



River Derwent Rod Fishery Byelaw Review 2022

Response to Consultation Representations

December 2022

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We can't do this alone. We work as part of the Defra group (Department for Environment, Food & Rural Affairs), with the rest of government, local councils, businesses, civil society groups and local communities to create a better place for people and wildlife.

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 2019-2021

1. Background

The 2013 time-limited rod fishing byelaw for the River Derwent expires in July 2023 and requires renewal. The Derwent salmon stock has declined to the lowest level on current record over the last ten years. Therefore, appropriate rod fishery regulations are now required to complement the work of the Environment Agency and its partners in trying to protect and improve the Derwent salmon stock.

Our guiding principles in developing the new regulations have been focussed primarily around affording the necessary protection for the salmon and sea trout stock. Our proposed byelaws aim to assist the recovery of the salmon stock from its current low status, and help at least maintain, and ideally enhance, sea trout stocks. The byelaws seek to do this whilst permitting angling activity to continue.

The public consultation on the new proposed regulations ran for a period of five weeks from 23 September 2022 to 31 October 2022. The consultation was advertised in local and national media outlets and circulated to local MPs and parish councils. In addition, 520 individual anglers were directly contacted by either letter (137) or email (383) and informed of the consultation. These were anglers who had declared a fishing trip on the Cumbrian Derwent in the last three fishing seasons. Informal consultations took place at a meeting with the Derwent Owners Association in June 2022, where we presented our proposals and the data supporting them to fishery representatives. We took on board views from this meeting in our final determination of proposed byelaws before public consultation.

The formal public consultation resulted in 107 representations being made, with 104 within the defined period and three submitted late. We are very grateful for all responses received.

This response document has drawn upon all representations received and is intended to clarify specific points and decisions that have been used or taken in formulating the proposed new regulations.

In summary, our proposed byelaws set out:

- The requirement to release, unharmed, and without undue delay, all rod caught salmon to the river in which they were caught
- Prohibition of the use of bait (such as worm and prawn) for salmon and sea trout fishing
- Restrictions on the type of hooks that can be used (barbless hooks only), and the type and size of hooks that can be used (hook size and number restrictions based on method used)

We are confident that the killing of salmon, and the methods used in the Derwent rod fisheries are not the main cause for the decline in this species. However, reducing rod fishery exploitation to zero, and maximising post-release survival must now form part of

the solution to ensure that numbers of salmon remain at levels that will allow populations to recover.

In terms of other pressures on Atlantic salmon, one of the key issues is to understand and improve marine survival, though this is unlikely to be straightforward. Work is ongoing with NASCO (North Atlantic Salmon Conservation Organisation), other European countries and partners such as the Atlantic Salmon Trust, to help us understand why fewer salmon are returning from the marine part of their lifecycle.

Improving water quality and river flows are also important parts of our work within a freshwater context. This is being and will continue to be delivered as part of wider work in our regulation of business and industries such as agriculture and water companies. Improving and enhancing habitat for our fish stocks is also important, as well as appropriately addressing other forms of salmon and sea trout exploitation, including illegal activity and predation.

There is no short term and immediate solution to reversing the current trend in salmon population on the Derwent catchment or ensuring full protection for the sea trout stock. A combined and partnership approach which addresses key pressures and maximises the freshwater production of smolts is what is needed. The Environment Agency is committed to building further on this existing approach within the Derwent catchment. Proposed Derwent rod fishery byelaws form part of this.

How this document addresses your views

The public consultation on the proposed Derwent rod fishery byelaws measures is now closed. It yielded both support and objection. It also received comments, suggestion and information from both supporters and objectors. This document aims to respond, where applicable, to the objections received. It also sets out our final position in regards to proposed regulations.

Please read the information in this document. We advise that you click on the links in the contents page above to find the response to the specific theme/issue/suggestion you raised. If you made an objection, please consider whether you wish to withdraw it based on the explanations provided here. If this is the case, then please contact us using the details below by 18 January 2023. If you do not agree with the responses below, and do not wish to withdraw your objection, <u>you do not need to respond</u>. If we do not hear from you, we will assume that your objections and associated comments/supporting information stand, and all relevant submissions will be forwarded to Defra for their consideration.

Email: <u>DerwentSalmon@environment-agency.gov.uk</u>

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Environment Agency, Penrith 40 Business Park

Ghyll Mount, Gillan Way, Penrith, CA11 9BP

1.2 Introduction

Salmon stocks are declining across the entire North Atlantic, with recent stock assessments being amongst the lowest levels on record. In England and Wales, 2021 stock assessments show that 54 out of 64 (84%) principal salmon rivers failed to meet their conservation limits. A total of 44 of these rivers are predicted to remain in the worst category of stock performance (At Risk) in five-years' time. This is the worst assessment on record and represents a very serious situation with regards to our salmon stocks.

There are multiple issues which impact on salmon throughout their lives in freshwater and at sea. These include predation, water quality issues, exploitation from fisheries, illegal activity, and barriers to migration to name but a few. Action is needed to address all relevant issues to improve salmon stocks. A variety of international, national and local initiatives are already happening to highlight the plight of both Atlantic and Pacific salmon and improve their populations. These includes work such as The Missing Salmon Alliance's Likely Suspects Framework and the Environment Agency and its partner's Salmon Five Point Approach. On a local scale, the Derwent catchment already has a strong partnership approach, including the Environment Agency. This delivers important work such as, but not limited to, habitat improvement, water quality work, research and monitoring and barrier removal. We are committed to building further on this existing approach and are already proactively engaging with key stakeholders to establish and deliver further avenues of work and action.

Following the review of evidence on the status of the Derwent salmon stock, and to address the need to reduce exploitation on the stock, the Environment Agency has proposed a mandatory catch and release byelaw for salmon caught by the Derwent rod fishery. Furthermore, to improve the survival rate of salmon that are caught, byelaws are also proposed which control permissible angling methods and tackle. The byelaws will allow as many salmon as possible to survive the fishery and have a chance to spawn, therefore boosting the abundance of juvenile salmon.

Mandatory catch and release regulations for salmon have been applied in other jurisdictions to reduce the exploitation of the weakest salmon stocks. For example, in recent seasons, approximately 60% of Scottish rivers have mandatory catch and release regulations applied and approximately 70% of Irish rivers have either mandatory catch and release regulations and method restrictions or are totally closed to fishing. Wales, which uses the same salmon stock assessment methodology as England, applied mandatory catch and release and method restriction regulations on all of its salmon rivers in 2020.

At this time, stock assessment of sea trout populations against river-by-river biological reference points is not available. A more basic methodology, combined with review of rod catch and juvenile data is used to assess sea trout stock level. In summary, we believe the current status of Derwent sea trout stocks are such that there we do not propose byelaws to limit their retention at this time. However, the Environment Agency encourages the continuation of the very high voluntary catch and release rate, aiming to ensure exploitation doesn't increase beyond current levels. Byelaws controlling permissible

angling methods and tackle that apply to salmon will also apply to sea trout, and this will provide an additional layer of stock protection, improving survival of fish caught and released.

1.2 Summary of responses

Responses to the consultation could either be made via the dedicated online citizen space portal, by writing or by email. A total of 84 responses were received via the online portal, of which 83 were individual responses, and one was an organisation. One respondent made two representations via the online portal. They provided the same answers to questions but different free text comments/ explanations. The respondent is only counted as one representation, but both sets of comments/explanations are considered.

A total of 23 consultation responses were received via email. Of these, 17 were made by individuals and six on behalf of an organisation. Notably, three responses were late but we have chosen to include them. Two of the individual emails were from respondents who had also made a response on the online portal. One of these had been consistent in both their responses and thus for the purposes of summarising support/objection, their views are only described within the display of online responses below. The detailed comments/objections they set out via email are however included and responded to later in the document. The other respondent gave contradicting submissions in the online portal to their emailed response, and therefore in the interest of transparency is included in both online and written response summaries below. One further individual response was entirely irrelevant to the Derwent catchment and instead discussed the Border Esk. This response has been discounted from further discussion.

Notably there were instances in which organisations made email objections to proposed byelaws, but members of these same organisations contradicted those objections in making their own representations via the online portal which supported proposed byelaws.

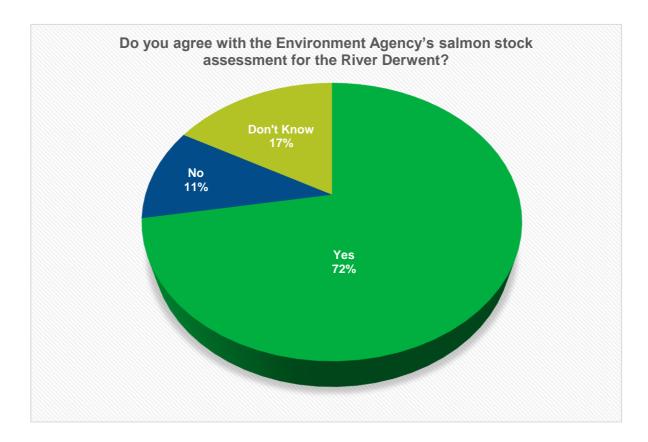
The online portal captured responses through a series of questions. These questions had simple **yes/no/don't know** options, with an accompanying free text field for explanation of answers. There was also a free text field at the end of the form for any other comments. Emailed responses followed whatever format the author chose and did not necessarily follow the same framework of responses as those set out within the online portal. It is therefore not possible to categorise and display each email response in the same way as we can for online responses. Some written and email responses were very clear, but some were less so. Some made no indication regarding support or objection to aspects of proposed byelaws, but simply provided comment/suggestion.

Responses are summarised below. For each online consultation question, we set out an infographic which displays the pattern of responses. We then provide a paragraph which best describes the pattern of responses received via email, **less two responses to account for the one aforementioned duplication within the online portal, and the one irrelevant response regarding the Border Esk**. We have then collated and reviewed all of the comments, alternate suggestions, issues and information provided both online and

via email. This includes any and all duplicate responses as described above. These have been grouped into themes and are responded to in section two.

Question: Do you agree with the Environment Agency's salmon stock assessment for the River Derwent?

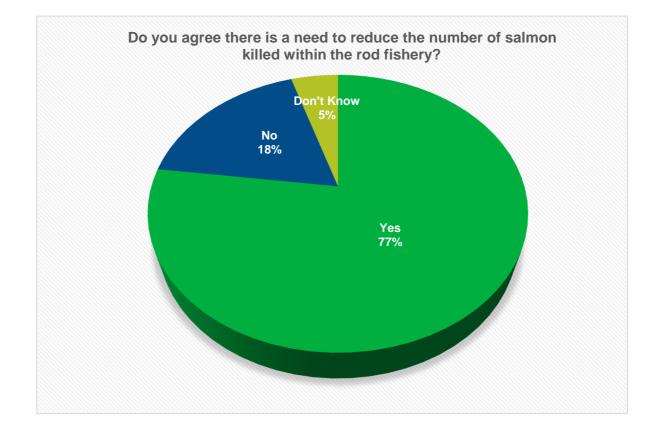
Online responses



Emailed responses

Of the 21 email responses, 18 did not indicate any clear opinion in other support or objection of the Environment Agency's stock assessment of salmon on the Derwent catchment. Three responses did not agree with, and therefore objected to our stock assessment.

Question: Do you agree there is a need to reduce the number of salmon killed within the rod fishery?

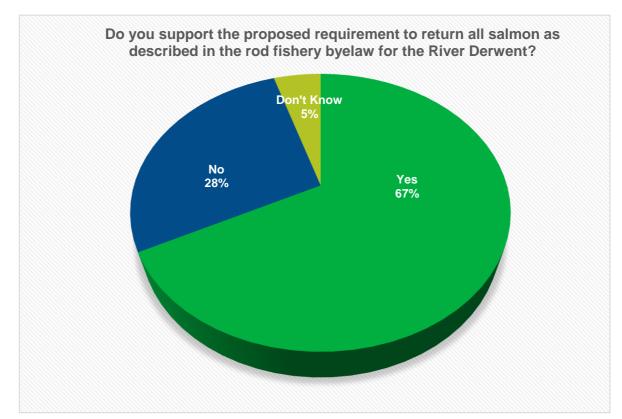


Online responses

Emailed responses

Of the 21 email responses, four did not indicate any clear opinion in either support or objection of the need to reduce the number of fish killed within the Derwent rod fishery. Six emailed responses clearly objected to the need to reduce the number of fish killed, and a further seven implied objection. One response directly supported the need to reduce the number of fish killed, and three implied support.

Question: Do you support the proposed requirement to return all salmon as described in the rod fishery byelaw for the River Derwent?

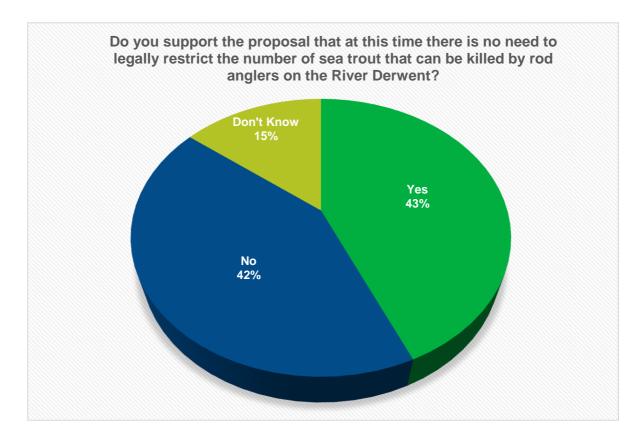


Online responses

Emailed responses

Of the 21 email responses, nine clearly objected to the proposed requirement to release all rod caught salmon. A further four implied objection. Five responses clearly supported the proposed requirement to release all rod caught salmon, and two implied support. One response did not indicate any opinion. Question: Do you support the proposal that at this time there is no need to legally restrict the number of sea trout that can be killed by rod anglers on the River Derwent?

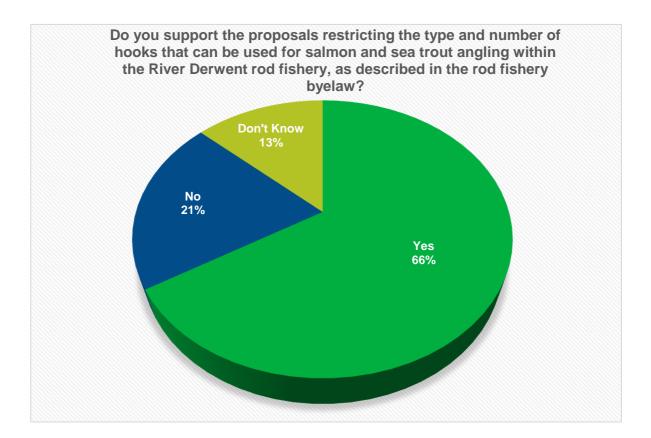
Online responses



Emailed responses

Of the 21 relevant email responses, 13 did not indicate any clear opinion in either support or objection of the proposal that there is no need to legally restrict Derwent sea trout retention at this time. One respondent clearly objected to this proposal, and one respondent clearly supported this it. A further six implied support. Question: Do you support the proposals restricting the type and number of hooks that can be used for salmon and sea trout angling within the River Derwent rod fishery, as described in the rod fishery byelaw?

