Technical Appendix 7.4: Fisheries

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Technical Appendix 7.4: Fisheries

Contents

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Introduction

Background

This Technical Appendix has been prepared to accompany **Chapter 7: Ecology** of the Appin Wind Farm (hereafter referred to as the 'the Proposed Development') Environmental Impact Assessment (EIA) Report.

It presents detailed methodologies and results of desk studies and field surveys completed establish baseline conditions with regards to fisheries.

It should be read with reference to the following Figures, which are included within **Volume 2** of the EIA Report:

- **Figure 7.1**: Ecological Statutory Designated Sites; and,
- **Figure 7.10**: Fisheries Habitat Survey Plan.

Only common species names are used throughout this Technical Appendix. Scientific names for all species referenced are supplied in **Annex 1.**

Site Overview

The term 'Site' in this report refers to the land within the Site boundary as illustrated on **Figure 7.10.**

The Site lies at Appin, 6.2 km north of Moniaive, in Dumfries and Galloway. The Site largely comprises commercial forestry plantation, with a number of minor watercourses present throughout the Site.

A number of watercourses are present within the Site. The locations of all watercourses subject to fish habitat survey (FHS) are illustrated on **Figure 7.10**. Watercourses W1 – W10 comprise the Shinnel Water and its tributaries. The Shinnel Water joins the Scaur Water to form one of the main tributaries of the River Nith, which discharges into the Solway Firth. W11 – W17 are all tributaries of the Appin Burn (W18). The Appin Burn itself is also a tributary of the Shinnel Water.

Key Guidance

Fish habitat survey methodologies and subsequent interpretation of results has made reference to the following key industry standard guidance and documentation:

- Gardiner, R. (2003). Identifying Lamprey. A field key for Sea, River and Brook Lamprey. Conserving Natura 2000 Rivers Conservation Techniques Series No. 4. English Nature, Peterborough.
- Harvey, J. and Cowx, I. (2003). Monitoring the River, Brook and Sea Lamprey, *Lampetra fluviatilis, L. plane*ri and *Petromyzon marinus*. Conserving Natura 2000 Rivers Monitoring Series No 5, English Nature, Peterborough.
- Hendry, K. and Cragg-Hine, D. (1997). Restoration of riverine salmon habitats: A guidance manual. R&D Technical Report W44. Environment Agency, Bristol.
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- Nith District Salmon Fishery Board and Nith Catchment Fishery Trust (2014). River Nith Catchment Fishery Management Plan 2014-2018.
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- NatureScot (2024). NatureScot pre-application guidance for onshore wind farms. February 2024.
- Scottish Environment Protection Agency (SEPA) River Basin Management Plan.

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- Skinner, A., Young M. and Hastie, L. (2003). Ecology of the Freshwater Pearl Mussel. Conserving Natura 2000 Rivers Ecology Series No. 2 English Nature, Peterborough.

Methodology

Key Species

The following species of conservation significance are considered:

- European eel - Council Regulation (EC) No 1100/ 2007) establishing measures for the recovery of the stock of European eel; listed by IUCN as Critically Endangered, Scottish Biodiversity List (SBL) (Watching Brief Only) and UK Biodiversity Action Plan (BAP) Priority Species;
- Atlantic salmon – Annex II of Habitats Directive, Salmon and Freshwater Fisheries (Consolidation) (Scotland) Act 2003, SBL (Conservation Action Needed & Avoid Negative Impacts) and UK BAP Priority Species;
- brown trout/sea trout - SBL (Conservation Action Needed) and UK BAP Priority Species;
- freshwater pearl mussel (FWPM) – Schedule 5 of the Wildlife and Countryside Act (1981) and annex II of Habitats Directive SBL (Conservation Action Needed) and UK BAP Priority Species;
- river lamprey - Annex II of Habitats Directive, SBL (Avoid Negative Impacts) and UK BAP Priority Species;
- brook lamprey - Annex II of Habitats Directive, SBL (Avoid Negative Impacts); and,
- sea lamprey - Annex II of Habitats Directive, SBL (Avoid Negative Impacts) and UK BAP Priority Species.

Desk Study

A desk study was undertaken to identify any classified waterbodies and existing fisheries records within the Site and surrounding area. A review of the key sources included in the desk stud are summarised in **Table 1.**

Additional peer reviewed literature and industry guidance has also been reviewed and is referred to where relevant.

