

## 5 BIODIVERSITY

### 5.1. INTRODUCTION

This section of the Environmental Impact Assessment Report (EIAR) describes the potential impacts of the proposed River Deel (Crossmolina) Drainage Scheme on biodiversity, flora and fauna and has been completed in accordance with the guidance set out by the Environmental Protection Agency in ‘Guidelines on Information to be contained in Environmental Impact Statements’ (EPA, 2000/2017). In addition, the EC Guidance on Integrating Climate Change into Environmental Impact Assessment (EC 2013). The interactions between all flora and fauna (both protected and unprotected) have been assessed along with the overall impact on biodiversity. The assessment has assumed a worst case scenario when considering likely impacts. This chapter should be read in conjunction with the overall EIAR and in particular Chapter 7 (Water) and Chapter 8 (Air Quality & Climate – Noise & Vibration).

The ecology of the area surrounding the proposed scheme was first assessed in terms of habitats and species. The area over which the proposed scheme has the potential to result in effects (Zone of Influence) was then determined. Following this, the chapter identified the Key Ecological Receptors (KERs) within the Zone of Influence (ZOI) and accurately assessed the potential for effects thereon.

This chapter quantifies any potential direct and/or indirect significant effects relating to biodiversity and the identified KERs. It identifies the measures required to avoid, reduce and mitigate likely significant effects and assesses any residual effects that remain following the implementation of mitigation. The assessment has been undertaken following a collaborative approach working with a multi-disciplinary team including the OPW, engineers, hydrologists and hydrogeologists among other disciplines. The results of the ecological surveys have been utilised to inform the ecological assessment of the proposed development. The results of successive and iterative ecological assessments informed the design of the proposed scheme, thereby minimising potential effects on sensitive habitats and species of conservation interest.

Using the comprehensive assessment of the existing environment (baseline conditions), it has been possible to accurately predict the likely direct and indirect significant effects of the proposed scheme on the KERs and correctly assign an ecological significance to them.

Where detrimental effects have been identified, detailed and specific mitigation has been developed in accordance with the hierarchy of options suggested in the European Commission publication, ‘Managing Natura 2000 Sites - The provisions of Article 6 of the ‘Habitats’ Directive 92/43/EEC’, 2000. The adopted approach was - avoid at source, reduce at source, abate on site and finally, abate at receptor. These measures have been incorporated into the proposed scheme as part of the avoidance and environmental protection strategy.

The information provided in this EIAR chapter, accurately and comprehensively describes the baseline ecological environment; provides an accurate prediction of the likely ecological effects of the proposed scheme prescribes mitigation as necessary. It then describes the residual ecological effects and any monitoring that is to be undertaken post consent. The specialist studies, analysis and reporting have been undertaken in accordance with the appropriate guidelines as fully described in the methodology section below.

## **5.2. METHODOLOGY AND LIMITATIONS**

The ZOI for the project was set out at the commencement of the project. This was determined by careful scientific analysis of the receiving environment within which the proposed scheme is located. The ZOI includes the full extent of the surface water catchment in which the proposed scheme is located to its coastal outfall. This is the River Moy catchment and it includes the designated sites that are located downstream within the catchment and are connected via surface or groundwater. Habitats and foraging routes remote from the development particularly for mammal species were all considered in the establishment of the ZOI. In this regard, the ZOI includes the development site, the washlands, benefitting lands, and any European or Nationally Designated Sites (SACs, SPAs pSPAs) that could potentially be affected and any other receptors that may potentially be affected. The area included the immediate surroundings of the proposed development and the downstream catchment.

An initial study area which encompassed potential options for the scheme was determined as part of the Constraints Study and consisted of the channel, floodplain and immediate surrounding areas of the River Deel. The Study Area extended along the channel, flood plains and surrounding lands of the River Deel from Ballycarroon to Lough Conn and included three tributaries, their flood plains and surrounding lands. Several tributary streams joined the River Deel within the initial Study Area along with larger tributaries including the Torreen River and the Rathnamagh River.

