



Objection

Objector:	Ms. Karin Dubsy
Objector Address:	Civil, Structural and Env Engineering , TCD, Dublin 2, Dublin, Co. Dublin.
Objection Title:	Coastwatch Objection
Objection Reference No.:	OS010250
Objection Received:	08 March 2022
Objector Type:	3rd Party
Oral Hearing Requested?	Yes

Application

Applicant:	SSE Generation Ireland Limited
Reg. No.:	P0606-04
See below for Objection details.	
Attachments are displayed on the following page(s).	

To: EPA licensing Section Office of Environmental Sustainability.
EPA Headquarters, P.O. Box 3000, Johnstown Castle Estate, County Wexford.



From: Coastwatch, Civil, Structural Env Eng. TCD, D 2
Date: 7th March 2022

Comment on Industrial Emissions licence review application in the Register of Licences is **PO606-04** and PROPOSED DETERMINATION OF A REVIEW OF AN INDUSTRIAL EMISSIONS LICENCE IN ACCORDANCE WITH SECTION 87(2) OF THE ENVIRONMENTAL PROTECTION AGENCY ACT 1992 AS AMENDED.

Dear EPA license unit team

The above SSE license determination is of great concern to Coastwatchers around the Waterford estuary and at national level. On examining

- the application and EIS of 2009
- the status of the waters which SSE is both abstracting and discharging to,
- the status of the Waterford estuary Special Areas of Conservation
- the range of pressures on the estuary including SSE and the cumulative impact of these
- Changes of IPC licensing and practise in other countries to adapt to climate change
- Recurrence of unexplained mass mortalities of macro invertebrates in the estuary and the lack of timely official intervention to find causes when mass mortalities when reported
- the loss of biogenic reefs in the mid estuary where SSE is located, with no sign of recovery
- the mass mortality of shellfish in several aquaculture companies downstream from SSE
- the reliance on company manual self-monitoring
- the past record of SSE non-compliance with its license and lack of penalty

We urge that a significantly stricter, clearer and time limited license is offered to SSE with closure of the gas (oil back up) plant and conversion to renewable energy and other activities compatible with the high value and sensitive location. That license should be monitored and enforced with meaningful penalties for non-compliance.

Please see detail of our grounds in attached document. The Agency has recorded a previous submission by Coastwatch to this process dated 21 April 2021 and that submission should also be considered as part of this objection to the PD.

Coastwatch respectfully requests that the EPA holds an Oral Hearing. The fee of 126 euro is enclosed for this objection, together with the fee of 100 euro for an Oral Hearing. If you have any queries in relation to this objection please contact the undersigned.

Very best

Karin Dubsky

Coastwatch coordinator
kdubsky@coastwatch.org and 086 8111 684

Re: Coastwatch Ireland Objection to Proposed Determination P0606-04

Coastwatch objects to this PD for the following reasons:

OVERARCHING: An alternative approach.

Coastwatch is very concerned about the cumulative impacts of pressures on the Waterford estuary and compliance with the Water Framework Directive and Habitats Directive. This transitional water with several linked SACs is not in good status and deteriorating. The EPA catchment management unit has officially assessed the river basins and set out the surface waters at risk. Here we used the catchment