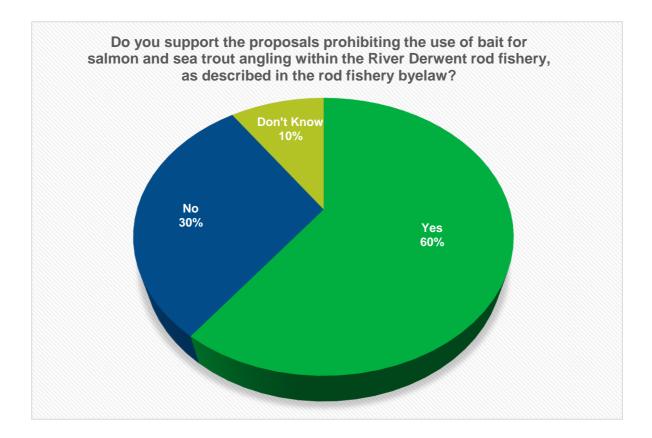
Online responses



Emailed responses

Of the 21 relevant email responses, five did not indicate any clear opinion in either support or objection of the proposal to restrict the type and number of hooks that can be used for salmon and sea trout within the Derwent rod fishery. Seven responses clearly objected to proposals, and a further four implied objection. Three responses clearly supported proposals, and a further two implied support. Question: Do you support the proposals prohibiting the use of bait for salmon and sea trout angling within the River Derwent rod fishery, as described in the rod fishery byelaw?

Online responses



Emailed responses

Of the 21 relevant email responses, four did not indicate any clear opinion in either support or objection of the proposal to prohibit the use of bait for salmon and sea trout within the Derwent rod fishery. A total of 10 responses clearly objected to proposals, and a further three implied objection. Two responses clearly supported proposals, and a further two implied support.

1.3 Summary of support and objection

Online consultation responses were more supportive than those received via email. In all but one case (regarding the proposal <u>not</u> to legally restrict sea trout retention), a majority of support was received for all aspects of the proposed byelaw via the online portal. Conversely, more objection than support was received through emailed responses. A summary of the themes around both support and objection are set out below.

Supportive comments received included themes such as:

- Salmon are plainly in serious decline on the Derwent catchment, there are less fish than there was
- Rod catches have dropped to very low levels, and are much poorer than historically
- Salmon must have all available protection, and anglers must do all they can to help
- The desire to kill fish should be of secondary importance to the need to protect the population, anglers don't need to kill fish to eat
- Some anglers still kill everything they catch, and a voluntary policy isn't enough to stop them
- Most anglers are already voluntarily releasing all fish anyway, so the mandatory catch and release won't affect them
- Club memberships have already voted for mandatory catch and release rules within club regulations, and are 100% behind mandatory catch and release byelaw
- These byelaws aren't the only solution, but are a necessary part of the wider solution
- Even if anglers aren't the issue, we shouldn't make it worse by killing fish
- A quick photo should be enough, there is no need to kill salmon
- We need to maximise spawning salmon and smolt production, dead salmon don't spawn, catch and release provides additional fish to spawn and create smolts
- There is no better available evidence than EA stock assessment
- There is no justification for killing salmon at current stock levels
- The enjoyment in angling is in being outside, and catching the fish, not in killing it
- Method and tackle restrictions will protect fish, as evidenced from personal experience, and other areas/countries people have fished
- Worm fishing is too damaging for fish
- Some anglers use barbless and/or single hooks already, these are just as effective for landing fish, and protect fish, so the byelaw makes no difference to these anglers and won't impact fishing success/participation
- Hook type and size limits proposed are already broadly consistent with those being used by some anglers so won't affect them
- Fish welfare should be the number one priority of anglers
- The byelaws are fair, and unambiguous across the whole catchment, preventing the unfairness in some anglers killing fish when most try to voluntarily do the right thing
- Catch and release is well overdue and should have been in force a while ago
- Agreement with the proposed sea trout measures because although not at historic highs, there are better numbers than salmon

Objecting comments received included themes such as:

- Anglers should have the right to kill salmon for the table, and killing salmon should be the angler's choice
- The byelaw punishes anglers and is unfair to them, it makes anglers the "whipping boys"
- This is simply political, designed to show that the EA is doing something
- Other issues (i.e. poaching, predatory birds, pollution) represent far bigger threats to the salmon population than anglers
- The EA is not addressing these other issues adequately, and disproportionately regulating the rod fishery instead
- Dry weather means fewer anglers fishing, so don't agree with EA stock assessment
- Anglers killing fish will make no difference to the stock level
- The byelaws will discourage people from fishing and buying licences, and reduce fishing opportunity in some parts of the catchment and at some water levels
- The byelaws will reduce angler participation and the "eyes and ears" on the river
- Voluntary approach would be better and would not annoy legitimate anglers
- Prohibiting worm fishing may exclude less able/elderly anglers
- The byelaws may impact businesses
- Some fish legitimately die upon capture and putting them back dead is a shame
- Bait methods are not damaging to fish, there is no evidence of this
- The Environment Agency cannot enforce these byelaws
- Anglers may not report catches, or just falsify returns
- It would be difficult to measure hook gapes/de-barb hooks and ensure compliance with the byelaw
- Proposed byelaws won't make any difference or provide any gain
- Method/tackle restrictions will impact anglers financially
- The stock assessment model is statistically inaccurate, making invalid assumptions and being overly pessimistic
- The stock assessment process is outdated, and byelaws should be placed on hold until a national review is completed
- Juvenile data can't be relied upon due to other variables

2. EA Response to representations

This document will now set out our response to the points of objection, and issues raised by both supportive and objecting respondents. Our response will be categorised under nine main themes.

Notably, many statements of support were made that did not raise any issues, but simply stated why the respondent supported the proposals. These do not require a specific response, so are not set out in the themes below. A general summary of supporting comments/themes is given above. Furthermore, some responses contained objections, suggestions or concerns which were addressed within the technical case. Where this is the case, this document references the technical case and provides a summary of what was set out in it.

Finally, it should be addressed that some respondents, both individuals and organisations, appeared to believe that the technical case was a wholistic Derwent salmon conservation plan. These respondents made representations asking for explanation of the lack of detailed discussion on other pressures facing salmon, and the other research into these pressures (such as salmon smolt tagging). **The technical case was never designed as a wholistic plan of action or review of pressures on the Derwent salmon population**. Instead, it solely deals with the review of the Derwent rod fishery byelaw. As we clearly state within the technical case, we recognise the many other pressures faced by salmon (and sea trout) and we are committed to acting to address those where we can. We reaffirm that our proposed byelaws are one small but necessary piece of a wider jigsaw in addressing declining salmon populations.

Theme 1 – Stock assessment

Issue raised: Fewer anglers are fishing, and thus rod catch is lower

Whilst a majority of respondents agreed with the Environment Agency's Derwent salmon stock assessments, some did not. Of the respondents who did not agree, or did not know, several made comment that factors such as low flows, nutrient enrichment (discussed further in section 2) and dry weather in recent years has led to lower fishing effort by anglers, and thus lowered rod catch. The inference being that this presents an artificially lower stock assessment.

We specifically address the point around reducing fishing effort and its corresponding impact on rod catch in section 2.2 of the technical case. We would refer respondents to that document. In summary, we acknowledge that river conditions (such as prolonged low flows in 2021) will influence angling effort year on year, and this will influence rod catch. While conditions such drought or prolonged low flows will affect fishing effort and likely result in lower recorded catches, that does not automatically imply that stocks are otherwise healthy, and the low catches are simply caused by poor fishing conditions. Data from fish counters and traps in England and Wales in 2021 have generally indicated

relatively poor salmon runs in this year, compared to the last 10 to 15 years. In the technical case, we present data on 'catch per unit effort' for the Derwent fishery, which is a better measure of the size of the stock of fish than the total catch alone. The catch per unit effort has been at its lowest recorded levels for the last 8 to 10 years. We remain of the position that Derwent salmon stocks are in decline and are 'At Risk'.

It should be noted that one organisation questioned the use of catch per unit effort within the technical case, stating it was outdated and unreliable. There was no explanation provided detailing why this was, so we cannot address this point further. Catch per unit effort is a valid method used in fisheries management, and we do not discount it. The same organisation refers to 'acknowledged data' on fishing effort, stating that this data is not reflected within the technical case. The technical case does present fishing effort data exactly as it is reported to us in statutory catch returns, and we discuss the relevant features of it within section 2.2.

With reference to low flows in 2021 specifically, evidence from fish counters across the UK supports a genuinely relatively low abundance of adult fish, rather than low rod catch simply due to lack of fishing effort. For example, the River Tyne recorded low counts compared to the last decade, and the Dorset Frome recorded a 20% drop in returning adults compared to its 10-year average.

Issue raised: Discussion about low numbers could be decreasing angler effort further

Within the technical case document, we acknowledge that the perception of the likelihood of catching salmon is likely to play a role in whether anglers choose to make a fishing trip or not. This theme was raised by one respondent who raised concerns about whether our stock assessment might be artificially lowered by the declining participation of anglers on the river. They cited themselves as an example of someone who has not fished for seven to eight years. They stated that they knew others who didn't fish in perfect conditions because of the perceived low chance of catching salmon. We agree that discussion among anglers around the chances of catching a fish may influence angler participation. However, if perception of the likelihood of catching is reducing, it is likely that lower numbers of adult fish returning to the river is the root cause of this. This is supported by catch per unit effort data presented in the technical case, and our proposed byelaws are an effort to help address this issue. We remain of the position that our stock assessment is an accurate reflection of Derwent salmon stocks.

Issue raised: Some anglers don't complete returns, so stocks are deemed lower than they are

In our annual salmon stock assessment process, we account for a level of underreporting of catches by anglers. We encourage all anglers to complete catch returns through the use of reminders. However, we still apply a raising factor to the total catch numbers we receive to account for under reporting. It is likely that many of the anglers who do not submit

returns, do not do so because they have not caught salmon or sea trout, and thus their return would not contribute to the stock assessment. Typically, a minority of anglers account for the majority, or all of the catch. For example, in the past three Derwent seasons, an average of only 30% of anglers accounted for the entire rod catch.

Issue raised: Salmon catch figures compiled by Derwent Owners Association should be used

Our stock assessment was set out within the technical case. One respondent raised concern about using angler catch return data, and suggested that other sources of rod catch data, such as the catches compiled by the Derwent Owners Association should be considered. These data are considered below.

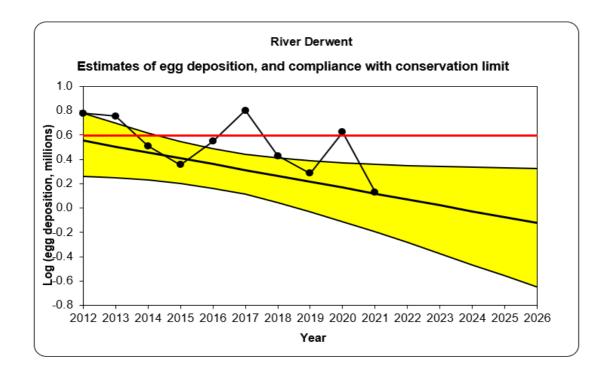


Figure 1a – Current EA Derwent salmon egg deposition plot (key below)

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 20 th percentile regression line	

Figure 1b – Derwent salmon egg deposition based on Derwent Owners Data plot (see key figure 1a)

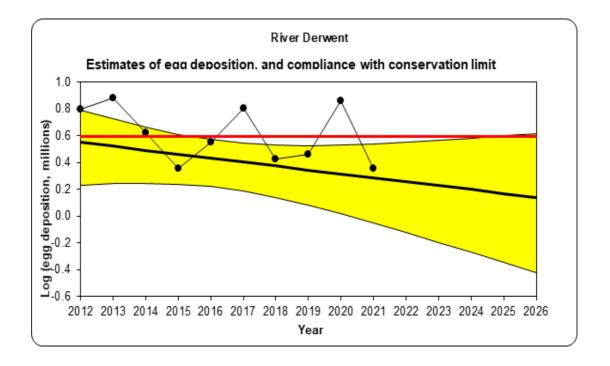


Figure 1a above sets out our current stock assessment model. This model is explained within section 2.4 of the technical case. Figure 1b then sets out exactly the same model but based **entirely** on Derwent Owners Association rod catch data. The assessment result alters only very slightly, with broadly similar annual assessments and a stock level below the Conservation Limit. Using Derwent Owners Association data, the 2021 Derwent salmon stock would still be classified as At Risk now, but would be predicted to attain the slightly higher category of Probably At Risk of failing to achieve its conservation limit in the next four years out of five. The Derwent Owners Association output only marginally attains this slightly higher category (the yellow error bars are only just above the conservation limit in 2026). The Probably At Risk category reflects between a 5% and 50% chance that the stock will meet its conservation limit in fours year out of five. In this instance, it would be very likely to be closer to 5%.

Importantly, given the wider picture, and other factors such as recent low juvenile abundance and the failing SAC status of the Derwent catchment, both results would lead us to propose the same measures that we have recommended in this consultation.

Issue raised: The statistical model used in EA stock assessments is overly pessimistic

In assessing the current state of the Derwent salmon stock, we have examined the effect of several more generous assessment scenarios. One of these is set out above and uses entirely Derwent Owner catch data to calculate egg deposition rates. However, two respondents specifically objected to other aspects of our stock assessment model.

Specifically, these respondents focussed on the exploitation rate. This a key component within our stock assessment model and represents the percentage of the total run of salmon that is caught and recorded by the fishery each year. Annual rod catch is multiplied up by the exploitation rate to provide an estimate of the stock size each year. Where we have fish counters or traps that measure the run of fish independently of the fishery catch data, then we can specifically evaluate that exploitation rate. However, we only have nine operational fish counters and/or traps around England and Wales at present, providing data on the number of salmon entering those nine rivers each year and deriving specific exploitation rates. For the other 55 principal salmon rivers where we cannot directly measure the salmon run or the exploitation rate, we rely on local estimates based on a number of options including local calculations derived from recorded fishing effort or local interpretations of data derived from the counters. A premise of the respondents criticisms of the exploitation rate is that as fishing effort declines (as has been apparent from the data collected) then the exploitation rate should also decline. This is not a reliable expectation, and in fact exploitation rates have been shown to increase at lower stock levels on the rivers Coquet and Frome in the past.

For the Derwent assessment, as presented in the technical case document, we apply an estimated exploitation rate of 25% for each year, i.e. for every 100 salmon that enter the river we estimate that 25 are caught by rod and line. That 25% estimate sits within the range of exploitation rates that are measured from the counted rivers. One respondent claimed that it is unreasonable to apply the same exploitation rate over all years, citing the declining exploitation rates of two of the counted rivers - the Dee and Tamar - as evidence to support their view. The measured exploitation rates from all the 9 counted rivers certainly vary from year to year, but they do not all follow a universally declining pattern. While using a fixed exploitation rate on uncounted rivers for each year seems simplistic, if that fixed value is within the range of likely variability of the true exploitation rate or close to the average exploitation rate for that river, then the stock assessment result will still be reasonably accurate. This is the basis upon which local area staff have made the decision to utilise the 25% value in Derwent stock assessments to date. Decisions on appropriate exploitation rates are at the discretion of local area staff. Local staff in different areas may use different options to estimate exploitation rates that they consider most appropriate for their rivers.

In considering specific consultation responses regarding the stock assessment model, we have examined how the Derwent stock assessment might change based on different exploitation rates. Firstly, a theoretical lower exploitation rate of 15%, and thus a more generous stock assessment is set out in figure 1c below. The estimated 15% exploitation rate results in each years estimate of egg deposition being higher than in the 25% calculation (figure 1a), and therefore is a more generous assessment of spawning stock. However, in this scenario the Derwent salmon stock is still classed as being in the At Risk category now, and projected to still be in the At Risk category in five years' time.

We have also examined a potential stock assessment based on the average annual exploitation rate recorded by all nine fish counters across England and Wales over the last 10 years. The outcome of this model is shown in figure 1d below.



