



Map Legend

-  Annex I Alluvial Woodland
-  River Moy SAC
-  Washlands Extent
-  Temporary Construction Works Area
-  Permanent Works Area



Drawing Title

Annex I Alluvial Woodland

Project Title

Crossmolina Flood Relief Scheme

Drawn By

JOS

Checked By

PR

Project No.

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Drawing No.

Figure 5.5

Scale

1:30000

Date

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MKO
Planning and
Environmental
Consultants
Tuam Road, Galway
Ireland, H91 VW84
+353 (0) 91 735611
email: info@mkofireland.ie
Website: www.mkofireland.ie

5.4.2. Significance of Flora

Habitats were assessed in accordance with the receptor importance classification criteria outlined in NRA (2009), *Guidelines for Assessment of Ecological Impacts of National Roads Schemes*. The Wet willow-alder-ash woodlands (WN6) recorded within the proposed washlands adjacent to Lough Conn and downstream of the Jack Garrett Bridge corresponded to Annex I Priority Habitat Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*)* [91E0] and were classified as being of **International** Importance where they occur within the River Moy SAC as they are a Qualifying Interest for the SAC. Where they occurred outside the SAC, they were classified as being of **National Importance** as they were examples of viable areas of an Annex I Priority Habitat that was not designated for conservation. No additional habitats listed under Annex I of the Habitats Directive were recorded. The woodlands associated with the associated Mullenmore Springs are an example of this wet woodland habitat that is outside the SAC. The woodlands between the flow control structure and Jack Garrett Bridge did not conform to the Annex I habitat as they were primarily dominated by a steep bank of Mixed Broadleaved Woodland (WD1) with only a narrow fringe of riparian or vegetation and were highly disturbed through cutting and dumping. Similarly, the encroaching and immature willows that were present at the site of the intake weir, were not classified as Annex I woodland as they represent the recent colonisation of a field of Agricultural Grassland (GA1) with willow scrub and immature woodland.

The River Deel, as part of the River Moy SAC, was also classified as being of **International** Importance as per (NRA 2009). However, the proposed scheme is not located within any Annex I habitats for the protection of which the SAC is designated.

Lough Conn, which is located downstream of both the River Deel and the washlands is assigned **International** importance as it is designated as part of the River Moy SAC. No works are proposed within or adjacent to Lough Conn.

The woodland, scrub, hedgerows, treelines, Marsh and the Mullenmore Stream are classified as **Local Importance (Higher Value)** as they provide semi natural habitats with high biodiversity in a local context.

The other habitats recorded included highly managed agricultural lands and built areas that were of low ecological significance and classified as Local Importance (Lower Value).

5.4.3. Fauna

5.4.3.1. Birds

The bird species recorded during the walkover surveys were typical of the habitats along the route of the proposed works. Species including Kingfisher (*Alcedo atthis*), Grey Wagtail (*Motacilla cinerea*), Heron (*Ardea cinerea*) and Dipper (*Cinclus cinclus*) were recorded in the corridor of the River Deel along with songbirds such as Chaffinch (*Fringilla coelebs*), Wren (*Troglodytes troglodytes*) Blackcap (*Sylvia atricapilla*), Chiff Chaff (*Phylloscopus collybita*) and Willow Warbler (*Phylloscopus trochilus*) in the associated riparian fringe. Woodcock (*Scolopax rusticola*) was also flushed from the riparian fringes. A dedicated search for breeding habitat for Kingfisher within the vicinity of the proposed scheme was undertaken and no such

habitat was recorded within the vicinity of the proposed works. Potential nesting holes for Kingfisher were recorded high on the bank upstream of the proposed intake structure, on the opposite bank, over 100 metres upstream and not visible from the site of the proposed works. The location of this feature is shown on Figure 5.7 – faunal records map (Confidential Appendix 5F).

The lands where the bypass channel is proposed are dominated by improved agricultural lands and supported lower levels of bird activity than the river and its wooded fringes. Common passerine species and corvids were regularly recorded during the walkover surveys recorded frequently in this area, with species recorded including blue tit (*Parus caeruleus*), blackbird (*Turdus merula*), robin (*Erithacus rubecula*), dunnoek (*Prunella modularis*), chaffinch (*Fringilla coelebs*), willow warbler (*Phylloscopus trochilus*), grey heron (*Ardea cinerea*), great tit (*Parus major*), starling (*Sturnus vulgaris*), jackdaw (*Corvus monedula*), chiffchaff (*Phylloscopus collybita*), greenfinch (*Carduelis chloris*) and magpie (*Pica pica*).