Table 1 – Desk study key sources and information sought

Key Source	Information Sought	Search Area
NatureScot Sitelink https://sitelink.nature.scot/home *February 2025*	Proximity to statutory designated sites with fish interests.	Within 10 km of the Site boundary (see **Figure 7.1**).
NatureScot's Open Data Geoportal https://opendata.nature.scot/datasets/biosphere-reserves/explore?location=57.631597%2C-4.815034%2C9.38 *February 2025*	Proximity to Biosphere Reserves, with terrestrial mammal interests.	Within 5 km of the Site.
South West Scotland Environmental Information Centre (SWSEIC) *September 2021 and update in March 2025*	Existing fish records, and non-statutory sites.	Within 2 km of the Site boundary, and within 1 km of the access track[1].
Nith District Salmon Fishery Board and Nith Catchment Fishery Trust (2014). River Nith Catchment Fishery Management Plan 2014-2018 and 2023-2028 *February 2025*	Existing ecological records and watercourse condition.	Watercourse with potential hydrological connectivity to the Site and access track.
Scottish Environment Protection Agency (SEPA) River Basin Management Plan https://www.sepa.org.uk/data-visualisation/water-environment-hub *February 2025*	Watercourse condition.	Within 10 km of the Site and access track.
Joint Nature Conservation Committee's (JNCC) distribution of the Freshwater Pearl Mussel	Existing ecological records	Within 10 km of the Site and access track.

[1] It should be noted that the Search Area was based on a previous iteration of the access route which deviated slightly from the final access route. However, given the extent of the Search Area it is considered that records from an appropriate area of relevance to the access route have been considered.

Key Source	Information Sought	Search Area
https://sac.jncc.gov.uk/species/S1029/ *February 2025*		

Fish Habitat Survey (FHS)

A FHS was completed on all watercourses within the Site (including a 100 m Site buffer, where accessible; 'Study Area') on 28th and 29th October 2021, to identify any areas of critical fish habitat (i.e. spawning, nursery areas, juvenile and adult holding areas, juvenile lamprey habitat and FWPM habitat).

All stretches of watercourses with a gradient of ≥6 % are considered to be unsuitable or non-productive fish habitat for Atlantic salmon and brown/sea trout. Mills (1973) found that gradients of <3 % were favourable for Atlantic salmon; whilst sea trout were found to spawn in streams with gradients up to 4 %. Most populations of lamprey occur where the average stream gradient is 1.9 – 5.7 m/km, being rarely found where gradients exceed 7.8 m/km or 0.78 % (Maitland and Campbell, 1992). Whilst gradients of ≥6 % are considered to be typically unsuitable for fish fauna, it is recognised that small, isolated, populations of brown trout may occur in locally suitable habitat in stretches with steeper gradients.

The watercourses within the Study Area were systematically walked (including in-stream inspections where required) and the habitats mapped according to the classifications presented in **Table 2**.

Specifically, the habitat survey focused on the identification of the following:

- spawning habitat for salmonid and lamprey species;
- nursery habitat for lamprey species;
- areas of habitat important for juvenile salmonids (fry and parr);
- areas of habitat important for adult holding areas; and,
- areas of suitable substrate and flow conditions for supporting FWPM.

The habitat classification used in this study was based on the Scottish Fisheries Coordination Centre (SFCC)'s Habitat Surveys Training Course Manual (SFCC, 2007), the Environment Agency's Restoration of Riverine Salmon Habitats Guidance Manual (Hendry and Cragg-Hine, 1997), and a review of key habitat requirements for other species of conservation significance including lamprey, salmonids and FWPM (e.g. Maitland, 2003; Hendry & Cragg-Hine, 2003; Skinner *et al*., 2003).

Each watercourse within the Study Area was visited. Detailed analysis was undertaken at sample points within locations identified as having diverse geomorphological and hydrological conditions within each watercourse. Samples were taken at each of the representative sections of each watercourse. The following information was collected at each sample location: channel gradient; substrate composition (% bedrock, boulders >256 mm, cobbles 65-256 mm, pebbles 4-64 mm, gravel 2-4 mm, coarse sand 0.5-2 mm and fine sand/silt/peat <0.5 mm); average wetted channel width (m); average depth (m) and turbidity (1 [clear] – 3 [turbid]). Any potential barriers to fish movement within watercourses were also recorded. A photograph was taken at each sample point.