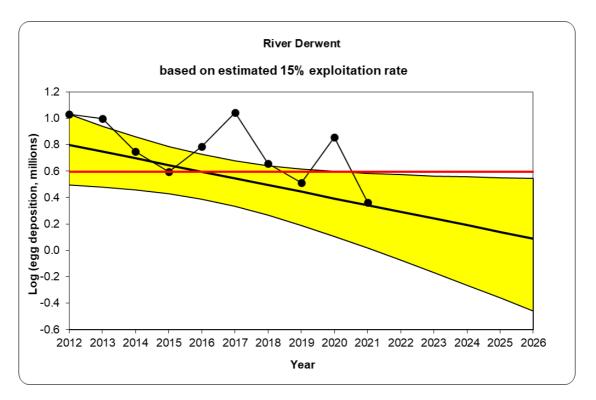
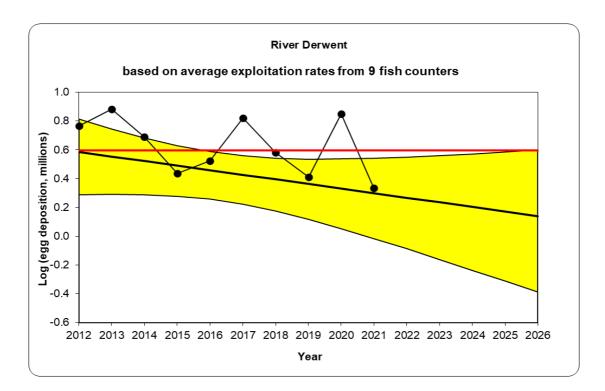


Figure 1d: Derwent salmon egg deposition plot based on average annual exploitation rate from all nine river counters in England/Wales (see key figure 1a)



The stock assessment model in figure 1d uses an average annual exploitation rate calculated from all nine English and Welsh counters/traps over the last 10 years. This places the Derwent salmon stock At Risk now, and Probably At Risk in five years' time.

Even under different scenarios of lower exploitation rates (or higher catch records in the section above) stock assessments all result in either At Risk or Probably at Risk outcomes for the Derwent salmon stock. While the recommended management action from our Decision Structure guidance for Probably at Risk stocks is less urgent in nature than for At Risk stocks, when we consider the wider picture and additional information such as recent low juvenile abundance, and failing SAC status, **then**, **as stated above**, **we would still recommend the same byelaw restrictions that are the basis for this consultation**. Indeed, other recent byelaws on catchments such as the Severn, and Border Esk/Eden have seen similar measures approved by the Government Minister on Probably At Risk stocks.

Issue raised: The Derwent salmon stock should be re-categorised

One respondent speculated that the Derwent salmon stock should be classified as Not at Risk or Probably Not at Risk, without providing substantive evidence to support this view, or applying the Environment Agency's method of calculation. Another respondent suggested that there may not be any spawning deficit whatsoever, and that spawning stock on the Derwent should be double what our model suggests. The parameters and estimates that we use in our stock assessment calculations are reasonable, and we stand by them. Extended discussions and challenges around the stock assessment method have gone on for a number of years now between Environment Agency and North-West fisheries interests. There are a number of particular areas where we do not agree and specific data is challenged. Our position remains that **the Environment Agency stands by the data and calculations that are used in the annual assessments.**

Looking further afield, the results of the Derwent stock assessment are very much in line with results from other nearby rivers, and elsewhere in England and Wales. Even looking to Scotland and Ireland that use different stock assessment methods, low observed salmon stock levels are becoming increasingly prevalent, and the application of mandatory catch and release regulations and fishing method restrictions are a very common part of the fisheries management measures to protect these poorer stocks. Our position remains that the **Derwent salmon stock is below its Conservation Limit** and in urgent need of additional protection.

Issue raised: The five-year forward projection of stock status by the EA model is inaccurate

One respondent attempts to discredit the EA stock assessment model by claiming that the five-year forward projection is inaccurate, because between 2013 and 2020 only 20 to 48% of rivers actually attained the stock classification that they were projected to achieve five years previously.

The EA uses its stock assessment model as an early warning of potential future stock declines and levels dropping below Conservation Limit. This serves as a trigger to implement appropriate management action to try to prevent that stock falling below Conservation Limit. The stock assessment is based on the prevailing 10-year trend in stocks for the current year, plus the previous nine years. The five year forward projection is specifically based on that prevailing 10-year trend continuing at the same rate of change. However, it is inevitable that the trendline used in the stock assessment will change annually, with every new assessment. The claim by this respondent ignores that reality. Importantly, it cannot be ignored that salmon stocks have progressively worsened in recent years. For example, in 2015 the five-year forward projection suggested that six English rivers would be in the At Risk category in 2020. In reality at the 2020 assessment, 20 English rivers were classified in that At Risk category. In 2016, ten English rivers were project to be At Risk in 2021. In the 2021 assessment, 31 rivers were classified as At Risk.

This highlights the importance of a precautionary approach to salmon stock management, and reaffirms the fact that on an At Risk, failing SAC salmon stock, our proposed measures are proportionate and necessary.

Issue raised: The desired salmon population level for the Derwent is unachievable

One respondent argues that the Environment Agency's "management strategy is predicated on the attainment of a population level of adults and juveniles that is unlikely to be attainable." This appears to be based on the concept that other pressures (such as pollution) prevent salmon stocks from reaching this level. Our salmon management is based on each river stock achieving or exceeding its minimum biologically acceptable level – defined as the Conservation Limit. The Derwent stock has, until relatively recently, regularly exceeded its conservation limit and thus achieved the level that the respondent claims is unattainable. Up to 2012 the stock regularly exceeded the conservation limit and was classified as Probably Not at Risk. As recently as 2020 it exceeded the conservation limit, so the argument that the desired population level is unlikely to be attainable, is false.

Issue raised: Juvenile data might be impacted by other factors

Our references to juvenile salmon survey data are criticised by one respondent who claims that aspects such as water quality and predation are not accounted for within that survey data and implies that these factors have substantially contributed to the declining abundance of juvenile salmon seen in recent years. It is certainly correct that we do not routinely monitor either water quality or predation at the sites where we survey juvenile salmon and trout – to do so would not be remotely feasible within the monitoring resources available to us, and on the national scale of survey that we undertake. That does not however negate the validity of the data that we collect and present.

Juvenile data is not a formal part of the stock assessment calculation. It is a useful aid to interpretation, and that is all that it is used for in this context. The fact that lower juvenile salmon abundance coincides with the lower levels of spawning stock in the

respective years provides a strong indication that the lack of spawning adults is real and cause for concern at the present time. This cannot be ignored or dismissed. Similar distribution and abundance data is collected by West Cumbria Rivers Trust on a larger geographical scale and more frequently, since 2016. Notably that data suggests a relatively healthy stock of juvenile trout in recent years, with frequent high grades of abundance (A & B) and relatively few low grades (D & E) or absences (F). In contrast, the high grades of salmon abundance are much less frequent while the lower grades and absences are much more common. The relatively good grades for juvenile trout are not indicative of widespread environmental issues depleting juvenile assessments, as the respondent implies.

Issue raised: Changing run components and the Conservation Limit

One respondent asks that we recalculate the conservation limit every year based on the changing prevailing proportions of 1SW and MSW stocks. The Derwent Conservation Limit was set in the early 2000's, based on the prevailing proportions of 1SW/MSW within runs at that time. This Conservation Limit is the benchmark for what each river could realistically achieve at that time and is not re-defined annually. We do account for changes in the proportions of 1SW/MSW salmon within the annual stock assessments each year.

Issue raised: The 10-year byelaw proposals are an 'abuse of process' considering an ongoing national review into stock assessments

One respondent stated that setting byelaws now was an "abuse of process" in light of the fact that we are actively reviewing some of the aspects of our stock assessment calculation method.

The process and the legal powers for reviewing and setting byelaws are defined within the Salmon and Freshwater Fisheries Act (1975), the Water Resources Act (1991) and the Environment Act (1995). Defining fisheries byelaws for a 10-year time limited period is standard practice and does not constitute an "abuse of process" as this respondent suggests.

The Environment Agency is currently reviewing a method to estimate annual exploitation rates on non-counted rivers using the data derived from the nine rivers that currently do measure reliable counts of annual salmon runs. We have previously communicated that this process is ongoing to both respondents who specifically challenge Derwent and other stock assessments. That method is not yet finalised or ready to be implemented in time to inform this assessment. However, the alternative, and relatively generous exploitation scenarios presented in this document still do not portray a healthy level of salmon stock.

The fact that we are reviewing the stock assessment method at the present time does not suspend or negate either the validity of these legal powers, or the actual need to protect salmon stocks that are below their minimum biologically acceptable level. Indeed, given the poor state of salmon stocks observed on other UK and Irish rivers and also in other

European countries at this time, and assessed by different methods, it would be negligent to not apply appropriate regulations for the protection of salmon stocks in this or similar cases.

Given that stock status is reviewed annually, then it is perfectly feasible that any catch restrictions introduced now could be relaxed or removed before the usual 10-year duration lapses, should stock improve sufficiently before that time.

We will not, as one respondent requested, be suspending the Derwent rod fishery byelaw review process on the basis of their issues with our stock assessment process.

Theme 2 - Environmental pressures other than angling exploitation

Issue raised: Pollution

Water quality is a key aspect governing salmonid populations. This is an issue that has come to the public eye more recently at national level, and many are rightly concerned about the potential detrimental impacts on water quality of issues like sewage discharge and agricultural practices. Numerous respondents highlighted these issues within the Derwent catchment and stressed that these should be addressed to improve water quality, and thus the Derwent salmon and sea trout population (and fishing opportunity). Our proposed byelaw focus only on the rod fishery and intend to maximise spawning escapement within it. This does not mean, as several respondents suggested, that we do not recognise the importance of, and need for, work in other key areas.

The Environment Agency is committed to improving and protecting water quality within the Derwent catchment. We have a dedicated Environment Management team who work day in day out on the frontline issues, and we have recently recruited additional staff in this department. We also have a monitoring team who collect samples and data on key environmental parameters within the Derwent catchment, like water chemistry and ecology.

Our staff undertake activities such as inspecting farms and other business, monitoring private and commercial sewage systems as well as local watercourses, responding to incidents, and proactively seeking out environmental issues. Our officers have enforcement powers available to them, and frequently use these within the Derwent catchment to drive improvements in water quality. This very much includes regulating water company sewage treatment plants, which was specifically mentioned within the consultation by a number of respondents. We have recently served enforcement notices on such facilities.

Much of our water quality work goes on unseen and unrecognised. In many cases due to sensitivities around enforcement and confidentiality, we are not able to publicise many of

the works and actions undertaken. As a consequence, some perceive that our work in areas outside the regulation of fishing is minimal. This is not the case.

Members of our environment management team met with key stakeholder representatives on the 13 October 2022, as part of a meeting to plan a range of actions to improve the Derwent salmon population, and discuss how we can do better. In this meeting, our staff highlighted examples of their extensive and ongoing pollution prevention and water quality work within the catchment, and discussed what other work we can do in future.

Our work in regulating and preventing pollution is greatly enhanced when members of the public report issues to us. In order for us to act as best we can, it is crucial that any pollution, or concern for water quality is reported to our hotline.

Issue raised: Low flows, climate change and water temperature

Some respondents made direct reference to impacts of a changing climate on Derwent salmon populations, particularly within the freshwater environment. Respondents mentioned that low water levels for longer periods, coupled with high temperatures represent a threat to salmon and sea trout populations.

These concerns are entirely valid, climate change represents arguably the largest threat to our salmonid populations. In recent years we have seen long periods of hot, dry weather and this will at times present problems, particularly for our juvenile Derwent salmon and sea trout populations. Whilst there are measures we can all take to address global climate change, the Environment Agency alone cannot address it on such a scale. However, we are undertaking work which aims to mitigate against low flows, rising temperature and climate change, and help our salmonid populations be as resilient as possible.

For example, large scale regulatory work with the local utilities company ensures guaranteed supply of cool water to key waterbodies (such as St Johns Beck) at all times of the year, and provision of "water banks" to facilitate migration flows downstream of water supply reservoirs. We also regulate private abstraction within the catchment, to ensure usage of water remains at safe levels. We also focus on ensuring safe in-river temperatures for our salmonid populations. We use some rod licence income to fund habitat work such riparian planting and shading, which helps shade and cool waterbodies, and we work alongside our partners in the Derwent River Corridors Group and WCRT to contribute to other such projects. We have designs on other areas of the catchment which we feel need further riparian shading (such as Mosedale Beck), and our fisheries project team are actively planning that for delivery.

We also actively respond monitor and respond to fish stranding where we deem it necessary. In recent years we have conducted fish rescues in the Borrowdale valley, moving thousands of juvenile salmonids to safer refuge during times of extreme low flows. Again, members of the public are strongly encouraged to report any such issues to us via our hotline.

Issue raised: Habitat and fish refuge

Some respondents stated that habitat works, and especially habitat works that provide fish with a refuge from predation, should be promoted. We are very invested in such habitat work within the Derwent catchment and will continue to be so.

Our fisheries project officer covering the Derwent catchment is extremely proactive, well known and well received. He works very closely with key stakeholder groups such as the Derwent Owners Association, and the overarching River Corridors Group. Together, they facilitate delivery of large numbers of habitat projects each year. For example, from 2020-2021, 14 projects were delivered, of which 13 were administered by our fisheries project officer. Another eight are currently underway at the time of writing.

Projects typically include works such riparian fencing and planting, introducing woody debris and green engineering, and promoting gravel deposition. These actions benefit fish, as well as other species in a multitude of ways. Recent survey data from West Cumbria Rivers Trust has highlighted improved salmonid numbers in areas where habitat work has been undertaken.

From 2020-2021, overall projects costs were nearly £45,000, with the Environment Agency contributing over £27,000 of this, and the rest being contributed by the River Corridors Group and the Derwent Owners Association. It must be noted that this particularly high level of project delivery is only possible because of the very positive working relationship with partners and stakeholders, and the extensive (and in some cases voluntarily and unpaid) efforts of particular individuals.

We value the positive working relationship we have with Derwent stakeholders, and our habitat work will absolutely continue. Anglers and fishery interests are a key part of this process, and we act on their concerns and suggestions for this kind of work. For example, one consultee suggested we consider introducing more woody debris around "pinch points" for vulnerability to predation. We are already planning to do this in the coming months, and will do more in the near future. We will engage with angling interests to tap into local knowledge, and ensure it is delivered in the areas where it will make a difference.

During the meeting of the 13 October 2022 with key angling stakeholder representatives, we were pleased to reaffirm the joint commitment to delivering more habitat works, as part of a wider suite of actions.

Issue raised: Barriers to migration

We absolutely recognise the importance of ensuring salmon and sea trout can migrate both upstream and downstream throughout their lifecycle, and the importance of removing obstructions to this migration was raised by several respondents. Uniquely within the Derwent catchment, we have an ongoing study looking specifically at the impact of in-river barriers on salmon smolt migration. The University of Glasgow Derwent salmon smolt tracking study will be complete in 2023, and this will provide invaluable data and analysis. We will absolutely be using this data to inform actions and decisions.

Irrespective of this ongoing study, we are already actively working alongside partners to address migration barriers within the Derwent catchment. For example, our fisheries project officer recently met with a landowner on the Marron catchment, with a view to progressing plans on improvement/removal of a significant in-river structure there. We are also heavily involved in the planning for significant improvements at Yearl weir, though this is much more complex issue given the various utilities that currently rely on the structure.

One consultee raised concerns regarding woody debris caught on Yearl weir, and the possible impact on migrating fish. Whilst we do not own this weir, we have contacted the weir owner to raise and highlight these concerns. Concern was also raised regarding the mill stream as an alternate passage for smolts around Yearl weir. As with previous years we will continue to engage with the local rivers trust to discuss how this is best managed with regards to smolt passage. We will factor results from the smolt tracking study into these discussions.

