

# Stage 1 Habitats Regulations Assessment

Environment Agency record of screening for likely significant effects

This is a record of the screening for likely significant effects required by Regulation 63 of the Conservation of Habitats and Species Regulations 2017 (as amended), undertaken by the Environment Agency in respect of the permission, plan or project (PPP) detailed in Section 1, for the following relevant site(s):

River Derwent and Bassenthwaite Lake SAC (UK0030032)

Version1: Draft 03/08/2022

This record was sent to Natural England for consultation.

An additional component charge for habitats assessment was not applicable for this application.

## 1. Permission, plan or project (PPP) details

**Type of PPP:** Fisheries Byelaws

**Environment Agency reference:** River Derwent Rod Fishery Byelaw Review 2022

**Site/project name or reference:** River Derwent Rod Fishery Byelaw Review 2022

## 2. Description of proposal

Salmon and sea trout exploitation in the Cumbrian River Derwent rod fishery is regulated by local and national byelaws. This includes a time-limited local byelaw which expires in July 2023. There is therefore an imminent need to review the status of stocks and consider appropriate measures to include in a renewed byelaw package

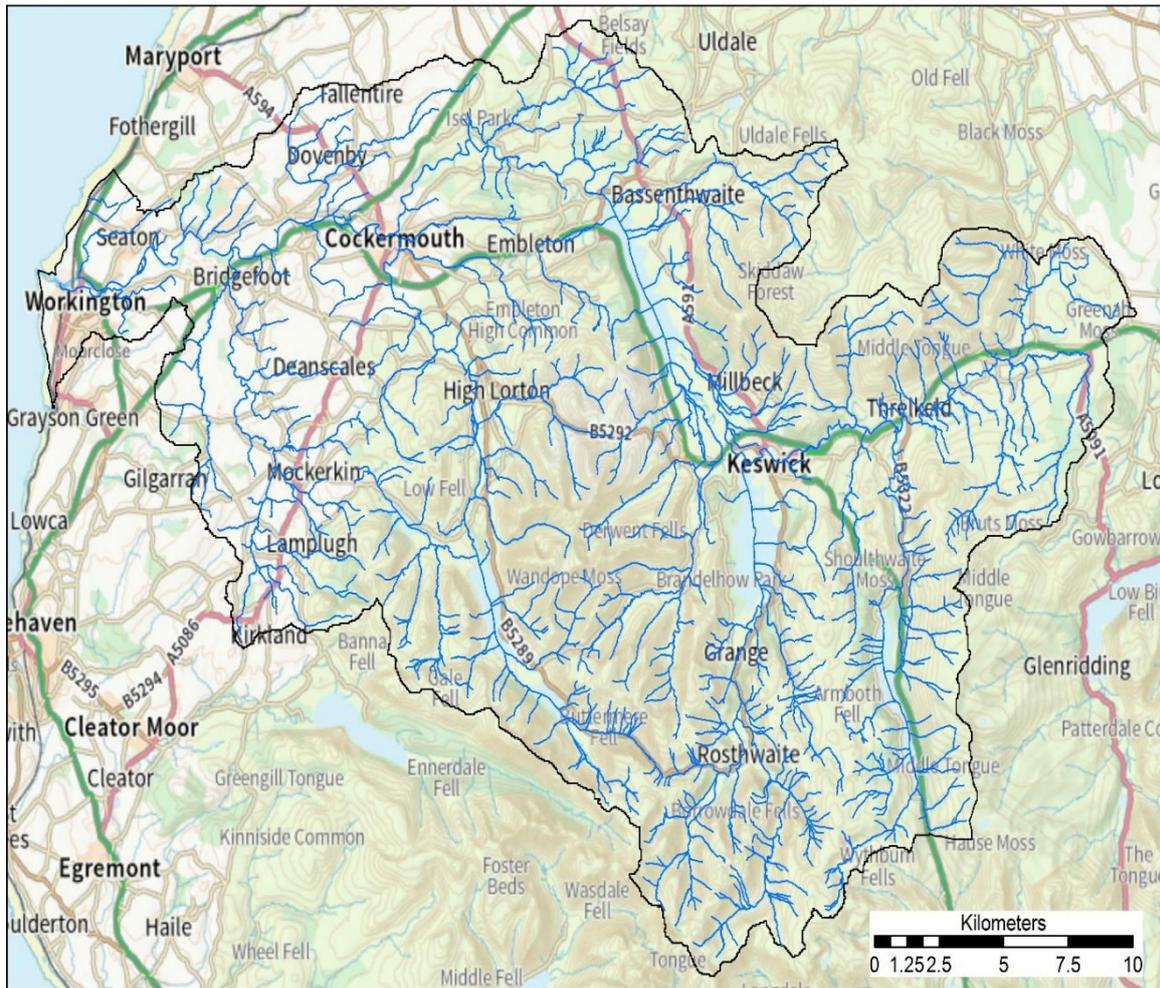
On the basis of our review of salmon stocks in the Derwent catchment, we believe there is a clear need to reduce the numbers of salmon directly killed within the rod fishery to zero, and to reduce catch and release related mortality.

