

Marine Scotland - Licensing Operations team ("MS-LOT")	
Non Compliance report	
Breach of Section.36 ("s.36") and Marine Licence Conditions - Piling Strategy	
s.36 Consent conditions: http://www.gov.scot/Topics/marine/Licensing/marine/scoping/Beatrice/decision Marine Licence Number 04461/14/1 http://www.gov.scot/Topics/marine/Licensing/marine/scoping/Beatrice/BOWLtml	
s.36 consent and Licence Holder: Beatrice Offshore Windfarm Limited ("BOWL") 1 Waterloo Street Glasgow G2 6AY	
<p style="text-align: center;">Decision: No further action required</p> MS-LOT has given due consideration to the breach of the Piling Strategy and is satisfied that the risk of a negative impact to the appropriate receptors from this event were minimal. MS-LOT is satisfied that BOWL have taken sufficient actions to prevent this type of event occurring again. MS-LOT is satisfied that piling works were completed with no further incidents. See report presented to stakeholders.	
Status: Closed	Reason: Piling works complete
Details: Beatrice offshore windfarm is a development in the Moray Firth of 84 wind turbines and associated offshore transmission works. http://www.gov.scot/Topics/marine/Licensing/marine/scoping/Beatrice As part of the conditions under the s.36 of the Electricity Act and associated Marine Licence:-Condition 12 of the s.36 consent and condition 3.2.2.5 of the Offshore Transmission Works (OfTW) Marine Licence (licence number: 04461/14/1) there is a requirement for piling operations during construction of the turbines and offshore transmission works to be carried out in accordance with an agreed Piling Strategy http://www.gov.scot/Topics/marine/Licensing/marine/scoping/Beatrice/piling The Environmental Clerk of Works ("ECoW") appointed for the BOWL development reported as required to MS-LOT on the 4 July 2017 that the piling strategy had not been complied with on 2 July 2017 (non-compliance report dated 6 July 2017 - Appendix A). MS-LOT requested that a non-compliance report be submitted detailing the events and actions taken by BOWL to remedy the situation and prevent a recurrence. MS-LOT consulted with Scottish Natural Heritage ("SNH") on the report Consultation (Appendix B) and with Marine Scotland Science ("MSS") Marine mammal expert (Appendix C) MS-LOT did not publicise this non-compliance immediately as there was a possibility, if the mitigation actions taken by BOWL were not successful, that further action might be required.	

BOWL submitted a piling strategy implementation report: - LF000005
<http://marine.gov.scot/data/beatrice-offshore-windfarm-piling-strategy-implementation-report>

In April 2018 and the report was presented to and accepted by stakeholders on 17 May 2018.

Appendix A – BOWL Non compliance report



Environmental Clerk of Works (ECOW) Non-Compliance Report

Date	06/07/2017	Compliance Report No.	LF000005-REP-1915
Originator	[REDACTED]	Rev.	01

1. Nature of Compliance Issue

Non-compliance event relates to: LF000005-PLN-142 Piling Strategy Rev 04 Section 10.2 (Section 36 Condition 12)

Summary of non-compliance event: (i) Accoustic Deterent Device (ADD) was not reactivated following a break in piling of >10mins but <2.5 hrs; and (ii) Soft start procedure following break of >10mins but <2.5 hrs not initiated with ~5-6 blows at as low an energy as practically possible ($\leq 300\text{kJ}$).

Location: Beatrice Offshore Wind Farm, pile location BE-E4-B2

Non-compliance event date: 02/07/2017 and time: 03:58

Reporting: Project Manager, Gardline Environmental to BOWL's Support ECoW on 2 July 2017 at approx. 10:45 (Lead ADD Operator, Gardline Environmental to BOWL Client Representative on 2 July 2017 at approx. 13:30).

Detailed description:

(i) Piling had commenced at location BE-E4 at 13:15 on 1 July 2017 following a period of nine days waiting on weather (last piling activity was on 22 June 2017 at location BE-D4). Three (B1, A2 and A1) of the four piles were installed at location. Piling activity commenced at pile B2 at 02:38 however technical problems with the hammer during piling resulted in a break of 36 minutes (03:22 - 03:58). The ADD on-shift operator received a call from the Seaway Heavy Lifting hammer control office at 03:58 to advise that piling could restart at B2 and there was a discussion between the ADD on-shift operator and Seaway Heavy Lifting control office as to whether the ADD was required to be reactivated. The ADD on-shift operator did not refer accurately to the piling mitigation protocol and as such agreed with Seaway Heavy Lifting hammer control office that ADD reactivation was not necessary on this occasion but that a post-break soft start would need to be carried out.