The washlands included habitats including wet woodlands, flooded fields, wet grasslands and lakeshore habitats. These lands provide high quality habitat for a wide range of bird species and are partially included within the Lough Conn & Lough Cullin SPA. Whilst no works are being undertaken in the washlands, a dedicated bird survey was undertaken on a monthly basis throughout 2016 and in early (Jan – Mar) 2017. The results of these surveys including details of the species recorded, maximum flock size and flightline mapping is presented in Appendix 5G. These surveys were undertaken at an early stage in the design process, when the potential for significant physical works in this area had not been excluded and low levels of bird activity was recorded. For these reasons, no further surveys were required.

The results as they pertain to the Special Conservation Interests (SCI) of the SPA are summarised below. As the SCIs include wetlands and waterbirds in general, this covers usage of the area by wildfowl that are not specifically mentioned in the Conservation Objectives. All bird species were recorded and included for assessment.

Tufted duck (*Aythya fuligula*) was only recorded on the January 2016 VP. Birds were observed on Lough Conn and within the lakes flooded extent and within the river flowing into the lake at the survey area. The maximum number of birds recorded was 40.

Common Scoter (*Melanitta nigra*) was not recorded during any of the surveys that were undertaken. This species is known to be in decline on the lake (Hunt et.al., 2012) and breeds on wooded islands. The habitats in the washlands and in the surrounding area are unlikely to be used significantly by this species.

Common gull (*Larus canus*) was observed during January, March, April, May, June, July, August and December in 2016 and in March 2017. All of the birds were recorded flying over Lough Conn or within and adjacent to the lake shore. The largest number recorded was a flock of 130 in March 2017.

Greenland white-fronted geese (*Anser albifrons flavirostris*) were recorded on three separate months, February, November and December 2016. The highest number observed was in November and December 2016 of 24 birds with activity restricted to Lough Conn and wet grassland habitat south of the washlands and adjacent to the lake.

5.4.3.2. Mammals

Evidence of badger and otter activity was recorded within the study area during the walkover surveys and as a result, dedicated surveys for these species were undertaken. The suitability of the site for bats was assessed during the ecological multi-disciplinary walkover surveys but whilst the site of the proposed scheme is likely to be used by foraging and commuting bats (especially the River Deel, Mullenmore Stream and Lough Conn), the proposed scheme will not result in the loss or damage to any significant roosting habitat and the loss of low hedges along the route of the drainage channel is unlikely to result in any significant effects on these taxa. A dedicated bat survey was however undertaken in the form of the deployment of three static detectors within the study area and is discussed below. Other species that are likely to occur in the area but were not recorded include Fox (*Vulpes vulpes*), Pine Marten (*Martes martes*), Rat (*Rattus norvegicus*) and Stoat (*Mustela erminea*). Mink (*Mustella vison*) are known from Lough Conn and surrounds but were not recorded during any of the surveys undertaken.

Bats

Preliminary Ground Level Roost Assessment

During the walkover surveys a preliminary assessment of the suitability of trees and structures within the works area to support significant bat roosting activity was undertaken. There were no buildings located within the site of the proposed scheme. The trees in the vicinity of the flow control structure, intake weir and diversion channel were assessed for their potential to support roosting bats. The majority of the trees were small, scrubby and immature with negligible potential to be used by roosting bats (As per Table 4.1 of 'Bat Surveys for Professional Ecologists – Good Practice Guidelines' (Bat Conservation Trust, 2016). A number of trees, in the vicinity of the proposed flow control structure and were the subject of a more detailed ground level inspection. These individual trees were of a size and age such that they could support potential roost features. However, only features with very limited roosting potential were identified and the trees were classified as having low potential to support roosting bats (Table 4.1 BCT 2016).

Assessment of Foraging and Commuting Habitat

The riparian corridor associated with the River Deel is lined with trees and provides high quality foraging and commuting habitat (Table 4.1, BCT 2016). The flow control structure and intake weir will be located within this high-quality commuting and foraging habitat. The diversion channel is located in a more open landscape with low hedges and open fields. Whilst it is likely to be used by foraging and commuting bats, it supports low to moderate habitat in this regard. The washlands and downstream benefitting lands provide high quality bat foraging and commuting habitat, and this habitat will not be affected by the proposed scheme.

Baseline Activity Surveys

Whilst no significant roosting habitats were recorded on the site of the proposed scheme is unlikely to significantly alter the quality of the foraging and commuting habitat at the site, bat activity was surveyed at three locations within the site of the proposed works to provide baseline information on bat activity.

Numerous foraging and commuting bats were recorded during the dusk bat activity survey. In total, 169 bat passes were recorded. Activity was dominated by Soprano pipistrelle (*Pipistrellus pygmaeus*) $n=72$ followed by Common pipistrelle (*Pipistrellus pipistrellus*) $n=51$ and Leisler's bat (*Nyctalus leisleri*) $n=38$. These species are common and widespread across Ireland. Instances of Myotis sp. $n=7$ and Brown long-eared bat (*Plecotus auritus*) $n=1$ were also recorded. Activity levels were assessed as Low and were concentrated along the field boundary hedgerows and treeline edge habitats bordering the site. Figure 5.6 shows the transects walked during the dusk survey. Plate 5.15 shows total bat species composition across all activity surveys.

