

Notice of request for more information

The Environmental Permitting (England & Wales) Regulations 2016

Application number: EPR/HP3228XT/V004

The Environment Agency, in exercise of its powers under paragraph 4 of Part 1 of Schedule 5 of the above Regulations, requires you to provide the information detailed in the attached schedule. The information is required in order to determine your application for a permit duly made on 15 February 2019.

Send the information to either the email or ShareFile site below by the 07 December 2019. If we do not receive this information by the date specified then we may treat your application as having been withdrawn or it may be refused. If this happens you may lose your application fee.

Email to: [REDACTED] (please note 10MB file size limit)

or

Upload to: <https://ea.sharefile.com/f/fo4e1382-6ffd-4f00-88be-f3be8f83a3a4>

| Name | Date |
|------------|------------|
| [REDACTED] | 07/10/2019 |

Authorised on behalf of the Environment Agency

Notes

These notes do not form part of this notice.

Please note that we charge £1,200 where we have to send a third or subsequent information notice in relation to the same issue. We consider this to be the first notice on the issues covered in this notice.

The notes in italics that appear after information requests in the attached schedule do not form part of the notice. The notes are intended to assist you in providing a full response.

Schedule

1. Provide a revised Updated Water Framework Directive Compliance Assessment document, to include full consideration of:
 - 1.1. The discharge of potentially polluting matter from the Fish Recovery & Return Outlet.
 - 1.2. The Marine Strategy Framework Directive.
 - 1.3. A wider scope of water bodies, to include Bristol Channel Inner and upstream fresh water bodies.
 - 1.4. Sensitive features as identified by the Water Framework Directive.

What is the issue?

The application states that “the removal of the AFD system could potentially increase the risk of entrapment associated with cooling water abstraction”. The magnitude of this increase is further assessed within Revised Predictions of Impingement Effects at Hinkley Point C (TR456 ed2). The potential increase in the impingement proportion of this entrapment will result in a larger amount of biota being discharged via the Fish Recovery & Return (FRR) Outlet. A proportion of this biota will be returned via this outlet dead. This dead biota is considered to be potentially polluting matter under the Environmental Permitting Regulations 2016.

Currently the application does not fully consider the potential impacts on the environment from the discharge of this dead biota.

The current assessment provided by the applicant (TR493) estimates a peak inundation of Sprat and uses a partial tracking model to predict the fate of these dead fish once discharged. This provides some information on the dispersal of this particular type of biomass, considering the fate of the floating biomass and the consumption by birds. It does not however consider the fate of the sunken biomass, the consumption by marine mammals, fish & benthic invertebrates, or the decomposition of the remaining biomass.

The current Updated Water Framework Directive Compliance Assessment submitted to support the application scoped out the Water Framework Directive (WFD) quality elements; Biology (Habitats) and Water Quality from requiring further assessment, due to “the removal of the AFD system will not alter the assessment already presented” within the 2011 WFD Compliance Assessment. However the assessment already presented did not consider this increase in predicted dead biota being discharged at the FRR Outlet location.

The current Updated Report to Inform the Habitats Regulations Assessment submitted to support the application only screened in “the potential effects on fish impinged on intake screens as a receptor”. Therefore this report did not consider the potential impacts from the discharge of these fish (and other biota) that did not survive impingement on the intake screens or passage through the FRR system.

What is the impact?

The current assessment provided by the applicant (TR493) estimates a peak inundation of Sprat and uses a partial tracking model to predict the fate of these dead fish once discharged. It presents a peak inundation of 281,219 individuals being discharged over 14 days. Predicting over 88% of these will sink immediately, presenting potential impacts within the vicinity of the FRR Outlet, and over 97% will sink within 24 hours, presenting potential lower impacts over a wider footprint. The report states “most dead fish will sink

rapidly and be consumed by benthic organisms. The remaining fish will initially float and be dispersed by local hydrodynamics. These fish will gradually sink; with the majority sunk within 24 hours". However there is no further consideration of the final fate of, or impact from, these individuals (e.g. decomposition of the remaining biomass).

Currently the application does not fully consider the potential impacts on the environment from the discharge of this potential increased amount of dead biota.