During the informal consultation meeting with the Derwent Owners Association in June, one gentleman raised concerns around a landowner blocking smolt migration via the use of a sluice gate at salmon hall weir. We have asked for more information on this, and our environment officers will willingly investigate it further. So far however this information has not been provided.

Issue raised: Flooding and washout of pools and redds

A small number of respondents stated that they felt a threat to salmon and sea trout populations was river flooding, and particularly large-scale floods in recent years impacting juvenile fish or redds and leading to loss of holding pools for fish. One respondent stated that the river required "repair" in order to be suitable for salmon.

Salmonid populations have evolved within environments that flood. These fish are well adapted to live and thrive in dynamic, gravel bedded fluvial environments. Indeed, natural flooding events are pivotal in the salmonid lifecycle, required for successful upstream and downstream migration, and for supply of fresh, clean and oxygenated gravel for spawning. There is a tendency to believe that floods over winter will destroy redds, or impact juvenile fish negatively. Whilst this will occur in some instances, and particularly at extremes or artificial levels, it is unlikely to generally be the case.

Several respondents raised concern that particular declines in salmon numbers since 2015 could be a result of damaging floods since that time. Whilst we have had extreme weather and flooding events since 2015, it is important to highlight that any damage to redds would only become apparent in returning adults four to five years later. It follows

therefore that declines in Derwent salmon catches in years since 2015 (such as 2016, 17, 18) are unlikely to be explained by flood damage. We would expect most multi sea winter salmon returning from eggs laid in 2015 to have returned in 2020. As it happened, 2020 was a relatively strong year for rod catches despite extreme flooding in 2015 and early 2016.

With regards to "repairing the river" as some respondent suggested, we believe that to benefit salmonids and a whole host of other species, that our rivers need to be as natural as possible within the confines of the human landscape we have. We can, and do intervene in order to help achieve this, and also to mitigate against potential damage from extreme events that may become more frequent in future. For example, as part of our fisheries habitat and improvement fund, we have installed extensive natural bank protection within the Derwent catchment. This not only helps mitigate excessive erosion and silt deposition on redds, but provides natural habitat and refuge for salmonids, their prey and other species. We also work at a wider catchment scale through our Environment Management team and alongside key partners to intervene and prevent bad land management practices that exacerbate flooding, erosion and silt deposition.

Issue raised: Marine survival and exploitation

Some respondents highlighted that the marine part of the salmon's lifecycle is where they are suffering most. It is quite correct that survival within the marine phase of the Atlantic salmon's lifecycle has declined markedly in recent decades. This is very likely to be a key cause of the decline of salmon across its range, and is believed to be linked to changing climate, sea surface temperatures and prey availability. Some respondents also stated that netting at sea, salmon farming and by-catch by trawlers may be to blame. Several respondents suggested this impact was highlighted by good salmon returns in 2020, when high seas trawling may have been reduced due to COVID related lock-down restrictions.

We must highlight that the Environment Agency's remit on certain marine environment aspects raised (such as high seas trawling and salmon aquaculture) are limited. However, we do support work which is ongoing to help us understand why fewer salmon are returning from the marine part of their lifecycle, and to regulate the marine environment. We continue to work effectively with the North Atlantic Salmon Conservation Organisation (NASCO) and now as a member state in our own right, the UK delegation is working to manage the pressures outside of our waters. In June, we concluded a successful annual meeting. Highlights included the agreement of a tighter regulatory measures for the West Greenland fishery.

We are also continuing to support initiatives for research in the marine space and would highlight the recent Cefas publication on marine stressors on salmon (see Gillson *et al* 2022 reference at the end of this document). On the River Derwent specifically, we have facilitated a significant acoustic salmon smolt tagging project, tracking salmon smolts during their freshwater and marine migration phases. Put alongside the wider partnership's tracking of smolts from Irish, Scottish and English rivers, this is already providing a better understanding of the routes that salmon smolts take at sea. In turn, this may lead to

improved protection from the issues they face, such as interaction with salmon farming facilities.

It is suggested by a number of respondents that the Environment Agency is only focussing on one part of the picture by regulating anglers and is ignoring other key aspects such as marine survival. This is not the case. As was stated extensively within the technical case supporting proposed byelaws, we see them only as one part of a much wider jigsaw. The fact that salmon face pressures other than exploitation by anglers does not negate the urgent need to reduce rod angling exploitation and maximise the number of fish that survive to spawn. The reality is that regulation in the form of rod fishery byelaws represents only a very small proportion of the Environment Agency's day to day work in areas that impact salmon stocks.

Issue raised: Bird predation

A large number of respondents, including supporters and objectors, cited bird predation as a very important issue that threatens the Derwent salmon population. Particularly, respondents focussed on the numbers of goosanders now present on the river compared to previously, and the fact that they felt lethal management of these needs to be increased.

The Environment Agency does not regulate the management of birds and has no remit or regulatory ability to issue licences or determine management plans. This remit sits with Natural England. We do acknowledge the strength of feeling on this issue. We specifically fund the Angling Trust to employ two Fisheries Management Advisors that provide advice to angling clubs and landowners around the scaring and control of cormorants and goosanders, and management of predators within the legal framework. We know these advisors work with Derwent stakeholders.

At a meeting between the Environment Agency and key Derwent fisheries stakeholder representatives on the 13 October 2022, we ensured Natural England were present. We also requested of Natural England that the specific department dealing with bird management licencing proactively engage with the Derwent Owners Association to discuss bird management going forward. We will talk directly with Natural England and highlight to them the level of response and comments received on the issue of avian predation within this consultation.

One respondent raised the bird predation on another Cumbrian catchment, and their perception that it is much reduced by the introduction of woody debris into the river. This is something that we can deliver within our habitat work, and we are actively planning this alongside the Derwent Owners Association at the time of writing. We have liaised and will continue to liaise directly with concerned parties and local anglers to identify areas that may be "pinch points" in terms of predation. We will also draw upon results of the ongoing smolt tracking study to help inform this work.

Issue raised: Mammalian predation

A small number of respondents highlighted predation by other species such as seal, otter and mink. The Environment Agency has no remit regarding seals, and the Marine Management Organisation should be contacted by any respondent who wished to progress talks on this topic.

Mink are an invasive species that do predate on fish and other native wildlife. The Environment Agency is not resourced to routinely undertake mink control work independently, but we have coordinated and supported volunteer trapping effort on the Derwent catchment before. This has included supplying traps to individual volunteers within the catchment, some of whom are still in possession of these traps. We will commit to discussing mink trapping efforts again and identify if this can be rekindled/improved upon.

One respondent suggested that we review otter and beaver reintroductions with regards to impact on migratory fish. There are no ongoing or planned otter or beaver reintroductions within the Derwent catchment that we are aware of. The same respondent suggested that we review brown trout numbers with regards to predation on migratory fish. Wild brown trout are a native fish species within the Derwent system. We do not believe they have a disproportionate or unnatural impact on populations of migratory species such as salmon and trout in the Derwent catchment.

Theme 3 - Impacts on anglers, participation and interested parties

Issue raised: Anglers are being punished and are not to blame for declines in salmon

This point was made by a number of respondents, both those who support the proposed byelaws and those who objected to part or all of them. Most commonly, this point was raised with regards to the mandatory catch and release requirement.

During both formal and informal consultation, it was stated by some that proposed catch and release byelaws unfairly punish anglers. Some of the same respondents state that most anglers already release all of their salmon voluntarily, and quoted voluntary approaches promoted by the Derwent Owners Association, or at an individual angler level. These voluntary approaches are presumably undertaken in recognition of the need to maximise the numbers of spawning adults. This is the same basis for our proposed byelaws. The argument that anglers who are already voluntarily releasing all of their salmon would be punished by a byelaw requiring them to release all of their salmon, is a difficult concept to follow.

One organisation also stated that these byelaws do not give anglers any 'credit' for their conservation efforts. We certainly recognise the very positive impact that most Derwent anglers have on the river environment and fishery. For example, this is reflected in the fact

that the catchment receives very considerable proportions of our fisheries improvement funding every year. However, giving 'credit' in the form of allowing anglers the option to kill salmon within a declining, and At Risk salmon stock is not appropriate or reasonable. Indeed, this would be contrary to the valuable conservation effort of many anglers.

We very clearly state within the technical case supporting these byelaws, and restate here, that we do not believe anglers are the cause of declines in Derwent salmon stocks, and that our proposed byelaws are not an exercise in blame, nor an easy 'win'. We absolutely understand and acknowledge there are many other factors that impact salmon (and sea trout) populations, and we are fully committed to work in these areas. As we have clearly and repeatedly stated, our proposed rod fishery byelaws are only one piece of the jigsaw, and do not negate the important work in other areas that must be delivered

At the current state of stocks however, proposed byelaws are an absolutely necessary and proportionate piece of this jigsaw. This is <u>no</u> harvestable surplus within the Derwent salmon population. Despite the fact that a low percentage of the fish caught in the fishery are killed by anglers, and that we do not believe this is the key factor in the decline of salmon, <u>no</u> kill of adult salmon is currently sustainable. Maximising the number of fish that survive to spawn is now crucial, and we cannot reasonably permit any kill of salmon at this time. This is obviously recognised by anglers who are already practising 100% catch and release, and would therefore be unimpacted by mandatory catch and release.

It should be noted that numerous consultees made comments highlighting that although they recognise that anglers are not likely to be the key cause of the decline in salmon, as we do, they also feel that anglers must now do everything they can to improve numbers, and thus supported this byelaw.

Issue raised: Anglers may stop fishing /opportunity would be reduced

A number of respondents indicated that angler numbers may decline, or club memberships would be impacted if proposed byelaws are brought into force, especially with regards to method restrictions. Some respondents (including organisations) suggested that prohibiting worm fishing particularly would restrict participation for older/less able anglers, and render some parts of the catchment unfishable. Two respondents stated they would stop fishing under mandatory catch and release, and one said that they would consider it. A number of respondents suggested alternative byelaws to mitigate against impacts on angling participation, these are discussed further in theme six of this document.

We set out considerations of potential impact of proposed byelaws on angler behaviour and participation within section six of the technical case, which was provided and available as part of this consultation. We acknowledge that our proposed byelaws represent more restrictive measures than are currently in force, however we do not believe they will have a disproportionate impact on angler participation or local businesses/anglers' finances. The summary reasons for this are set out below.

With regards to the mandatory catch and release of salmon:

- Over 80% of anglers who have caught salmon since 2018 have declared that they released all of them, thus mandatory catch and release represents no behavioural change for the majority of anglers. Clearly anglers are still participating within the rod fishery whilst expecting and intending to release all salmon.
- The Derwent Owners Association have promoted a voluntary 100% catch and release approach since 2018. This appears widely adhered to save for a minority of anglers. This signifies the acknowledgment by stakeholders that retention of salmon is not currently appropriate, and again highlights that anglers will still participate under the expectation of catch and release.
- We believe that most anglers are motivated to make a fishing trip by the perceived chance of catching a salmon, not by whether or not they can kill one. As set out and evidenced in section six of the technical case, we believe declines in angling participation are driven in the main by decline in adult salmon numbers, not angling restrictions.
- Angler participation (and resultant business generated from it) is and has been declining for some time irrespective of byelaw regulation. This is likely as a primary result of reducing numbers of adult salmon. If fish stocks continue to decline, then the economic benefits from angling will also continue to decline. Likewise, if fish stocks improve angling opportunity and participation may increase, alongside associated economic benefits.
- Proposed catch and release byelaws are consistent with those in force in numerous other rod fisheries within England, and within those outside of EA jurisdiction (such as the 2020 All Wales Byelaws, and rivers with similarly threatened salmon stocks in Ireland).

With regards to method and tackle restrictions:

- A small percentage (around 10% or much less) of the Derwent salmon rod catch and an even smaller percentage of sea trout rod catch is declared caught on bait each season. Correspondingly, we believe the number of anglers impacted by bait restrictions is likely to be small.
- Hook/lure restrictions are likely to be generally compliant with hooks already being utilised, or only require minimal alteration and minimal associated cost to be so (i.e. barb crushing/hook removal/purchase of new hooks).
- The ability to fish certain parts of the catchment is not likely to be solely controlled by permissible method. As per the statement of the Inspector in the 2019 public inquiry into the All Wales fishery byelaws (Written Statement: Outcome of the Local Inquiry on Natural Resources Wales' proposed 'All Wales Salmon and Sea Trout Byelaws' (16 July 2019) | GOV.WALES) angler skill is likely to also be a key contributory factor. We do not agree that that a ban on bait would in effect be a ban on fishing to the extent suggested by some respondents.
- We are prepared to suggest an amendment to proposed bait fishing restrictions. We believe this will at least partly address concerns around angling participation in

a manner which will not disproportionately undermine required levels of postrelease survival. Please see below, and theme six.

• Proposed method/bait byelaws would be consistent with those in force in other rod fisheries such as The River Severn Salmon and Sea Trout Protection Byelaws 2021, and within those outside of EA jurisdiction (such as the 2020 All Wales Byelaws, and numerous rivers with similarly threatened salmon stocks in Ireland).

We appreciate that some anglers may still be primarily motivated to make a fishing trip by the opportunity to kill salmon, and thus mandatory catch and release may discourage these anglers from fishing. The data set out in the technical case, and the prevailing response to the consultation indicates that these anglers form a very small minority.

We also understand that in some situations and for some anglers, prohibition of bait fishing may limit opportunity where other methods aren't as suitable. This particular theme was most commonly mentioned by respondents regarding worm fishing. Four organisations, along with a number of individual respondents raised concern that worm fishing allows less able, elderly or younger anglers to fish. Their position was that removing the opportunity to fish with worm bait would prevent some anglers from participating. Some respondents were also concerned that at certain river conditions and locations, methods other than worm fishing were ineffective or hard to use, and thus the proposed byelaws may reduce fishing opportunity. With regards to prawn/shrimp baits, a smaller number of respondents stated that preventing the use of shrimp is not necessary as it doesn't damage fish.

We have considered the points raised with regards to angler participation and impacts, within the consultation. The primary purpose of the proposed byelaws is to help protect and recover the Derwent salmon and sea trout stock. Maintaining the socio-economic benefit of salmon angling is secondary to the imperative to protecting and recovering failing stocks. This said, we are minded to propose to amend the bait fishing aspect of our byelaw, specifically to allow the use of shrimp/prawn bait. We discuss this further in theme six.

We believe that given the state of Derwent salmon stocks, the proposed measures are reasonable, necessary and proportionate in terms of the benefits and impacts they will have. The Derwent rod fishery would remain open under our proposed measures, with minimal alteration to behaviour and tackle/method required for the vast majority of anglers. We would highlight that in under some jurisdictions (such as state owned fisheries in Ireland), salmon rod fisheries are entirely closed when there is justifiable concern for salmon stocks. We are not pursuing that option here, and are striving to maintain the socio-economic benefit of the rod fishery within the confines of required stock protection.

It is pertinent to refer at this point to theme six of this document (below). Here we go into further detail on our position on aspects of the byelaws such as worm fishing, our proposed amendment with regards to shrimp/prawn baits, and allowing a take of salmon, and other suggestions that were raised.

Ultimately we believe our proposed measures will strike the right balance between our primary imperative of achieving the urgently required reduction in exploitation of salmon, the extra protection of sea trout, and preserving angler opportunity and participation within the rod fishery.