Within this proposal we set out a series of salmon (and sea trout) management options. With regards to salmon, we intend to introduce new time limited (10 year) byelaws requiring that all salmon caught in the Derwent rod fishery are returned immediately and with least possible injury to river in which they were caught in. That is to say, we intend to continue to support fishing for salmon, but on a 100% catch-and-release basis only. We do not intend to introduce the same catch and release requirement for sea trout, stocks of which are such that we believe retention of fish can still be managed voluntarily.

We also intend to propose that angling methods are restricted under new byelaws, in order to increase survival of salmon and sea trout caught and released within the fishery. This includes amendments to the type of hooks that can be used on lures and flies for salmon, and lures for sea trout. It also includes preventing bait fishing.

We have produced an in-depth technical case (*Cumbrian River Derwent Rod Fishery Byelaw Review 2022 – Technical Case*) in support of our proposed measures. This has been provided to Natural England alongside this assessment.

### 3. Map showing PPP location (River Derwent catchment)



## 4. European sites requiring assessment<sup>1</sup>

### River Derwent and Bassenthwaite Lake SAC (UK0030032)<sup>^</sup>

Atlantic salmon; Brook lamprey; Floating water-plantain; Marsh fritillary; Oligotrophic to mesotrophic standing water with vegetation; Otter; River lamprey; Sea lamprey; Water courses of plain to montane levels with *R. fluitantis*

## 5. Conservation objectives

Ensure that the integrity of the River Derwent and Bassenthwaite Lake SAC site is maintained or restored as appropriate, and ensure that the site contributes to achieving the favourable conservation status of its qualifying features, by maintaining or restoring:

- The extent and distribution of qualifying natural habitats and habitats of qualifying species
- The structure and function (including typical species) of qualifying natural habitats.
- The structure and function of the habitats of qualifying species
- The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely
- The populations of qualifying species, and,
- The distribution of qualifying species within the site

The above objectives are taken from '*European Site Conservation Objectives for River Derwent and Bassenthwaite Lake Special Area of Conservation Site Code: UK0030032 – Version 03, 27 November 2018*)