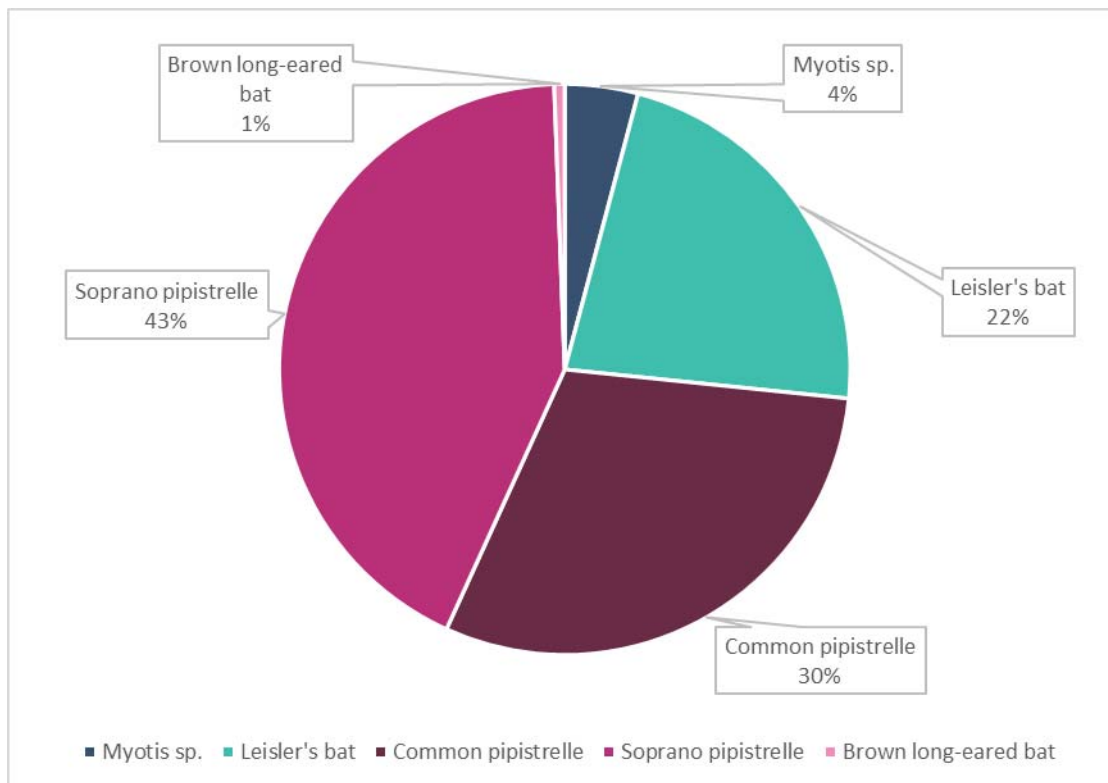
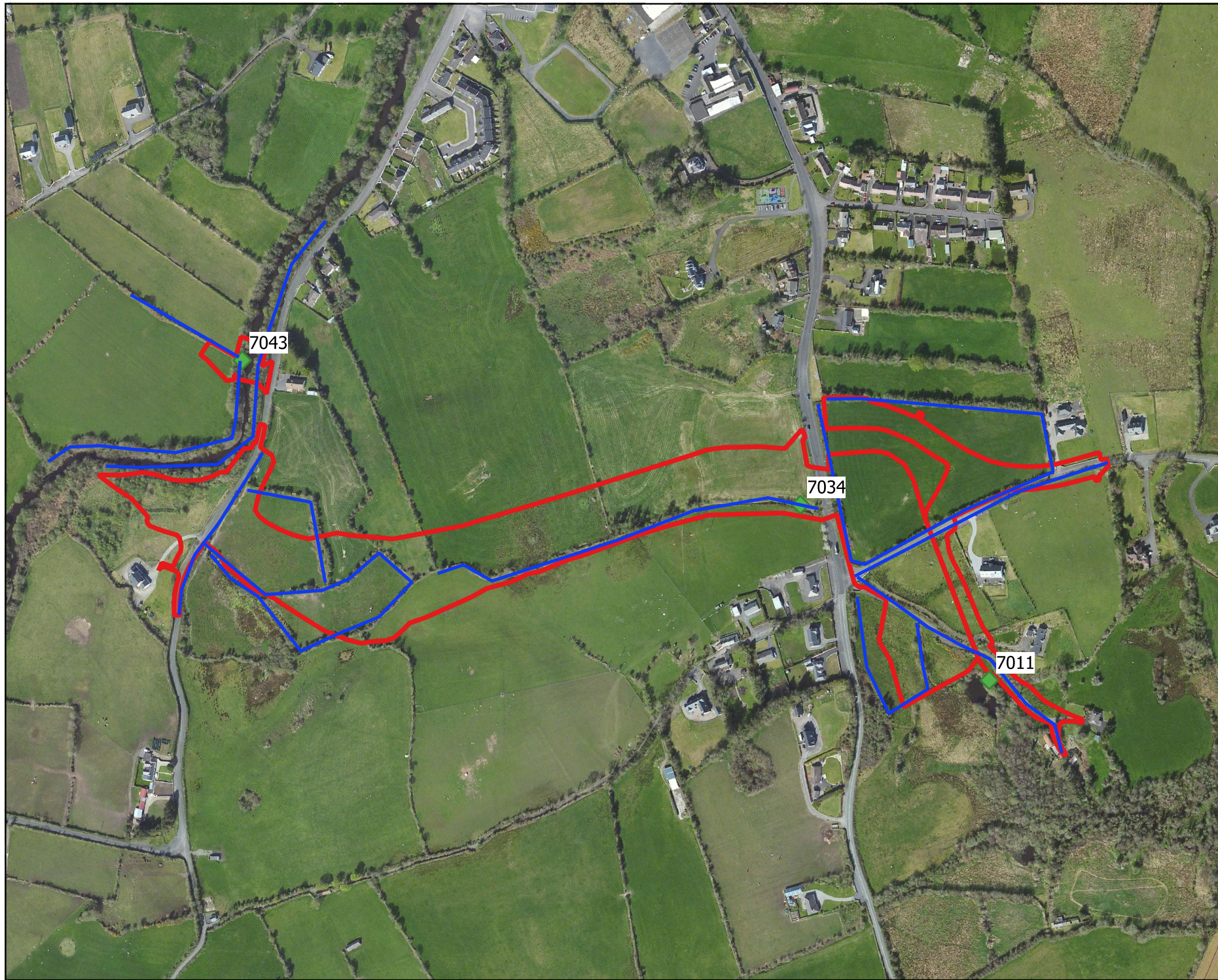





