the site. The zones of influence can be

refined during the design process. They should be determined by the appropriate experts, in accordance with best practice, as set out in the Guidelines for Ecological Impact Assessment in the UK

- 5.8 For major developments and some sensitive sites, extended Phase 1 Habitat Surveys are required to accompany the application.
- 5.9 This involves recording habitat types on site, assessing the potential for protected or otherwise notable species present and assessing the key processes influencing the ecology of the site. It is expected that the Phase 1 survey will record information about:
- Habitat types and main plant communities;
 - Features of potential importance for nature conservation including hedges, veteran trees, green lanes, old walls and traditional rural buildings;
 - Presence, or potential for presence, of legally protected species, principal species of biodiversity importance, or species of local conservation concern;
 - Requirements for additional surveys and timing for those surveys;
 - Presence of invasive/problem species, such as Japanese Knotweed, Himalayan Balsam *Rhododendron ponticum*;
 - Processes, natural or otherwise, that influence biodiversity within the zone of influence; and
 - Opportunities for enhancement.

Additional surveys

- 5.10 These more detailed surveys are required where there is a likelihood of species being present that are legally protected or recognised as being of conservation concern. These surveys can be identified as being required following an Extended Phase I Survey such as a more detailed assessment of plant communities associated with habitats of conservation significance or if further information required for protected species. When an extended phase I habitat survey is not undertaken detailed surveys may still be required. An Initial assessment checklist for protected species and habitats and the requirement for detailed surveys is provided below.
- 5.11 This checklist is designed to help developers identify where their proposed development could have an impact on Green Infrastructure assets relevant to protected species and habitats. In cases where survey work is required, a report should be submitted along with the application. The Council will then assess the information submitted against the relevant legislation and policy as part of the planning application process. In the event of uncertainty, developers should seek advice from the Council.

By the time a planning application is ready for submission the wildlife features present on site should have been fully considered.

- 5.12 In addition, information on the location of designated sites and other areas of nature conservation interest is referenced in the Local Development Plan and is shown on the Council's online [Green Infrastructure tool](#). As noted above, records of species are held by the [South East Wales Biological Records Centre](#).
- 5.13 When ecological surveys are submitted, and mitigation/compensation approved, these actions should be recorded onto the UK Biodiversity Action Reporting System (BARS) <http://ukbars.defra.gov.uk/>.
- 5.14 All submitted reports must provide sufficient information for the local planning authority to fully consider the impacts of a proposed development and will be rejected or additional surveys required if the information provided is deemed insufficient.

2. Conserving existing habitats and species

- 5.15 Policy ENV6 Nature Conservation in the Local Development Plan provides a list of wildlife habitats that should be retained, managed and enhanced on development sites. These habitats are woodland, trees, hedgerows, wetlands, watercourses, ponds, green lanes and other wildlife corridors and other natural features. As well as showing how these habitats are to be retained and protected, developers should also state how ongoing management necessary to retain the biodiversity will be undertaken.

3. Creating buffer zones and corridors for biodiversity

- 5.16 The protection and enhancement of wildlife corridors and networks is considered to be essential to secure the longer-term protection of biodiversity in the County Borough and help the Borough to respond to climate change. Development proposals must therefore take into account, and should not adversely affect (but seek to restore and enhance), the integrity or continuity of existing landscape features, landforms and habitats of importance to local fauna and flora. The Council will therefore expect potential developers to provide for the necessary ongoing conservation and management of wildlife corridors in their development proposals.

4. Taking steps to mitigate unavoidable harm to biodiversity

- 5.17 As noted above, every opportunity must be taken to record and retain important biodiversity habitats and features on a development site. However, where loss or harm is unavoidable, the Council will require developers to include appropriate mitigation and compensatory measures in their proposals. These measures will be secured by means of planning conditions and/or planning obligations or agreements with the developer.
- 5.1 In these situations, the onus is on the developer to clearly demonstrate the case for the site's development,

and why development should not be located elsewhere on a site of less significance to nature conservation.

- 5.11 If there is to be an impact on a species given protection under European legislation, it may be necessary to obtain a derogation licence from Natural Resources Wales before work can start. The licence will need to be supported by survey data and a description of mitigation measures.



Credit: David Green

6 Initial assessment checklist for protected species and habitats

- 6.1 The following checklist has been designed to provide a reference point for new planning applications and pre-application discussions to identify the possible presence of priority and protected species and/or habitats. In the case of any uncertainty about which answer to select, developers should seek confirmation from the Council.
- 6.2 The checklist directs the user to more detailed Guidance Sheets. Each guidance sheet includes **Blue Boxes** which contain policy guidance, **Green Boxes** which contain relevant facts and information and **Red Boxes** which contain penalty information.
- 6.3 There are a number of ecological surveys that could be carried out to gather additional information about ecology on a development site. Guidance sheet 9 provides some generic advice on what information Bridgend County Borough Council expects in a survey that accompanies applications. This guidance sheet does not replace species / habitat specific, nationally recognised survey guidelines / methods which are reference in species specific guidance sheets.

<p>1 Does your development/ project require a Strategic Environmental Assessment under the European Directive 2001/42/EC?</p>	<p><input type="checkbox"/> No – <i>(go to question 2)</i></p> <p><input type="checkbox"/> Yes – consult with Natural Resources Wales and the Council.</p>
<p>2 Does your development/ project require an Environmental Impact Assessment (EIA) under the Town & Country Planning (Environmental Impact Assessment) Regulations 1999, Schedule 1 and Schedule 2?</p>	<p><input type="checkbox"/> No - <i>(go to question 3)</i></p> <p><input type="checkbox"/> Yes - consult with NRW and the Council about the Environmental Impact Assessment (EIA) procedure.</p>
<p>3 Is your development considered to be a:</p> <p>a) Major development?</p> <p>b) Located within or adjacent to an ecologically sensitive site (designated sites (SSSI, SAC, NNR, LNR, SINIC), riparian corridor, pond, woodland, wetland etc.)?</p> <p>c) Known or suspected to contain priority or protected BAP/ Section 42 habitats and species?</p> <p>d) Undeveloped (greenfield) land?</p> <p>e) Previously developed land that has been derelict for 2 years or more?</p> <p>f) Involving demolition of rural barns and other farm buildings?</p>	<p><input type="checkbox"/> No - <i>(go to question 4)</i></p> <p><input type="checkbox"/> Yes- You may need to undertake an Extended Phase I Habitat survey <i>(go to question 4)</i></p> <p><input type="checkbox"/> Don't know – Please seek advice from the Council</p>

<p>4 Does the development require the conversion, modification, demolition or removal of any building? (including extensions, roofing work)</p>	<p><input type="checkbox"/> No - (<i>go to question 5</i>)</p> <p><input type="checkbox"/> Yes - Please refer to Guidance sheets: 1 - Bats & Development and 2 - Birds & Development</p>
<p>5 Are there trees on your development site?</p>	<p><input type="checkbox"/> No - (<i>go to question 6</i>)</p> <p><input type="checkbox"/> Yes - Please refer to Guidance sheet: 1- Bats & Development and 2- Birds & Development</p>
<p>6 Does the application require vegetation clearance/ earth works? Including scrub clearance, removal of trees, hedgerows?</p>	<p><input type="checkbox"/> No (<i>go to question 8</i>)</p> <p><input type="checkbox"/> Yes (<i>go to question 7</i>). Also see <i>Landscape Design Guidance</i></p>
<p>7 Does the site contain any of the following features?</p> <p>a. Woodland</p> <p>b. Field hedgerows and/or lines of trees with connectivity to woodland or water bodies</p> <p>c. Old or veteran trees that are more than 100 years old</p> <p>d. Mature trees with obvious holes, crack or cavities, or which are covered with mature ivy (including dead trees)</p>	<p><input type="checkbox"/> No Please refer to Guidance sheets 1- Bats & Development 2- Birds & Development 3- Reptiles and amphibians</p> <p><input type="checkbox"/> Yes - Please refer to Guidance sheets 1- Bats & Development 2- Birds & Development 3- Reptiles and amphibians 4- European, UK Protected and Priority Habitats and Species</p>
<p>8 Does the site contain/or is within a distance of?</p> <p>a. 500m of a pond/water body</p> <p>b. 50m of watercourse such as a river, stream, ditch, cut, drain or brook</p> <p><i>Note: If the proposed development is within 8 metres of a watercourse please consult Natural Resources Wales</i></p>	<p><input type="checkbox"/> No (<i>go to question 9</i>)</p> <p><input type="checkbox"/> Yes – Please refer to Guidance sheets 1- Bats & Development 2- Birds & Development 4- European, UK Protected and Priority Habitats and Species 5- Great Crested Newts & development</p>

<p>9 Has the site been identified as containing invasive species such as Japanese Knotweed, Himalayan Balsam or Giant Hogweed?</p>	<p><input type="checkbox"/> No (<i>go to question 10</i>)</p> <p><input type="checkbox"/> Yes – Please refer to Guidance sheet 6- Invasive Species & Development</p> <p><input type="checkbox"/> Don't know – Please seek advice from the Council. See Guide^{xx} on How to Identify Invasive Species</p>								
<p>10 Does the site contain badgers or a badger sett(s)?</p>	<p><input type="checkbox"/> No (<i>go to question 11</i>)</p> <p><input type="checkbox"/> Yes – Please refer to Guidance sheet 7- Badgers & Development</p> <p><input type="checkbox"/> Don't know – Please seek advice from the Council</p>								
<p>11 Does the site contain any of the following priority habitats?</p> <table border="0" data-bbox="208 762 1321 917"> <tr> <td>i. Woodland and Hedgerows</td> <td>v. Water</td> </tr> <tr> <td>ii. Grassland</td> <td>vi. Coastal Habitat</td> </tr> <tr> <td>iii. Heathland</td> <td>vii. Mosaics of habitat on previously developed land</td> </tr> <tr> <td>iv. Marshland</td> <td></td> </tr> </table>	i. Woodland and Hedgerows	v. Water	ii. Grassland	vi. Coastal Habitat	iii. Heathland	vii. Mosaics of habitat on previously developed land	iv. Marshland		<p><input type="checkbox"/> No (<i>go to question 12</i>)</p> <p><input type="checkbox"/> Yes – Please refer to Guidance sheet 4- European, UK Protected and Priority Habitats and Species 8- Protected Areas & Development</p> <p><input type="checkbox"/> Don't know – Please seek advice from the Council</p>
i. Woodland and Hedgerows	v. Water								
ii. Grassland	vi. Coastal Habitat								
iii. Heathland	vii. Mosaics of habitat on previously developed land								
iv. Marshland									
<p>12 Does the development require Floodlighting of;</p> <p>Churches, listed buildings, green space (e.g. sports pitches) within 50m of woodland, field hedgerows or lines of trees with connectivity to woodland or water</p>	<p><input type="checkbox"/> No (<i>go to question 13</i>)</p> <p><input type="checkbox"/> Yes - Please refer to Guidance sheet 1 - Bats & Development</p>								
<p>13 Is the site within?</p> <p>a. 1km of a Site of Special Scientific Interest (SSSI), National Nature Reserve (NNR) or Special</p>	<p><input type="checkbox"/> No - (<i>go to question 14</i>) <i>Not sure? Refer to Figure 2.1</i></p> <p><input type="checkbox"/> Yes - Please refer to Guidance sheet</p>								

<p>Area of Conservation (SAC)* or</p> <p>b. 500m of a Local Nature Reserve (LNR) or Site Important for Nature Conservation (SINC)</p> <p><i>Note – Some SACs may be considered to be affected by development beyond the 1km distance. Consultation with BCBC and Countryside Council for Wales will establish whether this is the case for a particular development site and type.</i></p>	<p>8 - Protected Areas & Development</p> <p><input type="checkbox"/> Don't know – Please seek advice from the Council</p>
<p>14 Is the development nearby or likely to cause disturbance to any of these built structures:</p> <p>Tunnels, mines, kilns, ice-houses, adits, military fortifications, air-raid shelters, cellars and similar underground ducts and structures, unused industrial chimneys that are unlined and of brick/stone construction</p>	<p><input type="checkbox"/> No - (<i>go to question 15</i>)</p> <p><input type="checkbox"/> Yes - Please refer to Guidance sheet 1 - Bats & Development</p> <p><input type="checkbox"/> Don't know – Please seek advice from the Council</p>
<p>15 Any developments affecting a quarry or where a quarry might be affected disturbance including new quarries or extensions to existing ones.</p> <p><i>Where quarries include ponds or buildings please also refer to the Guidance Sheets on these subjects</i></p>	<p><input type="checkbox"/> No - (<i>go to question 16</i>)</p> <p><input type="checkbox"/> Yes - Please refer to Guidance sheets 1 - Bats & Development 2 - Birds & Development – note impact on Peregrines schedule 1</p>
<p>16 Is the development on a Brownfield site (Including coal spoil)?</p>	<p><input type="checkbox"/> No - (<i>go to question 17</i>)</p> <p><input type="checkbox"/> Yes - Please refer to Guidance sheet 1- Bats & Development 2- Birds & Development 4- European, UK Protected and Priority Habitats and Species 6- Reptiles and amphibians 7- Badgers & Development</p>

B1 Biodiversity Design Guidance Sheet Bats and Development

Did you know! bats are one of the most frequently encountered wild animals in development!

1.1 Wales is home to 16 species of bat occupying a number of habitat, including occasional, maternity and hibernation sites known as a roost. Of these 16 species of bat, up to 10 are regularly recorded in the Bridgend area. Bats are afforded protection under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), as well as under Schedule 2 of the Conservation of Species and Habitats Regulations 2010 (as amended), and as such *causing damage to a bat roost or killing, injuring or disturbing bats constitutes a criminal offence.*

Why does the local authority need a survey to be submitted for planning?

1.2 National planning policy states that it is essential that the presence or otherwise of a protected species and the extent that it may be affected by a proposed development is established before any planning permission is granted. Otherwise all relevant material considerations may not be addressed in making the decision.

1.3 This means that local authority must have enough information to rule out any impact of the development on a protected species (in this case bats) before it can make its decision. As with other surveys requirements for planning, it is the applicant's responsibility to provide this information.

1.4 Bats roost in numerous locations including buildings, structures, trees and woodland. It is vital to avoid damaging or disturbing a roost during and after development.

Do I need to undertake a survey?

1.5 Not always. Not all buildings have bats, but we don't know where all the bats are! Bats like many animals prefer to use certain buildings close / linked to habitats which they like. We use guidance from the [Bat Conservation Trust's Good Practice Guidelines](#) (2012)^{xxi} to help us identify which developments are most likely to encounter bats.

1.6 Please note that when it is considered that it is not reasonable to request a survey it doesn't mean that bats will not be present, if bats are found during development it is essential to remember that they are still a protected species and it is a criminal offence to disturb them. Please refer to the [bat warning](#) for further information.

Did you know! Due to continued loss of habitat bats have had to take residence in many of our buildings or trees in our gardens in order to survive. Often you will not know that they are there! But don't worry they won't do any harm.

The following information is aimed at helping you identify whether bats could be affected by your development in which case you may need a bat survey to accompany your application.

2.0 Bat survey trigger list

GUIDANCE NOTE 1: If your development proposals involve any of the following activities the Council will require a bat survey carried out by a suitably experienced and qualified ecologist.

1. *Conversion, modification, demolition or removal of any building (including derelict buildings) which are:*

- Agricultural Buildings (e.g. farmhouses, barns and outbuildings) of traditional brick or stone construction and/or with exposed wooden beams;
- Buildings with weather boarding and/or hanging tiles that are within 200m of woodland and/or water;
- Pre-1960 detached buildings and structures within 200m of woodland and/or water;
- Pre-1914 buildings within 400m of woodland and/or water;
- Pre-1914 buildings with gable ends and/or slate roofs, regardless of location;
- Located within, or immediately adjacent to woodland and/or immediately adjacent to water;
- Dutch barns or livestock buildings with a single skin roof and board-and-gap or Yorkshire boarding if, following a preliminary roost assessment the site appears to be particularly suited to bats.

2. *Development affecting built structures*^{xxii}:

- Tunnels, mines, kilns, ice-houses, adits, military fortifications, air-raid shelters, cellars and similar underground ducts and structures, unused industrial chimneys that are unlined and of brick/stone construction
- *Bridge structures*^{xxiii}, aqueducts and viaducts (especially over water and wet ground)

3. *Lighting of*^{xxiv}:

- Churches, listed buildings, green space (e.g. sports pitches) within 50m of woodland, field hedgerows or lines of trees with connectivity to woodland or water
- Any building meeting the criteria listed above

4. *Felling, removal or lopping of:-*

- *Woodland*^{xxv}
- Field hedgerows and/or lines of *trees*^{xxvi} with connectivity to woodland or water bodies
- Old and veteran trees that are more than 100 years old
- Mature trees with obvious holes, cracks, cavities or which are covered with mature ivy (including large dead trees)

5. *Proposals affecting water bodies*

- In or within 200m of rivers, streams, canals, lakes, reedbeds or other aquatic habitats

6. *Proposals located in or immediately adjacent to*

- *Quarries*^{xxvii} or gravel pits
- Natural cliff faces and rock outcrops with crevices or caves and swallets (sink-holes)

7. *Proposals for wind farm developments*^{xxviii} of multiple wind turbines and single wind turbines (depending on size and location), proposals for small domestic turbines will need to be dealt with on a site by site basis

8. All proposals in sites where bats are known to be present

2.1 If your development meets any of the criteria in the trigger list above please see [Guidance sheet B9 Ecological survey requirements](#) for further guidance on bat surveys.

2.2 Whether or not your development requires a survey please see the [new benefits](#) section below. All development provides an opportunity to enhance biodiversity and by incorporating simple measures into the development you can help contribute to the population and maybe you will have some surprising benefits of encouraging these mammals into your gardens.

Did You Know!

All UK bats eat insects. Each bat species has its preferred insect types and hunts them in its own special way. Most insects are caught and eaten in mid-air, though bats sometimes find it easier to hang up to eat larger prey. All bats have very big appetites, because flying uses up lots of energy.

While some people think bats are pests, some bats are actually pest controllers eating thousands of insects every night. A common pipistrelle can eat over 3,000 tiny insects in a single night!

UK bats won't bite you or suck your blood – but they will help clear the air of bloodsucking mosquitoes!

Figure 1: Bat roosting behind boarded-up window



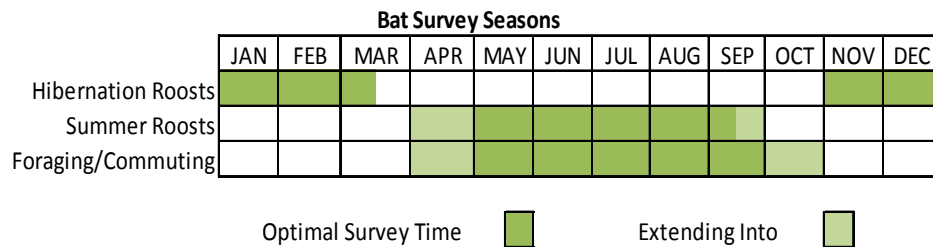
Figure 2: Greater horseshoe bat in a roof space



3.0 Survey Requirements

3.1 In terms of surveying the site and/or elements of the site for the presence of bats you should consider the timing of surveys. Different types of bat survey are carried at different times of the year and this could impact on your development schedule, it is important you are clear at what time these will be taking place. The survey season schedule is shown below.

Figure 3: Survey Schedule for bats



3.2 It is worth noting that the survey effort will vary depending on the location of the site, character, level of impact and species potentially affected.

3.3 The most common survey requested from household developments is an *initial bat survey and report*. This survey involves a habitat assessment and inspection of the building/potential roost which can be made at any time of year and may be enough to submit the *bat survey report* for planning permission if there is considered to be no risk to bats.

GUIDANCE NOTE 2: The Council will only accept survey/assessment work which has been undertaken by a suitably qualified person within the recognised survey guidelines.

3.4 All survey/assessment work must be undertaken and prepared by competent persons with suitable qualifications, licenses and experience. Survey work must be carried out at an appropriate time and month of year, in suitable weather conditions and using nationally recognised survey guidelines/methods where available and working to best practice standards (for guidance visit 'sources for survey methods' at: www.ieem.net/surveymethods.asp)

3.5 Reports should also include detailed information on impact assessment and include any necessary measures for avoidance, mitigation, compensation and enhancement.

4.0 Avoidance

GUIDANCE NOTE 3: Developers/applicants must provide sufficient evidence to demonstrate that avoidance is not possible before mitigation or compensation is considered as a viable alternative.

4.1 Once the extent of bats is understood you can take steps to avoid disturbing them. This could simply be retaining the roost location and/or foraging/commuting habitat within your plan; can you redesign the scheme to incorporate these elements? Timing of development or preparing for development activities is equally important. Most roosts are seasonal (i.e. breeding roosts in spring summer and hibernation in winter) this provides windows of opportunity to carry out works during the periods when roosts are not in use.

4.2 It is important to note that a roost is protected regardless of whether bats are present at the time of works or not, so it is important to seek professional advice to assist with your scheme.

4.3 Avoidance measures - measures taken or proposed to be taken that are designed to avoid (eliminate) adverse effects of change, such as locating a development away from areas of ecological interest (TAN 5).

4.3 Professional ecologists can help you identify possible impacts on bats and identify how to avoid harm including identifying potential impacts you may not think of. The lighting scheme for example, can have detrimental impacts on wildlife including bats. Identifying this at an early stage and inclusion into the development provides an opportunity to avoid harm to protected species, by providing dark corridors for movement (such as rear gardens, non-lit cycle paths) and the need for additional surveys and licenses whilst also reducing the light pollution of a development.

4.4 Incorporating the landscape features into the design / master plan of the development will help avoid harm to bats but should also be considered for their multiple Green Infrastructure benefits and contributions to satisfying related policies and requirements.

4.5 Maintaining hedgerows: can help contribute to the Landscape Character (SP2, SP4 and ENV3) whilst also maintaining flight-lines for bats. There are multiple benefits of trees and hedgerows and these features should be incorporated into developments.

5.0 Mitigation

5.1 If disturbance of priority species or habitat is unavoidable then a suitable mitigation scheme^{xxix} will need to be agreed. If evidence of bats has been found, avoidance has been ruled out, where harm is unavoidable then the loss of a roost/ disturbance to bats will have to be mitigated for. If there is a need to mitigate for a protected species during an activity such as demolition or renovation works to a building(s) or felling of trees a licence from the Welsh Government will be required. The type of mitigation/avoidance measures (such as timing of works) included within the licence application will be dependent on the species of bat found and the type of bat roost found.

GUIDANCE NOTE 4: Where harm is unavoidable it should be minimised by mitigation measures.

5.2 The bat consultant undertaking the survey will be able to guide you through the licence application process; however, Box 1 below provides a description of the licensing procedure.

5.3 Where avoidance is not possible, mitigation can provide a means to enhance the site for protected species. Measures put in place for mitigation can also contribute to the sustainability of the development and be designed with the Green Infrastructure approach in mind. Incorporating well designed natural features into developments can help contribute to the required mitigation but also provide multiple benefits.

Box 1 Licence Application^{xxx}

The licence application normally takes 30 working days to process from the receipt of application. The licence application will require a copy of full planning permission to accompany the application unless the development does not require planning permission e.g. it is permitted development.

If works require any other types of consent (e.g. listed building consent), more consents should also be submitted with a licence application.

Mitigation should consist of the following measures:

- i. Take all reasonable steps to avoid killing, injuring or disturbing bats e.g. carrying out works on roost outside of occupation season
- ii. Creation/enhancement/restoration/replacement of roosts e.g. appropriate replacements that reflect the species' needs
- iii. Habitat management and maintenance over the long term e.g. woodland management
- iv. Monitoring after the development and mitigation/compensation measures have been employed, to ensure that management can be altered or changes made to ensure the persistence of the bats

Mitigation measures could include the provision of bat roosts at nearby locations or the creation of additional foraging/commuting habitat such as open water for Daubenton's Bat (*Myotis daubentonii*).

Identified bat roosts in trees on site should already be physically protected by measures employed for tree protection, but additional measures will likely be required by the bat licence (e.g. avoidance of isolation, floodlighting etc.).

6.0 Compensation

GUIDANCE NOTE 5: Compensation will only be considered where the developer/applicant has satisfactorily demonstrated that avoidance and mitigation are not possible and the compensatory measures result in no net loss of habitat.