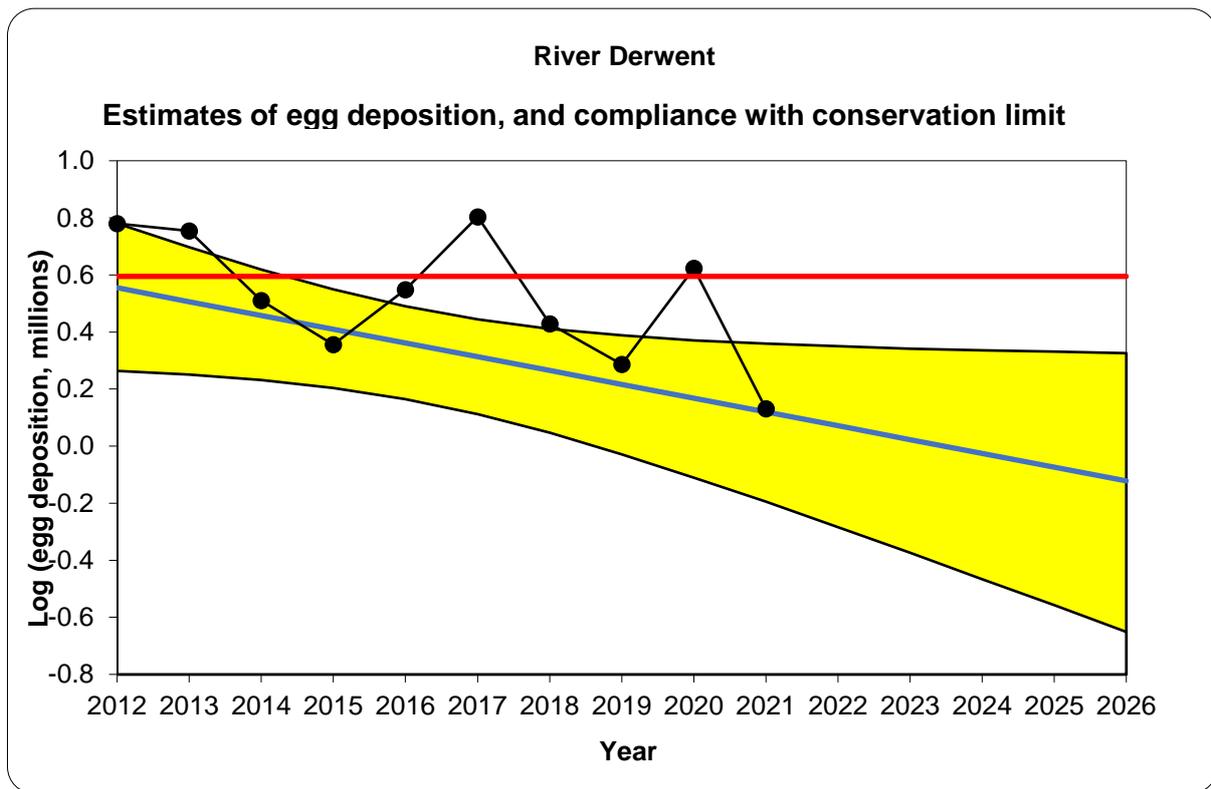
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<sup>1</sup> This is based on screening criteria the Environment Agency consider appropriate to identify possible significant risk.

<sup>^</sup> Protected area under the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017

## Current status of Derwent salmon

The Derwent salmon stock level is assessed annually. Egg deposition estimates are derived from adult numbers, using angler catch return data. Simply speaking, a regression line with associated probability intervals, is applied to the most recent 10 years of data. This is interpreted relative to the Derwent catchment's minimum safe level of spawning (the conservation limit). The relationship of this regression line with the conservation limit places the salmon stock within one of four risk categories and forms a basis for management decisions. Figure 1 displays the most up to date egg deposition graph for the Derwent catchment.



Key to Graph	
	20th percentile trend line for egg deposition estimates
	Annual egg deposition estimates
	Conservation limit
	Upper and lower boundaries of the probability interval around the 20th percentile regression line

**Figure 1:** 2021 Egg deposition graph for the River Derwent

In figure 1, the upper limit (95th percentile) of the probability interval around the regression line is below the Derwent conservation limit. This means that there is a >95% probability that the Derwent salmon stock will not meet its conservation limit in

four years out of five, and thus will not achieve the management objective<sup>2</sup> in five years' time. Consequently, the Derwent salmon stock is placed into the 'At Risk' category. Given the declining pattern of the regression line, the Derwent salmon stock is also predicted to remain in this category in five years' time. The 'At Risk' category is the "worst" categorisation, and our national decision structure directs us to 'urgently reduce exploitation to zero' in this scenario.

The most recent salmon stock assessment therefore reflects an urgent need to take action to maximise and increase egg deposition through increasing wild salmon spawning levels.

