

ASSESSMENT REPORT

Section 75W Modification Tooheys Brewery, Lidcombe – Wastewater Treatment Plant (06_0303 Mod3)

1. PROJECT BACKGROUND

The Tooheys brewery is located at Lidcombe (see Figure 1) and has been operating since the 1960s. It was initially used as a packaging facility and brewing commenced at the site in 1978.

In July 2007, the then Minister for Planning approved a major upgrade to the brewery which included:

- a new Beer Processing Building and upgrade of the associated beer processing equipment;
- a new Bright Beer Tank (BBT) Cellar and BBTs;
- an increase in production capacity to up to 3.3 hectolitres of beer per annum; and
- upgrade of utility services including the heating, refrigeration and compressed air plant.

The upgrade works, which have been completed, included significant works to reduce the electricity and natural gas consumption of the brewery.

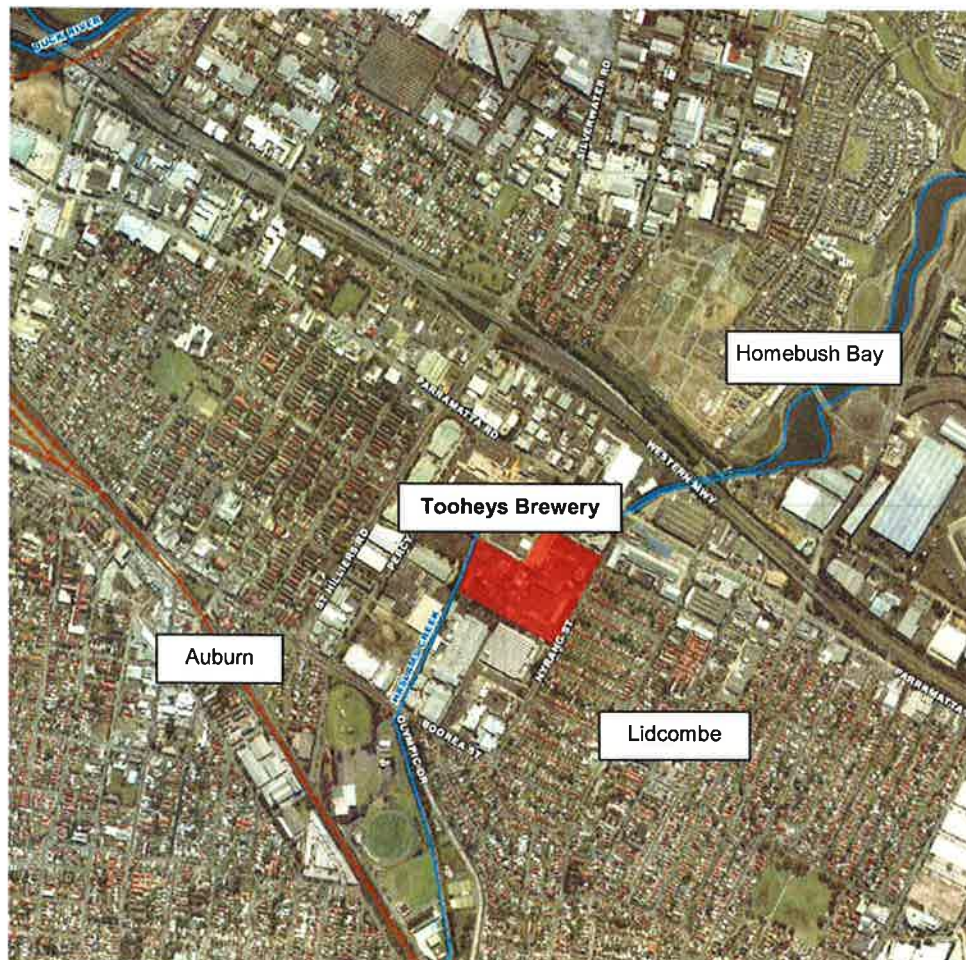


Figure 1: Site Location

Since the 2007 upgrade approval, the Minister has approved two further modifications:

- 06_0303 MOD1 - to install a 2MW Cogeneration Plant in order to further reduce the brewery's consumption of grid electricity. The Cogeneration Plant works in conjunction with the two highly efficient boilers approved as part of the 2007 upgrade; and
- 06_0303 MOD2 - to install new fermentation vessels and make minor changes to the site layout to allow for a longer processing time for the Heineken product.