6.1 In a very small percentage of cases it will not be possible either to avoid adverse impact on the ecology of the site, or to mitigate to reduce the adverse impact. In such cases compensation will be sought. This will only be considered after all other options have been explored without finding a sufficient solution. The provision of compensation should be relevant to the loss that has occurred within the development site and should ultimately aim to provide an overall biodiversity gain.

Figure 3: Bat Boxes on tree



6.2 The level of compensatory measures required following works on or close to bats and their roosts will depend on the level of disturbance and the degree of mitigation which can be implemented. Some low impacts could be balanced out with the provision of bat boxes on or close to the existing location. Larger impacts such as the complete loss of a roost will require much greater compensation such as new roost sites (i.e. a purpose built bat barn). This will normally be required to be built prior to any demolition or alterations, and so will have impacts on the development schedule. It is therefore important to understand fully the requirements of the licence before finalising your development programme.

6.3 Whatever compensatory measures are undertaken, it is vital to ensure a no-loss approach is followed and that the functions of the new measures match those of the old. An example could be where a hibernation roost has been lost due to development; this must be replaced with an alternative site that is a suitable hibernation roost for the particular species of bat using the previous hibernation roost.

6.4 Compensatory measures/compensation - measures taken or proposed to be taken to offset, or make up for, residual adverse effects resulting from development or other change after all avoidance, cancellation and reduction measures have been applied (TAN 5)

7.0 New Benefits

7.1 As prescribed in Section A of this SPG, all major and sensitive developments are expected to contribute to Green Infrastructure in some way.

7.2 Larger developments will often be accompanied by a survey with recommendations for biodiversity enhancements which will often be included as conditions of the application. On this scale we encourage developers to consider biodiversity enhancements in the design concept phase and challenge innovative design to not only benefit biodiversity but to include multiple benefits through the green infrastructure approach.

7.3 However, all developments can contribute [biodiversity enhancements](#)^{xxxix} through the planning process.

Contribute to the future of the local bat population on your home

7.4 Enhancements to buildings can help sustain the existing bat population and where suitable roosting sites are few and far between may have a positive influence on bat numbers. There exist a number of different features that can be 'built in' during development that can support the bat populations. Fabricated bat bricks and bat boxes are available to include in the construction and offer unobtrusive and maintenance-free opportunities for new benefits. Other bespoke features appropriate to the development such as hanging tiles and timber cladding can also provide additional benefit.

Figure 4: examples of bat tiles, bricks, integrated bat boxes from http://www.bats.org.uk/pages/bat_boxes.html



7.5 As per survey requirements, locations that feature on the BCT trigger list and require a survey even if found to be negative for bats are likely to have the greatest benefit when enhancements are included into the development. In such cases simple biodiversity enhancements may be included as conditions in the development.

7.6 Further information on bats and buildings can be found on the [Bat Conservation Trust \(BCT\)](http://www.bats.org.uk/pages/bats_and_buildings.html)^{xxxii} website: http://www.bats.org.uk/pages/bats_and_buildings.html.

7.7 Please note that the inclusion of bat box/bricks and access tiles **does not** replace the mitigation required as part of the licence.

7.8 Enhancement - measures to increase the quality, quantity, net value or importance of biodiversity or geological interest (TAN 5)

8.0 Bat warning

8.1 Sometimes your development may involve an activity that may be a risk to bats, should bats be using the property as a roost. However, many factors such as location and condition/type of building, existing records of bats etc. all influence the likelihood of bats being present. In all cases Bridgend CBC weigh up the risk of the development to bats and in some cases, whilst there is a risk of encountering bats during the development because of the nature of the works, the building proposed for works may not have a reasonable likelihood of use by bats. In such cases it may not be considered reasonable to request the submission of a bat survey.

8.2 If a bat survey is not requested all applicants should be aware that:

8.3 *British bats and their breeding sites and resting places are protected by law through UK legislation under the Conservation of Habitats and Species Regulations 2010 which implements the EC Directive 92/43/EEC in the United Kingdom and the Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000). This legislation makes it an absolute offence to damage or destroy a breeding site or resting place (sometimes referred to as a roost, whether the animal is present at the time or not), intentionally or recklessly obstruct access to a place used for shelter and protection, or deliberately capture, injure, kill, or disturb a bat/bats.*

8.4 Many species of bat depend on buildings for roosting; each having its own preferred type of roost. Some species roost in crevices such as under ridge tiles, behind roofing felt or in cavity walls and are therefore not often seen in the roof space. Bat roosts are protected even when bats are temporarily absent.

8.5 Although a bat survey may not be a requirement of your planning application, the possibility of encountering a bat roost when works begin cannot be eliminated unless a full bat survey is first conducted. The decision as to whether or not to conduct a bat survey lies with you (*the applicant*). However, if you (*the applicant*) is aware of bats using the building then it is essential you commission a bat survey.

8.5 The following good practice guidelines should be followed by all applicants whose development involves any risk to bats:

8.6 Contractors should be made aware that there is a small chance of encountering bat roosts unexpectedly during the development work. In the unlikely event of bats being found to be present on site, work should stop immediately and advice sought from the Natural Resources Wales, (NRW) (tel. 02920 772400).

8.7 Further information on bats and buildings can be found on the Bat Conservation Trust (BCT) website http://www.bats.org.uk/pages/bats_and_buildings.html.

B2 Biodiversity Design Guidance Sheet Birds and Development

1.0 Introduction

1.1 Birds nest in a range habitats including trees, scrub, grasslands and cliffs. Man-made structures such as quarries, buildings and derelict walls also provide nesting opportunities. Therefore, many types of development, from upland wind farms to town centre regeneration, can affect birds. Planning authorities often require developers to assess impacts on birds and to implement mitigation measures.

1.2 Different development situations require different ornithological survey techniques and different mitigation and compensation approaches. The following information is applicable to all development. However, specific assessment is required for some large developments or those close to protected areas. If your site is close to a protected area, please refer to [Guidance Sheet 8 Protected Areas and Development](#).

2.0 Legislation

2.1 Birds (as well as their nests and eggs) are protected under the [Wildlife and Countryside Act 1981^{xxxiii}](#) (WCA) (as amended). This makes it an offence to intentionally or recklessly, damage or destroy an active birds' nest or any part thereof. Schedule 1 birds under the WCA receive additional protection.

GUIDANCE NOTE 1: Planning permission does not override the WCA. Therefore, even if planning permission is in place, a development site with qualifying bird habitat features, such as trees, woodlands, scrub, grassland and hedgerows will need to be assessed in advance by a suitably qualified ecologist and mitigated for accordingly.

3.0 Schedule 1 bird species.

3.1 Many rare birds are listed in [Schedule One^{xxxiv}](#) of the WCA. These birds are provided with all the normal protection afforded to all British birds i.e. it is an offence to kill or injure our native birds, or damage or destroy their nest or eggs.

3.2 However, in addition, Schedule 1 birds are further protected making it an offence to intentionally or recklessly:
disturb a such a bird whilst building their nest, or is in, on or near a nest containing eggs or young; or
disturb dependent young of such a bird

3.3 Where nesting Schedule 1 species are likely to be disturbed a [licence^{xxxv}](#) from Natural Resources Wales will be required.

PENALTIES: The maximum penalty for non-compliance with WCA for each offence in the Magistrates' Court is a £5000 fine and/or six months imprisonment. Any equipment used to commit the offence may be forfeited. Both the company and the individuals can be held liable.

4.0 Do I need to undertake a survey?

4.1 Not always. Whilst most buildings and development sites have some potential for nesting birds, some sites have greater potential than others, such as development affecting woodlands, hedgerows, water-bodies and scrub.

GUIDANCE NOTE 2: Where Bridgend CBC consider there not to be sufficient risk of encountering nesting birds to request a survey this does not remove the applicant &/or contractors responsibilities to adhere to the relevant wildlife legislation.

4.2 Most commonly a nesting bird survey will be required if works are to be undertaken within the bird nesting season, or if birds are known to be nesting outside of this time (Barn Owls for example are known to nest throughout the year). An assessment will be made identifying the presence of active nests within the development site. Recommendations will then be made by the competent surveying ecologist to ensure that the development proceeds in accordance with the legislative framework.

4.3 Please note that when it is considered that it is not reasonable to request a survey to accompany the application it doesn't mean that nesting birds will not be present, if nesting birds are found during development it is essential to remember that they are still protected under the WCA and it is a criminal offense to disturb them.

4.4 The presence of nesting birds can generally only delay development, not prevent it.

4.5 If works that could disturb nesting birds and result in a breach of legislation (e.g. vegetation removal, demolition) are proposed within the nesting bird season (also see [Timing of Works](#) section below), surveys may be required.

4.6 The specific survey to be conducted will depend on the likely impact of the development. Often for larger or sensitive sites an extended phase I habitat survey or similar initial ecology assessment will assess the site's potential for birds and will recommend additional survey work.

4.7 Breeding and wintering bird surveys are often undertaken for larger developments where it is necessary to provide robust ornithological baseline data, usually to inform [Ecological Impact Assessment](#)^{xxxvi}.

4.8 Breeding bird surveys and winter bird surveys are needed to assess the level of interest and identify mitigation proposals.

4.9 The most common type of survey likely to be encountered will be the Breeding Bird survey, this is used to establish the use of the site by breeding birds, this survey is carried out between March and June, in some seasons it could extend into July and August. Surveys during March, April and early May, may also record the usage of the site by migrating birds. A Winter Bird survey as the name suggests is carried out between November and February and is usually to identify the use of a site by visiting over-wintering birds, some of which may not be present during summer but still find sustenance on the site during winter such as swans, redwings and waxwings. The survey period may be extended in to September and October to record migrating birds.

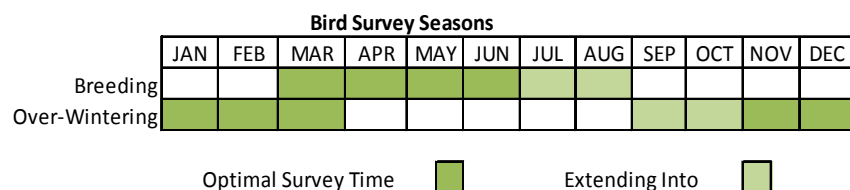


Figure 1: Survey Schedule for birds

4.10 Other surveys include a Vantage Point survey which can be used to help understand the use of a site or route by birds. This is a fixed position observational survey and is useful in large areas such as uplands and the coast. Vantage point surveys can be used to establish whether a bird is currently nesting in a particular location.

4.11 As per Section A: *The Green Infrastructure Approach*, the ecological features on site should be incorporated from the outset into the designs of the development and considered as assets providing benefit for both wildlife and residents.

4.12 As a general rule, it should be assumed that birds will be nesting in trees, scrub, reeds or substantial ditch side vegetation during the core breeding period, unless a survey had shown this not to be the case.

4.13 Birds are highly mobile and often move onto sites to nest on machinery, scaffolding or other temporary site structures. Should this occur the equipment cannot be used and the birds cannot be disturbed until they have finished nesting.

4.14 Most risk to nesting birds can be avoided by timing works outside of the bird nesting season. When this is not possible applicants may be required to undertake a survey for nesting birds immediately prior to works commencing.

5.0 Timing of Works

GUIDANCE NOTE 3: The WCA does not define a bird's breeding season. The law protects all active nests regardless of the time of year. Therefore, Bridgend CBC will expect the applicant to seek suitably qualified ecological advice in terms of timing of work and identify suitable mitigation measures to ensure compliance with the WCA.

5.1 To help avoid impacting on nesting birds Bridgend County Borough Council recommend that works should be done outside the nesting season, which is generally recognised to be from March to August.

5.2 Whilst ensuring avoiding harm to nesting birds conducting all work outside the bird nesting season may not be appropriate and these dates are a guide as some birds will nest outside of this period.

5.3 Alternatively, the applicant is often able to ensure they avoid harm, to nesting birds by demonstrating through a bird nesting survey by a suitably qualified ecologist that there are no nesting birds at the site immediately prior to works commencing. This survey should be submitted and agreed by the Local Planning Authority.

GUIDANCE NOTE 4: If at any time nesting birds are observed, works, which may disturb them, must cease immediately and advice sought. Any active nests identified should be protected until the young have fledged. Where a Schedule 1 species is involved, mitigation for impacts, e.g. loss of nesting site, should be devised and implemented.

5.4 Some developments will have multiple features suitable for nesting birds. In such developments, to ensure compliance with the law and with planning policies such as Policy ENV 6 Bridgend LDP, a condition will be included to secure the long-term protection of the species. This condition will assist in demonstrating the local authority's commitment to its statutory duty to conserve biodiversity under Section 40 of the Natural Environment and Rural Communities Act 2006.

6.0 Exceptions

6.1 An authorised person (i.e. someone who has the written consent or the owner or occupier), may fell or prune a dangerous tree in order to preserve public health and safety. If Schedule 1(3) birds would be affected, then a [licence](#) from Natural Resources Wales is required. Similarly a licence is also required for tree work deemed necessary for reasons other than health and safety.

6.2 Accidental injury, killing or disturbance of a wild bird, as a result of a lawful tree operation may not be an offence, provided it can be shown that the harm could not have been reasonably avoided.

7.0 Avoidance

7.1 If your site contains trees or scrub or other features important for birds and they are to be lost to development, timing the commencement of work so as not to conflict with the breeding season of birds and small mammals is the first step to avoiding unnecessary distress and harm and committing an offence. See [Guidance Note B4: European, UK Protected and Priority Habitats and Species](#) for further advice on Avoidance mechanisms and encountering protected species.

7.2 Do not carry out vegetation clearance during the nesting season! (Typically March – August)

7.3 As well as conducting works at the appropriate time of year, sensitive development design utilising the site assets as part of well-designed green infrastructure can help avoid disturbance to birds, preserving potential nest sites for future years. Developments can also enhance existing habitats for birds through landscaping schemes and nest box provisions (see below).

7.4 When conducting works to roofs, facias, soffits etc. Please beware of nesting birds sharing our homes.

8.0 Birds and Buildings

8.1 Building renovation, refurbishment and conservation works are a common development activity, particularly in areas of urban regeneration.

8.2 Particular attention should be paid to any site clearance/development work affecting buildings, as this is where swifts, swallows, house martins and barn owls preferentially choose to nest.

8.3 Large houses, farm buildings and historic buildings can provide important nesting and shelter habitat for a number of important bird species. Buildings also provide roosting opportunities for bats. Therefore, also see [Guidance Sheet 1: Bats and Development](#)

8.4 Many bird species of conservation concern can be encountered during development. Among these are barn owls, house sparrows, starlings and swallows. In addition there are a large number of other birds which are not of conservation concern but are legally protected at the nest, such as finches and robins. If birds are found to be nesting within a building works should be scheduled to commence outside of the breeding season, March to August inclusive.

9.0 *Barn Owls*

9.1 Barn Owls are the most commonly encountered Schedule One species of bird encountered during development of buildings.

9.2 Barn Owls nest in a variety of locations but prefer roomy, well sheltered places, they tend to inhabit barns and old buildings usually in areas of open country containing areas of rough, tussocky grassland over which it hunts for its favoured prey; the short-tailed vole, mice and shrews.

9.3 Such locations can be found very close to urban areas and therefore Barn Owls are not just to be found in rural locations.

Did you know! In the last century stone barns were often constructed with 'Barn Owl windows' to encourage the birds to nest. This assisted in keeping rodents under control.

9.4 Old barns used by Barn Owls are disappearing from the countryside as a result of demolition and decay. In addition the conversion of barns and derelict cottages has also contributed to site loss. Research undertaken by the Barn Owl Trust has demonstrated the negative effect of barn conversions but also the usefulness of making provision for Barn Owls.

9.5 If you are undertaking works such as a Barn Conversion it is important to identify if site is being used by Barn Owls (and bats) or whether it used to be. More information on Barn Owl surveys, legal considerations, planning issues, mitigation and enhancement and nest boxes and other accommodation can be found in the [Barn Owl Conservation Handbook^{xxxvii}](#) (Barn Owl Trust, 2012).

9.6 Barn conversions are never refused because of Barn Owls and the presence of Barn Owls can actually support a development (with provision) as it can help secure the long-term future of the site for the species. You can download a copy of the latest guidance "[Barn Owls and Rural Planning Applications - a Guide^{xxxviii}](#)" published by the Barn Owl Trust with support from Natural England.



Figure 2: Barn owl box in a barn

10.0 Trees and Birds

10.1 [Trees are a potential habitat](#)^{xxxix} for many species of nesting birds. To avoid unnecessary harm and distress, works to trees should be undertaken outside of the British bird nesting season (March to August). If this is not possible then a detailed inspection of each tree should be undertaken by a qualified ecologist immediately prior to the arboricultural works.

10.2 Should an active nest be found (being built, containing eggs or chicks) **any work likely to affect the nest must be halted and a working boundary of at least 5m left intact around the nest until the nest becomes inactive**. A greater buffer distance may be required depending on the species (particularly if a Schedule One) and setting. Your chosen ecologist will be able to provide advice on this

11.0 Hedgerows and Birds

11.1 As with trees, [hedgerow management](#)^{xl} should be timed to avoid the breeding bird season. If works cannot be

completed outside of the season there are a couple of avoidance measures available.

- a. Carrying out a nesting bird check prior to works. It must be stressed however, that this is a last-minute solution that could still delay works should breeding birds be found;
- b. Prevent the hedge from being used for nesting by covering the hedgerow with bird-proof netting prior to the start of the breeding season (i.e. before the end of February);
- c. The works must always be assessed by a suitably qualified ecologist. If implemented then the work should be carried out by or supervised by the ecologist.

12.0 Mitigation

12.1 The mitigation required to reduce any negative effects of development on birds will vary between the size and nature of a site and the particular species found to be using that site. Your chosen ecologist will be able to provide advice on the mitigation requirements of the site. Key mitigation measures could however include the following;

- Protecting areas containing breeding birds, such as tree or hedgerows
- Maintaining a corridor of natural vegetation on a site;
- Creating new habitat suitable for the species using the site, on or close to the site;
- Timing works outside of the breeding season;
- Construction activities only during daylight hours;
- Do not develop right up to the edge of watercourses/water bodies.

12.2 Some mitigation measures may require the presence of

an ecologist to confirm that all the procedures have been followed. See [Guidance Note B4: European, UK Protected and Priority Habitats and Species](#) for further advice on mitigation procedures and encountering protected species

13.0 Compensation

13.1 As with the mitigation requirements, compensatory measures will be entirely dependent on the size and nature of the site and the requirements of the bird species that were or are still using the site. A net-gain approach should be employed when planning any compensatory measures; this is to ensure that we are addressing the current issues affecting our birds and wildlife in general, such as loss of habitat. It is also there to cover any failures in new habitat creation such as unsuccessful tree planting.

13.2 Whilst Bridgend County Borough Council is committed to protecting and enhancing its biodiversity and landscape resource there are likely to be occasions where loss is unavoidable. To avoid incremental loss across the Borough even small amounts of habitat should be replaced, either on-site where the design allows (as part of a Green Infrastructure Approach) or off-site as part of biodiversity off-setting in agreement with a landowner.

13.3 In some cases a well thought out scheme can actually increase the level of biodiversity and landscape quality of a site above that prior to development.

13.3 A number of options are available in terms of compensation for the loss of habitats;

- On-site re-creation of habitats of equal or greater quantity to those lost;
- Enhancement of poor quality habitat on-site (e.g. species-poor amenity grassland into species-rich grassland);
- Off-site creation and/or enhancement of habitats. This is best undertaken in consultation with the Natural Resources Wales Bridgend County Borough Council and local Wildlife Trusts;
- Financial contribution towards the creation, enhancement and/or management of off-site habitats.

14.0 On-Site Compensation

14.1 When recreating habitats on-site it is important to understand the local context in which those habitats are being created. Some habitats are more appropriate to an area than others; similarly creating the right habitat can improve the overall connectivity of the ecological network and vastly increase the wildlife benefit. Guidance on incorporating wildlife habitats through green infrastructure into developments can be found in Section A: The Green Infrastructure Approach.

14.2 Some compensation measures are simple and can be achieved at little extra cost, the use of native berry bearing bushes for landscaping schemes and gardens in development are a good example and can often improve upon what was there originally, in the case of some urban sites.

14.3 Large losses of habitat will naturally require equally large compensation measures such as new woodland/scrub

planting or the creation of new ponds. Expected large losses and subsequent compensation measures should be considered at the very outset of the project and planning process. This will enable input from a number of sources about the most suitable and effective compensatory measures, it may also identify off-site locations when biodiversity off-setting can be used as a compensation tool. Ideally this would be somewhere nearby with the greatest benefit.

14.4 Often habitat creation is driven by habitat loss, but in some circumstances greater benefit can be gained by creating rarer or more specialist local habitats where the opportunity arises.

15.0 Off-site Compensation

15.1 Replacing habitats off-site should always be a last resort and as much natural value as possible should remain on-site. This is not only for wildlife but also for people living on or nearby the site. Green infrastructure provides numerous benefits and its removal from a locality could result in a loss of benefit and function for the local community.

15.2 However, Bridgend County Borough Council understand that in some cases the over-riding need for development will conflict with our biodiversity goals and it isn't always practical to completely replace habitats and Green Infrastructure within the development envelope. To address this any loss must be replaced off-site.

15.3 All biodiversity off-setting should be undertaken in consultation with Natural Resources Wales, Bridgend County Borough Council and local Wildlife Trusts.

15.4 There are a number of ways in which this can be achieved:

- Biodiversity Off-setting (creation/ enhancement/ restoration off-site) in arrangement with a landowner;
- Contribution towards habitat creation/enhancement undertaken by other parties, such as the Wildlife Trust of South and West Wales.

15.5 Off-setting will produce the greatest benefit when habitat creation, restoration and/or enhancement is undertaken in close association with existing habitats, the larger the habitat patch and its connectivity to other habitats the better for wildlife.

16.0 New Benefits

Enhancing Existing Habitats

16.2 One of the simplest ways to add biodiversity to a development is to enhance what is already on the site. This could be in the form of [creating a new pond^{xli}](#), tree planting, repairing a hedgerow or changing the management of grassland on a site. On larger developments, sometimes it is possible to create dedicated wildlife areas of perhaps grassland, woodland, scrub or even water bodies.

Bird Boxes

16.3 [Choosing and installing bird boxes^{xlii}](#) is a relatively cheap and simple way of supporting wildlife for all scales of development. There are numerous different types designed to support different species such as house martins and sparrows. Many are maintenance-free, easy to install during construction and, depending on materials, usually will last 25+years. Some

can be attached to buildings and are designed to blend in, two examples are shown below:



Figure 2: Barn owl box in a barn Images from Alana Ecology

Green/Brown Roofs

16.4 In some developments it may be possible to include [green^{xliii}](#)/brown roofs on housing and garages which can benefit a number of bird species. Brown roofs are a simple, environmentally friendly way of recycling building materials on site and creating a non-intrusive habitat for a range of species including black redstart.

16.5 When planning development in and near water it is helpful to incorporate bird-friendly features such as aquatic planting, nest holes and perching posts.

B3 Biodiversity Design Guidance Sheet Reptiles and Amphibians and Development

1.0 Introduction

1.2 [Amphibians and Reptiles](#)^{xliv} are two ancient groups of animals. The study of Amphibians and Reptiles is known as Herpetology and together both groups of animals are referred to as herpetofauna or herptiles.

1.3 There are 6 species of native amphibian and four of these species are indigenous to the Bridgend area. These being: Common Frog, (*Rana temporaria*), Common Toad (*Bufo bufo*), Common or Smooth Newt (*Lissotriton vulgaris*), Palmate Newts (*Lissotriton helveticus*) and the Great Crested or Warty Newt (*Triturus cristatus*). For great Crested Newt also see: Guidance Sheet B5: Great Crested Newt and Development.

1.4 Frogs, toads and newts often live in the undergrowth and provide a free pest control service; every allotment would benefit greatly from having its own wildlife pond.

1.5 Of the 6 native reptile species in the UK, four are present in the Bridgend area. These are: the Slow-worm (*Anguis fragilis*), Grass Snakes (*Natrix natrix*), Adder or European Viper (*Vipera berus*) and the Common or Viviparous Lizard (*Zootoca vivipara*).

1.6 Herpetofauna live in a variety of habitats throughout South and West Wales. The most important factors regarding suitable habitat for amphibians are access to water for breeding and safe refuge on land. Reptiles need areas that

receive a lot of sun and a complex variety of vegetation of varying height, it doesn't matter what the vegetation is so much as its structure.

