

# Cardiff Green Infrastructure SPG

## Ecology and Biodiversity

### Technical Guidance Note (TGN)



**Consultation Draft**

June 2017

# **Cardiff Green Infrastructure SPG: Ecology & Biodiversity Technical Guidance Note Consultation Draft – June 2017**

This document is available in Welsh / Mae'r ddogfen hon ar gael yn Gymraeg

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## Part 1

### 1.1 Introduction

This Technical Guidance Note (TGN) forms part of the Green Infrastructure Supplementary Planning Guidance, which supplements policies in the adopted Cardiff Local Development Plan (LDP).

Welsh Government supports the use of Supplementary Guidance (SPG) to set out detailed guidance on the way in which development plan policies will be applied in particular circumstances or areas. SPG must be consistent with development plan policies and national planning policy guidance. SPG helps to ensure certain policies and proposals are better understood and applied more effectively. They do not have the same status as the adopted development plan but are a material consideration in the determination of planning applications. Policies in the LDP to which this TGN relates are identified in the following sections:-

- Part 1 sets out how the Council will implement development plan policies relating to ecology and biodiversity, including how it will assess planning applications which could have an impact on ecological and biodiversity interests, the information applicants will need to provide to enable this, and the legislative framework within which the Council must operate.
- Part 2 sets out the biodiversity/nature conservation resource of Cardiff, including designated sites and biodiversity priorities.

**Biodiversity** is defined by the Convention on Biological Diversity as *“the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems”*.

For the purposes of this document, ‘biodiversity’ (short for biological diversity) is taken to have the same meaning and be interchangeable with terms such as ‘nature’ and ‘wildlife’.

Further guidance on how biodiversity should be considered in the planning system are given on the Biodiversity Planning Toolkit website:-  
<http://www.biodiversityplanningtoolkit.com/default.asp>

## 1.2 Context in relation to Green Infrastructure SPG

The Ecology & Biodiversity TGN forms part of the Green Infrastructure SPG, alongside other subject areas such as parks and public open spaces, access and public rights of way, trees, and landscaping and soils. A Sustainable Drainage Systems (SuDS) SPG will also relate to the Green Infrastructure SPG. The Ecology & Biodiversity TGN should be seen in the context of the overarching Green Infrastructure SPG, and of the other TGNs which are part of the Green Infrastructure SPG.

Green Infrastructure is defined as:-

*'The multi-functional, connected green spaces that make the best of land - providing green open space for all, at the same time helping wildlife to flourish, and delivering a wide range of economic, health and community benefits. This is as important to the city as its 'grey' infrastructure of roads, buildings and power lines, and helps to address many of the social and environmental issues linked to urban life.'*

Green infrastructure represents the biological and hydrological element of an ecosystem, which along with other elements such as geology, topography, climate and the weather, combine to provide the ecosystem services upon which our lives depend.

This direct link between biodiversity and ecosystem services, via green infrastructure, has gained widespread recognition, for example:-

- According to the General Assembly of the United Nations, biodiversity *'underpins ecosystem functioning and the provision of ecosystem services'*.

- According to the Environment (Wales) Bill 2015 Explanatory Memorandum, *'Biodiversity drives the functioning of our ecosystems which in turn deliver a multitude of essential ecosystem services to society. Changes in the distribution and abundance of plants, animals, and microbes affect ecosystem functions and the capacity of those functions to deliver ecosystem services. Loss of species from ecosystems affect their ability to resist invasion by other species, affect production and nutrient cycling, and affect the reliability and stability of ecosystems. Therefore, biodiversity is essential to sustaining ecosystems that provide the vital services our lives depend on. Where biodiversity is lost and perhaps never fully recovered, it affects the capacity of ecosystems to adapt to changes and disturbances.'*

Maintaining and enhancing the diversity of biological organisms is a key component of both the integrated approach and of the sustainable management of natural resources. The variability of our biological resources is a vital element in ensuring that our ecosystems are healthy and functioning, and that their integrity is maintained and enhanced such that they continue to provide the ecosystem services upon which we all rely.

In other words, biodiversity is an essential component of green infrastructure, and in turn, green infrastructure provides essential support for biodiversity.

The LDP ecology, biodiversity and green infrastructure policies are intended to maintain and enhance biodiversity and green infrastructure, such that ecosystems are supported in their delivery of ecosystem services, in accordance with national and international strategies.

### **1.3 Context in Relation to Policy and Legislation**

#### **1.3.1 International Nature Conservation Policy**

International nature conservation policies, set out below, provide the context for Wales' national nature conservation policies, which in turn must be reflected in Cardiff's local policies.

#### **Convention on Biological Diversity (CBD)**

The United Nations Convention on Biological Diversity (the 'CBD'), to which the UK government is a signatory, has produced a Strategic Plan for 2011-2020. The vision of this strategic plan is:-

*“By 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people.”*

A series of Biodiversity Targets, known as the 'Aichi Targets' are set out by the CBD. There are grouped into 5 strategic goals thus:-

Strategic Goal A: Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society

Strategic Goal B: Reduce the direct pressures on biodiversity and promote sustainable use

Strategic Goal C: To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity

Strategic Goal D: Enhance the benefits to all from biodiversity and ecosystem services

Strategic Goal E: Enhance implementation through participatory planning, knowledge management and capacity building

In addition, the CBD considers the ecosystem approach, describing it as *'a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way'*, which is widely recognised as international best practice for addressing the decline in biodiversity. Through the concept of sustainable management, the Environment (Wales) Act 2016 puts the ecosystem approach on a statutory basis, drawing on the 12 principles established by the CBD.

### **European Union Biodiversity Strategy (EUBS)**

The European Union Biodiversity Strategy is aimed at reversing biodiversity loss and speeding up the EU's transition towards a resource-efficient and green economy. The 2020 headline target is one of *'Halting the loss of biodiversity and the degradation of ecosystem services in the EU by 2020, and restoring them in so far as feasible, while stepping up the EU contribution to averting global biodiversity loss'*.

The EUBS document places a new focus on ecosystem services, so in addition to halting the loss of biodiversity, the new strategy also highlights, for the first time, the immense value of ecosystem services and the urgent need to maintain and restore these for the benefit of both nature and society.

### **1.3.2 UK Nature Conservation Policy**

#### **The UK Post-2010 Biodiversity Framework**

The UK Post-2010 Biodiversity Framework, published in July 2012, succeeds the UK Biodiversity Action Plan (UKBAP) and the 'Conserving Biodiversity – the UK Approach' document. It is the result of a change in strategic thinking following the publication of the CBD's 'Strategic Plan for Biodiversity 2011–2020' and its 20 'Aichi Biodiversity Targets', at Nagoya, Japan in October 2010, together with the launch of the new EU Biodiversity Strategy (EUBS) in May 2011. The Framework demonstrates how the work of the four countries and the UK contributes to achieving the Aichi Biodiversity

Targets, and identifies the activities required to complement the country biodiversity strategies in achieving the targets.

### **1.3.3 Nature Conservation Policy in Wales**

#### **The Environment Strategy for Wales**

The Environment Strategy for Wales 2006 is the Welsh Assembly Government's long term strategy for the environment of Wales, setting the strategic direction up to 2026. It is supported by a series of regularly updated action plans and a policy map setting out the key actions that will be taken to deliver the outcomes in the Strategy. The purpose of the Strategy is to provide the framework within which to achieve an environment which is clean, healthy, biologically diverse and valued by the people of Wales. By 2026, the ambition is to see Wales' distinctive environment thriving and contributing to the economic and social wellbeing and health of all of the people of Wales. The Environment Strategy for Wales is currently being reviewed in the light of the Natural Resource Management Approach, below.

#### **Natural Resource Management Approach**

Welsh Government strategy for management of natural resources involves taking an integrated approach to ensure that natural resources are managed sustainably.

*'Natural resources cover much more than the "environment". They supply everything from the air we breathe to the food we eat; from the land we develop to the water we use to cool our heavy industry.*

*They are as fundamental to the success of our economy and the wellbeing of our people as they are to quality of the natural environment. Demands on our natural resources are increasing so we need to find a way to work together to build healthier relationships with our environment. By managing our natural*

*resources sustainably, we can create jobs and support sustainable housing and infrastructure to help our economy thrive.*

*Our aim is to sustainably manage our natural resources in a way and at a rate that can maintain and enhance the resilience of our ecosystems whilst meeting the needs of present generations without compromising the ability of future generations to meet their needs. Our overall aim is to ensure that Wales has increasingly resilient and diverse ecosystems that deliver economic, environmental and social benefits.'*

(<http://gov.wales/topics/environmentcountryside/consmanagement/natural-resources-management/?lang=en> accessed November 2016)

## **Nature Recovery Plan**

Welsh Government has produced a Nature Recovery Plan which is aimed at addressing the underlying causes of biodiversity loss by putting nature at the heart of its decision-making, by increasing the resilience of Wales' natural systems (ecosystems), and by taking specific action for habitats and species. It sets out how Wales will deliver the commitments of the EU Biodiversity Strategy and the UN Convention on Biological Diversity to halt the decline in our biodiversity by 2020 and then reverse that decline.

The plan builds on Wales' ground-breaking new legislative framework. The Well-being of Future Generations (Wales) Act 2015 challenges us all to look at the long-term impacts of decisions and to work to meet our seven Well-being Goals, including increasing the resilience of our ecosystems, while the Environment (Wales) Act 2016 enshrines the principles of the UN's Convention on Biological Diversity in law by adopting an ecosystems approach to how we manage our natural resources in future.

The Nature Recovery Plan will also set out the governance structure for the coordination of local nature-conservation action in Wales. This will replace the Local Biodiversity Action Plan process.

### 1.3.4 National Planning Policy

The Welsh Government's aims and objectives for nature conservation are set out in Planning Policy Wales (PPW – 9<sup>th</sup> Edition November 2016)) Chapter 5 and supported by the advice in Technical Advice Note (TAN) 5. It is clear from these policy documents that the protection and enhancement of landscapes, habitats and species are among the Welsh Government's priorities. **Policy 5.2.8** of PPW sets out how the planning system has an important part to play in meeting biodiversity objectives by promoting approaches to development which create new opportunities to enhance biodiversity, prevent biodiversity losses, or compensate for losses where damage is unavoidable. Local planning authorities must address biodiversity issues, insofar as they relate to land use planning, in both development plans and development management decisions. Local planning authorities should consider how they might accommodate a response to climate change as part of their overall approach towards meeting biodiversity objectives. Ways in which the adaptation needs of biodiversity could be considered include identifying the scope for minimising or reversing the fragmentation of habitats and improving habitat connectivity through the promotion of wildlife corridors. Local planning authorities should ensure that development minimises impact within areas identified as important for the ability of species to adapt and/or to move to more suitable habitats.

**Policy 5.5.11** of PPW 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. Local planning authorities should advise anyone submitting a planning application that they must conform to any statutory species protection provisions affecting the site concerned, and should consult CCW (now incorporated into Natural Resources Wales) before granting permission. An ecological survey to confirm whether a protected species is present and an assessment of the likely impact of the development on a protected species may be required in order to inform the planning decision.

**Policy 5.5.12** relates to European Protected Species, and reminds us that developments are always subject to the legislation covering European protected species regardless of whether or not they are within a designated site. New developments for which development works would contravene the protection afforded to European Protected Species require derogations from the provisions of the Habitats Directive. A derogation may only be authorised if there is no satisfactory alternative and if the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in its natural range. The development works to be authorised must be for the purposes of preserving '*public health or 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*'. Derogations are granted by a licence issued by Natural Resources Wales. Local planning authorities are under a duty to have regard to the requirements of the Habitats Directive in exercising their functions. **To avoid developments with planning permission subsequently not being granted derogations in relation to European protected species, planning authorities should take the above three requirements for derogation into account when considering development proposals where a European protected species is present.**

Planning Policy Wales is supported by Technical Advice Note (TAN) 5 which provides advice about how the land use planning system should contribute to protecting and enhancing biodiversity and geological conservation.

The **Development Management Manual 2016** also considers protected species as a material planning consideration. Section 9.4.13 states that the presence of a protected species is a material consideration when an LPA is considering a development proposal that, if carried out, would be likely to result in disturbance or harm to the species or its habitat. Section 9.4.14 adds that it is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before the planning permission is

granted, otherwise all relevant material considerations may not have been addressed in making the decision.

### **1.3.5 Local Planning Policy**

#### **Local Development Plan Policies**

The following are excerpts from the main LDP policies which relate directly to ecology and biodiversity.

#### **KP16: Green Infrastructure**

Cardiff's distinctive natural heritage provides a network of green infrastructure which will be protected, enhanced, and managed to ensure the integrity and connectivity of this multi-functional green resource is maintained.

Protection and conservation of natural heritage network needs to be reconciled with the benefits of development. Proposed development should therefore demonstrate how green infrastructure has been considered and integrated into the proposals. If development results in overall loss of green infrastructure, appropriate compensation will be required.

#### **EN5: Designated Sites**

Development will not be permitted that would cause unacceptable harm to sites of international or national nature conservation importance.

Development proposals that would affect locally designated sites of nature conservation and geological importance should maintain or enhance the nature conservation and/or geological importance of the designation. Where this is not the case and the need for the development outweighs the nature conservation importance of the site, it should be demonstrated that there is no satisfactory

alternative location for the development which avoids nature conservation impacts, and compensation measures designed to ensure that there is no reduction in the overall nature conservation value of the area or feature.

#### **EN6: Ecological Networks and Features of Importance for Biodiversity**

Development will only be permitted if it does not cause unacceptable harm to:

- (i) Landscape features of importance for wild flora and fauna, including wildlife corridors and 'stepping stones' which enable the dispersal and functioning of protected and priority species;
- (ii) Networks of importance for landscape or nature conservation.

Particular priority will be given to the protection, enlargement, connectivity and management of the overall nature of semi natural habitats.

Where this is not the case and the need for the development outweighs the nature conservation importance of the site, it should be demonstrated that there is no satisfactory alternative location for the development and compensatory provision will be made of comparable ecological value to that lost as a result of the development.

#### **EN7: Priority Habitats and Species**

Development proposals that would have a significant adverse effect on the continued viability of habitats and species which are legally protected or which are identified as priorities in the UK or Local Biodiversity Action Plan will only be permitted where:

- i. The need for development outweighs the nature conservation importance of the site;
- ii. The developer demonstrates that there is no satisfactory alternative location for the development which avoids nature conservation impacts; and

iii. Effective mitigation measures are provided by the developer.

Where harm is unavoidable it should be minimised by effective mitigation to ensure that there is no reduction in the overall nature conservation value of the area. Where this is not possible, compensation measures designed to conserve, enhance, manage and, where appropriate, restore natural habitats and species should be provided.

### **Other relevant policies**

The following policies contain elements which relate to green infrastructure and/or Biodiversity, and so may be invoked where a development proposal may impact upon nature conservation interests.

#### **KP3(A): Green Wedge**

In order to strategically manage the urban form of Cardiff and to protect the setting of the urban area, a Green Wedge is proposed on land North of the M4 as shown on the Proposals Map. Within this area development which prejudices the open nature of this land will not be permitted. Positive biodiversity, landscape, climate change mitigation and informal recreational management and enhancement measures will be encouraged in this area to further enhance the long term role of the area as a key natural resource benefitting the city.

#### **KP7: Planning Obligations**

The Planning Obligations Supplementary Planning Guidance (SPG) sets out the Council's approach to planning obligations when considering applications for development in Cardiff. It also sets out the mechanisms for securing survey, assessment, mitigation, compensation and enhancement of ecological and biodiversity interests.

#### **KP15: Climate Change**

To mitigate against the effects of climate change and adapt to its impacts, development proposals should take into account the following factors:

- i. Reducing carbon emissions;
- ii. Protecting and increasing carbon sinks;
- iii. Adapting to the implications of climate change at both a strategic and detailed design level;
- iv. Promoting energy efficiency and increasing the supply of renewable energy;
- v. Avoiding areas susceptible to flood risk in the first instance in accordance with the sequential approach set out in national guidance;
- vi. Preventing development that increases flood risk.

#### **KP 18: Natural Resources**

In the interests of the long-term sustainable development of Cardiff, development proposals must take full account of the need to minimise impacts on the city's natural resources and minimise pollution.

#### **EN4: River Corridors**

The natural heritage, character and other key features of Cardiff's river corridors will be protected, promoted and enhanced, together with facilitating sustainable access and recreation.

#### **EN8: Trees, Woodlands and Hedgerows**

Development will not be permitted that would cause unacceptable harm to trees, woodlands and hedgerows of significant public amenity, natural or cultural heritage value, or that contribute significantly to mitigating the effects of climate change.

#### **1.3.6 Legislation**

Certain pieces of nature conservation legislation place statutory duties upon Cardiff Council, including its planning function. Implementation of the nature conservation policies in the LDP will ensure compliance with these statutory duties.

### **Conservation of Habitats and Species Regulations 2010 (as amended).**

This legislation is often referred to as the 'Habitats Regulations' and implements the EU Council Directive 92/43/EEC of 21 May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora, and the 2009/147/EC Directive of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds. These are known as the 'Habitats Directive' and the 'new Wild Birds Directive', respectively.

The main link between this legislation and the planning system is Regulation 9(3), which states that *'Without prejudice to the preceding provisions, a competent authority, in exercising any of their functions, must have regard to the requirements of the Directives so far as they may be affected by the exercise of those functions.'* This means that as part of any Cardiff Council function, including its planning function, it must be ensured that the protection afforded to European Protected Species (EPS) or habitats, is in place.

Specific procedures relating to EPS and European designated sites are set out in more detail in relevant sections of this TGN.

### **Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000 and the Natural Environment and Rural Communities Act 2006)**

The Wildlife and Countryside Act is the main legislation in the UK which sets out protection of species and designation of Sites of Special Scientific Interest (SSSIs). It also considers invasive non-native species, and control of hunting and trapping wild animals.

Specific procedures relating to UK protected species and SSSIs are set out in more detail in relevant sections of this SPG.

### **Natural Environment and Rural Communities (NERC) Act 2006**

The Act is primarily intended to implement key aspects of the Government's Rural Strategy published in July 2004; it also addresses a wider range of issues relating broadly to the natural environment. The Act also makes provision in respect of biodiversity, pesticides harmful to wildlife and the protection of birds, and in respect of invasive non-native species. It alters enforcement powers in connection with wildlife protection, and extends time limits for prosecuting certain wildlife offences. It addresses a small number of gaps and uncertainties which have been identified in relation to the law on sites of special scientific interest. It also amends the functions and constitution of National Park authorities, the functions of the Broads Authority and the law on rights of way (DEFRA website September 2016).

### **Environment (Wales) Act 2016**

The Environment (Wales) Act became law in 2016, and includes, among other things, a new Biodiversity and Resilience of Ecosystems Duty:-

*‘(1) A public authority must seek to maintain and enhance biodiversity in the exercise of functions in relation to Wales, and in so doing promote the resilience of ecosystems, so far as consistent with the proper exercise of those functions.  
(2) In complying with subsection (1), a public authority must take account of the resilience of ecosystems, in particular the following aspects—*

- (a) diversity between and within ecosystems;*
- (b) the connections between and within ecosystems;*
- (c) the scale of ecosystems;*
- (d) the condition of ecosystems;*
- (e) the adaptability of ecosystems.’*

A further duty is that public bodies such as Cardiff Council will have to publish a report on how they intend to comply with the Biodiversity and Resilience of Ecosystems Duty before the end of 2017. By the end of 2019, and before the end of every third year after 2019, Cardiff Council will have to report on how it has achieved compliance with that duty.

These measures, together with those in the Well-being of Future Generations Act below, are intended to ensure that the Ecosystem Approach is put on a statutory footing in Wales.

Natural Resources Wales (NRW) has a duty set out in this Act to prepare and publish statements (“area statements”) for the areas of Wales that it considers appropriate for the purpose of facilitating the implementation of the national natural resources policy. Each area statement must—

- (a) specify the priorities, risks and opportunities for sustainable management of natural resources which NRW considers need to be addressed in the area, and
- (b) state how NRW proposes to address them.

NRW must—

- (a) take such steps as appear to it to be reasonably practicable to implement an area statement, and
- (b) encourage others to take such steps.

The Welsh Ministers may direct a public body, such as Cardiff Council, to take such steps as appear to them to be reasonably practicable to address the matters specified in an area statement provided by NRW.

Specific procedures relating to Environment (Wales) Act Section 7 species are set out in more detail in relevant sections of this TGN.

## **Well-being of Future Generations (Wales) Act 2015**

Public bodies such as Cardiff Council must set objectives which contribute to the Welsh Government's seven Well-being Goals. The most relevant goal (the 'Resilience' Goal) in the context of this TGN is:-

*'A nation which maintains and enhances a biodiverse natural environment with healthy functioning ecosystems that support social, economic and ecological resilience and the capacity to adapt to change (for example climate change).'*

Those objectives may include measures to ensure that the planning system in Cardiff contributes to the Resilience Goal.