Table 2 – Fish river habitat classifications

Category	Habitat Type	Description	Species Suitability
1 1a 1b 1c	Unsuitable Steep > 10 % gradient Moderate 6-10 % gradient Other – ephemeral, shallow drains, dry beds	Usually 1st – 2nd order watercourses with steep gradient, ≥6 % slopes (often substantially greater), abundant bedrock, lack of fixed substrates, high velocity (e.g. headwaters/rivulets). Also includes less steep ephemeral stretches (e.g. headwater sources), flushes, shallow drains and modified watercourses with dry beds.	No productive fish habitat, although some species may migrate through these areas (also refer to 7. Rapids) depending on whether they represent a migration barrier.
2 2a 2b	Spawning Habitat Salmonids Lamprey	Stable "gravels" of minimum 15-30 cm depth, optimal 20-30 mm pebbles and small cobbles, not compacted or with excessive silt/sands (<20 % by weight) for salmonids. Lamprey spawning habitat where "gravels" include sands.	Spawning habitat - Atlantic salmon (*c.* 9 m^2 per pair) and sea/brown trout; lamprey.

Category	Habitat Type	Description	Species Suitability
		Often at tail end of pools or upstream ends of riffle-runs ensuring oxygenated substrate. Can also be found at end of weir pools.	
3	Riffle	Shallow (< 20 cm) and fast flowing, with upstream-facing wavelets which are unbroken (although often some broken water), with substrate dominated by gravel and cobbles.	Fry (0+) habitat – Atlantic salmon/ brown trout/sea trout.
4 4a 4b	Run Shallow (< 0.5 m deep) Deep (>0.5 m deep)	Generally deeper (>20-40 cm) and less steep bed compared to riffle, with substrate of boulders, cobbles, pebbles and gravels. Usually disturbed, rippled surface. Often located immediately downstream of riffle.	Mixed salmonid juvenile habitat. Fry (0+) & Par (1+) habitat - Atlantic salmon/ brown trout/sea trout.
5 5a 5b	Glide Shallow (<0.5 m deep) Deep (> 0.5 m deep)	Shallow gradient stretches with smooth laminar flow with little surface turbulence and generally > 30 cm deep; water flow is silent. Often located below pools. Typically, with small substrates of pebbles, gravel, coarse sand and fine sand/silt/peat.	European eel; non-productive salmonid habitat, although may provide some shelter for adults.
6 6a 6b 6c	Pool Plunge/Scour pool Meander pool Weir/bridge pool	No perceptible flow, eddying and usually > 100 cm deep. Substrate with high proportion of sand and silts. Often located on the outside of meanders but includes natural scour or plunge pools and artificial weir pools.	Adult refugia Atlantic salmon, sea/brown trout, European eel.
7 7a 7b 7c	Rapids Steep - >10% gradient Moderate - 6-10% gradient Low - <6% gradient	Sections of relatively steeper gradient with fast currents and turbulence, with mixed flow types, including free-fall, chutes and broken, with obstructions such as large boulders, rock outcrops and falls.	Negative feature for migratory species and may pose a migratory barrier; elvers/ yellow eels limited to velocity of <0.5 m/sec and 2.0 m/sec respectively; lamprey to 2m/sec. Low gradient rapids provide mixed salmonid juvenile habitat.
8 8a 8b	Banks of fine sediment of silts and sands Optimal Sub-optimal	Limited flow (sometimes back-flow) allowing deposition of silts/sands, not anoxic, with/without riparian trees. Optimal habitat is stable fine sediment and sand ≥15 cm deep with some organic detritus. Sub-optimal habitat includes small areas of deposited silts/sands behind boulders.	Lamprey ammocoete nursery and adult refuge.
9 9a 9b 9c 9d 9e	Vegetation features Riparian trees (tunnel) Flow constriction Aquatic macrophytes Emergent macrophytes Large woody debris (LWD)	Closed woodland canopy forming tunnel vegetation In-stream emergents, boulders, narrowing of channel, *etc.*. Stands of aquatic and floating vegetation Stands of emergent (usually marginal) vegetation LWD forming dams, *etc.*	Tunnel riparian trees may be negative feature for salmonids, although tree roots and fallen trees may provide refugia for Atlantic salmon/ brown trout/sea trout and European eel. Aquatics/emergents provide cover for fish.
10	Obstructions to migration	Impassable waterfalls, rapids, flow constrictions, weirs, bridge sills, culverts,	All migratory species; impassability varies between species and feature.