Following this, an option that involved the construction of walls through the town of Crossmolina was advanced as the preferred option and ecological survey work and assessment was undertaken between 2012 and 2015 as part of this proposed option. In late 2015, this option was abandoned and further consideration was given to the now preferred option (bypass channel). Further, detailed surveys of the now preferred option were then undertaken throughout 2015, 2016, 2017 and 2018. The EIAR was drafted in 2018 and was presented at the exhibition of the scheme. During the detailed design phase and following submissions from various consultees, additional ecological survey and assessment work was carried out throughout 2019 and into 2020. The preferred scheme is the now the focus of this EIAR. The information gained from surveys that were undertaken up to 2015 in relation to the previously proposed scheme was taken into account in this assessment where it was relevant to the now preferred scheme.

### **5.2.1. Surveys undertaken to inform the proposed scheme**

A preliminary walkover survey of the study area was undertaken on the 16th of December 2015 and a follow-up survey was conducted on the 18th of May 2016. The timing of the May site visit falls within the recognised optimum period for vegetation surveys/habitat mapping, i.e. April to September (Smith et al., 2011). These surveys were carried out in accordance with NRA Guidelines on Ecological Surveying Techniques for Protected Flora and Fauna on National Road Schemes (NRA, 2009). A walkover survey was repeated in March 2018, September 2019 and May 2020. A walkover survey of the river channel between the Jack Garrett Bridge and Lough Conn was undertaken in March 2019 to identify any areas of Annex I Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*) [91E0] with the potential to be affected by the proposed scheme.

Habitat mapping was undertaken with regard to guidance set out in 'Best Practice Guidance for Habitat Survey and Mapping' (Smith et al., 2011). Plant nomenclature for vascular plants follows 'New Flora of the British Isles' (Stace, 2010), while mosses and liverworts nomenclature follows 'Mosses and Liverworts of Britain and Ireland - a field guide' (British Bryological Society, 2010).

The walkover surveys were designed to detect the presence, or likely presence, of a range of protected species. Otter surveys were conducted as per NRA (2009) guidelines (Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes). These involved a search for all Otter signs e.g. spraints, scat, prints, slides, trails, couches and holts. In addition to the width of the rivers/watercourses, a 10m riparian buffer (both banks) was considered to comprise part of the Otter habitat (NPWS 2009, Threat Response Plan: Otter (2009-2011)). The area surveyed for otter included dedicated searches of both banks for a distance of over 150 metres upstream and downstream of the proposed works areas on the River Deel and along the length of the Mullenmore Stream (As Per NRA 2009). A dedicated Otter survey also followed the guidance as set out in NRA (2008) 'Guidelines for the Treatment of Otters Prior to the Construction of National Roads Schemes'. This was repeated in March 2018, April and July 2019 and in May 2020. In addition, signs of otter were recorded during the multi-disciplinary walkover surveys that were undertaken on the site.

Badger surveys were undertaken in full accordance with best practice guidance (NRA, 2009) and were cognisant of 'Guidelines for the Treatment of Badger Prior to the Construction of National Roads Schemes' (NRA, 2006) in order to determine the presence of badger signs along and adjacent to the study area. Whilst the NRA guidance recommend undertaking Badger surveys is between November and April, when vegetation cover is reduced, the Badger survey conducted in May 2016 was not constrained by vegetation or season and a comprehensive survey was conducted. In addition, this survey was repeated in March 2018, September 2019 and May 2020.

A walkover survey of the Study Area for Bats was carried out during daylight hours on the 27th of May 2020. The landscape features on the site were visually assessed for potential use as bat commuting/foraging habitats using a protocol set out in BCT Bat Surveys for Professional Ecologists: Good

Practice Guidelines (3rd edn.) (Collins, 2016). Table 4.1 of the 2016 BCT Guidelines identifies a grading protocol for assessing structures, trees and commuting/foraging habitat for bats. The protocol is divided into four Suitability Categories: High, Moderate, Low and Negligible.

A dusk activity survey was undertaken on 27<sup>th</sup> May 2020. The aim of the survey was to identify if there were bats present at the proposed site, what bat species were present and to gather any information on bat foraging and commuting behaviour. The activity survey covered the extent of the proposed site. The survey also included walked transects across the extent of the proposed site.

Two surveyors were equipped with active full spectrum bat detectors, a Batlogger M (Elekon, Lucerne, Switzerland). Where possible, species identification was made in the field and any other relevant information was also noted, e.g. numbers, behaviour, features used, etc. All bat echolocation was recorded for subsequent analysis to confirm species identifications.

