Dongwha Timbers

Bombala Sawmill

Section 75W Modification

Preliminary Environmental Assessment

April 2014

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1. Introduction

1.1 Overview

Dongwha Timbers (Dongwha) proposes to modify its existing project approval to install a new wood-fired boiler within its existing saw milling facility located south-west of Bombala in the Monaro Region of NSW. The installation of the new wood-fired boiler (hereafter referred to as "the proposal") involves the installation of a 20 megawatt (MW) boiler to replace the use of three gas fired boilers and an existing wood fired boiler currently approved at the site.

The existing mill operations comprise log sorting, greenmill operations, moulder operations kiln or steam autoclave drying of timber and timber preservation. The mill operates under an environmental protection licence (EPL) number 11205.

A major expansion of the sawmill operations was approved on 7 September 2010 by the NSW Minister for Planning under the former Part 3A of the EP&A Act. A modification to PA 07_0161 was granted in February 2012 following the acquisition of the operations by Dongwha. The modification allowed for alternate construction staging and modification to several conditions of the consent.

Dongwha are progressively implementing the proposed expansion of the sawmill and are required to undertake the development and operate the site in accordance with the modified approval, together with the environmental assessment (EA) and statement of commitments which supported both the original PA and subsequent modification.

The sawmill expansion project proposed as part of the original application included the operation of four boilers to service the kilns which form part of the drying and timber preservation process. The initial project application included retaining an existing 2.5 MW at the site together with installation of two new 10 MW gas fired boilers and transfer of a 3.5 MW gas fired boiler from a Tasco facility in Geelong.

One of the new 10 MW natural gas fired boilers has been installed as part of the initial stages of the sawmill expansion and the mill currently operates with the new boiler together with the original wood fired 2.5 MW boiler. The 10 MW gas boiler consumed 66,000 gigajoules (GJ) of natural gas in 2013 for the operation of three 50 m^3 timber drying kilns. The mill's gas demand is predicted to increase to 107,000 GJ in 2014 to supply steam to the four new kilns which are proposed as part of the expanded mill.

It is now proposed to replace all four boilers approved in the original PA with a new 20 MW wood-fired boiler. The boiler would be designed to comply with statutory emissions requirements and be supplied with clean timber residual products currently generated at the site. The proposal will allow Dongwha to proactively manage their ongoing energy costs and residual timber management requirements.

The proposal represents an alteration to the development as described in the original project application and therefore requires approval from the NSW Minister for Planning and Infrastructure in the form of a modification under Section 75W of the *NSW Environmental Planning and Assessment Act 1979* (EP&A Act).

This preliminary environmental assessment (PEA) has been prepared by GHD Pty Ltd (GHD) to support the application to the Department of Planning and Infrastructure (DP&I) to modify the existing approval under Section 75W of the EP&A Act. The PEA provides a broad description of the proposal, reviews the applicable legislative framework and includes a preliminary risk assessment to assist with issue identification for the proposal.

1.2 The proponent

Dongwha is a global manufacturer of wood materials with timber processing and marketing operations in Korea, Hong Kong, New Zealand, Malaysia, Vietnam, U.A.E, Japan, United States and Australia.

1.3 The site and surrounding land uses

The Bombala timber mill is located between Sandy Lane and Delegate Road in the suburb of Lords Hill, approximately two kilometres south west of Bombala in the Monaro region of NSW.

The site is located within the following allotments:

- Lot 2 DP 1016573.
- Lot 27 DP 1061792.

Timber processing operations commenced at the site since 1979 and have been subject to more than 20 development consents throughout the subsequent development of the site. A condition of the most recent approval included that all previous consents were effectively surrendered within 12 months of the determination and PA 07_0161 is now the only applicable project approval for the operations.

The nearest sensitive receiver is a residential property located approximately 175 metres south west of the site boundary.

The site location is shown on Figure 1.1.

1.4 Description of proposed modification

The proposed modification includes the replacement of the four boilers previously approved in PA 07_0161 with one 20 MW wood-fired boiler.

The new boiler would be installed in the north-western side of the mill and would require the construction of two steam pipelines to the kilns (as shown in Figure 1.2).