(ii) Following a break of 36 minutes at location BE-E4-B2 piling recommenced with six blows at the following energies: 607kJ, 555kJ, 572kJ, 525kJ, 526kJ and 518kJ respectively. This is contrary to the piling mitigation protocol which requires the soft start procedure (following break of >10mins but <2.5 hrs) to be initiated with ~5-6 blows at as low an energy as practically possible ($\leq 300\text{kJ}$).

2. Actions taken by BOWL's ECOW

2 July 2017, initial advice from BOWL's Support ECoW to Gardline Environmental as follows:

- Non-compliance did not result in a stoppage to works as reporting of incident only occurred following completion of piling at location BE-E4-B2 and corrective measures were implemented prior to commencement of piling at next location (BE-F2 03/07/2017 at 02:09) (see details in box 4 below);
- Requested all written information regarding the investigation be sent through to BOWL's ECoW no later than 3 July 2017;
- Extra vigilance to be shown after stoppages and pauses in piling;
- Toolbox talks and additional briefing prior to shifts be undertaken to raise awareness; and
- Communications be increased throughout piling operations and to 'over communicate' and ask questions as necessary.

3 July 2017, BOWL's ECoW had discussions on details of non-compliance, root cause and corrective measures with: BOWL's Support ECoW, Gardline Environmental, BOWL Client Representative, BOWL Package Manager, BOWL Environmental Advisor, and BOWL Senior Project Manager. BOWL's ECoW drafted non-compliance report.

4 July 2017, following analysis of Passive Acoustic Monitoring ("PAM") records, Gardline Environmental confirmed to BOWL's ECoW that there were no marine mammal detections observed on the spectrogram during the 36 minute break period. BOWL's Environmental Advisor discussed the details of the non-compliance with the University of Aberdeen (leading BOWL's Marine Mammal Monitoring programme ("MMMP")) and confirmed to BOWL's ECoW that, with reference to the PAM records and the initial findings of the construction MMMP, it is thought unlikely that any marine mammals would have returned to the injury zone during the 36 minute break period given the indications of disturbance and return times noted to date for harbour porpoise. BOWL's ECoW notified MS-LOT of non-compliance at 11:30.

6 July 2017, BOWL's ECOW non-compliance report submitted to Marine Scotland Licensing Operations Team.

3. Actions taken by BOWL Client Representative

Reported non-compliance to BOWL's ECOW on 2 July 17 at 13:39.

In collaboration with ADD Operators and Seaway Heavy Lifting's Assistant Superintendent, discussed specifics of non-compliance 2 July 2017 to 4 July 2017.

Discussed details of non-compliance with Seaway Heavy Lifting personnel at vessel daily progress meetings on 3 July 2017 and 4 July 2017

4. Agreed corrective measures and recommendations

Initial corrective measures, in addition to the measures undertaken by BOWL's ECoW and BOWL Client Representative as detailed in box 2 and box 3 above, included:

- Lead ADD Operator reiterated (both initially and as a follow-up) break procedures to ADD Operator on-shift .
- Lead ADD Operator checked that only approved documents were visible on office walls and in procedures folder.
- Lead ADD Operator explored potential benefit of adjusting ADD Operator shift patterns.
- Lead ADD Operator and BOWL Client Representative re-iterated the soft start procedure to Seaway Heavy Lifting Hammer Control Operatives and Assistant Superintendent.
- BOWL Senior Project Manager raised incident at BOWL Weekly Project Management Meeting and discussed package response to Key Contractor (Seaway Heavy Lifting) non-compliance.

Further corrective measures and recommendations:

- Gardline Environmental to ensure that only the approved documents such as the flowchart agreed with BOWL are used to inform the procedure to be followed and that new ADD Operators are instructed to use only the approved documents.
- Gardline Environmental to restructure their Beatrice project briefing to include an interactive element in the form of a series of piling mitigation protocol scenarios for each participant to run through thus ensuring participants have a better understanding on the protocol.
- Gardline Environmental to ensure that ADD Operators continue to receive a more thorough Beatrice project briefing before they join (or re-join) the vessel.
- BOWL Package Manager to discuss non-compliance with BOWL's ECoW and agree any further corrective measures in relation to the Key Contractor (Seaway Heavy Lifting).
- BOWL's ECoW to visit the vessel (Stanislav Yudin) between 12 July 2017 – 16 July 2017 and carry-out the following:
 - Present recommendations of the non-compliance report to BOWL Client Representative, ADD Operators and relevant personnel within Seaway Heavy Lifting;
 - In collaboration with Lead ADD Operator, prepare and present a refresher toolbox talk on compliance with the Piling Strategy to relevant personnel within Seaway Heavy Lifting;
 - Carry out refresher toolbox talk with BOWL Client Representative and ADD Operators on BOWL's Offshore Environmental Incident and Non-Compliance Procedure (LF000005-PR-915); and
 - Observe piling activities and discuss and agree any recommendations with affected parties.