The dusk survey commenced 30 minutes before sunset and were completed for 3 hours after sunset. Conditions were suitable for the bat survey; dry, warm (18°C at sunset) with a calm/light air (Beaufort Scale Force 0-2). Cloud cover was light throughout the survey (25%).

Full spectrum bat detectors, Song Meter SM4BAT (Wildlife Acoustics, Maynard, MA, USA), were deployed during static surveys to record bat activity at three fixed locations over a 2-week period in 2020. The three locations of static detectors were selected to represent the range of habitats present within the site, including favourable bat habitats. Settings used were those recommended by the manufacturer for bats, with minor adjustments in gain settings and band pass filters to reduce background noise when recording. Detectors were set to record from 30 minutes before sunset until 30 minutes after sunrise. The Song Meter automatically adjusts sunset and sunrise times using the Solar Calculation Method when provided with GPS coordinates.

The survey was designed to utilise three static detectors to monitor bat activity. Three Song Meter SM4BAT detectors were initially deployed on site on the 12<sup>th</sup> May 2020. The Song Meter SM4, dual-channel acoustic recorder is capable of the long-term acoustic monitoring of bats.

Echolocation signal characteristics (including signal shape, peak frequency of maximum energy, signal slope, pulse duration, start frequency, end frequency, pulse bandwidth, inter-pulse interval and power spectra) were compared to published signal characteristics for local bat species (Russ, 1999). *Myotis* species (potentially *M. daubentonii*, *M. mystacinus*, *M. nattereri*) were considered as a single group, due to the difficulty in distinguishing them based on echolocation parameters alone (Russ, 1999). The echolocation of *P. pygmaeus* and *P. pipistrellus* are distinguished by having distinct (peak frequency of maximum energy in search flight) of ~55 kHz and ~46 kHz respectively (Jones & van Parijs, 1993).

Survey design and effort was created in accordance with the most current best practice guidelines for surveying bats (Collins, 2016). Bats use different roosts, commuting routes and foraging areas throughout their annual life cycle and depending on the availability of insect prey. Therefore, all surveys are subject to seasonal and meteorological constraints.

May is within the optimal survey period for bat activity surveys, (Collins, 2016). In addition, there were no limitations associated with weather conditions or access. Therefore, a full and comprehensive survey was achieved.

Habitats considered to be of ecological significance and in particular having the potential to correspond to those listed in Annex I of the EU Habitats Directive 92/43/EEC were identified and assessed. Woodland habitats were found to have potential to correspond with Annex I classification and were subject to detailed assessment with full details of the methodology followed provided in Appendix 5A.

During field surveys, searches for Invasive Alien Species (IAS) listed under the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477 of 2011) were conducted. Regulations 49 and 50 of these Regulations include legislative measures to deal with the dispersal and introduction of invasive alien species. IAS are also addressed by EU Regulation 1143/2014 on the Prevention and Management of the Introduction and Spread of invasive alien species, which seeks to address the problem of invasive alien species in a comprehensive manner so as to protect native biodiversity and ecosystem services, as well as to minimise and mitigate the human health or economic impacts that these species can have.

The multi-disciplinary walkover surveys comprehensively covered the entire study area.

A dedicated Freshwater Pearl Mussel survey was conducted in May 2017. The survey was conducted in accordance with the *Margaritifera margaritifera* Stage 1 and Stage 2 Survey Guidelines produced by the NPWS (Irish Wildlife Manual No. 12), by ecologists from McCarthy Keville O'Sullivan Ltd. under license number C157/2016 from the NPWS. A standalone report detailing the finding of the Freshwater Pearl Mussel survey is provided as Appendix 5B. The Pearl Mussel Survey was conducted in the area surrounding the intake structure and also within the Mullenmore Stream. Additional surveys of this species within the River Deel were undertaken on 22<sup>nd</sup> March 2018 and on the 8<sup>th</sup> April 2019 and details of these surveys are also provided in Appendix 5B. A further survey for the species within the River Deel between the Jack Garrett Bridge and a location upstream of the proposed intake weir in May 2020 as part of the Fisheries Habitat Assessment that is provided as Appendix 5C.