## **Crime and Disorder Act 1998**

Section 17 (1) of this Act states that *'Without prejudice to any other obligation imposed on it, it shall be the duty of each authority to which this section applies to exercise its various functions with due regard to the likely effect of the exercise of those functions on, and the need to do all that it reasonably can to prevent, crime and disorder in its area.'*

Crime in this instance can be taken to include wildlife crime, such as offences against protected species. This being the case, the Council's planning function, including the attachment of conditions which would prevent wildlife crime taking place, must be compliant with this legislation.

## **Other Legislation**

There are other pieces of legislation which relate to nature conservation, but which do not directly impose duties upon Cardiff Council. Nevertheless, Cardiff Council expects those proposing development to comply with this legislation, and will seek to

ensure this, where appropriate, in discharge of its duties under the Environment (Wales) Act, as set out above.

This legislation includes:-

- Protection of Badgers Act 1992
- Deer Act 1991
- Wild Mammals (Protection) Act 1996

## **1.4 General Procedure for Assessing Planning Applications in Relation To LDP Policies**

### **1.4.1 Ecological Impact Assessment (EclA) Procedure**

In accordance with Policies **EN5**, **EN6** and **EN7**, the impact of a development proposal upon nature conservation interests must be assessed prior to determination of an application, as those interests, and the impacts upon them, may be a material consideration.

An Ecological Impact Assessment (EclA) is the normal procedure by which impacts upon nature conservation interests on a site are assessed. An EclA may relate to a number of habitats, species, ecological features or ecosystems present at a site.

Section 6.2.2 of TAN 5 advises that *'it is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before the planning permission is granted, otherwise all relevant material considerations may not have been addressed in making the decision. It is considered best practice that such a survey is carried out before planning application is submitted. Planning permission should not be granted subject to a condition that protected species surveys are carried out and, in the event that protected species are found to be present, mitigation measures are submitted for approval. However, bearing in mind the delay and cost that may be involved, developers should not be required to undertake surveys for protected species unless there is a reasonable likelihood of them being present. However, the level of likelihood that should trigger a requirement for developers to undertake surveys should be low where there is a possibility that European protected species might be present.'*

This is re-iterated in the **Development Management Manual 2016** which states at section 9.4.14 that it is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established

before the planning permission is granted, otherwise all relevant material considerations may not have been addressed in making the decision.

BS42020 further advises that ideally, '*...all necessary detailed survey information should be part of the application it is first registered with the decision-maker*'. (Section 6.4.5).

Cardiff Council expects that all EclA, whether as a standalone assessment or as part of a wider Environmental Impact Assessment (EIA), must be carried out in accordance with the most recent edition of the '*Guidelines for Ecological Impact Assessment in the UK and Ireland*', published by the Chartered Institute of Ecology and Environmental Management (CIEEM). Currently the most recent edition is the Second Edition published in January 2016, and these are referred to as the '2016 EclA Guidelines'.

In addition, Cardiff Council expects that all EclA should conform to the British Standard BS42020:2013, entitled '*Biodiversity – Code of Practice for Planning and Development*'. This document advises that any assessment should be based on objective professional judgement informed by sound scientific method and evidence and be clearly justified through documented reasoning (BS42020 section 4.4.1).

Survey methodologies should accord with those set out in the CIEEM Sources of Survey Methods (SoSM) web pages, or the IEEM 'Guidance on Survey Methodology' document.

Where an EclA has been submitted, or the need for an EclA has been invoked, the County Ecologist should be consulted on that planning application.

The need for an EclA, and the scope of any ecological assessments, should be agreed with the County Ecologist at the earliest possible stage in the planning process. This is because surveys for certain species and/or habitats can often only take place at certain times of year, and this may lead to significant delays in the planning process if the need for a survey is identified late in that process.

Mindful of the costs and delays that the requirement for species and habitat surveys may cause, surveys will only be required where:-

- There are insufficient existing survey data, or
- The presence of a species or its usage of a site cannot reasonably be assumed, or
- Any eventual mitigation of the impacts of a project upon a given species would be dependent upon the outcome of a survey.

An approach based on assumed presence, otherwise referred to as 'worst case scenario' or 'minimal survey approach' should not be considered as the default standard but should be considered only in exceptional cases. If this approach is taken, planning applicants should be explicitly informed that (a) additional surveys may be necessary at the European Protected Species (EPS) licensing stage, if an EPS licence is necessary, and that (b) they may be providing more mitigation than would otherwise be required for the actual impact upon the species concerned. Because of the number of different species in Cardiff, and their complex lifestyles requiring a number of different roosting conditions, it is generally unlikely that an assumed presence approach will be appropriate in the case of bats.

Surveys in respect of a Regulation 61(1) Habitats Regulations Assessment may be required in order to provide the information referred to in Reg. 61(2), as set out in Policy EN5.

To aid consideration of development management operations in the light of nature conservation policy and legislation, a checklist is provided at Appendix 1.A. This checklist sets out a series of questions, which if followed should allow full consideration of the relevant policy and legislation. This checklist should be used on a precautionary basis, such that if there is any doubt as to impacts upon habitats, species or ecosystems, then the County Ecologist should be contacted for advice.

## **Environmental Impact Assessment (EIA)**

Certain developments may require EIA, as set out in section 5.5.9 of PPW. The County Ecologist should be consulted on EIA screening and scoping requests. Where an EIA is required, the County Ecologist should be consulted on the ecological/biodiversity section of any Environmental Statement which results from that EIA.

## **Preliminary Ecological Appraisal (PEA)**

Normally, the first stage of an EclA is a Preliminary Ecological Appraisal (PEA) which is an initial assessment of the likely habitats, species and ecosystems at a site. This PEA will provide the scope for further surveys works that are needed. PEAs should be undertaken in accordance with the CIEEM Guidelines for Preliminary Ecological Appraisal 2013. Where there is good reason to believe that the likely habitats, species and ecosystems at a site can be accurately predicted, then the PEA stage may be omitted in favour of proceeding to a full EclA.

## **Desktop Studies**

The assessment of impact of a proposal upon nature conservation interests must take account of existing data on the presence and distribution of species in the area. These data, or 'records', are held by the South East Wales Biodiversity Records Centre (SEWBRc). All EclA reports should set out how data have been supplied by SEWBRc and considered in any assessment. For the avoidance of doubt, it is not acceptable to rely solely upon data provided by the National Biodiversity Network (NBN) Gateway – where data are needed, these must be provided by SEWBRc in the first instance.

## **Consideration of Ecosystems**

The 2016 EclA Guidelines make it clear that an EclA should consider the impacts upon ecosystems, as well as habitats and species. Statements to this effect are found throughout the document, for example at sections 1.3, 1.9, 2.3, 4.1 and 4.8 etc. All

EclA's submitted to Cardiff Council should demonstrate how the impacts upon ecosystems have been assessed, in accordance with the 2016 EclA Guidelines. This will allow Cardiff Council to demonstrate compliance with the ecosystem approach as required by the legislation referred to above.

### **Mitigation Hierarchy**

Where it is predictable that a development proposal will impact upon nature conservation interests, the 'mitigation hierarchy' should be applied as follows (adapted from British Standard BS42020):

- Information – sufficient information should be provided as to allow proper assessment of the impacts of a proposal
- Avoidance – where possible, potential impacts upon nature conservation interests should be avoided, noting that retention of habitats and species on a development site does not always constitute avoidance of harm to them
- Mitigation – where adverse impacts cannot be avoided, mitigation measures should be introduced to minimise or counteract them.
- Compensation – where residual adverse impacts remain after mitigation measures have been implemented, it may be necessary to secure compensatory provision, for example, of new habitats
- Enhancement – all development should seek to enhance habitats for wildlife

Normally, the principles of mitigation should be agreed at the planning decision stage, with a condition attached to any consent requiring a more detailed mitigation strategy. However, the exact balance of the extent of information which is required before consent or as a condition of consent, will be determined on a case-by-case basis. For further advice on this aspect, refer to Section 9.2 of BS42020.

## **Offsetting**

Where offsetting mechanisms exist in the Cardiff area, consideration should be given to whether an offsetting scheme will result in a better outcome for nature conservation interests than more traditional elements of the mitigation hierarchy.

## **Surveyor competencies and standards**

Surveys should be carried out by a suitably qualified and experienced ecologist, with the appropriate licences if necessary, using appropriate methodology and techniques. Ecological consultants submitting EcIA's should preferably hold membership of a professional body such as the Chartered Institute of Ecology and Environmental Management (CIEEM). Where they do not hold this membership, they should still act in accordance with the CIEEM Code of Conduct (See Section 4.2 of BS42020). We recommend that reference is made to the relevant survey methods listed in the CIEEM Sources of Survey Methods document, as part of the CIEEM Technical Guidance Series.

Ecological surveyors should meet the level of competency for each of the species/groups that they are surveying, as set out in the CIEEM Competencies for Species Survey documents. Surveyors should be able to demonstrate that they have the necessary training, skills and experience, required. They should also be able to adapt their approach to survey and mitigation where necessary, allowing deviation from published guidance if it can be supported by reasoned justification (Section 6.3.7 of BS42020).

## **Survey Timing**

Table 1 below provides a rough guide to the times of year that surveys can be undertaken for features which may be affected by development. Survey work should be carried out at a time of year which gives the maximum likelihood of encountering the species concerned. Whilst any of the species listed below may be encountered at any time of year under extreme circumstances (such as abnormal weather conditions),

these unusual occurrences do not mean that surveys can take place at any time of year.

### **Data Shelf-life**

As a general principle, survey work which is more than 2 years old will be regarded with caution, as certain species may colonise or leave an area in the interim period. This is particularly the case with mobile species such as bats, and bat surveys greater than 2 years old will have to be repeated. A planning condition should normally be attached stating that survey work should be repeated if works which may affect the species concerned haven't taken place within two years of the date of the most recent survey:-

Condition: If site clearance in respect of the development hereby approved does not commence (or, having commenced, is suspended for more than 12 months) within 2 years from the date of the most recent survey for XXX Species, the approved ecological measures secured through (other planning conditions) shall be reviewed and, where necessary, amended and updated. The review shall be informed by further ecological surveys commissioned to i) establish if there have been any changes in the presence and/or abundance of XXX Species and ii) identify any likely new ecological impacts that might arise from any changes.

Where the survey results indicate that changes have occurred that will result in ecological impacts not previously addressed in the approved scheme, the original approved ecological measures will be revised, and new or amended measures, and a timetable for their implementation, will be submitted to and approved in writing by the local planning authority prior to the commencement of development. Works will then be carried out in accordance with the proposed new approved ecological measures and timetable.

Reason: To ensure that the assessment of the impacts of the development upon the species concerned, and any measures to mitigate those impacts, are informed by up-to-date information.

Table 1. General guide to survey timing.

Survey \ Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Vegetation / habitat</b>	Sub-optimal survey period			Optimal survey period						Sub-optimal survey period		
<b>Otter</b>	Surveys possible				Surveys may be limited by vegetation cover				Surveys possible			
<b>Dormouse</b>	Gnawed hazelnut search			Nest tube / box survey							Gnawed hazelnut search	
<b>Bats (Activity / Summer Roost)</b>	Surveys not possible			Sub-optimal	Optimal survey period				Sub-optimal	Surveys not possible		
<b>Bats (Hibernation roosts)</b>	Optimal survey period		Sub-optimal	Surveys not possible						Sub-optimal	Optimal	
<b>Preliminary bat roost likelihood assessment</b>	Assessment possible year-round (though may indicate that a further specific roost survey is needed, which can only take place as above)											
<b>Water Vole</b>	Surveys possible				Surveys may be limited by vegetation cover				Surveys possible			
<b>Badger</b>	Surveys for badger signs possible year-round											
<b>Great Crested Newt</b>	Surveys not possible		Optimal survey period (Breeding adults)			Sub-optimal survey period (adults and larvae)				Surveys not possible		
<b>Reptiles</b>	Surveys not possible		Optimal survey period			Sub-optimal survey period			Optimal	Sub-optimal	Surveys not possible	
<b>Breeding birds</b>	Surveys not possible		Main breeding bird period					Surveys not possible				
<b>Invertebrates</b>	Surveys not possible			Optimal survey period						Surveys not possible		
<b>Fungi</b>									Optimal survey period			
<b>Freshwater Crayfish</b>	Surveys not possible			Sub-optimal			Optimal survey period				Surveys not possible	

## Data Format

In order to help us to better analyse the data obtained in survey work, it would be helpful if these data were presented in spreadsheet format (i.e. MS Excel) as well as in the usual tabular form in the context of text reports. In accordance with section 6.11.1 of BS42020, original field and desk-top data should be available for scrutiny and verification. Furthermore, there should be an undertaking to allow these data to be supplied to the local records centre SEWBRc, and incorporated into the Cardiff Biological Database in accordance with Section 6.4.7 of BS42020.

## Enhancements

In accordance with the BRE duty, as set out above, Cardiff Council has to consider how enhancements to the natural environment can be brought forward in development.

Furthermore, section 5.2.8 of Planning Policy Wales states that:- *'The planning system has an important part to play in meeting biodiversity objectives by promoting approaches to development which create new opportunities to **enhance biodiversity**, prevent biodiversity losses, or compensate for losses where damage is unavoidable.'*

Polices **EN5** and **EN7** of the LDP both reflect this, setting out respectively:-

*'Development proposals that would affect locally designated sites of nature conservation and geological importance should maintain or **enhance** the nature conservation and/or geological importance of the designation.'*

and,

*'Where harm is unavoidable it should be minimised by effective mitigation to ensure that there is no reduction in the overall nature conservation value of the area. Where this is not possible, compensation measures designed to conserve, **enhance**, manage and, where appropriate, restore natural habitats and species should be provided.'*

In terms of specific enhancement features, nesting or roosting opportunities for birds and bats should be incorporated into new build, in accordance with the advice given in the TCPA's '*Biodiversity Positive: Eco-towns Biodiversity Worksheet 2009*', and in the Bat Conservation Trust's '*Biodiversity for Low and Zero Carbon Buildings: A Technical Guide for New Build 2010*', i.e.

Potentially appropriate species	Recommended number of roosts/nest sites
Crevice dwelling bats	1 in 20 structures
Bats requiring flight space	1 in 5 public buildings (non-residential)
Horseshoe bats	1 in 5 public buildings (non-residential)
Swifts	1 in 20 buildings
House Martins	1 in 50 buildings
House sparrows	1 in 40 buildings
Starlings	1 in 100 buildings
Swallows	1 in 50 buildings
Barn owls	2 per medium-size development; 3 per large development
Peregrine	1 per medium-size development; 2 per large development

Where amphibians are known or likely to occur on a site, drainage systems which involve roadside gully pots are likely to trap and kill them, so there are a range of measures which can be used to prevent this. These include inset kerbs, offset gully pots or 'amphibian ladders' within gully pots.

In accordance with the Pollinator Action Plan for Wales, and with any local Pollinator Action Plan for Cardiff which is adopted, every effort should be made to allow wildflowers to develop on roadside verges, parks, attenuation basins, and any other greenspaces. The design of these areas should allow wherever possible for access for 'cut and lift' machinery, as cutting wildflower areas at an appropriate time of year, and removing the arisings, can be important in maintaining these areas.

### **Local Nature Conservation Priorities**

Local nature conservation priorities, be they species, habitats, ecosystems or green infrastructure, will be set out in a Local Nature Plan or similar process as advised by

the Wales Nature Recovery Plan. Development proposals will be expected to take account of these priorities, along with any actions required to further the conservation and enhancement of these priorities.

### **Monitoring of Mitigation Measures, and Remediation**

In accordance with sections 11.2.3.3 to 11.2.3.5 of BS42020, monitoring of the effectiveness of mitigation measures should be undertaken, as secured by planning condition. Where the results of monitoring show that mitigation aims an objectives are not being met, a monitoring report should set out how contingencies and/or remedial action are to be identified, agreed with the decision-maker, and then implemented. A draft planning condition to this effect is set out in Section D.4.2 of BS42020.

### **Other Local Authority Consents**

The statutory duties which apply to the granting of planning consent also apply to other forms of consent that Cardiff Council has the power to grant. For example, the Regulation 9 duty to have regard to the EU Habitats Directive in the exercise of functions also applies to Demolition Notices, Tree Preservation Orders (TPO's), Listed Building Consent, and Conservation Area Consent (Section 9.5.2 of BS42020). In all cases, early consultation with the County Ecologist is advised so that any potential constraints are identified.

### **1.4.2 European Protected Species (EPS)**

#### **Policy EN7: Priority Habitats and Species**

In accordance with Regulation 9(3) of the Conservation of Habitats and Species Regulations 2010 (as amended), Cardiff Council has a duty to have regard to the requirements of the Habitats Directive so far as they may be affected by the exercise

of its functions. The requirements in this case being the strict protection afforded to EPS.

EPS in Cardiff include all bat species, the Otter, the Dormouse and the Great Crested Newt.

In relation to EPS, section 5.5.11 of Planning Policy Wales advises *'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. Local planning authorities should advise anyone submitting a planning application that they must conform with any statutory species protection provisions affecting the site concerned, and should consult NRW before granting permission. An ecological survey to confirm whether a protected species is present and an assessment of the likely impact of the development on a protected species may be required in order to inform the planning decision.'*

Furthermore, section 5.5.12 advises:- *'To avoid developments with planning permission subsequently not being granted a derogation in relation to European protected species, planning authorities should take the three requirements for a derogation into account when considering development proposals where a European protected species is present'*.

Similarly, section 6.3.7 of Technical Advice Note 5 states:- *'It is clearly essential that planning permission is not granted without the planning authority having satisfied itself that the proposed development either would not impact adversely on any European protected species on the site or that, in its opinion, all three tests for the eventual grant of a regulation 44 licence are likely to be satisfied. To do otherwise would be to risk breaching the requirements of the Habitats Directive and regulation 3(4). It would also present the very real danger that the developer of the site would be unable to make practical use of the planning permission which had been granted, because no regulation 44 licence would be forthcoming.'*

The three tests referred to are:

- That the derogation licence is for preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment (Reg. 53 (2)(e))
- That there is no satisfactory alternative (Reg. 53 (9(a))); and
- That the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range (Reg. 53 (9)(b)).

These three tests should be taken into consideration during the planning decision, and Natural Resources Wales (NRW) should be consulted regarding the third test.

The interpretation which has arisen through caselaw is that in order to comply with its Regulation 9(3) duty, a Competent Authority such as Cardiff Council must first ascertain whether an activity which it is empowered to regulate would cause an offence under the Habitats Regulations, and secondly whether NRW would be likely to grant a licence to allow that activity to proceed legally.

In reality, the grant of such a licence would require consideration of the three tests as above, two of which (the 'imperative reasons' test and the 'satisfactory alternatives' test) are addressed in consultation with the Local Planning Authority (i.e. Cardiff Council), so effectively consultation of NRW at the planning stage is to ascertain whether the remaining test, the 'favourable conservation status test', would be met.

**Evidently, if Cardiff Council is of the view that there are no imperative reasons of overriding public interest that a development should take place, or that there are alternatives to the development which would have a lesser or no effect upon an EPS,**

**then it is prudent to take account of that view at the planning decision stage, rather than granting consent and subsequently advising NRW that a licence should not be issued because one or both of these tests have not been met.**

Favourable Conservation Status at a National level has not been determined for the EPS which occur in Cardiff. Therefore, the assumption is made that if no detriment occurs to the local conservation status of the species at a site level, then no detriment to National Favourable Conservation Status will have occurred.

Where NRW have been consulted on a planning application and have formally objected to that application, it will be assumed that they consider that the test of favourable conservation status (the 'third test') would not be met, such that they would not grant a licence for the proposed activity.

In this instance, the application should either be refused in accordance with section 5.5.12 of Planning Policy Wales, or the scheme should be amended such that, taking into account mitigation measures, there would be no adverse effect on the favourable conservation status of the EPS concerned.

Certain activities may not require an EPS licence issued by NRW in order to proceed, but may nonetheless adversely affect the favourable conservation status of a species. For example, mature hedgerows which bats may not use as breeding sites or resting places, may nonetheless be important features for foraging, commuting between roosts, or for navigation. Where such features are likely to be impacted by a proposed development, NRW may formally submit an objection to that proposal.

The need for an EPS survey should be established in consultation with the County Ecologist. Where a survey for any EPS has taken place in respect of a planning application, the County Ecologist should be consulted on the survey report, even if it reports a negative result.

Where surveys reveal the presence of EPS on the site of a planning application, then NRW must formally be consulted on that application.

### **EPS and Applications for Prior Approval**

Where prior approval is sought for an activity which benefits from Permitted Development Rights, the procedure in relation to EPS is set out in:-

Development Management Manual Revision 1 November 2016 Section 3 Annex –  
*'Application of the Habitats Directive to the Process of Prior Approval'*.

### **Use of Planning Conditions to Require Proof of Protected Species Licence.**

In July 2004 all LPAs in Wales received a letter from the Welsh Assembly Government reminding them of their duties in respect of European Protected Species (EPS), and asking that they attach the following planning condition to any consent.