Plate 5.15 Manual Transect: Total Bat Species Composition

Three static detectors were deployed on the site at three different locations, based on likely areas of bat activity, for a total of 16 nights (Figure 5.6). The locations of the statics were chosen to give a more comprehensive assessment of how bats are using the site and where most of the bat activity is occurring. These detectors allowed a specified look into species composition, commuting and foraging activities within the site. One detector was located on the banks of the River Deel close to the flow control structure. Another was placed close to the Mullenmore Springs and the third detector was within agricultural grassland along the diversion channel.



Map Legend

-  Permanent Works Area
-  Bat survey transects
-  Static Bat Detectors



Drawing Title

Bat Survey Transects

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JOS

Checked By

PR

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MKO
Planning and
Environmental
Consultants
Tuam Road, Galway
Ireland, H91 VW84
+353 (0) 91 735611
email: info@mkofireland.ie
Website: www.mkofireland.ie

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All recordings were later analysed using bat call analysis software Kaleidoscope Pro v.5.1.9 (Wildlife Acoustics, MA, USA). Bat species were identified using established call parameters, to create site-specific custom classifiers. All identified calls were also manually verified. In total 7,067 bat passes were recorded.

Analysis of the detector recordings positively identified four bats to species level with *Myotis* genus also present. Bat species included: Common pipistrelle (*Pipistrellus pipistrellus*) (n=3,225), Soprano pipistrelle (*Pipistrellus pygmaeus*) (n=3,170) and Leisler's bat (*Nyctalus leisleri*) (n=611). *Myotis* sp. (n=38) and Brown long-eared bat (*Plecotus auritus*) (n=23) were rarely encountered, with 1% or less of total bats recorded (Plate 5.16).