It is estimated that the proposed 20 MW wood-fired boiler would require approximately 43,000 tonnes of wood residue per annum. This is proposed to be obtained from the wood residues produced onsite and in hierarchy provided in Table 1-1.

Table 1-1 Proposed fuel source for the wood-fired boiler

Wood residue	Quantity (tonnes)
Fresh sawdust	21,525
Dried wood shavings	5183
Fresh pine bark	7616
Fresh woodchips	8631
Total	**42,955**

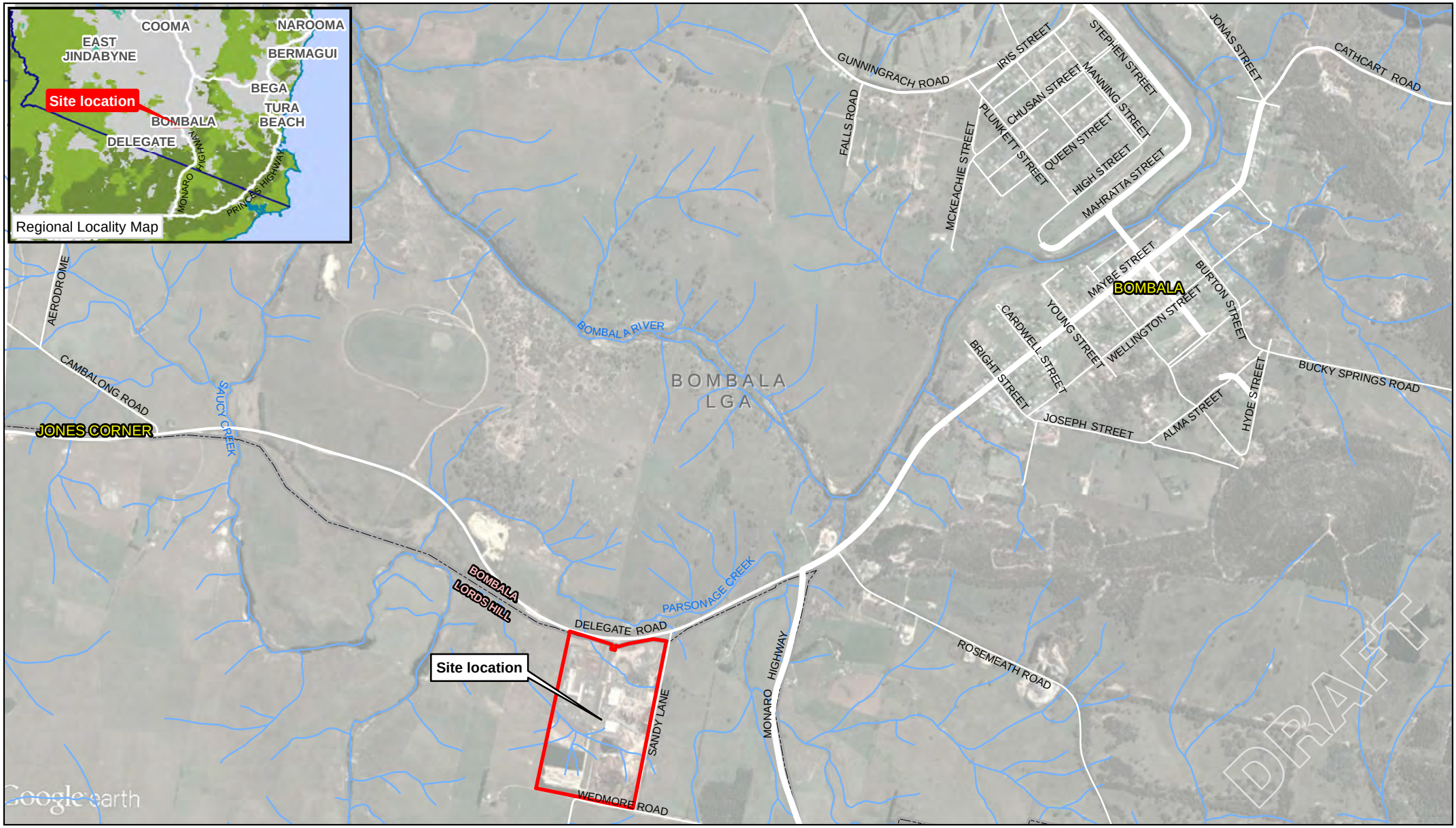
1.6 Need for the proposed modification

The Bombala Sawmill currently produces up to 800 tonnes of wood residue per day as a by-product of milling activities. Wood residue products, including fresh sawdust, pine bark, dried wood shavings and fresh woodchips are temporarily stored in purpose built bunkers on site prior to being transported off-site for sale or disposal.

