

From: [REDACTED]
To: [REDACTED]
Cc: [REDACTED]
Subject: SZC WDA permit determination - Additional information/clarifications required to support WDA
Date: 03 June 2021 17:01:00
Attachments: [image001.gif](#)
[image002.gif](#)
[image003.gif](#)
[image004.gif](#)
[image005.gif](#)
[image006.png](#)

Hi [REDACTED],

As discussed last week ahead of the upcoming L2 call, please find below several WDA related requests for information/clarification below for your consideration and response (as these may not need to be requested via Schedule 5 notice if clarification can be provided quickly).

Information request 1: The Sizewell C (SZC) screens are referred to as being smaller than those at Hinkley Point C (HPC). Therefore, please confirm the following dimensions and details:

- (a) The perimeter of the SZC band screens.
- (b) The number of buckets per SZC band screen.
- (c) The diameter of the SZC drum screens.
- (d) The number of buckets per drum SZC screen.
- (e) If there are no specifics available to respond to (a) to (d) above, are the dimension details specified within 16.1.22 regarding HPC's screens and buckets (also referenced as 'skips' via 14.1.20) to be taken as worst case for SZC? If so, please provide confirmation of the relevant sections of the specific report(s) that apply for the information requested above (a) to (d).

This information is required as part of the technical assessment of SZC waste stream H.

Background to information request 1: For Schedule 5 notice No.2, information request 2(e), your response specified the following regarding the travel time through the SZC fish recovery and return (FRR) systems and included a copy of a HPC report:

'Transit time through the cooling water and fish recovery and return (FRR) system is 53-89 minutes (Section 16.1.22 and Table 24 of Hinkley Point C Cooling Water Infrastructure Fish Protection Measures: Report To Discharge DCO requirement CW1 and Marine Licence Condition 5.2.31). For SZC, the transit time through the FRR system particularly (HCB and HCF) will be shorter. Hinkley Point C Cooling Water Infrastructure Fish Protection Measures: Report To Discharge DCO requirement CW1 and Marine Licence Condition 5.2.31 is provided.'

The SZC Appendix A report (section 3.1.3 on pages 59 to 60), and the Appendix E Eels Regulations Compliance Assessment report (section 3.4.11), referenced as [112] within the Appendix A report, and TR406 (v7) state that a similar CW/FRR system to that designed for HPC will be adapted/replicated for SZC:

- **3.1.3 (Pollution control measures):** *The Sizewell C Fish Recovery and Return will replicate the Hinkley Point C design where possible and appropriate, although it is worth noting that Sizewell C site specific requirements mean the complexity is reduced, leading to reduced handling of the fish also.*
- **3.4.11 (fish protection measures):** *A similar system to that designed for Hinkley Point C (Figure 3.3) will be adapted for Sizewell C as detailed in Section 3.2 of this ERCA.*
- **4.7.3 (Other factors which could potentially affect FRR survival rates):** *The rotation path lengths of the SZC drum and band screens will be smaller than those deployed at HPC due to the smaller tidal range at Sizewell and therefore fish residence times in the fish buckets will be shorter. The risk to fish survival from dead fish in the fish buckets is, therefore, expected to be lower at SZC than at HPC and therefore also negligible.*

If there are no specifics available to respond to (a) to (d) above, are the dimension details specified within 16.1.22 regarding HPC's screens and buckets (also referenced as 'skips' via 14.1.20) to be taken as worst case for SZC? If so, please provide confirmation of the relevant sections of the specific report(s) that apply for the information requested above (a) to (d). Examples within the HPC CW infrastructure Fish Protection Measures: Report to Discharge DCO requirement CW1 and ML condition 5.2.31 are included for reference below:

- **6.2.6:** *The band screens will be approximately 25 m high and 2.5 m wide*
- **6.2.12:** *The band screens are fitted with buckets for the safe recovery of fish from the screens. Buckets are fitted at approximately 600 mm intervals. Each bucket will retain approximately 40 l of water, equating to an approximate depth of 90 mm once the screen emerges from the water as it ascends towards the top of the screen.*
- **6.2.13:** *The buckets will be approximately 523 mm wide and approximately 2.5 m long (i.e. the full width of the band screen). Depth varies with the profile of the bucket, but will be around 100 mm.*
- **6.2.14:** *The basic bucket profile can be seen in Figure 17. As can be seen, the bucket has curves over to help prevent more active fish species from flipping out of the bucket.*
- **6.2.15:** *As the band screen buckets exit the water vertically, water level retained in the bucket is constant irrespective of tide level.*
- **6.3.5:** *Like the band screens (see section 6.2.7), the drum screens also need to accommodate the whole range of potential water levels for the large tidal range encountered at Hinkley Point. Because of this, the drum screens at Hinkley Point C will be the largest of their kind in the world, measuring 27 m diameter and 6.65 m wide; each screen will have a mass of approximately 80 t.*
- **6.3.8:** *To improve fish protection, the drum screen has one collection bucket mounted at the junction of every radial spoke of the drum (where spokes join the drum there is a cross member that joins the spokes on opposite sides of the drum, the cross members create a ledge which often partially traps fish before they drop back in to the drum screen well). This gives a total of 56 collection buckets on each side of the drum screen.*