1.7 Herpetofauna populations in South Wales are under ever increasing pressure throughout Britain due to a variety of reasons such as habitat loss, colony isolation and human encroachment.

1.8 Typical Herpetofauna: Habitat: Ponds and surrounding habitat, heathland, woodland rides and edges, bramble and gorse banks, coastal paths & sand dunes.

2.0 Legislation

2.1 Reptile species, such as the grass snake, adder, slow worm and common lizard receive protection under Section 9 (1) and (5) of the Wildlife and Countryside Act, 1981 (as amended), which makes it an offence to intentionally and **recklessly** kill, injure or take any species of reptile.

2.2 Widespread amphibians; palmate newt, smooth newt, common frog and common toad are listed on Schedule 5 of the Wildlife and Countryside Act 1981, but are protected (section 9[5]) only with respect to trade (prohibition of sale and advertising for sale, etc.).

2.3 Great Crested Newt receive the highest level of protection. Individuals and their breeding sites and places of shelter receive full statutory protection under the [Wildlife and Countryside Act 1981](#)^{xlv} (as amended) and the [Conservation of Habitats and Species Regulations 2010](#)^{xlvi} (as amended) (the Habitats Regulations). This makes it an offence to kill (or

injure), take or disturb any great-crested newt or damage or disturb any breeding site or place of shelter. More information on Great Crested Newts can be found in Guidance Sheet B5: Great Crested Newts and development.

2.4 The maximum penalty for non-compliance with Wildlife and Countryside Act 1981 (as amended) for each offence in the Magistrates' Court is a £5000 fine and/or six months imprisonment and a £5000 fine and two years imprisonment in the Crown Court. Any equipment used to commit the offence may be forfeited. Both the company and the individuals can be held liable. The smooth snake, sand lizard and natterjack toad also carry additional penalties, similar to that of the great crested newt, but are not found in the Bridgend area.

3.0 Do I need to undertake a survey?

GUIDANCE NOTE 1: Where it can reasonably be predicted that reptiles could be killed or injured by activities such as site clearance, earthworks or construction operations etc., to carry out such activities in the absence appropriate mitigation could legally constitute intentional or 'reckless' killing and injury. Therefore, the applicant should seek advice from a suitably qualified ecology in advance of works and mitigated for accordingly.

3.1 An assessment of reptiles should be considered at an **early stage** on any sites that may support them.

3.2 The presence of herptiles may affect the programming of work and the scope for development. Early consideration

can resolve most potential conflicts and avoid expensive delays. It is wise to do this even before purchasing a site, as the presence of reptiles could affect the scope for development. The field survey should confirm if reptiles are there (or likely to be there); assess how important the site is in terms of reptiles.

3.3 Herptiles may be found in a range of habitats, both in countryside and some urban situations. *Typical reptile habitats include brownfield sites, allotments, compost heaps, railway/road embankments, south facing banks, chalk grassland, rough grassland and areas where there is a diverse structure such as grassland with scrub edges. Grass snakes will often favour habitats near wetland areas and ponds. Woodland sites can often be important hibernation areas for reptiles.*

3.4 Where herptiles are known to be present locally and the site supports potential reptile habitat Bridgend CBC will expect to be provided with survey and mitigation plans before making a decision on planning applications. Planning conditions and other agreements may be imposed on consents to ensure effective reptile conservation.

3.5 Sometimes formal environmental assessments are required before planning permission will be considered; this is mainly for large-scale projects.

3.6 However, you may not need a new survey if your ecological advisers are confident that, based on existing information and a habitat assessment, the impacts of development will be minimal, and that further survey information would neither change this view nor significantly modify mitigation proposals.

3.7 In most situations less formal assessments may be needed to determine the impacts on reptiles. Where mitigation and compensation are needed, present these plans with the application. This will allow a full evaluation of the net effects of development and reptile protection measures, and can help speed up the decision-making process.

3.8 Further advice can be found from [Natural England: Reptiles: guidelines for developers^{xlvii}](#) and [Natural England Standing Advice Species Sheet: Reptiles^{xlviii}](#).

3.9 Herptile friendly features can be incorporated into the landscape design, in combination with mitigation can avoid impact on herptiles and achieve net gain.

3.10 If planning permission is granted, the law protecting reptiles still applies even if there are no conditions relating to reptiles. Because of this, developers must make every reasonable effort to safeguard reptiles. Similarly, some damaging activities, such as archaeological investigations, may not require planning permission but could still be unlawful if undertaken without proper care

3.11 Other considerations will also need to be taken into account. For example the common toad is a Species of principal importance in Wales Section 42 species under the Natural Resources and Rural Communities Act 2006 and is a UK Biodiversity Action Plan priority species. Bridgend CB Local Development Plan Policy ENV6 Nature conservation expects developers to avoid or overcome harm to nature conservation assets and/or species of wildlife which may be either resident,

in-situ or which have been demonstrated to have frequent habitats within the site on a migratory basis.

3.12 As part of the Green infrastructure approach, habitats should be identified, protected and enhanced where possible. For example: incorporating existing ponds and a buffer into the design of the development; by ensuring appropriate mitigation if ponds are lost to development. Enhancements can be made by promoting pond construction in appropriate new developments and by ensuring roads built across known migration routes have wildlife tunnels e.g. Toads.

3.13 [South East Wales Biological Records Centre^{xlix}](#) should be requested to undertake a search for herptiles to inform survey effort. In addition other relevant organisations may hold useful data including NRW, and the local amphibian and reptile groups.

3.14 *If the proposed development is within 8 metres of a watercourse please consult NRW*

4.0 [Survey Methodology^l](#)

GUIDANCE NOTE 2: The Council will only accept survey/assessment work which has been undertaken by a suitably qualified person within the recognised survey guidelines

4.1 Herptiles activity is highly seasonal and weather dependent, meaning that there are limited windows of opportunity for survey and mitigation work. Developers must allow for this when programming development.

4.2 Herptiles are most effectively surveyed in April, May and September. Surveys should not be undertaken during times of inactivity, which are typically from November to February inclusive, and occasionally during very hot, dry weather in July to August. There can be variation in these timings due to local weather patterns or species differences.

4.3 Site assessments for common lizards, slow worms, adders and grass snakes by a suitably qualified person will provide a good idea of the likelihood of reptiles occurring on the development site and their impact on proposed activities. Site assessments of habitat suitability may be undertaken at any time of year by experienced surveyors.

4.4 If deemed necessary, herptile presence or likely absence survey should be conducted following approved guidelines; if presence is confirmed a population assessment should be carried out to guide mitigation strategies.

4.5 As well as direct impacts upon reptiles and their breeding sites or resting places, development activities may result in indirect impacts and these should be fully considered at the application stage.

4.6 Incorporation and enhancements of the Green Infrastructure assets into the design of the scheme in context with the surrounding environment in combination with avoidance measures may negate for the need for surveys and other mitigation and compensatory measures for not only reptiles but other protected species. Bridgend CBC expects a 'net gain' for biodiversity in all schemes.

4.7 An example of an indirect impact could be on connectivity and habitat linkages. If key habitat linkages such as hedgerows, woodland, shelter belts, rough grassland, heathland and scrub are to be lost or severed, this may have indirect impacts upon the reptile population(s), restricting access to other parts of their habitat, even if that habitat is retained.

4.8 Development may sever the summer and hibernation sites for reptiles. Since much of the survey effort for reptiles is focussed on summer sites, it is important to consider possible hibernation sites as well.

4.9 In addition the scheme must not be considered in isolation, it may allow access to all required resources, such as summer feeding grounds or hibernation areas, which may be off the development site, and may be of considerable size. Development of such as a site may create a barrier to movement.

4.10 Further advice can be found from [Natural England: Reptiles: guidelines for developersⁱⁱ](#) and [Natural England Standing Advice Species Sheet: Reptilesⁱⁱⁱ](#).

GUIDANCE NOTE 3: Where surveys indicate that reptiles will be affected by the development proposal, the Council will require a method statement to be submitted with the planning application for the application to be registered. If it is considered that the proposed avoidance, mitigation, compensation measures are not satisfactory, the Local Planning Authority will refuse the planning application.

5.0 Licencing

5.1 For the adder, grass snake, slow-worm, common lizard and amphibians (excluding Great Crested Newt) you do not need a licence to capture or disturb them, or to damage their habitats. However, the reptiles themselves are still protected, so there is a risk you will commit offences if damaging the habitats causes harm to reptiles. Bridgend CB expects high standards to be maintained in all mitigation.

6.0 Avoidance

GUIDANCE NOTE 4: Avoidance measures built into development proposals may remove the need for detailed survey work, the Council will seek expert advice from NRW in determining cases when this may be applicable.

6.1 Avoidance measures are those measures that can reasonably be implemented to avoid an offence occurring. As such, these Reasonable Avoidance Measures (RAMs) can often avoid the requirement for a licence. RAMs are the preferred approach when considering design of a scheme. RAMs may include measures ranging from revising the site layout to avoid loss of an important feature, carrying out works at a time which is less likely to result in disturbance or amending working methods to reduce impacts to an acceptable level.

6.2 If RAMs are practical within a scheme, these must still be detailed in a method statement which is submitted to the Council for approval. Implementation of the measures outlined

in the RAMs method statement will likely be a condition of the resulting planning consent.

6.3 If the RAMs avoid all anticipated impacts affecting great crested newts and their habitats to acceptable levels, a licence is unlikely to be required. This can often avoid or reduce delays to commencing development and will often reduce costs as well.

6.4 It is therefore important to create communication channels between your architects (landscape or otherwise) and your chosen suitably qualified ecologist during the masterplanning process. This will aid in guiding the design and programme at an early enough stage to identify whether RAMs may be a suitable approach.

6.5 Early identification and incorporation of green infrastructure assets into a development will help reduce the development impact of a scheme and provide opportunities for RAMs and avoid more complex mitigation and compensation schemes which may require a license

7.0 Vegetation clearance and Herptiles

7.1 Reptiles can only be managed when they are active (Apr-Oct). Over spring, summer and early autumn grasses are cut in a phased approach through the site toward refuges left on site or adjacent to the site. This can leave a conflict with site clearance occurring when birds are nesting. To avoid conflict with both species the following method statement for site clearance can help avoid harm to these protected species.

7.2 Nesting opportunities can be removed before mid-February by cutting all grasses and isolated shrubs to a maximum height of 150mm, leaving more significant scrub untouched as reptiles may be hibernating in the surrounding ground (potential hibernation sites should be identified and marked by a suitably qualified ecologist prior to works).

7.3 Over the following spring, summer and early autumn the grasses should be cleared in such a way that if reptiles are present on site they will easily be able to move to adjacent suitable habitat/ wildlife corridor. For example, following: [Evaluating local mitigation and translocation programmes: Maintaining Best Practice and Lawful Standards \(HGBI\)^{liii}](#), a strip of vegetation 2m wide should be cut to a height of 10-15cm. This will avoid harming reptiles, but will make it less hospitable to reptiles.

7.4 After a wait of at least a day, this strip should be cut as close to the ground as possible, with an adjacent strip cut to 10-15cm. This should be continued in the direction of the suitable habitat away from any roads. Surface contaminants (e.g. asbestos) can be trapped by covering cut areas with a thin skim of new soil.

7.5 Cut material, piles of debris etc. should be removed not to leave reptile shelters. Should reptiles be found on site a competent ecologist should be available to capture any reptiles and amphibians and relocate them to a safe area.

7.6 Once the nesting season is over the residual scrub patches can be removed and the same methodology of vegetation clearance can be implemented to encourage reptiles to move out of the development site (September – October). If it is essential the whole site is cleared during the

bird nesting season, it must be demonstrated through submission to the Local Planning Authority of an appropriate survey immediately prior to works commencing that nesting birds are absent or a method statement is included in the clearance methodology and agreed in writing with the local planning authority and fully implemented

7.7 Vegetation clearance methods, such as phased site clearance can be used to encourage species such as reptiles off site provided they have a suitable habitat to disperse to.

7.8 It is therefore recommended that a condition of consent be that a clearance methodology for site clearance taking into account reptiles and nesting birds be submitted to the local authority for approval prior to the commencement of works and thereafter be fully implemented.

7.9 The above approach would comply with the [Adopted Bridgend County Borough Local Development Plan \(2006-2021\)^{liv}](#) Policy ENV6.

7.10 Where habitat opportunities exist for birds and reptiles at a site, the site clearance methodology can be adapted to suit the site, but must be considered early in the site development.

7.11 **Where European protected species occur on site, vegetation clearance may only be undertaken under a [licence^{lv}](#) from Natural Resources Wales (NRW).** See checklist for species that may occur on your site.

7.12 When potential refugia are encountered on an urban development site some can often be moved by hand to

minimise harm to these species. Potential refugia in this environment include stone piles, log piles, wooden planks & metal sheets lying on the floor etc.

GUIDANCE NOTE 5: Developers/applicants must provide sufficient evidence to demonstrate that avoidance is not possible before mitigation or compensation is considered as a viable alternative.

8.0 Mitigation

8.1 Mitigation measures built into proposals may also reduce the amount of survey work required (including survey effort and spatial extent), though there must still be sufficient information supplied to understand the nature of impacts and their likely effect on the conservation status of the species concerned.

GUIDANCE NOTE 6: Where harm is unavoidable it is a requirement that any harm will be minimised by mitigation to be established by a suitably qualified ecologist and in agreement with the Council.

8.2 Depending on the scale of development and predicted impacts, it may not be possible to rely on RAMs alone to fully address all potential impacts affecting reptiles or their habitats. Early communication across the design team will promote a greater understanding of all the constraints, ecological or otherwise, and allow a balanced approach to the development design.

8.3 Where RAMs cannot satisfactorily avoid impacts affecting reptiles, mitigation measures will be required to ensure no harm comes to reptiles and that no net loss of their habitats results. The exact measures required will be dependent on the population size, distribution and proximity to works and the scale, timing and duration of the works. Measures could include trapping out the site to remove any reptiles and amphibians and the installation of fencing to prevent reptiles and amphibians re-entering the site during construction amongst others.

8.4 Mitigation measures to be implemented will be detailed in the method statement and will be licensed activities and must therefore be carried out in strict accordance with the method statement

8.5 Mitigation schemes may include a combination of hand catching reptiles under refugia and translocating the animals to an on/off site receptor habitat. Exclusion fencing systems may be required and habitat manipulation to restrict the movement of animals and thus achieve a 'clear' site. Mitigation schemes must include enhancement works and long term habitat management commitments, especially with large populations of animals.

8.6 Herptiles should be accommodated within existing and/or new created habitats on the development site (this is usually preferable to off-site translocation). This is especially important for species such as adder, whose faithfulness to hibernacula and other resources make successful translocation more difficult.

8.7 If the scheme involves translocation, the developer must identify and survey both the development site and the receptor

site and produce a translocation strategy that must be submitted to and agreed by the Bridgend CBC. The most effective time to undertake reptile translocations is between April and late June and again between August and late September, although translocation works can be undertaken outside of these optimal periods.

8.8 Translocation will only be considered as a last resort when reptiles cannot be accommodated on site. The translocation strategy must include a long term management plan for the receptor site.

8.9 Any proposals for mitigation and translocation should follow best practice advice and guidance such as contained in Evaluating local mitigation/translocation programmes: maintaining best practice and lawful standards and [Natural England: Reptiles: guidelines for developers](#) and [Natural England Standing Advice Species Sheet: Reptiles](#).

9.0 Compensation

GUIDANCE NOTE 7: Compensation will only be considered where the developer/applicant has satisfactorily demonstrated that avoidance and mitigation are not possible and the compensatory measures result in no net loss of habitat.

9.1 Where mitigation cannot satisfactorily reduce all potential impacts to satisfactory levels, additional compensation measures will likely be required. Compensation measures will be requirements of the licence.

9.2 All compensation measures outlined in the licence must be adhered to; failure to do so constitutes a criminal offence.

Compensation measures most frequently involve habitat losses. For example, if the loss of a pond cannot be avoided in the proposed development then a compensatory pond(s) should be created prior to the pond's loss. The loss of terrestrial habitats also requires offsetting, such that sufficient terrestrial habitat is provided to maintain breeding, foraging, refuge and dispersal functions for the affected population. The population size and natural range must also be maintained, so it will be important to consider the connectivity between retained habitats, new habitats and existing habitats in the wider area.

9.3 Habitat compensation must be provided in advance of exclusion of the site and the capture of reptiles and amphibians. This will enable the transfer of fauna to the compensation area(s) before they are disturbed by development.

9.4 Compensation should ensure that once completed, there will be no net loss of breeding or resting sites. In fact where significant impacts are predicted there will be an expectation that compensation will provide an enhanced habitat (in terms of quality or area) compared with that to be lost. Compensation should also remedy any loss of connectivity brought about through the development.

10.0 Enhancement

10.1 Large development sites have the opportunity to enhance the surrounding habitats and connecting corridors for amphibians, reptiles and other flora and fauna and provide natural interest for residents.

- Incorporation of [wildlife ponds](#)^{lvi}, including suitable adjoining terrestrial habitat, into new developments, even if herptiles are not affected by the development. Where they are affected mitigation measures should include recreation of ponds on a two for one basis.
- Creation of 'networks' of ponds linked by suitable terrestrial habitat.
- [Creation/enhancement of refuges/over-wintering sites](#)^{lvii} within existing as well as new habitat.

B4 Biodiversity Design Guidance Sheet European, UK Protected and Priority Habitats and Species.

1.0 Introduction

1.1 Particular species of flora and fauna within Wales are subject to special protection. This is normally because of their vulnerable conservation status, for example because they are endangered or are suffering decline in numbers or range, either within the context of the UK or the European Community, or because they can be the victims of persecution or cruelty (such as that inflicted on badgers or the collection of the eggs of birds). These species are protected under legislation that is independent of, but closely related to, the Town and Country Planning legislation in Wales.

1.2 The main Acts for protection of biodiversity in England and Wales are the Wildlife and Countryside Act 1981, and the Countryside and Rights of Way Act 2000. However, there is another layer of legislation produced at a European level. The Conservation (Natural Habitats, &c) Regulations 1994 (the Habitats Regulations) implement the requirements of the Habitats Directive^{lviii} in relation to species listed in Annexes IV and V of the Directive. The Conservation of Habitats and Species Regulations 2010 consolidate all the various amendments made to the 1994 Regulations in respect of England and Wales.

1.3 In addition to legally protected species, the planning and development process has a fundamental role to play in controlling and relieving this pressure. Planning Policy Wales

requires local authorities to protect wildlife and natural features in the wider environment, with appropriate weight attached to priority habitats and species in Biodiversity Action Plans (PPW 5.2).

1.4 Where there is a reasonable likelihood for a development to impact on a designated site or protected or priority habitat / species an assessment of the likely impact must be undertaken.

1.5 Planning Policy Wales states that: “the presence of a species protected under European or UK legislation is a material consideration when a local planning authority is considering a development proposal which, if carried out, would be likely to result in disturbance or harm to the species or its habitat”.

1.6 Therefore it is essential that the presence or otherwise of a protected species and the extent that it may be affected by a proposed development is established before any planning permission is granted, therefore a habitat assessment and survey work for presence or absence and level of use should be carried out prior to consent. It is considered best practice that such a survey is carried out before planning application is submitted.

Guidance Note 1: Where protected species could be affected by a development and a survey is required by the authority the survey should be completed and any necessary measures to protect the species should be in place, such as through conditions and/or planning obligations, before the permission is given.

1.7 In appropriate circumstances, the permission may also impose a condition preventing the development from proceeding without the prior acquisition of a licence under the appropriate wildlife legislation.

1.8 Additional guidance in accounting for protected species in development can be found in Technical Advice Note (TAN) 5: Nature Conservation and Planning (2009)^{lix}. This document provides advice about how the land use planning system should contribute towards protecting and enhancing biodiversity and geological conservation. It should also be read in conjunction with Planning Policy Wales.

1.9 Annex 7 of [TAN 5](#) explains the legislative provisions for the protection of birds, badgers, other animals and plants and explains where licences may be needed to undertake certain operations associated with development. A list of all protected species of animals and plants can be found at Table 2 of Annex 8 of [TAN 5](#).

1.10 Further guidance on protected sites and species in Wales is available from a wide range of sources including Natural Resources Wales (www.naturalresourceswales.gov.uk).

2.0 Legislative Status: Protection of European protected species

2.1 European Protected Species (EPS) - their breeding sites and resting places - are protected against disturbance

and harm. EPS plants are also protected. If you have a valid purpose, NRW can grant you a licence to undertake the work legally and avoid breaking the law.

GUIDANCE NOTE 2: Legislation covering European Protected Species applies regardless of whether or not they are found within a designated site. A preliminary ecological survey to confirm whether a protected species is present and an assessment of the likely impact of the development on the species will be required in order to inform the planning decision-making process.

2.2 Bridgend CBC will consult with NRW (the licensing authority) before granting planning permission when European Protected Species are involved.

GUIDANCE NOTE 2: When European protected species are present on site it will be necessary for the developer to apply for derogation (development licence) from the Natural Resources Wales.

2.3 As a competent authority under the Conservation of Species & Habitats Regulations 2010 ('Habitat Regulations'), the Council must have regard to the Habitats Directive's requirement to establish a system of strict protection and to the fact that derogations are allowed only where the three conditions under Article 16 of the EC Habitats Directive are met (the 'three tests') (TAN5, 6.3.6)

2.4 In order to comply with its duty under the Habitats Regulations, the Council will need to take all three tests into account in its decision (see Judicial Review, Woolley vs Cheshire East Borough Council 2009^{lx}). NRW must be

consulted on whether test (iii) is met before the application is determined.

2.5 It is essential that planning permission is only granted when the Council is satisfied that all three tests are likely to be met. If not, then refusal of planning permission may be justified (TAN5, 6.3.6). A proportional approach can adapt the application of the tests: the severity of any of the tests will increase with the severity of the impact of derogation on a species/population.

Test i) The derogation is in the interests of public health and public safety, or for other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment.

Only public interests, promoted either by public or private bodies, can be balanced against conservation aims. Projects that are entirely in the interest of companies or individuals would generally not be considered as covered.

The public interest must also be overriding and as such not every kind of public interest is sufficient. A public interest is in most cases likely to be overriding only if it is a long-term interest and provides long-term benefits.

Test ii) There is no satisfactory alternative

An analysis of whether there is no satisfactory alternative needs to consider: a) the specific situation that needs to be addressed; b) whether there are any other solutions; and c) whether any of the other solutions will resolve the situation for which the derogation is sought.

From amongst the possible alternatives, the most appropriate that will ensure the best protection of the species while addressing the situation should be chosen. This could involve alternative locations or routes, different development scales or designs or alternative processes or methods. Derogation must be a last resort.

This appraisal must also take account of whether an alternative is satisfactory. This appraisal must be founded on objectively verifiable factors, such as scientific and technical considerations. The approach must also be limited to the extent necessary to address the situation.

Where another alternative exists, any arguments that it is not satisfactory will need to be convincing. An alternative cannot be deemed unsatisfactory because it would cause greater inconvenience or compel a change in behaviour.

Test iii) The derogation is not detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.

Assessment of the impact of a specific derogation will normally have to be at a local level (e.g. site or population) in order to be meaningful in the specific context.

Two things have to be distinguished in applying test iii: a) the actual conservation status of the species at both a biogeographic and a (local) population level; b) what the impact would be

In such cases where the conservation status is different at the different levels assessed, the situation at the population level should be considered first.

In the case of destruction of a breeding site or resting place it is easier to justify derogation if sufficient compensatory measures offset the impact and if the impact and the effectiveness of compensation measures are closely monitored to ensure that any risk for a species is detected.

2.6 To aid the planning process when European protected species are present on site it is recommended that:

- A method statement demonstrating how test (iii) can be met is submitted to the local planning authority by the applicant. Details of the requirements of this method statement are available from the EPS licensing section of Natural Resources Wales and the submission should include amended plans detailing all proposed mitigation and compensation.

- The method statement, a copy of the survey report and the application details are sent to NRW to seek their written approval on whether test (iii) will be met.
- The applicant should also submit a statement addressing tests (i) and (ii) to the local planning authority to help inform its assessment of the tests.

2.7 If advice from NRW is received which confirms that test (iii) will be met (and the Council has decided that all three tests are met) consent should be granted on the condition that all mitigation measures as approved by NRW be fully implemented.