The application does not currently demonstrate the proposals will comply with the Environmental Permitting Regulations 2016 in terms of the discharge of potentially polluting matter.

The application does not currently demonstrate that the proposals will not cause or contribute to the deterioration of WFD &/or MSFD status and/or jeopardise the waterbody(s) achieving good status, in terms of the discharge of potentially polluting matter.

The application does not currently fully demonstrate that the proposals follow the use of Best Available Techniques (BAT) in terms of minimising the polluting potential, as per the UK's commitment to the OSPAR convention as the polluting potential of the proposals has not been fully considered.

The application currently only provides information to inform the Habitats Directive Assessment (HRA) in terms of the potential increase in impingement of fish.

What is the solution?

Provide further information via this Schedule 5 notice process to further support the current application. There is currently no definitive guidance or policy on how to assess dead biota discharged in to the water environment as potentially polluting matter. However the Environment Agency's 'Clearing the Waters for All' Guidance 2016 provides a good format, some well-defined receptors and sets out useful impact thresholds that would make a good basis to define the significance of the dead biota predicted to be discharged.

Therefore we would advise as a mechanism to address the impacts outlined above, to follow the 'Clearing the Waters for All' Guidance 2016 to develop a revised Updated Water Framework Directive Compliance Assessment document, to include full consideration of the discharge of potentially polluting matter from the Fish Recovery & Return Outlet.

Information within this revised document can then also be used to inform areas of the HRA and BAT assessment further.

Detail this document should consider presenting is:

- What is the amount of dead biota (e.g. dead biomass) coming out of the FRR outlet? We would advise considering a worst case scenario to ensure a precautionary assessment is provided avoiding a degree of the uncertainties involved with the predicted estimates of impingement and survivability.*
- What is the fate of the dead biota discharged? Such as dispersal, consumption (by bird, mammals, fish and invertebrates), and decomposition. How long will it take for all the biomass to be consumed? Consider any variability, including seasonal variation in dead biota discharge and seasonal variation in consumption and temperature and potential decomposition rates.*
- What is the potential risk from the fates of the dead biota discharged? Such as beaching (currently assessed within TR493), habitat smothering and water quality*

impacts due to decomposition. What are the decomposition products and what levels of these are predicted to be produced? If there is settlement and accumulation what potentially anoxic conditions could be produced? What is the ecological effect of an increased detritivore population in the footprint of the outfall? What is the ecological effect of a layer of biomass on the seabed for a period of time?

- *Are these risks considered significant? As proposed the WFD guidance provides some criteria to assess this against, such as:*
 - *For habitat smothering, consider the size of the footprint of the discharge (e.g. due to dispersal minus consumption) against the following thresholds:*
 - *0.5km² or larger*
 - *1% or more of the water body's area*
 - *within 500m of any higher sensitivity habitat*
 - *1% or more of any lower sensitivity habitat.*
 - *For water quality consider the effects of the decomposition of the remaining biomass on oxygen levels and unionised ammonia in particular as well as any hazardous substances and nutrients. Considering if these impacts are likely to be seen in any particular area for longer than a spring neap tidal cycle (about 14 days). Considering if these effects will pose any impacts to the local fauna & flora and any seasonal variations such as owing to temperature changes.*
 - *For fish, first consider the water quality impacts then consider if these will present any risks to fish, as well as the impacts predicted from entrainment & impingement in-combination.*
 - *For phytoplankton & harmful algae we would advise inclusion of a narrative describing the risk within the receiving waterbodies for completeness.*
- *Further to these, for completeness we would also advise consideration of the following for inclusion within the updated document to provide a full 'WFD assessment':*
 - *The Marine Strategy Framework Directive*
 - *A wider scope of water bodies, to include Bristol Channel Inner and upstream fresh water bodies*
 - *Sensitive features as identified by the Water Framework Directive such as Protected Sites and consideration for any further assessment to cover the SAC habitat features.*
 - *Consideration of any in-combination impacts resulting from the discharge and entrapment.*
 - *Up to date EQ standards as revised in 2015.*
 - *Consideration of all current case law – significant rulings have been issued since the original WFD Assessment that should be considered, such as the 'Weser Ruling'.*