2. PROPOSED MODIFICATION

Tooheys are now seeking to modify the Minister's approval to install a Wastewater Treatment Plant (WWTP) and a new cooling tower at the site.

The modification is a result of a directive from Sydney Water to Tooheys to improve the quality of its liquid trade waste under a new trade waste agreement which will likely be in force from August 2014.

In order to improve the liquid wastewater quality, Tooheys propose to install a WWTP onsite to treat an average flow of 2,400 kL of wastewater per day with a maximum daily peak of 3,240 kL. The plant would treat raw wastewater via a two stage process to improve water quality prior to discharge to Sydney Water's trade waste system.

The two stage treatment process includes:

- Stage 1 - Primary treatment (Anaerobic digestion); and
- Stage 2 - Secondary treatment (Aerobic polishing).

Within Stage 2 there are two potential treatment methods:

- Membrane bioreactor; or
- Dissolved air flotation.

The decision to adopt the membrane bioreactor or dissolved air flotation technology would depend upon the outcome of a feasibility stage. Notwithstanding, both technologies have been considered in this assessment.

In addition to secondary treated wastewater, the WWTP would produce approximately 4,400 m³ of biogas per day which is proposed to be combusted within an existing boiler on-site. The biogas would supply approximately 12% of the site's thermal energy requirements, significantly reducing the need to import natural gas.

