

ASSESSMENT REPORT

Dongwha Timbers MP 07_0161 MOD 2 Section 75W Modification

1. BACKGROUND

Dongwha Timbers Pty Ltd (Dongwha, formerly Willmott Timbers Pty Ltd) owns and operates a sawmill and timber processing facility off Sandy Lane, Bombala, in the Bombala local government area (see **Figure 1**). Products manufactured at the site include structural, landscaping, fencing and decorative timbers.

The site is located approximately 2km south-west of the township of Bombala, between Sandy Lane, Delegate Bombala Road (also known as the Bonang Highway) and Wedmore Road. The site is surrounded by farmland and the nearest residence is located on a property called 'The Parsonage' approximately 275 metres north-east of the site boundary.

Timber milling operations commenced on the site in 1979 and the facility has previously been the subject of more than 20 development consents issued by Bombala Council (Council) for various upgrades and expansions.

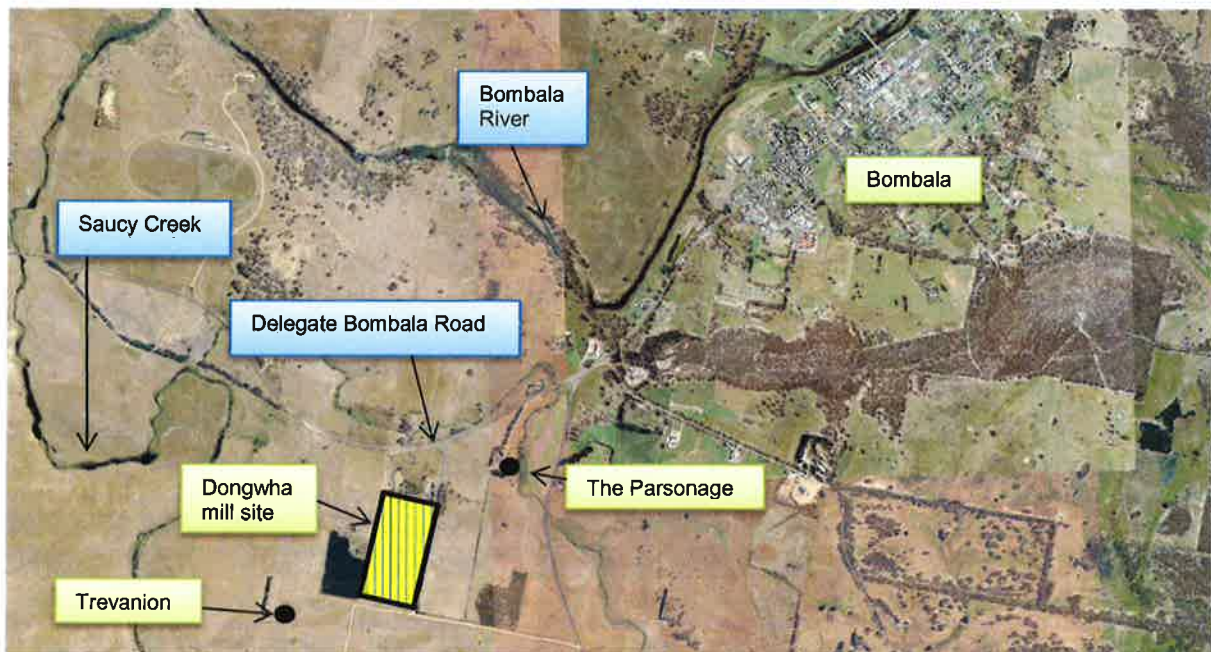


Figure 1: Dongwha timber mill and nearest rural residences

On 7 September 2010, the then Deputy Director-General under the delegation of the Minister for Planning, granted approval to Willmott Timbers Pty Ltd (now Dongwha, the Proponent) under the now repealed Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act) for the expansion of sawmilling and pole production at the site.

The approved Project (MP 07_0161) includes the construction of a new greenmill and timber treatment plant and associated infrastructure such as kilns, a new wastewater management

system, a new site access and a new office and car park. The Proponent is progressively implementing this expansion, and when completed, is permitted to:

- process up to 400,000 tonnes per annum (tpa) of sawlogs; and
- treat up to 150,000 tpa of timber for improved durability.