Complimenting adult stock assessments are juvenile surveying data. Whilst this data is not formally included in the process, it forms a useful reference point. Detailed data is displayed in the technical case supporting these byelaw proposals (*Cumbrian River Derwent Rod Fishery Byelaw Review 2022 – Technical Case*). This includes salmon fry and parr densities across 11 key sites on the Derwent catchment.

In general, Derwent catchment salmon juvenile densities have declined from higher levels around 10-15 years ago, to levels that are more consistently below the site-specific averages in more recent years.

The relationship between returning adult numbers and juvenile abundance in the following years, is governed by many and varied factors. However overall, the data indicates a general decline concurrent with a similar decline in adult salmon abundance. At many sites, the pattern of fry and parr densities over time broadly mirrors that of overall salmon rod catch. Generally, in periods when rod catches were higher, juvenile densities were also higher, and vice versa. This is likely to represent the fact that a higher rod catch is indicative of higher adult salmon abundance. Higher adult abundance is likely to lead to more spawning, and to an extent, higher juvenile densities.

Full details and analysis of the juvenile data drawn upon in the formulation of these byelaws can be found in the technical case (*Cumbrian River Derwent Rod Fishery Byelaw Review 2022 – Technical Case*). In summary, juvenile data suggests that whilst some sites still perform well, it is likely that juvenile salmon densities are well below their potential across the Derwent catchment, and juvenile habitat is therefore underutilised. This reinforces the need to maximise and protect wild spawning.

## **6. Risks (pressures) relevant to the type of PPP being assessed**

Disturbance

Killing/injury or removal of fish or other animals

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<sup>2</sup> The 'management objective' used for each river in England is that the stock should be meeting or exceeding its conservation limit in at least four years out of five (i.e. >80% of the time), on average.

Physical damage

## 7. HRA Stage 1 screening<sup>3</sup>

### River Derwent and Bassenthwaite Lake SAC (UK0030032)<sup>^</sup>

#### Summary of likely significant effect alone

**Disturbance - NONE**

**Killing/injury or removal of fish or other animals - NONE**

#### Summary of likely significant effect in combination:

**Disturbance - NONE**

**Killing/injury/physical damage or removal of fish or other animals – NONE**

## 8. Alone assessment (further details)

We have considered the potential impacts of the proposed byelaw package on the various features of the SAC. We do not consider that there is any potential impact on any qualifying feature other than Atlantic salmon. The proposed byelaw package is solely designed to reduce exploitation of Atlantic salmon and sea trout, aiming to protect and enhance their populations. Proposals focus entirely on the rod fisheries within the Derwent catchment, which specifically target these species. Our assessment is therefore that if proposed byelaws are approved, there will be no mechanism for adverse effects on any other qualifying feature. We therefore only consider Atlantic salmon further within this assessment.

### **Atlantic salmon - Disturbance**

We have considered the possible impacts of our byelaw proposals in terms of disturbance and have concluded that there is likely to be no impact. Proposed byelaws are solely focussed on reducing exploitation of salmon and sea trout through increasing restrictions on angling and angling methods. Proposals are designed to reduce current levels of negative disturbing impacts on salmon and sea trout through method restrictions, and mandatory release of all salmon caught.

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<sup>3</sup> Only features the Environment Agency consider likely to be sensitive to the type of PPP being assessed are included, see [Habitats Regulations Assessment: Risk definitions and matrices](#)

<sup>^</sup> Protected area under the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017

\* Priority natural habitat/priority species

~ Marine Protected Area

Therefore, we do not believe there is any mechanism within this project for enhanced disturbance of Atlantic salmon, rather we believe that proposals will lead to positive effects.

### **Atlantic salmon - Killing/injury/physical damage or removal of fish or other animals**

We have considered the possible impacts of our byelaw proposals in terms of killing/injury/physical damage or removal of fish or other animals. We have concluded that there is likely to be no negative impacts with regards to this pressure, rather we believe that proposals will lead to positive effects.

Using a simple average fecundity of 5600<sup>4</sup> eggs per salmon, there was an approximate average deficit of 347 hen salmon for the most recent three Derwent conservation limit failures (2021, 2019, 2018).