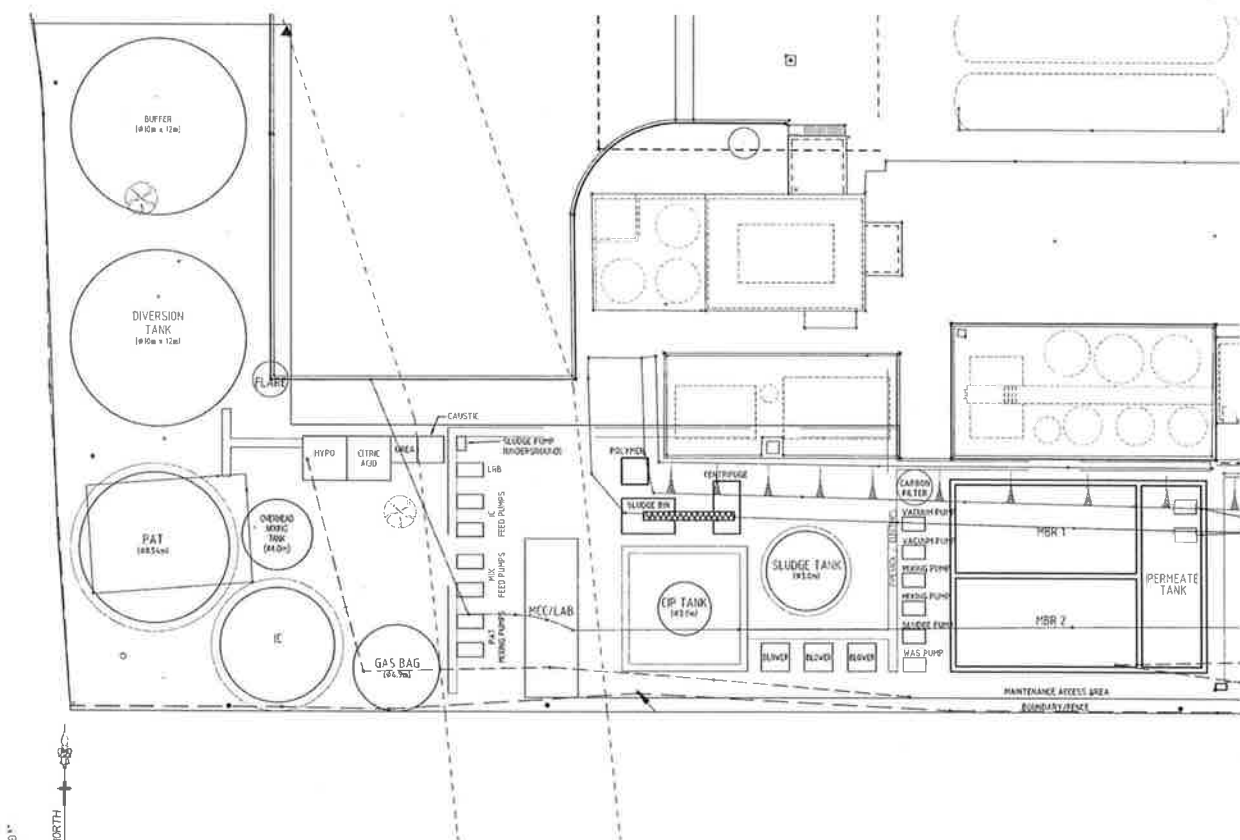


Figure 2: Layout of Proposed Wastewater Treatment Infrastructure

The WWTP would be located on the rear boundary in the western corner of the site adjacent to industrial neighbours (refer to Figure 3) and approximately 275m from the nearest residential receptor.

It would be operational 24 hours a day, 7 days a week which is consistent with the approved operating hours for the rest of the brewery. Construction would occur over 19 months with the civil stage (earthworks and concrete pour) taking 4-5 months.

To meet Sydney Water's timeframes, Tooheys require construction of the WWTP to commence by July 2012 to have the plant fully operational by August 2014.

The total capital expenditure for the WWTP is estimated at approximately \$20M.

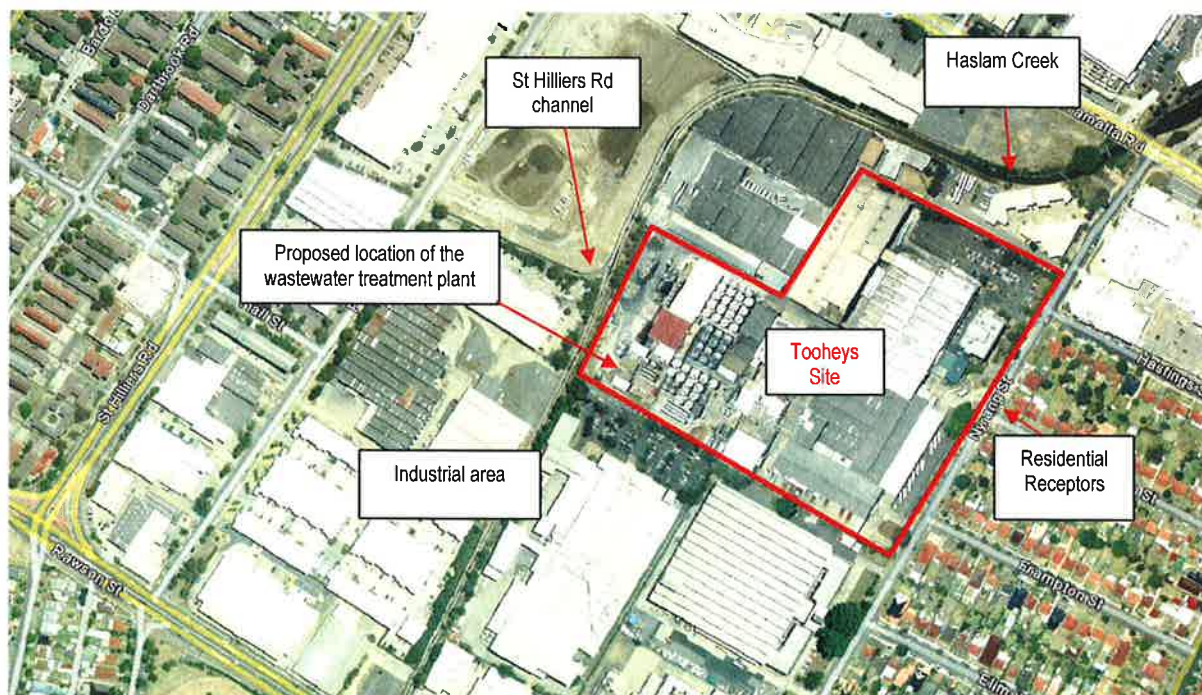


Figure 3: Proposed WWTP location relative to the brewery site

3. STATUTORY CONTEXT

3.1 Approval Authority

The Minister was the approval authority for the original project and is consequently the approval authority for this application.

