



RESPONSE FORM

Catch Controls: byelaws for Nets and Rods 2017

We would like to find out your views on the proposed byelaw changes to catch controls to help protect vulnerable salmon and sea trout stocks and fisheries. By providing this information we will be better able to understand the context to the answers that you provide to our consultation. We also want to quantify and be sure that we have received responses from all sectors that may be affected by, or have an interest in managing our fisheries. This information will therefore help us to accurately record who has responded to this consultation. Your details will only be kept for this consultation and any future work directly related to this.

Section 1

Q. 1a) About Yourself

Please tell us which one of the following categories best describes your primary interest in salmon and sea trout.

- I am a licensed net fishermen
- X I am an angler.
- I represent a group of individuals who fish for salmon and sea trout (please tell us the name of the group).
.....
- I own or lease salmon and sea trout fishing
- X I represent a salmon and sea trout conservation or environmental conservation organisation (please tell us the name of your organisation).
Wye and usk Foundation.....
- I am involved in the catering industry and buy/sell wild salmon and sea trout (fish retailer, fishmonger, restaurateur, etc.)
- I am involved in the tackle trade for angling
- x Response from Non-Governmental Organisation
- Other (please specify).

If more than one of these categories applies to you please select all relevant categories.

Q. 1b) What part of the country do you have an interest in?

Please tell us where you primarily fish for salmon or where the salmon that support your business are from.

- North Wales (Anglesey and North Gwynedd, Conwy, Denbighshire, Flintshire and Wrexham, Meirionnydd)
- Mid Wales (Montgomeryshire, Ceredigion, Radnorshire)
- South west Wales (Pembrokeshire, Carmarthenshire, Swansea, Neath Port Talbot and Bridgend)
- South east Wales (Ely and Vale, Taff, Rhymney and Ebbw, Usk and Wye)
- All Wales
- Other e.g. England/Ireland/Scotland (please specify).....

If more than one of these categories applies to you please select all relevant categories.

Q. 1c) Please tell us how you found out about the Catch Controls consultation:

- From Natural Resources Wales
- From another organisation
- Through an organisation you're a member of
- Press article
- Social media e.g. Facebook, Twitter
- Through a meeting you attended
- Other (please specify).....

Name: Wye and Usk Foundation

Address The Right Bank, The Square, Talgarth, Brecon, LD3 0BW

Please note that this response relates to the effect of the proposals on the River Usk only.

How we will use your information

Natural Resources Wales will look to make all responses publicly available after the consultation, unless you have specifically requested that we keep your response confidential.

We will not publish names of individuals who respond.

In accordance with the Freedom of Information Act 2000, we may be required to publish your response to this consultation, but will not include any personal information. If you have requested your response to be kept confidential, we may still be required to provide a summary of it.

We will not disclose financial or other individual specific information that could inadvertently identify an individual or his / her business.

We will also publish a summary of responses on our website in which we may publish the name of the organisation providing responses.

Returning your response

Your response to this consultation needs to be returned by **14th November**. Please respond using this form. You can add extra documents supporting any responses that you make but please make it very clear which question this additional information relates to.

Please ensure any evidence previously submitted as part of the Questionnaire in 2016 is re-submitted to make sure it is included in your submission.

We would like you to use this form if you are not submitting your response online. You can return it by email to Fisheries.Wales@cyfoethnaturiolcymru.gov.uk. Please use this email address if you have any questions regarding this consultation.

Or by post to:

**David Mee, "Salmon and Sea Trout Byelaws",
Natural Resources Wales,
Maes Newydd,
Llandarcy,
Neath Port Talbot,
SA10 6JQ**

We welcome your views on the catch control byelaws 2017.

Section 2

Q2a. Do you agree with Natural Resources Wales salmon and sea trout stock assessments?

Please tick the relevant box

- Yes
- No
- Don't know

Please explain your answer.

Partially. They are the best we have based on limited data collection.

Assessing salmon stock health on rod catch alone is prone to considerable error as small variations in exploitation rate on a monitored river several hundred miles away leads to a difference in assessment. The proscribing of bait fishing on the Dee will lead to a decrease in exploitation rate, which will, in turn, mean that both the Wye and Usk are likely to pass their conservation target comfortably once fishing effort and methods are comparable.