Category	Habitat Type	Description	Species Suitability
		shallow braided river sections, pollution preventing upstream migration.	Leaping ability: <3.7 m Atlantic salmon; <1.81 trout; European eel and lamprey none.
11 11a 11b 11c 11d	Other features Side channel Backwater Artificial channel Standing water	Includes other channel features, with side channel (connected to main channel) and backwaters. Artificial channels may comprise either man-made banks and/or beds. Standing waters may comprise natural or artificial on-line or with/without inputs or outputs	Side channel/backwater often important refugia for juveniles. Artificial channels have limited diversity and are often non-productive fish habitat.

Note, for the purpose of appraising habitats for suitability for supporting FWPM, due regard was given to FWPM requiring clean, fast-flowing watrecourses, with a substrate of coarse sand and fine gravel. Furthermore, given FWPM larvae require salmonids (attaching to their gills for a period of time), the watercourses suitability for supporting salmonids is also considered a key consideration for its likelihood to support FWPM.

Personnel

The survey was undertaken by C. Nisbet *MCIEEM*, who is fully trained on FHS as part of a Level 3 Management of Electrofishing Operations qualification as accredited by the SFCC.

Limitations

During the survey, although water levels were slightly elevated following recent rains, it is considered that a robust assessment of the suitability and value of the watercourses within the Study Area for fish fauna was undertaken. The survey is therefore considered not to be subject to any substantial limitations.

Results

Desk Study

Statutory Designated Sites for Nature Conservation

This section should be read with reference to **Figure 7.1**.

The Site does not form part of any statutory designated site for nature conservation with qualifying fish species interests, nor is it within 10 km of such a designated site.

Non-statutory Designated Sites for Nature Conservation

Consultation with SWSEIC indicated that the Site does not form part of any non-statutory designated site for nature conservation and no such sites are located within the Search Area.

A review of NatureScot's Open Data Geoportal identified that with the Site is within the Transitional Zone of the Galloway and Southern Ayrshire Biosphere Reserve, which is recognised as an internationally world class environment for people and nature. The Biosphere Reserve covers a large area (9,000 km^2) of south-west Scotland's land and sea.

Existing Fish Species Records

Following review of returned SWSEIC records, no fish species records were identified within the Search Area.

The European Water Framework Directive (WFD) requires that surface waterbodies in member states are classified according to ecological status. SEPA's River Basin Management Plan website confirms there is a single classified waterbody within the Search Area. Watercourse W1 is the Shinnel Water, which is classified as currently having good overall ecological status and high access for fish migration. All 17 remaining watercourses covered within the Search Area tributaries of the Shinnel Water. There were no physical instream barriers between the Shinnel Water and the remaining watercourses within the Search Area, however, many lie on gradients > 10 % and as such have limited suitability for fish fauna.

A review of the River Nith Catchment Fishery Management Plans (FMPs) revealed that the Nith Catchment supports the following species: Atlantic salmon, sea trout, brown trout, grayling, pike, eel, lamprey (brook, river and sea), minnow, stone loach, stickleback, tench, perch, bream and roach. The catchment is not stated to include FWPM.

All Scottish salmon rivers are assigned a Conservation Categorisation grading by the Scottish Government. Gradings range from 1 to 3. Grade 1 denotes a river that has sustainable populations of fish and has a harvestable surplus. Grade 3 means that the river does not have a sustainable population and that the taking of salmon is not

permitted. As detailed in the FMPs, the River Nith (and catchment) has been assigned a Grade 3 status for a number of years which means that all salmon must be released. Given current catch returns, it is unlikely that this grading will change in the near future.

As detailed in the FMPs, following The Conservation of Salmon (Collection of Statistics) Scotland Regulations 2006, the Nith District Salmon Fishery Board issues a request to all salmon fishing proprietors for them to submit their annual catch data. Plate 1 and 2 respectively illustrate the total number of salmon and grilse and total number of sea trout caught by all methods in the Nith Fisheries between 1952 and 2023.

