Visy Pulp and Paper

Visy Tumut Mill Buildings & Storage s75W Modification Environmental Assessment

August 2015

Table of contents

Table index

Figure index

Appendices

1. Introduction

1.1 Background

Visy Pulp and Paper Pty Ltd (Visy) operate the Kraft Pulp and Paper Mill at a site located approximately eight kilometres west of the township of Tumut in the Snowy Mountains region of NSW. Development consent was granted in 1998 for the operation of the mill. The initial production capacity of 300,000 tonnes per year (tpy) was given, with consent for an increase of up to 450,000 tpy for future mill expansion.

Construction of the mill commenced in January 2000 and was completed in May 2001. The official commissioning period ended on 15 May 2002. The mill has since been operating for over 12 years.

In 2006 a new approval was sought by Visy to increase production from the originally approved 450,000 tpy to 700,000 tpy to manage increasing product demand. The mill expansion had a capital investment value of more than $30 million for the purposes of manufacture of paper pulp. This, therefore, triggered the State Environmental Planning Policy (Major Projects) 2005 and the project was assessed under Part 3A of the *Environmental Planning and Assessment Act 1979 (EP&A Act).*

In May 2007, the then Minister for Planning granted approval to increase paper production to 700,000 tpy (Project Approval (PA) 06_0159).

Additional modifications were sought by Visy in 2012 for installation of a new refuelling facility with diesel storage tanks adjacent to the main entry of the site.

A further modification of approval (MoA) is now being sought by Visy as part of its project approval 06_0159. Approved machinery and plant upgrades require construction of three buildings and storage facilities which is the basis for this modification application.

GHD Pty Ltd (GHD) has been engaged by Visy to prepare an Environmental Assessment (EA) to assist Visy in its section 75W modification application to be lodged with the NSW Department of Planning and Environment (DP&E) for the building and storages to be approved.

1.2 The proponent

Visy Industries is the world's largest privately owned packaging and recycling company with its headquarters in Melbourne, Australia. Visy Pulp and Paper Pty Ltd are a leading global packaging, paper and recycling sector of Visy Industries.

Visy Pulp and Paper Pty Ltd is the proponent for the new modification to the existing approval.

1.3 The site and surrounding land use

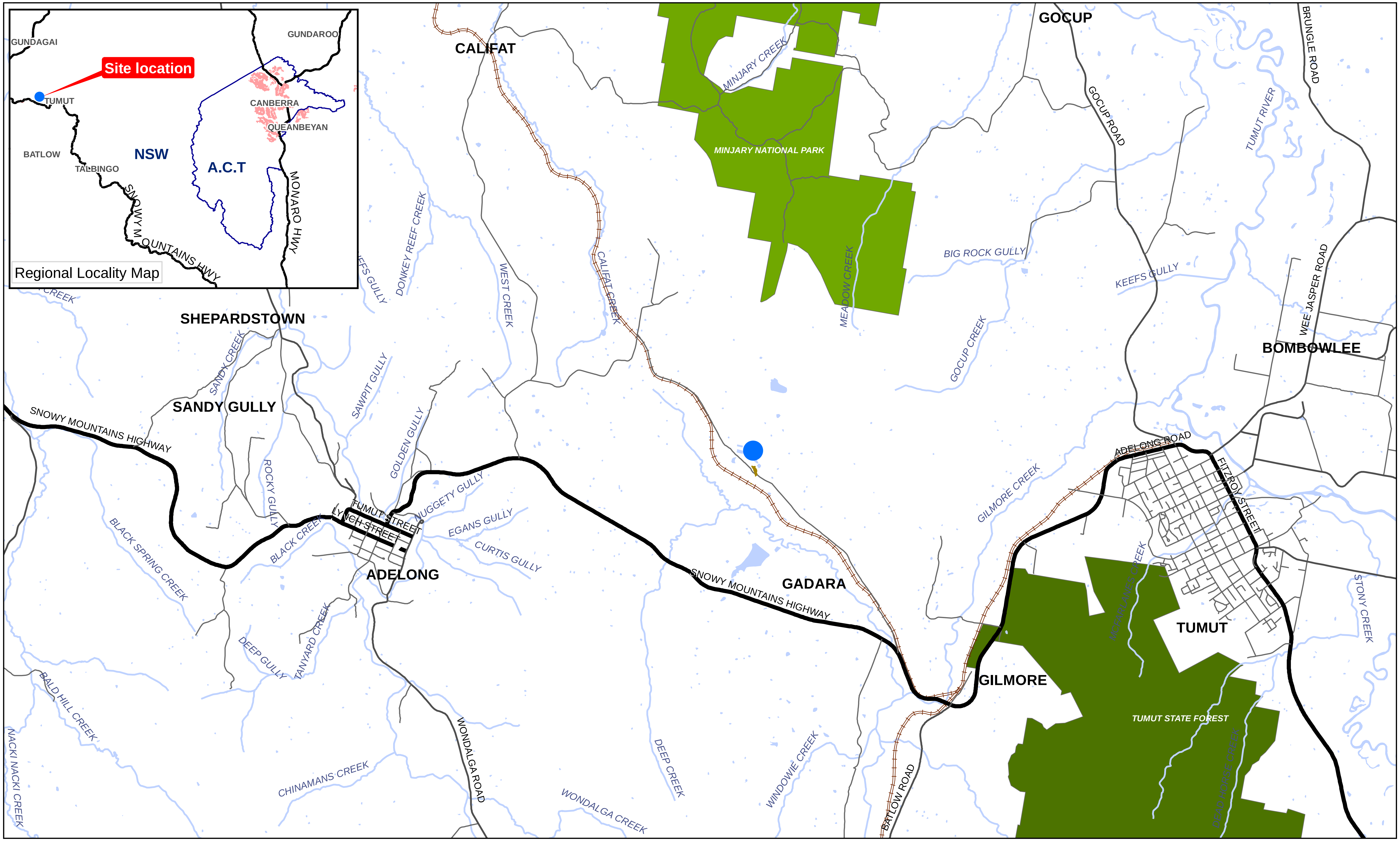
The site is located at 1302 Snowy Mountains Highway, approximately 8 kilometres directly west of the township of Tumut in NSW as shown on Figure 1. The mill site occupies an area of approximately 53 ha within a total property owned by Visy of approximately 2,124 ha located on both side of the Snowy Mountains Highway.

