

Department of Agriculture, Food & the Marine,
Johnstown Castle Estate,
Co. Wexford.

Sent by email to:
Forestryfpmplan@agriculture.gov.ie

3rd October 2018

An Taisce wish to make the following submission as part of the Draft Plan for Forests & Freshwater Pearl Mussel in Ireland and the associated draft SEA and NIS- Public Consultation 2018

Dear Sir/Madam,

An Taisce welcome the opportunity to take part in this public consultation in relation to producing a Plan for Forests & Freshwater Pearl Mussel (FPM) in Ireland as part of the national strategy for the conservation of the species. An Taisce supports the sustainable and balanced development of appropriate forestry in appropriate locations, and would like to make the following observations.

The ecologically sensitive licensing of forestry in FPM catchments is critically important in regard to FPM conservation. Forestry is acknowledged as being one of the primary threats to FPM conservation. If this species is to avoid extinction, then it is imperative that any conservation plans, and future forestry proposals, be adequately and thoroughly researched. In this regard, An Taisce would like to raise the following points regarding the Draft Plan.

1. The proposed Continuous Cover Forestry model

In regard to the proposed Continuous Cover Forestry (CCF) model, it is outlined in the Draft Plan that:

"The above water-related ecosystem services demonstrate the proactive contribution woodlands and forests can make to water quality and associated aquatic species and ecosystems"

and that:

"Immediate 'bankside' benefits arising from native woodland development on sites adjoining watercourses include: the filtering-out of sediment and nutrients from overland flow; bank stability; the restoration of natural dynamics between the terrestrial / riparian / aquatic systems; the provision of dappled shade; the regulation of water temperatures; and the provision of appropriate inputs that enhance instream diversity."

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An Taisce would gladly welcome provisions like these in most other circumstances, and recognise that the DAFM Woodland for Water (2018) document outlines the research which underpins the reasoning behind their suggested measures, and that there is good evidence to back up their validity in certain circumstances. However, we would highlight that none of these are specific to FPM rivers, which have very unique conditions, and as such cannot be applied in these catchments. Indeed, one of the studies to which the Draft Plan makes reference (Mc Conigley *et al.*, 2015) highlights that tree species are not a feature of the riparian zone on peat soils, and thus tree planting is not recommended as a management option unless used to control water temperatures. FPM rivers are generally found on peat soils, and this plan should promote the removal and prevention of further afforestation on peat soils. Open peat soils would be far more beneficial to FPM than any type of forestry, and the restoration of these should be prioritised, similar to measures currently underway in the KerryLIFE project.

In addition, An Taisce would direct the DAFM to the submission by Evelyn Moorkens and colleagues on this Draft Plan, which outlines with absolute clarity and certainty that for the purposes of FPM conservation this model is not appropriate, nor will it achieve the intended result. The introduction to the Draft Plan itself states that:

"In developing this Plan, DAFM takes cognisance of recent and ongoing research and initiatives, including KerryLIFE"

However, An Taisce would express dismay that the vast wealth of knowledge and expertise of the top Irish FPM experts was not sought in this process, thus undermining these claims. The recent research clearly supports the findings by these experts that there is a multitude of failings in the Draft Plan (Table 1 of the submission to this Draft Plan authored by Dr. Evelyn Moorkens, Ian Killeen and Dr. Eugene Ross), based on incorrect assumptions about FPM ecology and conservation needs, thus leading to the promotion of an inappropriate forestry model for these sensitive catchments. The aforementioned experts' critique is based on a thorough review of the published evidence base, and the most up to date research on FPM ecology and conservation.

There is work underway in Ireland to implement functioning measures for the protection of FPM, and the lessons learned in the KerryLIFE project should be considered, and, where appropriate, incorporated in to the approach planned for the Forests & FPM Management Framework. The conservation measures needed to protect FPM communities vary hugely depending on the baseline condition of the community and their surrounding habitat. Although the Draft Plan acknowledges the work underway in the KerryLIFE project, it still promotes a generalised forestry model, which will fail to achieve the nuanced sub-catchments specific approach, which has been proven necessary in the KerryLIFE project. Although it will prove far more time consuming and resource intensive, research to date would suggest that this approach is imperative in order to implement true conservation for FPM.

The proposed model purports to:

"build in permanent protection from forest-related pressures", and to "transforms forestry from an existing pressure to a direct support for FPM within these catchments."