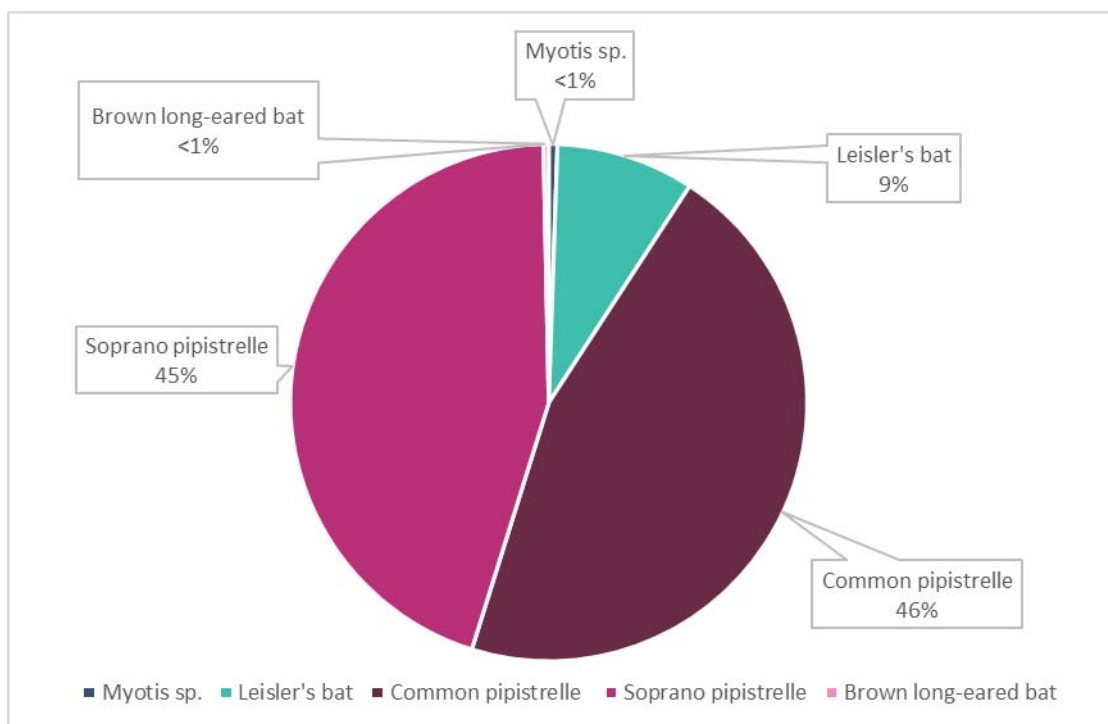


Plate 5.16 Static Detector Bat Species Composition.

Bat activity was also calculated as total bat passes per hour (bp/h) to account for any bias in survey effort, resulting from varying conditions throughout the survey period. Species composition per night, and measured in bp/h, is shown in Plate 5.17 The graph demonstrates that Soprano and Common pipistrelle species were most commonly recorded during the survey periods.

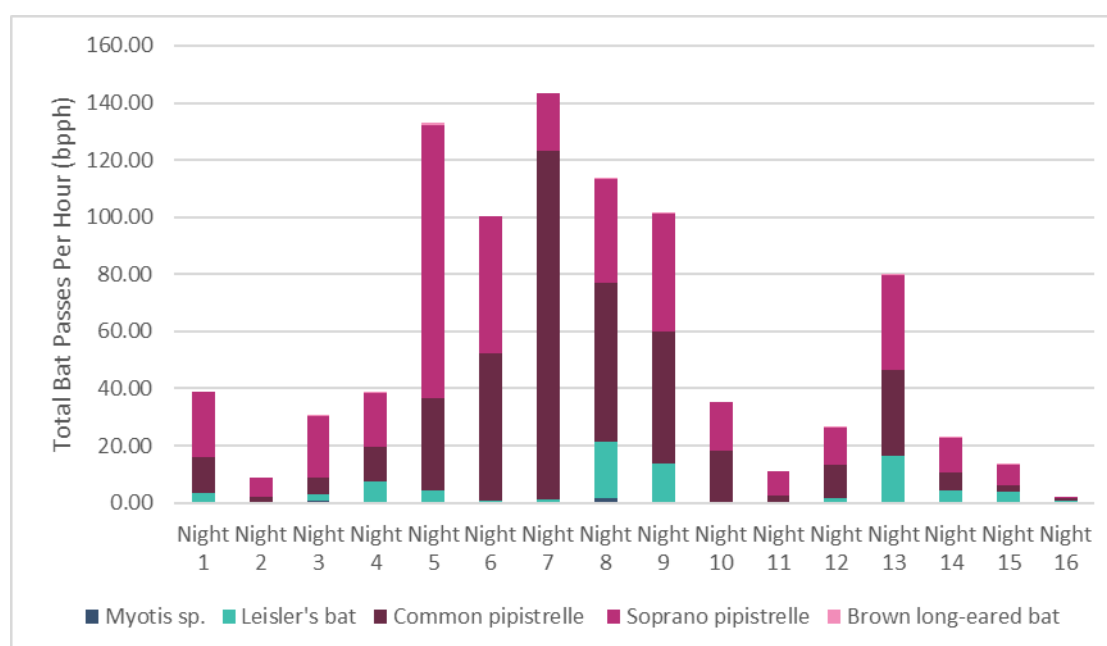


Plate 5.17 Static Detector Surveys: Species Composition Across All Deployments (Total Bat Passes Per Hour, All Nights)