The approval included the installation and use of four boilers with a total capacity of 26 Megawatts (MW).

A condition of the Project Approval required the Proponent to surrender all previous consents for the site. As such, the Project Approval is now the only applicable approval for the operation of the facility.

Figure 2 provides an overview of the site layout and components.

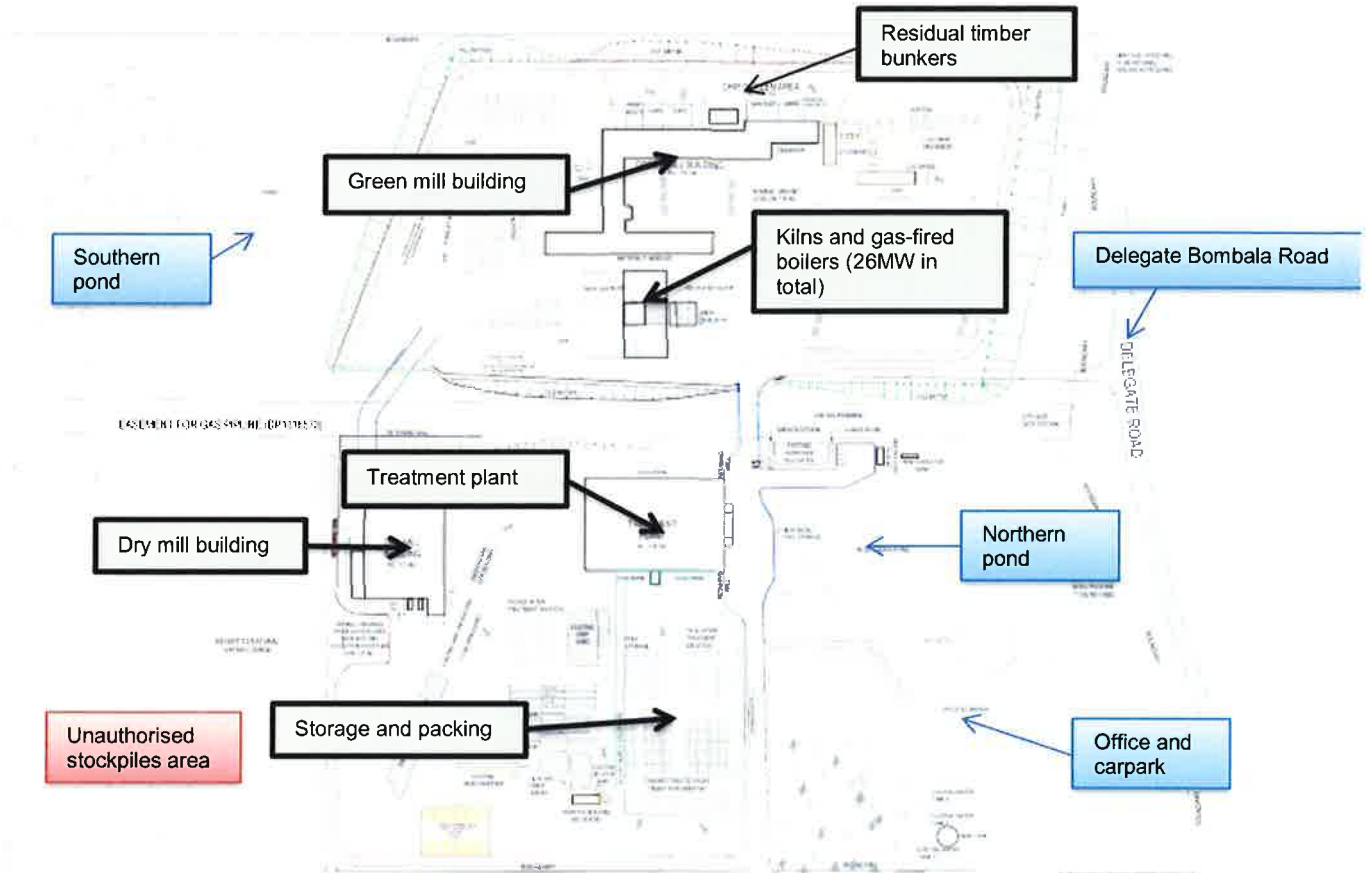


Figure 2: Approved site layout

1.1 Previous modification

A modification to the Project Approval (MOD 1) was approved by the Department on 10 February 2012. This modification allowed two broad changes, including:

- administrative changes so that the project is more accurately defined and developed in site “zones” rather than sequential stages; and
- minor changes to the design and layout of the mill.