Surrounding land use consists predominantly of cleared farmland, with the Tabletop Mountain range to the north, Deep Creek to the west and Gilmore Creek to the east. The disused Cootamundra-Tumut railway line lies immediately to the south of the site. Sandy Creek flows from west to east through the proponent's site. The Snowy Mountains Highway runs approximately 2.5 kilometres south of the site.

Visy location details are outlined below:

Table 1 Visy land title details

Site details		
Land ownership reference	Visy Pulp and Paper Pty Ltd	
Local Government Area (LGA)	Tumut LGA	
Land title details	DP No. 757228	Lot 5, 12, 14, 19, 42, 57, 61, 62, 63, 64, 76, 84, 91, 92, 93, 94, 103, 105, 106, 107, 115, 116, 117, 118, 119, 138
	DP No. 757252	Lot 211, 219, 220, 221, 222, 223, 224, 229, 230, 235
	DP No. 832090	Lot 1
	DP No. 1004478	Lot 4
	DP No. 1082770	Lot 1
	DP No. 1035564	Lot 102, 103
	DP No. 96829	Lot 7002
	DP No. 27482	Lot 1
Current land use	Pulp and paper mill / agricultural land	



1:60,000 (at A3)

0 300 600 1,200 1,800 2,400

Metres

Map Projection: Transverse Mercator
Horizontal Datum: Geocentric Datum of Australia (GDA)
Grid: Map Grid of Australia 1994, Zone 56

N

LEGEND

- Visy Mill Location
- Highways
- Major Roads
- Secondary Roads
- Railway
- Waterways (lines)
- Forestry Reserve
- Nature Conservation Reserve

Visy Pulp and Paper Pty Ltd
Tumut Mill Expansion s75W

Job Number	21-24378
Revision	0
Date	27June 2015

Site Location Figure 1

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

G:\23\14267\GIS\Maps\MXD\23_14267_Z001_SiteLocation.mxd

© 2010. While GHD has taken care to ensure the accuracy of this product, GHD and DATA CUSTODIAN, make no representations or warranties about its accuracy, completeness or suitability for any particular purpose. GHD and DATA CUSTODIAN, cannot accept liability of any kind (whether in contract, tort or otherwise) for any expenses, losses, damages and/or costs (including indirect or consequential damage) which are or may be incurred as a result of the product being inaccurate, incomplete or unsuitable in any way and for any reason.