2.8 Following WAG guidance, TAN5 (6.2.1) and in partial fulfilment of a requirement under S25(1) of the Wildlife and Countryside Act 1981 (as amended) the following will be attached as an informative (I1037) to the planning consent:

Where any species listed under Schedules 2 or 5 of the Conservation of Habitats and Species Regulations 2010 is present on the site, or other identified area, in respect of which this permission is hereby granted, no works of site clearance, demolition or construction shall take place unless a licence to disturb any such species has been granted by the Natural Resources Wales in accordance with the aforementioned Regulations.

2.9 Reference to the provisions of the Conservation of Habitats and Species Regulations 2010 will also be made in the planning officer's reasons for approval.

2.10 When applying for their licence, the applicant must send a copy of the local authority consultation document (part of the Natural Resources Wales application) to the planning officer.

This form requests details from the Council to show that the three tests have been met and considered as part of the planning decision and forms a record of the LPA's compliance. In the event of police investigation, such records could provide valuable evidence that the LPA has exercised due diligence.

2.12 Further guidance on how the three tests are to be considered is provided by the EC Guidance document^{lxii} on the strict protection of animal species of Community interest under the Habitats Directive 92/43/EEC.

2.13 European Protected Species most likely to encounter in Wales:

2.14 The following animals are listed on Schedule 2 of the Habitats Regulations:

- Bats (all species)
- Dormouse, *Muscardinus avellanarius*
- Great Crested (or Warty) Newt, *Triturus cristatus*
- Otter, *Lutra lutra*

2.15 The following plants occurring in Wales are European Protected Species (EPS), and are listed on Schedule 5 of the Conservation of Habitats and Species Regulations 2010:

- Fen Orchid, *Liparis loeselii*
- Floating Water-plantain, *Luronium natans*
- Killarney Fern, *Trichomanes speciosum*
- Shore Dock, *Rumex rupestris*

Licensing European Protected Species

2.16 Natural Resources Wales has a standard method of [application for licences](#)^{lxiii} in respect of development. Briefly, a licence application requires the developer or landowner who will be undertaking the proposed works to appoint a suitably qualified and experienced ecologist who will be named on the licence application. The appointed ecologist will most likely be responsible for coordinating the licence application, which requires the completion of an application form and a method statement. The method statement must be to the approved Natural Resources Wales format (provided with the licence application information) and will present much the same information as that required by the Council to inform the planning application.

2.17 Once an application is received by the Welsh Government, it will normally take up to 30 days for a determination.

2.18 The licence granted will have conditions attached and will only be valid with the approved method statement. The licence permits only those activities identified in the method statement, so it is important that developers and landowners carefully review and agree the method statement before submission to Natural Resources Wales.

2.19 The activities and measures detailed in a licence are there to avoid unnecessary harm to the protected species; failure to follow the exact measures in the licence can lead to prosecution. Any activity carried out that deviates significantly from the licensed method statement would be considered a breach of the licence. This includes works carried out in different locations, using different methods or at a different time

than that identified in the method statement. Any committed works identified in the method statement, such as inspecting and maintaining exclusion fencing, carrying out monitoring and management works or mitigation measures being supervised on site by the ecologist, which are not implemented as specified in the licensed method statement might also be considered a breach of the licence.

2.20 A breach of the licence is considered to be a criminal offence. Under the current legislation, anyone authorised to carry out activities implemented under the licence may be held responsible for breaches of the licence terms and conditions.

2.21 It is therefore important that all staff and contractors on the site are fully briefed on the licence and its implications for working on site, prior to being allowed to start on site. An up to date copy of the licence and the associated method statement should be held on site at all times, together with any identification sheets that may be helpful to site workers and contact details for the appointed ecologist.

2.22 Licences have an expiry date. If works need to continue beyond the expiry date an extension must be applied for. An extension **cannot** be issued for a licence that has expired, once a licence has expired then a new licence must be applied for. Depending on the time elapsed from expiry this may or may not require additional surveys to ensure that accurate and up to date information supports the licence application.

3.0 Legislative Status: UK Protected Species

3.1 Part 1 of the Wildlife and Countryside Act 1981 provides protection for wild birds and wild plants, and for certain wild animals.

Protection of Birds

3.2 Part I of the Wildlife and Countryside Act 1981 (as amended) makes it an offence (with certain limited exceptions and in the absence of a licence) intentionally to kill, injure or take any wild bird, or to damage, take or destroy the nest of any wild bird whilst that nest is being built or in use, or to take or destroy its eggs. Consequently, even common birds such as blackbirds or robins, and their nests and eggs are protected in this way.

3.3 Further, the Act affords additional protection to specific species of birds listed in [Schedule 1](#)^{lxiii} of the Act. In respect of these species it is unlawful intentionally or recklessly to disturb such a bird whilst it is nest-building or is in, on or near a nest containing eggs or young; or to disturb their dependent young. For eagles and ospreys (listed in Schedule ZA1 of the 1981 Act) it is also an offence to take, damage or destroy the nest at any time. (Table 1 of Annex 8 TAN 5 contains the list of bird species in Part 1 of Schedule 1 which are protected at all times).

3.3 Licences to enable surveys to be carried out can be granted by NRW under section 16 of the Act but licences cannot be issued to facilitate development.

Protection of animals

3.4 Part I of the Wildlife and Countryside Act 1981 (as amended) affords protection to wild animals of the species listed in [Schedule 5](#)^{lxiv}, most of which are not European protected species (see Table 2, Annex 8 TAN 5).

3.5 With certain exceptions detailed in Table 2, Annex 8 TAN 5, and in the absence of a licence or a relevant defence, it is an offence in respect of any wild animal of a species listed in Schedule 5 to:

- i. intentionally kill, injure or take any wild animal of such a listed species;
- ii. intentionally or recklessly damage or destroy or obstruct access to any structure or place which any wild animal of a listed species uses for shelter or protection (at any time even when the animal is not there);
- iii. intentionally or recklessly disturb a wild animal of a listed species whilst it is occupying such a structure or place which it uses for that purpose;
- iv. trade in a wild animal of a listed species whether alive or dead, or any part of it or anything derived from it, or publish an advertisement, or cause an advertisement to be published, which is likely to be understood as meaning that a person trades, or intends to trade, in this way;
- v. intentionally or recklessly disturb a dolphin, whale or basking shark wherever it may be;
- vi. possess or control a live or dead wild animal of a listed species, or any part of it or anything derived from it.

3.6 Some species are covered by one or more, but not all, of these provisions, as listed in Annex 8, Table 2 of TAN 5.

Protection of Plants

3.7 Part I of the Wildlife and Countryside Act 1981 (as amended) affords protection to wild plants of the species listed in [Schedule 8](#)^{lxv}, most of which are not European protected species (see Table 2, Annex 8 TAN 5).

3.8 Section 13 of the Wildlife and Countryside Act 1981 (as amended) gives legal protection to certain wild plants listed in Schedule 8, and lesser protection to other wild plants not so listed. In the absence of a licence or a relevant defence, it is an offence to:

- i. intentionally pick, uproot or destroy a wild plant listed in Schedule 8;
- ii. not being an authorised person, intentionally uproot any wild plant not included in Schedule 8;
- iii. sell, offer or expose for sale, or have possession of or to transport for the purpose of sale, any live or dead wild plant, or any part of or anything derived from a wild plant listed in Schedule 8; or
- iv. publish, or cause to be published any advertisement likely to be understood as conveying that a person buys or sells, or intends to buy or sell, any of those things.

The breach of protected species legislation can often give rise to a criminal offence. A grant of planning permission does not relieve a developer from compliance with the protected species legislation and offences may be committed during the development of land, even where the development is in accordance with a valid planning permission (TAN 5, 2009).

Do I need to undertake a survey for UK Protected Species?

Where any birds, animals or plants protected under the Wildlife and Countryside Act 1981 Schedule (1, 5 & 8 respectively) may or may be present, we strongly recommend that you undertake surveys before considering development proposals.

3.9 An assessment for protected species should be considered at an early stage on any sites that may support them.

3.10 The presence of protected species may affect the programming of work and the scope for development. Early consideration can, however, resolve most potential conflicts and avoid expensive delays. It is wise to do this even before purchasing a site, as the presence of protected species could affect the scope for development. The field survey should confirm if protected species are there (or likely to be there); assess how important the site is in terms of protected species

3.11 Protected species may be found in a range of habitats, both in countryside and some urban situations.

Guidance Note 3: Where protected species are known to be present locally and the site supports potential habitat Bridgend CBC will expect to be provided with survey and mitigation plans before making a decision on planning applications. Planning conditions and other agreements may be imposed on consents to ensure effective conservation of the affected

3.12 Sometimes formal environmental assessments are required before planning permission will be considered; this is mainly for large-scale projects.

3.13 South East Wales Biological Records Centre should be requested to undertake a search for protected species to inform survey effort. In addition other relevant organisations may hold useful data including NRW, and local species interest groups.

3.14 However, you may not need a new survey if your ecological advisers are confident that, based on existing information and a habitat assessment, the impacts of development will be minimal, and that further survey information would neither change this view nor significantly modify mitigation proposals.

3.15 Where mitigation and compensation are needed, present these plans with the application. This will allow a full evaluation of the net effects of development and protected species protection measures, and can help speed up the decision-making process.

3.16 Protected species friendly features can be incorporated into the landscape design, in combination with mitigation can avoid impact on protected species and achieve net gain.

3.17 If planning permission is granted, the law protecting protected species still applies even if there are no conditions relating to protected species. Because of this, developers must make every reasonable effort to safeguard protected species. Similarly, some damaging activities, such as archaeological

investigations, may not require planning permission but could still be unlawful if undertaken without proper care.

3.18 However, other considerations will be taken into account, for example, Species of principal importance in Wales (S.42) and UK Biodiversity Action Plan priority species. Bridgend CB Local Development Plan Policy ENV6 Nature conservation expects developers to avoid or overcome harm to nature conservation assets and/or species of wildlife which may be either resident, in-situ or which have been demonstrated to have frequent habitats within the site on a migratory basis.

Licencing UK Protected Species

3.19 The Wildlife and Countryside Act 1981 lists protected species of plants and animals on various schedules, with differing levels of protection according to their needs. NRW can issue licences for several purposes under this legislation, including scientific, research, educational, conservation and photography, but not for development.

3.20 There is no provision within the WCA which allows Natural Resources Wales to issue a wildlife licence where a protected species is affected by development activities. This means that where development works affect a species that is protected under the WCA this may be a breach of the legislation and a developer would only be able to seek to rely on the 'incidental result of an otherwise lawful operation' defence if enforcement proceedings were brought due to the breach. If a developer can show that the works carried out followed good practice and are being carried out in accordance with a lawfully granted permission, such as planning

permission, it may support his defence. However, ultimately this is a matter for the courts to decide.

4.0 Legislative Status: Local Priority Habitats and Species: Section 42 (NERC Act 2006)

4.1 Biodiversity is the variety of life on earth and includes all species of plants and animals and the network of systems that support them. The conservation and enhancement of biodiversity are key elements of sustainable development.

4.2 The loss of biodiversity and the subsequent negative environmental impact, runs contrary to the aims and objectives of sustainable development. In principle, sustainable development should not lead to a net loss in biodiversity or natural resources.

4.3 Much of the pressure on biodiversity is related to development and land use. Consequently the planning and development process has a fundamental role to play in controlling and relieving this pressure. Failure to address biodiversity issues may cause a planning application to be refused.

4.4: Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006, places a duty on all public authorities in England and Wales to have regard, in the exercise of their functions, to the purpose of conserving biodiversity.

4.5 A key purpose of this duty is to embed the consideration of biodiversity as an integral part of policy and decision making throughout the public sector.

4.6 The UK Biodiversity Action Plan ([UK BAP^{\(xvi\)}](#)) describes the UK's biological resource and sets out a plan for its protection. This is the UK's response to the Convention on Biological Diversity to which the UK signed up in 1992, making a commitment to halt the decline of biodiversity by 2010.

4.7 The Governments of all four UK countries adopted the recommendations of experts and published the UK list of priority species and habitats in August 2007. This list is the result of the most comprehensive analysis ever undertaken in the UK. It contains 1150 species and 65 habitats that have been listed as priorities for conservation action.

Priority Habitats

4.8 The UK BAP set out a programme for conserving biodiversity in the UK and this includes the list of habitats which were conservation priorities.

4.9 Under the requirement set out in section 42 of the Natural Environment and Rural Communities Act (2006), the Welsh Government has published a list of the types of habitat which, in its opinion, are of principal importance for the purpose of conserving biodiversity in Wales.

4.10 The list contains 51 of the total 65 UK BAP habitats with an additional 3 marine habitats that are specific to Wales. The list is the definitive reference for all statutory and non-statutory bodies involved in operations that affect biodiversity in Wales.

4.11 It should also be used to guide decision-makers such as local and regional authorities, in implementing their statutory

duties to have regard to the conservation of biodiversity in the exercise of their normal functions

4.12 Ignoring or inadequately addressing the potential of a development to affect important wildlife habitats or species could lead to delay in the processing of the application or refusal of permission. In some cases it could delay or even prevent implementation of a planning permission, for example, where a protected species is found on a development site after work has started.

4.13 The following groups of habitats are known as United Kingdom Biodiversity Action Plan (UKBAP) Habitats which are found in Bridgend County Borough and included in the local BAP, identifying priorities at a county level.

4.14 Relevant Habitat Action Plans (HAPs) were developed to cover the actions that are needed to help conserve many of the county borough's Key Species. However, some species are not adequately covered by the Habitat Action Plans, for these species individual Species Action Plans (SAPs) were produced.

4.15 SAPs were produced for species so highly threatened, or rapidly declining, that urgent action must be taken to avoid local extinction - the rarer fritillary butterflies are a case in point; where a species is widespread, occurring on a range of habitats, but general habitat work will not cater for it; there are species which, although restricted to a particular habitat, have such peculiar ecological requirements that normal habitat management will not cater for it: for example, the Shriill Carder Bee.

4.16 Where development proposals may affect national or local BAP habitats or species the same principles apply as to locally designated sites (TAN 5; 5.5.4).

4.17 Local sites have an important role to play in meeting biodiversity targets and contributing to the quality of life and well-being of the community. The nature conservation interests for which they have been designated are a material consideration in planning decisions (TAN 5) and Policies in the Bridgend Local Development Plan provides for their protection.

4.18 Therefore, as in the case of designated sites TAN 5 expects developers to identify how their proposals may affect BAP habitats and species (either positively or negatively) and where relevant, how the proposed development sites contribute to wider ecological networks or mosaics (TAN 5; 5.5.2).

Table 1: Bridgend Local Biodiversity Action Plan Habitats

Woodland and Hedgerows

Ancient and Species-rich Hedgerows
Lowland Ancient Woodlands
Upland Oak Woodlands
Upland Mixed Ash Woodlands
Wet Woodlands
Lowland Wood-Pasture and Parklands
Beech & Yew Woodland Lowland Mixed Deciduous Woodland
Traditional Orchards

Grassland

Hay Meadows and Old Pastures
Lowland Dry Acid Grasslands
Calcareous Grasslands
Cereal Field Margins

Other

Open Mosaic Habitats on Previously Developed Land
Urban Green Space (e.g. parks, allotments, flower-rich road verges and railway embankments)
Caves and disused tunnels and mines
Coal Mining Spoil heaps

Marshland

Purple Moor-Grass and Rush Pastures
Coastal and Floodplain Grazing Marshes
Reedbeds
Fens and Flushes
Blanket Bogs

Heathland

Heathlands

Coastal, Marine & Rock

Coastal Sand Dunes
Marine Habitats Statement
◆ Saltmarsh
◆ Shingle
◆ Coastal Cliff & Slope
Limestone Pavements

Water

Eutrophic Standing Waters and Ponds
Aquifer Fed Naturally Fluctuating Water Bodies
Rivers
Mesotrophic Lakes
Oligotrophic and Dystrophic Lakes

Guidance Note 4: These habitats do not receive statutory protection, but are protected by planning policy. They will be found both within and outside designated site.

Priority Species

4.19 The protection offered by the Wildlife and Countryside Act 1981 and the Habitats Regulations (2010) is additional to that offered by the planning system.

4.20 LDP Policy ENV6 Nature Conservation (4.1.26) The Natural Environment and Rural Communities (NERC) Act 2006 places a statutory duty on public bodies to conserve biodiversity. It is therefore essential that a balance is achieved between the need for development and the need to protect existing habitats and species which contribute to the general biodiversity of the County Borough. It is the aim of Policy ENV6 to achieve that balance between the location, design, and layout of development or redevelopment, and the need to conserve that site's biodiversity interest, whilst also taking into account the interests of any adjacent nature conservation resources.

4.21 Under the requirement set out in [Section 42](#)^{lxvii} of the NERC Act (2006), the Welsh Government has published a list of the types of species which, in its opinion, are of principal importance for the purpose of conserving biodiversity in Wales.

4.22 Bridgend CBC has an obligation to protect and promote the long-term conservation of Section 42 and other protected species as part of the planning process and must be able to provide a clear audit trail for any decisions which might impact on them. Therefore where these species occur information should be sought from appropriate experts and taken into account in the development plans.

4.23 The Bridgend LBAP contains details of Section 42 habitats and species of principal importance for nature conservation that occur in Bridgend. Bridgend's local biodiversity action plan is available on the UK biodiversity action reporting system (BARS, <http://ukbars.defra.gov.uk>).

Table 2: Bridgend Local Biodiversity Action Plan Species

Hazel Dormouse	Waved Carpet Moth
Bats (All Species)	Hornet Robberfly
Otter	Brown-Banded Carder-Bee
Water Vole	Shrill Carder-Bee
Barn Owl	Hairy Dragonfly
Lapwing	Scarce Blue-Tailed Damselfly
Skylark	Bog Bush-Cricket
Whinchat	Medicinal Leech
Reed Bunting	Fen Orchid
Spotted Flycatcher	Whorled Caraway
Great Crested Newt	Shore Dock
Marsh Fritillary Butterfly	Viper's-Grass
High Brown Fritillary Butterfly	Arable Weed Species (Group Plan)
Small Blue Butterfly	The Lichen: <i>Bacidia incompta</i>
Double-Line Moth	
Bordered Gothic Moth	

Monitoring

4.24 The Welsh Government has selected the status of priority habitats and species as a headline indicator, providing a measure of national progress towards sustainable development. Future development in Bridgend will play a key

role in ensuring that the status of habitats and species is improving.

4.25 To aid monitoring of works to priority habitats and species. All development works that effect these features should be recorded on The Biodiversity Action Reporting System (BARS) website.

5.0 Do I need to undertake a survey for Priority species or habitat?

GUIDANCE NOTE 5: Where there is a reasonable likelihood for a development to impact on a priority habitat or species an assessment of the likely impact must be undertaken.

The type of assessment needed will take the form of an ecological survey and report.

5.1 It is important to bear in mind that the survey work needed to inform such assessments will be seasonally restricted see Guidance sheet: survey requirements. Discussion of biodiversity survey needs at the pre-application stage can help reduce the likelihood of delays resulting from requirements for survey being identified at a later stage.

5.2 Normally, development which would adversely affect these features is not acceptable.

GUIDANCE NOTE 6: Only in special cases, where the importance of a development outweighs the impact on the feature, would an adverse affect be permitted. In such cases, planning conditions or obligations will be used to mitigate the impact.

5.3 The loss of or damage to any of the BAP habitats or species should be compensated for on a no-net loss basis. They can be replaced on a like for like basis on site or off-site as part of a biodiversity off-setting scheme. Any planned loss and replacement of the above habitats should be discussed in detail with Bridgend County Borough Council at the pre-application stage, as recommended by national policy (PPW 5.5.1), who will be able to provide advice. Pre-application discussions with statutory consultees such as Natural Resources Wales are recommended, in addition to non-statutory consultees such as South and West Wales Wildlife Trust and RSPB if appropriate. This should be done at the very beginning of the design process to allow adequate and suitable mitigation and compensation measures to be included in the design and to aid the planning application process.

5.7 Natural Resources Wales have a regulatory function with regards to the water environment and advice can be found on the NRW website for more information on consents and permissions which developers may need to obtain from them.

Note:

1. Ancient woodlands are virtually irreplaceable and should not be removed or destroyed
2. Hedgerows are subject to the Hedgerow Regulations
3. These habitats may contain or be used by fauna that is protected, which will be subject to specific surveys and mitigation/compensation measures

Avoidance, Mitigation, Compensation and Enhancement for protected species

6.0 Avoidance

GUIDANCE NOTE 7: Developers/applicants must provide sufficient evidence to demonstrate that avoidance is not possible before mitigation or compensation is considered as a viable alternative.

6.1 Avoidance measures built into development proposals may remove the need for detailed survey work, the council should will seek expert advice from NRW in determining cases when this may be applicable.

6.2 Avoidance measures are those measures that can reasonably be implemented to avoid an offence occurring. As such, these Reasonable Avoidance Measures (RAMs) can often avoid the requirement for a licence. RAMs are the preferred approach when considering design of a scheme. RAMs may include measures ranging from revising the site layout to avoid loss of an important feature, carrying out works at a time which is less likely to result in disturbance or amending working methods to reduce impacts to an acceptable level.

6.3 If RAMs are practical within a scheme, these must still be detailed in a method statement which is submitted to the Council for approval. Implementation of the measures outlined in the RAMs method statement will likely be a condition of the resulting planning consent.

6.4 If the RAMs avoid all anticipated impacts affecting great crested newts and their habitats to acceptable levels, a licence from Welsh Assembly Government is unlikely to be required. This can often avoid or reduce delays to commencing development and will often reduce costs as well. It is therefore important to create communication channels between your architects (landscape or otherwise) and your chosen suitably qualified ecologist during the masterplanning process. This will aid in guiding the design and programme at an early enough stage to identify whether RAMs may be a suitable approach.

6.5 Early identification and incorporation of green infrastructure assets into a development will help reduce the development impact of a scheme and provide opportunities for RAMs and avoid more complex mitigation and compensation schemes which may require a license

7.0 Mitigation

Guidance Note 8: Where harm is unavoidable it should be minimised by mitigation measures

7.1 Depending on the scale of development and predicted impacts, it may not be possible to rely on RAMs alone to fully address all potential impacts affecting European Protected Species or their habitats. Early communication across the design team will promote a greater understanding of all the constraints, ecological or otherwise, and allow a balanced approach to the development design.

7.2 Where RAMs cannot satisfactorily avoid impacts affecting European Protected Species, mitigation measures will

be required to ensure no harm comes to great crested newts and that no net loss of their habitats results. The exact measures required will be dependent on the population size, distribution and proximity to works and the scale, timing and duration of the works.

7.3 Mitigation measures to be implemented will be detailed in the method statement and will be licensed activities and must therefore be carried out in strict accordance with the method statement

8.0 Compensation

Guidance Note 9: Compensation will only be considered where the developer/applicant has satisfactorily demonstrated that avoidance and mitigation are not possible and the compensatory measures result in no net loss of habitat.

8.1 Where mitigation cannot satisfactorily reduce all potential impacts to satisfactory levels, additional compensation measures will likely be required. Compensation measures will be requirements of the licence. All compensation measures outlined in the licence must be adhered to; failure to do so constitutes a criminal offence.

8.2 Compensation measures most frequently involve habitat losses. The loss of habitats requires offsetting, such that sufficient habitat is provided to maintain breeding, foraging, refuge and dispersal functions for the affected population. The population size and natural range must also be maintained, so it will be important to consider the connectivity between retained habitats, new habitats and existing habitats in the wider area.

8.3 Habitat compensation must be provided in advance of exclusion of the site and the capture of European Protected Species. This will enable the transfer of European Protected Species and other fauna to the compensation area(s) before they are disturbed by development.

9.0 Enhancement

9.1 As part of the Green infrastructure approach habitats should be identified, protected and enhanced where possible. For example: incorporating existing natural assets (ponds, trees, woodland) and a buffer into the design of the development; and by ensuring appropriate mitigation if natural assets are lost to development. Enhancements can be made by promoting inclusion of natural features in appropriate new developments and by ensuring roads built across known migration routes have wildlife tunnels, bridges.

9.2 Large development sites have the opportunity to enhance the surrounding habitats and connecting corridors for protected species and other flora and fauna and provide natural interest for residents.

9.3 We are now moving towards a more integrated landscape-scale approach to biodiversity conservation with the aim of recovering habitats and species as well as the ecosystems and services that they underpin. The emerging Bridgend Local Biodiversity Action Plan will provide information and maps of priority habitats and species.

9.4 The contribution of a development depends on the nature of the location, the type of development, the contribution it can make to eco-connectivity and regulatory and provisioning services. Through the development of ecosystem services

maps, developed by Bridgend CBC together with Natural Resources Wales the provision, character and distribution of Green infrastructure opportunities can be identified by developers.