Approved by ECoW

Checked by BOWL Client Representative

Signed-off by BOWL Offshore Consents Manager

From: [REDACTED]

Sent: 07 September 2017 15:32

To [REDACTED]

Subject: RE: 20170707 LF000005-REP-1915 BOWL ECOW Non-Compliance Report - LF000005-PLN-142 Piling Strategy Rev 04 Section 10.2 (Section 36 Condition 12)

H [REDACTED]

SNH have been receiving the ECoW compliance reports and marine mammals reporting sheets upon receipt since piling began at Beatrice in April this year.

These reports are both informative and timely and highlight where any non-compliance has occurred. BOWL have set a good standard with these reporting practices.

In July, a non-compliance event was recorded and reported to both MS and SNH. The non-compliance report indicates details of the event which occurred – piling occurring after a break without use of ADD as per the agreed protocol. The ECoW report subsequently provides information on the steps taken to review the cause and the remedial actions taken. SNH are therefore content that lessons have been learned and that this type of event is unlikely to be repeated.

In the August reporting form we have noted that a basking shark has been observed close to a piling event within 150m. We would be interested to see the photograph that has been taken and are currently assessing whether or not we need to provide any additional advice on this – noting that we did not ask for any cessation in piling activity if an animal was seen once piling activity had begun and soft start had been carried out. We hope to provide further comments on this aspect next week.

I hope these comments are of assistance, but please contact me if you require any further advice.

Best wishes.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Perth, PH1 3EW

Please note the email address for all marine energy correspondence is marineenergy@snh.gov.uk

From: [REDACTED]

[REDACTED] September 2017 11:37

To: [REDACTED]

Subject: FW: 20170707 LF000005-REP-1915 BOWL ECOW Non-Compliance Report - LF000005-PLN-142 Piling Strategy Rev 04 Section 10.2 (Section 36 Condition 12)

Good morning,

Further to the email below, I would be grateful if you would forward any comments you have on this non-compliance as soon as possible and before the 8th September.

Many thanks,

[REDACTED]

From: [REDACTED]

[REDACTED].14

To: [REDACTED]

[REDACTED]

Subject: FW: 20170707 LF000005-REP-1915 BOWL ECOW Non-Compliance Report - LF000005-PLN-142 Piling Strategy Rev 04 Section 10.2 (Section 36 Condition 12)

Dear Sir/Madam,

Please find attached the ECoW non-compliance report received from BOWL in relation to Piling in July 2017.

We would be grateful for any comments you may have on this by 22nd August 2017.

Yours faithfully,

[REDACTED]

[REDACTED]

[REDACTED]

Scottish Government

Marine Laboratory

375 Victoria Road

Aberdeen

AB11 9DB

Direct Line: +44 (0)1224 295683

e: [REDACTED] MS.MarineRenewables@gov.scot

w: <http://www.gov.scot/marinescotland>

[REDACTED],

Thank you for sending the BOWL non-compliance report through. I have had an opportunity to review it and note that there were two non-compliant actions. The first was in the advice provided by the ADD operator that there was no requirement to use the ADD, which is contrary to the agreed piling mitigation protocol. The second was the hammer energy used by the piling contractor, which the piling mitigation protocol requires to be less than 300kj for the first few hammer blows.

This combination of failures to employ mitigation has the potential to lead to a situation where marine mammals are exposed to noise levels sufficient to cause injury. While analysis of passive acoustic data suggests that cetaceans were not present, such data cannot provide that comfort for seals, since they vocalise infrequently.

Given that this is the first non-compliance to have been brought to our attention, our main concern is ensuring that procedures are reviewed and actions are taken to ensure that this does not happen again. The non-compliance report indicates that such a review has taken place, and that actions, which appear to be appropriate, were taken. We assume that since no further non-compliance has been reported, there have been no further incidents of this sort. We would, however, suggest that may be worth BOWL requesting that the ECoW undertakes periodic reviews of how the protocol is being implemented, to ensure on-going compliance.

[REDACTED]
[REDACTED]

[REDACTED]
Marine Mammals Specialist