2. PROPOSED MODIFICATIONS

On 12 September 2014, the Department received a modification request 07_0161 MOD 2 and supporting Environmental Assessment (EA) from GHD on behalf of the Proponent to install a new wood-fired boiler within its existing saw milling facility.

The installation of the new 18 Megawatt (MW) wood-fired boiler would replace the use of four previously approved boilers (with a total capacity of 26MW), including:

- three approved but not yet installed gas fired boilers (two x 10MW gas fired boilers and one x 3.5MW gas fired boiler); and
- an existing 2.5MW wood-fired boiler.

It is anticipated that the new boiler would be connected to the Green Off-Sawn (GOS) kilns and the 'redry' kilns by an above ground 300mm diameter steel steam pipeline. The new boiler is expected to meet the energy requirements of both these kilns, and have:

- considerably lower running costs than multiple boilers; and
- better thermal efficiency.

The boiler would cover a footprint of approximately 90 metres (m) by 30m, and would have an estimated height of 15m (with a stack height of 30m).

The proposed fuel source(s) for the new 18MW wood-fired boiler would be timber by-products from milling operations that are currently stockpiled on site. The proposed boiler would be located in close proximity to residual timber bunkers on existing hardstand as shown on **Figures 3 and 4**.

The boiler would utilise an estimated 21,525 tonnes of fresh sawdust and around 21,430 tonnes of wood shavings, woodchips and pine bark per annum.



Figure 3: Aerial view of the expanded facility (December 2012)