Issue raised: There could be economic impact on business, individual anglers or the EA through loss of rod licence sales

A small number of respondents raised concerns that there would be an economic impact resulting if the proposed byelaws were enacted. This impact was raised in the context of local business, angling clubs, and also on local anglers in terms of tackle alterations. It was also suggested that the EA may lose revenue if fewer anglers choose to go fishing. Within the technical case we considered some economic impacts, modelled using data from angler surveys in 2016 in respect of proposed national fisheries byelaws.

Our view is that we do not believe there will be a disproportionate economic impact on business, anglers or rod licence sales as a result of the proposed byelaws. We set out many of the reasons for this in the issue above regarding angler participation, and within the technical case. In summary, this position is based on the fact that these byelaws require minimal behavioural and tackle change for the majority of Derwent anglers. Over 80% of anglers tell us they release all of their salmon, yet plainly they still partake in angling and contribute to the economy accordingly. Further, tackle alterations required are likely to be very minimal for most anglers, being either free (for example, crushing or removing barbs) or low cost (for example, purchasing new hooks).

Our primary imperative and duty is the protection of fish stocks, not the socio-economics of the fishery, or preserving Environment Agency income. Accordingly, our proposed regulations are designed to contribute to the protection and enhancement of the salmon and sea trout populations on the Derwent first and foremost. However, we have still considered potential socio-economic impacts (including looking at other catchments which have seen similar restrictions imposed - as set out within the technical case) and we believe these will be minimal.

Issue raised: Anglers have the right to kill salmon/should have the choice

Several respondents stated that anglers should have the right to kill salmon or have the choice to decide for themselves. We understand the value to some anglers in retaining salmon. We also understand that having the choice to decide for themselves is likely to be more appealing than mandatory restrictions, even if, as most anglers tell us they do, they choose to release fish.

Regarding the right to kill salmon, there is no such legal right. A rod licence does not provide any statutory entitlement whatsoever to kill fish, nor does any other legislation.

Regarding the choice to retain salmon, there is currently no harvestable surplus within the Derwent salmon stock. Despite the fact that anglers generally kill small numbers of salmon each year, no level of salmon kill whatsoever is currently sustainable within the rod fishery. We accept that most anglers voluntarily make the choice to release all of their salmon, but there is now no leeway within Derwent salmon stocks to facilitate this voluntary choice and allow any opportunity for salmon to be retained within the fishery. We must act with mandatory restrictions to best guarantee reduction of salmon exploitation to zero.

Issue raised: Anglers do not want to be 'told what to do'

For some respondents who objected to proposals, part, or all the issue appeared to be simply the imposition of fisheries restrictions through mandatory legislation. This was particularly the case regarding mandatory catch and release of salmon. There was an inference that anglers would happily adhere to regulations and continue fishing, provided these measures were voluntary. This position is best summarised with a direct quote from one organisational response, which states:

"Anglers are quite willing to accept 100% catch and release and restrictions on tackle and angling methods if these are on a voluntary basis, controlled through club rules. But they will resent the introduction of mandatory controls when they believe that these are unnecessary, ineffective and will not contribute to halting the decline in Derwent Salmon".

The suggestion is that anglers are prepared to fish voluntarily under the same, or similar restrictions as set out in the byelaws. This is presumably because anglers recognise the current poor state of Derwent salmon stocks, and that protective restrictions would be beneficial. However, the statement then suggests that anglers feel the same restrictions are ineffective at the point at which they become mandatory. Ultimately, this appears to state that anglers recognise the need for fishery restrictions, but simply do not want to be 'told what to do'.

The argument that anglers do not want to be "told what to do" is one which was specifically tested within the 2019 public inquiry into the All - Wales byelaws. These were proposed by Natural Resources Wales and set out similar restrictions to our proposed measures here (namely, mandatory catch and release of salmon and similar method restrictions).

Several objectors to the All-Wales byelaw stated similar arguments to those raised during this consultation, in that anglers simply did not want to be controlled by mandatory restrictions. The inquiry inspector concluded that these arguments were essentially philosophical, and given what was at stake, they could not hold sway. The report can be viewed online - <u>Written Statement: Outcome of the Local Inquiry on Natural Resources</u> Wales' proposed 'All Wales Salmon and Sea Trout Byelaws' (16 July 2019) | GOV.WALES

As we have highlighted in response to the issue above, Derwent salmon stocks are such that we must act with the mandatory restrictions proposed in order to best guarantee reduction of exploitation for zero. Voluntary measures are only taken up to a certain point, and do not represent a robust enough method for guaranteeing the required level of stock protection. For example, despite an angler led voluntary policy of 100% catch and release since 2018, 10% of rod caught salmon have been killed within the rod fishery every year since then. Furthermore, best practice guidance on methods and tackle that reduce post-release mortality has been around for several decades now, but is not widely taken up.

We appreciate that voluntary measures are more palatable to some anglers, but these are not proportionate to the state of Derwent salmon stocks at this time. **There is no harvestable surplus within the stock, and thus <u>no room for any choice to kill salmon</u> to be available** to any angler. We must also urgently maximise and add to spawning escapement through mandatory method restrictions that preserve the rod fishery, but increase post-release survival.

Issue raised: Anglers may fish without a licence if they can't kill salmon

It is an offence to fish with rod and line in freshwater without a valid rod licence regardless of the byelaws governing a particular fishery. Committing such an offence would render an individual liable to enforcement action. We would also highlight that fishing for salmon or sea trout without a valid **migratory rod licence** is an offence, regardless of whether any salmon or sea trout caught would have to be released. A rod licence does not entitle the angler to kill fish, and **fishing for salmon and sea trout with a non-migratory** rod licence would render an individual liable to enforcement action.

Issue raised: What do anglers do if a salmon dies upon capture

Several respondents raised issue with the fact that a mandatory catch and release byelaw would require any salmon that died upon capture, or were badly injured, to be returned. We understand this concern, but we cannot reasonably allow anglers to take any legitimately damaged or dead fish. This would make any catch and release byelaw unenforceable, and unfortunately, open to exploitation. If our proposed byelaws are enacted, any salmon caught within the rod fishery must be returned to the river.

Our proposed byelaws include method restrictions which are designed to minimise catch and release mortality. Evidence shows that survival of rod caught salmon can be extremely high on certain methods and tackle, and if the fish are handled correctly. For example, a recent Irish study found survival of 98% for fly caught salmon (Gargan *et al* 2015), see theme five. We believe rod capture related mortality can be kept to an absolute minimum with our proposed method/tackle restrictions, and adherence to good fish handling and playing practice (in line with best practice catch and release guidelines that have been promoted for several decades. Theme five and theme six within this document discuss fish handling and post-capture survival in more detail, and references related material on the subject.

Theme 4 – Fisheries enforcement and illegal fishing

Issue raised: Illegal netting/poaching takes many more fish than anglers, and isn't adequately dealt with

This issue was raised by numerous respondents. Some respondents stated that large numbers of salmon are poached on the Derwent catchment each year. Numerous respondents (including both those who supported and objected to byelaws) stated that the impact of poaching is greater than that of anglers, and that it was therefore unfair to impose byelaws on anglers. One key concern was the low numbers of fisheries officers perceived to be working on the Derwent catchment, and that enforcement is seen to be inadequate. There was also concern that if some anglers left the fishery due to proposed restrictions, there would be fewer 'eyes and ears' in terms of reporting / deterring illegal activity.

The Environment Agency has a team of fisheries enforcement officers who have powers to deal with illegal fishing activity. It is the case that officer numbers have decreased in recent years, in line with the funding available to the Environment Agency for these posts.

We do absolutely acknowledge the strength of feeling on this issue and recognise that where poaching and particularly illegal netting occurs, it is potentially extremely destructive. We take incidents like this extremely seriously, and we also understand how frustrating they are for the law-abiding angler. We also recognise that angling stakeholders want more to be done on this issue. We held a very positive meeting of the 13 October with two stakeholder representatives from the Derwent Owners Association. During that meeting we had extensive discussion around illegal fisheries activity on the Derwent system, and we have committed to formulating new approaches and targeting enforcement and anti-poaching work on the catchment. Our fisheries enforcement team leader will engage with the Derwent Owners Association, the Angling Trust Voluntary Bailiff Service, and Cumbria Constabulary to look at and plan what we can do. We are also looking at ways we can increase our enforcement capability despite funding pressures.

An absolutely key aspect that will drive and focus our enforcement work is the reporting of incidents and information to us. On the Derwent catchment we have stressed extensively that anglers should use the 24-hr incident hotline to report to us, and we reiterated this point in our meeting of the 13 October. We are committed to improving fisheries enforcement, but incidents must be reported to help us do this.

At the time of writing the Environment Agency has only received one formal report relating to illegal netting in the lower river area this season. This is despite a large number of respondents citing extensive illegal netting and poaching activity that they believe has occurred in 2022, in quite some detail. This concerns us, because we cannot act on information that we do not have or become aware of after the event. There is clearly a disconnect between what is being reported to us and what angling stakeholders are aware of in terms of potential illegal activity.

We have received incident reports through several direct emails to individual staff, but the information received has been vague and unfortunately untraceable. Despite a low level of reports this year, we have acted with increased enforcement patrols and investigations to establish any potential evidence and observe the river for illegal activity. At this time, we have not identified evidence of large-scale illegal activity on the Derwent catchment.

We will commit to improving our fisheries enforcement service, within the bounds of the resource and opportunities we have and working with partner agencies such as Cumbria Constabulary. However, it will always be vitally important that anglers report any information or concern around illegal activity to us via the hotline (0800 80 70 60) and in a timely manner. We cannot act on information we do not have.

It remains the case that although salmon face other pressures (of which illegal activity is one), this does not negate the fact that there is no sustainable harvestable surplus within the Derwent salmon population. We cannot, at this time, reasonably allow any kill of salmon by the rod fishery, and we must act to maximise the number of fish surviving to spawn.

Issue raised: How will/can the EA realistically enforce proposed byelaws?

A number of respondents raised concerns around how proposed byelaws could be enforced by the Environment Agency. If the proposed byelaws come into force, our fisheries officers and supporting staff will enforce them through their routine work, and in response to information/intelligence received.

Some respondents actually stated support for proposed byelaws on the basis that they may make enforcement easier, being clear and unambiguous, especially in terms of salmon retention. We understand concerns around the funding and resource available to the Environment Agency in terms of enforcement, and we have raised the concerns received in this consultation regarding funding for frontline staff to the appropriate departments. We are also looking at ways we can expand fisheries enforcement within the confines of our current staffing levels.

Theme 5 – Likely level of gain likely from proposals

Issue raised: Catch and release will make no difference

Some respondents, including both objectors to and supporters of proposed byelaws, felt that mandatory catch and release would make no difference.

Within section six of the technical case, we set out approximate benefits in terms of the extra spawning salmon that may be added to the catchment as a result of mandatory catch and release. This is based on the level of salmon kill declared in catch returns over the last three seasons. We also set out various scenarios for post-capture mortality of

released fish, including the 20% estimate currently used in stock assessments, and better survival rates that we believe will come about under our proposed method/tackle restrictions. One respondent highlighted a minor arithmetic error in these estimates of additional spawning salmon within the technical case. We thank the respondent for this. The slightly revised approximate losses are given in table 1 below.

Table 1: Average salmon losses from angler kill and estimates of post-release mortality 2019-2021(Red numbers show those produced in technical case, Green showed revised estimates)

2019-2021	Salmon killed	20% post-	15% post-	10% post-	5% post-
average rod	by anglers per	release	release	release	release
catch	season	mortality per	mortality per	mortality per	mortality per
(corrected) ¹	(corrected) ²	season	season	season	season
<mark>(241)</mark> 238	25	(48) 43	<mark>(36)</mark> 32	(24) 21	(12) 11

Mandatory catch and release would prevent any direct salmon kill in the rod fishery. We also believe that post-release mortality would decrease with the implementation of our proposed method restrictions, thus allowing more fish to survive being released than do currently.

Mandatory catch and release and method restrictions would therefore immediately increase spawning escapement, and effectively 'add' extra spawning fish to an At Risk population. This would contribute positively towards making up the existing spawning deficit. Extra spawning salmon are particularly valuable when stocks are low, and even small gains in spawning are likely to contribute to stock recovery.

Whilst we absolutely acknowledge that additional fish gained from proposed measures would not all be female, and would not on their own make up the spawning deficit within the Derwent salmon population, we believe these gains are necessary and urgently required. We do not agree with the contention that our proposed byelaws would make no difference.

Our measures would protect extra fish and increase spawning escapement. At present this is urgently required, and every spawning salmon is crucial. Allowing any salmon to continue to be lawfully killed is unsustainable and will at best delay or at worst prevent recovery of the stock.

¹ Catch raised by 1.1 to account for under-reporting of catches, as per annual stock assessment process

Issue raised: Captured and released fish don't survive

One respondent objected to catch and release and method restrictions on the grounds that they felt migratory fish are unlikely to survive being released. They asked if there was any evidence that fish survive being released and assumed there was not.

Captured and returned salmonids do survive to spawn, and this is well evidenced over several decades. The crux of this evidence is that survival is variable, and dependant on factors such as fishing method, tackle, water temperature, fish handling, playing, and location of hooking.

A recent example with Atlantic salmon specifically is radio tagging work carried out in Ireland. This study tagged rod caught Atlantic salmon across three rivers and tracked fish after capture to ascertain if they reached spawning grounds. The study concludes that injury inflicted on fish, and subsequent survival, varies with the method used. Of the fly caught fish, 98% survived to spawn compared with only 55% of lure caught fish (Gargan *et al* 2015). The high survival of fly caught fish was consistent with other similar studies.

Evidence demonstrates that salmon and sea trout do survive being captured within a rod fishery and go on to spawn. Clearly, factors such as the method of capture can make a difference to level of this survival. This is why our proposed byelaws contain method restrictions designed to minimise injury to fish and maximise post-capture survival.

We believe that proposed byelaws, coupled with adherence to best practice for fish handling and playing (discussed further under theme 6 below), can allow for a very high level of post-release survival within the Derwent rod fishery.

Issue raised: More important issues are elsewhere, how is the EA acting in other areas?

Numerous comments have centred on a perceived lack of action by the Environment Agency in areas outside of rod fishery exploitation, suggesting that the proposed measures disproportionately target anglers with limited focus on other key factors which would make more difference. Many of these factors are addressed in the other sections of this document.

The Environment Agency and its partners are absolutely committed to a range of measures to improve salmon stocks. As we have expressly stated, proposed byelaws are only one part of much wider suite of necessary actions.

The National Salmon Five-Point Approach sets out a framework for delivery of these measures. The approach highlights five key areas – water quality, habitat, barriers to migration, marine survival and exploitation (legal and illegal). This is not a framework owned or delivered exclusively by the Environment Agency and is very much a partnership

approach. We have set out examples of the work we deliver under some aspects of this framework in other parts of this document.

We are in regular dialogue with key Derwent stakeholders and have very positive working relationships with key partners within the catchment. This helps deliver a wide range of positive work. However, we do absolutely recognise that there are opportunities for more action to be taken, and more work to be done. We also know that some issues are close to the heart of Derwent salmon anglers, but that are not within the remit of the Environment Agency. We are committed to the Derwent catchment, and to continuing delivery of positive environmental work within it that will benefit salmon and sea trout populations. We met with stakeholder representatives on the 13 October 2022 with a specific agenda centred around the actions we can jointly take going forward. This agenda included issues outside of the Environment Agency's remit (such as bird predation).

Theme 6 – Alternate suggestions/concerns regarding proposed byelaws

Suggestion raised: Keep salmon retention voluntary, or introduce a bag limit or tag scheme

Some respondents who objected to mandatory release of salmon stated that instead a voluntary approach should be employed/continued. One organisation suggested that we share names of anglers who have declared killing salmon, so that they could be 'educated' by clubs/associations. Similarly, one respondent suggest we refuse to issue rod licences to anglers declaring a kill of salmon. Several respondents suggested the use of a bag limit or tagging scheme to provide a limited take of salmon by anglers.