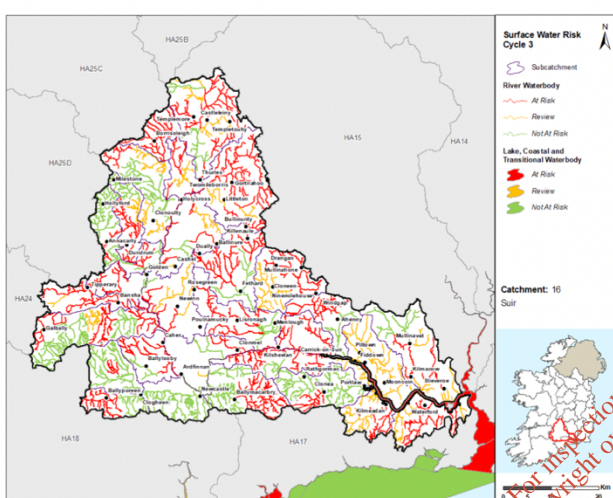


Figure 8: Surface Water Risk Cycle 3

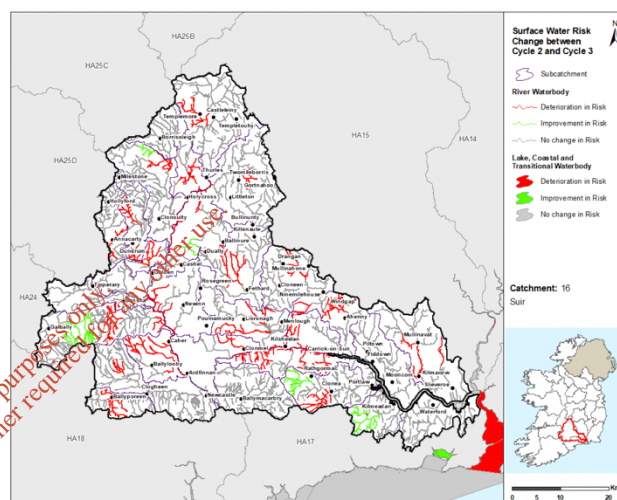


Figure 9: Surface Water Risk Change between Cycle 2 and Cycle 3

unit for the Suir estuary (Fig 8 above) showing it is 'at risk' and the risk change between cycle 2 and 3 (Fig. 9) highlights the risk of further deterioration where the SSE power station is discharging. <https://catchments.ie/wp-content/files/catchmentassessments/16%20Suir%20Catchment%20Summary%20WFD%20Cycle%203.pdf>

Mass death of estuarine macro invertebrates has been observed repeatedly in the estuary which we know is eutrophic. If you now license for continuation of large volumes of biocide carrying cooling water discharges 10⁰C above receiving water temperature during a heat wave it risks longer more mass death in drought/heat wave conditions. On top of that we have silt released from plough dredging as extra stressor and a new variation in the Waterford Port dredge license which does not seem to have been taken into account when drawing up the new license.

This is our second largest estuary. It is of highest ecological, archaeological, and historic value. SSE sits right in the core of that estuary, where the 3 sisters meet.

With passing of the MSP act in Dec 2021 it opens up the opportunity of a DMAP for this estuary, where all riparian local authorities as well as relevant agencies and stakeholder representatives come

together and plan a new approach to achieving the legally binding water and nature goals while simultaneously looking to the development of compatible employment and business opportunities. This could be an international centre for education/ecology/archaeology tourism and could recover to good status by 2027 if we act now.

The company has major alternative energy capabilities and interests. We should now plan the phased closedown of the current operation and support new renewable energy and ‘Green line’ services. A national education centre for alternative energy on the old brown field site which has plenty of space for a solar farm would also fit into the DMAP plan suggested above.

If the new SSE plant license as proposed now is granted by the EPA, it ties our hands to old ways. In the Elb estuary court action brought the closure of the Vattenfall Moorburg power station – see synopses in box below. We don’t need court action; we need to just grab the opportunity to work together for estuarine water and biodiversity restoration.

Water Framework Directive case FoE Hamburg v city of Hamburg, cc Vattenfall. FoE argued against the water abstraction and cooling water permit that the city of Hamburg granted to Vattenfall Moorburg power station for using water of the Elbe estuary. They argued under Art. 4.1 WFD, that damaging/killing protected fish while abstracting cooling water and additionally impacts of cooling water release in summer from high temperature and low oxygen was not acceptable and must be replaced by cooling tower technology. The company’s argument of excessive costs and reduction in efficiency could not override that. The higher administrative court of Hamburg (OVG Hamburg) agreed with FoE and ordered Vattenfall to use the cooling tower. (Case is unfortunately only in German)

ISSUES WITH THE INFORMATION ON WHICH THE PROPOSED LICENSE is BASED

1. There is no current Environmental Impact Assessment. The purported EIA was conducted on outdated information submitted in an Environmental Impact Statement that was issued in 2010 and which is based on data collected much earlier than that. An up to date Environmental Impact Assessment Report should have been requested from the power plant operator and it ought to have been assessed in accordance with the most recent EIA Directive 2011/92/EU as amended by Directive 2014/52/EU.