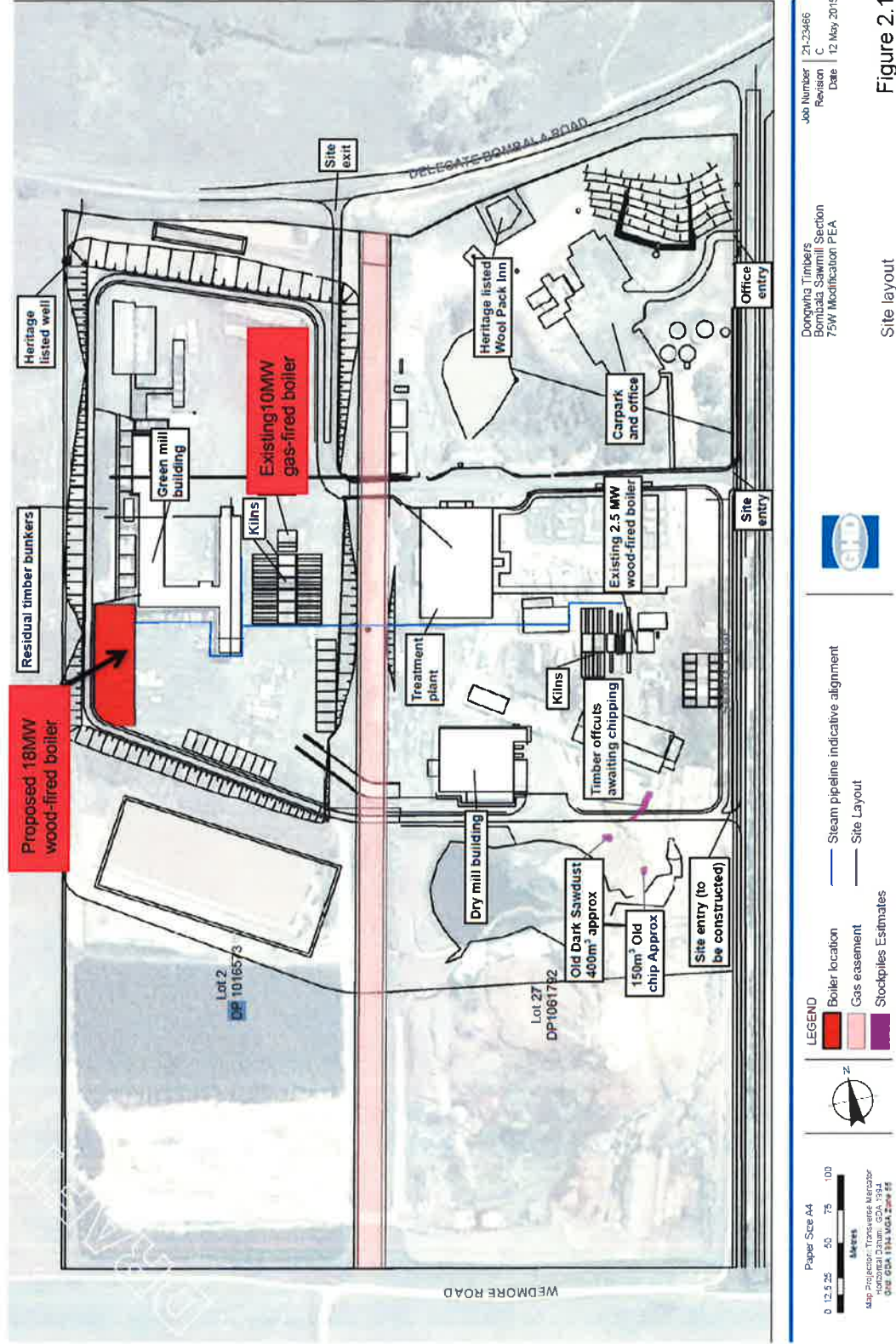


Figure 4: Approved site layout of facilities including the location of the proposed wood-fired boiler, and timber stockpiles

2.1 Compliance – wood stockpiles

The Proponent inherited a number of environmental legacy issues from the previous owners of the mill, including soil and water contamination from the use of copper chrome arsenic in the timber treatment process, and a large stockpile of wood residue and sawdust from the timber milling operations (see **Figure 5**).



Figure 5: Woodchip stockpiles at the site in 2013

As such, the Project Approval required the Proponent to address these issues. Condition 26 of the Project Approval required the complete removal of stockpiles from the rear of the site by June 2013.

While some timber residue products have been sold to the Visy paper mill in Tumut for recycling, and some sawdust and residual timbers have been transported to Sydney or Canberra for reuse and recycling, demand for the reuse of these products has been low. As such, large quantities of waste timber remain stockpiled on the site. In addition, the sawmill currently produces up to 800 tonnes of wood residue per day as a by-product of milling activities.

The large timber residue stockpile(s) at the rear of the premises have been a compliance concern for the Department and Environment Protection Authority (EPA) for several years, generating problems both onsite (that is contamination of the southern stormwater pond) and offsite (wind-blown residues on roads and neighbouring properties – see **Figure 6**).

At present, the Proponent is not complying with Condition 26 of the Project Approval. A key aim of the modification request is to assist in resolving this compliance issue, through the use of timber stockpiles in the proposed wood-fired boiler. Notwithstanding, this ongoing compliance issue is being handled as a separate matter by the Department's Compliance Team.



Figure 6: Windblown woodchip and dust at a nearby property in 2013.

2.2 Compliance - Noise

Due to the low ambient noise levels, the operational project specific noise limit for the mill is 35 dB(A) during all time periods at all surrounding residential receivers.

The EPA has received a number of complaints in relation to intrusive noise from the facility. Noise levels at the two nearest properties have been recorded at up to 11 dB(A) above the criteria. These exceedances have been attributed to the operation of the log in feed and sorting chain, green mill and dry mill.

Whilst the Proponent is working closely with the EPA and the Department's Compliance Team to resolve this issue, careful assessment of the noise impacts of the proposed 18MW wood fired boiler is required to ensure that no additional noise impacts on sensitive properties are generated. The Department's assessment of the potential noise impacts related to MOD 2 is in **Section 4.3** of this report.

3. STATUTORY CONSIDERATION

3.1 Approval Authority

The approval for the Dongwha facility was granted in 2010 under Part 3A of the EP&A Act.

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 transitional Part 3A projects.