Data Source: NSW Department of Lands: Cadastre - Jan 2011; LPMA Topo March 2012; Geoscience Australia: 250k Data - Jan 2011. Created by: sdwoodger

2. The Project

2.1 Description of proposed MoA

Visy seeks the Minister's approval to modify the existing Project Approval (PA06_0159) 'Tumut Mill Expansion 2007' at its pulp and paper manufacturing facility located west of Tumut in the Snowy Mountain region of NSW. There are three components involved in the proposed modification:

- Construction of a White Pulp Storage Facility.
- Construction of a Coating Kitchen Building
- Construction of Storage Sheds over existing laydown area and wood yard.

The primary objective of the modification proposal is to enable the construction of new buildings and storage to house existing processes approved as part of the Tumut Mill Expansion 2007.

The current Project Approval (PA06_0159) permitted the installation and upgrade of certain plant and machinery required for the phased expansion to the existing mill and mill production covered within the original EA (2007). Of relevance to this modification, the approved upgrade included:

- The installation of an upgraded recycled cellulose fibre (RCF) processing line.
- Installation of upgraded recrystallization plant.
- Installation of a white pulp paper processing line.
- Extension to the existing conveyor.
- Installation of fans next to the existing RCF building.
- Installation of equipment to existing paper machine building (Paper Machine 9 and Film Press).

This project approval, however, did not specifically describe the associated buildings and storage construction required as a result of the plant and machinery upgrades described above.

The proposal for modification represents an alteration to the development as described in the original project application and therefore comes under Clause 3 of Schedule 6A of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act), requires approval from the NSW Minister for Planning in the form of a modification under Section 75W of the same NSW EP&A Act.

This EA identifies the potential environmental issues and impacts by identifying the potential risks associated with the different elements of the proposed modification.

The EA has been based around existing baseline studies and investigations undertaken for the already approved Visy Tumut Mill Expansion. Visy Key Operating Parameters (Appendix B) were used as the foundation for outlining possible environmental risks associated with the proposed modification.

The EA subsequently identifies and assesses possible environmental impacts arising from the proposed modification. The additional buildings and storage construction would take place on the existing pulp and paper mill site located at 1302 Snowy Mountains Highway, Tumut within existing infrastructure.

2.2 Modification infrastructure and housing

Figure 2 below and (Appendix A) outlines the site layout for the components of the sought modification of approval (MoA). Included below are general descriptions of the proposed buildings and storage. It is proposed to locate them generally in accordance with what is shown in Figure 2 and to construct them generally in accordance with the descriptions below.

White Pulp Storage Facility

A new storage facility will be constructed in the north-east corner of the site within the existing waste paper storage yard. The facility will have a roofed storage area of approximately 1,500m^2. This may be achieved via a single building of approximately 60m x 25m x 8m high or may be the cumulative area of a number of roofed structures. Access to the new storage facility will be via existing access to the waste paper storage yard.

The building will be constructed of galvanised steel frame work and colourbond ultra surfmist cladding.

The purpose of the storage facility will be to store high quality, purchased white pulp. This is air dried wet lap pulp that will be used for white top liner board, developed in the context of the existing Tumut Mill Expansion 2007 approval, manufactured on existing paper machine. The white pulp needs to be stored undercover to protect it from sunlight, to prevent 'browning' from UV exposure, and rain.

Coating Kitchen Building

A new building will be constructed in the front (southern) area of the site within an existing hardstand area in front of an existing tank farm and bulk liquid and slurry unloading facility. This Coating Kitchen building is expected to be approximately 216m^2 made up of three levels giving an overall area of approximately 648m^2. Dimensions of the building will be approximately 36m x 18m x 13m high. The Coating Kitchen building will have a tank popping through the roof to a height of approximately 19m. Access to the new building will be via the existing road circuit for tankers delivering bulk liquid or slurry to the tank farm.

The building will be constructed of galvanised steel frame work and colorbond ultra surfmist cladding.

New pipework for the transport of liquids and slurries will connect the building to the existing tank farm and also connect the building to the site's existing recycled process water system.

The purpose of the Coating Kitchen building will be to house various storage silos, tanks, pumps, mixing system and controls needed to produce onsite a coating mixture which will be applied via an existing paper machine to the surface of new paper products developed in the context of the existing Tumut Mill Expansion 2007 approval. Prior to construction of the Coating Kitchen at Tumut, the coating mixture will be produced at an offsite Coating Kitchen, transported as bulk slurry, and delivered to the existing tank farm.