Given that, particularly in the Top 8 highly sensitive oligotrophic FPM catchments, the pressure is from the forestry itself, An Taisce submit that the only way to effectively remove that pressure is to allow the catchment to return to its natural open peatland habitat. In Section 5, it is outlined that in the Felling & Reforestation Policy document, that permanent forest removal may also be considered by DAFM, on a case-by-case basis, in particular for sensitive sites, which may be deemed incompatible with the maintenance and restoration of a particular habitat for which that SAC was designated. An Taisce would welcome the wide scale ecologically sensitive implementation of such a measure in many of the FPM catchments, to counteract the negative effects of legacy forestry on peat soils.

Many of the issues outlined by Moorkens *et al.* in their submission on this plan echo those raised by the NPWS in their scoping response to this Draft Plan. The NPWS highlighted the need for undrained land, with fringing wetlands as a food source, and with a natural hydrological regime, with high near bed water velocities facilitated through good sub-surface and shallow groundwater flow. Given that the national body charged with conserving Ireland's wildlife, and the leading FPM experts in the country are all promoting the restoration of natural hydrological conditions for FPM conservation, and highlighting the risk posed to FPM by removing the loss of fringing wetlands and the alteration of drainage, any proposed forestry plan should be acutely aware of this, and should be tailored accordingly.

There appears to be a lack of hydrological assessment throughout the Draft Plan, with the NPWS submission highlighting that:

"an under-estimation of the role of hydrological change, and interactions between commercial non-native forestry plantations, associated drainage, ground cultivation methods and flow regulation, morphological changes to river beds and banks and freshwater pearl mussel habitat modification (both in-stream and supporting riparian habitats). "

It would appear from the CCF model which is promoted throughout the Draft Plan, that this is not being given due consideration, and should be urgently addressed given the importance of hydromorphological pressure on FPM communities. The implementation of a potentially damaging plan will be in direct contravention of Article 6.1, 6.2 and 6.3 of the Habitats Directive, in addition to the European Communities Environmental Objectives (Freshwater Pearl Mussel) Regulations 2009 (S.I.296 of 2009). These SIs set legally binding objectives for water quality in rivers, or parts of rivers, inhabited by FPM and designated as Special Area of Conservation (SAC) to protect those species; and to take steps necessary to attain those objectives. These regulations call for the publication of sub-basin plans for FPM SAC catchments, the final version of which still not forthcoming, which has likely contributed to the potential shortcomings of this Draft Plan.

Given that Irish FPM experts have indicated that if this model is implemented in the Top 8 FPM catchments at least 90 % of the FPM individuals will be lost, which we have a legal obligation to protect, there is nothing more we can add to highlight the gravity of the situation should this ill-conceived model be implemented.

2. Monitoring and regulatory oversight

In regard to the Daily Monitoring Form (Appendix D of the Draft Plan), four of the questions rely on visual assessment of the water colour, both at the beginning, and at the end of the day. They also mention the use, where possible, of REDOX and conductivity, measured using hand-held devices, and used as indicators of key water quality parameters, i.e. oxygenation and suspended solids.

Firstly, An Taisce would highlight that a visual assessment is highly subjective, and will vary depending on who is carrying out the assessment, and the weather and light conditions on the given day. A scientifically rigorous assessment should be undertaken. However, the choice of such an assessment must be fully considered. An Taisce submit that the suggested use of REDOX is ill-advised, given that in a study by the EPA (2012) it was highlighted that the use of redox potential measurements in the field is '*fraught with difficulty*' and that with regard to oxygen the redox potential should be regarded more as a relative rather than an exact measurement. In addition, they outline that turbidity has been used as a proxy for sedimentation in other countries, but given the high colour in Irish rivers the results may be meaningless. The overall conclusion from this EPA study was that:

"the examination of data-sets of easily measured parameters, as surrogates for suspended solids, is that these can vary between rivers and that each site is different and thus can yield different relationships. Any relationship developed between surrogate parameters of suspended solids would be largely nullified by the amount of work required gaining adequate data over a range of hydrographical conditions."

As such, these monitoring measures will be largely meaningless, and cannot be considered to be effective means of measuring an environmental impact. It would appear that anything less than standard laboratory scientific methods for assessing suspended solids would prove problematic.