A better assessment would be to include whole catchment juvenile assessments and marine survival data for salmon, along with the rod catch.

For seatrout, it is more complicated due to the poorly understood interactions between the marine and freshwater forms of the trout stock.

In the Usk the trout population appears in good health and has improved since the mid 00's in response to work to restore fish access and improve habitat in the catchment.

Seatrout catch numbers have waxed and waned; inexplicably increasing to a high of over 600 in the late 1990's before falling steadily back to their previous level of around 100, and remaining fairly stable at that level from 2006 to 2016.

In contrast to some rivers in West Wales, the total egg deposition of *Salmo trutta* in the Usk is dominated by the freshwater form which grows relatively fast, has a high average size and is capable of producing enough eggs to saturate the habitat.

Q2b.

Please tell us if have any evidence to support a different stock assessment conclusion.

In the case of the Usk, we agree that the salmon stock is currently 'probably not at risk' and due to the work taking place in the catchment (See answer 3b part 2) and the increasing strength of the more fecund MSW component, it is likely to remain in this state in the medium term.

However, reduced returns of adults are expected in 2019 and 2020 after the spawning failure of the 2015 run, the extent of which was revealing by the dire 2016 salmon fry numbers across the catchment (see figure 3 below).

2017's electrofishing showed a lack of parr (as expected given the paucity of fry in 2016) and a decrease in numbers of salmon in the tributaries when compared to the last major surveys in 2013 and 2007. This was also expected due to the abnormally low flows in the autumn of 2016 and strong evidence of poaching of salmon from the lower reaches of spawning streams above Brecon (Senni in 2013, 2014 and 2015, Ysgir in 2016). This information and evidence has been shared with NRW.

The decline in the tributaries was more than offset by a large increase in the numbers of salmon fry in the main stem of the Usk (343% compared to the average of 2013 and 2007). In addition, 75% of the juvenile salmon (180 out of 238) caught by WUF were over 100mm in length. This suggests that there will be some compensation for the 2015/16 wipe out with a run of S1 smolts in 2018. These smolts are likely to be small and migrate later than normal, but are very important and should be given every protection/assistance (see 3b.2.f below).

This means we are expecting the Usk salmon adult return to recover in 2021 after 2 poor years in 2019 and 2020, assuming that no more serious stochastic events occur, that poaching is controlled and that the environment doesn't decline further.

Source: Wye and Usk Foundation and NRW electrofishing. WUF's data has been shared with NRW and vica versa.

Section 3

Q3a. Do you support the proposed Net fishing byelaws?

Please tick the relevant box

- Yes
- No
- Don't know

If no, please state on what grounds your objection is based.

There are a number of inconsistencies in the proposal. The Blackrock Lave net fishery is assumed to be only exploiting fish from rivers 'probably not at risk'. Swain (1982) determined that all the fisheries in the Severn Estuary were mixed stock fisheries exploiting Usk, Wye and Severn salmon to a greater or lesser extent.

Do Usk and Wye salmon need protection from exploitation or not?

Why do the Blackrock lave fishermen have more right to kill a Wye or Usk salmon for their table than anglers who contribute far more to the preservation and enhancement of the species through their license fees and contributions to the Wye and Usk Foundation?

It is agreed that in 2019 and 2020 adult salmon returns to the Usk will be poor and should be protected. Under the precautionary principle by which the Annex II listed Wye and Usk salmon populations should be managed, all of the mixed stock Severn Estuary salmon exploitation must cease to protect the weakest stock component.

When stocks are deemed to be above 60% chance of meeting this conservation target, both rods and nets should be able to exploit the stock in a regulated and controlled manner. When it is less than 60% all exploitation, both rod and net, should cease.

Ref:

Swain, A. (1982). The migration of salmon (*Salmo salar* L.) from three rivers entering the Severn Estuary. *J. Cons. Int. Explor. Mer* 40(1), 76-82

Q3b. Do you support the proposed rod fishing byelaws?

Please tick the relevant box

- Yes
- No
- Don't know

If no, please state on what grounds your objection is based.