Guidance Note 10: As well as protecting priority habitats, should developments seek to maximise the contribution of their development to Green Infrastructure and take into account how their development contributes to ecosystem services.

9.5 Increases in our understanding of the natural environment will lead to further legislation and guidance being published. It is the responsibility of the developer to ensure that their proposals meet current policy and guidance.

Guidance Note 11: Increases in our understanding of the natural environment will lead to further legislation and guidance being published. It is the responsibility of the developer to ensure that their proposals meet current policy and guidance

B5 Biodiversity Design Guidance Sheet Great Crested Newts and Development

1.0 Introduction

1.1 Great Crested newts (GCN) (*Triturus cristatus*) are the largest of the three UK newts species, reaching a maximum adult length of 17cm, and can be found across much of the mainland.

1.2 The adult [GCN can be identified](#)^{lxviii} from the two other smaller native newt species ([smooth](#)^{lxix} and [palmate](#)^{lxx}) by their size and colouring. In the breeding season adult males are recognisable by their jagged crest and silvery-blue and almost fluorescent stripe down the centre of the tail.



Figure 1: Adult Male Great Crested Newt

1.3 Newts require a variety of habitats throughout their life cycle. As tadpoles they need well vegetated fresh water ponds, while during adulthood they need a variety of habitats, ranging from log piles to grassland and woodland.

1.4 Typical breeding sites contain a number of medium to large ponds that have some areas of clear, base-rich water, deeper than 30 cm and with few fish predators.

Such ponds are usually surrounded by terrestrial habitat with plentiful ground cover (e.g. scrub, trees, long grass) with damp refuges in which newts spend the daytime (e.g. log piles, rocks or other debris).

1.5 Although GCN does not favour garden ponds, as these are often small and offer far from ideal habitats, they have been recorded in larger garden ponds where they are known to breed.

1.6 The GCN is widespread in Europe, but is threatened and in decline throughout much of its range. This decline has been for a number of years with GCN becoming increasingly rare or absent in some areas because of a reduction in suitable breeding ponds, pollution and neglect and the variety of habitats required in their lifecycle.

1.7 The UK has probably Europe's largest population and is therefore, very important to the continuing survival of the GCN.

2.0 Legislation

2.1 GCN and their breeding sites and places of shelter receive full statutory protection under the [Wildlife and Countryside Act 1981](#)^{lxxi} (as amended) and the [Conservation of Habitats and Species Regulations 2010](#)^{lxxii} (as amended) (the Habitats Regulations). This makes it an offence to kill (or injure), take or disturb any great-crested newt or damage or disturb any breeding site or place of shelter.

2.2 The combined effect of the national and European legislation is to afford full protection to all life stages of GCN and to their aquatic and terrestrial habitats, including habitats used to migrate or disperse between breeding, foraging and refuge sites.

2.3 It is extremely important that developers and landowners wishing to undertake activities that may affect great crested newts obtain site-specific advice before formulating their designs and programme.

2.4 Any development proposal or activity that would impact on GCN or any of their habitats is required to provide for conservation of the species and its habitats under licence from Natural Resources Wales.

2.5 If the proposed activity requires planning consent, or any other type of consent (e.g. listed building consent, extraction licence, etc), this consent must be in place and provided to Natural Resources Wales with the [licence application](#)^{lxxiii}.

2.6 Developers and landowners should note that a licence is often required from [Natural Resources Wales](#) (NRW) to carry out development and vegetation clearance works that affect GCNs (and any other European protected species), irrespective of whether planning permission is required to undertake those works. Failing to secure a licence before starting development or site clearance works could result in an offence(s) being committed. This could lead to delay, prosecution, fines, confiscation of equipment, legal fees and, potentially, a custodial sentence.

2.7 A licence is granted under the provisions set out in the Habitats Regulations. In order to grant a licence, NRW must be satisfied that the proposed activity meets the criteria in the Habitats Regulations, often referred to as “the three tests”. These tests include:

- a. the need for the proposed development/activity;
- b. consideration of possible alternatives (e.g. activity, method, timing, phasing, location etc.);
- c. maintaining the favourable conservation status of the population of great crested newts to be affected.

2.8 The Habitats Regulations imposes a similar duty on Bridgend County Borough Council to consider the impact of a proposed development on GCN before determining planning applications that could affect the species or their habitats. The Council must therefore also be satisfied that the proposals will meet the criteria of the three tests set out in the Habitats Regulations in order to grant planning consent. This duty is irrespective of whether the application is for outline, reserved matters or full planning.

2.9 In order to assist the Council and NRW (if a licence is required) assess proposals, the developer or landowner must provide sufficient information to make the determination against the Habitats Regulations, including:

- a. up to date presence / absence survey data;
- b. population estimate, if present;
- c. habitat assessment;
- d. impact assessment;
- e. mitigation and compensation strategy;
- f. management and monitoring plan.

2.10 A diagram illustrating the various stages of developing land that may support GCN, including their breeding and terrestrial habitats, can be found at the end of this guidance sheet.

PENALTIES: The maximum penalty for non-compliance with the above legislation for each offence is a £5000 fine and/or six months imprisonment. Any equipment used to commit the offence may be forfeited. Both the company and the individuals can be held liable.

3.0 Do I need to undertake a survey?

GUIDANCE NOTE 1: If there is any water body on or within 500m of the boundary of the development site (with the exception of rivers or streams with a noticeable flow) and/or there are existing GCN records on or within 500m of the boundary of the development site, the Council will require a GCN survey. This survey needs to be undertaken by a suitably experienced and qualified ecologist.

3.1 When suitable water bodies are present on or within 500m of a site, a records search should be undertaken to identify any previously identified GCN populations in the local area. The search for records should be made to at least 500m from the proposal site, sometimes further depending on the scale of development, likely impacts and whether a landscape scale population assessment approach may be beneficial.

3.2 GCN can be found in ephemeral ponds that hold water until at least August.

3.3 The [South East Wales Biological Records Centre](#)^{lxxiv} should be requested to undertake a search. In addition other relevant organisations may hold useful data including NRW, and the local [amphibian and reptile groups](#)^{lxxv}.

3.4 If no records of GCN are present within 500m of the development site, but there are water bodies on and adjacent to the development, site developers will need to refer to guidance sheets relating to reptile and amphibians and bats.

GUIDANCE NOTE 2: *If the proposed development is within 8 metres of a watercourse please consult [NRW](#).*

4.0 Survey Methodology

GUIDANCE NOTE 3: The Council will only accept survey/assessment work which has been undertaken by a suitably qualified person within the recognised survey guidelines

4.1 General survey guidance for protected species can be found in Guidance Sheet B9: Survey Requirements. In addition [The Great Crested Newt handbook](#)^{lxxvi} provides detailed guidance for surveying GCN.

4.2 The appointed ecologist should make an assessment of any ponds on or near the site (within around 500m provided that they are not separated by significant barriers to dispersal such as a major trunk road or motorway), even if it holds water only seasonally.

4.3 Muddy, cattle-poached, heavily vegetated or shady ponds, ditches and temporary, flooded hollows can be used by GCN.

4.4 Sites with refuges (such as piles of logs or rubble), grassland, scrub, woodland or hedgerows within 500m of a pond should be surveyed/ protected provided that they are not separated by significant barriers to dispersal such as a major trunk road or motorway.

4.5 A habitat survey should also be carried out within the proposal site to determine the value of the site for breeding and terrestrial amphibians.

4.6 The Habitat Suitability Index can be used to identify potential breeding ponds for great crested newt. However:

- The Habitat Suitability Index only gives an estimate of the likelihood that a pond could be used by great crested newts;
- It works only with ponds, and is not suitable for use with lakes, ditches or running waters;
- It cannot be used to determine presence or likely absence of great crested newts; and
- It cannot be used as a replacement for a full survey.

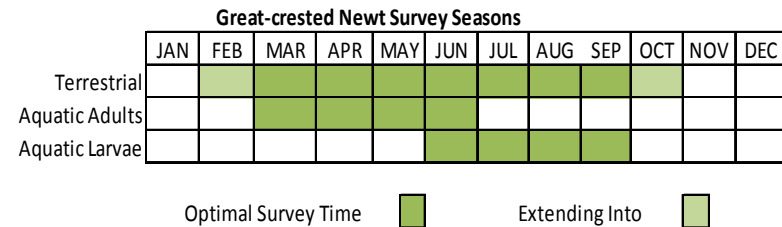
4.7 All suitable ponds identified during the preliminary appraisal should be subjected to a survey to establish the presence of great crested newts. Pond survey is the only way to effectively and confidently confirm the presence of GCN, their abundance and, in many cases their population distribution. Pond survey is the surest way of providing sufficient information to the Council and NRW. However, pond survey is highly seasonal and must be carried at the correct

time of year, or risk being inadequate to validate a planning or licence application or subject to challenge.

4.8 Terrestrial surveys may assist GCN assessments, but cannot provide robust population information without considerable cost, effort and time.

Figure 2: Survey Schedule for Great Crested Newts

4.9 To determine if GCN are present in a pond, the pond



must be surveyed on four separate occasions. In the event that great crested newts are found, at least two further surveys need to be carried out to establish a population size class. Surveys for great crested newts are licensable activities and must be carried out by a suitably qualified and experience ecologist who is licensed for the survey methods to be employed.

GUIDANCE NOTE 4: Where surveys indicate that GCN will be affected by the development proposal, the Council will require a method statement to be submitted with the planning application for the application to be registered.

If it is considered that the proposed avoidance, mitigation, compensation measures are not satisfactory, the Local Planning Authority will refuse the planning application.

4.10 The data obtained from the GCN surveys must be formulated into a method statement which is submitted to the Council to inform their planning decision.

4.11 The method statement should detail the survey area, project proposals, survey methods and results. The impact assessment should be presented in the method statement, detailing how aquatic and terrestrial habitats and the amphibians might be affected. Impacts should be classified as temporary, short term or long-term and the scale of each impact should be identified. The method statement should include practical avoidance measures and, where avoidance is not possible, provide a detailed mitigation strategy, including a timetable.

4.12 The method statement should also identify whether a [licence](#) is required prior to commencing development activities.

4.13 Developers and landowners should note that the Council will not condition the production of the method statement. The information in the method statement is required to assist the Council to make their determination in regards of the Habitats Regulations. Applications in which an effect upon GCN is anticipated as a result of the proposals, but which do not include an appropriate method statement will most likely not be validated.

4.14 If the application is validated, but the information relating to GCN is subsequently found to be insufficient during the determination, this may affect the result of the planning decision.

5.0 Licencing

5.1 NRW has a standard method of [application for licences](#) in respect of development. Briefly, a licence application requires the developer or landowner who will be undertaking the proposed works to appoint a suitably qualified and experienced ecologist who will be named on the licence application. The appointed ecologist will most likely be responsible for coordinating the licence application, which requires the completion of an application form and a method statement. The method statement must be to the approved NRW format (provided with the licence application information) and will present much the same information as that required by the Council to inform the planning application. Licence application normally take up to 30 days for a determination.

5.2 The licence granted will have conditions attached and will only be valid with the approved method statement. The licence permits only those activities identified in the method statement, so it is important that developers and landowners carefully review and agree the method statement before submission.

5.3 The activities and measures detailed in a licence are there to avoid unnecessary harm to the protected species. Failure to follow the exact measures in the licence can lead to prosecution. Any activity carried out that deviates significantly from the licensed method statement would be considered a breach of the licence. This includes works carried out in different locations, using different methods or at a different time than that identified in the method statement. Any committed works identified in the method statement, such as inspecting and maintaining exclusion fencing, carrying out monitoring and management works or mitigation measures being supervised

on site by the ecologist, which are not implemented as specified in the licensed method statement might also be considered a breach of the licence.

5.4 A breach of the licence is considered to be a criminal offence. Under the current legislation (see penalties above), anyone authorised to carry out activities implemented under the licence may be held responsible for breaches of the licence terms and conditions.

5.5 It is therefore important that all staff and contractors on the site are fully briefed on the licence and its implications for working on site, prior to being allowed to start on site. An up to date copy of the licence and the associated method statement should be held on site at all times, together with any identification sheets that may be helpful to site workers and contact details for the appointed ecologist.

5.6 Licences have an expiry date. If works need to continue beyond the expiry date an extension must be applied for. An extension **cannot** be issued for a licence that has expired, once a licence has expired then a new licence must be applied for. Depending on the time elapsed from expiry this may or may not require additional surveys to ensure that accurate and up to date information supports the licence application.

Avoidance, Mitigation, Compensation and Enhancement

6.0 Avoidance

GUIDANCE NOTE 5: Developers/applicants must provide sufficient evidence to demonstrate that avoidance is not possible before mitigation or compensation is considered as a viable alternative

6.1 Avoidance measures built into development proposals may remove the need for detailed survey work, the council should will seek expert advice from NRW in determining cases when this may be applicable.

6.2 Avoidance measures are those measures that can reasonably be implemented to avoid an offence occurring. As such, these Reasonable Avoidance Measures (RAMs) can often avoid the requirement for a licence. RAMs are the preferred approach when considering design of a scheme. RAMs may include measures ranging from revising the site layout to avoid loss of an important feature, carrying out works at a time which is less likely to result in disturbance or amending working methods to reduce impacts to an acceptable level.

6.3 If RAMs are practical within a scheme, these must still be detailed in a method statement which is submitted to the Council for approval. Implementation of the measures outlined in the RAMs method statement will likely be a condition of the resulting planning consent.

6.4 If the RAMs avoid all anticipated impacts affecting GCN and their habitats to acceptable levels, a licence is unlikely to be required. This can often avoid or reduce delays to commencing development and will often reduce costs as well. It is therefore important to create communication channels between your architects (landscape or otherwise) and your chosen suitably qualified ecologist during the masterplanning process. This will aid in guiding the design and programme at an early enough stage to identify whether RAMs may be a suitable approach.

6.5 Early identification and incorporation of green infrastructure assets e.g. hedgerows, trees, ponds into a development will help reduce the development impact of a scheme and provide opportunities for RAMs and avoid more complex mitigation and compensation schemes which may require a license.

For example: retention of a GCN breeding pond into the design of a development, with a suitable vegetation buffer with connectivity to other ponds may be able to demonstrate avoidance of impact of the development on GCN. The construction of additional ponds and planting of hedgerows for improved connectivity may result in net benefit.

7.0 Mitigation

GUIDANCE NOTE 6: Where RAMs cannot satisfactorily avoid impacts affecting GCN, mitigation measures will be required to ensure no harm comes to GCN and that no net loss of their habitats results.

7.1 Mitigation guidelines for GCN can be found at [Natural England website](#)^{lxvii} additional information can be found in the [Great Crested Newt Habitat Management Handbook](#), [Froglife](#)^{lxviii}.

7.2 Depending on the scale of development and predicted impacts, it may not be possible to rely on RAMs alone to fully address all potential impacts affecting great crested newts or their habitats. Early communication across the design team will promote a greater understanding of all the constraints, ecological or otherwise, and allow a balanced approach to the development design.

7.3 The exact measures required will be dependent on the population size, distribution and proximity to works and the scale, timing and duration of the works. Measures could include trapping out the site to remove any GCN and the installation of fencing to prevent newts and other amphibians re-entering the site during construction amongst others.

7.4 Mitigation measures to be implemented will be detailed in the method statement and will be licensed activities and must therefore be carried out in strict accordance with the method statement.



Figure 3: Newt exclusion fencing and capture of newts from development sites within 500m of a breeding GCN pond prior to development commencing is a common mitigation measure.

8.0 Compensation

GUIDANCE NOTE 7: Compensation will only be considered where the developer/applicant has satisfactorily demonstrated that avoidance and mitigation are not possible and the compensatory measures result in no net loss of habitat.

8.1 Where mitigation cannot satisfactorily reduce all potential impacts to satisfactory levels, additional compensation measures will likely be required. Compensation measures will be requirements of the licence. All compensation measures outlined in the licence must be adhered to; failure to do so constitutes a criminal offence.

8.2 Compensation measures most frequently involve habitat losses. For example, if the loss of a pond cannot be avoided in the proposed development then a compensatory pond(s) should be created prior to the pond's loss, in accordance with the licence requirements. For loss of GCN breeding ponds, at least two new ponds must be created to compensate the loss. The loss of terrestrial habitats also requires offsetting, such that sufficient terrestrial habitat is provided to maintain breeding, foraging, refuge and dispersal functions for the affected population. The population size and natural range must also be maintained, so it will be important to consider the connectivity between retained habitats, new habitats and existing habitats in the wider area.

8.3 Habitat compensation must be provided in advance of exclusion of the site and the capture of GCN. This will enable the transfer of amphibians and other fauna to the compensation area(s) before they are disturbed by development.

9.0 Enhancement

9.1 Large development sites have the opportunity to enhance the surrounding habitats and connecting corridors for newts and other flora and fauna and provide natural interest for residents.

- Incorporation of [wildlife ponds](#)^{lxxxix}, including suitable adjoining terrestrial habitat, into new developments, even if GCN are not affected by the development. Where they are affected mitigation measures should include recreation of ponds on a two for one basis;
- Creation of 'networks' of ponds linked by suitable terrestrial habitat;
- Creation/enhancement of [refuges/over-wintering](#)^{lxxx} sites within existing as well as new habitat.

B6 Biodiversity Design Guidance Sheet Non-Native Invasive Species & Development

1.0 Introduction

1.1 The term 'non-native species' is the equivalent of 'alien species' as used by the [Convention on Biological Diversity^{lxxxii}](#). It refers to a species, subspecies or lower taxon, introduced (i.e. by human action) outside its natural past or present distribution; includes any part, e.g. seeds, vegetative growth of such species that might survive and subsequently reproduce.

1.2 There are many non-native species in UK, but only a small proportion are invasive. An [invasive non-native species^{lxxxiii}](#) is any non-native animal or plant that has the ability to spread causing damage to the environment, the economy, our health and the way we live. For the purposes of this guidance sheet, these species will be known as invasive species.

1.3 The problems caused by invasive species affect us all, costing in the region of £1.7 billion every single year in the UK. Their impact is now so significant that they are considered to be one of the greatest threats to biodiversity worldwide, even more than pollution or climate change.

1.4 It's not just our wildlife that suffers, invasive species can also have an impact on the way we live. Some species have a direct impact on our health (Giant Hogweed) while others have less apparent, but just as serious effects such as flooding.

1.5 A number of riverside and aquatic invasive plants are widely considered to increase the risk of flooding. They do this by clogging water courses with plant material or sometimes in the case of Himalayan Balsam and Japanese knotweed by causing riverbank erosion which can lead to sediment getting into the watercourse. Sediment run-off also has negative implications on fisheries and the overall ecology of rivers.

1.6 Once a species has been introduced the problems persist and escalate as the species spreads further, causing us to feel more of the impacts and incur more cost every year. In urban environments, invasive species can be aesthetically detrimental and make places to live less appealing. Ponds clogged with invasive water plants can reduce their appeal and some species, such as Japanese knotweed, can encourage deterioration in the built environment, encouraging vermin and providing opportunities for littering.

2.0 Legislation

2.1 Under the [Wildlife and Countryside Act 1981, Schedule 9, Section 14^{lxxxiii}](#) (as amended) it is an offence to deliberately cause (Invasive Species listed under Part II of Schedule 9 Wildlife and Countryside Act (WAC) 1981) to grow in the wild.

Table 1: Invasive Species listed under Part II of Schedule 9 WAC Act 1981

Botanical Name	Common Name
<i>Smyrniium perfoliatum</i>	Perfoliate Alexanders
<i>Grateloupia luxurians</i>	Red algae
<i>L. galeobdolon subsp. Arg</i>	Variegated archangel
<i>Rhododendron luteum</i>	Yellow azalea
<i>Impatiens glandulifera</i>	Himalayan balsam
<i>Cotoneaster horizontalis</i>	Cotoneaster
<i>Cotoneaster integrifolius</i>	Entire-leaved cotoneaster
<i>Cotoneaster simonsii</i>	Himalayan cotoneaster
<i>Cotoneaster bullatus</i>	Hollyberry cotoneaster
<i>Cotoneaster microphyllus</i>	Small-leaved cotoneaster
<i>Parthenocissus inserta</i>	False Virginia creeper
<i>Parthenocissus quinquefolia</i>	Virginia creeper
<i>Disphyma crassifolium</i>	Purple dewplant
<i>Cabomba caroliniana</i>	Fanwort
<i>Azolla filiculoides</i>	Water fern
<i>Carpobrotus edulis</i>	Hottentot fig
<i>Allium triquetrum</i>	Three-cornered garlic
<i>Heracleum mantegazzianum</i>	Giant Hogweed
<i>Eichhornia crassipes</i>	Water Hyacinth
<i>Fallopia sachalinensis</i>	Giant knotweed
<i>F. japonica x F. sachalinensis</i>	Hybrid knotweed
<i>Fallopia japonica</i>	Japanese knotweed
<i>Allium paradoxum</i>	Few-flowered leek
<i>Pistia Stratiotes</i>	Water lettuce
<i>Crocsmia x crocosmiiflora</i>	Montbretia
<i>Myriophyllum aquaticum</i>	Parrot's-feather
<i>Hydrocotyle ranunculoides</i>	Floating pennywort
<i>Sagittaria latifolia</i>	Duck potato
<i>Ludwigia peploides</i>	Floating water primrose
<i>Ludwigia grandiflora</i>	Water primrose

<i>Ludwigia uruguayensis</i>	Water primrose
<i>Rhododendron ponticum</i>	Rhododendron
<i>R. ponticum x R. maximum</i>	Rhododendron
<i>Gunnera tinctoria</i>	Giant Rhubarb
<i>Rosa rugosa</i>	Japanese rose
<i>Salvinia molesta</i>	Giant salvinia
<i>Crassula helmsii</i>	Australian swamp stonecrop
<i>Undaria pinnatifida</i>	Wakame
<i>Lagarosiphon major</i>	Curly waterweed
<i>Elodea sp.</i>	All species of <i>Elodea</i>

NB: species associated with marine environments have been excluded from the above list. Please be aware that this list is correct on date of publication (2013).

2.2 Invasive Species listed under Part II of Schedule 9 WAC Act 1981 are also subject to [Section 34 of Environmental Protection Act \(1990\)^{lxxxiv}](#) and are classed as 'Controlled Waste'. Consequently they should be disposed of at a licensed landfill site under the [EPA \(Duty of Care\) Regulations \(1991\)^{lxxxv}](#).

2.3 *Invasive plant material is considered a 'controlled waste' and must be disposed of in accordance with, an environmental permit issued under, the Environmental Permitting (England and Wales) Regulations 2007, unless one of the exemptions set out in Schedule 3 of these regulations applies, although exemptions also require registration with the Environment Agency. [Managing invasive non-native plants in or near fresh water^{lxxxvi}](#)*

NB. Removal and disposal of invasive species can only be undertaken by a licensed carrier. There are currently no disposal sites in Bridgend County Borough.

Penalties: The maximum penalty for non-compliance with Section 14 of the WCA 1981 for each offence in the Magistrates' Court is a £5000 fine and/or six months imprisonment and an unlimited fine (subject to the discretion of the court) and/or two years imprisonment in the Crown Court.

If these species are not disposed of in the correct manner, a civil offence would occur and can be prosecuted by Natural Resources Wales. Infringement of the Environmental Protection Act can result in an unlimited fine.

3.0 Encountering invasive plant species

Guidance Note 1: Where invasive plants occur on development sites, an invasive species management plan which includes full details of a scheme for its eradication and/or control is to be submitted and approved by the council prior to the commencement of work on site and the approved scheme

3.1 The above scheduled plant species require specific control and removal methods, due to their ability to affect both wildlife and human health.

3.2 These species, if they are found to occur on or adjacent to your site during the ecology survey, should be highlighted on a constraints plan. Measures should be put into place to arrange their removal and disposal in consultation with an appropriately qualified ecologist and contractor and subject to compliance with the above legislation.

3.3 Many development sites experience invasive species colonisation. The most frequently encountered invasive plants in Bridgend County Borough developments in urban areas are [Japanese Knotweed](#)^{lxxxvii} and [Himalayan balsam](#)^{lxxxviii}. It is essential that invasive plant species if present on or adjacent to the site are identified before works begin.

3.4 The **invasive species management plan** be put in place for all scales of development. This plan will help developers identify the areas where the plants occur on and adjacent to the site and the level of contamination.