Therefore the Minister for Planning is the approval authority for the modification application. Under the Ministerial delegation of 16 February 2015, the Executive Director – Infrastructure and Industry Assessments may determine the modification application as Council did not object, there were no political donation disclosures, and there were less than ten submissions in the nature of objections (with two such submissions being received).

3.2 Modification

The modification request is seeking to replace four approved boilers (including three gas-fired boilers and one wood-fired boiler) with a single large wood-fired boiler. The boiler would be designed to comply with statutory air emission requirements, and would enable the Proponent to manage residual timbers on site more effectively. The existing saw milling operations would not change. As such, the Department is satisfied that the request can be characterised as a modification to the original Project Approval, and can therefore be

assessed and determined under Section 75W of the Act, rather than requiring a new application.

3.3 Consultation and Submissions

The Department made the request publicly available on its website and invited submissions from the EPA, Council, Office of Environment and Heritage (OEH) and two nearby residences that have previously raised concerns with the site.

The Department received submissions from both of these residences raising concerns about potential air quality and noise impacts from the proposal.

The EPA and Council also provided submissions on the proposal.

Council fully supports the proposal. In its submission it stated that the opportunity to effectively utilise residue products for sustainable energy purposes has great merit.

The **EPA** raised a number of concerns with the proposal, including:

- lack of detail on the proposed noise levels and performance (i.e. model, size, capacity) of the proposed boiler;
- inadequacy of the air quality impact assessment; and
- lack of detail on the potential waste generated by the boiler.

All submissions are attached in full at **Appendix C**.

3.4 Response to Submissions

The Proponent provided the Department with a Response to Submissions report (RTS) on 11 February 2015 which included clarification and additional information in response to the submissions (see **Appendix D**).

In addition, during the assessment of the modification request, the Department requested additional information from the Proponent in relation to noise and timber stockpiles. This information was provided to the Department on 13 May 2015.

4. ASSESSMENT

The Department has assessed the merits of the proposed modification(s). During this assessment, the Department has considered the:

- Environmental Assessment (EA) prepared in support of the modification request (see **Appendix B**);
- Director-General's assessment reports for the original project approval;
- existing approval conditions;
- all submissions (see **Appendix C**);
- relevant environmental planning instruments, policies and guidelines; and
- requirements of the Act, including the objects of the Act.

The Department's assessment found that the key issues associated with the modification relate to air quality, noise and ongoing compliance matters. These issues are considered below. The Department's assessment of all other issues is detailed in **Table 1**.

4.1 Air quality

As discussed above, the proposal includes the removal of four boilers from the approved project and the installation of one 18MW wood fired boiler. This has the potential to change the air quality impacts associated with the approved project.

The Department notes that both the EPA and the 'Parsonage' submissions sought clarification about the capacity of the proposed boiler, given that the EA refers to the installation of both an 18MW boiler and a 20MW boiler.

In addition, the EPA stated that the air quality impact assessment (AQIA) contained errors and/or lack of information including:

- no specific provision of the air emissions associated with the new boiler in accordance with the appropriate EPA guidelines and manufacturers specifications;
- lack of justification for the use of 2009 meteorological data;
- inappropriate modelling of impacts; and
- unclear presentation of results.

The owner of the Parsonage also raised concerns about air quality as a result of the proposal, given that the prevailing winds (south-westerly) would direct emissions towards this property.

In response to the submissions, the Proponent sought additional information from the boiler manufacturer on design and performance and provided an updated AQIA. Using the new information, the Proponent has confirmed that the new boiler would have a capacity of 18MW and provided revised maximum off-site ground level emissions.

The revised AQIA predicted that concentrations for all pollutants modelled including particulate matter, carbon monoxide, nitrogen oxides and sulfur dioxide would comply with the relevant regulatory measures [i.e. 'Group 6' emission limits specified for a boiler within Schedule 4 of the *Protection of the Environment (Clean Air) Regulation 2010*] at all surrounding receiver locations.

The EPA stated that the revised AQIA had addressed its concerns. However, it recommended that all emissions be verified post commissioning using the fuel mix that is proposed to be used, in order to verify the predicted emissions in the AQIA. The Department considers that this is an appropriate way to measure the actual performance of the proposed boiler and to verify the air quality emission predictions that have been made. As such, this requirement has been included in the recommended conditions of approval.