Our objection is based on 4 grounds:

- 1) The 10 year all Wales approach does not agree with international standards the Welsh government is signed up to and Welsh Government Policy. There is a proven and tested alternative to assessment and management that is adopted in other parts of the UK.
- 2) The proposal and supporting documents clearly indicate the disconnected nature of environmental management in Wales and will not lead to the recovery of salmon stocks.
- 3) The bylaw on fishing method and hook limitations does not make sense.
- 4) The bylaw on worm fishing does not make sense.

In detail:

- 1) **The 10 year all Wales approach does not agree with international standards that Welsh government is signed up to and Welsh Government Policy. There is a proven and tested alternative to assessment and management that is adopted in other parts of the UK.**

IUCN Ecosystem approach requires the use of “best available science” and to manage the environment at the appropriate scale. This approach is enshrined in the Environment Act.

Each river has genetically unique, sometimes multiple salmon stocks, which defines the appropriate scale (NASCO). This is acknowledged in the technical case which concluded that further reduction towards zero exploitation of fish is urgently required in **most** of our rivers.

This change in bylaw is set to operate at a political scale (all Wales) rather than an ecological one and politics are obvious in the proposal with the maintenance of the mixed stock net fisheries in the Severn estuary.

WUF sincerely hopes that it is not being forced by funding constraints preventing adequate data collection to allow river by river management and assessment.

If so, this should not be a reason to proscribe against annual river by river salmon stock assessment within these bylaws, especially for rivers where partnerships can be created to collect and deliver the data that allows for annual assessments to take place each autumn to determine rules the following year.

This is the method that has been adopted in Scotland and Ireland who fully appreciate the value of their fisheries.

We advocate this method being applied to all of Wales and in particular the Usk. From the point of view of the Usk, if an exception can be made for the Blackrock lave nets, an exception can be made for the one river within this consultation that is classified as ‘probably not at risk’.

For examples, please see below the results of the juvenile surveys for 3 years.

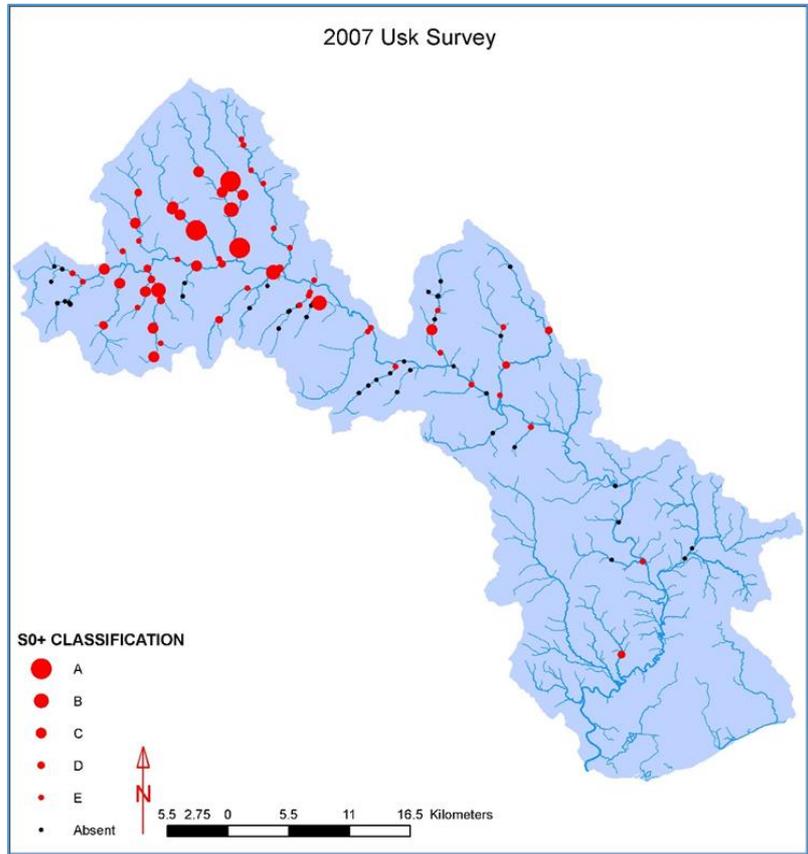


Fig. 1 2007 when the river was not at risk and the juveniles produced the excellent returns of 2010,11 and 12.