Approximately 21,500 tonnes of sawdust together with 5000 tonnes of dried wood shavings and 7500 tonnes of fresh pine bark are currently produced per year as a by-product from product the mill's operations. The demand for sawdust in the local market is typically low so sawdust tends to be held in the bunkers at the site until it is transported to Sydney and Canberra for sale. The mill also produces approximately 48,000 tonnes per annum (tpa) of woodchips which are predominantly sold to Visy for use in their pulp and paper mill.

The installation of a wood fired boiler to allow use of timber residue products is considered to have a number of benefits including:

- Beneficial re-use of a residual timber product within the mill operations
- Use of renewable timber resource in place of consumption of fossil fuels;
- Demand for residual timber will not be driven by external market forces
- Proactive management of residue product stockpiles to minimise dust emissions from the site
- Minimising heavy vehicle movements associated with the transport of waste products
- Improved safety performance by minimising interaction between mobile plant operations and road haulage vehicles.



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Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 55

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Legend

- Site Location
- Suburb
- Highways
- Major Roads
- Other Roads
- Waterways

Dongwha Timbers
Bombala Sawmill Section
75W Modification PEA

Job Number	21-23466
Revision	A
Date	07 Apr 2014

Regional context

Figure 1.1

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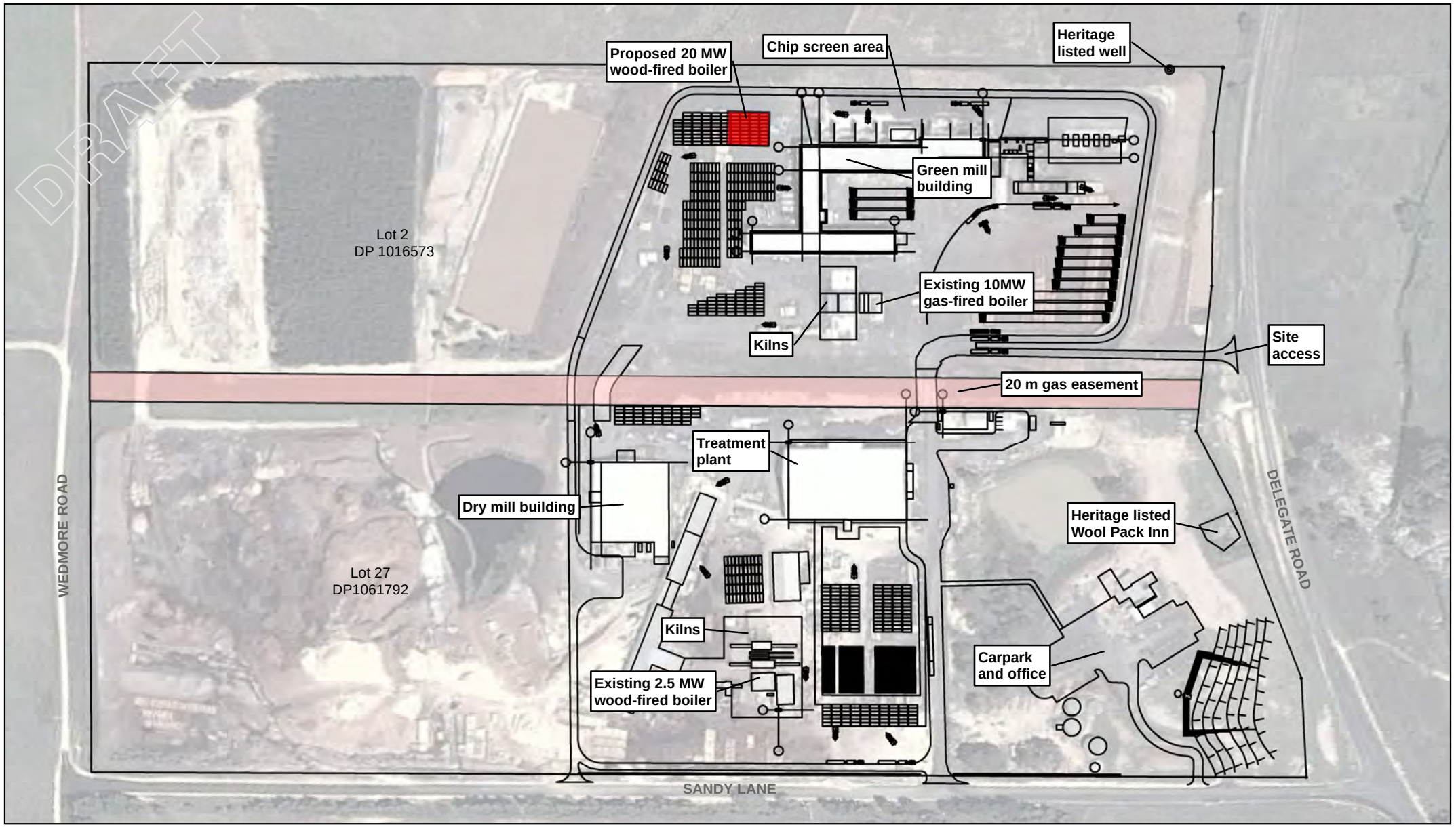
Level 15, 133 Castlereagh Street Sydney NSW 2000 Australia **T** 61 2 9239 7100 **F** 61 2 9239 7199 **E** sydmail@ghd.com **W** www.ghd.com

