

Shoalhaven Starches Pty Ltd
C/- Cowman Stoddart Pty Ltd
29-31 Kinghorn Street
Nowra NSW 2541

Reference: 2007001e-l.docx

Attention: Mr Stephen Richardson
Telephone: 02 4423 6198
Email: stephen@cowmanstoddart.com.au

1 December, 2020

Dear Stephen,

MODIFICATION 19 TO SHOALHAVEN STARCHES EXPANSION PROJECT 06_0228.

ADDITIONAL INFORMATION REQUEST – ENVIRONMENTAL NOISE ASSESSMENT

Shoalhaven Starches Pty Ltd has recently submitted a modification application to the NSW Department of Planning, Industry and Environment seeking approval for modification to allow for a further increase in the proportion of beverage grade ethanol produced at the Site (Mod 19).

At the time of the application, Harwood Acoustics Prepared an Environmental Noise Impact Assessment, reference 2007001E-R, dated September 2020 (the NIA). The NIA among other things assessed noise emission from the plant and equipment associated with the modification. The NIA established noise design goals for the noise sources associated with Mod 19 to ensure that the overall noise emission from the Site does not increase because of the new additional noise sources.

Following submission of the NIA, the NSW EPA has requested some additional information and clarification in relation to the NIA in its letter to the Department of Planning, Industry and Environment, reference DOC20/473110-8.

I am pleased to advise that I have reviewed the request and have prepared a revised NIA, Revision A (the Rev A NIA), which addresses the items raised by the EPA and can offer the following comments as clarification:-

Each bullet point below is a summary of the EPA request and indented below that is my response to indicate how each request has been addressed.

- 1 (A) Annoying Characteristics – The NIA did not address the potential for annoying characteristics arising from any of the noise sources associated with the Modification.
 - This is now assessed in the Rev A NIA, Section 4.2.3.
- 1 (B) Assessment of Noise Enhancing Weather Conditions – The NIA should assess the worst case noise level predictions under potential noise enhancing weather conditions in accordance with the EPL meteorological conditions.
 - This is addressed in the Rev A NIA, Section 4.2.1
- 1 (C) Further Details of Modelling Inputs – The NIA should provide detailed information in relation to how the predicted noise levels are derived including, but not limited to, noise source heights, modifying characteristics, noise enhancing weather conditions, etc. The response should also address any discrepancies relating to noise levels of plant and equipment that may differ from previous assessments of similar items in previous modification applications.
 - This is addressed in the Rev A NIA, Section 4,
 - A computer-generated noise model using *SoundPLAN* Essential has been established and details of the modelling parameters are provided in Section 4.2.1 of the Rev A NIA,
 - Examples of the 3D model are provided in Appendix A along with up close graphics of the noise source heights and locations in Appendices B and C,
 - A noise contour map is provided in Appendix E showing the predicted noise levels at Receptors R3 and R4 in Bomaderry, and
 - A Table of predicted noise levels for all four receptors is provided in Appendix D which shows the contribution of each individual noise source.
 - The NIA contained an error with respect to the stated sound power level (L_w) for the ethanol distillery plant and equipment. The NIA stated an L_w 98 dBA, which should have been 90 dBA in keeping with previous assessments and noise measurements of similar plant under, for example, Modification 12,
 - Noise modelling and predicted noise levels were based on the L_w 90 dBA level and have not changed consequently,
 - The inclusion of 98 dBA was a typographical error, derived from the manufacturer's stated noise design goal,
 - This has been corrected in the Rev A NIA and resultant changes made to the noise control recommendations in Section 6 to ensure the noise level is achieved in practice, or additional treatment is implemented.
- 2 (A) Cumulative Noise Impacts and Post Construction Compliance Assessment The NIA does not provide a cumulative assessment of overall Site noise levels. Rather it established noise design goals for new items of plant and equipment that are designed to ensure that overall noise emission from the Site is not increased as a result of the introduction of new noise sources.
 - To demonstrate that the cumulative noise levels from the Site are not increased by noise sources associated with Modification 19, the Rev A NIA (Section 4.2.4 and Section 6.3) and Shoalhaven Starches undertake to conduct a post commissioning noise compliance assessment,

- This will essentially comprise:-
 - Direct noise measurement (where practicable) and assessment of the level of noise emission from the Shoalhaven Starches facility at each of the identified receptor locations in Nowra, Bomaderry and Terara,
 - This will be done prior to commissioning of the Modification 19 noise sources and after commissioning, to determine the contribution of the new plant and equipment to the overall noise levels,
 - The assessment will determine compliance with the noise design goals for the Mod 19 plant and equipment as well as compliance with the EPL noise limits at all receptors for the overall operation of the Site,
 - The noise surveys will include an assessment of modifying factor corrections,
 - If the noise design goals are exceeded for the Mod 19 plant and equipment and / or that overall Site noise exceeds the EPL noise limits at any receptor locations, a detailed noise control assessment and design will be undertaken.

I trust this response along with the revised NIA addresses the queries raised by the EPA.

Please do not hesitate to contact the undersigned should you require any further information or clarification.

Yours faithfully



Matthew Harwood, MAAS
Principal Acoustical Consultant