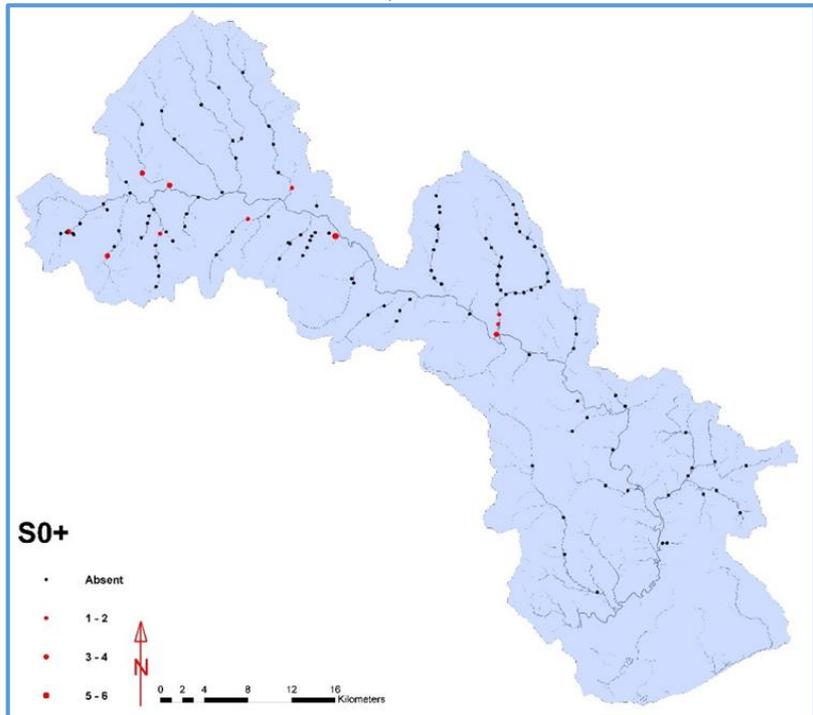


Fig 2. 2016 with very poor fry numbers due to the abnormally wet and mild Nov and Dec 2015.

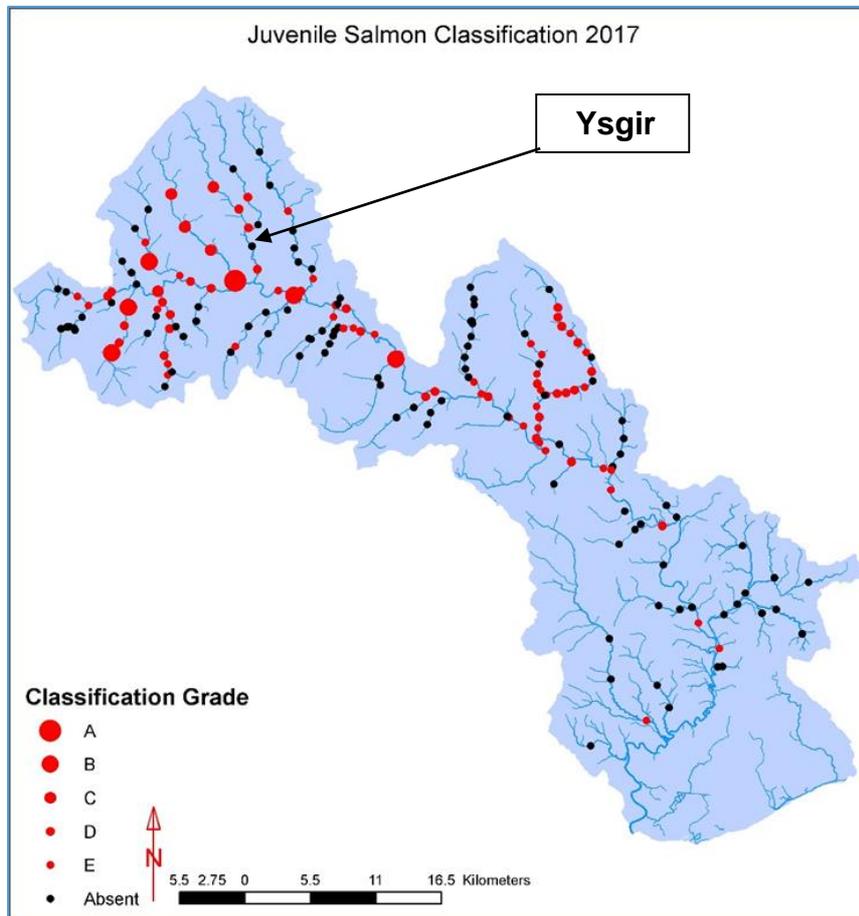


Fig 3. 2017 which shows levels on a par with 2007 (and 2013)

Note the lack of salmon in the Ysgir highlighted above when compared to 2007. This suggests something 'abnormal' happening in a stream which, when surveyed, recorded excellent invertebrate and trout populations and is mostly superb habitat.