As example: The PD fails to address the impacts of the significantly increased water abstraction beyond what was in the EIA of 2009. The number of protected fish caught in the abstraction process increases as the abstraction increases and may be significant during migration past the cooling water intake. Last year the screen broke under the weight of sprat sucked in. Twaite

shad hunt sprat and are likely to have been drawn in at that time too. The Inspector was wrong to exclude these impacts from the now out of date EIA and AA.

2. There is no Appropriate Assessment Screening. The Agency has not made a proper determination with conclusions about why and to what extent and for what reason there will be significant impacts on the River Barrow and River Nore SAC and Lower River Suir SAC prior to mitigation. In the absence of a proper screening, it is not possible to how mitigation measures will affect the risk profile at Stage II Appropriate Assessment.
3. There is no Stage II Appropriate Assessment. The Inspector's Report records that a so-called "*Inspector's Appropriate Assessment*" has been completed and made a determination but the assessment in question is not included in the report and does not appear to have been made available to the public on the Agency's website. Conclusions have been presented and conditions of the PD identified as mitigation measures but without an assessment it is not possible to say how the conclusions have been derived or if they are credible. The requirement is for an *assessment* and that has not been done.
4. Any purported Appropriate Assessment does not meet the standard of assessment required in Article 6(3) of the Habitats Directive. The obligation is to use best scientific information and that has not been done here.. The assessments conducted rely mainly on generic and arbitrary ELVs and are not sufficiently site specific to the sensitivity of Waterford estuary in this key location. The impacts on salmon, twaite shad, river and sea lamprey caught in water abstraction and associated processing have not been properly assessed and neither has there been a proper assessment of the impacts on the estuarine environment and conservation objectives of the discharges.
5. Concern about the impact on the protected fish species: It is necessary to achieve conservation objectives of European sites and that includes the fish for which the Waterford estuary and Lower Suir are designated. Key times are (i) migration periods and (ii) when high numbers of sprat congregate in the estuary, as twaite shad and possibly others are attracted to feed on sprat.

In the follow up correspondence after our meeting with SSE in April 2021 it was confirmed to us that twaite shad is caught in the abstraction water. While we were told that the fish spend time in a cradle and are gently released through discharge SS8, the dousing with bleach followed by gauntlet of waiting gulls is unlikely to be conducive to survival. None of the fish protected here under the habitats directive and or the eel regulations are at 'Good Status'. Eel and Twaite Shad are at bad status. There is insufficient data to even determine where twait shad occur in the estuary and whether or when the number of fish taken in abstraction water is significant. The deficiencies in monitoring and fish population data are so great that the EPA cannot stand over the adequacy of the abstraction conditions to protect these fish and support restoration.

6. Best Available Techniques were not applied in a number of areas. protected site designated as estuary – when estuaries are at highest risk and for the range of threatened fish species and as estuarine habitat. Our concerns in relation to this are summarised as follows:

- a. Temperature ELVs are not BAT. In the first place, the temperature ELV in for SW2-Condenser Cooling Water in Section B2 of the PD has ambiguous wording and could be unenforceable. It could be interpreted as a limit of 10 degrees Celsius for 98% of the time, or a limit of 10 degrees Celsius over the ambient estuarine temperature for 98% of the time subject to a maximum limit of 12°C above estuarine water temperature. Either way it allows the plant to discharge cooling water into the estuary during periods when the estuarine water temperature is already critically high during heat waves. These are becoming more frequent with climate change. Recent licences consenting discharges into the Elbe Estuary have prohibited cooling water discharges in such circumstances under a Thermo plan.
- b. The PD has no pH limits on the cooling water emissions at SW2 and SW8. This is not BAT. The impact of pH on sodium hypochlorite consumption rates is long recognised.
- c. Chlorine ELVs are not BAT. Alternative non-chemical technologies and coatings as well as recycling of cooling water is BAT when power stations are located in sensitive sites. The PD allows continuous 24 hours usage of sodium hypochlorite as biocide, which was never envisaged back in 2001 and certainly is not BAT now. The 2001

document gives a guideline of 0.2 mg/l for short pulses of biocide use and even that limit is not used in the PD which has adopted a limit of 0.3 mg/l. Any ELV should be determined on the basis of what the estuary environment can safely accept and should consider a range of compounds related to the reaction of chlorine in the discharge waters, including with ammonia. There should be chlorine ELVs on all surface water emission points on a precautionary basis and continuous monitoring of residual chlorine at all discharge points.