However, under the delegation instrument of 14 September 2011, the Executive Director, Major Projects Assessment may determine this application on behalf of the Minister. The Minister has confirmed this delegation, subject to the local council not objecting to the proposal, there being no reportable political donations and less than 25 public submissions objecting to the proposal.

Toohey's modification application meets the terms of this delegation and the Executive Director, Major Projects Assessment may therefore determine the application under delegated authority.

3.2 Section 75W

In accordance with clause 12 of Schedule 6A of the EP&A Act, section 75W of the Act as in force immediately before its repeal on 1 October 2011 and as modified by Schedule 6A, continues to apply to modifications of the development consents referred to in clause 8J (8) of the EP&A Regulation 2000.

Under Section 75W of the EP&A Act, the Minister is obliged to be satisfied that what is proposed is indeed a modification of the original proposal, rather than being a new project in its own right.

The Department notes that:

- the proposed modification does not seek approval for a new and different project for which approval was granted; and
- any potential impacts would be minimal and could be appropriately managed through the existing or modified conditions of approval.

It is therefore recommended that the Executive Director, Major Projects Assessment as delegate for the Minister, agree that the modification falls within section 75W of the *Environmental Planning and Assessment Act 1979*.

3.2 Consultation

The Department made the EA for the modification publicly available on its website and sought submissions from the Office of Environment and Heritage (OEH), Auburn City Council (Council) and Sydney Water (SW). Consultation with other government agencies and neighbouring sites was considered unnecessary, as the environmental impacts of the proposal would essentially remain unchanged from the approved project.

The OEH did not object to the proposed modification but requested that any proposed conditions of approval include the requirement for additional odour impact assessment and air quality management for the whole of site.

Council did not object to the proposed modification, however, it did request that Tooheys comply with the existing limits for odour and noise, and maintain a direct traffic route to Penrith Road for biosolid removal from the site.

Sydney Water support the project, however, they did highlight some issues that warrant further consideration such as adequate bunding of the treatment tanks and bulk reagent storage, and other minor operational/design issues. These issues were addressed through further consultation.

The Department has considered Council's, OEH's and Sydney Water's comments in its assessment of the proposed modification.

4. ASSESSMENT

In assessing the merits of the modification, the Department has considered the following:

- Toohey's original environmental assessment,
- Toohey's project approval as modified (Consolidated Approval at Appendix D);
- Toohey's modification application and supporting environmental assessment (refer to Appendix B)
- agency submissions (refer to Appendix C);
- Toohey's response to submissions; and
- the relevant environmental planning instruments, guidelines and policies.

Table 1 provides the Department's assessment of the key issues associated with the modification. All other issues are considered to be minor and able to be managed through the implementation of standard safeguards and measures contained within Toohey's existing Construction Environmental Management Plan or conditions of approval.