Otter

Extensive evidence of otter (*Lutra lutra*) was observed along the banks of the River Deel during the surveys (2016 -2018) with records including spraints, slides and prints recorded throughout the survey area. Similarly, evidence of otter in the form of prints and numerous spraints were found from the banks of The Mullenmore Stream in the east of the study area. These watercourses are utilized extensively by otter, which is a Qualifying Interest of the River Moy SAC. The spraints observed contained fish remains and remains of the Annex II species freshwater white-clawed crayfish (*Austropotamobius pallipes*) which is also a Qualifying Interest of the SAC. There is also suitable habitat for otter along the shoreline of Lough Conn although no otter signs were observed along the lake shore during the site visits. The location of otter signs recorded are shown on the faunal records map, Figure 5.7 (Confidential Appendix 5F).

A suspected otter holt was recorded in previous surveys undertaken in 2014 and 2015. This was located on the left bank of the River Deel, approximately 50 metres downstream of the proposed works associated with the flow control structure. This was resurveyed in 2018, 2019 and 2020 and whilst prints were recorded in the sediments on the river bank close to the suspected holt, no signs of activity within it were recorded. An otter holt was recorded approximately 10m to the north of the proposed flow control structure during a survey undertaken in 2020. The location of this holt is shown in Figure 5.7 in confidential Appendix 5F. A camera trap was placed on the holt for a period of 10 days in May 2020 and no activity was recorded.

No evidence of otter activity or commuting routes outside the river corridor of either the River Deel and the Mullenmore Stream were identified and all signs were recorded alongside these watercourses.

Badger

Dedicated badger surveys were carried out in May 2016, May 2017 and March 2018. A subsidiary sett with five entrance holes was recorded in an area of scrub within a field of wet grassland in the west of the site, in the townland of Cartrongilbert (shown on the Faunal Records Map, Figure 5.7). During the 2016 and 2017 surveys, the sett was unused with many of the entrances fully blocked and with no signs of badger activity in the surrounding lands. During the 2017 survey, one of the five holes was in use with the remaining four being covered by vegetation. Additional entrance holes were also found but these were blocked. Evidence of badger trails were found in the surrounding area and a latrine was recorded 190m further east.

A further survey was undertaken in July 2019. The scrub that surrounded the sett had been cleared at the time of this survey and the sett had been abandoned. This was confirmed during the 2020 walkover surveys. A latrine and foraging signs were however recorded at this location in 2019.

5.4.3.3. Invertebrates

Invertebrates were considered in the initial assessment of the site as part of Scoping. Following this, dedicated surveys for freshwater pearl mussel and white clawed crayfish were undertaken within the study area. No habitat for other protected invertebrates such as Marsh Fritillary (*Euphydryas aurinia*) was recorded.

Freshwater Pearl Mussel

A dedicated survey for Freshwater Pearl Mussel (*Margaritifera margaritifera*) was carried out on the 11th May 2017 under licence from the National Parks & Wildlife Service (Licence No. C157/2015). The survey included the section of the River Deel adjacent to the proposed intake structure, which was surveyed when the River Deel was completely dry and of the Mullenmore Stream. The results of this survey as submitted to the NPWS are provided as Appendix 5B.

No pearl mussel were recorded in the Mullenmore Stream and very little suitable habitat for the species was recorded during the survey that was undertaken in 2017. In relation to the section of the River Deel that was surveyed, the following conclusion was made in the survey report in Appendix 5B:

Approximately 324 metres of channel within the river Deel and 928 metres of channel within the Mullenmore Stream. Pearl mussels were recorded within the river Deel but not in the Mullenmore Stream. The survey was conducted in accordance with the methodology set out by the NPWS in its Stage 1 and Stage 2 survey guidelines (Anon, 2004).

The pearl mussel that were recorded were likely to be under extreme stress due to the lack of water and appeared to have been mobile within the river to reach the last remaining pools. Those mussels that were outside the water but still alive, clamped tightly shut and many were inverted so that the siphons were as close to the substrate as possible.

This section of the river is subject to regular drought and dries out completely for short periods in most years (local knowledge) and yet supports a population of pearl mussel.

It is likely that the distribution of mussels within the channel will expand in high water levels and contract to the deeper areas as the water subsides.

The area surveyed corresponded to sections 33 and 34 in the 'Mapping of the Distribution of Margaritifera Margaritifera in the River Deel (Moy Catchment), Co. Mayo' (Moorkens & Killeen, 2009). Mussels were recorded as 'occasional' in this area during that survey (1- 40 in every linear 100m) in 2009. The current survey recorded over 300 mussels per 100 metre section. This would have corresponded to a rating of 'Common' according to the parameters set in the 2009 report. The reasons for this are unknown but it is likely that the population of mussels is mobile within the river depending on conditions.