In addition, the Department has recommended that the existing Air Emissions Management Plan (AEMP) required by Condition 6 of the Project Approval is updated to include the management of the new boiler, and to ensure that contingency measures are implemented should an exceedance of the criteria be identified during performance monitoring.

The Department's assessment concludes that the air quality impacts associated with the operation of the boiler are likely to be within relevant limits, and any unlikely emission exceedances can be managed through the recommended conditions of approval and with the EPA through the Environment Protection Licence (EPL) for the site.

In addition, the Department has updated the Project Approval to remove emission limits and instead refer to the EPL for ongoing air emissions monitoring and emissions limits. This will enable the EPA to amend these limits in the future without necessitating further modifications to the Project Approval.

The Department notes that in addition to the AEMP and EPL for the site, the existing Project Approval requires the Proponent to report air emissions monitoring results to the Department annually through existing environmental reporting requirements. Where non-compliances are identified in these reports, details of actions to improve the air emissions from the site are required to ensure compliance. This requirement will continue to apply to the project.

4.2 Noise emissions

Operation

Noisy activities at the site include wood chipping, moulding, paling, rounding and milling and the existing 10MW gas fired boiler fan.

As with the previously approved boilers, the proposed 18MW wood-fired boiler would operate 24 hours per day along with other limited equipment including kilns, treatment plant, dry mill and residues handling.

As discussed above in **Section 2.2**, the timber mill has a history of generating noise emissions which exceed relevant noise criteria at the two closest properties during the day time periods. These exceedances have been attributed to specific mill operations and are being dealt with separately by the EPA and the Department's Compliance Team.

The two public submissions both raised concerns that the operation of the existing mill is 'noisy' and the boiler fans will exceed 'noise standards'.

Although previous noise exceedances have not been attributed to the existing boiler blower fan, the Department has carefully considered the Proponent's noise impact assessment (NIA) prepared in support of the modification request to ensure that the proposed 18MW boiler would not increase noise emissions from the site.

The boiler(s) at the facility are required to operate 24 hours a day, including during the night-time period when the more dominant noise sources from the site are not operational. The approved four boilers at the site were to have a combined fan noise sound power level of 98 dB(A), and were predicted to comply with the day, evening and night time noise criteria of 35dB(A) $L_{eq\ 15\ min}$. The highest predicted residential receiver noise level during the night time period was 31 dB(A) at The Parsonage.

Under the *NSW Industrial Noise Policy 2000* (INP) where the existing noise level from industrial noise sources is close to the acceptable noise level, the noise level from any new source(s) must be controlled.

The Proponent has advised that the 18MW wood-fired boiler blower fans would be selected so that the sound power level is lower than the approved fan sound power levels of 98 dB(A) to ensure the night-time noise criteria of 35 dB(A) is achieved at all surrounding sensitive receivers. Consequently, the Department is satisfied that it would not increase the overall noise levels from the site, during all periods.

In its submission, the EPA has recommended that the existing noise limits remain in place, and the Proponent should be required to prepare a noise verification report within three months of commissioning of the new boiler to demonstrate compliance with the existing noise limits. The Department has included this requirement in the recommended conditions of approval and notes that existing conditions in the Project Approval require the Proponent to implement mitigation measures should any exceedance of the existing noise criteria be identified.

The Department's assessment concludes that noise from the proposed 18MW wood-fired boiler is unlikely to result in additional unacceptable noise impacts. The Department notes that ongoing noise impacts on the nearest residential properties due to other noise sources at the site are being managed separately as a compliance matter by the EPA and the Department's Compliance Unit.

Construction

The Project Approval includes a 40 dB(A) construction noise limit at residences. The Proponent's NIA stated that during the 24 week construction period, the short term activities of jack hammering and concrete cutting could have the potential to exceed construction noise criteria at the nearest residences (The Parsonage and Trevanion) by up to 6 dB(A).

The Proponent has agreed to manage construction noise impacts in accordance with the EPA's *Interim Construction Noise Guidelines 2009*, including notifying affected residences of the timing and duration of noisy activities prior to commencing work, and scheduling noisy activities to minimise disruption to nearby residences.