In section four of the technical case supporting these byelaws, we specifically set out a series of management options that we considered. We set out advantages and disadvantages of each option. The options included the continuation of a voluntary approach to salmon retention, having a limited salmon kill per angler, or a reduced permissible kill window through the season. We did not consider the option of sharing names of anglers who have killed salmon with clubs/associations, or refusing to issue rod licences to anglers who had declared a kill of salmon. The former option would be a potential breach of data protection regulations, and the latter would have no legal basis.

Voluntary catch and release, whilst adhered to by the majority of anglers, does not guarantee protection for all salmon caught within the rod fishery. A number of respondents objected to proposed mandatory catch and release of salmon on the contention that voluntary catch and release is already at 100%. Whilst we absolutely commend the voluntary approach taken by many Derwent anglers and promoted by clubs and associations, salmon catch and release levels **are not at 100% within the Derwent catchment**. There has been a voluntary 100% catch and release practice within the Derwent anglers and provided to us by Derwent anglers.

and clearly set out within the technical case shows that **around 10% of rod caught** salmon have been killed each season since then.

Derwent Owners Association catch data from 2021 was referred to by some respondents particularly. This data states that all salmon caught within the rod fishery were released in that season. Environment Agency catch returns submitted by the anglers who fished the Derwent in 2021 show that just under 10% of salmon (11 out of 126 fish) caught within the rod fishery were killed.

Furthermore, although catch returns have not yet been submitted and compiled for this 2022 season, we are already aware of a number of rod caught Derwent salmon that have indisputably been killed within the rod fishery this season.

We are not dismissing the effectiveness of the voluntary policies within the rod fishery. This is illustrated by our position that this can currently be applied to sea trout. This is despite a significant number of respondents suggesting they are in favour of mandatory restrictions for sea trout. What we are saying, is that despite the fact that most anglers adhere to a voluntary policy, some do not, and there is no legal or enforceable basis for them to do so. As we have already stated within this document, at this time there is no harvestable surplus within the Derwent salmon stock, and no space for there to be a choice available that could allow the kill of salmon. The need to reduce fishery exploitation of salmon to zero is absolutely urgent. We must therefore propose mandatory restrictions to best guarantee this protection and be able to enforce it. **No option that facilitates any possible kill of salmon within the rod fishery is appropriate at this time.**

Some respondents stated that they felt it was a contradiction to allow a voluntary approach to sea trout management, but not salmon. The different proposed options are on the basis of our differing stock assessment results for salmon and sea trout. As stated within the technical case, sea trout stocks are not so depleted that a mandatory catch restriction is required at this time. However, the stock of salmon is not in the same position, and is currently well below it's Conservation Limit. We must act with mandatory restrictions for salmon, to provide the best assurance of attaining the urgently required reduction of their exploitation to zero.

The introduction of a sanctioned level of salmon kill, perhaps via a tagging scheme, bag limit or allowance for cock fish was also considered within the technical case. However, such options were not taken further, because there is currently no safe level of salmon kill within the Derwent rod fishery. Furthermore, a tag scheme/bag limit or allowance for cock fish only would potentially create the impression that this was sustainable, and this in turn might increase exploitation.

Suggestion raised: No method/tackle restrictions whatsoever

A small number of respondents stated that we should consider removing proposals to restrict methods and bait altogether. Our position remains that we believe our method and tackle restriction proposals will improve the survival of released rod caught fish and are

necessary and proportionate at this time. They are consistent with best practice catch and release guidance which has been around for a considerable time, and also with regulations in other jurisdictions and rod fisheries with similarly threatened salmon stocks. Our method restrictions are designed to compliment the requirement to release all salmon with the least possible injury and maximise post release survival.

Suggestion raised: Allow the use of some bait / all bait

Some respondents stated that bait fishing should be permissible, or that some types of bait fishing should be. Principally, bait fishing for salmon refers to either the use of shrimp/prawn, or worm. These are addressed separately below.

Shrimp/prawn

With regards shrimp/prawn baits, the use of this method is generally tightly controlled by salmon angling clubs, often being prohibited. It had been the original intention to allow this method within proposed byelaws. This was due to low levels of damage typically associated with it, and the fact that allowing this bait method would help enable additional participation for young, elderly or less able anglers. During informal consultations with the Derwent Owners Association however, there was minimal appetite for this. During a meeting in June 2022, stakeholders were directly asked if the use of shrimp/prawn should be permitted within proposed byelaws. The sentiment expressed by those present was that it is generally prohibited by most clubs/beats. As a consequence, this option was removed from proposed byelaws.

During the formal consultation process however, it has become apparent that there is concern regarding the complete prohibition of bait methods. Concern has focussed on the impact this may have on young, elderly or less able anglers, as well as some parts of the catchment which are deemed less suited to fly or lure. It is acknowledged that the majority of this concern was centred around worm baits, but a number of respondents did highlight that shrimp/prawn fishing might represent a less damaging bait alternative. While there are no published comparisons of the mortality of salmon caught by the two methods it is generally observed that fish caught on worm are more often deep-hooked, while salmon caught on shrimp or prawn tend to be more commonly shallow-hooked.

We are minded as part of our final recommendations to submit a proposed amendment to DEFRA regarding the use of shrimp/prawn bait specifically. Our proposal would be that shrimp/prawn bait be allowed, with the same hook restrictions as those proposed for use of artificial fly.

We know that shrimp/prawn fishing is not a like for like swap with worm fishing. We fully appreciate that the two methods are fished differently and are suitable to different conditions. We also realise that allowing the use of shrimp/prawn will not appease all of

the concern around the prohibition of the use of worm bait, and that in general anglers would likely prefer to be allowed to fish with worm baits. However, our position remains that we do not believe worm baits are appropriate in a situation where we require the maximum level of post-release survival possible, and that the risk they pose to fish is still too high. We discuss this further below.

We believe allowing the use of shrimp/prawn will facilitate additional angler participation (provided that club rules allow this method), providing an additional permissible method which is more compatible with less able/elderly and young anglers. In addition, it may facilitate fishing in parts of the catchment where fly or lure methods are harder to use. These are concerns that were raised within the consultation, and we aim to address it with this amendment. We believe allowing the use of shrimp/prawn will not disproportionally impact post-release survival of fish, and is thus a reasonable concession. We appreciate that angling clubs may still not wish to permit this method, but that is outside of the Environment Agency's control and entirely down to these clubs.

Worms

With regards to the use of worm baits, as set out in theme three above, some respondents (including four organisations) were concerned that removing this method would impact angler participation. We were asked to reconsider the prohibition of worm fishing, and alternate suggestions received for proposed byelaws included allowing worm fishing entirely, allowing it during certain river conditions, allowing clubs to manage it themselves, and/or allowing it but with barbless/single hooks only.

It is generally accepted and evidenced that salmonids caught on worm baits are more likely not to survive being released compared to other methods (Cowx *et al* 2017, Lennox *et al* 2017, Warner and Johnson 1978). Indeed, numerous respondents specifically commented about the higher levels of damage/injury caused by worm baits in their response. Some respondents suggested that worm fishing would not be compatible with a mandatory catch and release byelaw because of this risk to fish.

Conversely, a small number of respondents stated or inferred that worm fishing was no more damaging than other methods. One of these respondents submitted a journal article alongside their objection. This article is well known to us and reviews the fate of tagged salmon caught on various different angling methods. It must be highlighted that the study mainly focussed on fly caught fish (279 in total), with a much lower number of bait caught fish (11). Whilst this study is not therefore an equal comparison of the relative impacts of different angling methods, it is telling that it still clearly finds that salmon have a lower chance of survival when caught on bait than on the other methods examined.

Specifically, salmon captured on fly were 5.55 times more likely to survive than those caught on bait, and salmon caught on lure were 1.75 times more likely to survive than those caught on bait (Lennox *et al* 2017). The importance of other factors such as hook

size, water temperature and fish handling practice are highlighted within the article. We absolutely acknowledge these aspects and discuss and promote them elsewhere in this document, and indeed within proposed byelaws. Good practice guidelines for catch and release salmon fishing have been in circulation and promoted by angling bodies and Rivers Trusts for well over 20 years. These underline the importance of aspects such as fishing method and hook type, amongst others, in determining the chances of the fish's survival after release.

We understand that worm fishing is a method which can allow fishing in certain situations and for certain anglers where other methods are less suitable. We are not stating that worm fishing has caused the decline in Derwent salmon stocks. However, at the current state of Derwent salmon stocks we do not believe the risk it poses to fish is acceptable, even with the use of barbless or circle hooks. The risk of deep hooking exists regardless of the river conditions under which worm baits are used.

We believe that allowing worm fishing would disproportionately undermine successful catch and release practice. Our position remains that we believe that prohibition of the use of worm baits is reasonable, proportionate and necessary. This position is reinforced by other fishery management policies in other jurisdictions. For example, the All-Wales fisheries byelaws prohibit worm fishing for salmon across the entire country, and many catch and release rivers in Ireland also prohibit it. This is clear recognition of the widely accepted risk posed by this method to survival of salmonids post-release.

One respondent raised concerns that other rivers, such as the Border Esk, have no regulations governing permissible methods. The Derwent rod fishery byelaw review focusses on the Derwent alone, and proposes regulations proportionate to the present state of its salmon stocks. In the case of the Border Esk, the rod fishery byelaw on this catchment was last reviewed in 2016/17. Future and ongoing local and national review of other rod fishery regulations will include consideration of regulations that are deemed proportionate to the prevailing state of stocks.

Suggestion raised: Allow one treble hook on lures/ allow barbed flies

One respondent suggested that rather than require single barbless or de-barbed hooks on lures, that one treble hook be allowed. Our proposed byelaws specifically sought to limit the use of treble hooks on lures because of the potential damage caused by them. The classic example is the "Flying C" lure, which traditionally has a barbed treble hook at the tail of the lure and is damaging and difficult to remove if taken deep by a fish.

It is generally accepted and evidenced that barbed treble hooks are the most damaging type of hook (Cowx *et al* 2017). This is especially the case when hooks are large (as they generally are on lures). This is logical, given barbed trebles have three barbed hook points which can inflict damage, as opposed to barbless doubles or singles.

A recent study in Ireland used radio tagging to look at the survival of rod caught fish. The study found that only 55% of lure caught fish survived to spawn, and most of these lures

caught fish were caught on trebles. (Gargan *et al* 2015). It is widely accepted that treble hooks are less fish friendly than other alternatives, and this is reflected both in voluntary best practice policies and legislative fisheries management policy across the UK and Ireland. Examples include the All-Wales byelaws, which prohibit the use of treble hooks on lures, and numerous catch and release rivers in Ireland which allow only single or double hooks barbless hooks.

One respondent suggested that barbed hooks should be permissible on flies only. Whilst evidence suggests that fly tackle is far less damaging (the same Irish study as quoted above found a 98% survival in fly caught fish), we feel that the risk posed by barbed hooks needs to be removed at this stage. In supporting our proposals, several respondents highlighted that they already use barbless hooks, and that they were perfectly adequate. Indeed, to draw from other disciplines of fishing, most coarse fisheries require the use of barbless hooks. Numerous pacific salmon/steelhead fisheries also require single and/or barbless hooks. Measures in these fisheries are widely accepted by anglers, and do not appear to be a factor in participation or perceived success.

At this time, we must provide the protection we deem reasonable and proportionate to the Derwent salmon and sea trout stock. We believe the use of barbless or de-barbed hooks, and the restrictions on the type of hooks will provide additional, required protection to salmon and sea trout caught within the rod fishery. At the same time, we believe the alterations required will be minimal for anglers and are consistent with those required in other jurisdictions both within the UK. We believe they strike the right balance between the urgently required fish stock protection and impacts on anglers.

Suggestion raised: Ban treble hooks entirely and place weight limits on lures

One respondent suggested that treble hooks be prohibited on fly methods as well as lure, to prevent risk of damage to fish. We have carefully considered our proposed method and tackle restrictions and believe we have struck the right balance with regards to treble hooks. We feel that size limited, barbless treble hooks fished on fly methods only appropriately reduces the risk to fish without disproportionately impacting anglers and their tackle.

The same respondent highlighted that heavy lures may be used to illegally foul hook or "snatch" fish, and thus weight limits should be set. We do not propose to introduce weight limits for lures on the Derwent at this time, given the nature of the river and its size at some locations. We also believe hook restrictions as part of the byelaw would reduce the opportunity for any individual to "snatch" using a lure. Such activity would of course remain illegal and would render anyone undertaking it liable to enforcement action.

Suggestion raised: Improve fish handling/require forceps and nets

Improving the handling of fish that are caught and released was an issue a number of respondents raised, and something that was highlighted during informal consultations. It was rightly pointed out that some anglers do not practice good fish handling techniques,

and this can lead to mortality of fish. We know that this is a problem and have in fact been made aware of a number of examples (including video/photo evidence) on the Derwent catchment in recent seasons of fish being caught, and then very poorly handled prior to release. Issues such as fish being suspended by the wrist of the tail, kept out of the water for an extended time, carried a distance and unhooked on the bank, and dragged up gravel are often raised with us or witnessed by our officers.

Best practice guidance for practising catch and release in salmon fishing has been promoted by angling representative bodies since at least the 1990's, but unfortunately it is fair to say that fishing method best practice has been very poorly adopted in this time and UK game angling is behind the curve in this area when compared with coarse angling, or game angling in other countries. Good fish handling and welfare practice is down to the angler and involves numerous key behaviours. Examples include keeping fish in the water, using forceps and landing nets, playing the fish correctly, using the right strength of tackle, and not holding fish up by the tail. It can also include voluntary restraint when temperatures are very high.

Our proposed byelaws will improve post-release survival of fish through the restrictions of methods and tackle. However, we do not reasonably feel we can set out byelaw measures which specifically govern safe fish playing, landing, handling and unhooking. This is down to the angler but is something that we very strongly encourage the angling clubs and beat owners to promote and lead on. It is clear that most Derwent anglers are willing to voluntarily undertake angling practices to benefit salmon and sea trout. We specifically discussed fish handling practice with representatives from the Derwent Owners Association on the 13 October 2022. It was agreed that this was an issue, and even suggested that bad handling could account for mortality of as many fish as are directly killed by anglers. The Derwent Owners Association representatives agreed that they would discuss/plan how better fish handling could be promoted among Derwent anglers. The Environment Agency is happy to lend support to this however we can.

There are numerous pieces of simple and straightforward guidance available online on how to practice good catch and release and fish handling. The Atlantic Salmon Trust have produced a very good video on the matter which can be viewed at https://www.youtube.com/watch?v=g7uoXk_hFOk

Suggestion raised: Shorten season, or close the fishery

We considered a range of fishery management options within the technical case to reduce exploitation of salmon and protect sea trout stocks before setting out our proposed byelaws. In response, two consultees suggested we go further and implement a shorter fishing season, or even that we close the rod fishery entirely. Whilst these measures would protect fish and closure of salmonid fisheries is routine in other jurisdictions, we do not believe either option is proportionate at this time. Our primary aim is to protect and recover Derwent salmon and sea trout stocks, but we do also consider the socio-economic benefits provided by the rod fishery. At this time therefore, we believe that our proposed byelaws strike the right balance between the protection required for salmon and sea trout and continuing to provide the opportunity to fish.