The condition reads:

*"Where any species listed under Schedules 2 or 4 of The Conservation (Natural Habitats, &c.) Regulations 1994 is present on the site [or other identified part] in respect of which this permission is hereby granted, no works of site clearance, demolition or construction shall take place in pursuance of this permission unless a licence to disturb any such species has been granted in accordance with the aforementioned Regulations and a copy thereof has been produced to the local planning authority."*

The letter further states that '*... it is essential that you attach it as appropriate when granting new planning permissions to ensure that animal and plant species which come within the terms of the Regulations are effectively protected.'*

The regulations quoted in that letter have since been amended, but an LPA duties in respect of EPS remains the same. British Standard 42020:2013 'Biodiversity – the Code of Practice for Planning and Development' updates the wording of this condition of this condition in the light of amendments to the legislation, in section D.6.2 of that document:-

*'The following works [...state the specific works or activity likely to cause harm to particular protected species ... and as identified in plan/drawing/specification X...] shall not in any circumstances commence unless the local planning authority has been provided with either:*

*a) a licence issued by [the relevant licensing body] pursuant to Regulation 53 of The Conservation of Habitats and Species Regulations 2010 authorizing the specified activity/development to go ahead; or*

*b) a statement in writing from the relevant licensing body to the effect that it does not consider that the specified activity/development will require a licence.'*

This template condition is one of a series of such templates set out in BS4202, each of which has been subject to legal scrutiny and satisfies the 'six tests' for planning conditions as required by guidance.

There is a view (for example Circular WGC 016/2014: Use of Planning Conditions for Development Management) that a planning condition such as this should not be used, as it duplicates other controls. A number of reasons are set out below why this is not correct, and that such a condition is appropriate.

- The 2014 circular explains in section 1.10 that *'Unless otherwise stated, this circular does not seek to replace advice in Planning Policy Wales or on specialist matters set out in other circulars and TANs, some of which may also contain suggested wording for conditions.'* As below, section 6.2.2 of TAN5, and the

2004 circular both speak of the need for a planning condition requiring proof of an EPS licence, and so are not replaced by the WGC 016/2014 circular.

- It is a legal requirement under Regulation 53 of the Habitats Regulations that an EPS licence must be obtained in order to undertake works which may otherwise contravene Regulation 41, whereas a condition requiring proof that a licence has been obtained is in discharge of a competent authority's duty under Regulation 9(3). Therefore, there is no duplication, as the licence is to allow work to proceed legally, whereas the condition is to demonstrate that the LPA has adequately considered the Habitats Directive in the exercise of its functions.
- Section 17 of the Crime and Disorder Act 1998 (the CDA) states that '*Without prejudice to any other obligation imposed on it, it shall be the duty of each authority to which this section applies to exercise its various functions with due regard to the likely effect of the exercise of those functions on, and the need to do all that it reasonably can to prevent, crime and disorder in its area.*'. The crime referred to includes wildlife crime, such as, for example, causing harm to EPS and their breeding sites and resting places, without an EPS licence. Therefore, a condition requiring proof that a required EPS licence has been obtained serves to assure an LPA that an offence under the Habitats Regulations would not be committed, and thereby discharges its duty under the CDA as above.
- The advice to avoid planning conditions which duplicate other controls arises from a guidance circular, whereas the duty to consider European Protected Species in respect of development arises from primary legislation, which itself enacts a European Directive, and thus outweighs a circular.

There is also caselaw to the effect that conditions requiring an EPS licence to be obtained, can be attached:-

- In the ‘Halkyn’ Judgement (Case No: CO/1872/03, Duke of Westminster Settlement –v- Welsh Assembly Government) which related to an EPS (Great Crested Newts) Mr Justice Pitchford stated at point 114:- *‘Furthermore, the planning authority can, in an appropriate case, impose a condition that the developer may not proceed without a regulation 44 licence’*, setting a precedent to the effect that planning conditions such as this can be attached.

This precedent has been incorporated into planning policy:

- Section 6.2.2 of TAN 5 (2009) states:- *‘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.’*
- Section 99 of Government Circular 06/2005 states:- *‘In appropriate circumstances the permission may also impose a condition preventing the development from proceeding without the prior acquisition of a licence under the procedure set out in section C below.’*

There is also specific NRW advice to the effect that conditions requiring an EPS licence to be obtained, can be attached.

- The October 2015 NRW Approach to Bats and Planning: Good Practice Guide, recommends in the flow-chart at Annex 2 that *‘The LPA includes conditions or planning obligations to secure measures required to avoid disturbance, AND requires a copy of the licence issued by NRW to be submitted to the LPA, or confirmation from NRW that a licence is not required’*.

Finally, an LPA in Wales has statutory duties in relation to nature conservation, and requiring proof that an EPS licence has been obtained where necessary, is compliant with those duties:-

- Each LPA in Wales has a duty under Section 6 of the Environment (Wales) Act 2016 to seek to maintain and enhance biodiversity in the exercise of its functions and in doing so to promote the resilience of ecosystems. Were an LPA to grant planning consent for a development which adversely affected an EPS and/or its habitat, because an EPS licence had not been obtained, it would be difficult to argue that that LPA had sought to maintain and enhance biodiversity, without having assured itself that the appropriate licence was in place.

## 1.5 Specific Procedure Guides

### 1.5.1 Bats

#### Policy EN7: Priority Habitats and Species

##### Summary of Main Points

- Protected Species such as bats are a **material consideration** in the planning process
- All information needed to assess the impacts of a planning application upon bats must be **available when the planning decision is made**
- This information may need to include the results of a survey for bats, and these can only be undertaken at **certain times of the year**
- Planning guidance reminds us that it is **not generally acceptable to require protected species surveys to be provided as a condition of consent**
- Therefore **early dialogue** between someone considering making a planning application, and the Cardiff Council planning service, is advised, so that all necessary survey reports are **provided when the planning application is submitted**
- A roost which has been used by bats is protected whether it is occupied or not

Section 5.139 of Policy EN7 of the adopted Cardiff LDP states that:- *'Development proposals that have the potential to cause a significant adverse effect on priority habitats and species will need to be accompanied by an ecological survey and an assessment of the likely impact of the development on the protected species. The need for such assessments will be undertaken at the appropriate time of year, in accordance with the Council's Biodiversity SPG.'*

The priority species referred to in this policy include all bat species in Cardiff, and the development proposals referred to include works to buildings, which may be used by bats for roosting. Therefore this Technical Guidance Note is intended to provide guidance on how this policy will be implemented in relation to planning applications which affect existing buildings. For applications which affect trees, caves or wider landscape features such as hedgerows, woodland, waterbodies, the Cardiff Council Ecologist should be consulted for advice.

## **Bats in Cardiff**

Bats are found throughout Cardiff, and there is nowhere in Cardiff that bats are not found. Most of the bat species found in the UK have been recorded in Cardiff. In central urban areas, species of Pipistrelle bat tend to be the most common, whereas rarer species such as Greater and Lesser Horseshoe Bats are generally confined to the rural areas. Although larger, older buildings tend to present more roosting opportunities, modern buildings may also support bat roosts. Certain species are more likely to be found in houses than others, but all species receive equal protection.

Different species use buildings in different ways. Brown long-eared bats for example tend to roost in roof voids such as attics, and droppings and feeding remains will be evident below their perch. Pipistrelle bats on the other hand tend to roost in crevices in the structure of a roof or wall, and therefore may not be easily detectable. With crevice-dwelling bats, any signs of their presence may remain in the structure of the feature they are using, such as between inner and outer roof linings, or in cavity walls. Therefore, internal inspections of buildings may not detect them, in which case only emergence/re-entry surveys are valid.

As well as roosting sites, bats need access to foraging areas, which include woodland, wetlands, meadows, roadside verges, railway embankments and hedgerows. Buildings which are closer to these features are more likely to support roosting bats than those which are further away.

## **Development Control Procedure**

The procedure Cardiff Council will use in considering whether an individual planning application has the potential to affect bats in this way, and to decide whether a bat survey is needed in order to comply with this policy, is set out in the interactive bat protocol found at [http://www.biodiversityplanningtoolkit.com/bats/bio\\_bats.html](http://www.biodiversityplanningtoolkit.com/bats/bio_bats.html) Appendix 1 to this document presents a simplified flow diagram which accompanies the interactive protocol. The following notes are intended to aid interpretation of that protocol.

Implementation of this procedure in relation to minor or householder planning applications is the responsibility of the DC Case Officer. The County Ecologist will advise in relation to major

planning applications. For all applications, where surveys reveal that bats are present in a property, then the County Ecologist should be consulted.

Table 2 below should be used as a guide to which types of building are likely to support bats, to which activities are likely to affect bats if present, and to whether Cardiff Council planning service is likely to require a survey to be undertaken.

It is recognised that, in theory, bats may inhabit any type of building, and that any type of work to that building may affect bats. However, it is not practical or desirable within the limits of an efficient planning system to require a bat survey for every planning application for every type of work to every type of building. Therefore a coarse filter is required to help determine whether an activity is likely to disturb bats, in which case a bat survey is needed, or whether the likelihood of significant disturbance is low, such that an advisory note can be provided to the applicant.

Table 2. Screening Matrix for works to buildings which may affect bats.

Activity \ Building type <sup>1</sup>	Brick/stone Farm Buildings or churches	Buildings with weather boarding/hanging tiles	Pre-1960 buildings within 200m of woodland or water	Pre-1914 buildings within 400m of woodland or water	Pre-1914 buildings with gable ends or tiled roof	Buildings within or immediately adjacent to woodland or water	Buildings or structures <sup>2</sup> not falling within any of these categories	Dutch barns or livestock buildings with single skin roof
Demolition/removal of building, or part thereof	Survey	Survey	Survey	Survey	Survey	Survey	Survey	Advisory
Modification of roof not covered by the above, including re-roofing	Survey	Survey	Survey	Survey	Survey	Survey	Advisory	Advisory
Internal conversion /refurbishment/ change of use affecting loft or roof void	Survey	Survey	Survey	Survey	Survey	Survey	Advisory	None
Any extension affecting roof, including hip-to-gable conversion	Survey	Survey	Survey	Survey	Survey	Survey	Advisory	None
Attachment of exterior cladding or insulation to building	Survey	Advisory	Advisory	Advisory	Advisory	Advisory	None	None
Re-pointing, rendering, or repairs to soffits, fascias or barge-boards	Survey	Advisory	Advisory	Advisory	Advisory	Advisory	None	None
Installation dormer windows	Survey	Advisory	Advisory	Advisory	Advisory	Advisory	None	None

Installation Velux windows or rooflights	<b>Survey</b>	Advisory	Advisory	Advisory	Advisory	Advisory	None	None
Attachment of lighting or wind turbine to roof	<b>Survey</b>	Advisory	Advisory	Advisory	Advisory	Advisory	None	None
Installation of solar panels	<b>Survey</b>	Advisory	Advisory	Advisory	Advisory	Advisory	None	None
Internal conversion /refurbishment/ change of use not affecting loft, roof void or cavity wall	Advisory	Advisory	Advisory	Advisory	Advisory	Advisory	None	None

<sup>1</sup> Buildings include dwellings, schools, hospitals, places of worship, factories, castles, stately homes, shops, garages, light industry units, business park buildings, office buildings, farm buildings etc.

<sup>2</sup>Tunnels, mines, adits, ice-houses, lime kilns, bridges, aqueducts, viaducts, air-raid shelters, cellars, unused industrial chimneys etc.

## Bat Surveys

When submitting a planning application is being considered, early discussion between the planning service and prospective applicant is advised, because if certain surveys are needed, these can only be undertaken at certain times of the year (See Table 1, above). As set out in section 6.2.2 of TAN 5, it is considered best practice that surveys are carried out **before** the planning application is submitted.

A preliminary roost assessment should normally be undertaken, as this can take place at any time of year. However, if the application is submitted from May to August inclusive, it may be more advantageous for the applicant to omit the preliminary assessment and proceed directly to a full survey. Similarly, if there are known records of bats being present in a building or high likelihood of their being present, it may be more advantageous for the applicant to omit the preliminary assessment and to wait until the appropriate time of year to have a full survey.

The types of outcome of a preliminary roost assessment include:-

- an adverse impact upon bats is so unlikely that no further action in relation to bats is necessary
- the likelihood of an impact is low, such that precautionary mitigation measures can reduce this likelihood still further
- the likelihood of an impact upon bats is high, so further survey are needed in order to establish exactly what the impact would be
- the outcome is uncertain due to, for example, lack of access to certain areas of the building, so further survey are needed in order to establish exactly what the impact would be
- the impact is certain and can be defined precisely on the basis of the preliminary assessment, such that no further surveys are needed, but a licence issued by NRW would be required to allow works to proceed legally

**Where surveys or further surveys are indicated, but the results of those surveys would not be available within the statutory period for determination of an application, then the application should either be withdrawn by the applicant, or refused on the basis that there is insufficient information to allow the application to be determined whilst having regard to the provisions of the Habitats Directive.**

If it is not possible to carry out a summer emergence/re-entry survey for bats, the applicant should seek advice from their consultant ecologist as to whether it is possible to undertake a fingertip search of all likely bat roosting areas and access points. These should include: all rooms, all roof voids, all cellars, basements or boiler-rooms, all soffits, fascias and bargeboards, any gable end apex points, lead flashing, hanging tiles or weatherboards, gaps in mortar, mortice joints, cracks and holes in roof timbers, and any other features likely to allow bat access, plus a visual inspection of all roof tiles and ridge tiles. Any potential access points should be closely examined for signs of bat use, such as fur/urine staining, droppings, smells, scratch marks, absence of cobwebs and any other signs of bat use.

### **Survey Standards**

Surveys for bats should be undertaken by suitably qualified and experienced ecological consultants. Normally, ecological consultants should hold membership of a professional body such as the Chartered Institute of Ecology and Environmental Management (CIEEM). The CIEEM Professional Directory lists members who are qualified to undertake bat surveys. In addition, ecological consultants should be able to demonstrate that they meet the CIEEM competencies set out in the CIEEM *'Competencies for Species Survey: Bats'*.

Survey methodology should adhere to Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3<sup>rd</sup> edn.) The Bat Conservation Trust, London., or the most recent subsequent edition. Where deviation from this methodology is proposed, it should be supported by a reasoned justification based upon published evidence.

The CIEEM document '*What to Expect From a Bat Survey - A Guide for UK Homeowners*' should be made available to those who have been advised to commission a bat survey, as it provides useful advice on the bat survey process. It is available in English and Welsh.

A report on the bat survey should be submitted which accords with BS42020, NRW advice on a suitable bat report, and CIEEM report writing guidance.

### **Survey Licensing**

Surveys of bats in flight using bat detectors do not need a licence, but where internal inspections of buildings, for example in attics, are needed, then those surveys may cause disturbance to bats. In this instance, the bat surveyor should be able to demonstrate that they have a licence issued by NRW to allow that disturbance to take place legally in the context of a survey. For the avoidance of doubt, a licence issued by Natural England, Scottish Natural Heritage, or any other agency, does not permit a surveyor to disturb bats as part of a survey in Wales – a licence issued by NRW is required for all such surveys in Cardiff.

### **Survey Timing**

Preliminary roost assessments can take place at any time of year, and this can give an indication of whether bats are likely to be using a building as a roost. A preliminary assessment may also find signs of bat use such as bats themselves, their droppings or their feeding remains etc. However, in most cases, a flight survey will be needed to confirm where the bats are accessing the building concerned, which species of bats are present, how many of them there are, and for what purpose they are using the building. These flight surveys involve observing bats leaving the building at dusk, and then re-entering the building just before dawn. These emergence/re-entry surveys, can only be carried out during the bats' active season, which is roughly between March and October. However, the formation of a maternity roost is a critical element of bats'

lifecycle, and this normally takes place between May and August inclusive. Therefore surveys which take place during March and April, or during September and October, may not detect a maternity roost, because they may not have formed, or may have dispersed from, their maternity roost. This being the case, unless it can be evidenced that the presence of a maternity roost is unlikely, **all emergence/re-entry surveys must be carried out between May and August inclusive**. This timing constraint must be considered when submitting or considering a planning application.

### **Mitigation of Impacts upon Bats**

Where a proposed development may affect bats or their breeding sites or resting places, those effects will need to be avoided, mitigated or compensated for. Where effects cannot be avoided, it is likely that a licence will be required from NRW, to allow those works to proceed legally, as set out below. In order to demonstrate compliance with Regulation 9, as well as to ensure that planning consent is not granted for a development which would not subsequently receive an EPS licence, the principles of any mitigation measures need to be agreed prior to granting planning consent. The level of detail required to be sure at the determination stage that mitigation will be adequate, will be determined on a case-by-case basis.

Generally, loss of smaller roosts can be offset by the provision of manufactured bat roosts in the form of 'bat boxes' or 'bat bricks' or similar, either incorporated into buildings or attached to buildings or trees. Loss of maternity roosts cannot generally be offset by the provision of bat boxes. For larger roosts or maternity roosts, it may be more appropriate to provide access points such that bats can enter a new roof void or cavity wall. In certain cases, it may be necessary to construct a bespoke 'bat house' for the sole use of bats, and there are examples of this in Cardiff.

Where a bat roost has not been detected, but there remains a low risk of their being present, or if a roost survey is not conclusive, then a range of precautionary measures can be introduced in order to further reduce the risk of harm or disturbance to bats. These precautionary measures include:-

- Timing of works to avoid bats' maternity and hibernation seasons
- Giving tool-box talks to site operatives such that they are aware that bats may be present
- 'soft-stripping' of features such as roof tiles, soffits, barge-boards, fascias etc, and any other features which bats may use to roost or to access a roost
- Having an ecologist on call in case bats are found during demolition, etc. If bats are found during these works, they should stop immediately and Natural Resources Wales contacted for advice
- Incorporating enhancement measures for bats, such as bat bricks, bat tiles or providing bat access to roof voids
- A final pre-demolition internal inspection of the roof void of the building
- Repeat of the bat survey if works do not take place within one year of the most recent survey

### **Development Licensing**

Where bats are roosting in a building, and the proposed works to that building would adversely affect the roost or the bats themselves, then in most cases a licence is required from NRW to allow those works to proceed. This is because to do so otherwise would lead to an offence under the legislation which protects bats. A licence will not normally be issued until planning consent has been granted. However, to avoid the situation whereby planning consent is granted but works cannot proceed because NRW will not issue a licence, the planning service in Cardiff Council should consider the likelihood that NRW will issue a licence, when the planning decision is made. In practice this means that we have to consider the same three tests when we determine a planning application that NRW has to consider when looking at a licence application. This approach is set out in section 5.5.12 of PPW and section 6.3.6 of TAN5.

One of these tests is that the proposed activity will not compromise the Favourable Conservation Status (the 'FCS') of the species concerned. Only NRW can advise on

whether this would be the case, which is why **it is essential to consult NRW as soon as a report is received which confirms that bats are roosting in a building** which is the subject of a planning application. If NRW are of the view that FCS cannot be maintained, then the proposals should be altered or the application should be refused. In most cases however, it is possible to find a form of mitigation or compensation which maintains FCS, and which allows NRW to confirm that they would grant a licence for the proposed works, if planning consent were granted. If the Cardiff Council planning service believes that either of the other two licensing tests would not be met, then planning consent could also be refused on those grounds. Those tests are that there are no satisfactory alternatives to the proposed development, or that there are 'imperative reasons of overriding public interest' (the 'IROPI' test) that the proposed development should proceed.

In practical terms this means that it is essential that all survey information and details of mitigation of any impacts upon bats are considered at the time that the planning application is determined. Section 5.5.11 of PPW reminds us that the presence of a protected species is a material consideration in the planning decision. Therefore **it is not generally possible to require that surveys are provided as a condition of a planning consent**, apart from in exceptional circumstances, and these are listed in section 9.2.4 of BS42020.

In their good practice guide entitled '*NRW Approach to Bats and Planning*', NRW set out those cases which they consider to be 'lower risk' and how they will approach consideration of those cases. Lower risk cases are those which **do not** involve:-

- Maternity roosts
- Hibernation roosts
- Greater or Lesser Horseshoe bats, Barbastelles, Bechstein's, Grey Long-eared, Leisler's, Serotine or Nathusius' Pipistrelle bats
- Buildings with three or more of any bat species
- Mating or swarming roosts identified as being important.

In these cases, NRW consider that development is not likely to be detrimental to the Favourable Conservation Status of the species concerned, provided the recommendations of a suitable bat report are implemented. The guidance goes on to describe what NRW would consider to be a 'suitable bat report'. In such cases, it is not necessary to consult NRW. If that report concludes that the development would be likely to cause an offence in law, then a licence from NRW would still be needed

### **Demolition Notices**

The administration of the Prior Notification of Demolition process is a function in the context of Cardiff Council's duty under Reg. 9(3) of the Habitats Regulations, as set out above. Therefore we have to have regard to the strict protection afforded to bats and their roosts, when considering prior notification of demolitions.

Where a survey is triggered in accordance with Table 1 above, those seeking prior approval of demolition should commission a bat survey in accordance with the Survey Standards and Survey Timing sections above. Where bats are found, it is likely that demolition could only proceed in accordance with a licence issued by NRW. That licence may be granted according to a series of conditions which are in place to ensure mitigation of the impact upon bats, such that their Favourable Conservation Status is maintained. In controlling the manner of demolition, Cardiff Council should incorporate any conditions likely to be attached to an NRW licence. Therefore, as soon as bats or evidence of bats are discovered in a building which is proposed to be demolished, NRW should be contacted for advice as to what those conditions might be.