During the 2017 survey, the section of channel adjacent to the intake structure supported 410 live mussels and 2 dead shells. This transect was 166m in length and primarily consisted of cobble and gravel. At the time of the survey most of the river bed was completely dry with just one pool located in the downstream section of the transect.

The same transect was repeated in March 2018 and 173 live mussels and 5 dead shells were recorded within the same location as previously recorded (the deepest section of the river). The results of this survey are also included in Appendix 5B.

A further survey was undertaken in 2019 (Licence number C11 2019). The results of this survey are also included in Appendix 5B. During this survey, no live mussels were recorded in the vicinity of the proposed works. One live mussel was recorded, upstream of the works area but it was lying on its side as if it had been washed in. The River Deel has dried out completely for significant periods each year since the initial surveys in 2017. It appears likely that this drying out of the river has resulted in the loss of mussels in this section of the river.

During a dedicated fisheries survey that was undertaken on the 12th May 2020, the entire river channel between the Jack Garrett Bridge and approximately 200m upstream of the proposed works (where there will be no works or hydrological effects resulting from the proposed development) was walked in dry conditions. Less than live 50 mussels were recorded in this area and all of these were located between 100 and 200 metres upstream of the Jack Garrett Bridge with none recorded at the site of the proposed works or immediately up or downstream of them. Full details of these records are provided in Appendix 5G.

White Clawed Crayfish

Dedicated presence/absence surveys for white clawed crayfish were carried out whilst undertaking the freshwater pearl mussel surveys on the dates listed above. These revealed numerous crayfish within the River Deel, many of which had died due to desiccation as the river dried out or were concentrated in pools. Crayfish were also recorded in the Mullenmore Stream, though appeared far less frequent. The River Deel provides excellent habitat for this species in the vicinity of the proposed works. This is likely to be due in part to the fact that they were harder to observe in the wetted conditions and that the habitat was generally siltier and less suitable for the species. Crayfish were also recorded in the dedicated fisheries habitat survey that was undertaken on the 12th May 2020. Details of this survey are provided in Appendix 5C. The Crayfish plague is not known from the River Deel and no signs of this disease were recorded during any of the surveys undertaken.

5.4.3.4. Fisheries Habitat

The fisheries habitat of the River Deel was initially assessed by means of a desk study (as described in Section 5.3 of this report) and was visually assessed during the walkover and freshwater pearl mussel surveys. It is well known as a high quality fisheries habitat with significant populations of Salmon (*Salmo salar*), Trout (*Salmo trutta*) and Lamprey species (*Lampetra* & *Petromyzon* Spp.). The river also provides habitat for European eel. The substrate of the river, whilst silty at the edges and heavily shaded in places, supported good spawning gravels, cobbles and boulders. Whilst it has been drained through blasting during the original drainage of the channel (downstream of the Jack Garrett bridge) and dries out entirely during the summer months, it still retains very high-quality fishery features with a natural 'riffle, glide, pool' sequence throughout along much of its length. A dedicated fisheries habitat assessment was undertaken in May 2020 and is included as Appendix 5C. The findings of the dedicated fisheries habitat report are summarized below:

A fisheries appraisal was undertaken on a 1.3km length of the River Deel in the vicinity of Crossmolina on May 12th 2020. While the river channel was largely dry at the time of the survey, it allowed inspection of the riverbed substrata size classes. This helped identify the river's inherent fisheries value when considered in terms of normal flow regimes (i.e. naturally a swift flowing glide and pool spate channel). Under such normal flow conditions the River Deel supports an abundance of salmonids and other species. Indeed, even during the observed dry weather flows, the small pools of water remaining supported locally abundant juvenile salmonids (many observably 0+ age class), exemplifying the area's importance as a spawning and nursery habitat for salmonids. Taking full-flow periods into consideration, the river offered good salmonid habitat throughout the 1.3km survey reach, with sections 2 and 8 (Appendix 5C) offering excellent overall salmonid habitat. Habitat was typically poorer downstream of Crossmolina, where historical works have altered the river channel. Holding habitat for adult fish was typically good throughout the survey area, although some glide profile-dominated sections featured few deeper areas (these were more suitable as nursery areas). Salmonid spawning habitat was considered good and widespread in all areas upstream of Crossmolina with the more prolific adult salmonid spawning habitat being situated at the tailings of deeper pool areas. Spawning was considered less optimal downstream of Jack Garrett Bridge, albeit the area may still support spawning adult fish during peak runs. In terms of the location of the best spawning habitat, a particularly suitable spawning area of loose, small cobble/very coarse gravel was located immediately upstream of the deep pool area in section 9 (Appendix 5C) (near the small meander/channel constriction). Overall, the Deel was considered to offer very good salmonid nursery

habitat during wetted periods throughout the survey reaches (as supported by widespread 0+ salmonids in scattered remnant pools), with the best habitat located both upstream and c.300m downstream of the proposed instream flood control structure.