Given that there were two public submissions raising concerns regarding noise, the Department requested that the Proponent provide more detail in relation to the duration of noisy jack hammering and concrete cutting activities. The Proponent has confirmed that these activities would be isolated in nature and for no more than two hours when required. In addition, the Proponent reiterated that the more substantial construction activities associated with the Project Approval (i.e. the ongoing sawmill expansion) would not exceed construction noise criteria.

The Department is satisfied with the Proponent's response and notes that both the EPA and Council raised no concerns regarding construction noise. The Proponent has agreed to manage construction noise impacts in accordance with the existing construction noise criteria, NIA and relevant guidelines.

4.3 Compliance – Stockpile Management

As discussed in Section 2.1, the Proponent has ongoing environmental and compliance issues related to the residual timber stockpiles at the rear of the site. To resolve these issues, the 2010 Project Approval required these stockpiles to be removed by June 2013. In addition to not complying with this condition, the Proponent has:

- not met the EPA's Pollution Reduction Program deadline to remove the rear stockpile from the site by December 2014; and
- recently established a new unmanaged stockpile near the residual timber bunkers.

After discussing this matter with the EPA, it has been agreed that the modification request presents an opportunity for the Proponent to permanently resolve the ongoing issues associated with managing timber residue waste at the site.

In its submission, Council stated that it fully endorsed the opportunity for the Proponent to effectively utilise residue products for sustainable energy purposes on the site.

The Department and the EPA consider that the approval and operation of the new 18MW wood-fired boiler should enable the Proponent to remove all unmanaged and residual stockpiles from the rear of the site within 12 months from the date of approval of this modification. Condition 26 has been updated to reflect this new deadline.

In addition, the Department and EPA consider that this historic residue holding area should be rehabilitated to an agreed ground level and revegetated with native plant species. As such, the Department has recommended amendments to existing Condition 38 which requires the Proponent to prepare and implement an updated Landscape Management Plan including:

- details on how the stockpile site would be revegetated with native species and integrated into the surrounding landscape, including measures to ensure that the final landform is free draining; and

- a detailed description of the measures that would be put in place to ensure sufficient resources are available to implement the proposed rehabilitation measures, and the ongoing management of the vegetation following the complete removal of the stockpile.

The Department's assessment concludes that residual waste stockpiles can be effectively removed through the operation of the new boiler and adherence to the recommended conditions, and in addition the site would be improved through the future rehabilitation and vegetation works.

4.4 Other issues

The Department's assessment of other issues is provided in Table 1.

Table 1: Other assessment issues

Issue	Consideration	Recommendation
Boiler Waste	<ul style="list-style-type: none"> • Both the EPA and the owner of the Parsonage stated that the EA neglected to provide details on the disposal of ash residue waste from the new boiler. • The RTS provided an estimation of the ash waste that would be produced - being between 2,800 and 3,400 tonnes per annum. • The RTS states that dry ash may be used in fertiliser products or liming agents. However, if the Proponent is unable to find suitable reuse opportunities then ash would be disposed of in accordance with the EPA's <i>Waste Classification Guidelines</i> (DECCW, 2009). • The EPA raised concerns that a definite disposal or reuse option for the ash waste had not been identified. It recommended that a specific concrete bunker is dedicated to the storage of waste ash. Additionally, it recommended that details for disposal or reuse should be provided prior to the commissioning of the new boiler. • The Department has recommended a condition requiring the Proponent to store waste ash in accordance with the EPA's requirements. • The Department notes that there is an existing condition (29) that requires the Proponent to prepare a Product Management Plan (PMP). This plan requires the proponent to detail measures to maximise the reduction, reuse and recycling of waste. • The Department recommends that the PMP is updated prior to the commissioning of the new boiler, to include details on expected quantities of boiler ash, capacity of concrete bunkers and options to reuse or dispose of waste ash to ensure that ash dust does not become an issue for the site. 	<p>Recommended conditions require the Proponent to:</p> <ul style="list-style-type: none"> • store waste ash temporarily in a dedicated concrete bunker; and • prepare and submit an updated Product Management Plan, to include details on reuse or disposal of ash, to the satisfaction of the EPA and Secretary, prior to the commissioning of the new boiler.
Visual	<ul style="list-style-type: none"> • The most prominent approved building on the site is the new greenmill which has a height of around 12 metres (m). • The proposed boiler stack would have a height of 30m. • The EA states that 'the sawmill development is visible from a small number of rural residential receivers and from vantage points on the Delegate Bombala Road. The proposed boiler would be located within the approved footprint and be visually integrated within the existing sawmill structures'. • The proposal is not considered by the Proponent to introduce any additional visual impacts to surrounding receivers. • No submissions raised concerns regarding the potential visual impacts of the new boiler or its stack. • The Department has reviewed the site elevations provided in the original EA and images of the site in context with the surroundings. The Department does not agree with the Proponent's conclusion that the boiler stack does not introduce any new visual impacts. The timber mill is currently situated within rural grazing land containing a forestry pine plantation and rural residences. 	<p>No new conditions are considered necessary.</p>