Similar inexplicable 'collapses' appeared on the Senni in 2013 and 2014. There are string reports to suggest that this is poaching of salmon by some well know individuals and families, in a climate of zero enforcement/regulation.

In 2016 and 2017 the electrofishing was conducted by WUF staff, funded by owners/projects at a cost of around £5,000.

In 2015, 2016 and 2017 a phone round the beats in late October to estimate that year's rod catch cost <£100.

The value of the Usk salmon fishery is C £330,000 p/a (based on 6,000 rod days).

WUF's conclusion for Usk salmon, which is privately accepted by others, is, based on current rod catch, juvenile populations and marine assessments:

2018 Precautionary position: method restrictions to maximise survival of adults fish angled (banning bait, flying C's and hooks over size 6) aim for 90% C&R. Protect the smolt run.

2019 and **2020** Mandatory C&R for all nets and rods. Protect the smolt runs.

2021: T.B.D. but early estimates are for similar rules to 2018.

2) The proposal and supporting documents clearly indicate the disconnected nature of environmental management in Wales and will not lead to the recovery of salmon stocks.

Basing salmon stock management on managing angler exploitation goes against the requirement of Sustainable Management of Natural Resources to “work together better”. There are a number of complex problems impacting on the salmon populations that appear to have been put in the too difficult pile.

Assuming that 15% of the stock is angled and that 19% of those fish are being killed (2016 catch statistics), the catch and release bylaw will at best save less than 3% of the stock. This will not lead to a meaningful change in stock assessment.

Assuming an average of 20% post angling mortality: 60% survival for flying C, 85% other spinner and prawn and 96% fly, the fishing method controls proposed in these bylaws could save as much as 3% of the stock

In combination, the bylaws will not deliver the require objects unless other actions to address the limiting factors causing the decline in stocks are also addressed. These include pollution from agriculture and forestry, predation, barriers, abstraction and protecting smolt and post-smolt migration, but are river specific and need to be managed at the appropriate scale.

For example, the following actions are already happening or scheduled to happen that will have a greater benefit.

- a) Usk & Wye Abstraction Group modelling shows that the reforms to the public water abstraction and river regulation on the Usk will reduce losses in the estuary by 90% saving an average of 7% of the annual return (350-450 adults) from dying in the estuary and ensure on average 15.5% more fish enter during the fishing season, so by increasing rod catch and numbers of fish spawning. This will be operational from 2019.
- b) There is finally some protection (10 man-days in 2017) being given to the salmon in the spawning streams. There is strong circumstantial evidence that large numbers of fish have been removed from the Senni, Crai, Ysgir and Tarell at spawning time since 2013.
- c) Work is underway between Farming Connect, NRW and WUF to reduce the impact of farming on the river and its fish stocks.

Actions that would all have greater benefit than mandatory catch and release include the cessation of merely talking about agricultural pollution in seemingly endless working groups and:

- d) Introduce the proposed all Wales NVZ which will mandate 5 months slurry storage. This will require changes to slurry pits, which will result in the older ones being brought into Silage, Slurry and Fuel Oil Regulations (SSAFO). This will markedly reduce the risk of a catastrophic pollution in the Usk.
- e) Siltation of redds is the hidden killer limiting salmon production in agricultural areas. It cannot be tackled without correcting GAEC 5 to remove the exemptions for crop establishment and maize stubbles, so by ensuring that over 1ha of eroding field or 30ms of poached riverbank is an absolute breach, with no mitigating factors. To generate over 1ha of soil loss, such as the examples shown below, the soils have to be degraded and/or planted with an inappropriate crop. Extreme weather alone does not cause soil loss. In the

autumn/winter of 2012, potatoes and maize on low-risk fields and un-grazed grass on high-risk fields did not erode. It is the farmer's choice to take the risk and the farmer should not be excused if the risk comes to fruition should it rain more intensely than 'normal'. It is essential to empower Welsh Government staff to enforce the ruling.