The woodlands, located adjacent to the River, which had been identified during the habitat surveys were assessed in greater detail in May 2015, May 2016 and March 2018 and were then further classified according to criteria set out in the National Survey of Native Woodlands 2003 – 2008 (*Perrin et al, 2008*). Detailed surveys of the riparian woodlands downstream of the proposed scheme but within the benefitting lands were undertaken on the 23<sup>rd</sup> and 24<sup>th</sup> July 2019. A Woodland Assessment Report detailing the findings of the woodland survey is provided as Appendix 5A.

Seasonal factors that affect distribution patterns and habits of species were taken into account when conducting the surveys and the potential of the site to support certain populations (in particular those of conservation importance that may not have been recorded during the field survey due to their seasonal absence or cryptic nature) was assessed.

Surveys were carried out on site during all seasons. Summer is usually the most appropriate time of year for ecological surveys, though even in summer some wintering species may not be recorded and thus surveys were carried out throughout the year.

Additionally, vantage point (VP) bird surveying was undertaken on a monthly basis for fifteen months between January 2016 and March 2017. Data on bird observations and flight activity was collected from a scanning arc of 180° and a 2km radius by an observer at a fixed location for three hours per month to provide a good indication of the levels of bird activity at the site over a long period. The area focussed on was the washlands adjacent to and within the Lough Conn And Lough Cullin SPA and the VP locations were located to the north of this area. Further, updates to these surveys were not required as the scheme design was developed to avoid significant physical works in the Washlands area associated with the construction of the proposed development.

Table 5.1 summarises the field surveys completed to date in relation to the proposed scheme.

Survey Type	Dates of Survey	Survey Locations
Woodland Survey	6 <sup>th</sup> May 2015	Banks of River Deel downstream of intake structure
Preliminary Walkover Survey	16 <sup>th</sup> December 2015	Entire study area
Bird Surveys	January 2016 – March 2017	Washlands
Multi-disciplinary walkover survey Otter Survey Badger survey	18 <sup>th</sup> May 2016	Entire Study Area
Woodland Surveys	18 <sup>th</sup> May 2016	Washlands
Multi-disciplinary walkover survey	May 2017	Entire Study Area

<p>Otter Survey</p> <p>Badger Survey</p> <p>Invasive Species Survey</p>		
<p>Freshwater Pearl Mussel Stage 2 survey</p> <p>Crayfish Survey</p>	11 <sup>th</sup> May 2017	River Deel adjacent to the intake structure and Mullenmore Stream
<p>Ecological Assessments associated with SI works and flow measurements</p>	Throughout 2016 & 2017	Entire Study area and locations in the wider area up and downstream of the proposed scheme
<p>Multi-disciplinary walkover survey</p> <p>Otter Survey</p> <p>Badger Survey</p> <p>Invasive Species Survey</p> <p>Freshwater Pearl Mussel Survey</p> <p>Crayfish Survey</p>	March 2018	<p>Entire study area.</p> <p>Freshwater Pearl Mussel Survey undertaken in River Deel adjacent to the intake structure and flow control structure</p>
<p>Walkover Survey of the River Deel downstream of Jack Garrett Bridge to Lough Conn – to identify potential alluvial woodland habitats within the benefitting lands</p>	6 <sup>th</sup> 7 <sup>th</sup> & 8 <sup>th</sup> March 2019	River Deel and its banks downstream of Jack Garrett Bridge
<p>Freshwater Pearl Mussel</p>	8 <sup>th</sup> April 2019	Freshwater Pearl Mussel Survey undertaken in River Deel adjacent to the

Survey		intake structure and flow control structure
Crayfish Survey		
Dedicated surveys of woodlands downstream of Jack Garrett Bridge in the benefitting lands and Marsh within washlands	23 <sup>rd</sup> , 24 <sup>th</sup> July 2019	Entire study area
Otter Survey	July 2019	River Deel at intake structure and flow control structure
Multi-disciplinary walkover survey	19 <sup>th</sup> September 2019	Verification of previous walkover surveys
Walkover of River Bed measuring particle size of substrate (to inform hydromorphological assessment)	21 <sup>st</sup> 22 <sup>nd</sup> October 2019	River Deel from upstream of the Intake Structure to downstream of the Jack Garrett Bridge
Dedicated fisheries habitat survey	12 <sup>th</sup> May 2020	Upstream of intake structure to Jack Garrett Bridge
Multi-disciplinary ecological walkover Survey	12 <sup>th</sup> May 2020	Entire study area
Bat survey	27 <sup>th</sup> May/28 <sup>th</sup> May 2020	River Deel near intake structure and along diversion channel route