Table 1. Summary of Issues

Issue	Assessment	Recommendation
Noise	<ul style="list-style-type: none"> The most stringent noise criterion for the Tooheys site is the 50dB(A) which applies at the boundary of the closest sensitive receiver (24 Nyrang Street) at all times. The proposed WWTP would operate 24 hrs 7 days per week. Sources of noise would include pumps, treatment vessels, exhaust flues, blowers and water discharge. These components would be contained within buildings where possible to mitigate against noise impacts. The Noise Impact Assessment (NIA) for the modification showed that, with the proposed noise mitigation measures in place: <ul style="list-style-type: none"> operational noise levels at both the industrial boundary and at residential receivers is not expected to be significantly altered and would comply with the existing noise limits for the brewery. The Department is satisfied that noise from the project would meet the relevant criteria at all receptors. Notwithstanding, additional conditions are recommended which give the Director-General the power to require Tooheys to employ additional mitigation should noise levels exceed the project noise criteria. 	<ul style="list-style-type: none"> Recommended conditions require Tooheys to: <ul style="list-style-type: none"> undertake a noise validation of the WWTP within 90 days of commencement of operation to demonstrate the findings of the EA; should the results of the noise validation show an exceedence of the noise criteria, Tooheys shall employ additional mitigation to reduce noise impacts from the site, to the satisfaction of the OEH and the Director-General.
Visual	<ul style="list-style-type: none"> Stage two (Secondary Treatment Process) of the proposed WWTP requires the installation of a number of tanks (approximately 3) up to a height of 28 metres. These include the pre-acidification tank, anaerobic reactor and the anaerobic sludge tank. Given the location of the WWTP in relation to the existing process equipment at the site and residential receptors (refer to Figure 3), it is considered that the plant and equipment required for the WWTP is comparable to the heights of other nearby process equipment and would not be visible from residential areas on Nyrang Street. 	<ul style="list-style-type: none"> Existing conditions of approval are considered adequate.
Odour	<ul style="list-style-type: none"> Existing odours at the site are considered to be negligible, and no odour complaints relating to the current operations have been received by public authorities. The process of anaerobic digestion produces small quantities of odourous hydrogen sulphide. The proposed process equipment includes a number of odour mitigation measures including, but not limited to: enclosed vessels, off-gas treatment and activated carbon scrubbers. The Odour Assessment (OA) for the WWTP determined that under normal operations, the odour impacts are expected to be negligible and well below the 2OU odour objective relevant to the Tooheys site. Notwithstanding, Tooheys concede that there are inherent uncertainties in the odour predictions. Tooheys propose to undertake post commissioning testing for odour to validate the results of the OA and establish an odour complaints system. The Department is satisfied that the proposed design measures and Tooheys commitments would adequately address odour impacts from the WWTP. Notwithstanding, additional conditions are recommended that give the Director-General the power to require Tooheys to employ additional mitigation should odour impacts from the site become an issue. 	<ul style="list-style-type: none"> Recommended conditions require Tooheys to: <ul style="list-style-type: none"> comply with all monitoring (point) requirements and pollutant discharge concentration limits as specified in the site EPL; undertake odour validation within 60 days of commencement of operation of the WWTP to demonstrate compliance with the WWTP EA; undertake a facility wide odour impact assessment for all approved operations within 90 days of commencement of the operation of the WWTP; Prepare a facility wide Odour Monitoring and Management Plan within 12 months of commencing operation of the WWTP.