Data Source: NSW Department of Lands: Cadastre - Jan 2012; Geoscience Australia: 250k Data - Jan 2012; NSW Department od Primary Industry - Jan 2012; Google image Jan 2013. Created by: qjchung



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Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 55

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LEGEND

- Boiler location
- Gas easement
- Site Layout

Dongwha Timbers
Bombala Sawmill Section
75W Modification PEA

Job Number 21-23466
Revision A
Date 07 Apr 2014

Site layout

Figure 1.2

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Level 15, 133 Castlereagh Street Sydney NSW 2000 Australia T 61 2 9239 7100 F 61 2 9239 7199 E sydmail@ghd.com W www.ghd.com

Data Source: NSW Department of Lands: Cadastre - Jan 2012; Geoscience Australia: 250k Data - Jan 2012; NSW Department od Primary Industry - Jan 2012; Google image Jan 2013. Created by: qjchung

2. Planning and approval framework

Approval for expansion of the mill was granted by the Minister for Planning in 2010 under the former Part 3A of the EP&A Act.

Part 3A of the EP&A Act was repealed and a new assessment system for projects of State significance commenced in NSW on 1 October 2011. Despite this, Schedule 6A of the EP&A Act contains transitional arrangements for the repeal of Part 3A. Under Schedule 6A an approved project is considered a transitional Part 3A project and Part 3A of the EP&A Act (as in force immediately before the repeal of that Part) continues to apply to and in respect of a transitional Part 3A project.

Therefore Section 75W of Part 3A continues to apply for the purposes of modification and the request for modification of this consent is made under section 75W of the EP&A Act to the Department of Planning and Infrastructure for approval by the Minister.

Section 75W of the EP&A Act applied to ministerial approvals (included in part below):

75W Modification of Minister's approval

(1) In this section:

***Minister's approval** means an approval to carry out a project under this Part, and includes an approval of a concept plan.*

***modification of approval** means changing the terms of a Minister's approval, including:*

(a) revoking or varying a condition of the approval or imposing an additional condition of the approval, and

(b) changing the terms of any determination made by the Minister under Division 3 in connection with the approval.

(2) The proponent may request the Minister to modify the Minister's approval for a project. The Minister's approval for a modification is not required if the project as modified will be consistent with the existing approval under this Part.

(3) The request for the Minister's approval is to be lodged with the Director-General. The Director-General may notify the proponent of environmental assessment requirements with respect to the proposed modification that the proponent must comply with before the matter will be considered by the Minister.

(4) The Minister may modify the approval (with or without conditions) or disapprove of the modification.