- d. The ELV for flow volumes is not BAT. There is no ELV for flow from SW13-Process Wastewater. The flow from SW2 equates to a maximum daily limit of 792,000 m³ which is considerably higher than the 480,000 m³ per day abstraction rate that was proposed in the 2009 EIS with no assessment of the impacts of the increased abstraction and discharge. Flow is considered in the PD in isolation from other ELVs. There should be kg/day maximum ELVs for chlorine, ammonia, phosphorous and BOD based on flow and mass balance calculations and assimilative capacity.
 - e. The ELVs for phosphorous are inconsistent, not site specific and not BAT.
 - f. If in the specified short term water abstraction and discharge continued, then there should be an annual limit on the amount of biocide utilised. No reason has been given, or assessment made of the different process now employed going from 5 tonnes per annum used in short daily pulses relied upon in the 2009 EIS to over 1,000 tonnes used on the site in 2019 with ongoing biocide use. It is not adequate to control sodium hypochlorite consumption solely by chlorine ELVs, particularly when there is no continuous monitoring and when only some of the surface water emission points are to be monitored at all for chlorine.
7. The Water Framework Directive objectives have not been properly considered. The status of the receiving waterbody is not 'good' which is where we should be by now. Indeed it is deteriorating. The 3 waterbodies affected are acknowledged to be at risk. If we continue the path we are going, we will not even achieve Good status by the final deadline of 2027 in the 3rd cycle rbmp. Measures to address the impact of the power plant on the status of the estuary waterbodies must be adequate when seen in combination with other pressures.
8. HEALTH IMPLICATIONS: The estuary is also designated as **shellfish water** and is open for native surf clam fishing and aquaculture for oysters. The shellfish water status has dropped from A to B in the last review cycle. A review of inputs, dredging and management are needed.

Recent research on microbes in cooling waters have shown that: the intake and discharge water microbial load is quite different; warm water fosters the rapid increase in some, while sodium hypochlorite biocide kills selectively, there are some species which are resistant. Given the Waterford sewage treatment plant discharge within one km of the abstraction site and the planned extra volume with extra industrial development like the Glambia cheese plant, the EPA license should include microbial monitoring from the cooling water discharge to provide assurance to shellfish growers and the general public who enjoy gathering cockles and other shellfish. As simple immediate independent sampling regime using H₂S strips as indicators daily in the shellfish harvest season and weekly outside that is recommended. Additionally, more detailed research on the microbes and plankton going in and out of the plant should be undertaken.

9. The EPA needs to set a high enough bar in the new license to assure us that protection of habitat and fish species for which the 2 SACs - Waterford Estuary and Lower Suir were designated is going to improve. At present there is the probability and risk that the SSE operations might cause significant disturbance/damage to the protected fish species here at key times. (see case [CJEU Case C-404/09 EC v Kingdom of Spain](#))
10. There is no planning permission for the development that is the subject of this PD. The planning process concluded in 2010 considered a development with much lower cooling water demand and a much lower effluent loading to Waterford estuary.
11. The proposed license has too many areas which are left open to be discussed and agreed between EPA and SSE afterwards.
12. Given the history of non-compliance of the company with its license in an SAC and designated shellfish water we believe the large scale water abstraction and cooling water release process should be terminated as soon as possible. We recommend that the new license be focussed on a managed transition to close down of existing operations and change to ones which are compatible with this most important estuarine area. To tease this out an oral hearing would

be of large benefit and would facilitate real participation for eNGOs and local traditional fishers who know the area inside out.

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