In addition, it is outlined in the Draft Plan that the monitoring will reflect the level of risk and that besides monitoring by the applicant, other measures that can be utilised in this process include the presence of an onsite clerk of works. Field inspections will be carried out, and it is outlined that:

"All FS-DAFM field inspections will be unannounced, and will initially be of a high number, particularly in high risk areas"

An Taisce submit that, in circumstances where sites have been identified as being at high risk, it should be mandatory that an onsite clerk of works is utilised. In regard to the overall monitoring of the plan, one of the points in the Draft Plan is to:

"Ensure engagement of FPM ecologist and hydrologist to aid the inspectorate"

An Taisce submit that it is unclear what this means. What is the definition of 'engagement' in this case, and how will they go about ensuring it? It should be specified whether or not an FPM ecologist will be involved, and if so the specifics of when and how they will feed in to the process should be laid out. It is also outlined that:

"It is envisaged that direct monitoring of FPM population will take place to monitor the effects of implementing the plan."

An Taisce submit that this is insufficient, and lacks a firm commitment to monitoring. A monitoring plan should be very clearly laid out in the plan itself, as well as rigorously enforced and acted upon. Without clear monitoring information, the ambition to refine and improve the plan is meaningless. A results-based approach is essential, as utilised within the Pearl Mussel Project. The other indicators of progress outlined in the Draft Plan are merely indicators of the level of afforestation within the catchments, and are not relevant to the FPM population itself, particularly given that the proposed CFF model will likely further damage the FPM populations.

In regard to oversight, in section 2 of the Draft Plan, it is outlined that:

"conditions attached to any licences issued in these areas will require a higher degree of monitoring, including the likely appointment of environmental Clerk of Works to oversee environmental protection during operations"

An Taisce would welcome this, but note that there is a significant need for more clarity regarding the application of such conditions for forestry proposals in general. In our experience, the conditions applied, even in sensitive habitats, are often generic and do not appear to address the specific sensitivities of the given environment. We would highlight that this needs to be greatly improved if this measure is to be effective.

In addition, in Section 7.4 it is outlined that there will be strong regulatory oversight, including:

"instigat[ing] the engagement of a FPM ecologist and a hydrologist, as and when required, to support the Inspectorate in decision-making"

While An Taisce very much welcome strong regulatory oversight, we would again highlight the vague wording here: 'instigate the engagement' does not give any indication of what the specific process will be, or what this will realistically involve. In addition, we would highlight that, as outlined by Evelyn Moorkens, the top three FPM experts in Ireland were not consulted in the preparation of this Draft Plan. They have outlined their concerns that if this Draft Plan goes ahead it will be detrimental for the FPM, and as such we would submit that the FPM experts should be consulted before deciding on the framework, as opposed to using them to regulate a potentially flawed approach.

3. Application procedures

The purpose of the plan is:

"to enable Applicants and Registered Foresters to evaluate the degree of sensitivity regarding FPM, and to select the most appropriate option(s) regarding the activity in question. This will result in applications appropriately tailored to the sensitivities regarding FPM, pre-submission to DAFM and as early in the planning process as possible"

The NPWS submission at the scoping stage outlined that there is a need to develop a more considered analysis of the information submitted by an applicant and the making of a determination that no adverse effects on site integrity will arise. They also noted that the level of site-specific detail documented is likely to be insufficient to inform an Article 6(3) (Habitats Directive) assessment or to provide the necessary information for site managers and operators. An Taisce would fully agree with this, as outlined below.

In Appendix B of the Draft Plan, it is outlined that a site risk form will be completed at the first stage of a forestry application within an FPM site. However, An Taisce would highlight that this form calls for a site assessment by a 'competent person', but gives no indication of what qualifications or level of expertise this person should have. Given that much of the assessment is based on hydrology, An Taisce would highlight the need for hydrological expertise in all stages of forestry planning within the most sensitive FPM catchments. The forester, once the site risk assessment has been complete, can then choose what options would be best for a particular situation. However, these options are based on the CCF forestry model, which as previously outlined is scientifically flawed when it comes to most sensitive oligotrophic FPM catchments. As such, An Taisce have concerns regarding both Step 1 and Step 2 of the procedure. Compounding that, when the Draft Plan outlines the procedure for referring the Screening on to the NPWS, it is stated 'if required'. An Taisce would question how this decision is arrived at, and who makes that decision based on what data? We submit that when it comes to the Top 8 FPM catchments, all screenings should be referred to the NPWS.