Plate 2 – Salmon and Grilse[2] total catch in the Nith Fisheries between 1952 and 2023 (Source: FMP 2023-2028)

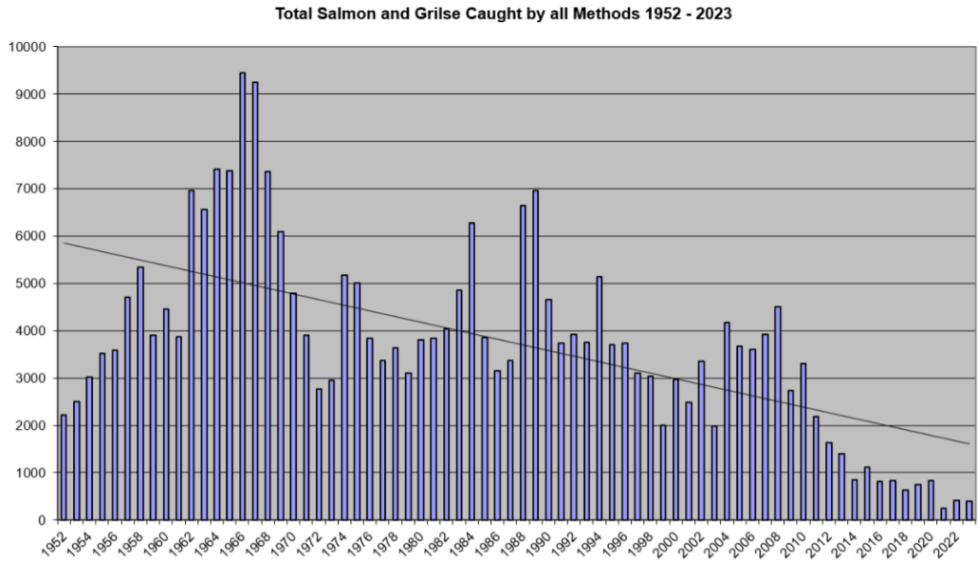
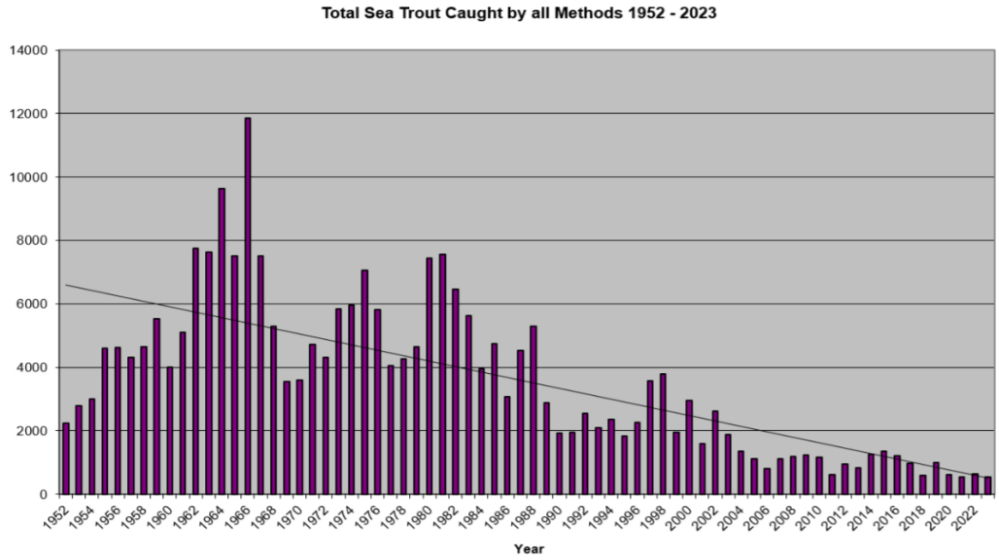


Plate 2 – Sea trout total catch in the Nith Fisheries between 1952 and 2023 (Source: FMP 2023-2028)



FWPM was not identified in the Nith catchment following review of its species distribution as detailed by the JNCC (see source in **Table 1**).

Fish Habitat Survey

The following presents results of the FHS for each of the watercourses within the Study Area, including a summary of channel characteristics at time of survey, and should be read with reference to **Figure 7.10**.

[2] Refers to a salmon which has been to sea for one year only.