It is worth reiterating that if a building is demolished and bats or their roost are harmed as a result, the persons undertaking that demolition may be liable to prosecution. If this were the case, those persons may query whether Cardiff Council had adequately discharged its duty under Reg. 9(3) of the Habitats Regulations when administering the prior notice of demolition.

The Section 3 Annex to the Development Management Manual 2016: 'Application of the Habitats Directive to the Process of Prior Approval', provides further advice in this respect.

### **Bat Advisory Note**

The following advisory note will be used when Table 1 above indicates that there is not sufficient justification to require a bat survey, but that some limited potential for bat presence exists.

'Bats often roost in houses and other buildings, and work on these buildings may disturb a bat roost. All bats and their roosts are protected against disturbance under UK and European legislation. If works are planned on a building in which bats are roosting, Natural Resources Wales must be contacted for advice.

If work has already commenced and bats are found, or if any evidence that bats are using the site as a roost is found, work should cease and NRW should be contacted immediately.

Where there is a likelihood that bats are present, or where bats are found to be present, a suitably qualified and experienced ecological consultant should be contracted to provide an assessment of the impact of the proposed works, and undertake bat surveys if necessary.

Where bats or their roosts are present, no works of site clearance, demolition or construction should take place unless a licence to disturb these species and/or their roosts has been granted in accordance with the relevant legislation. Otherwise, a prosecution may result in a fine and/or imprisonment.

NRW can be contacted at:-

Natural Resources Wales, Tŷ Cambria, 29 Newport Road, Cardiff CF24 0TP,  
0300 065 3000

Bat Conservation Trust can be contacted at:-

5th Floor, Quadrant House, 250 Kennington Lane, London, SE11 5DR, 0845  
1300228'

## **Conditions**

If EPS have been recorded on a site, we should attach the following condition as recommended by Welsh Government:

**Condition:** Where any species listed under Schedules 2 or 4 of The Conservation of Habitats and Species Regulations 2010 (as amended) is present on the site [or other identified part] in respect of which this permission is hereby granted, no works of site clearance, demolition or construction shall take place in pursuance of this permission unless a licence to disturb any such species has been granted in accordance with the aforementioned Regulations and a copy thereof has been produced to the local planning authority.

**Reason:** To ensure protection of European Protected Species.

### **1.5.2 Dormice**

#### **Policy EN7: Priority Habitats and Species**

Dormice are European Protected Species, so the EPS procedure should be applied.

Dormice are found in hedgerows, woodland and scrub in rural and suburban areas of Cardiff, and are particularly prevalent in the north-eastern part of the city. Any proposed works which involve removal of these habitats should be assessed for their potential to affect dormice.

Where dormice are likely to be present on site, surveys should be undertaken using an appropriate methodology at an appropriate time of year. Typically this involves the use of nest tubes and/or nest boxes attached to trees etc. in accordance with the methodology set out in Bright, P, Morris, P & Mitchell-Jones, T (2006). *The Dormouse Conservation Handbook*. Second Edition. English Nature. Peterborough.

Surveys can be carried out from April to November, but experience has shown that in Cardiff the most effective month for detecting this species with this method is October. Therefore all surveys should include at least one nest tube/box check in the month of October.

As with all species, it should be remembered that no survey method is guaranteed to detect the focal species, and this is acknowledged in the *Dormouse Conservation Handbook* and the reports upon which it is based. For example, paragraph 3.2.5 of the *Dormouse Conservation Handbook* states '*(nest boxes) are often not used immediately. Sometimes they remain empty for several years.*' The nest-tube methodology set out in the *Dormouse Conservation Handbook* is based on the Chanin and Woods 2003 report<sup>1</sup>. Page 16 of that report states that '*nevertheless it is evident that some dormice are being missed as they were present at some sites where they were not recorded*'. In other words, at sites where dormice were known to exist, they were not detected by nest tubes as part of that study. Similarly, on page 17 we read '*However it is essential to bear in mind that when dormice are not recorded in tubes, it does not necessarily mean that they are not present.*'.

Situations such as these have occurred in Cardiff, whereby surveys using nest tubes have failed to detect dormice, but surveys using other methods, such as using nest boxes or searching for hazelnut shells that have been nibbled by dormice, have revealed their presence. Therefore it is considered best practice that surveys for dormice in Cardiff employ at least two of the following methods:

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<sup>1</sup> Chanin, P. & Woods, M. 2003. Surveying Dormice using nest tubes. Results and experiences from the South West Dormouse Project. *English Nature Research Report* No. 524.

- Nest tubes
- Nest boxes
- Searching for characteristically-nibbled hazelnuts

It may also be the case that where natural nesting opportunities are abundant, such as in ancient semi-natural woodland, dormice do not use artificial nesting sites such as nest tubes or boxes. Therefore, where dormouse surveys in mature woodland or ancient semi-natural woodland using artificial nesting sites fail to detect this species, then any conclusion that they are likely to be absent for that site, will be treated with caution.

Whilst it is acknowledged that in behavioural terms, Dormice may seek to cross roads, there is no evidence as to the degree to which they are successful in this, nor to the impact that any roadkill may be having on Dormouse populations in the long term. Therefore it is essential that, where roads do interrupt habitat connectivity, there are a range of measures in place to ensure that this break in connectivity is not detrimental to the long term maintenance of Dormouse FCS. These measures could include:-

- Road narrowing
- Widening of the hedgerow or connectivity feature which is to be broken
- Dormouse 'bridges'
- Sensitive lighting schemes

### **1.5.3 Great Crested Newts (GCN)**

#### **Policy EN7: Priority Habitats and Species**

GCNs are European Protected Species, so the EPS procedure should be applied.

This species occurs in several locations throughout Cardiff, and its life cycle depends upon breeding ponds surrounded by terrestrial habitat. Generally, most newts are found within 500m of the breeding pond, though they can disperse much further than this.

Not all ponds in Cardiff support this species, so the County Ecologist should be consulted for advice as to whether consideration of this species is required for developments within 500m of a pond.

Where development is proposed within 500m of a known breeding pond, an assessment of the impact of the proposed development upon this species, will be required. This may entail further survey of the pond to determine the likely population size class.

Generally, surveys can only be undertaken between mid-March and mid-June, so prospective planning applicants should be made aware of this potential timing constraint.

Survey and mitigation work should accord with the most recent good practice guidelines. Currently these are the English Nature 2001 GCN Mitigation Guidelines, but these are likely to be replaced by Guidelines issued by Scottish Natural Heritage during 2016.

Mitigation of the impacts of development upon this species should focus on maintaining and enhancing habitat connectivity between populations. This may involve the construction of additional ponds, and managing terrestrial habitat for the benefit of this species.

Where it is unavoidable that a GCN pond is lost due to development, compensatory ponds should be constructed, at a ratio of three ponds installed for each GCN pond lost.

In all cases, mitigation and compensation should demonstrate that a strategic view of the viability of GCN metapopulations at a landscape scale, has been taken.

#### **1.5.4 Otters**

##### **Policy EN7: Priority Habitats and Species**

Otters are European Protected Species, so the EPS procedure should be applied.

Otters are found throughout Cardiff but are closely associated with the rivers Taff, Ely, Rhymney, the Nant Fawr stream, coastal areas, and waterbodies such as Cardiff Bay and the Llanishen and Lisvane Reservoirs. Any plan or project which may affect these habitats, either directly or indirectly, may need to consider the presence of this species. This consideration may include the need to survey for their breeding dens (known as Holts), or their lying-up or resting areas in dense vegetation close to the waterbody concerned.

As well as protecting their breeding sites and resting places, it is important that habitat connectivity is maintained to allow normal foraging and dispersal of Otters. Connectivity along linear features such as rivers can be interrupted by noise, lighting and human disturbance associated with development, so any potential impact in this respect must be taken into account considering a planning application.

Otters require good riparian vegetation cover for movement along riverbanks, and for the provision of habitat for laying-up sites. Therefore, where development, including the provision of access, is planned for sites adjacent to rivers, public pathways should meander away from the river bank and back towards it along the route. This will allow significant areas of dense cover to be created, whilst allowing for viewing points across the river.

### 1.5.5 Birds

#### Policy EN7: Priority Habitats and Species

Cardiff Council has a duty in relation to wild birds following the 2012 amendment to the Habitats Regulations:-

- Cardiff Council is required to take such steps in the exercise of our functions as we consider appropriate to secure the *preservation, maintenance and re-establishment of a sufficient diversity and area of habitat for wild birds* so far as lies within our powers.
- Cardiff Council must take such steps in the exercise of our functions as we consider appropriate to contribute to the achievement of the *preservation, maintenance and re-establishment of a sufficient diversity and area of habitat for wild birds*
- In exercising any of its functions Cardiff Council must use all reasonable endeavours to avoid any pollution or deterioration of habitats of wild birds.

The law specifically relates this duty to functions under Town and Country Planning Acts.

Habitats of wild birds referred to above includes those parts of buildings used by house-nesting birds, such as House Martins, Swifts and Swallows.

Guidance on the implementation of this duty has been produced by DEFRA in collaboration with Welsh Government:-

<http://gov.wales/docs/desh/publications/160223-birds-guidance-wg-overview-en.pdf>

<https://www.gov.uk/guidance/providing-and-protecting-habitat-for-wild-birds>

This guidance will be observed in relation to any development which may affect wild bird habitat.

Where there is vegetation management or tree removal proposed, or where buildings or any other structure which may support nesting birds are to be removed, then we should attach the following condition to protect nesting birds. Certain parts of Cardiff offer suitable opportunities for ground-nesting birds, such as Lapwing or Skylark, and this condition would apply equally to those species. The County Ecologist should be consulted for advice on which species are likely to be affected.

Condition: No site clearance/demolition of (*relevant features*) to take place between 1st March and 15th August unless otherwise approved in writing by the Local Planning Authority. This approval will be granted if a consultant ecologist can evidence that there are no birds nesting in these features immediately (48 hrs) before their removal.

Reason: To avoid disturbance to nesting birds which are protected under the Wildlife and Countryside Act 1981: Part 1, 1(1)(b), it is an offence to intentionally take, damage or destroy the nest of any wild bird while that nest is in use or being built.

Enhancement measures for house-nesting birds such as Swallows, Swifts and House Martins should be incorporated into new buildings in accordance with the 'Enhancements' paragraphs of the Ecological Impact Assessment section (Section 1.4.1) of this TGN.

Where a Heronry may be affected by proposed development, an earlier time limit such as 1<sup>st</sup> February to 15<sup>th</sup> August may be applied to this condition, in order to reflect the earlier onset of breeding which is typical for this species.

## **1.5.6 Reptiles**

### **Policy EN7: Priority Habitats and Species**

#### **Reptile Survey and Mitigation Guidelines for Cardiff**

Widespread reptile species are protected against intentional killing or injury under the Wildlife and Countryside Act 1981 (as amended). A defence against a potential prosecution is that the action which caused death or injury was the incidental result of an otherwise lawful operation that could not reasonably be avoided. Therefore, to allow activities which might otherwise cause harm to these species, reasonable avoidance of that harm needs to be demonstrated. In order to achieve this, firstly there must be an adequate assessment of the potential impact of any scheme, which should itself be based upon an accurate, appropriate and up-to-date survey. Secondly, the mitigation hierarchy should be applied to demonstrate reasonable avoidance. In practice, this may often mean trapping and translocation of these animals to a suitable receptor site.

Widespread reptile species in Cardiff include Slow-worms, the Grass Snake, Adders and Common Lizards. Other species native to Britain, the Sand Lizard and the Smooth Snake, do not occur in Cardiff. Also, this section does not deal with sea turtles, which sometimes occur off the coastline of Cardiff, nor does it deal with non-native species such as the Red-eared Terrapin.

In the absence of definitive guidance on reptile survey and mitigation techniques, I refer to the following documents:-

- Froglife Advice Sheet 10 (FAS 10),
- National Amphibian and Reptile Recording Scheme – Reptile Survey Guide (NARRS)
- Reptiles: Guidelines for Developers (EN2004)

- Design Manual for Roads and Bridges Vol. 10, Section 4, Part 7, Ch. 6 (DMRB)
- HGBI Evaluating local mitigation/translocation programmes 1998 (HGBI)
- Protected Reptiles and Build Development – Kent Reptile and Amphibian Group and Kent Wildlife Trust October 2003 (KRAG 2003)
- Edgar, P., Foster, J. and Baker, J. (2010). Reptile Habitat Management Handbook. Amphibian and Reptile Conservation, Bournemouth (RHHM 2010)
- Survey protocols for the British Herpetofauna Version 1.0. Sewell D., et al. March 2013 (Sewell 2013)
- Natural England Technical Information Note TIN102. Reptile mitigation guidelines (TIN102) – Withdrawn.
- Survey Guidelines for the Widespread British Reptiles by Howard Inns (Inns) in Reptile Survey Methods, Foster & Gent (Eds) 1996.
- Evaluation of Reptile Survey Methodologies. EN Research Report No. 200. Reading CJ, 1996. (Reading)

Should formal and authoritative national guidelines on reptile survey and mitigation methods be produced, then the information below would be superseded by those guidelines.

Those undertaking reptile survey and mitigation should be able to demonstrate, if asked, that they meet the knowledge, skills and practical experience competency criteria, as set out in the CIEEM Technical Guidance Series '*Competencies for Species Survey: Reptiles*'.

Those undertaking reptile survey and mitigation should apply and adapt their knowledge, skills and experience to individual situations. However, any deviation from the above sources of guidance should be accompanied with a reasoned justification which can be considered in the context of that guidance. Where this reasoned justification is not forthcoming or is not acceptable, there will be reduced confidence in the results of the survey, which may lead to a more precautionary approach to mitigation.

## Surveys

Combination surveys involving both direct observation and use of artificial refugia are the most effective at detecting the presence of reptiles (e.g. DMRB, NARRS). Therefore, combination surveys should be undertaken and the results of both types of survey set out in a report.

All sources of guidance listed above recommend using a range of materials for refugia surveys, not just roofing felt on its own. Corrugated metal is regarded as being the best material (e.g. NARRS, Reading), but it is recognised that this can be impractical sometimes. A combination of at least two of the following materials is recommended; roofing felt, corrugated bituminised roofing sheets such as Onduline or similar, corrugated metal roofing sheets, carpet tiles or wooden boards. Where there are existing refugia on site, such as logs, stones or rubbish, these should be incorporated into refugia surveys.

The minimum size of refugia recommended is 0.5m<sup>2</sup> (e.g. FAS 10, DMRB). Note that KRAG and NARRS interpret this as about 0.7m x 0.7m (or 1m x 0.5m), not 0.5m x 0.5m (see e.g. KRAG 2003), although Sewell 2013 does recommend a minimum 0.5m x 0.5m. Inns suggests 1m x 1m, and Reading suggests about 0.76m x 0.65m, although this is for corrugated sheet steel. Smaller refugia may not be as effective at detecting larger animals such as adult Grass Snakes (e.g. DMRB). A range of sizes is likely to be most effective (DMRB), so it is recommended that either a range of sizes, or roughly equal numbers of two different sizes, are used.

Normally refugia should be left to 'bed in' for about 2 weeks for reptiles to find them and become used to using them. DMRB recommends a minimum of a week before 1<sup>st</sup> inspection, although RHMH 2010 states:- *'There is some evidence that refuges are more attractive to reptiles if they are left to 'bed in' for several weeks. At low population densities, it can take weeks or months for animals to start using refuges.'*

A report on a reptile survey should give the numbers of artificial refugia used in order to demonstrate that the survey was adequate in this respect. Normally at least 10 refugia per hectare is recommended (e.g. FAS 10, DMRB), although INNS suggest using 3 to 8 per hectare. On very large sites with substantial areas of suitable habitat, it may be acceptable to sample smaller areas of representative habitat and extrapolate those data to the site as a whole, based on the suitability of the habitat.

A report on a reptile survey should give details of the location of artificial refugia, demonstrating that refugia have been placed appropriately. This is important as refugia incorrectly placed may not be effective at detecting reptile species.

The minimum number of survey visits to establish likely absence of reptiles from a site is 7 visits on separate days during which no reptiles are found, in suitable conditions (FAS10). Where reptiles are found, more visits than this will be needed to indicate abundance or relative population size. Sewell recommends 7 visits unless it can be demonstrated that refugia have been in place for a long time or that reptile detectability is known to be high, in which case 4 to 5 visits may suffice.

The timing of the survey should be appropriate for the species being surveyed. Whilst it is true that some individual reptiles may be seen at any time of year, the accepted peak months for reptile surveys are March, April, May and September (DMRB, KRAG 2003, FAS10). Whilst ambient temperatures outside of these months may be within the recommended ranges, endogenous circannual rhythms may lead to reduced activity, and therefore reduced detectability. Surveys conducted entirely within the month of October are unlikely to be acceptable.

Weather conditions should be appropriate for survey work, and the prevailing conditions of temperature, wind, precipitation and sunshine should be recorded for each survey visit. The generally accepted temperature ranges are 9 to 18°C (FAS 10, DMRB, Inns) or 10 to 20°C (NARRS, RHMH, TIN 102).

## **Mitigation**

In 2005 the then Countryside Council for Wales (CCW) produced draft mitigation guidelines for common reptile species. In the absence of any formal mitigation guidelines, the following text is adapted from those draft guidelines.

For any development site which supports reptiles, or which contains habitats with the potential to support reptiles, detailed survey at an early stage is recommended. Where suitable survey information is unavailable, however, or where there is insufficient time to carry out the necessary surveys, it should be assumed that any habitats on the site which are suitable for reptiles do indeed support reptiles, and mitigate accordingly.

It is not necessary to obtain a licence to carry out works which affect reptiles, but it is always advisable to seek guidance in any case where a development could potentially cause impacts to reptiles. Advice regarding what would constitute 'reasonable' mitigation should also be sought, although it is ultimately up to the developer to decide what is 'reasonable' (and to accept any consequences which may ensue). In most cases, the services of an appropriately qualified and experienced reptile consultant will be required.

Wherever possible, reptiles should be accommodated within the site, or on one or more adjacent or nearby site. The translocation of reptiles to a different site which lies at a distance from the development site should only be undertaken as a last resort. Where reptiles cannot be accommodated within the site, a suitable receptor site should be identified in advance and surveyed for suitability. If a reptile population already exists on the receptor site, then advance enhancement works to increase the 'carrying capacity' of the receptor site may be necessary. Adequate time should be allowed in the development programme for the safe clearance of reptiles ahead of any potentially harmful works using suitable means, which may vary from site to site.

If reptiles are confirmed as being present (or are assumed to be present, for example from habitat assessment) then measures should be put in place to avoid or minimise the killing and injuring of reptiles as a result of development operations. Ideally, a 'Reptile Mitigation Strategy' should be drawn up for the site by a suitably qualified person, and agreed in advance with the County Ecologist.

### **Selection of Suitable Receptor Site.**

The HGBI document 'Evaluating local mitigation/translocation programmes 1998' provides some guidelines in section 4.2 as to the selection of receptor sites. Suitable receptor sites may be easier to identify for more generalist species such as Slow-worms, but conversely species such as Adders can have specific habitat requirements which require much more detailed consideration. **It should be noted that Cardiff Council cannot always be relied upon to provide suitable receptor sites for translocated reptiles.** Where a suitable receptor site cannot be identified, it may be necessary to refuse a planning application on the basis that harm to reptiles cannot reasonable be avoided. Normally habitat management for translocated populations should continue for between 5 and 25 years, depending upon the size of population and number of species involved. Where the receptor site is on Council-owned land, his habitat management should be funded by a commuted sum or similar mechanism.

### **Reptile Clearance Methodology**

More detailed advice on a suitable reptile clearance methodology can be provided on request, but above all a methodology should be used which minimises the risk of harm to individual reptiles.

### **Timing of Works**

It should be noted that the clearance of reptiles from a site can only be undertaken when the reptiles are active (i.e., during the spring, summer and autumn months) and should never be attempted during the winter hibernation period (which runs

approximately from November to February/March inclusive). This constraint may lead to conflict with other issues — the presence of nesting birds, for example - which will also need to be taken into account and mitigated for accordingly. Clearance operations are less desirable later in the summer, since after about June there is the chance that juvenile animals will also be present, which as well as being more difficult to see and catch, may also significantly increase the number of animals on the site.

### **Post-development Monitoring**

In addition to the above, the developer of a given site should be encouraged to put in place a scheme to monitor the effects of the development on the reptiles and to see if the mitigation has been successful. The design of any monitoring exercises should be discussed in advance with the County Ecologist. It may be the case that remediation measures should be incorporated into a mitigation scheme, which are implemented if monitoring reveals that mitigation measures are failing. Normally monitoring of translocated populations should continue for between 5 and 25 years, depending upon the size of population and number of species involved.