Further to this, The SEA outlines that:

"A key component of Forest Management Framework is the DAFM's Appropriate Assessment Procedure (AAP). The AAP represents the primary mechanism for ensuring that all forestry operations are consistent with the protection of FPM within each of the 27 FPM Catchments. Subsequently, the project can only be licensed by DAFM if it has ascertained(), either at screening or at appropriate assessment, that the project – alone and in combination with other plans and projects and with regard to potential impacts throughout its lifetime – does not threaten the achievement of the conservation objectives for the SACs involved, namely "To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species [including FPM] for which the SAC has been selected." (* alongside other legal responsibilities, e.g. Annex I habitats outside SACs, WFD objectives.)"*

It is our opinion, based on our involvement as a statutory consultee, that the Stage 1 screening exercise carried out by the Forestry Service is inadequate and is not in accordance with the strict provisions of Article 6(3) of the Habitats Directive. In addition to a determination as to

whether the development would have an adverse impact on the integrity of the European Sites, the AA:

- a) Must identify, in the light of the best scientific knowledge in the field, all aspects of the development, which can, by itself or in combination with other plans or projects, affect the European Site. This requires both examination and analysis;
- b) Must contain complete, precise and definitive findings and conclusions and may not have lacunae or gaps. This requires analysis, evaluation and decisions in light of the best scientific knowledge in the field;
- c) May only include a determination that the proposed development will not adversely affect the integrity of any European Site where, on the basis of complete, precise and definitive findings and conclusions made, the Board decides that no reasonable scientific doubt remains as to the absence of identified potential effects.

In addition, at a recent Forestry Appeals Board oral hearing, it became apparent that it was up to the discretion of the Forestry Inspector whether a project underwent AA screening, even within NPWS referral zones, and where ecological concerns had been flagged by An Taisce. It would appear to us, but remains to be clarified, that this is standard practice within the forestry service. As such, while there is an assertion that the AAP document will be a key component of the Forest Management Framework, given its, by times, weak implementation in other ecologically sensitive situations, An Taisce would submit that far more rigorous measures need to be put in place if meaningful protection is to be afforded to FPMs.

The Draft Plan outlines that:

"During the pre-application design stage, the Registered Forester assesses the site and carries out various checks, and subsequently designs the afforestation proposal in a way that addresses the various environmental features and sensitivities identified."

An Taisce submit that currently this is not always the case, and we have received applications which have not taken account of the environmental concerns, or often of the specific forestry requirements laid out in the forestry guideline documents. To rely on this step as a means of protection, with regard to how the system now functions, may not prove to be a strong safeguard. It is also outlined that, in regard to a water setback, that:

*"It is envisaged that this width would vary onsite, depending on any areas of particular sensitivity (which **may require** input from a hydrologist)." [An Taisce emphasis added]*

and that:

*"the actual width of the water setback on-the-ground can then be increased at various points along its length, to increase the degree of safeguard at specific locations onsite, **as informed by site level hydrology.**" [An Taisce emphasis added]*

However, An Taisce would highlight that the input of a hydrologist should be mandatory, at least for the 8 priority FPM catchments. We fail to see how a non-hydrologist could be

expected to conclusively recognise areas which may be of particular sensitivity, or to be fully cognisant of the subsurface flows which would alter the hydrology and drainage of the area. It has been demonstrated in the KerryLIFE project that large amounts of expertise and site level surveys are needed, and that same level of detail should be applied for other FPM catchments, particularly for the priority ones.

4. Cumulative impact

In their scoping submission, the NPWS outline that there is no strategic plan for forestry within the FPM catchments, with the implementation of reactive rather than a proactive approach, which means that cumulative impact cannot be strategically assessed. An Taisce would note that this last point is extremely pertinent, and is relevant for all forestry proposals in ecologically sensitive areas. As a statutory consultee for afforestation, An Taisce frequently raise the issue of the lack of cumulative impact of forestry. Given that this is often ineffectively implemented with current forestry proposals, we submit that the procedures relating to afforestation in ecologically sensitive areas, with particular regard to FPM, need to be restructured to facilitate this process. The EPA also echo this opinion, in their scoping submission. They also called for a strategic catchment-wide approach, with assessment for adverse environmental effects at a catchment level including cumulative effects, and the consideration of catchment level mitigation and monitoring measures. They note that the granting of forestry plans at a site level does not account for this.