- f) Make it mandatory to exclude stock from watercourses. Support this with existing Pillar 2 funding structures and so by improve fish habitat, reduce sedimentation, algal blooms, faecal coliforms and cryptosporidium contamination of water and improve livestock management, health and farm profits.
- g) Ensure regulation, advice and grants are joined up but delivered by separate organisations (e.g. methods developed within the Wye catchment partnership) and are focused on reducing diffuse pollution through better management of soil, manures, stock grazing regimes, nutrient applications, cropping regimes and river banks.
- h) Protect the smolt run (especially that of 2018), by working with WUF to remove low flow barriers, regulating abstraction/releases to ensure adequate flows in March, April and May, and allow NGOs to co-ordinate avian predator scaring/shooting during April and May. The rationale and actions required are detailed in Mawle 2013 (see below). The headwater to headland conference <http://www.atlanticsalmontrust.org/conference-from-headwater-to-headland/> showed again how this has the potential to increase salmon returns by up to 50%.

Reference:

Protecting the smolt migration from the impacts of abstraction on the River Usk- Mawle 2013 (attached).

3) The byelaw on fishing method and hook limitations is poorly written and can be improved.

The outcome, if it stands, is likely to be that a significant number of salmon and sea trout will not survive release, reducing the already small, benefits that can be achieved through the other proposed byelaws.

If fish have to be returned badly injured, it will bring the requirement for release into disrepute.

The latest scientific review of fishing methods (Lennox et al, 2017), quoted in the Technical case: 'Physical injury caused by hooking is the most important predictor of post-release fisheries mortality'.

Specifically, NRW should revise the long-standing, existing byelaw that was designed to help prevent foul-hooking of salmonids. It is widely contravened by pike fishermen and some salmon fishermen. Lures are commonly on sale and used in Wales and the borders that contravene it.

The term 'more than one hook' is confusing. In common parlance, a double or treble is called 'a hook', yet this byelaw presumably intends that a double hook should be intended to comprise two hooks and a treble hook, three. Simpler language would be desirable to avoid misinterpretation, inadvertent or otherwise. The hook byelaws should be rewritten to focus on the need to reduce hook damage from legal capture rather than foul-hooking.

Mortalities from spinning

Based on catch returns, most angling mortality of salmon in the Usk is linked to spinning. In 2013, the last year for data is available from the EA, about half the salmon were caught spinning and only 56% of these were returned, compared to 84% of fly-caught fish being returned.

The most popular spinning lure on Usk fisheries is, by far, the Flying C.

The Technical case notes the high mortality rates associated with the Flying C, though the evidence presented is mostly anecdotal. The exception is Gargan et al (2015), cited in the Technical case, who found a 55% survival rate for a small sample (11) of salmon caught on Flying Cs, compared to 98% for fly-caught salmon.

Data from Guy Mawle is that of 245 salmon caught on the Usk at the Upper Llangybi Fishery on this lure showed severe injuries in at least 11% of cases, compared to 3% for 854 fly caught fish. Note that some of the Flying Cs used were fitted with small hooks (size 8, 7mm gape), in some cases doubles, and many were barbless. This is best practise and not normal for Usk and Wye fisheries. Furthermore, not all severe injuries would have been recorded. Consequently, the true rate of severe injury associated with standard Flying Cs fitted with larger, barbed trebles will be greater.

The comparative survival rates reported by Lennox et al (2017) of 96% for fly caught fish compared to 86% for 'lure' (spinner, spoon or wobbler) are optimistic, the latter especially for those caught on Flying C. Firstly, the Flying C is significantly worse statistically than other spinning lures used. Secondly, in the sample of salmon in the studies used by Lennox et al, there was some selection for salmon that were not severely injured. Lastly, the salmon used in those studies were generally caught by experienced anglers and the fish handled carefully.

Consequently, survival rates to spawning associated with Flying Cs may be nearer the lower end of the range (50-80%) indicated in the Technical case (p114). Given the need to reduce mortality associated with spinning, the restrictions on hooks on lures must be a key feature of the byelaws. The proposed byelaws will allow Flying Cs to be used with large double hooks (up to 10mm, size 4). There are no scientific studies to indicate that this will adequately reduce the rate of severe injury. The requirement for barbless will help but severe injuries are likely to remain commonplace if greater restrictions are not imposed.