Issue	Consideration	Recommendation
	<ul style="list-style-type: none"> • However, the Department notes that the proposed boiler and its stack would be located at the rear of the mill buildings at just about the furthest point from the Delegate Bombala Road (see Figure 3). The bulk and scale of the boiler and its stack would not be out of character with the existing mill buildings. • In addition, the proposal signifies an improvement in visual amenity as it replaces four previously approved boilers (and therefore four stacks) with just one boiler and stack. • Notwithstanding, the Department requested additional information from the Proponent regarding the visibility of the emissions from the new boiler stack. This information confirmed that whilst the proposed boiler includes controls for the removal of particulates, steam like emissions may be observed on cold winter mornings. These would normally dissipate within a few metres of the stack. • The four approved boilers would also have stacks and steam associated with the heat transfer process. However, the Proponent notes that the existing wood-fired boiler does not meet the stringent Group 6 emissions standards (see Section 4.1), and occasionally emits black smoke. The new 18MW boiler would be designed with better pollution controls, therefore ensuring less visible air emissions from the stack. • Finally, the Department notes that the recommended amendments to the Landscape Plan (see Section 4.2) would ensure that the rear stockpile area on site will be rehabilitated and revegetated, improving local amenity. • The Department's assessment concludes that the proposed boiler and its stack would not be highly intrusive or out of scale with the timber mill, and may represent an improvement in visual amenity to surrounding viewers. In addition, through the use of timber stockpiles on site, amenity on site generally would be improved. The Department's assessment concludes that visual impacts associated with the boiler and stack are acceptable. 	
Hazards and Risks	<ul style="list-style-type: none"> • The EA states that the proposal would not introduce any new hazards to the site that would alter the conclusions of the existing Preliminary Hazard Analysis (PHA). • In addition, the EA states that as the proposal is reducing stockpiles of timber residues, and potentially reducing traffic movements the proposal would assist in 'managing a number of risks identified in the initial PHA'. • The Department's assessment concludes that no new conditions are necessary to manage Hazards and Risks at the site. 	No new conditions are required.

5. CONCLUSION

The Department has assessed the request, the EA, the submissions and the RTS in accordance with the relevant requirements of the Act.

The Department has carefully considered the potential impacts associated with the use of the 18MW wood-fired boiler on site, including the potential air and noise emissions and visual impacts. The Department, EPA and Council concur that any potential emissions at the nearest sensitive receivers are likely to comply with the relevant statutory limits and can be effectively managed through on site pollution controls and the existing and recommended conditions of approval. The Proponent has reviewed and accepted these conditions.

The approval of the modification request would have the benefit of assisting the Proponent to achieve compliance with its Project Approval and EPL with regards to the removal of unlawful timber stockpiles on the site. The proposed amendments to the Landscape Plan will ensure that the rear stockpile area on site will be rehabilitated and revegetated, improving local amenity.

Consequently the Department is satisfied that the modification request is acceptable and should be approved by the Acting Executive Director, Infrastructure and Industry Assessments.

6. RECOMMENDATION

It is RECOMMENDED that the Acting Executive Director, Infrastructure and Industry Assessments:

- **approve** of the proposed modifications under Section 75W of the Act; and
- **sign** the attached instrument (**Appendix A**).

Report prepared by Kerry Hamann


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6/7/15


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15/7/15