### **1.5.7 Invasive Non-native Species (INNS)**

#### **Policy KP18 – Natural Resources**

Invasive Non-native Species of animal and plant are a substantial economic and environmental threat to Wales, and there is legislation in place controlling the release of these species or any activity which could cause them to grow in the wild. In considering the effects of a proposed development upon nature conservation interests, it may be necessary to ascertain the presence of INNS on a development site and ensure that these species are controlled. If a Preliminary Ecological Appraisal discovers INNS plants on a site, a programme for their treatment and eradication should be required as part of Cardiff Council's general duty towards conserving biodiversity.

Of the INNS species, Japanese Knotweed is the most common and most serious in economic and environmental terms in Cardiff, so where it has been identified on the site, we should attach the standard condition as below. There may be other invasive non-native plant species on site which are listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), such as Himalayan Balsam and Giant Hogweed. The applicant should be reminded that it is an offence to plant or cause these plants to grow in the wild.

Condition: Prior to the commencement of development, a detailed scheme for the treatment and disposal of soils affected by Japanese Knotweed shall be submitted to and approved in writing by the Local Planning Authority. Such a scheme shall accord with most recent guidance issued by the relevant statutory authority. Thereafter the development shall be carried out in accordance with the approved scheme.

Reason: To ensure the safe destruction and prevention of spread of Japanese Knotweed.

### **1.5.8 Brownfield Sites**

#### **Policy EN7: Priority Habitats and Species**

Brownfield sites or previously developed land can often be richer in biodiversity than heavily improved or intensively cultivated 'greenfield sites'. Very often, the poor and shallow soils of brownfield sites allow a greater range of flowering plants to develop, compared with the monoculture of rye grass that can predominate in heavily improved agricultural land. A diverse range of flowering plants will support more insects, and subsequently birds and other animals. In addition, the warm microclimates that occur in the open mosaic habitats of brownfield sites can be of value to insects and reptiles.

Therefore, an assessment of the nature conservation value of a brownfield site should be undertaken objectively, and should in no way be prejudiced by the previous land-use of that site.

Section 4.9.1 of Planning Policy Wales states, in relation to the preference for the re-use of land, that the Welsh Government recognises that not all previously developed land is suitable for development. This may be, for example, because of its location, **the presence of protected species or valuable habitats** or industrial heritage, or because it is highly contaminated. For sites like these it may be appropriate **to secure remediation for nature conservation**, amenity value or to reduce risks to human health.

Therefore the habitats, species, and ecosystems of a brownfield site should be assessed, where that site is the subject of a planning proposal, and remediation in the form of mitigation or compensation measures secured if planning consent is granted. Surveys should seek to determine whether the UK Biodiversity Action Plan (UKBAP) habitat known as '*Open Mosaic Habitat on Previously Developed Land*', which is characterised by a diverse invertebrate and plant fauna, is present on site. Furthermore, any assessment should consider whether the site qualifies as a wildlife site (Site of Importance for Nature Conservation - SINC) in accordance with Section H18 (Post-industrial Land) of the Guidelines for the Selection of Wildlife Sites in South Wales 2004.

Where a site is identified as supporting a UKBAP habitat, or as qualifying as a SINC as above, then guidance elsewhere in this TGN relating to UKBAP habitats and SINC should be consulted.

In accordance with Section 5.5.3 of Technical Advice Note (TAN) 5, the conservation and enhancement of locally designated sites (such as SINC) is an important contribution to the implementation of Biodiversity Action Plans and to the management of features of the landscape of major importance for wild flora .... Developers should avoid harm to those interests where possible. Where harm is

unavoidable it should be minimised by mitigation measures and offset as far as possible by compensation measures designed to ensure there is no reduction in the overall nature conservation value of the area or feature.

### **1.5.9 Ancient Semi-natural Woodland**

#### **Policy EN7: Priority Habitats and Species**

Ancient Semi-natural Woodland (ASNW) comprises all woodland sites with historical evidence of woodland cover since the year 1600. This definition includes woodland sites which have been clearfelled and re-planted, which are known as Planted Ancient Woodland Sites (PAWS). The value of ASNW and PAWS sites lies not just in the trees themselves, but also in their understorey and ground flora, rides and glades, and the mammals, birds, invertebrates, fungi, microorganisms etc., that they support. These habitats are particularly rich in biodiversity, as well providing other ecosystem services such as carbon capture and storage, flood risk management, recreation, and natural beauty. As such, these habitats are considered irreplaceable, and require special consideration in the planning system. This is reflected in PPW section 5.2.9., wherein:-

*‘Ancient and semi-natural woodlands are irreplaceable habitats of high biodiversity value which should be protected from development that would result in significant damage.’*

The definition of *‘significant damage’* will be considered on a case-by-case basis.

Where development is proposed on sites adjacent to ASNW, there is the potential for harm to the woodland edge to arise from construction activities and from inappropriate management during occupation of the development.

The Forestry Commission’s Standing Advice for Ancient Woodland and Veteran Trees, updated April 2014, states:-

*'Buffer Zones: Development must be kept as far as possible from ancient woodland, with a buffer area maintained between the ancient woodland and any development boundary. An appropriate buffer area will depend on the local circumstances and the type of development. In a planning case in West Sussex the Secretary of State supported the arguments for a 15m buffer around the affected ancient woodland, but larger buffers may be required'.*

In Cardiff, the term 'Ecotone' is preferred, as this better reflects a more natural woodland edge, with canopy trees grading into shorter understorey species, through scrub habitats, and into rough grassland. Therefore, the provision and management of a 15 metre-wide ecotone around woodland sites will normally be required. Domestic gardens should be excluded from this ecotone, as the creation of gardens backing directly onto woodland is likely to lead to conflict between occupants and the woodland, leading to inappropriate tree management. This in turn may have negative impacts upon species supported by these trees, such as bats, nesting birds and dormice.

Further guidance relating to trees, woodlands, landscaping and soils is provided in separate sections of the Green Infrastructure SPG.

#### **1.5.10 Coastal, Estuarine and Marine Habitats**

##### **Policy EN7: Priority Habitats and Species**

National planning policy in relation to development management and the coast is set out in sections 5.8.1 to 5.8.4 of PPW.

Some areas of Cardiff's coastline are important for wildlife and are designated as SINCs. Other areas, such as the Gwent Levels and the Severn Estuary itself, are designated as SSSIs. Furthermore, the estuary and parts of the coastline receive protection at an international level. Works which may affect these designations, even

if they do not take place within the boundaries of those designations, may need a Habitats Regulations Assessment. The designations concerned are:-

### **Severn Estuary Special Area of Conservation (SAC)**

This is part of the European Union 'Natura 2000' network of sites and is designated for habitats such as Estuary, sandbanks, mudflats, sandflats, saltmarsh and reefs, as well as certain migratory fish species.

### **Severn Estuary Special Protection Area (SPA)**

SPAs are also part of the European Union 'Natura 2000' network and are classified for the protection of birds. In this instance, assemblages and species overwintering and migratory wildfowl are the focus of this designation.

### **Severn Estuary Ramsar Site**

Ramsar sites are a non-statutory designation for as Wetlands of International Importance. The Severn Estuary Ramsar site is listed on account of the habitats and species for which the SAC and SPA are designated/classified.

Typical effects which may arise from development along the foreshore and which may impact upon these designations include (but are not limited to):-

- Direct loss of habitat such as vegetated shingle or saltmarsh
- Visual or noise disturbance to overwintering and migratory birds
- Direct impacts upon overwintering and migratory birds by features such as wind turbines
- Mobilisation of existing ground contaminants by works such as piling etc. which may then leach into the estuary
- Deposition of airborne contaminants arising from traffic and industrial processes

### **1.5.11 Habitats Regulations Assessment (HRA) Procedure**

#### **Policy EN5 - Designated Sites**

Under Regulation 61(1) of the Conservation of Habitats and Species Regulations 2010 as amended, referred to as the 'Habitats Regulations', a competent authority, before deciding to undertake, or give any consent, permission or other authorisation for, a plan or project which...

- a) is likely to have a significant effect on a European site or a European offshore marine site (either alone or in combination with other plans or projects), and
- b) is not directly connected with or necessary to the management of that site,

...must make an appropriate assessment of the implications for that site in view of that site's conservation objectives. These conservation objectives will be as set out in the most recent advice from Natural Resources Wales. In relation to the Severn Estuary European Marine Site (EMS), this advice is issued jointly with Natural England under Regulation 37 of the Conservation of Habitats and Species Regulations 2010 (as amended).

The process of establishing whether there is likely to be a significant effect upon a European Site, and if so undertaking an 'appropriate assessment', is known as a Habitats Regulations Assessment or HRA.

When a planning application is submitted for a proposal which might affect a European Site, Cardiff Council will have to consider whether a HRA is required.

The European Sites in Cardiff are the Severn Estuary Special Area of Conservation (SAC), the Severn Estuary Special Protection Area (SPA) and the Cardiff Beech Woods SAC. However, the impacts of a development, such as contamination by air-borne pollutants, may be felt further afield than Cardiff. Clearly it would be impossible to assess the impacts of a development upon all European Sites in the UK and in the EU,

so a perimeter of 15Km around Cardiff has been established with CCW and subsequently NRW through the Review of Consents Process and the HRA of the Cardiff Local Development Plan.

The additional sites within this perimeter which may need to be considered in a HRA process are currently:-

Aberbargoed Grasslands SAC,  
Blackmill Woodlands SAC,  
River Usk SAC,  
River Wye SAC.

As a matter of Welsh Government policy, Ramsar sites (sites listed under the Ramsar convention as wetlands of international importance) should be treated in the same way as SACs and SPAs, including in particular in relation to the consideration of plans and projects likely to affect them. Therefore following a procedure analogous to Regulation 61 in relation to the Severn Estuary Ramsar Site would also help ensure adherence to WG policy.

Projects will be assessed in accordance with the following documents:-

- Assessing Projects under the Habitats Directive - *Guidance for Competent Authorities*. David Tyldesley and Associates for Countryside Council for Wales. September 2008.
- Managing Natura 2000 Sites - The provisions of Article 6 of the 'Habitats' Directive 92/43/CEE. 2000.
- Assessment of plans and projects significantly affecting Natura 2000 sites. Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC. November 2001.

## Screening

The following criteria will be used to screen plans, projects or programmes for relevance to the HRA process:-

1. A HRA will be required for any plan, project or programme which results in an activity which is known to affect a European site.
2. A HRA will be required for a plan, project or programme which:-

Steers a quantum or type of development towards or encourages development in, an area that includes a European site or an area where development may indirectly affect a European site.

The 'area' referred to above will include:-

- Any area within the boundary of the European site
- All land within 1000m of the boundary of the European site
- All land or any area of watercourse in hydrological connectivity (tributaries, ground water etc.) with a European site, to include those within 1000m (provisional) of the boundary of watercourses upstream and downstream of the European site
- All land within 3km of a European site for industrial developments, larger housing developments and minerals consents including those requiring an EIA
- All land within distance criteria set out in paragraphs 2 and 3 of Appendix 2 to Annex XVII of Part B of the General Guidance Manual on Policy and Procedures for A2 and B Installations.

Under Regulation 61(2), a person applying for any such consent, permission or other authorisation must provide such information as the competent authority may reasonably require for the purposes of the assessment or to enable them to determine whether an appropriate assessment is required. In effect, this may mean that

additional survey work of species or habitats which are the features of the European Site, may be needed. An applicant should be made aware that in some circumstances, such survey work can only take place at certain times of the year, and that more than one survey season may be needed in order to provide adequate data.

There is no statutory requirement to formally consult NRW at the initial screening stage or at the test of likely significance stage. However, if an 'appropriate assessment' is undertaken, the competent authority must for the purposes of the assessment consult NRW and have regard to any representations made by them within such reasonable time as the authority specify.

The HRA process is normally undertaken by the County Ecologist within Cardiff Council, who will provide a report on the HRA to the case officer dealing with the planning application concerned. In certain circumstances, it may be acceptable for the planning applicant to commission a draft HRA and submit it in support of a planning application. If this draft HRA is found to be acceptable, then it can be adopted by Cardiff Council for the purposes of its duty under Regulation 61(1).

#### **1.5.12 SSSI Procedure**

##### **Policy EN5 - Designated Sites**

There are 17 Sites of Special Scientific Interest in Cardiff, and Cardiff Council has statutory duties in relation to these sites under the Wildlife and Countryside Act 1981 as amended.

A general duty under Section 28G of that Act is to take reasonable steps, consistent with the proper exercise of the authority's functions, to further the conservation and enhancement of the flora, fauna or geological or physiographical features by reason of which the site is of special scientific interest. An authority to which this section applies is referred to as a '*Section 28G authority*'.

In practice, this means that where any Cardiff Council functions, including the consideration of planning applications, may affect a SSSI, the County Ecologist should be contacted for advice as to how to proceed. It is likely that NRW should be consulted on any such activity.

A more specific duty is set out in section 28I of the CRow Act, which states that before granting planning (or any other) consent for operations likely to damage any of the features for which a SSSI has been designated, a section 28G authority, in this case Cardiff Council, must give notice of the proposed operations to NRW.

Operations which may affect the features of a SSSI in this way require consent from NRW. However, where that operation also requires planning consent, then rather than operate the SSSI consent procedure in parallel with the planning consent procedure, NRW will instead provide comment on the planning application to the Cardiff Council Planning Service. If those comments are incorporated into the consideration of the planning application, then SSSI consent will be deemed to have been granted if planning consent is granted.

Where notice of a proposed operation has been given to NRW, they must then be given 28 days to respond, and when they do, their advice must be taken into account.

If NRW advise against granting consent, but this advice is not taken into account, then consent must not be granted until 21 days after this advice is received from NRW.

### **1.5.13 SINC Procedure**

#### **Policy EN5 - Designated Sites**

The use of Sites of Importance for Nature Conservation (SINCs) is indicated in Section 5.3.11 of PPW 2016 and Section 5.5 of TAN5. Section 5.5.3 of TAN5, states:-

*'The conservation and enhancement of locally designated sites is an important contribution to the implementation of Biodiversity Action Plans and to the management of features of the landscape of major importance for wild flora and fauna. Developers should avoid harm to those interests where possible. Where harm is unavoidable it should be minimised by mitigation measures and offset as far as possible by compensation measures designed to ensure there is no reduction in the overall nature conservation value of the area or feature.'*

As a precedent we use the Planning Inspectorate's comments on the Monmouthshire Unitary Development plan, wherein:- *'The Council will assess sites proposed for development to ascertain whether they fulfil the criteria for designation and may request information from applicants to assist in that process. If a site satisfies the criteria it will, for planning purposes, be treated as if it were a SINC.'* In other words, even if a site has yet formally to be designated as a SINC, if it meets the qualifying thresholds, it should be treated as a SINC for planning purposes.

The qualifying criteria for SINC designation are set out in the Guidelines for the Selection of Wildlife Sites in South Wales.

Therefore, where a SINC or land which could be designated as a SINC is likely to be affected by development, survey work should be undertaken to establish the features of importance for nature conservation for which the SINC has or could be designated. Subsequently, mitigation and compensation measures may be needed. Where there is the potential for significant adverse effects upon the features of a SINC, the following condition should be attached to any planning consent:-

Condition: No materials, waste, arisings or plant shall be stored or operated within the (XXX) SINC, outside the site boundary identified within the planning application, or allowed to fall, be washed or blown into it.

Reason: To protect the features of interest for nature conservation for which the (XXX) SINC has been designated.

A map showing SINC in Cardiff is available on the Cardiff Council mapping portal, or from the County Ecologist, who can also provide SINC designation sheets, which describe the SINC and their special interest. These can be forwarded to planning applicants.

#### **1.5.14 Biodiversity and Resilience of Ecosystems Duty (BRED)**

##### **EN7: Priority Habitats and Species**

##### **EN6: Ecological Networks and Features of Importance for Biodiversity**

The Biodiversity and Resilience of Ecosystems Duty (BRED) as set out in the Environment (Wales) Act 2016 states that public bodies such as Cardiff Council must seek to maintain and enhance biodiversity in the exercise of their functions, and in so doing promote the resilience of ecosystems, so far as is consistent with the proper exercise of those functions. In complying with this duty we will have to take account of the resilience of ecosystems, in particular the following aspects—

- (a) diversity between and within ecosystems;
- (b) the connections between and within ecosystems;
- (c) the scale of ecosystems;
- (d) the condition of ecosystems;
- (e) the adaptability of ecosystems.

Under Section 7 of the Environment (Wales) Act 2016, Welsh Ministers must prepare and publish a list of the living organisms and types of habitat which in their opinion are of principal importance for the purpose of maintaining and enhancing biodiversity in relation to Wales. The species and habitats on this list may be taken to be the focus of Cardiff Council's duty under Section 6, as above.

Cardiff Council has to consider the implications of a proposed scheme upon the habitats and species in the published Section 7 list, and any loss of habitat or fragmentation of habitat that supports them. Clearly it would be unreasonable to

require a planning applicant to survey for all species and habitats on those lists which might be found within the immediate area of this application. Correspondingly, it would be impossible for Cardiff Council accurately to assess the impacts of the proposed scheme upon all of those habitats and species.

Instead, where it is unavoidable that areas of semi-natural habitat will be lost to a proposed development, robust assumptions should be made as to which Section 7 habitats and species are likely to be affected. Subject to other protected species/habitat controls, loss of these habitats may be tolerable, provided there remains sufficient habitat connectivity through and around the proposed development site to allow the normal movement, dispersal, migration, foraging and adaptation to climate change of any relevant species which may be present.

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## Appendix 1.A Planning Officers Checklist

The following checklist can be used as an aid firstly to guide Planning officers in considering the impact of a planning application upon biodiversity, and secondly to remind prospective planning applicants of the information that they may need to provide with their application. This checklist is adapted from that provided by the Biodiversity Planning Toolkit <http://www.biodiversityplanningtoolkit.com/default.asp>

<b>Planning Officers Checklist</b>	<b>Yes ✓ No ×</b>
<b>General</b>	
1. Has the decision been based upon up-to-date information about the environmental characteristics of the area?	
2. Has the decision sought to maintain and enhance biodiversity and in doing so promoted the resilience of ecosystems, as required under s7 of the Environment (Wales) Act 2016?	
3. Even if a development site is not statutorily protected, does it nevertheless contribute to a network of natural habitats which, because of their linear and continuous structure, or their functions as stepping stones, are essential for migration, dispersal and genetic exchange?	
4. Will the proposal maintain, enhance, restore or add to biodiversity and geological interests within the wider community as required by PPW and TAN5?	
5. Would the proposal lead to the loss or deterioration of ancient woodland? If so are the benefits of the proposal sufficient to outweigh this loss or deterioration?	
<b>Protected sites</b>	
1. Is the development site subject to an international, national or local designation? Has reference been made to the designation in the decision?	
2. Does the development site fall within, adjacent to or near a European site (Special Protection Area, Special Area of Conservation, candidate Special Area of Conservation), an international site (Ramsar Site) or a potential Special Protection Area?	
3. If so, have the following tests been applied, as required under the Habitats Regulations:	
a. Is the proposal directly connected with or necessary for the management of the protected site?	
b. If not, can it be objectively determined that it would be unlikely, alone or in combination with other plans and projects, to have a significant effect on the protected site?	
c. If not, has an appropriate assessment (AA) been undertaken?	
d. Does the AA establish that the development would not adversely affect the integrity of the protected site?	
e. If not, can the adverse effects be minimised or avoided by imposing appropriate conditions or through a valid S106 obligation?	
f. If not, are there alternative solutions which would have no or a lesser effect on the integrity of the protected site?	

g. If not, are there imperative reasons of overriding public interest to justify permitting the development?	
h. If so, can all necessary compensatory measures to ensure the overall coherence of the network of internationally protected sites (Natura 2000) be put in place?	
4. If the proposal site could potentially have an impact on a nationally designated site e.g. Site of Special Scientific Interest (SSSI), is the proposal likely to damage the protected site's special interest features? If so are the benefits of the proposal sufficient to outweigh this harm?	
5. If the proposal would have an impact on Site of importance for Nature Conservation (SINC) would it significantly undermine the intrinsic scientific interest of the protected site and/or reduce the opportunity it provides for contact with and enjoyment of nature and a resource for learning about the natural world? If so are the benefits of the proposal sufficient to outweigh the harm?	
<b>Protected species</b>	
1. Is there evidence to suggest that there is a reasonable likelihood of protected species (PS) being present on or near the site and is there a risk they may be adversely affected by the proposal?	
2. If so, has a survey been undertaken (recently)? If not, the application can be refused on the grounds that it will not be possible to ascertain the likely impact on the species.	
3. If a survey has been undertaken, can it be determined that the proposal would not have an adverse effect on the PS?	
4. If it would potentially have an adverse impact could this be overcome by any proposed mitigation measures?	
5. Can such measures be secured through the imposition of conditions or has a valid section 106 obligation been submitted which would ensure such measures are implemented?	
6. If you have concluded that the proposal would result in a breach of the protection afforded to European Protected Species (EPS), have you had regard to the 3 tests that the licensing authority must consider in deciding a licence application?	
7. If you propose to grant planning permission, are you satisfied that there are sufficient grounds to justify this? Are these grounds clearly expressed in the decision? In particular, if there would be harm to the PS/EPS does the decision identify how this would be mitigated? If it cannot be mitigated have you clearly identified the overriding reasons for granting planning permission?	