3. Overview of environmental impacts

3.1 Purpose of the environmental risk analysis

This section provides a preliminary environmental risk analysis to screen the potential environmental impacts that may arise as a result of the proposed modification. The issues identified from this analysis would be considered for further detailed assessment in the Section 75W Modification EA.

The analysis was undertaken in the form of a preliminary, desktop-level risk assessment, to broadly assess the potential environmental risks that may arise as a result of the construction and operation of the proposed modification to identify key areas for the assessment.

3.2 Methodology

The environmental risk analysis for the proposed modification involved:

- Identifying environmental aspects.
- Identifying the source of potential risks associated with each of these aspects.
- Identifying the potential impact associated with each risk.
- Evaluating the likelihood of occurrence and consequence of each risk with the definitions provided below.
- Assigning a risk ranking.
- Identifying priority issues for the EA.

The potential risks were given a ranking with regard to the likelihood of it occurring (assuming that the proposed modification is designed and implemented with standard environmental controls) in accordance with the definitions provided in Table 3-1 and Table 3-2.

Table 3-1 Likelihood of occurrence definitions

Likelihood	Description
Almost certain	Expected to occur in most circumstances
Likely	Will probably occur in most circumstances
Possible	Could occur
Unlikely	Could occur but not expected
Rare	Occurs only in exceptional circumstances

Potential risks were given a ranking with regard to the perceived consequence if left unmanaged, in accordance with the following definitions:

Table 3-2 Consequence of impact

Consequence	Definition
Extreme	Irreparable/long-term damage/ widespread environmental effects may include major pollution incident, unauthorised damage to significant cultural or heritage sites. Occurrence may result in significant regulatory intervention
High	Serious damage to the environment, medium-long term impact, rehabilitation at considerable expense. Possible legal non-compliance and/or damage to corporate reputation.
Medium	Localised, short term damage/disturbance to the environment requiring relatively short-term remedial action (<1 month)
Low	Noticeable impact on the natural environment/corporate reputation requiring little to no remedial action
Negligible	Negligible impact on the environment which is difficult to notice and does not require remedial action

Based on the assessment of likelihood and consequence, a foreseeable impact/risk was assigned a risk rating. This enabled higher rating risks to be identified early in the process for the purpose of focusing the preliminary environmental assessment process. The matrix shown in Table 3-3 was used to prioritise potential environmental risks as either category A, B or C.

Table 3-3 Impact priority matrix

	Consequence level				
Likelihood level	**Negligible**	**Low**	**Medium**	**High**	**Extreme**
Almost certain	*Medium*	*High*	*Extreme*	*Extreme*	*Extreme*
Likely	*Low*	*Medium*	*High*	*Extreme*	*Extreme*
Possible	*Negligible*	*Low*	*Medium*	*High*	*Extreme*
Unlikely	*Negligible*	*Negligible*	*Low*	*Medium*	*High*
Rare	*Negligible*	*Negligible*	*Negligible*	*Low*	*Medium*

3.3 Environmental risk analysis

Table 3-4 provides the environmental risk analysis for the proposed modification. It includes:

- A summary of the potential key impacts/risks (columns 2 and 3).
- Likelihood of occurrence and consequence levels (columns 3 and 4).
- The risk rankings that were assigned (column 5).
- A discussion regarding the findings of the risk analysis (column 6).

Table 3-4 Preliminary environmental risk analysis results

Environmental aspect	Source of risk	Potential impact (without mitigation)	Likelihood	Consequence	Risk rating	Discussion
Air emissions	Emissions from proposed 20 MW wood-fired boiler	NO_x and PM_{10} emissions exceeding the relevant criteria.	Possible	High	High	The new wood-fired boiler would be designed to comply with the EPA Group 6 limits. An air quality assessment is proposed to be undertaken as part of the EA. This would include a quantitative assessment of emissions from the proposed modification and a comparison against the relevant EPA criteria.
		Impacts on nearby sensitive receivers.	Unlikely	High	Medium	Air modelling would be undertaken as part of the EA to compare the potential emissions against the EPA's *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales* (DEC, 2005).
	Storage of wood residue	Dust emissions causing nuisance to sensitive receptors.	Rare	Medium	Low	The proposed modification would utilise the wood residue as the main fuel source for the boiler, which would reduce the volume temporarily stored onsite and hence the potential for dust generation. Dust generation from bunkers would be considered qualitatively in the air quality assessment.
	Air emissions (dust and exhaust) during construction.	Dust and exhaust emissions causing nuisance to sensitive receptors.	Possible	Medium	Medium	Construction activities would be minor and temporary in nature. With the implementation of standard controls provided in the original EA, potential impacts on air quality during construction would be appropriately minimised. Emissions during construction are considered to be negligible due to the small scale of the proposed modification and the implementation of standard controls. Construction dust and emissions would be considered qualitatively as part of the EA.