Ingredients for the coating mixture include pigments in solid powder and other paper making additives such as starch and lubricants. The coating mixture will be produced within a fit for purpose mixing tank which will include filters and screens to prevent escape of any powder. Any internal wash down water from within the building will be collected via internal drains and directed back into the sites' existing recycled process water system.

The coating mixture will be transported via new pipework to the existing tank farm and will replace coating mixture previously delivered already prepared. Coating mixture is transported from the tank farm via existing pipework to existing paper mill for application to the surface of the new paper products.

No chemical processing will occur in the Coating Kitchen building. Coating mixtures and other paper making additives will be produced within purpose built mixing tanks and wash down areas within the building infrastructure. Due to the activities occurring inside and in purpose built tanks, it is very unlikely that it will give rise to external emissions or odours.

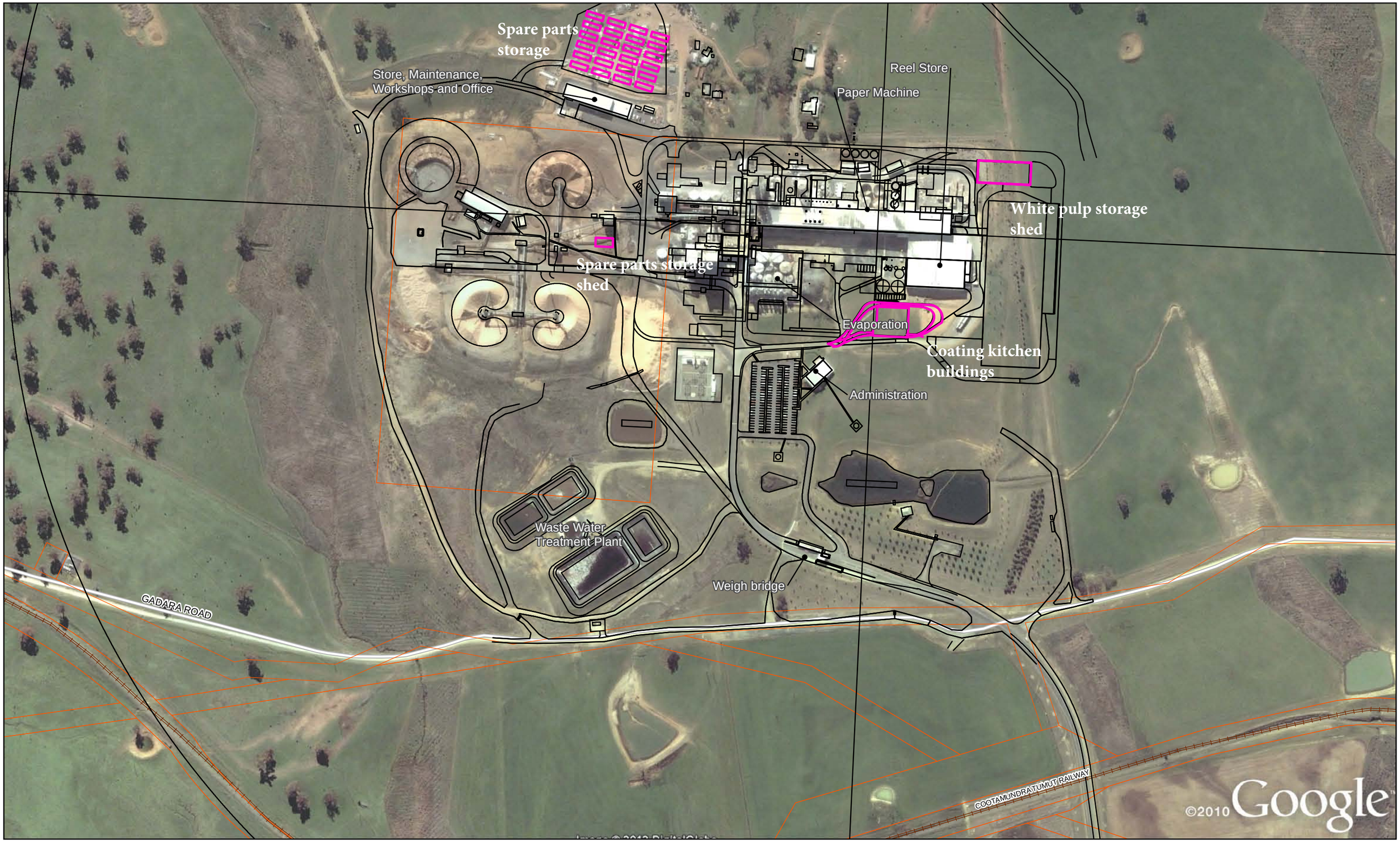
Storage Sheds

New sheds will be constructed in the existing laydown area at the rear (northern) edge of the site. The sheds are expected to have a cumulative roofed floor area of approximately 864m^2. It is expected that this may be achieved using up to 24 modules each approximately 12m x 3m x 6m high. Access to the sheds will remain via the existing access to the laydown area.

A new spare parts/workshop shed will be constructed in the Wood Yard. The shed is expected to be approximately 300m^2. Dimensions will be approximately 30m x 10m x 6m high.

The sheds will be constructed of galvanised steel frame work and colourbond ultra surfmist cladding.

The purpose of the sheds is to provide upgraded, covered storage for equipment and parts to support the mill's upgraded and evolved operations that have been developed in the context of the existing Tumut Mill Expansion 2007 approval.



1:4,000 (at A3)

0 20 40 80 120 160

Metres

Map Projection: Transverse Mercator
Horizontal Datum: Geocentric Datum of Australia (GDA)
Grid: Map Grid of Australia 1994, Zone 56

LEGEND

- Proposed modification
- Design
- Road
- Railway
- Cadastre

Visy Pulp and Paper Pty Ltd
Tumut Mill Expansion s75W

Job Number	21-24378
Revision	0
Date	03 Jul 2015

Site layout Figure 2

N:\AU\Orange\Projects\21\24378\GIS\Maps\Working\21_24378_WorkingQC.mxd

© 2010. While GHD has taken care to ensure the accuracy of this product, GHD and DATA CUSTODIAN, make no representations or warranties about its accuracy, completeness or suitability for any particular purpose. GHD and DATA CUSTODIAN, cannot accept liability of any kind (whether in contract, tort or otherwise) for any expenses, losses, damages and/or costs (including indirect or consequential damage) which are or may be incurred as a result of the product being inaccurate, incomplete or unsuitable in any way and for any reason.