# Ecology and Biodiversity TGN Part 2 – The Cardiff Resource

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## 2.1 Introduction

2.1.1 This Technical Guidance Note (TGN) relates to policies concerning ecology and biodiversity in existing development plans for Cardiff. It applies to all categories of development for which planning permission is required and includes comprehensive guidance on matters relating to ecology and biodiversity.

2.1.2 This TGN outlines:

- In Part 1 - how the Council will implement development plan policies relating to ecology and biodiversity, including how it will assess planning applications which could have an impact on ecology and biodiversity interests, the information applicants will need to provide to enable this, and the legislative framework within which the Council must operate.
- In Part 2 - the biodiversity/nature conservation<sup>2</sup> resource of Cardiff, sets out factual details of designated sites and biodiversity priorities.

2.1.3 The Welsh Assembly Government supports the use of SPG to set out detailed guidance on the way in which development plan policies will be applied in particular circumstances or areas. SPG must be consistent with development plan policies and national planning policy guidance and may be taken into account as a material planning consideration in planning decisions. The policy context is given in section 1.2 of this document.

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<sup>2</sup> For the purposes of this document, 'biodiversity' (short for biological diversity) is taken to have the same meaning and be interchangeable with 'nature' or 'wildlife'.

## 2.2 International/European Designated Sites in Cardiff

<b>SITE NAME</b>	<b>CENTRAL GRID REF.</b>	<b>COMMUNITY</b>	<b>YEAR FIRST DESIGNATED</b>
<b>Cardiff Beech Woods Special Area of Conservation (SAC)</b>	<b>ST118824</b>	<b>Pentyrch, Radyr and Morganstown, Whitchurch and Tongwynlais.</b>	<b>2004</b>
Cardiff Beech Woods contains one of the largest concentrations of beech forests in Wales, and represent the habitat close to the western limit of its past native range in both the UK and Europe. The woods show mosaics and transitions to other types, including more acidic Beech woodland and Oak and Ash woodland. Characteristic and notable species in the ground flora include Ramsons, Sanicle, Bird's-nest Orchid and Yellow Bird's-nest.			
<b>Severn Estuary Special Area of Conservation (SAC)</b>	<b>ST321748</b>	<b>Splott, Rumney, Trowbridge, Butetown</b>	<b>2007</b>
The Severn Estuary is the largest coastal plain estuary in the UK with extensive mudflats and sandflats, rocky shore platforms, shingle and islands. Saltmarsh fringes the coast, backed by grazing marsh with freshwater and occasionally brackish ditches. The estuary's classic funnel shape is a factor causing the Severn to have the second highest tidal range in the world at more than 12 metres. This tidal regime results in plant and animal communities typical of the extreme physical conditions of strong flows, mobile sediments, changing salinity, high turbidity and heavy scouring.			
<b>Severn Estuary Special Protection Area (SPA)</b>	<b>ST368818</b>	<b>Splott, Rumney, Trowbridge, Butetown</b>	<b>2005</b>
The Severn Estuary SPA consists of intertidal mudflats and sandflats, saltmarsh, shingle and rocky shoreline. These habitats support internationally important populations of regularly occurring Bewick's Swan, an internationally important assemblage of wintering waterfowl and internationally important populations of Shelduck, Dunlin, Redshank, European White-fronted Goose and Gadwall.			
<b>Severn Estuary Ramsar Site</b>	<b>ST368818</b>	<b>Splott, Rumney, Trowbridge, Butetown</b>	<b>1995</b>

SITE NAME	CENTRAL GRID REF.	COMMUNITY	YEAR FIRST DESIGNATED
<p>The Severn Estuary has been designated a Ramsar site because it is important for migratory birds during passage periods in spring and autumn and regularly supports over 20 000 waterfowl in winter. The site also regularly supports, during the same period, internationally important populations of five species of waterfowl. The Severn Estuary is also important for the run of migratory fish between the sea and rivers. Other unique features include an immense tidal range affecting physical environment and biological communities, unusual estuarine communities, reduced species diversity and high productivity.</p>			

### 2.3 Sites of Special Scientific Interest in Cardiff

Site name	Grid Ref.	Community	Year First Designated
<b>Castell Coch Woodland and Road Section</b>	<b>ST130827</b>	<b>Tongwynlais</b>	<b>1972</b>
<p>A biological and geological SSSI. Ancient semi-natural Beech woodland which although intensively managed in the past maintains its ancient nature, with county rarities such as Bird's-nest Orchid, Greater Butterfly Orchid and Yellow Bird's-nest. Forms part of the Cardiff Beech Woods Special Area of Conservation (SAC). Geological exposures present at Castell Coch Road Section show a sequence of rocks that includes the Devonian Old Red Sandstone and the younger Carboniferous Limestone.</p>			
<b>Coed y Bedw</b>	<b>ST111826</b>	<b>Pentyrch</b>	<b>1982</b>
<p>A diverse, north-facing, 17 Ha broadleaved woodland with Oak, Birch, Beech, Ash and Alder all occupying distinctive areas in the reserve. Lime-rich springs found in the southwest meet an acidic stream running eastward, while a small pond sits in the centre of the woodland, overlooked by coppiced Alder.</p>			
<b>Fforestganol Chwm Nofydd</b>	<b>ST147835</b>	<b>Rhiwbina/Tongwynlais</b>	<b>1985</b>
<p>An area of mixed deciduous woodland with Beech plus old, orchid-rich pasture, Alder woodland and calcareous flushes. One flush contains the nationally rare plant <i>Rivularia biasoletiana</i>. Woodland areas contain Solomon's Seal, Yellow Bird's-nest, Bird's-nest Orchid and Wood Goldilocks. Herb Paris and Adder's Tongue Fern have been recorded. Forms part of the Cardiff Beech Woods SAC.</p>			

Site name	Grid Ref.	Community	Year First Designated
<b>Ely Valley</b>	<b>ST114764</b>	<b>St Fagans, Ely</b>	<b>1959</b>
The best station in Wales for Monk's-hood. This rare plant has a population alongside several miles of the River Ely, occurring mainly in ditches, wetlands and woods immediately adjacent to the river. The majority of this site falls within the Vale of Glamorgan, with only a small amount within Cardiff.			
<b>Flat Holm</b>	<b>ST222649</b>	<b>Butetown</b>	<b>1972</b>
A biological and geological SSSI which forms part of the Severn Estuary SAC, SPA and Ramsar site. Carboniferous limestone island dominated by coarse grassland and scrub with a maritime sward in the low western cliffs. There is a range of plant species adapted to chalky soil, and this is one of the few stations in Wales for the Wild Leek. Herring and Lesser Black-backed Gulls also nest here. The south western shoreline demonstrates rocks of the Flat Holm Limestone of the Birnbeck formation.			
<b>Garth Wood</b>	<b>ST125821</b>	<b>Radyr</b>	<b>1979</b>
Mixed Beech-Ash woodland of uneven age, with Beech growing near the western limits of its natural range. Exhibits a well-developed understorey and is one of the few county locations for Bird's-nest Orchid. Badgers are also present. A population of <i>Porrhomma rosenhaueri</i> (a cave dwelling spider) is found within Lesser Garth Cave. Forms part of the Cardiff Beech Woods SAC.			
<b>Glamorgan Canal/Long Wood</b>	<b>ST139809</b>	<b>Whitchurch</b>	<b>1982</b>
An artificial wetland ecosystem adjoining river terrace beech woodland of considerable age. There is a range of habitats from open water, Alder carr, scrub and deciduous woodland. Includes important invertebrate species, birds and plants such as Arrowhead.			
<b>Gwent Levels - Rumney and Peterstone</b>	<b>ST350800</b>	<b>Rumney, Trowbridge</b>	<b>1993</b>
Supports a number of important plant species including Flowering-rush, Brackish Water-crowfoot, Frog-bit and Hair-like Pondweed. The aquatic invertebrate fauna is very diverse and contains many rare and notable species.			
<b>Lisvane Reservoir</b>	<b>ST190822</b>	<b>Llanishen</b>	<b>1982</b>
A stream-fed reservoir of importance for birds, which makes a useful refuge on the northern outskirts of Cardiff for overwintering Mallard, Teal, Tufted Duck, Pochard, Coot, Divers, Grebes and passage migrants.			

Site name	Grid Ref.	Community	Year First Designated
<b>Argloddiau Cronfeydd Dwr Llanisien a Llys-Faen - Llanishen and Llvane Reservoir Embankments</b>	<b>ST185822</b>	<b>Llanishen</b>	<b>2005</b>
An important site for grassland fungi, supporting 28 species of Waxcaps <i>Hygrocybe spp.</i>			
<b>Penylan Quarry</b>	<b>ST198787</b>	<b>Roath</b>	<b>1982</b>
Geological SSSI. Exposure of the Wenlock Series of Silurian mudstones. Important fossil collections have come from this site and have been used worldwide in comparative dating of similar rocks.			
<b>Rhymney River Section</b>	<b>ST209789</b>	<b>Rumney</b>	<b>1981</b>
Geological SSSI: The most complete exposure of the Silurian strata containing the local Wenlock succession, Rumney Grit, Ludlow Series and Old Red Sandstone. There is some fossil significance.			
<b>Rumney Quarry</b>	<b>ST215788</b>	<b>Rumney</b>	<b>1972</b>
Geological SSSI: Rumney Quarry is a small disused quarry situated in a residential area of east Cardiff. It is a very important site for the interpretation of the disposition of land and sea in mid-Silurian times. This site provides the best exposure of the Silurian Rumney Grit, which is considered to belong to the oldest part of the Homerian Stage of the Wenlock Series.			
<b>Severn Estuary</b>		<b>Splott, Rumney, Trowbridge, Butetown</b>	<b>1952</b>
One of the largest and most important tidal estuaries in Britain with mudflats, sand banks, rocky platforms and saltmarsh. This SSSI forms part of the Severn Estuary SAC, SPA and Ramsar site. The estuarine fauna includes: internationally important populations of waterfowl, invertebrate populations of considerable interest, and large populations of migratory fish, including the nationally rare and endangered Allis Shad ( <i>Alosa alosa</i> ).			
<b>Ty Du Moor</b>	<b>ST107792</b>	<b>Creigiau &amp; St Fagans</b>	<b>1999</b>
This site is of special interest for its base enriched fen meadow vegetation, which is associated with a range of marshy grassland, flush, swamp and carr communities. Also of special interest is the population of Broad-leaved Cottongrass <i>Eriophorum latifolium</i> .			

Site name	Grid Ref.	Community	Year First Designated
<b>Caeau Blaen-Bielly</b>	<b>ST101825</b>	<b>Pentyrch</b>	<b>2010</b>
Caeau Blaen-Bielly are a series of enclosed pastures with a south to south-easterly aspect, separated by hedgerows. These fields are of special interest for their species-rich neutral grassland and marshy grassland, some of which is species-rich 'fen-meadow'.			
<b>Cwarrau Ton Mawr a Ffynnon Taf – Ton Mawr and Taffs Well Quarries</b>	<b>ST119822</b>	<b>Pentyrch, Radyr</b>	<b>2012</b>
Geological SSSI: The site is of special interest for the several phases of spectacular mineralization exposed in the quarry walls. The limestone rocks that are being quarried are Carboniferous in age (approximately 340 to 350 million years old), but the mineralization is much younger. The presence of spectacular calcite minerals, coupled with the opportunity to study the history of mineralization, make these quarries nationally important for the study of mineralogy.			

## 2.4 Designated Local Nature Reserves in Cardiff

SITE NAME	GRID REF.	COMMUNITY	YEAR DESIGNATED
<b>Flat Holm</b>	<b>ST222649</b>	<b>Butetown</b>	<b>1977</b>
Carboniferous limestone island dominated by rough grassland and scrub with a maritime sward on the low western cliffs. Flat Holm supports a gull breeding colony and a large range of plant species which prefer chalky soil. The site is also part of the Severn Estuary SSSI, SPA & Ramsar Site.			
<b>Glamorgan Canal</b>	<b>ST139809</b>	<b>Whitchurch</b>	<b>1981</b>
An artificial wetland ecosystem adjoining river terrace beech woodland of considerable age. A range of habitats exist from open-water, Alder carr, scrub and deciduous woodland. The site is also a SSSI.			
<b>Hermit Wood</b>	<b>ST137797</b>	<b>Radyr</b>	<b>1985</b>
Semi-natural Oak/Ash/Alder woodland with diverse ground flora including Toothwort.			

<b>Howardian</b>	<b>ST205789</b>	<b>Roath</b>	<b>1991</b>
An area of semi-natural Oak woodland with grassland, marshland and pond habitats which have been created on a reclaimed landfill site. The site supports Broad-leaved Helleborine, Bee Orchid, Southern Marsh Orchid and Grass-leaved Vetchling, together with a large population of Dormice			
<b>Fforest Ganol &amp; Cwm Nofydd</b>	<b>ST144836</b>	<b>Tongwynlais, Rhiwbina</b>	<b>1995</b>
An area of ancient semi-natural woodland with Beech as the dominant species together with orchid rich pasture, Alder carr and calcareous flushes with a number of locally rare species such as Solomon's Seal, Bird's-nest Orchid and Wood Goldilocks.			
<b>Cardiff Bay Wetland &amp; Hamadryad Park</b>	<b>ST188740</b>	<b>Butetown</b>	<b>2010</b>
Created in 2002 to compensate in part for the loss of the mudflats when the barrage was completed which had been submerged by the rising water levels. The reserve is an important site for over-wintering and breeding birds, and other wildlife.			

## 2.5 Sites of Importance for Nature Conservation (SINCs) in Cardiff

Note that some SINCs occur in more than one ward. No SINCs have been identified in the Adamsdown ward.

<b>SINC Name by Ward</b>	<b>Area (Ha)</b>	<b>Grid Reference</b>	<b>Year Designated / Last Reviewed</b>
<b>Butetown</b>			
Beach Sidings	2.90	ST205740	2011
Cardiff Bay Wetland Reserve	10.14	ST188740	2004
Cardiff Heliport Fields	3.18	ST211750	2010
Ocean Park South	2.57	ST205753	2006
River Taff	90.44	ST17 & ST18	1995
Tidal Sidings	3.20	ST207755	2006
<b>Caerau</b>			
Caerau Wood	13.46	ST131750	2006
Canton Common Ditch	0.76	ST161756	2006
Leckwith Woods Viaduct	0.25	ST154757	2009
River Ely	34.99	ST17	2006
Sweldon Wood	5.32	ST128749	2006

<b>Canton</b>			
Canton Common Ditch	0.76	ST161756	2006
Leckwith Woods Viaduct	0.25	ST154757	2009
River Ely	34.99	ST17	2006
<b>Cathays</b>			
Blackweir & Dock Feeder	17.73	ST171776	2007
Cathays Cemetery	34.41	ST181785	2009
River Taff	90.44	ST17 & ST18	1995
<b>Creigiau &amp; St Fagans</b>			
Afon Clun	0.27	ST071826	2008
Cadoxton & Trehafod Branch Line	17.29	ST081820	2006
Castell-y-Mynach Wood	6.44	ST082806	2005
Coed Gwernybwlau	7.99	ST085795	2005
Coed Tre Wern	12.58	ST106807	2008
Coedbychan	14.87	ST125777	2004
Coed-y-Creigiau	8.53	ST084821	2009
Coed-y-Glyn	5.17	ST110802	2008
Coed-y-Goetre	6.20	ST118799	2006
Coed-y-Gof	14.39	ST124791	2008
Coed-y-Trenches	8.19	ST117797	2008
Craig-y-Sianel	3.33	ST088812	2009
Craig-y-Parc	18.75	ST093806	2009
Creigiau Railway Fields	7.53	ST079823	2012
Ely Northwest	4.88	ST120764	2009
Ffynnon-Dwym Wood	10.57	ST087815	2009
Former Llantrisant No. 1 Branch Line	17.87	ST120790	2008
Former Penhros Branch Line	17.08	ST110784	2010
Former St. Fagans Branch Line	3.47	ST114767	1995
Glan Ely Wood	2.42	ST130772	2006
Groes Faen Fen Meadow	2.12	ST073802	2012
Groes Faen Wood	7.73	ST076806	2004
Gwern-y-Cegyrn	5.59	ST115800	2006
Henstaff Rhos Pasture	1.82	ST080804	2012
M4 Junction 33 Spoil Tip	1.49	ST091796	2006
Maes Mawr Wood	2.62	ST076812	2009
Michaelston Marsh & Woods	9.41	ST114763	2006
Nant Coslech	1.68	ST080813	2010
Nant Dowlais	1.81	ST105787	2010
Nant Henstaff	6.98	ST082802	2005
Nant Rhydlafer	0.95	ST110794	2010

Nant-y-Cesair	0.13	ST076827	2010
Nant-y-Glaswg	5.86	ST100790	2010
Pant y Gored Wet Woodland	2.98	ST088809	2009
Pencoed Wood	5.44	ST091799	2008
Pentrebane Cottage Ponds	0.12	ST119788	2008
Plymouth Great Wood	25.37	ST126769	2006
River Ely	34.99	ST17	2006
Slanney Woods & Garn	18.24	ST112784	2004
St Fagans	30.17	ST112772	2012
Tre Wern Field, Pentyrch	8.89	ST104806	2008
Tydu Marsh	2.81	ST109796	2006
Tyn-y-coed Complex	73.16	ST086829	2009
Waterhall Plantation & Pond	8.99	ST128786	2008
<b>Cyncoed</b>			
Discovery Wood	0.97	ST189801	2007
Llanedeyrn Woodlands Complex	28.95	ST204807	2008
Llanishen Brook (South)	0.74	ST183804	2011
Llanishen Reservoir Grassland and Scrub	4.97	ST184817	2006
Nant Fawr Community Woodlands	4.04	ST185807	2009
Nant Fawr Meadows	5.50	ST190816	2007
Nant Glandulais	2.51	ST197825	2010
Rhyd-y-Pennau Complex	4.51	ST188812	2012
Roath Brook	4.77	ST206783	2011
Roath Park Lake	12.52	ST185796	2011
Roath Park Wild Gardens	3.48	ST185802	2007
Scott Wood	0.90	ST189802	2007
Swan Mear Wood	1.02	ST192800	2007
<b>Ely</b>			
Michaelston Marsh & Woods	9.41	ST114763	2006
Nant-y-Plac Complex	0.92	ST114754	2011
Plymouth Great Wood	25.37	ST126769	2006
River Ely	34.99	ST17	2006
Riverside Wood	1.68	ST134769	2006
<b>Fairwater</b>			
Fairwater Park	1.42	ST140779	2012
Former Llantrisant No. 1 Branch Line	17.87	ST120790	2008
Glan Ely Wood	2.42	ST130772	2006
River Ely	34.99	ST17	2006
Waterhall Plantation & Pond	8.99	ST128786	2008

<b>Gabalfa</b>			
Blackweir & Dock Feeder	17.73	ST171776	2007
Gabalfa Woods	5.77	ST165783	2007
River Taff	90.44	ST17 & ST18	2011
<b>Grangetown</b>			
Cogan Spur Viaduct	0.83	ST176729	2011
Grangemore Park	18.10	ST173737	2008
Leckwith Pond & Marsh	2.39	ST166742	2011
River Ely	34.99	ST17	2006
River Taff	90.44	ST17 & ST18	2011
<b>Heath</b>			
Cathays Cemetery	34.41	ST181785	2009
Heath Wood & Pond	9.49	ST176799	2012
<b>Lisvane</b>			
Airshaft No. 4 Spoil Tip	0.19	ST177848	2009
Castell Mor Craig Wood	1.95	ST161843	2009
Cefn Onn Amenity Grassland	1.14	ST176843	2012
Coed Transh yr Hebog	20.90	ST174847	2009
Coed-ty-Llwyd	3.08	ST186822	2009
Coed-y-Felin	6.73	ST181829	2012
Coed-y-Graig	2.92	ST195850	2009
Coetgaepengam	2.45	ST186827	2009
Coetgae-sych	3.76	ST190826	2012
Craig Llanishen	14.16	ST169846	2010
Craig-Llwyn Road Wood	2.40	ST194837	2011
Foxfield	0.95	ST194845	2009
Lisvane Reservoir Wood	1.00	ST189823	2009
Llwyn-y-Pia Marsh	3.12	ST189834	2005
Nant Fawr (north section)	1.80	ST179840	2010
Nant Glandulais	2.51	ST197825	2010
Nant Transh yr Hebog	0.26	ST179843	2010
Nant Ty-draw	0.86	ST194832	2009
Nant Ty-draw Fach	0.88	ST189841	2009
Nant-y-Draenog	0.31	ST199826	2010
Nant-y-Felin	0.42	ST193841	2009
Parc Cefn Onn	12.54	ST178841	2009
Springmeadow	1.47	ST192842	2009
Springmeadow Wood	3.91	ST192844	2010