The habitats of the watercourses surveyed are characterised based on the habitat classifications in **Table 2** and can largely be considered as 'unsuitable' fish habitat (Category 1), or 'suitable' fish habitat (all of the other habitat categories stated in **Table 2**). The exception to this is 'rapids' (Category 7) which are largely sub-optimal for fish species.

Environmental data for sample points (1-24), including channel dimensions, gradient and substrate composition is provided in **Annex 2**, with photographs showing each sample point presented in **Annex 3**.

Where specific species are not regarded for watercourses, the conditions are considered suboptimal for the species, and the species is considered likely to be absent. The watercourses surveyed were considered suboptimal for FWPM, and FWPM is not predicted to be present within the watercourses.

W1 – W10 Shinnel Water and Tributaries

Watercourse W1 was the Shinnel Water which tributes into the Scaur Water and then the River Nith before reaching the sea. The Shinnel Water is a SEPA classified watercourse assessed as having good overall ecological status and high access for fish migration. The upper reaches of W1 – W10 occurred within open moorland and flow through small areas of forestry plantation as they combined in the northern extent of the Study Area.

Watercourse W1 occurred on a relatively shallow gradient, which itself was considered to be passable by migratory fish, although there are known to be barriers downstream that reduce access opportunities for migratory fish fauna. By contrast, watercourses W2 – W10 all occurred on moderately steep to steep gradients, which were considered to be either at, or beyond the limit for access by migratory fish.

The substrates present in W1-W3 and W6-W8 all contained elements of finer stone (pebble and gravel), which had some suitability for fry and parr, however apart from W1, the remainder of these watercourses had limited suitability due to steep gradients. Watercourses W4, W5, W9 and W10 comprised peaty headwaters and contained abundant emergent and marginal vegetation. These sections were unlikely to contain much water during drier periods and therefore were considered to provide limited suitable habitat for juvenile fish fauna.

W11 – W14 Upper Appin Burn and Tributaries

Watercourses W11 - W14 were all tributaries of the Appin Burn (W18). W11 occurred on the upper reaches of the main stem of Appin Burn and its gradient was shallow to moderate. It predominantly included cobble sized substrate within the channel, with smaller proportions of large boulders and small pebbles also present. Limited pockets of gravel were also identified. The channel had a run/riffle flow type and there was no known barriers to fish migration downstream. This section of the Appin Burn was considered suitable for small numbers of juvenile fish fauna, including salmonids.

Watercourses W12 – W14 tributed into the upper reaches of the Appin Burn. W12 was very minor in nature and flowed through a small culvert upstream of its confluence with the Appin Burn. Due to its minor nature, bankside rush vegetation almost encroached over its width. This minor watercourse was considered to be of negligible suitability for supporting fish fauna.

W13 and W14 were also very minor in nature and occurred on steep gradients giving rise to rapid and chute flow conditions. W14, which flowed through Shiel Cleuch was the steeper of these two watercourses. They were both considered to be of negligible suitability for fish due to the gradient. The watercourse, which flowed through Dun Cleuch to the south of Shiel Cleuch was excluded from survey due to its steeper gradient.

W15 – W17 Tributaries of the Lower Appin Burn

Watercourses W15 – W17 tributed into the lower reaches of the Appin Burn. Watercourse W15 was the Magmallach Burn and Watercourses W16 and W17 tributed into the Magmallach Burn prior to its confluence with the Appin Burn. These watercourses were dominated by steep (>10 % gradient) sections and were considered to be of negligible suitability for fish.

W18 Lower Appin Burn

The lower extent of the Appin Burn occurred over a shallow gradient and comprised a variety of substrate types. It was dominated by cobbles, however it also included smaller proportions of pebble, gravel and sand. Flow conditions comprised run, riffle and glide sections within the channel. There was a small waterfall downstream of the Study Area, which was considered to be a potential feature that could reduce suitability for migratory fish, although it is likely to be passable. The Appin Burn was also suitable for non-migratory fish.

References

Gardiner, R. (2003). Identifying Lamprey. A field key for Sea, River and Brook Lamprey. Conserving Natura 2000 Rivers Conservation Techniques Series No. 4. English Nature, Peterborough.

Harvey, J. and Cowx, I. (2003). Monitoring the River, Brook and Sea Lamprey, *Lampetra fluviatilis, L. plane*ri and *Petromyzon marinus*. Conserving Natura 2000 Rivers Monitoring Series No 5, English Nature, Peterborough.