Environmental aspect	Source of risk	Potential impact (without mitigation)	Likelihood	Consequence	Risk rating	Discussion
Traffic and transport	Operation of construction equipment and vehicles	Increase in traffic on the local road network as a result of construction activities.	Possible	Medium	Medium	The proposed modification would result in a minor increase in traffic during construction, which would be managed with the implementation of standard traffic controls provided in the original EA. The generation of traffic during construction is considered to be negligible due to the small scale of the proposed modification and the implementation of standard controls. No further assessment on construction traffic is proposed as part of the EA.
	Movement of heavy vehicles during operation	Increase in traffic as a result of operation impacting safety and traffic along the local road network.	Unlikely	Medium	Negligible	Heavy vehicle movements to and from the site are predicted to decrease as wood residue would mostly be used to fuel the boiler. The reduction in heavy vehicle movements would result in an improvement in traffic and safety on the local road network. As the proposed modification would result in an improvement to traffic during operation, further traffic analysis of projected vehicle movements would be undertaken as part of the EA to quantify likely improvements to the local road network.
Noise	Noise emissions from the proposed 20 MW wood-fired boiler	Noise emissions during operation exceed noise limits and affect sensitive receptors.	Unlikely	High	Medium	The original EA which assessed the operation of four boilers operating 24 per day and 7 days per week, concluded that the operation of the facility would be below the *Industrial Noise Policy* (DECC, 1999) noise criteria. It is unlikely that operation of the proposed modification would create a significant additional noise source at the site. Analysis of sound power levels from the proposed boiler in comparison with the approved project would be undertaken in the EA.

Environmental aspect	Source of risk	Potential impact (without mitigation)	Likelihood	Consequence	Risk rating	Discussion
	Operation of construction equipment and vehicles	Noise emissions exceeding noise limits and affecting sensitive receptors.	Unlikely	High	Medium	Construction activities would generate only minimal noise emissions as the proposed modification would be undertaken within the existing facility shielded from surrounding land uses. With the implementation of standard controls provided in the original EA, potential noise impacts during construction would be appropriately minimised.
	Movement of heavy vehicles during operation	Noise emissions exceeding noise limits and affecting sensitive receptors.	Unlikely	High	Medium	Heavy vehicle movements to and from the site are predicted to decrease as wood residue would mostly be used to fuel the boiler. The reduction in heavy vehicle movements would result in an in improvement in traffic noise from the site and the local road network. No further assessment on operational traffic noise is proposed as part of the EA.
Flora and fauna	Damage to flora and fauna from equipment, vehicles, site sheds during construction.	Loss of habitat and degradation to landscape.	Unlikely	Low	Negligible	No endangered species have previously been recorded on site. The proposed modification would be undertaken within the boundary of the existing mill. No flora or fauna would be impacted by the proposed modification. No further assessment on flora and fauna is proposed as part of the EA.

Environmental aspect	Source of risk	Potential impact (without mitigation)	Likelihood	Consequence	Risk rating	Discussion
Heritage	Impacts on items of Aboriginal and non-Aboriginal heritage significance.	Encounter and disturb items of cultural heritage during construction and operation.	Unlikely	Medium	Low	Items previously identified in the original EA include two sites of potential heritage value (Wool Pack Inn ruins and a filled well). These items would not be impacted by the proposed modification. One Aboriginal site, previously identified within the site and is understood to have been relocated as part of the original PA. Impacts on previously unidentified cultural heritage items are considered unlikely due to the level of subsurface disturbance of the site. In the unlikely event that items of potential heritage significance are encountered, procedures provided in the original PA would be implemented . No further assessment on heritage is proposed as part of the EA.
Odour	Odour from the wood-fired boiler	Odour emissions impacting nearby sensitive receivers	Unlikely	Low	Negligible	The proposed modification is not likely to result in an increase in odours from the site. The proposed odour management measures in the original EA would be implemented in the event that odour complaints are received. The EA would consider potential odour from the boiler.
Chemical usage and storage	Chemicals used during construction and maintenance of the proposed modification.	Chemical spill or leak during transport or usage, impacting on soil, groundwater or stormwater.	Possible	Medium	Medium	The proposed modification is will not result in additional impacts from chemical usage and storage to those considered in the original EA. No treated timber residual products will be used in the boiler operations.