Table 5.1 Summary of Ecological Surveys Completed to Date



## **5.2.2. Methodology for Assessment of Effects**

### **5.2.2.1. Determining Importance of Ecological Receptors**

The importance of the ecological features identified within the study area was determined with reference to a defined geographical context. This was undertaken following a methodology that is set out in Chapter 3 of the 'Guidelines for Assessment of Ecological Impacts of National Roads Schemes' (NRA, 2009). These guidelines set out the context for the determination of value on a geographic basis with a hierarchy assigned in relation to the importance of any particular receptor. The guidelines provide a basis for determination of whether any particular receptor is of importance on the following scales:

- International
- National
- County
- Local Importance (Higher Value)
- Local Importance (Lower Value)

The Guidelines clearly set out the criteria by which each geographic level of importance can be assigned. Locally Important (lower value) receptors contain habitats and species that are widespread and of low ecological significance and of any importance only in the local area. Internationally Important sites are either designated for conservation as part of the Natura 2000 Network (SAC, SPA or pSPA) or provide the best examples of habitats or internationally important populations of protected flora and fauna. Specific criteria for assigning each of the other levels of importance are set out in the guidelines and have been followed in this assessment. Where appropriate, the geographic frame of reference set out above was adapted to suit local circumstances. In addition, and where appropriate, the conservation status of habitats and species is considered when determining the significance of ecological receptors.

Any ecological receptors that are determined to be of Local Importance (Higher Value), County, National or International importance following the criteria set out in NRA (2009) are considered to be Key Ecological Receptors (KERs) for the purposes of ecological impact assessment if there is a pathway for effects thereon. Any receptors that are determined to be of Local Importance (Lower Value) are not considered to be Key Ecological Receptors.

### **5.2.2.2. Characterisation of Impacts and Effects**

The proposed scheme will result in a number of impacts. The ecological effects of these impacts are characterised as per the CIEEM 'Guidelines for Ecological Impact Assessment in the UK and Ireland (2018)'. The headings under which the impacts are characterised follow those listed in the guidance document and are applied where relevant. A summary of the impact characteristics considered in the assessment is provided below:

- **Positive or Negative.** Assessment of whether the proposed scheme result in a positive or negative effect on the ecological receptor.
- **Extent.** Description of the spatial area over which the effect has the potential to occur.
- **Magnitude.** Size, amount, intensity and volume. It should be quantified if possible and expressed in absolute or relative terms e.g. the amount of habitat lost, percentage change to habitat area, percentage decline in a species population.
- **Duration.** Defined in relation to ecological characteristics (such as the lifecycle of a species) as well as human timeframes. For example, five years, which might seem short-term in the human context or that of other long-lived species, would span at least five generations of some invertebrate species.
- **Frequency and Timing.** This relates to the number of times that an impact occurs and its frequency. A small-scale impact can have a significant effect if it is repeated on numerous occasions over a long period.
- **Reversibility.** This is a consideration of whether an effect is reversible within a 'reasonable' timescale. What is considered to be a reasonable timescale can vary between receptors and is justified where appropriate in the impact assessment section of this report.

The magnitude of the effects of the proposed scheme are determined following the precautionary principle and in accordance with the methodology set out in Section 5 of CIEEM (2018).

For the purpose of EclA, 'significant effect' is an effect that either supports or undermines biodiversity conservation objectives for 'important ecological features' or for biodiversity in general. Conservation objectives may be specific (e.g. for a designated site) or broad (e.g. national/local nature conservation policy) or more wide-ranging (enhancement of biodiversity). Effects can be considered significant at a wide range of scales from international to local (CIEEM, 2018).

When determining significance, consideration is given to whether:

- Any processes or key characteristics of key ecological receptors will be removed or changed
- There will be an effect on the nature, extent, structure and function of important ecological features
- There is an effect on the average population size and viability of ecologically important species.
- There is an effect on the conservation status of important ecological habitats and species.

The terminology used in the determination of magnitude and quality of effects follows the suggested language set out in the Draft EPA Guidelines (2017) as shown in Section 1.4.2 of this EIAR.