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Annex 1 - Scientific Names

Table A1-1 provides common and scientific names of fish species (and FWPM) included in this Technical Appendix, and within **Chapter 8: Ecology**.

Table A1-1 - Common and scientific names of fish (and FWPM)

Common Name	Scientific Name
Atlantic salmon	*Salmo salar*
Bream	*Abramis brama*
Brook lamprey	*Lampetra planeri*
Brown trout / sea trout	*Salmo trutta*
European eel	*Anguilla anguilla*
Flounder	*Platichthys flesus*
Freshwater pearl mussel	*Margaritifera margaritifera*
Grayling	*Prototroctes maraena*
Minnow	*Phoxinus phoxinus*
Perch	*Perca fluvialis*
Pike	*Esox lucius*
River lamprey	*Lampetra fluviatilis*
Roach	*Rutilus rutilus*
Sea lamprey	*Petromyzon marinus*
Stone loach	*Barbatula barbatula*
Ten-spined stickleback	*Pungitius pungitius*
Tench	*Tinca tinca*
Three-spined stickleback	*Gasterosteus aculaeatus*

Annex 2 – Environmental Data

Table A2-1 - Environmental data from W1 – W10

Location		Substrate Composition (%)							Channel Information				Habitat type
Grid Ref.	Photo/ Sample No.	Bed-rock	Boulders >256 mm	Cobbles 65–256 mm	Pebbles 4 – 64 mm	Gravel 2 – 4 mm	Coarse sand 0.5 – 2 mm	Peat/fine sand/silt <0.5 mm	Av. Wetted Width (m)	Av. Depth (m)	Turbidity (1 [clear]-3[turbid])	Channel Gradient (%)	
NX75399 97454	1	0	25	25	25	25	0	0	4m	0.25	2	2	3, 4
NX75397 97482	2	0	10	40	40	10	0	0	1.5m	0.25	1	>10	1a, 7a
NX75342 97516	3	0	10	30	40	20	0	0	1.5m	0.25	1	>10	1a, 7a
NX75292 97560	4	0	0	0	0	0	0	100	0.4m	0.1	1	4-5	1c
NX75129 97733	5	0	0	0	0	0	0	100	0.3m	0.1	1	1-2	1c
NX74506 98070	6	0	0	20	40	20	0	20	1m	0.2	1	1-2	3, 4
NX74005 98872	7	0	20	60	20	0	0	0	0.9m	0.2	1	5	3, 4
NX73485 98969	8	0	5	15	70	10	0	0	0.8m	0.2	1	4-5	3, 4
NX73015 99083	9	0	30	40	20	10	0	0	1m	0.2	1	6-10	1b, 7b
NX72911 99156	10	0	0	0	0	0	0	100	0.3m	0.1	1	>10	1c

Table A2.2 - Environmental data from W11 – W18

Location		Substrate Composition (%)							Channel Information				Habitat type
Grid Ref.	Photo/ Sample No.	Bed-rock	Boulders >256 mm	Cobbles 65–256 mm	Pebbles 4 – 64 mm	Gravel 2 – 4 mm	Coarse sand 0.5 – 2 mm	Peat/fine sand/silt <0.5 mm	Av. Wetted Width (m)	Av. Depth (m)	Turbidity (1 [clear]-3[turbid])	Channel Gradient (%)	
NX71561 98140	11	0	20	50	10	10	0	0	1m	0.18	1	4-6	3, 4
NX71568 98099	12	0	10	50	30	10	0	0	0.7m	0.14m	1	6-10	3, 4
NX71693 98020	13	0	15	35	40	10	0	0	0.75m	0.15	1	>10	3, 4, 7a
NX72085 97274	14	0	60	30	10	0	0	0	0.6m	0.2	1	>10	7a
NX73098 96862	15	10	20	55	10	5		0	0.8	0.1	1	>10	7a
NX74026 96672	16	0	20	20	20	10	10	20	1.25	0.15	1	6-10	3, 4, 7b
NX74234 96527	17	0	70	20	10	0	0	0	1	0.15	1	>10	7a
NX74393 97187	18	0	0	40	30	20	10	0	3	0.22	1	1-2	3, 4, 5a

Annex 3 – Photographic Plates

W1

W2

W3

W4

W5

W6

W7

W8

W9

W10

W11

W12

W13

W14

W15

W16

W17

W18