3.5 Invasive species management plans should include a method statement ensuring that everyone working on the site is aware of and adheres to good site hygiene. This can be done by marking out contaminated areas, ensure that vehicles with caterpillar tracks do not work within contaminated areas where possible, treat contaminated soils carefully ensure that machinery or equipment that could be contaminated is cleaned.

3.6 An invasive species management plan will help developers deal with the implications of invasive species and will identify good working practices to provide an efficient cost effective solution. A management plan will also set out the procedures for taking potentially contaminated soil off site under the provisions of Section 34 of the Environmental Protection Act 1990 and EPA Regs 1991. [Section 34 of Environmental Protection Act \(1990\)](#)^{lxxxix} and the [EPA \(Duty of Care\) Regulations \(1991\)](#)^{xc}.

3.7 Home owners to large scale developers can produce invasive species management plans by understanding the implications of finding invasive plants on site.

4.0 Implications of invasive plants on or adjacent to the development site

4.1 The independent report Economic cost of Invasive non-native species on Great Britain (2010)^{xci} estimated the total annual costs of Invasive Non Native Species to Wales as £125,118,000.

4.2 There are no definitive industry wide figures for how much the plant costs, but even on relatively small sites the cost of control can run into hundreds of thousands of pounds and the annual cost across the UK is likely to be many tens of millions. The cost to eradicate Japanese Knotweed in Britain using conventional methods has been estimated at £1.56 billion.

Options

4.3 There are several options for the control and eradication of invasive plant species. Advice regarding the use of appropriate options is dependent on several factors including:

- The development timescale;
- The presence of nearby water bodies/land drainage;
- Landscaping requirements;
- Other protected species issues.

Prior to treatment

4.4 The first stage would be to identify all of the locations of the invasive species on and adjacent to the site and effectively safeguard their locations. If possible the locations could be plotted by GPS but it is also recommended to fence off the location(s).

Contractors

4.5 Vigilance can be encouraged by the provision and display of identification information where contractors working on site have ease of access. The Environment Agency species secretariat provided a suite of identification sheets.
<https://secure.fera.defra.gov.uk/nonnativespecies/index.cfm?sectionid=47>^{xcii}

4.6 The treatment of the commoner invasive species on development sites such as Japanese knotweed^{xciii}, Himalayan Balsam^{xciv} can be straight forward, but will involve repeat treatments to ensure eradication. However, in the instance of giant hogweed^{xcv}, this species has additional health and safety implications that must be taken into consideration.

4.7 Given that the above invasive species are more likely to be encountered on development sites within the Bridgend county borough area, the following sets out management approaches generally aimed at these species.

Herbicide Treatment

NB. Developers should seek advice of a suitably qualified pesticide operator or BASIS^{xcvi} registered pesticides advisor before starting a herbicide treatment programme.

4.8 Treatment of **Japanese knotweed** infestations can usually require a 3 year treatment programme with spraying being undertaken at the end of the growing season normally (August/September) to effectively eradicate the plants. Annual monitoring visits should be conducted during April/May for 3 years following the initial 3 years of spraying. Should any

regrowth be identified the annual spraying regime should be implemented.

4.9 Treatment of **Himalayan balsam** should be undertaken before the plant set seeds and when the plant has put on sufficient growth to ingest the herbicide sufficiently. This normally occurs around May and early June, depending upon the growing season. Himalayan balsam has a viable seed bank for about of approximately 2 years. Therefore, a spraying programme of 3 years should be considered. Annual monitoring visits should be conducted during April/May for 3 years following the initial 3 years of spraying. Should any regrowth be identified the annual spraying regime should be implemented.

4.10 However, strimming and in the instance of smaller infestations hand pulling, before the balsam flowers, is the most effective means of managing [Himalayan balsam](#)^{xcvii}.

4.11 Treatment of **giant hogweed** is likely to be required for at least 5 years with monitoring continuing for a further 5 years. A detailed schedule of works for the annual treatment and monitoring programme is given below in the table below. Annual monitoring visits should be conducted during April/May for 5 years following the initial 5 years of spraying. Should any regrowth be identified the annual spraying regime should be implemented.

4.12 **It will be a requirement of the invasive species management plan to include precautionary measures to avoid drift spraying that may affect a site's native flora/fauna.**

4.13 Annual monitoring followed by spraying upon identification of new growth should continue until no regrowth is identified. An ecologist should inspect the re-growth during the following growing season and instruct Landscape Contractors to carry out the recommended follow-up work.

4.14 An appropriate herbicide should be selected in consultation with [Natural Resources Wales](#)^{xcviii}, and the applicant's appointed ecologist if wildlife constraints exist on site.

4.15 Should the stands of invasive species be positioned [close to watercourses or water bodies](#)^{xcix} then only those herbicides authorised by the [Natural Resources Wales](#)^{xi} for use on knotweed on/near water shall be used, the competent contractor should know what is appropriate.

Excavation

4.16 Excavation is an option for immediate removal of invasive species subject to [Section 34 of Environmental Protection Act \(1990\)](#)^{iv} and the [EPA \(Duty of Care\) Regulations \(1991\)](#)^v. This method is recommended suitable for those stands that are to be directly affected by the sites remediation works.

4.17 It is recommended that invasive species that are to be affected by remediation works are sprayed, using an appropriate herbicide, followed by the removal of the weakened plants by excavation. Stockpiling or burial of the contaminated material is recommended following excavation.

4.18 The excavated plant material, must be carried out using appropriate methods to minimise the risk of further infestations occurring within the site.

4.19 In the instance of Japanese knotweed, this plant's prime means of colonisation is through the spread of its underground stem system, known as *rhizomes*. These rhizomes can extend to a depth of 3m and 7m laterally from the above ground stems. The entire root system must be removed to ensure no re-growth occurs.

4.20 Both Himalayan balsam and giant hogweed spread by seed. Therefore, soil should be removed laterally and to a depth agreed with the developer's ecologist and Natural Resources Wales.

4.21 Following excavation, the area must be regularly monitored in order to identify any regrowth. Should regrowth be identified a spraying regime should then be implemented.

4.22 Vehicles used to excavate the contaminated material need to be washed in order to prevent spreading these plant species. Any water used for cleaning these vehicles should be collected. If the water is contaminated with seeds or plant material, it will not be possible to discharge it into a watercourse. Contaminated water should be passed through a settlement tank to remove any soil before passing it through a very fine mesh sieve to remove seeds or plant material.

4.23 Material sieved from water used for vehicle washing may be deposited in a controlled area of the site and monitored for regrowth.

4.24 Two options following excavation are available; the material can be removed off-site to [licenced site^c](#) and subject to the [Section 34 of Environmental Protection Act \(1990\)](#) and the [EPA \(Duty of Care\) Regulations \(1991\)](#). or retained within the site in a prepared receptor area to be stockpiled or buried.

4.25 If the invasive plant material is to be retained on site, there are two options for its disposal.

Stockpiling or bund method

4.26 If the site has areas invasive plant material can be left for at least three years then stockpiling is an option. Following excavation, the material would be transported to and stockpiled on the prepared area to enable the herbicide treatment to continue.

4.27 Bunds can be raised or an excavation made to contain the stockpile. In either case the enclosed area needs to be large enough to hold the volume of excavated contaminated soil and be lined with a root barrier membrane to protect the surrounding soil from unintentional cross-contamination.

4.28 Within any bunded or excavated stockpile it is the aim to concentrate the plant material in a thin upper surface of soil of no greater than 1m in depth. This will enable the plant to grow readily from in order to receive the continuing herbicide treatment later.

4.29 It is also recommended that the bund or stockpiled material should receive some disturbance through being turned over after 1 or 2 herbicide treatments. The disturbance will stimulate re-growth. The re-growth can then be chemically treated with the appropriate herbicide.

4.30 NB. This method of treatment is not usually suitable for giant hogweed and Himalayan balsam, due to the large number of seeds that may be dispersed by the wind. However if treatment occurs before regrowth is allowed to set seed, this method may be suitable.

Cell formation or burial method

4.31 NB: Burial on-site may require a licence under the [Landfill Regulations 2002](#)^{ci}. The developer is advised to enquire whether they are required to obtain a licence before works commence.

4.32 If agreement with the environmental regulator can be met, invasive plant material can be excavated and buried on site within a lined cell or in a deeper excavation on site.

4.33 The first method involves creating a cell, lined with a root-barrier material, set below ground level. The contaminated material is then deposited within the cell which then needs to be adequately sealed with the root-barrier liner and covered with at least 2m depth of spoil and/or soil.

4.34 A burial method can also be carried out without using a root-barrier membrane. However, in this case the site must be able to provide an area where burial can take place below a depth of at least 5m from the finished surface. It is recommended that the material containing Japanese knotweed, Himalayan balsam and giant hogweed are chemically treated prior to the burial with a non-persistent herbicide.

4.35 It is important to notify the local Natural Resources team prior to the burial. An inspection of the material to be buried and the burial location may be required.

4.36 It is also necessary to accurately map and record the location of the burial site so that details can be kept with title deeds to inform subsequent owners of its position. This will help to prevent the accidental damage and subsequent re-infestation of the site through any future works.

4.37 Inspections of the area containing the buried material must be conducted yearly for at least 3 years to ensure no new growth has occurred through inadvertent contamination of the surface material.

5.0 Landscaping Schemes

5.1 Landscape schemes must ensure that species listed in Schedule 9 are ***not*** included within the design.

5.2 For further advice on preferred species in relation to landscaping schemes, see the emerging BCB Landscape Design Guidelines.

6.0 Brownfield sites and Invasive Species

6.1 The development of land in particular brownfield sites can often have problems associated with previous activities. The land is often contaminated, and requires decontamination before development can proceed. Integrating new development into the existing urban development has control issues. For example, Policy ENV7 Natural Resource Protection and Public Health Development; only permit proposals where it can be demonstrated that they would not cause a new, or

exacerbate an existing, unacceptable risk of harm to health, biodiversity and/or local amenity.

B7 Biodiversity Design Guidance Sheet Badgers & Development

1.0 Introduction

1.1 The Eurasian badger (*Meles meles*) is nocturnal and elusive mammal that forms part of the mustelidae family, which also includes, weasels, stoats and otters. Like humans, they are omnivorous, with earth worms and berries forming a large part of a badger's diet. Badgers are social creatures and live together in large underground setts, comprised of a series of interlocking tunnels with nest chambers, toilets and several entrances.

Did you know! Badgers inherit these setts from their parents, while always expanding and refining them. The resulting huge tunnel systems are, in some cases, centuries old.

1.2 The badger uses a variety of habitats; they are found in urban, suburban and rural areas and will use woodland, pasture, other farmland, parks and gardens for foraging and to excavate their setts. Conflict often occurs where development affects areas traditionally used by badgers. In recent years, the proposed and implemented controlled cull of badgers in the UK has brought the plight of the badger into public focus.

Did you know! The badger is the largest land carnivore left in the British Isles following the extinction of the bear and the wolf, at around 10 to 12 kilos in weight and measuring about a metre long from nose to tail. Amazing, considering that it occurs on such a crowded island.

1.3 Although widespread in England and Wales, badgers have been subject to a number of threats including habitat loss and deliberate persecution. This has led to specific legislation being drawn up in relation to badgers.

Legislation

1.4 Badgers are specifically protected under the [Protection of Badgers Act 1992^{cii}](#). This Act makes it is a criminal offence to either:

- Wilfully kill, injure, take, possess or cruelly ill-treat a badger, or attempt to do so
- To intentionally or recklessly interfere with a sett, by
 - Damaging or destroying a sett or any part of it;
 - Obstructing access to, or any entrance of, a badger sett;
 - Disturbing a badger when it is occupying a sett.

1.5 Badgers are also listed in [Schedule 6^{ciii}](#) of the Wildlife and Countryside Act 1981. [Section 11^{civ}](#) of this Act prohibits the use of certain methods of taking or killing a wild animal, including illuminating devices and some snares.

PENALTIES: Under the Protection of Badgers Act 1992, a person convicted of an offence or offences under the terms of the Act is liable to a £5000 fine and/or six months imprisonment. Any equipment used to commit the offence may be forfeited. Any dog used to commit an offence maybe destroyed and the offender disqualified from custody of a dog.

Where there are reasonable grounds for suspicion that there is an offence, a constable may without warrant stop and search

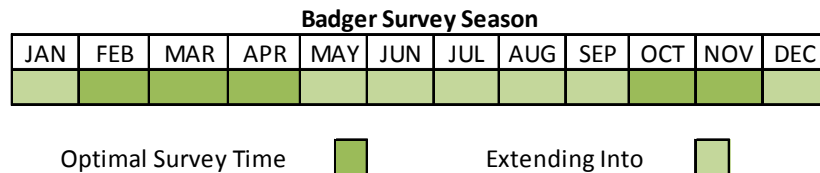
any person or vehicle involved, and seize anything which may be evidence.

2.0 Survey Requirements

GUIDANCE NOTE 1: It is the responsibility of the developer to ensure that the proposed development will not have an adverse impact on badgers or their habitats.

A licence is required for heavy machinery work within 30m, light machinery within 20m and hand digging within 10m of a badger sett.

2.1 A badger sett is defined as ‘any structure or place which displays signs indicating current use by a badger’. An ecological survey will confirm whether or not a site contains or lies within the influence of a badger sett. The optimum timing for a badger survey is during spring or early autumn/winter when animals are active but new vegetation growth is less



likely to obscure field signs.

Figure 1: Survey schedule Badgers

2.2 The types of sett created and used by badgers can be seasonal in their use. Natural Resources Wales (NRW) considers all setts including seasonal ones to be in use unless evidence confirms a sett has not been occupied over a 12 month period. The damaging or closure of a sett without a

licence^{cv} will constitute a criminal offence unless it can be demonstrated that it has not been used over a 12 month period.

2.3 Further advice on undertaking a Bader survey can be found from Natural Englands [Standing Advice Species Sheet: Eurasian Badger \(Badger\)](#),^{cvi} and CCWs [Badgers and Development](#)^{cvii}

GUIDANCE NOTE 2: Where surveys indicate that badgers will be affected by the development proposal. The applicant should consult with natural Resources wales to determine if the works require a licence. In addition the Council will require a method statement to be submitted with the planning application for the application to be registered.

If it is considered that the proposed avoidance, mitigation, compensation measures are not satisfactory, the Local Planning Authority will refuse the planning application

2.4 The data obtained from the badger survey must be formulated into a method statement which is submitted to the Council to inform their planning decision.

2.5 The method statement should detail the survey area, project proposals, survey methods and results.

2.6 The impact assessment should be presented in the method statement. Impacts should be classified as temporary, short term or long-term and the scale of each impact should be identified. **The method statement should include practical avoidance measures and, where avoidance is not possible, provide a detailed mitigation strategy, including a timetable.**

2.7 The method statement should also identify whether a licence from the NRW is required prior to commencing development activities.

2.8 Developers and landowners should note that the Council will not condition the production of the method statement. The information in the method statement is required to assist the Council to make their determination in regards to the 1992 The Protection of Badgers Act 1992 and the need for licence from NRW.

2.9 Applications in which an effect upon Badgers is anticipated as a result of the proposals, but which do not include an appropriate method statement will most likely not be validated. If the application is validated, but the information relating to Badgers is subsequently found to be insufficient during the determination, this may affect the result of the planning decision.

3.0 Licencing

3.1 Works on a site that contains an active badger sett may require a [licence](#)^{cvi} from NRW. A licence can only be applied for once planning permission has been granted.

3.2 A licence cannot be applied for retrospectively i.e. after a sett has been damaged or disturbed. A licence will normally take around 6 weeks so make sure you plan ahead.

For NRW to determine a licence application, the following must be confirmed or provided:

- i. Details of the final planning permission granted for the site, including a copy of any section 106 agreement;
- ii. Proposals showing how it will be ensured that there are no badgers occupying setts that need to be damaged or destroyed;
- iii. The location and number of alternative setts where excluded animals may shelter when a main sett is to be lost;
- iv. Details of any artificial sett that has been constructed including a clear plan of the sett and photographs of the sett under construction and once completed. Evidence of use of the sett by badgers should also be included. It is recommended that the developer should consult with the Countryside Council for Wales regarding proposed artificial setts prior to their construction;
- v. Details of fencing and underpasses, where necessary, to permit access by badger to existing feeding areas, and to prevent obstruction to sett(s). Main, or seasonally important, feeding areas or water sources should be maintained or replaced where they may be affected;
- vi. The names and addresses of those who will be carrying out specialised badger work, capable of operating to a suitable standard to ensure the work is carried out effectively;
- vii. Assurances that machinery used near setts, or to destroy setts, shall be operated by competent persons;
- viii. Dates between the months of July and November inclusive when the work will be carried out or

mitigating circumstances for any work to be undertaken outside of this period;

- ix. Details of the monitoring to be undertaken during and post-construction;
- x. Information on general operating practices on site must ensure that badgers are not inadvertently harmed or trapped.

NOTE: the law does not permit licences to capture badgers for development purposes. Relocating badgers by translocation is not an option.

3.3 For further up-to-date information regarding how to apply for Badger licences issued by NRW and the Welsh Government visit NRW [website](http://www.naturalresourceswales.gov.uk)
www.naturalresourceswales.gov.uk

Avoidance, Mitigation, Compensation and Enhancement

4.0 Avoidance

GUIDANCE NOTE 3: Developers/ applicants must provide sufficient evidence to demonstrate that avoidance is not possible before mitigation and compensation are considered as alternatives.

4.1 The simplest way to avoid disturbing badgers is not to develop where sett(s) are located. Ensuring that works do not take place after dark in the proximity of the sett(s) is also another possibility to avoid disturbance.

4.2 Badger setts are used by the same family of badgers over generations, as are their foraging routes. Barriers or fencing across a badger foraging route will likely be damaged by a badger as they will nearly always use the same pathways. By conducting observations over a period of time the movement patterns and habits of the badgers can be understood and unnecessary disturbance and costly repairs can be avoided.

Did you know! With Badger numbers declining in most of Europe, The UK is one of the species' strongholds. Badgers are "ancient Britons and have lived alongside us for a very long time. The earliest fossil remains date back 250,000 years. Some of their setts have been occupied by generations of badgers over a many years. One sett in Derbyshire is even recorded in the Domesday Book.

5.0 Mitigation

GUIDANCE NOTE 4: Where harm is unavoidable it should be minimised by mitigation measures.

5.1 Where impact on a sett or on the badgers occupying the sett, is unavoidable, relocation, exclusion and provision of artificial badger setts are all methods that could be employed to mitigate the impact. However, the specific methods of mitigation should be decided in consultation with NRW and Bridgend County Borough Council and will be the subject of the licence.

5.2 An exclusion zone should be created around any badger setts on, or close to the site. Even if a sett is not within

the development footprint. An exclusion zone will be required if a sett lies within 30m of a development site.

5.3 The exclusion zone must be made apparent to workers on site, as should the control on activities that can take place on site and within the exclusion zone. The exclusion zone should be fence of around 1m high. It is important to leave a gap underneath to allow the badgers passage (around 30cm/1 foot should be ample) or alternatively a badger gate could be used, similar to a cat-flap in concept.

5.4 A number of activities of different levels can be carried out close to a badger sett, the level of activity and distance from the sett will be dependent on whether a licence has been issued.

5.5 A licence is required for work;

- <30m from a sett for the use of heavy machinery
- <20m from a sett for the use of light machinery
- <10m from a sett use of hand tool/scrub clearance and digging etc.

5.6 Other more disruptive activities such as pile driving or the use of explosives, within 100m of a sett(s) will require a licence. These are not definitive distances and advice should be sought from NRW before commencement of such activities, preferably prior to applying for a licence. The 10m, 20m, and 30m distances might also need adjustment depending on circumstances.

5.7 Building sites are as dangerous for badgers as they are for people and measures must be taken to reduce the risk. Chemicals should be stored securely away from setts. **Holes**

or trenches left open overnight should be provided with a means of escape for badgers that may fall in.

5.8 If and when a badger sett is to be lost, an experienced and suitably qualified ecologist should be on-site to provide guidance. It is usually a condition of the licence that work to close and destroy a badger sett are implemented or at least supervised by an ecologist.

6.0 Compensation

GUIDANCE NOTE 5: Compensation will only be considered where the developer/applicant has satisfactorily demonstrated that avoidance and mitigation are not possible and the compensatory measures result in no net loss of habitat

6.1 Foraging habitats used by badgers that will be lost or damaged by development should be replaced by habitat suitable for foraging. A suitably qualified ecologist will be able to provide advice in this respect. It is important to not simply rely on the provision of private gardens as foraging areas. This is because badgers can be destructive and dig up gardens, better to provide alternative feeding areas not associated with gardens.

6.2 Should a badger sett be unavoidably destroyed it will most likely need to be replaced. This is achieved through the provision of an artificial sett. It should be noted that this is really only an option if all other avenues to avoid destruction have been explored. Should this be the only suitable course of action the new artificial sett should be created before development commences.

6.3 A suitably qualified ecologist and the local badger group will be able to provide guidance and suggestions for locations for new artificial setts. It is important to note that it is **not** possible to capture and translocate badgers, to a new sett and any mitigation land **must** be made accessible in the immediate surroundings.

7.0 Enhancement

7.1 The avoidance, mitigation or compensation provided by developments for Badgers should not be considered in isolation but included into the design stages early in the development including opportunities for [badger foraging areas](#)^{cx}.

7.2 Well designed green infrastructure with the provision of open spaces can allow wildlife to flourish, as well as providing other benefits to the development. Green infrastructure should be designed with input from an ecologist. This will allow factors to be taken into account such as how to incorporate wildlife features such as [artificial badger setts](#)^{cx} into developments whilst also taking into account subsequent uses of the site and designing to avoid disturbance to wildlife features such as badger setts and [foraging areas](#)^{cx}.

7.3 It is important that developments do not isolate a badger territory by surrounding it with roads or housing which could result in problems such as increased road traffic collisions, and badger damage to gardens and houses.

B8 Biodiversity Design Guidance Sheet Protected Areas and Development

1.0 Introduction

1.1 Bridgend contains a number of internationally, nationally and locally important sites for nature and geological conservation. These sites are of primary importance for Bridgend and form the core ecological network which is a vital part of Bridgend's natural heritage and recreational resource.

1.2 It is important to understand the potential impact of your development on protecting irreplaceable habitat (such as ancient woodland) and existing sites of international, national or local importance and landscape character. National and local policy recognises the importance of protecting and enhancing these areas designated for their special landscape and/or biodiversity importance.

1.3 Bridgend CBC also seeks to ensure the protection of areas important for nature conservation. These sites have been identified and receive protection in the Bridgend Local Development Plan CHP 4: Protecting and Enhancing the Environment. Areas having a high and/or unique environmental quality are protected from inappropriate development which directly or indirectly impacts upon them.

1.4 Designated sites are essential, however, they provide only small isolated refuges. It is essential that we maintain and create connections between these sites to allow for the movement of wildlife between sites and between populations.

1.5 If your development occurs near a protected area whilst minimising the detrimental effect of your development you can **actually have a positive benefit**. Protected sites are important refuges for habitats and the species that reside there, and are the foundations for Bridgend's green infrastructure. However these sites are becoming increasingly fragmented and are not able to function as well as they could and are becoming less resilient to changes such as climate change. Bridgend CBC aim to promote green infrastructure which aims to create ecological networks, green corridors and greenways that have both social and environmental benefit. It is a mechanism for more informed decision-making and more 'joined-up' thinking in relation to urban and regional environmental planning.

GUIDANCE NOTE 1: Adverse impacts to designated site should only occur as a last resort, and should be fully compensated by replacement with a feature of comparable or higher ecological value.

1.6 By maintaining or creating natural features such as trees and hedgerows, or providing well designed natural open spaces within developments you can provide essential stepping stones and connections that and have a positive contributions to green infrastructure.

1.7 For example, collectively householders can make a huge contribution to green infrastructure and connectivity between woodlands by planting native species trees. In addition households will directly receive the benefits (ecosystem services) of the trees such as shading, cleaner air, and amenity value see CIRIA report C712 The benefits of large species trees in urban landscapes for more information.

1.8 You can find out more information regarding ecosystem services from the [Wales Biodiversity Partnership^{cxii}](#).

2.0 Descriptions of protected sites

2.1 Protected sites receive varying levels of protection. Sites of European (SAC) and National importance (SSSI) receive **statutory** protection as well as protection under the Bridgend Local Development Plan. Sites of local importance make a vital contribution to delivering the UK and Local Biodiversity Action Plans and the Geodiversity Action Plan, as well as maintaining local natural character and distinctiveness. Although these sites are non-statutory national government guidance (PPS 9) requires their identification, designation and protection by local authorities through planning policies in their development plans.