Information request 2: Please provide a copy of the latest version of the following report, as referenced within section 4.7.3 (page 48) of TR406 v7 (Sizewell C – Impingement predications based upon specific cooling water system design):

- **TR493 (please provide the most up to date version):** *The effect of not fitting an AFD system at HPC on the operation of the HPC FRR systems.*

A review of this report and its evidence is required as part of the technical assessment of SZC waste stream H, based on the following reference (section 4.7.3 (page 48) of TR406 v7:

A study for HPC (BEEMS Technical Report TR493) determined that there was a negligible risk to fish survival in the HPC FRR system due to dead impinged fish (overwhelmingly sprat). The rotation path lengths of the SZC drum and band screens will be smaller than those deployed at HPC due to the smaller tidal range at Sizewell and therefore fish residence times in the fish buckets will be shorter. The risk to fish survival from dead fish in the fish buckets is, therefore, expected to be lower at SZC than at HPC and therefore also negligible.

Information request 3: For the proposed waste stream G (discharge of treated domestic sewage effluent from the site's administration and mess facilities), the maximum and normal proposed discharges are (based on the details within section 2.6.1, table 4.1.25 and sections 5.9.12 and 5.9.13 of the main WDA support report: 100232385):

- Maximum discharge volume of 190 m³/day based on a maximum population equivalent of 1,900 staff on site during outage (at water usage of 100 litres/person/day)
- Normal discharge volume of 90 m³/day based on a population equivalent of 900 staff on site during normal operation (at water usage of 100 litres/person/day)

Within the SZC DCO application, Environmental Statement 6.3, volume 2 (main development site), chapter 4 (description of operations, sections 4.11.6 to 4.11.8), there is reference to a visitor centre for Sizewell. The visitor centre has a population estimate of 135 people (made up of visitors and staff).

Information request 3a: Please confirm if the proposed Sizewell visitor centre will be connected to the proposed private foul sewage system serving SZC, and if the proposed population of 135 people is included within the proposed discharge volume/loading calculations of 90 and 190 m³/day (or if these volumes, and proposed loadings within table 4.1.26 of the SZC WDA permit supporting report 100232385 need to be revised). If the proposed Sizewell visitor centre is not to be connected to the SZC foul sewerage infrastructure, please confirm what the proposals are for removal of the foul/sanitary effluent).

- Environmental Statement 6.3 - Volume 2 Main development site - Chapter 4 Description of operations 4.11.7): <https://infrastructure.planninginspectorate.gov.uk/wp->

Information request 3b: Please clarify and confirm whether or not any laundry facilities and generated effluent will be treated and discharged via waste stream G (or any other waste streams from SZC)? Section 4.4.26 of Environmental Statement 6.3 - Volume 2 Main development site - Chapter 4 (via the above [web-link](#)) references that the sewage system would typically collect black and grey wastewater from kitchens, lavatories and laundry rooms. In WDA supporting report 100232385, 'laundry' is referenced within HVL (Hot laundry) and SBE (Laundry, Maintenance and Decontamination Services) via waste stream B (Trade effluent from operations within the nuclear island waste monitoring and discharge system). In your e-mail dated 06/08/2020, the SZC WDA comments excel spreadsheet (response row 42) states the following regarding laundry facilities at SZC:

'In line with HPC the laundry has been removed from system so no longer appears in waste stream B/C'

Information/clarification requested at previous L4 calls: Following WDA and CA permitting L4 meeting on 11/02/2021, there is an outstanding WDA action under **4b**) for SZC's consideration and response (as provided in the EA meeting minutes/notes sent via e-mail from [REDACTED] to [REDACTED] dated 17/03/2021). Please provide a response to action 4b), or confirm if the detail has been provided within any of the WDA Schedule 5 information request submissions (i.e. is the action addressed as part of the wider Sch 5 No.1 to No.4 information submissions, as if so, please detail the location(s)).

If you have any queries regarding these responses, please let me know.

All the best,

[REDACTED]

[REDACTED]

Senior Permitting Officer: Nuclear New Build
National Permitting Service (Part of National Operations)

Environment Agency | Richard Fairclough House, Knutsford Road, Warrington, WA4 1HT

[REDACTED]

External: [REDACTED] | Internal: [REDACTED]

Mobile: [REDACTED]
Working days: Monday to Friday



[cid:image006.png@01D58F3C.AAF23F30](#)