Suggestion raised: Require mandatory catch and release of sea trout (and brown trout)

A number of respondents who opposed the proposal not to legally restrict sea trout retention stated that they felt sea trout angling should also be made mandatory catch and release. The reasons for this included the views that sea trout stocks are under as much threat as salmon, that their numbers have declined similarly to that of salmon, and that unscrupulous anglers may kill salmon, claiming they believed them to be sea trout. One respondent highlighted that they believe brown trout are also under threat and that the EA should consider mandatory catch and release for them.

We have carefully considered this significant response. Our position remains that we feel at their current stock level, that sea trout (and brown trout) retention can continue to be managed voluntarily. This is based in no small part on the premise that the commendable and ongoing voluntary approach to sea trout retention is preserved and promoted by key stakeholders, such as the Derwent Owners Association. Anglers should ensure they are able to identify salmon and sea trout accurately. If proposed byelaws come into force, any angler who kills a salmon will be liable to enforcement action.

We do recognise that many respondents expressed concern that Derwent sea trout numbers were in similar decline, and under similar threat as those of salmon. As we state in the technical case, we do not have the same level of biological reference point or stock assessment for sea trout as we do for salmon. Our stock assessment is based on trends in catch per unit effort. This however, is under review and subject to the development of a more advanced stock assessment system. We will keep both salmon and sea trout stocks under yearly review and will act if we feel sea trout populations require mandatory restrictions in future.

Suggestion raised: Implement these byelaws nationally, not river by river

This was a suggestion raised by one consultee, who suggested that a river-by-river approach to fishery regulation is unfair and may lead to anglers leaving one fishery in favour of another. There are already a national set of salmon and sea trout protection byelaws, which came into force in 2019. These byelaws required mandatory catch and release on all At Risk salmon populations (taken from the 2017 assessments, at which time the Derwent was not in this category). We are currently considering the most recent state of UK salmon and sea trout stocks with relation to these national regulations and will ensure any proposed change is clearly communicated.

Issue raised: Measuring hooks / de-barbing larger hooks

One respondent raised questions of practicalities in terms of anglers adhering to hook restrictions. This respondent was concerned that measuring hook gape would be difficult, specifically on flies which have dressing material around the hook shank. We understand the concern here but believe it will still be practical to measure the hook from shank to point. Typically, ribbing or dressing on the shank of a fly opposite the hook point is minimal, so we believe an accurate measurement of gape can still be made. The respondent in this case asked for clarity on how a hook should be measured. The image below (figure 2) is taken from our gov.uk site, and details how hook gape should be measured with regards to compliance with fishery byelaws.

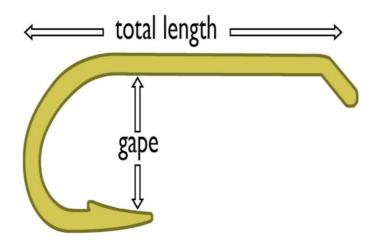


Figure 2: Diagram showing how to measure hook gape

Concern was also raised by this respondent with regards to how easily/effectively debarbing or hooks could be carried out, and whether they would be committing an offence if any remnants of a barb remained. It would be down to the angler to ensure that hooks are de-barbed adequately, but this is usually easily achievable. We appreciate that a debarbed hook may not have the same visual appearance as a barbed hook, but our position is that the hook should simply perform as a barbless hook would, offering no resistance to removal. This could be tested by the angler on a towel, or cloth. Our fisheries enforcement officers would not be disproportionate or unreasonable in their regulation of these proposed byelaws.

Issue raised: What about the use of worms for coarse fish in Derwent Water/Bassenthwaite

The proposed Derwent rod fishery byelaws are only of relevance to salmon and sea trout. They do not place any restrictions on the use of worm baits for coarse species within Derwent Water and Bassenthwaite. It should be highlighted however, that if proposed byelaws are approved and a fishery officer had reasonable cause to believe worm fishing was being undertaken with the intent of targeting salmon or sea trout, the angler could be reported for the offence.

Theme 7 - Hatcheries and stocking

Issue raised: Stocking salmon should be undertaken on the Derwent catchment

The use of hatchery practices, specifically stocking salmon to attempt to enhance the wild population on the Derwent catchment, was raised and suggested within the consultation. This is a discussion which, in recent years, has been held at length with angling stakeholder groups on the Derwent catchment. These discussions included the constituency MP in 2018. Our position on this issue remains unchanged, in that we will not support stocking of salmon the Derwent catchment at this time. We have been clear that this position is based on the very considerable weight of evidence from across the world, regarding the effectiveness and negative impacts of stocking practices on wild salmon stocks. We are not, as some respondents suggested, ignoring an obvious solution. We are following very prevalent, ever increasing scientifically derived evidence.

This evidence has grown considerably since the late 1990's, demonstrating that hatchery origin salmon have poorer marine and freshwater survival, reduced homing instinct, weaker adaption ability and lower lifetime reproductive fitness than wild-spawned salmon.

Investigations show that where hatchery origin fish (even from native broodstock) breed with wild fish, the resulting juveniles can suffer from the same disadvantages, potentially over a number of generations. Ultimately, this can create a situation where a hatchery effort can increasingly negatively impact wild stocks, making them worse rather than improving them. One recent study demonstrated this, assessing salmon stocking on an Irish catchment and finding that salmon population productivity decreases in response to an increasing proportion of spawning by hatchery origin fish (Sullivan *et al.*,2020).

Our position on any fisheries management tool such as stocking, is that it must be evidence based. We cannot afford to make decisions that might negatively affect salmon stocks, especially at current stock levels. Given the very significant weight of scientific evidence indicating that stocking is not likely to be beneficial, is inefficient, and may have negative impacts, our position remains that we will not permit it on the Derwent catchment at this time. We cannot conclude that it will not have any adverse impact, and scientific evidence tells us that it is better, safer and more effective to support, protect and restore natural salmon production in the river through a range of measures. Much of the evidence relating to the use of stocking and its efficacy and impacts on salmon stocks is publicly available online, and we encourage those interested to read it.

This position is reinforced by other fisheries managing organisations. For example, in 2014 Natural Resources Wales requested a review of evidence with regard to their own

hatchery and stocking efforts across Wales. This concluded that, in light of the scientific evidence, their own stocking programmes should be brought to an end to prevent harm to wild salmon populations, and that a realistic timetable should also be considered for bringing third party stocking efforts to an end.

Calls for increased hatchery effort are seldom supported by any actual evidence of positive impacts on salmon population recovery. Indeed, there is minimal evidence of this in existence. Typically, any support for hatcheries is either based on the simple assumption that adding hatchery reared fish or eggs must be beneficial, or it draws on examples from rivers that have hatcheries, inferring that rod catch on these rivers is attributable to stocking. The example that is regularly highlighted is that of the River Tyne, North East England. Indeed, some responses to this consultation process mention this catchment.

The third party funded salmon hatchery programme on the Tyne catchment is in place providing statutory mitigation for large scale habitat loss due to the construction of Kielder reservoir. This construction led to the permanent loss of 7% of the spawning and juvenile habitat on the Tyne catchment. It is suggested by a number of respondents that the high rod catch of the Tyne is demonstrative of the effectiveness of hatcheries. However, tagging research published in 2004 clearly concludes that by far the dominant process supporting the Tyne salmon rod catch was, and is, wild reproduction, not hatchery stocking.

Theme 8 – The consultation process

Two respondents objected to the consultation process specifically. One respondent suggested that the online consultation contained non-neutral questioning, without adequate facility for objection to be made. Both respondents suggested that there was no explanation of next steps, or a timeframe for responses to representations. One of the respondents also stated that there were no contact details for DEFRA or any way for respondents to make written representations.

Issue raised: The consultation process isn't clear/is non-neutral

With regards to consultation questions in the online portal, questions were entirely nonbiased. They allowed for any answer or comment consultees wished to provide. Questions could be answered with either support (yes), objection (no) or a don't know answer. A free text field was then available for each question for whatever explanation or additional comment respondents wished to make. There was also a free text field for any other comments at the end of the online portal.

With regards to explanation of next steps, timeframes, and the lack of contact details for submissions, we are perplexed by these objections. Next steps were made clear when a consultation response was made either online, or by email/in writing. Respondents all

received acknowledgment of receipt of their submission. This acknowledgement clearly set out that a response to representations would be made as the next step and within 12 weeks of the end of the consultation. Appendix 1c and 1d reproduce these acknowledgements for reference.

Issue raised: Relevant contact details/detail on how to respond wasn't provided

With regards to contact details, advertisement and notification of the consultation included four media adverts, 383 direct emails to individual anglers, 137 direct letters to individual anglers, and email notification to the Derwent Owners Association. **In all of these advertisements and notifications**, very clear instruction was given on how to respond. Appendix 1a and 1b reproduce these items for reference. It was clearly set out that respondents could use either the online portal, for which a link was provided, or respond by email or in writing. The relevant contact addresses for email or written responses were clearly provided. Contrary to one respondent's assertion, this included both email and postal contact details for DEFRA. Indeed, DEFRA received numerous direct responses to the proposed byelaws via the contact details provided. To be clear, DEFRA will have sight of all consultation responses, regardless of if these were sent directly to them by the respondent or not.

We also notified relevant constituency MPs and Parish Councils of the consultation and provided them with a briefing and information on how the consultation could be accessed and relevant information obtained.

Issue raised: The Environment Agency shouldn't be judge and jury of its own recommendations

One respondent stated that the Environment Agency should not be "judge and jury" of its own recommendations. We are not. The respondent in this case made a consultation response via the online portal. Here, it was clearly set out within the introductory text that DEFRA receive and review our final recommendation for proposed byelaws. DEFRA and the relevant Government Minister are responsible for the final decision regarding proposed byelaws, not the Environment Agency.

Theme 9 – Other issues/suggestions

A number of specific issues or suggestions were raised within this consultation that are not easily grouped into the themes set out above. These are answered individually below.

Issue raised: Failure of the National Salmon Five-Point Approach

The National Salmon Five-Point Approach is designed to be a partnership approach to improve salmon populations. It is not exclusively owned by the EA, nor solely deliverable by it. The approach focuses on five key areas (water quality/quantity, barriers to migration,

habitat, marine survival and exploitation). Some respondents stated that they felt this approach has been a failure, and that the proposed Derwent byelaws are especially unfair on anglers in light of this perceived failure. Within this document we deal with the five key areas, in response to comments/suggestions made around each of them. We highlight examples of the work that has been and is being undertaken on the Derwent catchment, and regarding Derwent salmon populations. This work is ongoing and we will remain committed to delivering and expanding it alongside partners. For example, we met with some key stakeholders on the 13 October, specifically to discuss how we can build on our actions to deliver for Derwent salmon.

We would take this opportunity to highlight again that the proposed byelaws are only one small part of this important wider work, and are not seen by us as a single solution. We will continue to do the best we can with what resource we have available to us.

Issue raised: Why are these byelaws coming in when national byelaw consultations did not require catch and release on the Derwent?

Two respondents raised the fact that they felt it was unfair for the Derwent catchment to have a proposed catch and release/method restriction byelaw, when recent national processes did not require it. This particular respondent referred to the National Salmon Five-Point Approach, suggesting that this had proposed mandatory catch and release at a national level, and that during consultation this was not carried forward. This is not correct, in that the National Salmon Five-Point Approach never set out specific rod fishery regulations.

The respondent in this case is likely referring to our National Salmon and Sea Trout Protection Byelaws that came into force in 2018. These did go to national consultation and do require mandatory catch and release of salmon on 'At Risk' salmon populations (taken as of the 2017 stock assessment).

Originally, the byelaws used 2016 salmon stock classifications to establish which rivers were proposed to be made mandatory catch and release for salmon. The Derwent was one of these, as it was deemed 'At Risk' at the time. However, delays to the process meant that ultimately, the 2017 salmon stock classifications were used (which then placed the Derwent in the 'Probably At Risk' category instead), and on the basis of this the river was not then proposed to go into mandatory catch and release.

Since that time however, the Derwent salmon stock alongside many others, has continued to decline. The Derwent catchment has its own set of rod fishery byelaws, and these are due for renewal in 2023. This is why this byelaw review is now taking place. We must review these byelaws in light of the current state of Derwent salmon stocks, the pattern of decline, and what is required to help address that. We considered a range of options for these byelaws, as set out in the technical case. We believe that release of all salmon caught, and proposed method restrictions are necessary, reasonable, and proportionate. Measures are in line with our national decision structure, and consistent with others applied in other jurisdictions.

The National Salmon and Sea Trout Protection Byelaws will be reviewed, and we will consider the level of restriction they place on fisheries a national level against the backdrop of the most up to date stock assessments.

Issue raised: The byelaws need to be reviewed/ may remain forever if they are approved

Proposed Derwent rod fishery byelaws would be time limited to 10 years. They are not permeant byelaws, but we will not be formally reviewing byelaws on an annual basis, as one respondent requested. However, given that stock status is reviewed annually, then it is perfectly feasible that any catch restrictions could be relaxed or removed before the usual 10-year duration lapses, should stock improve sufficiently before that time.

Issue raised: The introduction of these byelaws is politically motivated, designed to show that the EA are doing something to address salmon stock declines

This is a sentiment which has been expressed during informal consultations and was raised by several respondents within the formal consultation. There appears to be a feeling that proposed byelaws represent an easy route by which the Environment Agency can prove action in addressing failing salmon stocks, whilst not acting in other areas. This is absolutely not the case.

To be clear, the Environment Agency is conducting the Derwent rod fishery byelaw review because the current byelaws expire in July 2023. We therefore need to review the byelaws now and ensure a suitable package of measures is in place prior to July 2023. This package of measures has to be proportionate to the current state of stocks, and in line with our decision structure. This process has not been triggered by political motivation to be seen to do something. We have a statutory duty to appropriately regulate fisheries.

Issue raised: The Technical Case only considers one fishery management option

One respondent stated that the technical case only considered mandatory catch and release along with bait and method restrictions as a fishery management option, and ignored the option of voluntary restrictions for salmon. This is not the case. The technical case clearly sets out and discusses various fishery management options, which include continuation of voluntary approaches to catch and release and method restrictions. Our conclusion was that voluntary options are not appropriate to the current state of salmon stocks, and thus they were not carried forward and proposed.

Issue raised: Funding for frontline staff, workstreams and practices

The issue of funding was raised by a number of consultees, with the key theme being that more funding should be provided for frontline officers at the Environment Agency and

other organisations such as Natural England and West Cumbria Rivers Trust, and the work they do. The administration of funding received by and directed to these organisations is outside of the scope of our considerations on proposed rod fishery byelaws.

However, we recognise that this is a key issue. For the Environment Agency's part, we try to act in the best and most targeted way that we can with the resource that we have, and the funding that we are allocated each year from government or from other funding streams. A higher number of frontline officers across the EA and partner organisations would of course be positive, but that is not within the control of this rod fishery byelaw review. Balancing and allocating the resource we have into work such as enforcement, monitoring and habitat creation is an evidence led process. This is why it is crucial that any concerns around issues such as pollution and illegal fishing activity are reported to us via our hotline. We can then factor that evidence and information into resource allocation and requests for funding.

As already stated within this document, we have highlighted the concerns raised in this consultation regarding Environment Agency and partner organisation funding with the relevant departments and personnel.

Issue raised: EA staff are "far flung" and desk based, and don't know the river

Several respondents (who objected to the proposed byelaws) made comment that the EA staff involved in formulating proposed byelaws were 'far flung', were not on the 'frontline' of the river and did not understand the fishery. This is not the case. Staff involved in the Derwent rod fishery byelaw are experienced, local, frontline staff. They are also lifelong salmon and game anglers.