The overall habitat quality of the surveyed sections for *Lampetra* sp. (i.e. river/brook lamprey) ranged from poor to moderate, with overall habitat quality for sea lamprey (*Petromyzon marinus*) improved given the predominance of larger substrata more suitable for spawning (moderate to good habitat overall). In general, the river throughout the 1.3km survey reach offered very limited larval lamprey habitat given the paucity of soft sediment accumulations. Only sections 1, 2 and 9 (Appendix 5C) offered potential for ammocoete burial, although this was highly localised in small marginal areas of sand-dominated soft sediment. Lamprey ammocoetes, regardless of species, require soft sediment in which to burrow, be it mud, sand, silt, clay or a matrix of all types, which is $\geq 5\text{cm}$ in depth (Maitland, 2003). No soft sediment areas were identified in the immediate vicinity of the proposed flood control structure or diversion channel works area.

Sea lamprey spawning potential was good throughout most survey sections (i.e. given the species preference for coarser gravels under cobble), with spawning habitat for smaller *Lampetra* species considered moderate overall (i.e. typically less finer gravel fractions in study area). Both sea lamprey and *Lampetra* sp. are known from the River Deel upstream of Crossmolina (O'Connor, 2004). Sea lamprey typically utilise similar (or even the same) spawning areas to Atlantic salmon, spawning in coarse gravel, pebbles and sand, where the diameter of the gravel can vary from 1–11cm (Igoe et al., 2004). Such habitat was widespread throughout the survey sections. Owing to their relatively small morphologies, *Lampetra* species (i.e. River & Brook species) require clean, fine gravels in which to dig their redds (Rooney et al., 2013; Aronsuu & Virkkala, 2014) although areas may also include fractions of sand, larger gravels, and cobble (Nika & Virbickas, 2010). The sediment particle size usually associated with *Lampetra* species is fine to coarse sands (0.2–1.4 mm) (Goodwin et al., 2008) and these were present locally in interstitial spaces throughout all survey sections but largely disguised by the overburden of coarser material. It is likely that, in addition to known upstream spawning areas, the survey area in the vicinity of Crossmolina may also support some localised spawning for lamprey species, albeit the paucity of burial habitat near to these areas would somewhat reduce the viability of spawning site selection by adults.

European eel nursery habitat was considered widespread in the survey area given the abundance of unbedded cobble that would offer viable refugia for maturing eel in addition to a crayfish and small fish prey base. The species has been recorded in fair numbers during the National Eel Monitoring Programme (2012-2014) downstream of Crossmolina (O' Leary et al. 2015).

The Mullenmore Stream is a much less significant channel in terms of fisheries habitat. Much of its length is at a very flat grade with sluggish flow and silty substrate with only a small section close to the springs that has a steeper gradient and some cobbles and gravels present in the substrate. There is little suitable Salmonid habitat but potentially suitable habitat for Lamprey species (particularly juvenile Lamprey).

Brook Lamprey were recorded spawning within the stream during the freshwater pearl mussel survey in May 2017. The species was utilizing a small patch of gravels in the midst of the silty substrate.

5.4.4. Significance of Fauna

Of the faunal species recorded or known to be present, those that are among the QIs/SCIs of the River Moy SAC and the Lough Conn & Lough Cullin SPA are of **International** importance on this basis. These include the aquatic species associated with the River Moy, otter, white clawed crayfish, salmon, and lamprey species. They also include the three bird species that are among the SCIs and were recorded during the bird surveys Greenland white fronted goose, common gull and tufted duck. Common scoter were not recorded and are unlikely to regularly occur within the study area. The known population of freshwater pearl mussel within the River Deel is also assessed to be important in the **international** context. However, it is noted that the population has suffered significant decline in recent years (at least in the vicinity of the proposed works). This is likely to be attributed to the drying out of the river for extended periods on an annual basis for the last number of years (2017 -2020 at least)

Badger, kingfisher, coarse fish, European eel and bats are assessed as being of **Local Importance (Higher Value)** as there is a regularly occurring population that is important at the local level in the vicinity of the proposed scheme.

The other species assessed or recorded such as bird species other than those listed above are classified as **Local Importance (lower value)** in the context of the proposed scheme as they are common and widespread in the local area and not dependent on the site of the proposed works.

5.4.5. Identification of KERs

Table 5.12. lists all identified receptors and assigns them an ecological importance in accordance with the Guidelines for Assessment of Ecological Impacts of National Road Schemes (NRA, 2009). This table also provides the rationale for this determination and identifies the habitats that are Key Ecological Receptors.