Statutory

- **Special Areas of Conservation (SACs)**

Strategic Policy 4:

SP4(1) Natural 2000 Network Sites including Special Areas of Conservation (SACs);

2.2 A Special Area of Conservation is a strictly protected site designated under the European Commission (EC) Habitats Directive.

2.3 In 1992 European Union governments adopted the Habitats Directive. The aim of the Habitats Directive is to conserve natural habitats and wild species across Europe by establishing a network of sites known as Natura 2000 or European sites as defined under The Conservation of Habitats and Species Regulations 2010 (as amended).

2.4 The Habitats Directive requires Special Areas of Conservation (SACs) to be designated for species and for habitats. Sites designated solely for birds are called Special Protection Areas (SPA) and are designated under the Birds Directive which was adopted in 1979. Bridgend has 1,046ha designated as SAC. All SAC and SPA are designated as Sites of Special Scientific Interest (SSSI).

- **Sites of Special Scientific Interest (SSSIs)**

Strategic Policy 4:

SP4(2) Sites of Special Scientific Interest (SSSIs).

2.5 This designation is the highest in the UK and provides statutory protection for our best examples of flora, fauna and geological features. SSSIs were created following the Countryside Act 1949 and subsequently re-notified under the

2.6 Wildlife and Countryside Act 1981 and improved protection and management was provided by the Countryside and Rights of Way Act 2000. It is a criminal offence to damage, destroy or disturb a SSSI. The Welsh Government in its Environment Strategy has set a target of ensuring that 95% of

Wales' SSSIs are in favourable condition by 2015. Natural Resources Wales are responsible for the designation of SSSIs on behalf of the Welsh Government. Bridgend has 17 SSSIs covering an area of around 1,345ha.

- **National Nature Reserves (NNRs)**

Policy ENV4:

ENV4(1) Local Nature Reserves (LNRs).

2.7 NNRs are designated for their natural and semi-natural habitats, including coastal habitats. They are managed to conserve their biodiversity interest and for scientific research. Bridgend has 2 National Nature Reserves at Kenfig Pool and Dunes and Merthyr Mawr Warren, totalling 838ha. Kenfig Pool and Dunes is also a Local Nature Reserve.

- **Local Nature Reserves (LNRs)**

Policy ENV4:

ENV4(2) Site of Importance for Nature Conservation (SINC).

2.8 As the name suggests these reserves are designated for their value to local communities, they are not only for wildlife but also for education and for people to experience nature. Other than Kenfig Pool and Dunes LNR, Bridgend has 4 additional LNRs at Frog Pond Wood, Locks Common, Craig-y-Parcau Woodland and Tremains Wood.

Local Nature Reserves are true green infrastructure assets.

Non-Statutory

- **Sites of Importance for Nature Conservation (SINCs)**

2.9 SINCs are a local planning designation, designated by Bridgend County Borough Council. They are decided by a set of criteria developed to represent valuable habitats and species for Bridgend and Wales. There are 174 SINCs in Bridgend. Under the Town and Country Planning System these sites are a material consideration when determining planning applications.

- **UK and Bridgend Biodiversity Action Plan Priority Habitats**

2.10 Outside of designated sites Bridgend contains a wealth of habitats that are locally and nationally important, such as woodland and species-rich grassland. Under the Natural Environment and Rural Communities (NERC) Act 2006 local authorities have a duty 'when exercising its function' (including development control) to conserve biodiversity, this includes restoring or enhancing habitat or a population. A list of the habitats under Section 41 of the Act can be found in Information Sheet 5 – Priority Habitats and Development.

- **Landscape Character Areas**

2.11 For further information on Landscape Character Areas please refer to the Landscape Character Assessment.

- **Ecological Network**

2.12 Designated sites and natural habitats are essential for the conservation of wildlife; equally as important is the connectivity between those sites and habitats. Isolated sites outside of a network are vulnerable to a number of factors. Those within a network are better placed to recover from damage and to enable re-colonisation by wildlife. Bridgend's ecological network is based on its protected sites and the river and stream network. The landscape between the core sites is important for wildlife and for people and Bridgend aims to improve the habitat quality and quantity within those linking landscapes.

2.13 Whilst some sites fall outside of the statutory and un-statutory designations, biodiversity including habitats can be a material consideration in the formal planning system. Undesignated sites which have the biodiversity importance of designated sites will also receive the same protection.

3.0 How do I know if my development is near a protected site?

3.1 Statutory protected sites can be found on the adopted Bridgend Local Development Plan (2013). Maps of SINC sites can be found in the Appendices accompanying this guidance document as part of the SINC review (2011) document. Biodiversity Action Plan habitats can be found on priority maps produced by Natural Resources Wales and if present on or adjacent to the site should be identified by site surveys.

3.2 Development sites that provide the maximum benefit to ecological networks can be identified using eco-connectivity mapping produced by Bridgend CBC and Natural Resources Wales. These maps can be used to identify how your

development can best utilise and contribute to Green Infrastructure functionality within the County Borough.

3.3 If you are unsure you can contact the council's planning department by calling 01656 643643. Please note in some cases the boundaries of these designations overlap.

4.0 What do I do if my development affects a protected site?

4.1 Requirements from developers will range from site to site and will be proportionate to the degree of risk to biodiversity and the nature and scale of the development. I.e. the level of protection of the site and the likely impact of the development.

4.2 Bridgend CBC will require supporting information and conservation measures that are relevant, necessary and material to the application.

4.3 For example, Developments on or likely to result in significant effects on a Natura 2000 site may be required to provide an appropriate assessment. Sites near a Site of Importance for Nature Conservation may be required to demonstrate that they will not directly impact on the site through a simple method statement such as root protection zones for trees or to follow vegetation clearance methodologies etc.

5.0 How do I determine the significance of the impacts of my development?

5.1 To determine the significance of any environmental harm or benefits requires the affected resource(s) and the potential impacts associated with the proposal to be examined.

5.2 The BS 42020 2012 refers to “*significant impact*” as an effect which is important. Notable, or of consequence, having regard to its context. The significance of the impact will depend on the sensitivity of the resource that is affected and on the magnitude of any likely impacts.

6.0 Development and Natura 2000 Sites

6.1 The UK Government has a statutory requirement to maintain or achieve “Favourable Conservation Status” for wildlife in European sites of importance (Natura 2000 Sites) in Bridgend the Natura 2000 sites are represented by the Special Areas of Conservation (SAC).

6.2 The SAC sites represent the ‘highest tier’ of sites of importance for nature conservation in the County Borough. The LDP Habitat Regulations Assessment (HRA) concludes that future development may have an impact on water resources affecting Kenfig and Cefn Cribwr SAC, and air quality affecting Blackmill Woodlands SAC. Developments will not be permitted in these areas where monitoring by the determining authorities indicates that there would be an over abstraction of water or decrease in air quality.

6.3 Under Article 6(3) of the Habitats Directive, an appropriate assessment is required where a plan or project (in

this case an NSIP proposal) is likely to have a significant effect upon a European site, either individually or in combination with other projects.

6.4 It is the duty of all competent authorities to comply with Regulation 61 of the Habitats Regulations when assessing and recording their decisions for all relevant new plans and projects. Our understanding and interpretation of the Habitats Directive and Regulations including, in particular, the assessment of ‘plans and projects’, is continually developing and we continue to refer to up-to-date advice and guidance from statutory organisations such as relevant sections of TAN 5, the European Commission’s Managing Natura 2000 Sites and guidance such as Assessing Projects Under the Habitats Directive Guidance for Competent Authorities (2011).

6.5 Protected sites form the backbone of eco-connectivity and Green Infrastructure through Bridgend CB and throughout Wales. See updated LBAP for maps of protected sites, ecosystem services and GI.

7.0 The Habitat Regulation Assessment screening process

7.1 A Stepwise Process is used to ensure plans and projects do not adversely affect the integrity of SACs.

7.2 Any plan or project with the potential to impact upon a European Designated Site (SAC, SPA or Ramsar) must legally be assessed under the Habitat Regulation Assessment (HRA) process.

7.4 Screening Test – establish if the proposed plan or project either likely to have a significant effect on a European Designated Site either alone or in-combination?

7.5 An effect is significant if there is a **possibility** that published conservation objectives of the site could be undermined.

7.6 If the answer to test 1 ‘significance’ is ‘yes’ or ‘unknown’ then an Appropriate Assessment must be undertaken by the Local Planning Authority (known as the Competent Authority).

7.7 Appropriate Assessment – The appropriate assessment is triggered by the likely significant effect test and is conducted to ascertain that there will not be ‘adverse effect on the integrity’ of the site.

7.8 The scale and scope of an Appropriate Assessment varies significantly depending upon the type of plan or project being assessed. As the competent authority Bridgend CBC may need to seek additional information from planning applicants to allow an Appropriate Assessment of planning applications to be undertaken.

7.9 When undertaking an Appropriate Assessment the Local Planning Authority must formally consult Natural Resources Wales and must have regard to the representations of Natural Resources Wales in making its decision. (In the presence of a Natural Resources Wales objection on HRA grounds a planning permission cannot legally be granted until NE’s objection has been addressed and formally withdrawn).

7.10 Habitat Regulation Assessment Conclusions

GUIDANCE NOTE 2: A Local Planning Authority will only legally grant planning permission if it is established that the proposed plan or project will not adversely affect the integrity of the European Site.

7.11 If it is not possible to establish this beyond reasonable scientific doubt then planning permission cannot legally be granted.

7.12 Significant effect – If a significant adverse effect was identified so severe that (in the absence of imperative reasons of overriding public interest) the plan or project is to be refused automatically.

7.13 Planning policy typically indicates that a significant adverse effect resulting from a development is one that cannot be addressed through the **mitigation hierarchy** (e.g. **avoided** [such as managed or designed/ relocated to avoid impact], **adequately mitigated**, or as a last resort compensated for).

7.14 Developers should be aware that if insufficient information i.e. about HRA, is submitted with the application, the application may be refused. Developers are therefore

strongly advised to use the pre-application consultation process to seek assurances from the relevant statutory bodies that all potential impacts have been properly addressed in sufficient detail before the application is submitted.

7.15 Please note - Projects should also be carefully checked for the need for assessment under the Environmental Impact Assessment (EIA) Directive as well as assessment under the Habitats Regulations, because the criteria are different. Where a project subject to EIA would also be likely to have significant effects on a European site, the appropriate assessment under the Habitats Regulations must be carried out as well as undertaking the EIA. It should also be noted that Strategic Environmental Assessment will be required for plans and programmes that are likely to have a significant effect on a European Site.

8.0 Other Statutory Sites

8.1 Development close to National Nature Reserves, Local Nature Reserves and Sites of Special Scientific Interest will require direct consultation with both the Natural Resources Wales and Bridgend County Borough Council.

9.0 Non-Statutory Site

9.1 Development on, or close to, the non-statutory designations listed above should deliver to a net gain approach to biodiversity, i.e. more is created than is lost. Individual elements and species on those sites are still subject to legislation i.e. great crested newts, bats and water voles.

10.0 Mitigation Hierarchy

10.1 With respect to all designated sites the mitigation hierarchy will follow the following rules.

Avoidance

10.2 The first stage is to identify if the development can be managed or designed so as to avoid impact. If impact is unavoidable then there may be scope for mitigation through design and timing of development. In certain situations development may be allowed even where it has an adverse effect on integrity of the site. In all situations a rigorous and formulaic process of reporting should be followed in order to comply with European and national legislation.

10.3 Protection of existing high quality habitats such as unimproved grassland and irreplaceable habitats such as ancient woodlands should be prioritised over creating new habitats. Resources for long-term protection and management need to be addressed and incorporated into an agreed plan using relevant up-to-date information and ecological expertise.

Mitigation/ compensation

10.4 Any mitigation or compensation proposals must be carefully thought through to guarantee that they will be effective and implementable. This can often require protracted negotiation between developers, planners, nature conservation bodies and land owners. Skilled negotiation can identify proactive solutions which meet the needs of all parties and enable development while safeguarding sites.

B9 Biodiversity Design Guidance Sheet Ecological Survey requirements

1.0 Other Statutory

1.1 There are a number of ecological surveys that could be carried out to gather additional information about ecology on a development site. Below is some generic advice on what Bridgend County Borough Council expects to accompany applications.

NB: This guidance sheet does not replace species / habitat specific, nationally recognised survey guidelines / methods. See species specific guidance notes.

GUIDANCE NOTE 1: The Council expects that all survey/assessment work is undertaken and prepared by competent persons with suitable qualifications, licenses and experience.

1.2 Survey work must be carried out at an appropriate time and month of year for that species, in suitable weather conditions and using nationally recognised survey guidelines / methods where available and working to best practice standards (for guidance visit 'sources for survey methods' at: www.ieem.net/surveymethods.asp^{cxiii}).

1.3 Reports should also include detailed information on impact assessment and include any necessary measures for avoidance, mitigation, compensation and enhancement.

GUIDANCE NOTE 2: All submitted reports must provide sufficient information for the local planning authority to fully consider the impacts of a proposed development.

1.4 Reports must address two requirements:

1.5 Assessment of the site through ecological survey(s) and assessment of ecological impacts;

1) Submitted reports demonstrating thorough survey work and assessment must:

- Identify all designated sites and/or protected species that could be affected by the proposals, and provide details of potential impacts and proposed mitigation measures. Figure 1 gives an overview of the considerations that should be addressed in relation to protected species;
- Include a summary of the proposed development, description of the site (including existing wildlife features), and site history (e.g. ownership, general land use, type of and need for the proposed development, planning history);
- Include a search for data from the [South East Wales Biological Records Centre](#)^{cxiv} (SEWBReC) and/or any other relevant organisations. (All data submitted to the local planning authority as part of the application will be made available to SEWBReC, unless the applicant requests otherwise);

- Inform of the extent, scope, and methodology of the survey(s) being undertaken;
- Be undertaken and prepared by competent persons with suitable qualifications, licenses and experience – and this information should be contained within the report;
- Be carried out at an appropriate time and month of year (see Figure 2 below), in suitable weather conditions and using nationally recognised survey guidelines / methods where available and working to best practice standards (for guidance visit sources for survey methods at:

www.ieem.net/surveymethods.asp;

- Record species and/or habitats present on site, identifying their numbers/extent and location – both on site and within an appropriate buffer zone around the site boundary;
- Map species distribution and use of the area, site, structure or feature (e.g. for feeding, shelter, breeding);
- Map the habitat types present on site and/or in the surrounding area to be shown on an appropriate scale plan and record extent, area or length. Maps should indicate habitat and wildlife features, and any appropriate target notes, on and off site. Inclusion of photographs is recommended;
- Briefly record species and habitats incidentally encountered as part of the survey as appropriate (for

example, a bat survey should also include any evidence of nesting birds);

- Detail any limiting factors or constraints that may have affected survey work;
- Assess site status against [Wildlife Sites/Site of Importance for Nature Conservation criteria](#)^{cxv};
- Identify ecological networks;
- Identify and describe development impacts likely to harm the species, features used and habitats. This should take account of: direct and indirect effects; short-term and long term impacts; direct and indirect impacts; scale and nature of impacts (set within a local/national context); and impacts during construction and operation.

2.0 Avoidance

2.1 Avoidance measures built into development proposals may remove the need for detailed survey work, the council will seek expert advice from NRW in determining cases when this may be applicable.

2.2 Avoidance measures are those measures that can reasonably be implemented to avoid an offence occurring. As such, these Reasonable Avoidance Measures (RAMs) can often avoid the requirement for a licence. RAMs are the preferred approach when considering design of a scheme. RAMs may include measures ranging from revising the site layout to avoid loss of an important feature, carrying out works

at a time which is less likely to result in disturbance or amending working methods to reduce impacts to an acceptable level.

2.3 If RAMs are practical within a scheme, these must still be detailed in a method statement which is submitted to the Council for approval. Implementation of the measures outlined in the RAMs method statement will likely be a condition of the resulting planning consent.

2.4 If the RAMs avoid all anticipated impacts affecting protected species and their habitats to acceptable levels, a [licence](#) from Natural Resources Wales (NRW) is unlikely to be required. This can often avoid or reduce delays to commencing development and will often reduce costs as well. It is therefore important to create communication channels between your architects (landscape or otherwise) and your chosen suitably qualified ecologist during the master planning process. This will aid in guiding the design and programme at an early enough stage to identify whether RAMs may be a suitable approach.

GUIDANCE NOTE 3: Developers/applicants must provide sufficient evidence to demonstrate that avoidance is not possible before mitigation or compensation is considered as a viable alternative.

3.0 Mitigation

GUIDANCE NOTE 4: Where harm is unavoidable it should be minimised by mitigation measures

3.1 Depending on the scale of development and predicted impacts, it may not be possible to rely on RAMs alone to fully address all potential impacts affecting protected species or their habitats. Early communication across the design team will promote a greater understanding of all the constraints, ecological or otherwise, and allow a balanced approach to the development design.

3.2 Where RAMs cannot satisfactorily avoid impacts affecting protected species, mitigation measures will be required to ensure no harm and that no net loss of their habitats results. The exact measures required will be dependent on the population size, distribution and proximity to works and the scale, timing and duration of the works.

3.3 Mitigation measures to be implemented will be detailed in the method statement and will be licensed activities and must therefore be carried out in strict accordance with the method statement.

3.4 When considering mitigation measures, the following points must be taken into account: unproven mitigation methods will be unacceptable all relevant professionals must be involved in developing mitigation solutions (engineers, for example, may need to work with tree specialists to design hard landscape elements that reduce impacts on trees whilst meeting other performance requirements) measures designed to mitigate one impact, may give rise to other impacts, which need to be taken into account (for example, extensive tree belts for screening may adversely impact on the character of open land and be inappropriate) planting intended to provide

screening may take a considerable amount of time to take effect and realistic growth rates must be taken into account when considering this type of mitigation involving control over construction activities must be considered at this stage, to ensure feasibility.

3.5 Specific requirements for mitigation for species and habitats are outlined within the species specific guidance Sheets and in nationally recognised survey guidelines/methods.

3.6 Taking into account proposed mitigation measures, the Council will assess the significance of residual impacts in terms of relevant planning policies. We strongly advise applicants to do the same at key stages, as the proposals are prepared, to avoid wasting resources preparing unacceptable proposals.

3.7 If a designated site of international importance (Special Area of Conservation) falls within the zone of influence, a separate assessment under the Habitat Regulations 1994 may be required.

3.8 If all avenues for mitigation of landscape and biodiversity resources on the development site have been exhausted, then compensation measures should be considered.

4.0 Compensation

GUIDANCE NOTE 5: Compensation will only be considered where the developer/applicant has satisfactorily demonstrated that avoidance and mitigation are not possible and the compensatory measures result in no net loss of habitat.

General Considerations for Compensation

4.2 Where mitigation cannot satisfactorily reduce all potential impacts to satisfactory levels, additional compensation measures will likely be required. Compensation measures will be requirements of the licence. All compensation measures outlined in the licence must be adhered to; failure to do so constitutes a criminal offence.

4.3 Compensation measures most frequently involve habitat losses. If the loss of habitat cannot be avoided in the proposed development then a compensatory habitat should be created prior to loss, in accordance with the licence requirements. The population size and natural range of protected species must also be maintained, so it will be important to consider the connectivity between retained habitats, new habitats and existing habitats in the wider area.

4.4 Habitat compensation must be provided in advance of site clearance works. This will enable the transfer of protected species to the compensation area(s) before they are disturbed by development.

4.5 A number of options are available in terms of compensation for the loss of habitats;

- On-site re-creation of habitats of equal or greater quantity to those lost;
- Enhancement of poor quality habitat on-site (e.g. species-poor amenity grassland into species-rich grassland);

- Off-site creation and/or enhancement of habitats. This is best undertaken in consultation with the NRW, Bridgend County Borough Council and local Wildlife Trusts;
- Financial contribution towards the creation, enhancement and/or management of off-site habitats.

4.6 In some cases a well thought out scheme can actually increase the level of biodiversity and landscape quality of a site above that prior to development.

On Site Compensation

4.7 When recreating habitats on site it is important to understand the local context in which those habitats are being created. Some habitats are more appropriate to an area than others; similarly creating the right habitat can improve the overall connectivity of the ecological network and vastly increase the wildlife benefit. Advice should be sought from the Council. Guidance on incorporating wildlife habitats through green infrastructure into developments can be found in Section 1 The Green Infrastructure Approach.

4.8 Some compensation measures are simple and can be achieved at little extra cost, the use of native berry bearing bushes for landscaping schemes and gardens in development are a good example and can often improve upon what was there originally, in the case of some urban sites.

4.9 Large losses of habitat will naturally require equally large compensation measures such as new woodland/scrub planting or the creation of new ponds. Expected large losses and subsequent compensation measures should be

considered at the very outset of the project and planning process. This will enable input from a number of sources about the most suitable and effective compensatory measures, it may also identify off-site locations when biodiversity off-setting can be used as a compensation tool. Ideally this would be somewhere nearby with the greatest benefit.

4.10 Often habitat creation is driven by habitat loss, but in some circumstances greater benefit can be gained by creating rarer or more specialist local habitats where the opportunity arises.

4.11 Whilst Bridgend County Borough Council is committed to protecting and enhancing its biodiversity and landscape resource there are likely to be occasions where loss is unavoidable. To avoid incremental loss across the Borough even small amounts of habitat should be replaced, either on-site where the design allows (as part of a Green Infrastructure Approach) or off-site as part of biodiversity off-setting in agreement with a landowner

Off Site compensation

4.12 Replacing habitats off site should always be a last resort and as much natural value as possible should remain on site. This is not only for wildlife but also for people living on or nearby the site. Green infrastructure provides numerous benefits and its removal from a locality could result in a loss of benefit and function for the local community.

4.13 However, Bridgend County Borough Council understand that in some cases the over-riding need for development will conflict with our biodiversity goals and it isn't always practical to completely replace habitats and Green Infrastructure within

the development envelope. To address this any loss must be replaced off-site.

4.13 Replacing habitats off-site should always be a last resort and as much natural value as possible should remain on-site

4.14 All biodiversity off-setting should be undertaken in consultation with NRW, Bridgend County Borough Council and the Wildlife Trusts of South and West Wales.

4.15 There are a number of ways in which this can be achieved

- Biodiversity (creation/enhancement/restoration off-site) in arrangement with a landowner; Off-setting
- Contribution towards habitat creation / enhancement undertaken by other parties, such as the Wildlife Trust of South and West Wales.

4.16 Off-setting will produce the greatest benefit when habitat creation, restoration and/or enhancement is undertaken in close association with existing habitats, the larger the habitat patch and its connectivity to other habitats the better for wildlife.

4.17 Any biodiversity offsetting should be undertaken in consultation with the Council and external partners such as the Wildlife Trust of South and West Wales, Natural Resources Wales.

4.18 There are a number of ways in which this can be achieved:

- Biodiversity off setting (creation/enhancement/restoration off-site) in arrangement with a landowner
- Contribution towards habitat creation/enhancement undertaken by other parties, such as the Wildlife Trust of South and West Wales

4.19 Offsetting will produce the greatest benefit when habitat creation, restoration and/or enhancement is undertaken in close association with existing habitats. **The larger the area of habitat and its connectivity to other habitats the better for wildlife.**

GUIDANCE NOTE 6: Offsets must only be used to compensate for genuinely unavoidable damage.

“The offsetting framework must not encourage a culture of wildlife being ‘disposable, tradable and replaceable’; biodiversity offsetting should be a last resort, after all attempts to avoid and reduce possible impacts have been taken” (National Trust, 2013).

Mitigation and compensation strategy for protected & priority species/ habitats

4.20 To avoid any additional impacts that are identified, changes to the design should first be considered. Only when the avoidance of landscape and biodiversity elements has been exhausted, should consideration be given to ways of mitigating the remaining impacts.

4.21 The local authority will require submitted reports to first demonstrate why avoidance of negative impacts is unfeasible before providing a strategy that details mitigation and compensation proposals

4.22 Development plans must provide the following information:

- a strategy to ensure no overall detrimental affect on the maintenance of habitats and species affected;
- on sites where European protected species or habitats are likely to be affected, a statement to inform the Council's assessment against the 'three tests';
- details of any translocation proposals, including methodology and full assessment and description of proposed receptor site;
- details of habitat/feature creation, restoration and/or enhancement;
- details of any resultant change in the status of priority habitats/species expressed in terms appropriate to the local biodiversity action plan;
- a work schedule (preferably to include maps and a diagram showing phasing/timing of works); post development management and monitoring (either in the report or, preferably, as a standalone management plan).

