From: Tracey Webb
Sent: Tuesday, 1 December 2020 3:33 PM
To: Tracey Webb
Subject: FW: Email to Dept Planning - DA2017-1338 - Forwarding Caltex Latest Response 10-07-20 - Amended Proposal & Information -reports for Wickham Woolstores Redevelopment - 33 Annie St Wickham

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From: Nicholas Hon <Nicholas.Hon@planning.nsw.gov.au>
Sent: Friday, 24 July 2020 4:39 PM
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Subject: RE: Email to Dept Planning - DA2017-1338 - Forwarding Caltex Latest Response 10-07-20 - Amended Proposal & Information -reports for Wickham Woolstores Redevelopment - 33 Annie St Wickham

Hi Amanda,

We provide this finalised advice following our interim advice of 10 June 2020, after reviewing the following technical reports on Hazards and Risks, referenced in Allens' letter of 1 May 2020:

- [HRA r1] Hazard and Risk Assessment for the Development of the Wickham Wool Stored adjacent to the Existing Caltex Fuel Depot (document number INVESTEC\01-B431, revision 1 v2, dated 30 April 2020, prepared by Planager); and
- [RER] Risk Equivalence Review, AS1940:2017 Separation Distance Non Compliances, Caltex Newcastle Terminal, Caltex Australia Petroleum Pty Ltd (document number 21345-RP-001, revision 1, dated 5 September 2019, prepared by Sherpa Consulting).

The review of the above reports also considers Caltex's submission of 8 July 2020 and SafeWork NSW's submission of 4 June 2020.

We also refer to the previous HRA (revision 0, dated 25 June 2017) [HRA r0] and Planager's letters of 12 February 2019 and 22 May 2019 in response to our advice to Council after reviewing HRA r0. As such, we expected the approach discussed in Planager's letters to be incorporated into HRA r1.

In reviewing HRA r1 with Caltex's submission, we have noted differences in the technical opinions, assumptions and analysis presented between Planager (Applicant's risk consultant) and Caltex. Moreover, we have noted differences in the technical assumptions and approach between HRA r1

and Planager's letters. Given these differences, we are uncertain if HRA r1 appropriately represents the risks from the Caltex Newcastle Terminal for estimating the risk exposure to the DA. Therefore, we are unable to verify if the DA can comply with the Department's HIPAP 10 land use safety risk criteria. To resolve these differences, we recommend Planager to provide items 1 to 3 below.

1. A technical response to Caltex's submission of 8 July 2020, especially Sections 6 and 7 of the submission in full. We consider these sections to be relevant in assessing HRA r1. Amongst the issues requiring responses are:
    a. The assumptions applied for analysing VCE scenarios.
        i. We note HRA r1 page 19 indicating overpressures could occur from VCE scenarios. However, these overpressures have not been estimated quantitatively. As such and in view of Caltex's comments, further clarification on overpressure estimation should be provided, including if 7 kPa injury and 21 kPa fatality overpressure contours can extend beyond the consequence ranges already estimated using the UK HSE VCE model.
        ii. We note significant discrepancies between Caltex and Planager in estimating the likelihood of VCE scenarios. In noting from Caltex comments that these discrepancies are at least 3 orders of magnitude and in understanding that Planager attempted to estimate likelihoods based on generic OGP, Planager should provide the full calculation to estimate the likelihood of VCE scenarios based on first principles (i.e. based on the number of tank filling operations per year and overfill protection failure on demand) and verifying these results against Caltex's comments, especially Figure 7.4.1.

    b. The RER demonstrating that the Caltex Newcastle Terminal is capable of operating with at least an equivalent level of safety to AS 1940:2017 only in respect to existing land uses surrounding the terminal and not considering the change in land uses arising from the DA.
        i. We note SafeWork NSW's submission of 8 July 2020 and concur that the risk of catastrophic tank failures at Caltex Newcastle Terminal has not been eliminated, thus requiring this risk to be controlled so far as reasonably practicable. We also note from this submission that Caltex has been working proactively with SafeWork NSW in controlling this risk.
        ii. In reference to item 2e of our interim advice, Caltex has clarified the context/purpose of the RER in Section 6.1 of their submission. We understand from the RER and Section 6.1 in Caltex's submission that the Caltex Newcastle Terminal is capable of operating with at least an equivalent level of safety to AS 1940:2017 in view of existing land uses surrounding the terminal (i.e. 'off-site protected places' under AS 1940:2017) despite differences to strict prescriptions under AS 1940:2017. In view of this understanding, we raise the following matters:
            - The understanding that the terminal is capable of operating with an equivalent level of safety to AS 1940:2017 is valid only in view of existing land uses surrounding the terminal which are primarily industrial. This understanding may not be valid if residential and commercial land uses are introduced, which is the scope of the DA. As such, the DA may cause the terminal to regress from the present equivalent level of safety to AS 1940:2017.
            - As already indicated in item 2d of our interim advice, the RER did not specifically assess if the risk exposure to the DA from the terminal can comply with the HIPAP 10 land use safety risk criteria. Therefore, the