Data Source: NSW Department of Lands: Cadastre - Jan 2011; LPMA Topo March 2012; Geoscience Australia: 250k Data - Jan 2011. Google Earth Pro, Imagery accessed 06092012 Created by: qjchung

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

2.3 Approval history

Visy obtained development consent from the former Minister for Urban Affairs and Planning (now Minister for Planning) on 29th November 1998 for the staged development of the Visy Kraft and Paper Mill. The consent was issued for operations for a production capacity of 300,000 tpy with an increase to 450,000 tpy into the future.

Construction of the mill commenced January 2000 and was completed in May 2001, with the official commissioning period ending in May 2002. The mill had been operating at this capacity for 5 years before market demands required the need for a production increase greater than the original consent of 450,000 tpy.

In July 2006, the Minister for Planning authorised and received a submission for a Concept Plan for the expansion of the existing Visy pulp mill for a production increase to 700,000 tpy. To assist in satisfying the requirements for Concept Approval and subsequent Project Approval an Environmental Assessment was completed in January 2007.

Original and current project approval (PA 06_0159) for the mill expansion was granted on 1st May 2007 by the then Minister for Planning under Part 3A of the Environmental Planning and Assessment Act 1979.

PA 06_0159 included a phased expansion, with an increase of production from the initial 450,000 tpy to 700,000 tpy. The expansion phases were to be determined by production demand requirements, and included installation of an additional paper machine, and increased pulping capacity which was achieved through effectively doubling existing pulp mill components.

Further modifications to the original project approval were sought by Visy in 2012 for installation of a new refuelling facility with diesel storage tanks adjacent to the main entry of the site. A Section 75W MoA and an associated environmental assessment was undertaken for the adjustments but the project has not been implemented to date.

Visy is now seeking additional modifications to the project approval PA06_0159 for construction of new buildings and storage on site. The proposed buildings and storage modifications (as outlined in section 2.1) include:

- Construction of a White Pulp Storage Facility
- Construction of a Coating Kitchen Building
- Construction of Storage Sheds over existing laydown area and wood yard.