Environmental aspect	Source of risk	Potential impact (without mitigation)	Likelihood	Consequence	Risk rating	Discussion
Soil	Erosion of soils during construction.	Sedimentation of adjacent drainage lines and dust generation impacting nearby receivers.	Unlikely	Medium	Low	The proposed modification is unlikely to result in additional impacts to soils to those considered in the original EA. Construction activities would be minor and temporary in nature. There is only minimal potential for disturbance of soils during construction as a result of the construction of ancillary infrastructure required for the boiler. With the implementation of standard controls provided in the original EA, potential impacts on air quality during construction would be appropriately minimised.
Surface water	Impacts to water quality	Contamination of surface water or ground water during construction activities.	Possible	Medium	Medium	The proposed modification is unlikely to result in additional impacts to water quality to those considered in the original EA. Impacts to water quality during construction would be adequately managed with the implementation of controls provided in the original EA.
Water usage	Water usage for the boiler	Increase in water demand for the site.	Unlikely	Medium	Low	The proposed modification is unlikely to result in an increase in water usage.
Wastewater	Wastewater generation from the boiler	Increase in wastewater generated from the boiler.	Unlikely	Medium	Low	The proposed modification is unlikely to result in an increase in wastewater generation.
Solid waste	Waste generation as a result of the proposed modification	Increase in the generation of solid waste from the site.	Unlikely	Medium	Low	The proposed modification would result in a reduction in wood residue which is required to be removed from the site. A quantitative analysis is proposed to be undertaken as part of the EA to demonstrate the reduction of waste from the mill operations.
Socio-economic	Construction of the proposed boiler.	Impacts to local community through increased noise and traffic.	Unlikely	Medium	Low	Construction activities would be minor and temporary in nature and would be appropriately mitigated with the implementation of controls provided in the original EA. No further assessment on the community is proposed as part of the EA.

Environmental aspect	Source of risk	Potential impact (without mitigation)	Likelihood	Consequence	Risk rating	Discussion
	Emissions from the boiler	Impacts to the local community as a result of reduced air quality.	Unlikely	High	Medium	As discussed above, air modelling would be undertaken as part of the EA to compare the potential emissions against the EPA's *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales* (DEC, 2005). If exceedances are predicted, additional controls would be incorporated into the design to ensure that the relevant criteria is met. As described above, emissions would be considered in the air quality assessment proposed to be undertaken as part of the EA.
Visual amenity	Visibility of the proposed boiler.	Impacts to the visual amenity of the surrounding area.	Unlikely	Medium	Low	The proposed modification would be located within the existing facility and is consistent with the existing land use/operations of the facility. There would be no visual impacts on adjoining lands. No further assessment on visual amenity is proposed as part of the EA.

4. Conclusion

The proposed modification includes the replacement of four boilers (gas-fired and wood-fired) with one 20 MW wood-fired boiler. The wood-fired boiler would be designed to comply with statutory emissions restrictions and allow Dongwha to proactively manage their ongoing energy costs and their residual timber wastes.

This document provides a high level preliminary environmental assessment of potential impacts associated with construction and operation of the proposed modification. We would welcome the opportunity to meet with the DP&I to discuss the proposed modification and assessment requirements for the preparation of an environmental assessment to support the application.

5. References

NSW Environmental Protection Authority (1999) *NSW Industrial Noise Policy.*

The Fifth Estate (2009), *Environmental Assessment for a Major Project – Expansion of Bombala Integrated Sawmilling and Value-adding Facility*, prepared for Willmott Timbers Pty Ltd, November 2009.

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