An Taisce would have serious concerns that, given the lack of site-specific detail within the Draft Plan itself, that there will be a lack of scientific scrutiny of these applications, particularly given the lack of an overall strategy for afforestation within each of the catchments. While cumulative impact is an integral part of a Stage 1 screening, An Taisce feel that this is not currently adequately assessed with regard to forestry applications, and highlight the need for a thorough catchment-wide strategic approach, with sufficient site level details to properly assess any potential impacts. The current procedures do not appear to encompass any meaningful measure of cumulative impact. The cumulative effects of plans and projects must also be taken into account when considering whether the effect of the plan or project is likely to be significant. MN2000 and the DEHLG Guidance advise that the authorities should consider the cumulative impact of plans or projects which are completed, those which have been approved but not completed, and those proposed (but not yet approved). The only way to overcome this is to have a strategic catchment specific plan for each of the FPM catchments, with clear limits to the amount of forestry, and with an assessment of the other potential pressures within the catchment.

5. Herbicides

In Section 3 of the Draft Plan, it is outlined that chemicals can be an issue:

"Onsite use of chemicals, fuels or oils: Potential risk of spillage, through accident or bad practice, and subsequent entry into receiving watercourses, leading to contamination and subsequent FPM death"

However, An Taisce would note that herbicides are applied as standard, and are included on all the forestry proposals we have received to date in 2018. This includes proposals in catchments supporting FPM. The ecological quality objectives for FPM are outlined in Schedule 4 of the European Communities Environmental Objectives (Freshwater Pearl Mussel) Regulations 2009 (S.I.296 of 2009), and the threat posed by the use of herbicide would undermine these objectives. An Taisce submit that instead of applying herbicides as standard, non-herbicide methods should be seriously considered in FPM catchments instead, such as trampling, mulches and mats, particularly in peat soils where run-off rates are particularly high.

6. NIS and SEA

At a fundamental level, the NIS and SEA are predicated on what An Taisce considers to be the erroneous assertion that the CCF model laid out in Section 5 of the plan is a valid approach which will be of benefit to the FMP:

"The model presented in Section 5 of the Plan, comprising water setbacks and Continuous Cover Forestry zones, will form the basic model to be achieved under the Plan, primarily through forest restructuring and afforestation. This outcome, realised at a site level and coalescing into a significant landscape feature at the subcatchment level, is designed to eliminate potential negative impacts arising from forestry and other land uses, while maximising the contribution woodlands and forests make to water quality and aquatic ecosystems in general, and FPM in particular."

As such, they cannot be considered to be complete or appropriate.

7. Conclusion

An Taisce would have serious concerns, based on the opinion of Ireland's top FPM experts, that the whole Draft Plan is ill-conceived and not fit for purpose. The Draft Plan could not have received a more damning critique, particularly given the vast wealth of knowledge and experience of the three authors of the submission. In this case, given their assertion that this plan, if implemented in its present form, will be severely detrimental to the FPM population, An Taisce can only bow to their expertise and second the call that, for the sake of the future conservation of FPM in Ireland, the fundamental model upon which the plan is based is extensively reviewed and improved in consultation with FPM experts.

8. Summary and recommendations

In summary, An Taisce would highlight that the proposed CCF forestry model needs to be re-designed, in conjunction with the input from the Irish FPM experts. The monitoring needs to be addressed, and properly designed. The application process needs to be more thorough, should utilise expert advice and assessment by hydrologists and other relevant sciences, and should be informed by strategic catchment level plans, including the assessment of cumulative impact, in conjunction with detailed site-specific assessments. In addition, the procedures and

requirements surrounding licensing of afforestation projects, AA screening and referral to the NPWS need to be far more rigorously enforced, in a much more transparent way.

Is mise le meas,

A handwritten signature in black ink, appearing to read 'Elaine McGoff'. The signature is fluid and cursive, with the first name 'Elaine' written in a larger, more prominent script than the last name 'McGoff'.

Elaine McGoff, PhD

Natural Environment Officer,

An Taisce- The National Trust for Ireland.