Issue raised: There are too many trees/too much tree planting which prevents fly casting

One consultee was concerned that too many trees line the riverbanks on the Derwent catchment, and this limits fishing opportunity. Furthermore, they felt that tree planting was adding to this problem. Typically, riparian owners and angling clubs are responsible for managing trees on banks to provide/facilitate the level of angler access that they deem appropriate. This isn't something that the Environment Agency influences routinely.

There are key environmental benefits to tree presence in the riparian zone. Trees provide shading, invertebrate life which feeds fish, and in-river cover through root systems and woody debris. They also help prevent excessive bank erosion and reduce silt input. For these reasons, some of our habitat projects within the Derwent catchment involve planting trees. Where we plant trees as part of our work, it is targeted in a way where we feel it will be beneficial to salmonids and other species. In turn, this will benefit anglers.

Issue raised: The technical case doesn't mention St Johns Beck because the EA trap salmon there and strip their eggs to re stock other rivers

One respondent suggested that the technical case did not mention St Johns Beck because the Environment Agency may be engaged in trapping salmon there and stripping their eggs for restocking into other rivers. To be clear, the Environment Agency does not strip eggs from any salmon within the Derwent catchment, nor stock using Derwent salmon eggs.

Issue raised: Do the proposed byelaws include tributaries like the Naddle, Greta, Glenderamackin and St Johns Beck?

The proposed Derwent rod fishery byelaws for salmon and sea trout apply to the entire Derwent catchment. This is clearly set out within proposed byelaws which state that the regulations would apply to the Cumbrian River Derwent, defined as the natural catchment of the Cumbrian River Derwent and all of the streams, lakes and rivers draining or flowing directly or indirectly into it.

Suggestions raised: EA should encourage clubs to focus on brown trout fishing rather than salmon/sea trout

This was a suggestion raised by one consultee, who stated that they felt brown trout fishing within the Derwent catchment was improving and perhaps undervalued. The promotion of different disciplines of fishing on a club/beat scale is down to the managers/owners of those clubs/beats. The Environment Agency's position is that we fully and actively encourage people to go fishing and to participate in angling, whichever discipline that may be.

We provide significant funding to the Angling Trust for them to encourage angling participation, and deliver schemes that encourage it, such as the "Take a Friend Fishing" free one day licence. Further to this, we help deliver angling participation days to (hopefully) inspire interest in angling. We recently helped deliver such an event in partnership with Cockermouth anglers.

Suggestions raised: Increase electrofishing programme and look into fry transfers

Several consultees asked that we increase monitoring in the form of electrofishing, and specifically that we target areas with a view to arranging the transfer of salmon fry from areas of high population, to areas devoid of salmon.

The Derwent catchment benefits from extensive electrofishing monitoring by West Cumbria Rivers Trust. This is a catchment wide project, funded through key stakeholder groups. An excellent report is produced annually, along with a detailed data explorer which allows results to be viewed across the catchment. This information is provided online at-West Cumbria Rivers Trust (WCRT). Alongside this, the Environment Agency undertakes routine electrofishing surveying within the catchment. We work closely with West Cumbria Rivers Trust and share data in order to help inform decisions. In 2022, we made the decision to train more local staff in electrofishing. We now have more operational capability and will be able to deliver more targeted electrofishing monitoring in future years. We plan to use this extra capability to specifically target monitoring to inform the delivery of habitat improvement work and assist colleagues in investigating/dealing with pollution issues.

With regards to the transfer of wild salmon fry between sites, this is something we have already undertaken at one site and considered further within the Derwent catchment. We have done this at the request of key stakeholders and following discussion with the Derwent Owners Association. We need to consider this work carefully. Selecting recipient sites is particularly tricky. To best guard against negative impacts requires the location of a site which contains suitable habitat for salmon, yet has no existing, or a very negligible salmon population. Electrofishing investigation and critique of existing data has been carried out in recent years with a view to finding such sites. In 2021 at the request of angling stakeholders, work carried out to consider whether fry from St Johns Beck could be moved to parts of the Glenderamackin system. Following investigation, this was not deemed appropriate due to the presence of juvenile salmon in all potential recipient areas.

We are however happy to consider fry transfer again in future. During a meeting of the 13 October 2022 with key angling stakeholder representatives we agreed to look at options again in future survey seasons. We will work collaboratively with members of Derwent Owners Association, who are going to provide us with locations within the catchment that they have already researched and believe may make suitable recipient sites. We can take these into consideration and work together to assess them.

Suggestions raised: Investigate and publicise the demographics of Derwent salmon anglers

One respondent suggested that we compile data on angling participation and age structure of Derwent anglers to look at changes over time. We do compile and publish data on angling participation, and this was presented for the Derwent catchment within the technical case in the form of overall annual effort (days fished). It is also published annually for all principal salmon rivers across England and Wales within the salmonid stocks report. These are published annually online, the most recent is available here - <u>Salmon Stocks and Fisheries in England and Wales 2021 (publishing.service.gov.uk)</u>. We do not routinely publish data on the age of salmon anglers.

The suggestion from the respondent was that analysing and publishing data would illustrate the decline in angling effort. This is already illustrated and discussed at length within the technical case, as is the relationship between rod catch, effort and the potential influence of proposed byelaws on effort.

The respondent also suggests that analysing age data with regards to salmon anglers would demonstrate a lack of younger anglers within the fishery, which may be indicative of

fewer new anglers joining the fishery. They go on to highlight concern that fewer new (and particularly young) anglers joining the fishery will lead to lower political enthusiasm (presumably with a view to taking action to improve salmon numbers).

It is widely accepted that an issue with angling generally is that fewer young anglers are coming into the sport. We will not be publishing specific data on the age of Derwent salmon anglers at this time, but we agree that encouraging angling participation (especially among youngsters) would be beneficial. We provide significant funding to the Angling Trust for them to work on angling participation, and deliver schemes that encourage it, such as the "Take a Friend Fishing" free one day licence. Further to this, we help deliver angling participation days to (hopefully) inspire interest in angling. We recently helped deliver such an event in partnership with Cockermouth anglers and will aim to do more in future.

Suggestion raised: Install a fish counter

Several respondents suggested that a fish counter on the Derwent system would be a more reliable way to form our salmon stock assessments, which currently use rod catch data. No form of stock assessment is perfect, but we are absolutely confident that our assessment of Derwent salmon stocks accurately reflects their status. A fish counter was previously sited at Yearl weir on the lower Derwent, but it never provided reliable counts of salmon and sea trout.

In an ideal world, we would have reliable fish counting facilities on all of our rivers. At this time however we do not have the resource to enable this, and we do not have any immediate plans for fish counter installation on the Derwent catchment.

Suggestion raised: Dredge the Derwent from Bassenthwaite to Workington

One respondent suggested that dredging a significant length of the river would improve fish stocks but did not provide any explanation as to why. Dredging out the spawning gravel and the natural pool and riffle sequence of the river on the scale suggested by this respondent would be utterly catastrophic for the salmon stock and all other river ecology. We do not propose to undertake dredging for the management of fish stocks within the Derwent catchment, as this would not be beneficial or appropriate.

Suggestions raised: Specific other project ideas

One consultee raised a large number of very specific project suggestions. The themes and concerns around these projects have largely been addressed within this document, but some suggestions were too specific to be reasonably and appropriately discussed and followed up within the scope of this byelaw review. These latter, very specific suggestions included:

- Expansion of fish friendly land management schemes and payment incentives
- Better working practices between partner organisations, i.e. charges for permits/permissions be waived
- Funding from EA for specific posts within partner organisations
- Pumping sewage from Borrowdale valley to Keswick treatment works
- Address drainage on A66 accident blackspots
- Encourage water company to install sluices to encourage gravel throughput on St Johns Beck

We will collate these responses and ensure they are raised with the relevant departments within the Environment Agency and partner organisations. We will also remain in contact with the consultee in this case, with whom we already work very closely and very positively.

3. Concluding position

After undertaking the public consultation on our proposed Derwent Rod Fishery Byelaws, we have considered all of the views, comments and suggestions contained within the representations received.

Our primary imperative is to protect the Derwent salmon and sea trout stock. We do consider socio-economic aspects of angling activity within our formulation of proposed byelaws, but these are secondary to the need to protect stocks. We must act in order to provide the level of protection to the Derwent salmon and sea trout stock that we deem appropriate at this time. Where our stock assessment data has been questioned, we have examined the effect of more generous scenarios, such as lower exploitation rates, and found that these alternatives still identify the Derwent salmon stock in either the At Risk or the Probably At Risk categories, and therefore still in need of direct management action. We have set out our concluding position for the different aspects of the byelaws separately for the sake of clarity.

Mandatory release of salmon

Our position remains that the mandatory release of all salmon caught within the rod fishery is necessary, proportionate and reasonable at this time in order to maximise the spawning stock.

Hook restrictions

Our position remains that the proposed hook restrictions are necessary, proportionate, and reasonable at this time, in order to maximise the survival of released adult fish.

Bait restrictions

Our position remains that our proposed worm fishing restrictions are necessary, proportionate, and reasonable at this time. However, we have considered the specific responses received in the consultation with regards to bait fishing and we are prepared to suggest an exemption for the use of shrimp or prawn as an acceptable fishing method. We will recommend to DEFRA that the use of shrimp or prawn bait be allowed, in accordance with the same hook restrictions as those set out for the use of artificial fly.

Our final recommendation will be that DEFRA approve our proposed byelaws as made, with the exception that we are prepared to amend our proposals to allow the use of shrimp and prawn bait with the same hook restrictions as those proposed for artificial fly.

3.1 What happens next

After we have offered the opportunity for respondents to withdraw objections, we will submit our final recommendation to Defra. Alongside this, we will supply a full package of materials which will contain:

- Our proposed byelaws and supporting material, including details of advertising, the technical case and this response document;
- Full details of the consultation, including all representations and information received both during and after the consultation period.

Defra will then scrutinise this information. The final decision regarding these byelaws will be made by Defra and the relevant Government Minister and published on the gov.uk website in due course. We will also communicate this decision to you directly if you made a consultation response and supplied contact details. Current local and national byelaws regulating the Derwent rod fishery remain in place at this time.

References

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Appendices

Appendix 1a

Email/letter text sent to 520 Derwent anglers who had declared a fishing effort on the Derwent catchment in the last three seasons

Dear XXXXX

We are contacting you today because we are consulting on the proposed new byelaws that are designed to protect the Cumbrian River Derwent salmon and sea trout stocks. Catch returns indicate you have made a fishing trip on this catchment in recent seasons.

Previous time-limited byelaws for salmon and sea trout fishing on the River Derwent expire in July 2023 and need to be replaced.

We think that this consultation will be of particular relevance to anyone with an interest in fishing for salmon and/or sea trout on the River Derwent. This includes residents, businesses, recreational and commercial river users, charities, statutory organisations and members of the public.

The River Derwent salmon populations in particular are declining, and are therefore in need of more protection than they were previously. We want to hear your thoughts, comments and opinions on River Derwent salmon and sea trout stock assessments and proposed new byelaws. The easiest way to make a response is through our online consultation tool, accessed via the link below. You will be able to view proposed byelaws, and the technical case supporting them.

https://consult.environment-agency.gov.uk/fisheries/river-derwent

The consultation will be live between the 23rd of September and the 31st of October and provides you with an opportunity to make a response to proposed byelaws and give us your thoughts, comments, and opinions.

You will not be able to make responses outside of these dates.

A copy of the proposed byelaws will also be made available for inspection at our local office; Ghyll Mount, Gillan Way, Penrith, CA11 9BP. Documents may also be obtained either by telephoning 03708 506 506, or emailing <u>derwentsalmon@environment-</u>

<u>agency.gov.uk</u>. We will be happy to provide you with a copy free of charge either electronically or by post.

Responses to the proposed byelaws can also be made in writing, addressed to Migratory & Freshwater Fisheries (Salmon Byelaws), Department for Environment, Food and Rural Affairs, 1st Floor, 2 Marsham Street, London, SW1P 4DF or by email to: <u>freshwater.fish@defra.gov.uk</u> and <u>derwentsalmon@environment-agency.gov.uk</u>

All responses to this consultation must be received no later than the

consultation closing date of the 31st of October 2022.

Thank you,

The Derwent Salmon Team

Appendix 1b

Advert/notification content published in London Gazette, Cumberland News, West Cumberland Times & Star, and the Keswick Reminder.

PUBLIC NOTICE - Fisheries

SALMON AND FRESHWATER FISHERIES ACT 1975, AS AMENDED BY THE ENVIRONMENT ACT 1995, WATER RESOURCES ACT 1991

PROPOSED RIVER DERWENT ROD FISHERY BYELAWS

Notice is hereby given that the Environment Agency intends to apply to the Secretary of State for the Environment, Food and Rural Affairs for confirmation of time limited byelaws for the protection and preservation of salmon and sea trout stocks within the River Derwent and its tributaries

The byelaws for the River Derwent and its tributaries:-

- Would begin in 2023, and expire 10 years after the date upon which they first come into force
- Prohibit any person from retaining a live or dead salmon that has been taken by rod and line;
- Require any salmon that has been taken by rod and line to be returned immediately to the river
- Prohibit the use of certain fishing tackle and fishing methods for salmon and sea trout

Associated documents may be viewed online, and responses to the consultation made at the following link from 23 September to 31 October – https://consult.environment-agency.gov.uk/fisheries/river-derwent

A copy of the byelaws will also be made available for inspection at our local office – Ghyll Mount, Gillan Way, Penrith, CA11 9BP. Documents may also be obtained either by telephoning 03708 506 506, or emailing <u>derwentsalmon@environment-agency.gov.uk</u>. We will be happy to provide you with a copy free of charge either electronically or by post.

Responses to the proposed byelaws can also be made in writing, addressed to Migratory & Freshwater Fisheries (Salmon Byelaws), Department for Environment, Food and Rural Affairs, 1st Floor, 2 Marsham Street, London, SW1P 4DF or by email to: <u>freshwater.fish@defra.gov.uk</u> and <u>derwentsalmon@environment-agency.gov.uk</u>

All responses to this consultation must be received no later than 31 October 2022

At the end of the consultation period copies of the responses may be made public. The information contained may also be published in a summary of responses. If you do not consent to having your response published, you must clearly request that your response be treated confidentially. Any confidentiality disclaimer generated by your IT system in email responses will not be treated as such a request. You should also be aware that there may be circumstances in which DEFRA will be required to communicate information to third parties on request in order to comply with its obligations under the Freedom of Information Act 2000 and the Environmental Information Regulations.

Appendix 1c

Email acknowledgement received upon submitting an online consultation response

Thank you for responding to this consultation.

We will publish a consultation response document on our consultation site within 12 weeks of the close of this consultation. This will group similar comments together and set our response to them.

It will also set out our final recommendation on the byelaws to the Secretary of State for Environment Food and Rural Affairs

We will email you to inform you when we have published this document if you asked us to do so in the survey section of this consultation.

We will also publish the Secretary of State's decision on our consultation site.

Thank you again for responding to this consultation.

The River Derwent Byelaw Review Team

Appendix 1d

Email acknowledgement received upon submitting an email, or emailed attachment consultation response

Dear XXXX

Thank you for taking the time to respond to the consultation.

We will review all of the comments and information/suggestions received, and shall publish a response document on our website within 12 weeks of the end of the consultation period.

We will notify you when this response document is available.

Thank you,

The Derwent Salmon Team.

Would you like to find out more about us or your environment?

Then call us on

03708 506 506 (Monday to Friday, 8am to 6pm)

Email: enquiries@environment-agency.gov.uk

Or visit our website

www.gov.uk/environment-agency

incident hotline

0800 807060 (24 hours)

floodline

0345 988 1188 (24 hours)

Find out about call charges (https://www.gov.uk/call-charges)

Environment first

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