GUIDANCE NOTE 7: All proposed actions and monitoring must be recorded onto the UK Biodiversity Action Reporting System (BARS) <http://ukbars.defra.gov.uk/>.

5.0 Licencing

5.1 Natural Resources Wales has a standard method of application for licences^{cxvi} in respect of development. Briefly, a licence application requires the developer or landowner who will be undertaking the proposed works to appoint a suitably qualified and experienced ecologist who will be named on the licence application. The appointed ecologist will most likely be responsible for coordinating the licence application, which requires the completion of an application form and a method statement. The method statement must be to the approved Natural Resources Wales format (provided with the licence application information) and will present much the same information as that required by the Council to inform the planning application.

5.2 Once an application is received by the Welsh Government, it will normally take up to 30 days for a determination.

5.3 The licence granted will have conditions attached and will only be valid with the approved method statement. The licence permits only those activities identified in the method statement, so it is important that developers and landowners carefully review and agree the method statement before submission to Welsh Assembly Government.

5.4 The activities and measures detailed in a licence are there to avoid unnecessary harm to the protected species; failure to follow the exact measures in the licence can lead to prosecution. Any activity carried out that deviates significantly from the licensed method statement would be considered a breach of the licence. This includes works carried out in different locations, using different methods or at a different time than that identified in the method statement. Any committed works identified in the method statement, such as inspecting and maintaining exclusion fencing, carrying out monitoring and management works or mitigation measures being supervised on site by the ecologist, which are not implemented as specified in the licensed method statement might also be considered a breach of the licence.

5.5 A breach of the licence is considered to be a criminal offence. Under the current legislation, anyone authorised to carry out activities implemented under the licence may be held responsible for breaches of the licence terms and conditions.

5.6 It is therefore important that all staff and contractors on the site are fully briefed on the licence and its implications for working on site, prior to being allowed to start on site. An up to date copy of the licence and the associated method statement should be held on site at all times, together with any identification sheets that may be helpful to site workers and contact details for the appointed ecologist.

5.7 Licences have an expiry date. If works need to continue beyond the expiry date an extension must be applied for. An extension **cannot** be issued for a licence that has expired,

once a licence has expired then a new licence must be applied for. Depending on the time elapsed from expiry this may or may not require additional surveys to ensure that accurate and up to date information supports the licence application.

6.0 Enhancement

6.1 One of the simplest ways to add biodiversity to a development is to enhance what is already on the site. This could be in the form of [creating a new pond](#)^{cxvii}, tree planting, repairing a hedgerow or changing the management of grassland on a site. On larger developments, sometimes it is possible to create dedicated wildlife areas of grassland, woodland, scrub or even water bodies.

6.2 Large development sites have the opportunity to enhance the surrounding habitats and connecting corridors for flora and fauna and provide natural interest for residents.

6.3 Important Key Points

- A licence must be obtained if protected species are found on or near the site and where proposals would otherwise adversely affect the species of their habitats (NRW will often assist the decision making process to identify whether a licence is necessary)
- A Method Statement prepared by the developer or their chosen ecologist detailing the mitigation and compensatory methods to be employed must be

supplied for a planning application and with the licence application.

- Failure to supply all the required information for a planning application or a licence application may result in delays
- A licence is issued for a specific species only if other protected/licensable species are found during development the appropriate licence must be applied for.
- The Method Statement, once licensed, is a legally binding document and a breach in the methods detailed within constitutes a criminal offence.
- The developer/landowner undertaking the proposals is responsible for the implementation of the method statement and the upkeep of protection/mitigation measures.
- The developer/landowner in occupation of the site is responsible for informing contractors working on or near your site about the requirements of the method statement and protected areas.
- Any persons authorised to undertake works under the licence may be held responsible for breaches of the licence.
- Any changes to the mitigation, even those on an emergency basis must be discussed with NRW and the ecologist responsible. Amendments to the licence will be required to permit significant deviations to the works proposed.

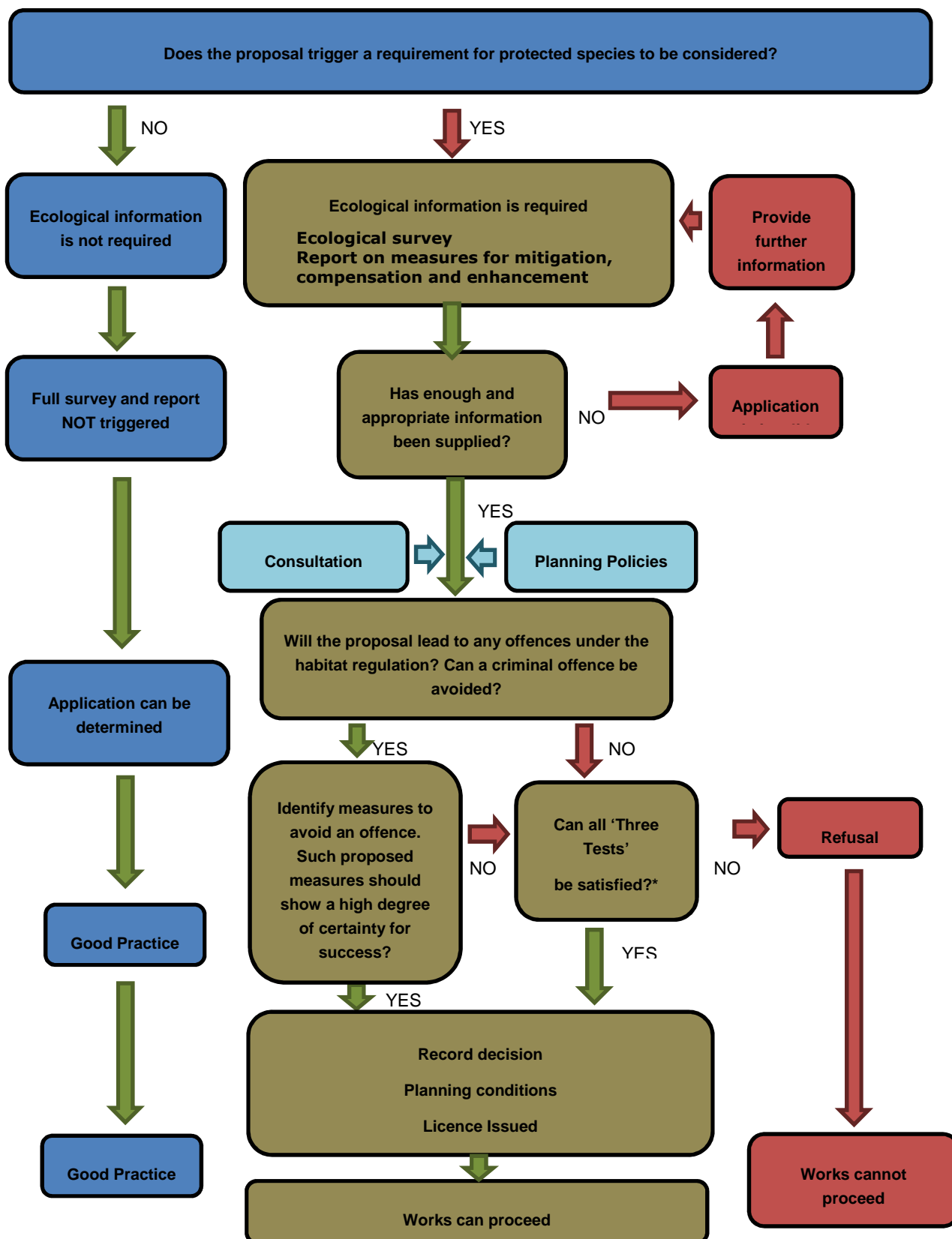
7.0 Exceptions for when a full Species Survey and Assessment may not be required

- a. Following consultation by the applicant at the pre-application stage, the LPA has stated in writing that no

protected species surveys and assessments are required.

- b. If it is clear that no protected species are present, despite the guidance indicating that they are likely, the applicant should provide evidence with the planning application to demonstrate that such species are absent (e.g. this might be in the form of a letter or brief report from a suitably qualified and experienced person, or a relevant local nature conservation organisation).
- c. If it is clear that the development proposal will not affect any protected species present, then only limited information needs to be submitted. This information should, however, (i) demonstrate that there will be no significant affect on any protected species present and (ii) include a statement acknowledging that the applicant is aware that it is a criminal offence to disturb or harm protected species should they subsequently be found or disturbed.
- d. In some situations, it may be appropriate for an applicant to provide a protected species survey and report for only one or a few of the species that are likely to be affected by a particular activity. Applicants should make clear which species are included in the report and which are not because exceptions apply.

Figure 1. Consideration of Protected Species within Developments



Adapted from Bat Conservation Trust's – Bat Surveys: Good Practice Guidelines 2nd Edition

*Three Tests
 No satisfactory alternative
 Over-riding public interest
 Maintains Favourable Conservation Status



Figure 2. Protected Species Survey Schedule

Protected Species: Generic Mitigation and Survey Timings



Species	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Badgers	Blue	Black dots	Black dots	Black dots	Blue	Blue	Work within 30m of a sett & sett closure permitted subject to licence form CCW					Blue
Bats (Hatching shows timing of activity surveys)	Blue	Blue	Blue	Black dots	Black dots	Black dots	Black dots	Black dots	Black dots	Blue	Blue	Blue
Otters	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
Water Vole	Blue	Blue	Blue	Black dots	Black dots	Black dots	Black dots	Black dots	Black dots	Black dots	Blue	Blue
Birds (General/Nesting)	Tree and scrub Clearance Permitted		Black dots	Black dots	Black dots	Black dots	Blue	Blue	Tree and scrub Clearance Permitted			
Great Crested Newt	Blue	Blue	Black dots	Black dots	Black dots	Black dots	Blue	Blue	Blue	Blue	Blue	Blue
Reptiles (Exc. Sand Lizard & Smooth Snake)	Teal	Teal	Teal	Black dots	Black dots	Black dots	Black dots	Black dots	Black dots	Black dots	Black dots	Teal
Protected & Significant Invertebrates	Consult qualified ecologist before carrying out any works in areas identified as supporting these species											
Protected Sites (SSSI, SAC, etc) UK BAP Habitats & Section 74 Habitats of Principle Importance	Teal background											
Important Hedgerows Under The Hedgerow Regulations 1997	Important Hedgerows may only be removed on the issue of Hedgerow Removal Order or Planning approval from the local planning authority											
Fish	Survey timings dependent upon species concerned and information required. Protection of the watercourse is required at all times. Mitigation will need to avoid the breeding season of species											
Ecological Assessment (Phase 1 and protected species)	Survey timings dependent upon species concerned and information required. Protection of the watercourse is required at all times. Mitigation will need to avoid the breeding season of species											

	Statutory Protected Periods: No works at Anytime without a licence
	Advisory Protected Periods: Avoid working during these periods if possible
	Optimal survey period (where this can be defined)

Acknowledgements: Saltys Brewster Ecology, Worcestershire Wildlife Consultancy

NB This is only generic guidance. For further information contact BCBC Countryside Section on 01656 643643, or email talktous@bridgend.gov.uk

Appendix A: Useful Contacts

Bridgend Countryside Team

Countryside and Tourism
Communities Directorate
Bridgend County Borough Council
Civic Offices Level 3
Angel Street
Bridgend, CF31 4WB
01656 643643,
Biodiversity@bridgend.gov.uk

Bridgend Planning Department

Regeneration and Development
Communities Directorate
Bridgend County Borough Council
Civic Offices Level 3
Angel Street
Bridgend, CF31 4WB
01656 643643,
planning@bridgend.co.uk

The Bat Conservation Trust

Bat Conservation Trust
5th floor,
Quadrant House,
250 Kennington Lane,
London, SE11 5RD
Bat Helpline 0845 1300 228 or
enquires@bats.org.uk
www.bats.org.uk [Bat Products for Construction](http://www.bats.org.uk/Bat_Products_for_Construction)

Natural Resources Wales

Species Protection Section
Maes y Ffynnon
Penrhosgarnedd
Bangor
Gwynedd LL57 2DW
0845 1306229
<http://naturalresourceswales.gov.uk>
[Protected species licensing](http://naturalresourceswales.gov.uk/Protected-species-licensing)

Amphibian and Reptile Conservation

655A Christchurch Road,
Boscombe,
Bournemouth,
Dorset
BH1 4AP
01202 391319
enquiries@arc-trust.org

Chartered Institute of Ecology and Environmental Management (CIEEM)

43 Southgate Street
Winchester
Hampshire
SO23 9EH
01962 868626
enquiries@cieem.net
<http://www.cieem.net/>

The Wildlife Trust of South and West Wales

The Nature Centre
Fountain Road
Tondu
Bridgend
CF32 0EH
01656 724100
www.welshwildlife.org

South East Wales Biodiversity Records Centre (SEWBRcC),

13 St Andrews Crescent,
Cardiff,
CF10 3DB
029 2064 1110
info@sewbrec.org.uk

APPENDIX B: GREEN INFRASTRUCTURE APPROACH CASE STUDIES

CASE STUDY 1: PENCOED BUSINESS CENTRE

The site is located at the edge of town and the proposals provide a smooth transition from urban development to countryside by utilising the landscape structure originally created for the technology park.

Strategic links to the surrounding area to ensure very good connectivity are also a central part of the proposal.



The proposals are designed to offer businesses a sustainable working environment in a **park setting**.

The existing waterscape and landscape features formed a **positive 'starting point'** for the GI proposals with the aim of providing a variety of open spaces to cater for a range of employee needs.

The premise of providing a **healthy work** environment is also at the core of the design rationale, with the opportunity to create 'break out' spaces from the controlled office environments for relaxation and exercise during breaks.

The redevelopment proposals for the former Sony manufacturing site in Pencoed were prepared on behalf of Macquarie Global Property Advisors (MGPA). The site forms part of the Pencoed Technology Park and is occupied by a large manufacturing building and ancillary buildings and extensive, related car parking areas.

APPENDIX B: GREEN INFRASTRUCTURE APPROACH CASE STUDIES**CASE STUDY 1: PENCOED BUSINESS CENTRE**

The following features form part of the GI network:

The existing retained trees and planting provide a strong framework for the layout. The proposals create a 'green loop' providing 'threaded' routes through the existing landscape and around water features for employees to stroll or run around. Spaces along the route incorporate outdoor gym equipment and markers to indicate distances run. The green infrastructure network provides green links for safe pedestrian and cycle movement across the business park.

Contemplation zones are located within quieter parts of the 'green loop' for employees to have access to peaceful spaces within a rich, biodiverse landscaped setting. Benches would be orientated to provide visual interest to those sitting on them.

The proposals integrate the existing wildlife features to enhance biodiversity. Protecting and enhancing the ecological value of the site is fundamental to the development of the scheme. Key elements include the retention of existing hedgerows and trees to ensure the preservation of existing habitats and the creation of new ones. Landscaping materials will be selected on the basis of low embodied energy and would be locally sourced. Long term management and maintenance will be considered including minimal mowing regimes, avoiding pesticides and sprays, encouraging natural pest control, and encouraging minimal use of water and fertilizer.

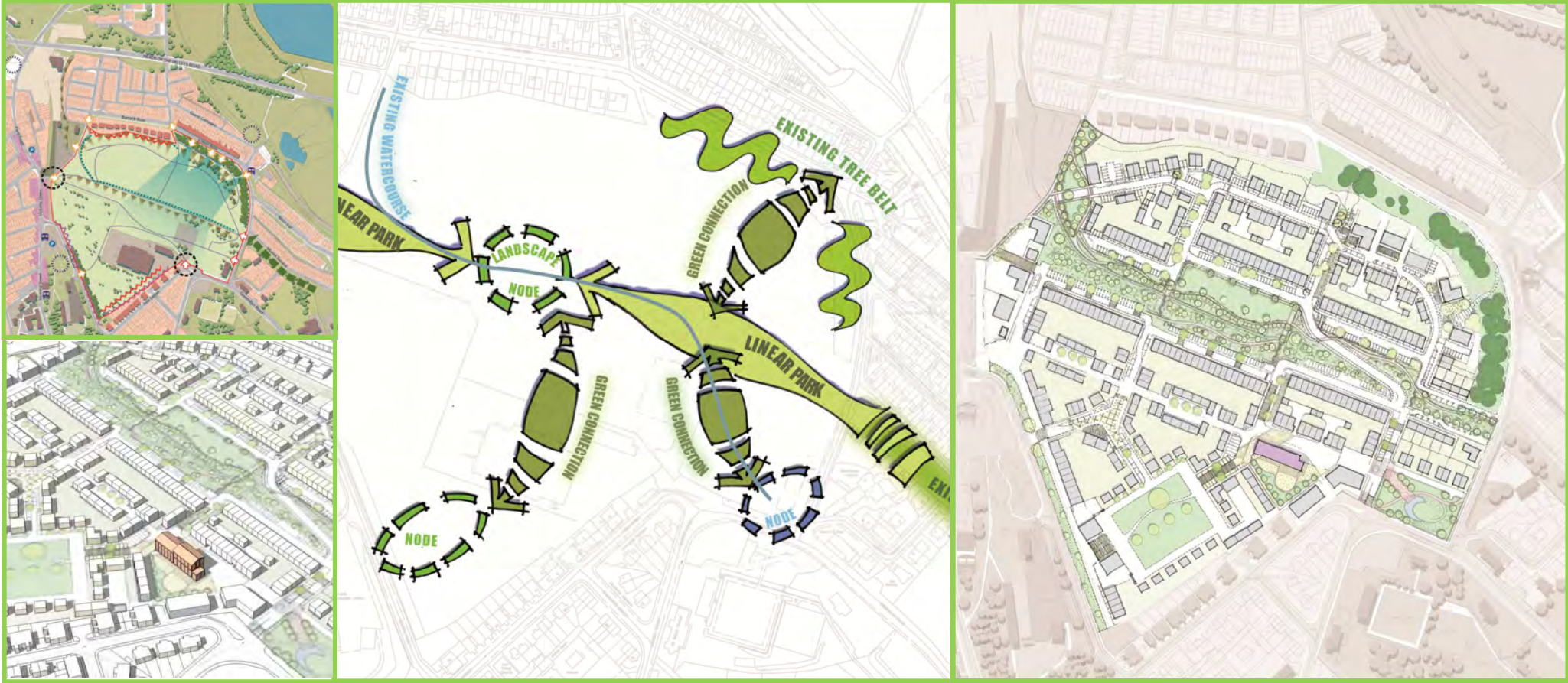
Flood risk and water quality management will be achieved through the integral design of a Sustainable Drainage System, which is designed to manage surface water by retention and natural infiltration. As part of this system are a series of linked linear ponds which also provide visual interest. The surface water drainage from impermeable areas of development will be controlled and managed within the GI network to reduce the risk of flooding and control pollutants whilst maximising the principles of more natural drainage mechanisms across the site.

The rectilinear structure of the layout in place of the current large parking areas is formed by creating green links in an east-west and north-south direction. This complements the rectilinear form of the retained buildings and provides a strong landscaped setting for new buildings.

The orientation of buildings on the site complements the green infrastructure approach, making a significant difference to the energy demands and quality of life for new occupiers of the business park. The layout of the buildings also minimises the wind chill factor for those using the green links. Parking blocks are subdivided with structural landscaping to soften impact of the parking areas, designed into the GI network.

APPENDIX B: GREEN INFRASTRUCTURE APPROACH CASE STUDIES

CASE STUDY 2: PROJECT HEARTLAND: DOWLAIS



A core part of the vision for the regeneration of the site is to create a sustainable development with green infrastructure creation at the heart of the scheme. The proposal introduces green space and creates green links on the former industrial, brownfield site.

The GI network is based on existing landscape features, including mature trees and a watercourse, and reflects desire lines through the site connecting to offsite footways to encourage walking and cycling.

The redevelopment proposals for the former Dowlais Foundry Site were prepared on behalf of Methyr Tydfil Borough Council and the Welsh Assembly Government.

APPENDIX B: GREEN INFRASTRUCTURE APPROACH CASE STUDIES**CASE STUDY 2: PROJECT HEARTLAND: DOWLAIS**

The key features of the GI network are:

A linear park provides recreational amenity to local residents at the heart of the proposal. This includes the existing watercourse retained as part of the SUDs proposal, alongside the retention of the existing tree belt within public open space;

An ecological habitat is proposed to enhance biodiversity, based around the existing watercourse. This linear habitat is connected to existing and proposed landscape features through a series of 'green connections' to aid wildlife movement;

'Green connections' are an integral part of a comprehensive movement strategy to create attractive and direct pedestrian and cycle routes. Parking bays form an interface between dwellings and mixed uses and the green spaces, with planting between bays to soften the visual impact of parked cars;

An important listed building, reflecting the rich history of the site, is retained within a public square and formal green space, connected to the wider GI network via 'green streets' and spaces;

Dwellings front the green links and corridors, enhancing the security and safety for pedestrians and cyclists with overlooking, and encouraging community use of the spaces and a sense of ownership;

Consistent build lines and rectilinear form defines the shape of the green spaces and ensures a strong sense of enclosure, with clear definition between public and private space.

APPENDIX B: GREEN INFRASTRUCTURE APPROACH CASE STUDIES

CASE STUDY 3: SENGHENYDD SAW MILL REGENERATION, CAERPHILLY

A core part of the vision for the regeneration of the site is to create a sustainable development with green infrastructure creation at the heart of the scheme.

The proposal introduces green space and creates green links on the former industrial, brownfield site.



The GI network is based on existing landscape features, including mature trees and a watercourse, and reflects desire lines through the site connecting to offsite footways to encourage walking and cycling.

APPENDIX B: GREEN INFRASTRUCTURE APPROACH CASE STUDIES**CASE STUDY 3: SENGHENYDD SAW MILL REGENERATION, CAERPHILLY**

Key features incorporated within the GI network include:

A central park, integrating the wooded embankment as part of the liner GI network. This formal green open space will provide panoramic views along the valley. It will be enclosed by built form with frontages and incorporate grass areas with seating and formal planting. Proposals will also include a change of surface material to the street around the park to encourage lower traffic speeds;

A green space in the northwestern corner of the site will incorporate informal planting and will contain a Local Equipped Area of Play. This Local Equipped Area of Play will cater for young children. This also forms part of the GI network;

The southern linear open space corridor, incorporating the wooded embankment, will include an informal open space located at the top of the bank. This space provides south facing views towards the village and surrounding hills along the valley. The orchard will provide opportunities for local food production for use by the whole community;

The eastern sloping edge bank will be retained with the associated tree planting. It will be enhanced with additional planting where appropriate and a barrier provided at the top for the safety of users.

A series of linear streets are proposed with street tree planting to create green links between the main open spaces. There are also links to the open countryside beyond the site boundary, also connected into the GI network.

Attenuation basins will be incorporated to attenuate water run-off from the site along the southern linear open space corridor as an integral part of the GI network.

References

ⁱ http://www1.bridgend.gov.uk/media/174812/ldp_text.pdf

ⁱⁱ http://www.legislation.gov.uk/ukpga/2008/27/pdfs/ukpga_20080027_en.pdf

ⁱⁱⁱ <http://wales.gov.uk/docs/desh/publications/121107ppwedition5en.pdf>

^{iv} <http://wales.gov.uk/topics/environmentcountryside/consmanagement/nef/?jsessionid=VNxjPXcPLWBmcMfn2TTLkkwxBWzRTG7n3vyp337yCm8JwL2kQzHQ!929540729?lang=en>

^v <http://wales.gov.uk/docs/desh/policy/100730tan5en.pdf>

^{vi} <http://wales.gov.uk/docs/desh/publications/040701tan15en.pdf>

^{vii} <http://wales.gov.uk/docs/desh/policy/090206tan16en.pdf>

^{viii} <http://wales.gov.uk/docs/desh/publications/100609tan22weben.pdf>

^{ix} <http://www.greeninfrastructurenw.co.uk/html/index.php?page=resources&NorthWestRegion=true>

^x CABE (2005). *Does money grow on trees?* Commission for Architecture and the Built Environment, London.

^{xi} <http://www.degroenestad.nl/Media/download/7074/Green+City+Guidelines.pdf>

^{xii} <http://uknea.unep-wcmc.org/LinkClick.aspx?fileticket=DUScBikyJQQ%3d&tabid=82>

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