A requirement for spinners or spoons to be fitted with single hooks would not be an excessive restriction.

A requirement for single barbless hooks on Flying Cs has already been imposed by some fishery owners on the Wye (at Wyesham) and the Usk (Isca A.C.). As noted in the technical case, anecdotal evidence from the Wye & Usk Foundation indicates that such a requirement does significantly reduce mortality. Experience recorded at Upper Llangybi Fishery on the Usk supports this. Few people spin now on this fishery, but those (including Garry Evans, fishing tackle dealer) that have used Flying Cs in the last three years have almost all used those developed and marketed by Garry and fitted with a single 'J hook'. Though the gape is quite large, <13mm, all 20 salmon caught on these were released. No injuries were recorded and in 18 cases (90%), release was described as easy. Presumably release would be even easier without a barb.

If these Flying Cs are effective and allow easy release, there is no apparent need to risk the damage associated with a double hook on this or other spinners or spoons. The gape does not need to be larger than 13mm.

Multiple hooks

If mandatory catch & release is required, anglers should not be allowed to fish with more than one hook, be it a single or double.

The proposed byelaws ban the use of trebles, however small, whilst allowing up a fly or other lure to be fitted with up to nine hooks, i.e. up four large doubles plus a single (up to size 4, 10mm gape). The byelaw, as written, might even allow a fly or lure fitted with up to three quadruple hooks. After all, what's the difference between a quadruple hook and two doubles fished back to back?

This is wholly inconsistent with regard to likely hook injury and ease of unhooking. It may also be ineffective or even more damaging, as anglers move from fishing trebles to fishing multi-hook lures.

Even plugs can be fished effectively with one double hook as indicated in the Wye & Usk Foundation's catch and release guidelines, endorsed by NRW. Netting a salmon caught on a lure with multiple hooks often results in one or more hooks catching in the mesh resulting in damage to the fish, if the hook tears out, and difficulty in unhooking.

Hook size

Permitted hooks should be smaller.

The proposed byelaws place no limit on the size of a single hook that may be used. Again this is inconsistent. As noted in a presentation by Jens Bursell at the 8th World Recreational Fisheries Conference in July this year, a large single hook will create a larger and deeper wound than a multiple hook three sizes smaller.

As indicated above, a Flying C apparently works satisfactorily with a single hook of <13mm and this should be a maximum. It may be that a smaller single hook would be equally effective.

Since a double hook will create twice the wound of a single, for a given gape, restrictions on doubles should be greater. Permitting a double hook with two gapes of 10mm (Size 4) is not precautionary or in line with good practice. The earliest Catch & Release guidelines of the

Environment Agency recommended a small hook, with small being defined as a gape of 8mm or less. The more recent Wye & Usk Foundation (WUF) guidelines recommend a 'size 6 or smaller' (again a gape of ~8mm).

Such a hook size restriction will not be a problem when larger salmon flies are needed. A tube fly can be used and fitted with a small double. This will also permit a short shank hook that is less likely to lever out.

For plugs, such small hooks may be considered a problem if the hooks lever over but again, as indicated in the WUF guidelines, a sliding or breakaway system is a solution.

4) The bylaw (no 7) on worm fishing creates a loophole whilst attempting to close another.

It makes no sense to allow bait fishing for seatrout from 1 May on the Usk given the proposed ban on worm for non-migratory trout as well as for salmon. There is little, if any, bait fishing specifically for seatrout on the Usk system and it would merely provide another loophole to worm fish for other salmonids when the original one, namely being able to worm fish for 'trout' in April with a size 4 hook and 15lb line (!), is being closed by the ban on worm fishing for non-migratory trout.

Section 4

Q4a. Please tell us if you have any further comments that haven't been covered by the previous questions.

Thank you for taking the time to fill in this consultation.

You can return it by email to Fisheries.Wales@cyfoethnaturiolcymru.gov.uk.

Or by post to: David Mee, "Salmon and Sea Trout Byelaws", Natural Resources Wales,
Maes Newydd, Llandarcy, Neath Port Talbot, SA10 6JQ