In the three most recent seasons since (2019, 2020 and 2021) a corrected<sup>5</sup> average of 25 salmon per season have been killed within the fishery. Additional salmon will also have died before spawning, due to post release mortality associated with injury and/or stress from capture. **Our proposed measures would prohibit any direct kill of salmon within the fishery and increase survival of salmon that were caught and released.**

Therefore, whilst the proposal byelaw measures will not, on their own, replace the spawning deficit, they will **contribute positively by directly and immediately increasing spawning escapement.**

## **9. In combination assessment (further details)**

### **Disturbance**

We have considered the possible in combination impacts of our byelaw proposals in terms of disturbance and assess that there are likely to be no impacts. We conclude that the byelaw package on its own is only likely to have a positive effect on Atlantic salmon, and therefore will not contribute to any negative in-combination effect.

### **Killing/injury or removal of fish or other animals**

We have considered the possible in combination impacts of our byelaw proposals in terms of killing/injury or removal of fish or other animals. We have concluded that there are likely to be no negative impacts with regards to this pressure. Our byelaw proposals will directly reduce killing, injury and removal of fish through prohibiting

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<sup>4</sup> Based on a simple mean fecundity (multi sea winter + grisle /2). The precise average fecundity will vary year on year with the proportions of grisle and multi sea winter fish in the run.

<sup>5</sup> This correction refers to the raising factor of 1.1 applied to overall salmon rod catch during annual salmon stock assessments, to account for anglers who do not report their catch.

direct exploitation, and requiring more fish friendly angling methods to reduce post-release mortality. This will increase spawning escapement. Byelaw proposals are likely to have a positive effect on Atlantic salmon, and therefore will not contribute to any negative in-combination effect.

## **10. Information / Advice**

The assessment has drawn upon the technical case produced by the Environment Agency in support of byelaw proposals (*Cumbrian River Derwent Rod Fishery Byelaw Review 2022 – Technical Case*). This includes relevant fisheries data and stock assessments and has been provided directly to Natural England.

### **Environment Agency internal advice and consultation (if applicable)**

The assessment has drawn upon the technical case produced by the Environment Agency in support of the byelaw proposals. This includes relevant fisheries data and stock assessments, and has been formulated through consultation with both local and national Environment Agency fisheries specialists.

### **Natural England information / advice (if applicable)**

Liaison with Natural England officers (Mel Fletcher and Silas Walton) has taken place throughout the formulation of the byelaw proposals.

### **Third party advice (if applicable)**

These byelaw proposals have been subject to informal external consultation and will shortly go to full formal public consultation. This has been, and will be targeted at key stakeholder groups, primarily the anglers and angling groups active on the Derwent catchment. Their views and input have been and will be captured during this process, and responded to. If any of these views/input provide information which fundamentally changes aspects such as the stock assessment or proportionality of the proposed measures, then we may consider amending byelaw proposals.

## **11. References**

Cumbrian River Derwent Rod Fishery Byelaw Review 2022 – Technical Case, Environment Agency 2022

European Site Conservation Objectives: Supplementary advice on conserving and restoring site features River Derwent and Bassenthwaite Lake Special Area of Conservation (SAC) Site Code: UK0030032, Natural England 2019

## 12. Decision

The Environment Agency concludes there is no likely significant effect.

Name of Environment Agency officer: Philip Ramsden

Job title: Fisheries Technical Specialist

Date: 03 August 2022

## 13. Consultation (if applicable)

Date sent to Natural England for consultation: 03 August 2022

Date response received from Natural England: 25 August 2022

### **Natural England advice on the screening for likely significant effects (if applicable)**

Natural England agrees with the conclusion of the Assessment of Likely Significant Effect (ALSE), of no likely significant effect (please find signed ALSE attached).

It is worth noting, that whilst we welcome the completion of the HRA and consultation with Natural England, we acknowledge that this action is relevant for the management of the site due to the deterioration on salmon numbers, so meets the initial screening criteria (Necessary to management (of the European site)).

Do Natural England have concerns about the assessment? No

Do Natural England have concerns about the decision? No

Name of Natural England officer: Melanie Fletcher

Job title: Freshwater Lead Adviser

Date: 25 August 2022