### **5.2.2.3. Determining the Significance of effects**

Once the potential effects are characterised using the methodology outlined in Chapter 1 of this EIAR, the significance of any such effects on the identified KERs will be determined following the NRA Guidelines (2009b). The 'Guidelines on the information to be contained in Environmental Impact Statements' (EPA, 2002, as revised 2017) are currently in Draft form).

### **5.2.2.4. Mitigation**

The development has been designed to specifically avoid, reduce and minimise effects on all KERs. Where potential effects on KERs are predicted, mitigation has been prescribed to avoid, reduce and abate such effects.

Proposed best practice design and mitigation measures are specifically set out and are realistic in terms of cost and practicality. They have been subject to detailed design and will effectively address the effects on the identified KERs.

The potential effects of the proposed scheme were considered and assessed to ensure that all effects on KERs are adequately addressed and no significant residual effects are likely to remain following the implementation of mitigation measures / best practice.

### **5.2.2.5. Limitations**

The information provided in this document accurately and comprehensively describes the baseline ecological environment; provides an accurate prediction of the likely ecological effects of the proposed scheme; prescribes mitigation as necessary; and, describes the residual ecological impacts. The specialist studies, analysis and reporting have been undertaken in accordance with the appropriate guidelines. No significant limitations in the scope, scale or context of the assessment have been identified.

## **5.3. DESK STUDY**

The following sources of information were reviewed as part of the desk study undertaken

- 1:50,000 scale Discovery series mapping;
- 1: 5000 OS Maps of the study area
- Aerial photography of the Study Area
- NPWS site synopses and database of information on designated sites and records of protected species.
- New Atlas of the British & Irish Flora (Preston et al., 2002)
- Database of Bat Conservation Ireland

- The Bird Atlas 2007-2011, the British Ornithology Trust website [www.bto.org/volunteer-surveys/birdatlas](http://www.bto.org/volunteer-surveys/birdatlas)
- National Biodiversity Data Centre online database <http://www.biodiversityireland.ie/biodiversity-data/access-biodiversity-data/>
- NPWS Rare and Protected Species Records
- The EPA website <http://www.epa.ie/rivermap/data>
- The Water Framework Directive website [www.wfdireland.ie](http://www.wfdireland.ie)

### 5.3.1. Designated Areas

The potential for the proposed scheme to impact on sites that are designated for nature conservation was considered in this assessment.

Special Areas of Conservation (SACs) and Special Protection Areas for Birds (SPAs) are designated under EU Habitats Directive and are collectively known as 'European Sites'. The potential for effects on European Sites is fully considered in the Natura Impact Statement that accompanies this application and discussed also in this EIAR.

Natural Heritage Areas (NHAs) are designated under the Wildlife Act 1976, the Wildlife (Amendment) Act 2000 and all amending acts, and their management and protection is provided for by this legislation and planning policy. The potential for effects on these designated sites is fully considered in this EclA.

Proposed Natural Heritage Areas (pNHAs) were designated on a non-statutory basis in 1995 but have not since been statutorily proposed or designated. However, the potential for effects on these designated sites is fully considered in this EclA. Many pNHAs are protected under County Development Plan Objectives.

The following methodology was used to establish which sites that are designated for nature conservation have the potential to be impacted by the proposed scheme:

- Initially the most up to date GIS spatial datasets for European designated sites and water catchments were downloaded from the NPWS website ([www.npws.ie](http://www.npws.ie)) and the EPA website ([www.epa.ie](http://www.epa.ie)) on the 12/05/2020. The datasets were utilized to identify Designated Sites which could feasibly be affected by the proposed scheme.
- As a starting point, all Designated Sites within a distance of 15km surrounding the development site were identified. In addition, the potential for connectivity with European Sites at distances of greater than 15km from the proposed scheme was also considered in this initial assessment. In this case, no potential connectivity with sites located at a distance of over 15km from the proposed scheme was identified.
- A map of all the European Sites within 15km is provided in Figure 5.1. All other designated sites within 15km are shown in Figure 5.2.
- Catchment mapping was used to establish or discount potential hydrological connectivity between the site of the proposed scheme and any Designated Sites. The hydrological catchments are also shown in Figures 5.1 & 5.2.
- In relation to Special Protection Areas, in the absence of any specific European or Irish guidance in relation to such sites, the Scottish Natural Heritage (SNH) Guidance, 'Assessing Connectivity with Special Protection Areas (SPA)' (2016) was consulted. This document provides guidance in relation