Ty Llwyd Meadows	2.65	ST189823	2009
Wern Fawr South	8.44	ST182839	2009
<b>Llandaff</b>			
Radyr Community Woodlands	6.33	ST136797	2008
River Taff	90.44	ST17 & ST18	2011
<b>Llandaff North</b>			
Hailey Park	8.20	ST142796	2009
River Taff	90.44	ST17 & ST18	2011
<b>Llanishen</b>			
Coedcochwyn	4.70	ST171819	2012
Coedifanbychan/Coedtirhwnt	11.18	ST168832	2009
Coed-y-Caeau	6.45	ST176811	2006
Gwern-y-Bendy	1.71	ST183817	2008
Lisvane Reservoir Wood	1.00	ST189823	2009
Lisvane Station Wood	2.98	ST178832	2012
Llanishen Brook (North)	1.30	ST171828	2010
Llanishen Brook (South)	0.74	ST183804	2011
Llanishen Reservoir	23.88	ST187818	2011
Llanishen Reservoir Grassland and Scrub	4.97	ST184817	2006
Llwyn-crwnganol Wood	1.44	ST177832	2012
Thornhill Primary School Pond	0.13	ST174381	2007
<b>Llanrumney</b>			
Coed-y-Cwar	4.07	ST214801	2012
Fishpond Wood	1.64	ST218806	2012
Lower Rookery Wood	1.87	ST218809	2012
Rhymney River Valley Complex	30.35	ST208793	2008
River Rhymney	42.24	ST 27 & ST28	2011
<b>Pentwyn</b>			
Blaen Buellai Complex	40.37	ST104827	2011
Cadoxton & Trehafod Branch Line	17.29	ST081820	2006
Llanedeyrn Woodlands Complex	28.95	ST204807	2008
Nant Glandulais	2.51	ST197825	2010
Rhymney River Valley Complex	30.35	ST208793	2008
River Rhymney	42.24	ST 27 & ST28	2011

<b>Pentyrch</b>			
Caerau Lane Fields	10.16	ST104814	2008
Coed Rhiw'r Ceiliog	10.40	ST115836	2007
Coed Tre Wern	12.58	ST106807	2008
Coedgae Basset	11.38	ST096839	2004
Coedgae Fawr	5.68	ST114809	2004
Coed-y-Creigiau	8.53	ST084821	2009
Craig y Sianel	3.33	ST088812	2009
Cwmrhyddgoed	12.56	ST114820	2010
Former Penhros Branch Line	17.08	ST110784	2010
Llys-y-Coed	5.94	ST102813	2011
Nant Cwmllywdrew	0.53	ST117829	2010
Nant-y-Glaswg	5.86	ST100790	2010
Pentyrch Drove Track	0.55	ST111813	2012
River Taff	90.44	ST17 & ST18	2011
The Garth	113.97	ST106838	2008
Tre Wern Field, Pentyrch	8.89	ST104806	2008
Tyn-y-coed Complex	73.16	ST086829	2009
<b>Penylan</b>			
Llanedeyrn Woodlands Complex	28.95	ST204807	2008
Rhymney River Valley Complex	30.35	ST208793	2008
River Rhymney	42.24	ST 27 & ST28	2011
Roath Brook	4.77	ST206783	2011
<b>Plasnewydd</b>			
Roath Brook	4.77	ST206783	2011
<b>Pontprenau &amp; Old St Mellons</b>			
Cefn Mably Woods	31.91	ST214841	2004
Coed-y-Llan	1.75	ST204836	2006
Druidstone Road	1.34	ST232825	2009
Malthouse Wood	5.44	ST209832	2006
Nant Glandulais	2.51	ST197825	2010
Nant Mwlán Wood	1.54	ST230833	2006
Nant-y-Draenog	0.31	ST199826	2010
Pontprenau Wood	7.11	ST213820	2008
River Rhymney	42.24	ST 27 & ST28	2011
St Julian's Forge Fields	2.14	ST219826	2008
Tyla Farm Wood	2.15	ST239825	2004
<b>Radyr &amp; Morganstown</b>			

Coed Pant Tawel/Coedgae-fach	14.16	ST116810	2008
Coed-y-Goetre	6.20	ST118799	2006
Cwm Farm Pond & Streamside Copse	1.08	ST124818	2007
Former Penhros Branch Line	17.08	ST110784	2010
Goitre-Fawr Ponds	6.25	ST116806	2012
Gwern-y-Cegyrn	5.59	ST115800	2006
Maerdy Woods	8.41	ST121805	2012
Mynydd Woods	6.08	ST129813	2007
Radyr Community Woodlands	6.33	ST136797	2008
Radyr Cricket Ground and Fields	18.67	ST139801	2008
River Taff	90.44	ST17 & ST18	2011
<b>Rhiwbina</b>			
Briwnant Footpath Field	1.21	ST160832	2007
Briwnant Wood	14.05	ST157836	2008
Briwnant-Isaf Wood	7.54	ST158830	2006
Coed-y-Briwnant	16.67	ST154837	2005
Craigbriwnant field	1.99	ST161832	2008
Cwm Nofydd Grasslands	1.02	ST147838	2008
Nant Nofydd	1.76	ST148827	2009
Nant-y-Briwnant	3.42	ST160838	2009
Nant-y-Briwnant Complex	10.26	ST159826	2006
Pant Mawr Cemetery	4.31	ST144816	2011
River Taff	90.44	ST17 & ST18	2011
Twmpath Fields	2.33	ST152821	2012
Twynau Gwynion Field	1.15	ST153837	2005
Wenallt Farm Fields	4.52	ST152840	2008
Wenallt Rd North Fields	1.98	ST155842	2009
Wenallt Road Field, Rhiwbina	2.24	ST155827	2009
Whitchurch Golf Course Pond	0.08	ST150811	2004
<b>Riverside</b>			
River Taff	90.44	ST17 & ST18	2011
<b>Rumney</b>			
Lamby North	1.78	ST213782	2008
Lamby Salt Marsh	4.14	ST220775	2011
Lamby Way	0.33	ST220784	2009
Rhymney Grassland East	3.10	ST212784	2009
Rhymney River Valley Complex	30.35	ST208793	2008
River Rhymney	42.24	ST 27 & ST28	2011

<b>Splott</b>			
Ocean Park South	2.57	ST205753	2006
Pengam Moors	22.04	ST216769	2006
River Rhymney	42.24	ST 27 & ST28	2011
Tidal Sidings	3.20	ST207755	2006
<b>Trowbridge</b>			
Cath Cobb Wood	4.05	ST234811	2012
Hendre Lake	4.85	ST245805	2011
Hendre Lake West	4.19	ST243802	2009
Hendre Road	26.18	ST235797	2009
Marshfield	4.98	ST253809	2009
Rumney Great Wharf	59.98	ST244786	2011
Wentloog Industrial Park	0.68	ST233792	2009
<b>Whitchurch &amp; Tongwynlais</b>			
Blaengwynlais Quarry Fields	6.51	ST144843	2008
Coryton Heronry Wood	2.99	ST140811	2005
Coryton Interchange	7.46	ST139816	2008
Fforest-fach/Graig-goch	2.10	ST145832	2011
Fforest-fawr	69.48	ST136833	2010
Greenmeadow Wood	29.06	ST139822	2011
Melingriffith & Melingriffith Feeder	3.42	ST131806	2007
Nant Nofydd	1.76	ST148827	2009
Nant-y-Fforest	1.93	ST135827	2009
River Taff	90.44	ST17 & ST18	2011
Tongwynlais Oldfield Rd	5.07	ST144820	2009
Whitchurch Green Fields	7.84	ST141808	2008

## 2.6 Protected Species in Cardiff

The habitats, known distribution and legal protection of protected species in Cardiff.

<b>Species</b>	<b>Habitats</b>	<b>Distribution in Cardiff</b>	<b>Legal Protection</b> (see below for abbreviations)
<b>Great Crested Newt</b> <i>Triturus cristatus</i>	Breeds in ponds; forages in adjacent grassland and woodland.	Mainly in the west between the M4 and River Ely, but scattered records across the city	CR, WCA Sch 5 (full)

<b>Otter</b> <i>Lutra lutra</i>	Breeds in riverbanks; forages extensively along watercourses and other water bodies.	Present on the rivers Ely, Taff and Rumney; also occurs on tributaries and other water bodies.	CR, WCA Sch 5 (full)
<b>Dormouse</b> <i>Muscardinus avellanarius</i>	Woodland and scrub	Modern records all to the north and east of the city, but historic record in Roath.	CR, WCA Sch 5 (full)
<b>Bats (all species)</b> <i>Rhinolophidae</i> and <i>Vespertilionidae</i>	Breeding sites include trees, buildings and underground voids depending on the species, hibernation roosts may be in different locations.	Some species such as Pipistrelles are widespread across the county, other are very localised.	CR, WCA Sch 5 (full)
<b>Water Vole</b> <i>Arvicola terrestris</i>	Breeds in riverbanks; forages on marginal vegetation adjacent to water courses and water bodies.	Gwent Levels, and North Cardiff either side of the Coryton area	WCA Sch 5 (sec9[4])
<b>Badger</b> <i>Meles meles</i>	Breeding Setts usually in woodlands; forages mostly in woodland and grasslands	Widespread in the north of Cardiff	Protection of Badgers Act 1992
<b>Adder</b> <i>Vipera berus</i>	Heathland, scrub and rough grassland	Mostly north of the M4	WCA Sch 5 (sec 9 [1&5])

<b>Grass Snake</b> <i>Natrix natrix</i>	Grassland and scrub near waterbodies	Recorded from Gwent levels, Lisvane Reservoir and Forest Farm, but widespread in suitable habitat	WCA Sch 5 (sec 9 [1&5])
<b>Slow-worm</b> <i>Anguis fragilis</i>	Grasslands, scrub, allotments, gardens, railway embankments and brownfield sites.	Widespread including urban locations	WCA Sch 5 (sec 9 [1&5])
<b>Common Lizard</b> <i>Zootoca vivipara</i>	Grasslands, scrub, railway embankments and brownfield sites.	Formerly probably widespread now much more localised to the north of the City.	WCA Sch 5 (sec 9 [1&5])
<b>Barn Owl</b> <i>Tyto alba</i>	Breeds in buildings, trees and quarries; forages over grassland	Gwent levels and north Cardiff	WCA Sch 1
<b>Peregrine</b> <i>Falco peregrinus</i>	Breeds on buildings and in quarries; forages widely.	Mainly north Cardiff	WCA Sch 1
<b>Kingfisher</b> <i>Alcedo atthis</i>	Breeds in river banks; forages on watercourses and lakes.	Widespread along watercourses	WCA Sch 1
<b>Cetti's Warbler</b> <i>Cettia cetti</i>	Willow, usually adjacent to reeds.	Gwent levels	WCA Sch 1
<b>Childing Pink</b> <i>Petrorhagia nanteuillii</i>	Dry grassland	Only one site on Cardiff Docks	WCA Sch 8

### Abbreviations

**CR – Conservation of Habitats and Species Regulations 2010 (as amended)** (which implement the European Council Directive on the Conservation of Natural Habitats

and of Wild Fauna and Flora (92/43/EEC) which is referred to in the Regulations as the “Habitats Directive”.

**WCA – Wildlife and Countryside Act 1981 (as amended).**

Sch 5 (full) – Schedule 5 – full protection.

Sch 5 (sec9[1&5]) – in respect of section 9 paragraphs 1 and 5 only. Protection for reptiles under section 9(1) extends to intentional killing and injury only.

Sch 5 (sec9[4]) – in respect of section 9 paragraph 4 only.

Sch 1 – Schedule 1 (birds protected by special penalties)

Sch 8 – Schedule 8 (Plants)

**Note:** Animals which are protected by the Wildlife and Countryside Act 1981 (as amended) in respect of Schedule 9, section 5 (sale) **only** are not listed. Also most birds and their nests and eggs are protected. The Schedule 1 birds listed receive additional protection in respect of disturbance during the breeding season.

## 2.7 Invasive Non-Native Species

Many non-native species of plants and animals have been introduced to the UK. Some of these have become very prolific and caused problems for native flora and fauna. Schedule 9 of the Wildlife and Countryside Act makes it an offence to introduce certain animals or cause certain plants to grow in the wild. These include Japanese Knotweed. This is an abundant species in Cardiff, particularly in the river valleys and on disturbed ground such as brownfield sites. A standard condition for its treatment and removal is usually attached to planning applications where the species is present (see Appendix 1.D). Other problematic non-native species which occur in Cardiff are also listed on Schedule 9, which was amended to include further species in April 2010. Development proposals should consider the impact of these species upon local biodiversity and remove them where possible.

The following Invasive Non-native Species are known to occur in Cardiff, but other species may be discovered in the future:-

- American Mink (*Mustela vison*)
- Canada Goose (*Branta canadensis*)
- Canadian Waterweed (*Elodea canadensis*)
- Evergreen Oak (*Quercus ilex*)
- False Acacia (*Robinia pseudoacacia*)
- Floating Pennywort (*Hydrocotyle ranunculoides*)
- Giant Hogweed (*Heracleum mantegazzianum*)
- Giant Rhubarbs (*Gunnera* species)
- Harlequin Ladybird (*Harmonia axyridis*)
- Himalayan Balsam (*Impatiens glandulifera*)
- Hottentot Fig (*Carpobrotus edulis*)
- Japanese Knotweed (*Fallopia japonica*)
- Japanese Rose (*Rosa rugosa*)
- Killer Shrimp (*Dikerogammarus villosus*)
- Least Duckweed (*Lemna minuta*)

Montbretia (*Crocasmia x crocosmiifolia*)  
New Zealand Flatworms (*Kontikia* spp)  
New Zealand Pigmyweed (*Crassula helmsii*)  
Parrot's Feather (*Myriophyllum aquaticum*)  
Quagga Mussel (*Dreissena rostriformis*)  
Red-eared Terrapin (*Trachemys scripta elegans*)  
Rhododendron (*Rhododendron ponticum*)  
Russian-vine (*Fallopia baldschuanica*)  
Signal Crayfish (*Pacifastacus leniusculus*)  
Three-cornered Leek (*Allium triquetrum*)  
Turkey Oak (*Quercus cerris*)  
Water Fern (*Azolla filiculoides*)  
Zebra Mussel (*Dreissena polymorpha*)

**APPENDIX 2.A: Section 7 List for Cardiff**

This is a list of the living organisms which have been detected in Cardiff and which occur on the Section 7 list for Wales. The Section 7 list, as set out in the Environment (Wales) Act 2016, is a list of species which in the opinion of Welsh Ministers are of principal importance for the purpose of maintaining and enhancing biodiversity in relation to Wales. The data below were accessed on 26<sup>th</sup> September 2016 by the South East Wales Biodiversity Records Centre (SEWBRc) and relate to the extant Section 7 list at that time. It should be noted that the Section 7 list may be amended by Welsh Ministers. Past records of presence of a species do not guarantee continued occurrence; absence of records does not imply absence of a species, merely that no records are held at SEWBRc. SEWBRc cannot guarantee the accuracy of supplied data, and copyright of records remains with the original recorder.

Scientific Name	Common Name	Number of Records	Last Date Recorded
<i>Acronicta rumicis</i>	Knot Grass	376	2016
<i>Anguis fragilis</i>	Slow-worm	206	2016
<i>Anthus trivialis</i>	Tree Pipit	317	2016
<i>Arctia caja</i>	Garden Tiger	71	2016
<i>Bufo bufo</i>	Common Toad	339	2016
<i>Chiasmia clathrata</i>	Latticed Heath	32	2016
Chiroptera	Bats	895	2016
<i>Chroicocephalus ridibundus</i>	Black-headed Gull	2178	2016
<i>Coenonympha pamphilus</i>	Small Heath	120	2016
<i>Cuculus canorus</i>	Cuckoo	236	2016
<i>Ecliptopera silaceata</i>	Small Phoenix	275	2016
<i>Emberiza schoeniclus</i>	Reed Bunting	845	2016
<i>Erinaceus europaeus</i>	West European Hedgehog	458	2016
<i>Falco tinnunculus</i>	Kestrel	773	2016
<i>Larus argentatus</i>	Herring Gull	2142	2016
<i>Linaria cannabina</i>	Linnet	733	2016
<i>Lutra lutra</i>	European Otter	232	2016
<i>Lycia hirtaria</i>	Brindled Beauty	110	2016
<i>Malacosoma neustria</i>	Lackey	557	2016
<i>Motacilla flava</i>	Yellow Wagtail	536	2016
<i>Natrix natrix</i>	Grass Snake	109	2016
<i>Nyctalus noctula</i>	Noctule Bat	307	2016
<i>Passer domesticus</i>	House Sparrow	1705	2016
<i>Perizoma albulata</i>	Grass Rivulet	2	2016
<i>Phylloscopus sibilatrix</i>	Wood Warbler	362	2016
<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	1943	2016

Scientific Name	Common Name	Number of Records	Last Date Recorded
<i>Pipistrellus pygmaeus</i>	Soprano Pipistrelle	1711	2016
<i>Plecotus auritus</i>	Brown Long-eared Bat	90	2016
<i>Prunella modularis</i>	Duncock	1428	2016
<i>Pyrrhula pyrrhula</i>	Bullfinch	730	2016
<i>Rhinolophus ferrumequinum</i>	Greater Horseshoe Bat	29	2016
<i>Rhinolophus hipposideros</i>	Lesser Horseshoe Bat	85	2016
<i>Spilosoma lubricipeda</i>	White Ermine	108	2016
<i>Spilosoma lutea</i>	Buff Ermine	983	2016
<i>Sturnus vulgaris</i>	Starling	1506	2016
<i>Triturus cristatus</i>	Great Crested Newt	286	2016
<i>Turdus philomelos</i>	Song Thrush	1623	2016
<i>Tyria jacobaeae</i>	Cinnabar	452	2016
<i>Vipera berus</i>	Adder	54	2016
<i>Xanthorhoe ferrugata</i>	Dark-barred Twin-spot Carpet	114	2016
<i>Acanthis cabaret</i>	Lesser Redpoll	240	2015
<i>Acronicta psi</i>	Grey Dagger	44	2015
<i>Agrochola helvola</i>	Flounced Chestnut	8	2015
<i>Agrochola lychnidis</i>	Beaded Chestnut	42	2015
<i>Alauda arvensis</i>	Skylark	634	2015
<i>Allophyes oxyacanthae</i>	Green-brindled Crescent	95	2015
<i>Apamea remissa</i>	Dusky Brocade	106	2015
<i>Atethmia centrugo</i>	Centre-barred Sallow	67	2015
<i>Bombus (Thoracobombus) humilis</i>	Brown-banded Carder-bee	22	2015
<i>Botaurus stellaris</i>	Bittern	172	2015
<i>Caradrina morpheus</i>	Mottled Rustic	425	2015
<i>Celaena leucostigma</i>	Crescent	2	2015
<i>Centaurea cyanus</i>	Cornflower	13	2015
<i>Ceramica pisi</i>	Broom Moth	17	2015
<i>Cirrhia icteritia</i>	Sallow	87	2015
<i>Coccothraustes coccothraustes</i>	Hawfinch	365	2015
<i>Dendrocopos minor</i>	Lesser Spotted Woodpecker	746	2015
<i>Diarsia rubi</i>	Small Square-spot	190	2015
<i>Emberiza citrinella</i>	Yellowhammer	87	2015
<i>Ennomos fuscantaria</i>	Dusky Thorn	147	2015
<i>Ennomos quercinaria</i>	August Thorn	135	2015
<i>Ficedula hypoleuca</i>	Pied Flycatcher	395	2015
<i>Hemistola chrysoptera</i>	Small Emerald	59	2015
<i>Hepialus humuli</i>	Ghost Moth	73	2015
<i>Hipparchia semele</i>	Grayling	79	2015
<i>Hordeum marinum</i>	Sea Barley	25	2015
<i>Hydraecia micacea</i>	Rosy Rustic	92	2015
<i>Lepus europaeus</i>	Brown Hare	18	2015
<i>Leucania comma</i>	Shoulder-striped Wainscot	44	2015
<i>Limosa lapponica</i>	Bar-tailed Godwit	429	2015
<i>Locustella naevia</i>	Grasshopper Warbler	136	2015
<i>Melanchra persicariae</i>	Dot Moth	468	2015
<i>Melanthia procellata</i>	Pretty Chalk Carpet	37	2015
<i>Muscardinus avellanarius</i>	Hazel Dormouse	740	2015
<i>Muscicapa striata</i>	Spotted Flycatcher	402	2015
<i>Mustela putorius</i>	Polecat	39	2015
<i>Numenius arquata</i>	Curlew	1872	2015
<i>Pluvialis apricaria</i>	Golden Plover	173	2015