Issue	Assessment	Recommendation
Air Quality	<ul style="list-style-type: none"> The discharge points for the 2 boilers that serve the WWTP would be required to have stack monitoring under new EPL conditions. These emissions would be monitored on a quarterly basis and reported to the OEH and the Department annually through Tooheys annual report. No new conditions are proposed for air quality management, as the Department considers that the existing conditions of approval and the EPL are appropriate for the ongoing management of air emissions. 	<ul style="list-style-type: none"> Recommended conditions require Tooheys to: <ul style="list-style-type: none"> comply with all monitoring requirements and pollutant discharge concentration limits as specified in the site EPL.
Wastewater Quality	<ul style="list-style-type: none"> The proposal aims to improve wastewater quality discharged from the site to SW sewerage system. Tooheys existing wastewater has a Biological Oxygen Demand (BOD) of around 3000mg/L which is well above the new standard of 600mg/L. The proposed WWTP has been designed to achieve the standards for effluent quality discharged into Sydney Water's sewerage system, as follows: <ul style="list-style-type: none"> a total BOD of less than 600mg/L and soluble BOD of less than 100mg/L; and pH range of between 7.0 and 10.0 for 12 hrs after sample collection. The proposed WWTP would result in improved water quality discharge and contribute to the longevity of Sydney Water's infrastructure. 	<ul style="list-style-type: none"> Recommended conditions require Tooheys to: <ul style="list-style-type: none"> prepare and implement an operational management and maintenance plan for the WWTP.
Flooding	<ul style="list-style-type: none"> The site is located within the Haslams Creek Floodplain and flooding is expected on the site in the 100 yr ARI flood event. The varying flood levels on the site result in parts of the site being classed as medium flood risk while the remainder is classed as low flood risk. A recommended design floor level of 7.4mAHD for the 100 yr ARI flood event includes a 0.7 metre freeboard. Tooheys proposes to adopt a top of slab level of 7.4mAHD for the WWTP. It is considered that this level will not only reduce damage to the WWTP but it will also reduce the risk of environmental impacts on the surrounding areas from industrial waste contamination. The proposed WWTP is set back from the creek bank and is not expected to significantly impact flood storage volumes. 	<ul style="list-style-type: none"> Existing conditions of approval are considered adequate.
Spill Containment System/ Hazards	<ul style="list-style-type: none"> Tooheys carried out a preliminary hazard assessment (PHA) for the modification which determined that there would be a number of hazards and risks associated with the proposed WWTP. The PHA made a number of recommendations and proposed safeguards to mitigate the risks. Based on the information provided in the PHA, and provided the safeguards and recommendations of the PHA are implemented, the Department is satisfied that the project would not impose an unacceptable risk to the surrounding land uses. Notwithstanding, over the last few years a number of modifications have been approved. Given Toohey's rapid expansion and considering its location and potentially hazardous operations, the Department considers that a comprehensive Hazard Audit of the entire facility should be carried out every three years in accordance with the Department's - Hazardous Industry Planning Advisory Paper No. 5. 	<p>Recommended conditions require Tooheys to:</p> <ul style="list-style-type: none"> Install appropriate bunding in accordance with OEH and Sydney Water requirements; <u>Pre-Construction:</u> Prepare/update the following studies: <ul style="list-style-type: none"> Fire Safety Study Final Hazards Analysis Construction Safety Study <u>Pre-Commissioning:</u> Update the existing: <ul style="list-style-type: none"> Emergency Plan; Safety Management System; <u>Ongoing:</u> Undertake a Hazards Audit for the entire site within 12 months of commencement of operation of the WWTP, and then every 3 years thereafter.

Issue	Assessment	Recommendation
Traffic	<ul style="list-style-type: none"> Construction traffic associated with the WWTP is expected to peak during the civil stage of the project at approximately 5 truck movements a day. Operational traffic would consist of 4 truck movements per week. Tooheys have proposed a number of measures to address traffic impacts. These include: <ul style="list-style-type: none"> on-site parking for all vehicles; and designated traffic routes which avoid local roads. The Department considers that the additional truck movements associated with the construction and operation of the WWTP would not be significant and that the existing conditions of approval and proposed management measures would adequately address any potential impacts. 	<ul style="list-style-type: none"> Existing conditions of approval are considered adequate.

The Department has assessed the project, in accordance with the requirements of Clause 8B of the *Environmental Planning and Assessment Regulation 2000*, and considers that all potential impacts of the project can be suitably managed to ensure an acceptable level of environmental performance.

5. RECOMMENDED CONDITIONS OF APPROVAL

The Department considers that the proposal represents a minor modification of the project as approved and would not have any impacts beyond that assessed and approved.

The Department has recommended minor amendments to the current project approval to include the modification application within the terms of the approval.

6. CONCLUSION

The Department has assessed the merits of the proposal in accordance with the requirements in Clause 8B of the EP&A Regulation. This assessment has found that the proposed modification is minor and is unlikely to cause any significant impacts.

Further, the proposed WWTP will improve environmental performance in the areas of greenhouse gas emissions and wastewater quality.

Consequently, the Department is satisfied that the modification should be approved.

7. RECOMMENDATION

It is **RECOMMENDED** that the Executive Director, Major Projects Assessment:

- consider** the findings of this report;
- approve** of the proposed modification under Section 75W of the EP&A Act; and
- sign** the attached instrument (tagged A).

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