terminal operating with at least an equivalent level of safety to AS 1940:2017 in view of any land uses does not imply that the risk exposure to the DA from the terminal can comply with HIPAP 10.

- Despite the RER and Section 6.1 of Caltex's submission concluding that the terminal is presently operating with at least an equivalent level of safety to AS 1940:2017 in view of existing land uses surrounding the terminal, we stress our view that the terminal is only, at this stage, capable in achieving this level of safety. The terminal bunding deficiencies highlighted in SafeWork NSW's prior submission of 30 September 2019 have not been clearly addressed in the RER. Until the bunding deficiencies have been resolved appropriately, the risks of leaks or spills extending beyond bunded areas cannot be ruled out which subsequently can impact the DA.

2. Justification in adopting the different approach in HRA r1 rather than the approach in Planager's letters of 12 February 2019 and 22 May 2019 which we expected to be incorporated in HRA r1. We noted the following differences:
    a. Planager's letter of 22 May 2019 indicating that the upper bound risk estimate would be able to comply with HIPAP 10 both for individual risks and societal risk, with this upper bound risk estimate assuming gasoline storage in all tanks, VCE scenarios and risk reduction taken only for bunding. HRA r1 appears not to consider gasoline storage in all tanks while applying additional risk reduction for other safeguards such as tank overfill protection systems.
    b. HRA r1 Figure E3 (Buncefield included) indicating societal risk within the ALARP region while Figure 4 in Planager's letter of 22 May 2019 indicating societal risk within the negligible region, despite less conservative assumptions applied for HRA r1 compared to Planager's letters. With regards to societal risk within the ALARP region, HIPAP 10 Section 5.5.4 states "options should be considered to relocate people away from the affected areas. If, after taking this step, there is still a significant portion of the societal risk plot within the ALARP region, the proposed development should only be approved if benefits clearly outweigh the risks."

3. Revise the HRA in view of items 1 and 2 above.

Notwithstanding the above items requiring further response, we reiterate (item 3 of our interim advice) the HRA assuming that leaks or spills from tanks at the Caltex Newcastle Terminal will be fully contained within bunds and will not extend beyond bunded areas, thus limiting the spread and potential impacts from these scenarios. Although not clearly stated in HRA r0, Planager's letters and HRA r1, this assumption remains critical in estimating the risk exposure from the terminal to the DA. In noting the bunding deficiencies at the terminal described in SafeWork NSW's submission of 30 September 2019, it is not certain if leaks or spills from tanks can be fully contained within bunds. As such, even if items 1, 2 and 3 above have been addressed appropriately, the bunding assumption will need to be revised to verify if the DA can comply with the Department's HIPAP 10 land use safety risk criteria.

Moreover, even if the DA is acceptable in terms of risks and the bunding deficiencies have been resolved appropriately, the DA must be designed to be protected against the potential consequences from the terminal. To this end, it remains uncertain how this can be accomplished, especially in view of the constraints imposed on the DA's design due to other assessment issues such as heritage and amenity.

Given the outstanding issues above, we are unable to verify if the DA is acceptable in terms of Hazards and Risks. Given the uncertainties of the issues discussed above, it is considered that these issues cannot be addressed or resolved through consent conditions. Should the consent authority wish to proceed in determining the DA based on the existing information to date, the current Department's position are as follow:

- Given the items discussed above, the current HRA rev 1 may not be considering the worst-case scenario in accessing the risk from Caltex Terminal to the proposed DA.
- Planager must revise the HRA r1 to reflect the actual bunding deficiencies to verify if the DA can comply with the Department's HIPAP 10 land use safety risk criteria in light of the bunding deficiency.
- The currently reported incremental societal risk may be further increased as a result of resolving the items above. Referring to the HIPAP 10 Section 5.5.4, it states "options should be considered to relocate people away from the affected areas. If, after taking this step, there is still a significant portion of the societal risk plot within the ALARP region, the proposed development should only be approved if benefits clearly outweigh the risks."

Please contact me if there are any queries on our advice.

Thanks.

Regards,

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