Scientific Name	Common Name	Number of Records	Last Date Recorded
<i>Poecile palustris</i>	Marsh Tit	242	2015
<i>Satyrrium w-album</i>	White-letter Hairstreak	30	2015
<i>Scotopteryx chenopodiata</i>	Shaded Broad-bar	62	2015
<i>Tholera decimalis</i>	Feathered Gothic	25	2015
<i>Turdus torquatus</i>	Ring Ouzel	55	2015
<i>Vanellus vanellus</i>	Lapwing	1761	2015
<i>Zootoca vivipara</i>	Common Lizard	82	2015
<i>Boloria selene</i>	Small Pearl-bordered Fritillary	19	2014
<i>Charadrius hiaticula</i>	Ringed Plover	1206	2014
<i>Circus cyaneus</i>	Hen Harrier	37	2014
<i>Eulithis mellinata</i>	Spinach	34	2014
<i>Melanitta nigra</i>	Common Scoter	308	2014
<i>Microglossum olivaceum</i>	Olive Earthtongue	12	2014
<i>Orthonama vittata</i>	Oblique Carpet	4	2014
<i>Perdix perdix</i>	Grey Partridge	79	2014
<i>Salmo salar</i>	Atlantic Salmon	12	2014
<i>Salmo trutta</i>	Brown/Sea Trout	30	2014
<i>Sciurus vulgaris</i>	Eurasian Red Squirrel	7	2014
<i>Timandra comae</i>	Blood-Vein	65	2014
<i>Watsonalla binaria</i>	Oak Hook-tip	24	2014
<i>Amphipoea oculaea</i>	Ear Moth	11	2013
<i>Caprimulgus europaeus</i>	Nightjar	49	2013
<i>Coeloglossum viride</i>	Frog Orchid	3	2013
<i>Euxoa nigricans</i>	Garden Dart	24	2013
<i>Lasiommata megera</i>	Wall	80	2013
<i>Poecile montana</i>	Willow Tit	235	2013
<i>Barbastella barbastellus</i>	Western Barbastelle	2	2012
<i>Hoplodrina blanda</i>	Rustic	392	2012
<i>Linaria flavirostris</i>	Twite	32	2012
<i>Pipistrellus pipistrellus</i> agg.	Pipistrelle	127	2012
<i>Scotopteryx bipunctaria</i>	Chalk Carpet	1	2012
<i>Scotopteryx bipunctaria</i> subsp. <i>cretata</i>	Chalk Carpet	12	2012
<i>Amphipyra tragopoginis</i>	Mouse Moth	81	2011
<i>Anguilla anguilla</i>	European Eel	66	2011
<i>Erynnis tages</i>	Dingy Skipper	9	2011
<i>Streptopelia turtur</i>	Turtle Dove	170	2011
<i>Vicia orobus</i>	Wood Bitter-vetch	1	2011
<i>Arvicola amphibius</i>	European Water Vole	27	2010
<i>Branta bernicla</i> subsp. <i>bernicla</i>	Dark-bellied Brent Goose	78	2010
<i>Cygnus columbianus</i> subsp. <i>bewickii</i>	Bewick's Swan	3	2010
<i>Lullula arborea</i>	Woodlark	11	2010
<i>Crex crex</i>	Corncrake	38	2009
<i>Gymnadenia conopsea</i>	Fragrant Orchid	13	2009
<i>Liparis loeselii</i>	Fen Orchid	2	2009
<i>Oenanthe fistulosa</i>	Tubular Water-dropwort	43	2009
<i>Cetorhinus maximus</i>	Basking Shark	1	2008
<i>Lucanus cervus</i>	Stag Beetle	16	2008
<i>Micromys minutus</i>	Harvest Mouse	5	2008
<i>Epirrhoe galiata</i>	Galium Carpet	8	2007
<i>Litoligia literosa</i>	Rosy Minor	34	2007
<i>Motacilla flava</i> subsp. <i>flavissima</i>	Yellow Wagtail	20	2007
<i>Orthosia gracilis</i>	Powdered Quaker	43	2007

Scientific Name	Common Name	Number of Records	Last Date Recorded
<i>Passer montanus</i>	Tree Sparrow	204	2007
<i>Cupido minimus</i>	Small Blue	9	2006
<i>Entoloma bloxamii</i>	Big Blue Pinkgill	4	2006
<i>Eugnorisma glareosa</i>	Autumnal Rustic	9	2006
<i>Tholera cespitis</i>	Hedge Rustic	5	2006
<i>Anser albifrons</i>	White-fronted Goose	100	2005
<i>Cygnus columbianus</i>	Bewick's Swan	40	2004
<i>Euxoa tritici</i>	White-line Dart	1	2004
<i>Hygrocybe spadicea</i>	Date Waxcap	3	2004
<i>Rhizedra lutosa</i>	Large Wainscot	20	2004
<i>Bombus (Thoracobombus) muscorum</i>	Moss Carder-bee	7	2003
<i>Bombus (Thoracobombus) sylvarum</i>	Shrill Carder Bee	17	2003
<i>Ennomos erosaria</i>	September Thorn	4	2003
<i>Perizoma albulata</i> subsp. <i>albulata</i>	Grass Rivulet	4	2001
<i>Martes martes</i>	Pine Marten	1	2000
<i>Clorismia rustica</i>	Southern Silver-stiletto	3	1999
<i>Euphydryas aurinia</i>	Marsh Fritillary	51	1999
<i>Hieracium radyrense</i>	Hawkweed	13	1998
<i>Meotica anglica</i>	Shingle Rove Beetle	5	1998
<i>Argynnis adippe</i>	High Brown Fritillary	22	1997
<i>Chesias legatella</i>	Streak	24	1997
<i>Endocarpon adscendens</i>	Endocarpon adscendens	9	1997
<i>Euphrasia officinalis</i> subsp. <i>pratensis</i>	Eyebright	2	1997
<i>Diloba caeruleocephala</i>	Figure of Eight	3	1996
<i>Galeopsis angustifolia</i>	Red Hemp-nettle	4	1996
<i>Varicellaria hemisphaerica</i>	Varicellaria hemisphaerica	1	1995
<i>Lipsothrix nervosa</i>	Cranefly	3	1994
<i>Lipsothrix nervosa</i>	Southern Yellow Splinter	3	1994
<i>Monotropa hypopitys</i> subsp. <i>hypopitys</i>	Bird's-nest	3	1994
<i>Hydnellum spongiosipes</i>	Velvet Tooth	1	1993
<i>Ranunculus arvensis</i>	Corn Buttercup	4	1993
<i>Monotropa hypopitys</i>	Yellow Bird's-nest	19	1991
<i>Acrocephalus paludicola</i>	Aquatic Warbler	5	1990
<i>Polystichum lonchitis</i>	Holly-fern	3	1990
<i>Sterna dougallii</i>	Roseate Tern	6	1990
<i>Pyrgus malvae</i>	Grizzled Skipper	6	1986
<i>Agrochola litura</i>	Brown-spot Pinion	6	1985
<i>Bembidion (Ocydromus) testaceum</i>	Pale Pin-palp	41	1985
<i>Stilbia anomala</i>	Anomalous	1	1983
<i>Macaria wauaria</i>	V-Moth	6	1978
<i>Cosmia diffinis</i>	White-spotted Pinion	1	1976
<i>Graphiphora augur</i>	Double Dart	5	1976
<i>Alosa fallax</i>	Twaite Shad	1	1975
<i>Emberiza calandra</i>	Corn Bunting	6	1975
<i>Ranunculus tripartitus</i>	Three-lobed Crowfoot	9	1973
<i>Monotropa hypopitys</i> subsp. <i>hypophegea</i>	Bird's-nest	2	1972
<i>Salsola kali</i> subsp. <i>kali</i>	Prickly Saltwort	2	1971
<i>Bupleurum tenuissimum</i>	Slender Hare's-ear	16	1969
<i>Lanius collurio</i>	Red-backed Shrike	29	1950
<i>Anania funebris</i>	White-spotted Sable	15	1945
<i>Boloria euphrosyne</i>	Pearl-bordered Fritillary	7	1945
<i>Galeopsis speciosa</i>	Large-flowered Hemp-nettle	1	1938

Scientific Name	Common Name	Number of Records	Last Date Recorded
<i>Silene gallica</i>	Small-flowered Catchfly	11	1938
<i>Carex divisa</i>	Divided Sedge	2	1937
<i>Cossus cossus</i>	Goat Moth	6	1933
<i>Lampronia capitella</i>	Currant Shoot Borer	4	1932
<i>Austropotamobius pallipes</i>	Freshwater Crayfish	3	1930
<i>Chesias rufata</i> subsp. <i>rufata</i>	Broom-tip	4	1930
<i>Fumaria purpurea</i>	Purple Ramping-fumitory	2	1930
<i>Carabus (Morphocarabus) monilis</i>	Necklace Ground Beetle	4	1929
<i>Andrena (Poliandrena) tarsata</i>	Tormentil Mining Bee	2	1925
<i>Lagopus lagopus</i>	Willow Ptarmigan	2	1925
<i>Viola lactea</i>	Pale Dog-violet	2	1922
<i>Adscita statices</i>	Forester	2	1921
<i>Apamea anceps</i>	Large Nutmeg	2	1921
<i>Brachylomia viminalis</i>	Minor Shoulder-knot	3	1921
<i>Cirrhia gilvago</i>	Dusky-lemon Sallow	2	1921
<i>Mniotype adusta</i>	Dark Brocade	5	1921
<i>Lampetra fluviatilis</i>	River Lamprey	2	1918
<i>Aporophyla lutulenta</i>	Deep-brown Dart	4	1917
<i>Chesias rufata</i>	Broom-tip	1	1917
<i>Meloe proscarabaeus</i>	Black Oil-beetle	2	1915
<i>Plebejus argus</i>	Silver-studded Blue	2	1912
<i>Platanthera bifolia</i>	Lesser Butterfly-orchid	10	1910
<i>Chamaemelum nobile</i>	Chamomile	5	1908
<i>Clinopodium acinos</i>	Basil Thyme	2	1908
<i>Gentianella campestris</i>	Field Gentian	2	1908
<i>Limenitis camilla</i>	White Admiral	3	1906
<i>Phocoena phocoena</i>	Common Porpoise	1	1900
<i>Cyclophora pendularia</i>	Dingy Mocha	2	1899
<i>Lophopus crystallinus</i>	Crystal Moss-animal	2	1891
<i>Orcinus orca</i>	Killer Whale	1	1891
<i>Melittis melissophyllum</i>	Bstard Balm	2	1886
<i>Pulicaria vulgaris</i>	Small Fleabane	2	1886
<i>Scandix pecten-veneris</i>	Shepherd's-needle	2	1886
<i>Stellaria palustris</i>	Marsh Stitchwort	2	1886
<i>Trollius europaeus</i>	Globeflower	3	1886
<i>Pyrrhocorax pyrrhocorax</i>	Chough	1	1880
<i>Dianthus armeria</i>	Deptford Pink	1	1876
<i>Hyperoodon ampullatus</i>	Northern Bottlenose Whale	1	1868

## **Appendix 2.B: Cardiff Modifications to the Guidelines for the Selection of Wildlife Sites in South Wales**

The 'Guidelines for the Selection of Wildlife Sites in South Wales' produced in August 2004, provide a framework within which Local Authorities are free to refine their own detailed criteria for the selection and designation of Wildlife Sites (SINCs) within their administrative boundaries.

Within Cardiff, the modifications to these criteria are as follows:-

- 1) Part 2 Section H1 Woodlands on page 21, the paragraph:-

*'No minimum threshold of indicator species is given because this could vary significantly depending on the type of woodland under consideration. However, the aim should be to demonstrate the presence of a significant assemblage of such species. The figure required for significance will vary greatly due to circumstance, and is best judged by local experts in a case by case or Unitary Authority by Unitary Authority basis.'*

...is removed, and replaced with:-

*'In Cardiff, a woodland will qualify for SINC designation as an Ancient Semi-Natural Woodland if it contains 12 or more species listed on Table 1. Woodlands will also qualify if any species or combination thereof on Table 1 forms a 'carpet' of ground flora that covers 25% or more of the woodland. These thresholds have been tested in woodlands in Cardiff and found to correspond accurately with sites which have already been selected as SINCs.'*

- 2) **S2 Birds**

The regional guidelines identify the following criteria:

- sites supporting breeding populations, of any size, of species marked with an A in Table 9
- sites supporting wintering or passage refuelling populations, of any size, of species marked with an A in Table 10
- sites supporting an agreed number (to be agreed by the LBAP partnerships) of those species that are marked B in Tables 9 & 10, or identified as additions to the tables by the LBAP partnership, that collectively designate a site and/or contribute towards its designation
- any site with 100 or more bird species recorded in the previous five years

On Table 9 (Pages 66 to 69), Sand Martin and Redstart are moved from the 'B' list to the 'A' list, and the Grey Heron is added to the 'A' list. Sand Martin and Heron are included on the A list because their breeding sites are concentrated in colonies. Redstart is an extremely scarce breeding species in Cardiff.

The selection criteria for assemblages of contributory species should also include a threshold for numbers of birds, so that sites which support significant populations are selected. Therefore the following site selection criterion is added:

- *'Sites which regularly support a population of \*waterfowl (excluding Mallard) which exceeds 200 individuals.'*

*\*The term waterfowl includes divers, grebes, cormorants, herons, swans, geese, ducks, waders, rails and their allies.'*

3) Section S3 Reptiles Page 70, there is inserted:-

The regional guidelines identify the following criteria:-

- Sites supporting three or more reptile species
- Sites supporting good populations of any reptile species

*'Reptiles in general are under-recorded in Cardiff, so SINCs will be designated as and when data becomes available.'*

In order to reflect the widespread distribution of slow-worms in Cardiff, including on brownfield sites, the following point:-

- *'Sites supporting good populations of any reptile species'*

...is replaced with:-

- *'Sites supporting good populations of Adders, Grass Snakes or Common Lizards.'*

...and the following point is added:-

- *'Sites supporting exceptional populations of Slow-worms.'*

4) Section S4 Amphibians – Great Crested Newt, page 72.

The regional guidelines identify the following criteria

- sites supporting 'good populations' of Great Crested Newt defined here as 10 or more individuals

Of the 5 breeding populations of this species in Cardiff, none qualify as 'Good', in that 10 or more individuals have not been detected at these sites during recent surveys. However, these populations are still important in the context of the biodiversity of Cardiff,

The regional criterion is substituted with:-

- *'Sites supporting breeding populations of Great Crested Newt.'*

In light of the above, the following text is deleted:-

*'Preference should be given to sites supporting 'good' populations of Great Crested Newts rather than all sites, bearing in mind that the species and its habitats are per se afforded full statutory protection by the Wildlife & Countryside Act 1981. 'Good populations' are here defined as sites that support 10 or more individuals. '*

...and the paragraph:-

*'The occurrence of Great Crested Newts, in whatever numbers, should be considered a supporting reason for selection of a site, which also qualifies under other guidelines (i.e. on habitat grounds or for species other than Great Crested Newts)'*

...is replaced by:-

*'The occurrence of Great Crested Newts, whether breeding or not, should be considered a supporting reason for selection of a site, which also qualifies under other guidelines (i.e. on habitat grounds or for species other than Great Crested Newts).'*

5) Section S5 Fish,

Additional criteria

- *'Significant spawning grounds for coarse fish.'*

This reflects the importance of some areas of the River Taff and Cardiff Bay in sustaining coarse fish populations.

6) Section S7 Vascular Plants (Page 78) after the second paragraph there is inserted:-

*'In Cardiff, some species may be moved from the list of Contributory Species to the list of Primary Species on the basis of currently available data and on advice from the county botanical recorder. Regard will be had to regionally and nationally declining species'*

Following initial review, Green-winged Orchid, Marsh Helleborine and Autumn Gentian are moved from the list of Contributory Species to the list of Primary Species, in order to reflect the rarity of these species in Cardiff.

7) Community Value Selection Criteria

The criteria for the selection of wildlife sites do not include any criteria relating to the community or social importance of wildlife. The following section will therefore be included in the Cardiff modifications to these criteria:-

*'Some sites which have significant biodiversity interest, but which narrowly fail to qualify under species and habitat criteria, may nonetheless be important sites for local communities to enjoy wildlife. These sites may be designated as SINC's if, in the opinion of the County Ecologist, they have substantial community value as well as being of significant biodiversity interest. In this instance, one or more of the following features will be considered in determining whether a site is of 'substantial community value' for wildlife.*

*Social Features:*

- *Close proximity (less than 500 metres) to significant residential areas (more than 1,000 households).*

- *High level of public access on the site.*
- *Active involvement of local community.*
- *Used as educational resource or for raising public awareness*

*Biodiversity Features:*

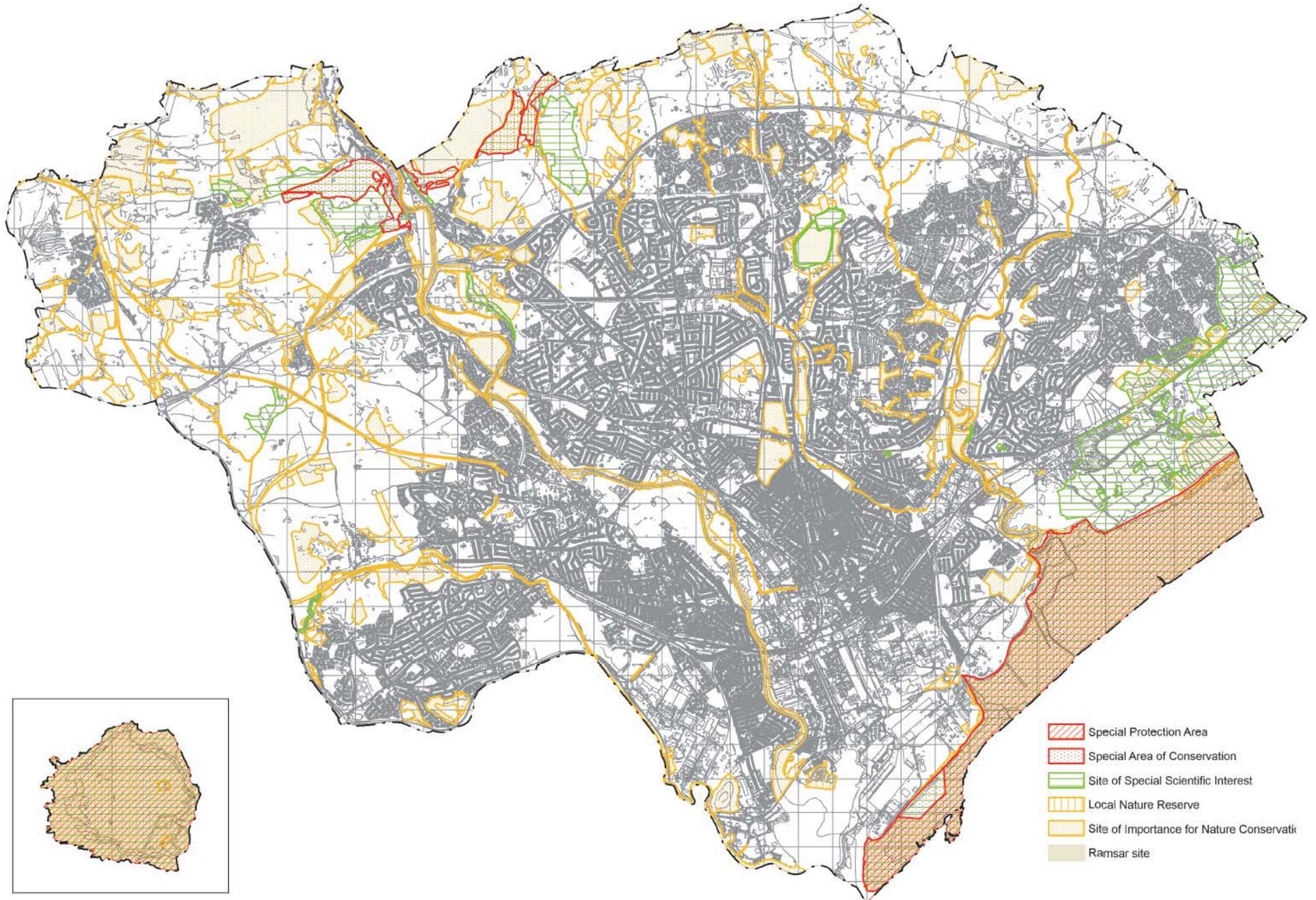
- *In an area with a lack of other semi-natural habitats.*
- *Managed for nature conservation.*
- *Forms part of a wildlife corridor - a largely continuous area of semi-natural habitats, which can facilitate the dispersal of flora and fauna.*
- *Supports significant habitats or species identified as a priority in any formally adopted local nature plan for Cardiff.*
- *Supports significant habitats or species identified as priorities in any Section 7 list published by the Welsh Government under the Environment (Wales) Act 2016.'*

8) Ecosystem Features

The following section will be included in the Cardiff modifications to the wildlife sites criteria:-

- *'Areas which are identified as being of strategic importance for ecosystems and ecosystem services should be considered for designation. Such areas will be identified by analysis of evidence-based geographical data, including remote-sensing data.'*

**APPENDIX 2.C: Map of Nature Conservation Sites in Cardiff**



Matthew Harris BSc(Hons) MSc MCIEEM  
Planner (Ecologist)  
Strategic Planning Highways Traffic & Transportation  
City of Cardiff Council

029 223 30840  
[mbharris@cardiff.gov.uk](mailto:mbharris@cardiff.gov.uk)

City of Cardiff Council  
Room 223  
Atlantic Wharf  
Cardiff  
CF10 4UW