Table 2 Project approval history

Element	Original Development Consent (1998)	Part 3A Project Approval (2007)	Proposed Modification (2015)
Production (tpy)	450,000	700,000	700,000
Main infrastructure components	Kraft pulp and paper mill including all machinery plant components for process of kraft and paper Wood yard Wastewater infrastructure Wastewater irrigation Water supply pipeline Land acquisition	Upgraded recycled cellulose fibre (RCF) processing line. Upgraded recrystallization plant. White pulp paper processing line. Extension to existing conveyor. Cooling fans Paper Machine 9 and Film Press	White pulp storage shed Coating kitchen building Spare parts laydown and storage shed
Phased expansion	Machinery and plant optimisation for production up to 450,000 tpy	Phase 1 and 2 – All components of process for production increase to 700,000 tpy	Housing infrastructure for plant and raw materials (purchased pulp, RCF, bagged pigment)
Power demand (MW)	71	75	No Change

2.4 Need for proposed MoA

Visy is committed to a process of continuous improvement in technology and production efficiencies, in line with changing community, business expectations and market sector needs.

The phased expansion upgrades (as outlined in section 2.1) approved under the original project approval (PA06_0159) permitted the installation and upgrade of certain plant and machinery comprising the latest technology in recovered paper pulping capacity to improve the fibre recovery from waste paper feedstock and the related fibre line. The proposed modification is for the construction of buildings and storage to house stock, spare parts and paper coating infrastructure for these approved process changes.

The additional housing will allow Visy to continue improving the pulp and paper processes within the intent of the 2007. This includes, minimising its waste and secondary environmental impacts associated with those waste streams.

The buildings and storage development (which forms this modification proposal) associated with the machinery and plant modifications under the existing project approval (PA06_0159 is considered to have a number of benefits including:

- Beneficial re-use of residual waste products within the mill operations.
- Beneficial and environmental re-use of wastepaper products.
- Use of recyclable resources in place of consumption of fossil fuels.
- Proactive management of product demands within environmental planning instruments of the project approval.

3. Planning and approval framework

3.1 Overview

Approval for expansion of the mill was granted by the Minister for Planning in 2007 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.

The proposed modification is for specific elements of the Mill which come within the broad framework of the existing approval, but which were not clarified or where caution suggests that it may be better to make clear that they are subject to the approval.

3.2 Consultation with Department of Planning and Environment

Visy has consulted with the Department of Planning and Environment (DP&E) to explain the required process enhancements now set out in this EA, and to seek the Department's advice on the appropriate approvals pathway. That consultation included a meeting with DP&E officers in Sydney on 5th March 2015 at which the various proposed process refinements were discussed, site plans reviewed, and which confirmed the intended planning approach, being a modification of the 2007 Project Approval under Section 75W of Part 3A of the EP&A Act (as outlined in section 3.1 above).

Visy also consulted with an independent specialist planning law adviser (Mr David Brigden) and confirmed the appropriateness of seeking approval for these particular process enhancements via that pathway.

3.3 Consultation with Tumut Shire Council

Visy Tumut Environment Manager (Mr Matthew O'Donovan) and Purchasing Manager (Mr. Sean O'Neill) met with Tumut Shire Council General Manager (Mr Bob Stewart) and Environment Director (Mr Paul Mullins) on Wednesday 12 August 2015 to explain the proposed modification. Bob Stewart and Paul Mullins indicated that the proposed modification was minor and they have no issues.

4. Overview of environmental impacts

4.1 Purpose of the environmental risk analysis

This section provides an environmental risk analysis to screen potential environmental impacts that may arise as a result of the proposed modification. The issues identified from this analysis have been considered for further detailed assessment in section 5.

The analysis was undertaken in the form of a 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.

4.2 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; and,
- Identifying priority issues for a further detailed assessment.

The potential risks were given a ranking with the 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 and Table 4.

Table 3 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 4 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 environmental assessment process. The matrix shown in Table 5 was used to prioritise potential environmental risk as either category A, B or C.

Table 5 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*

4.3 Environmental risk analysis

Table 6 provides the environmental risk analysis for the proposed modification. This includes:

- A summary of the potential key impacts/risks;
- Likelihood of occurrence and consequence levels;
- The risk ranking that were assigned; and,
- A discussion regarding the findings of the risk analysis.

Table 6 Environmental risk analysis

Environmental aspect	Source of risk	Potential impact (without mitigation)	Likelihood	Consequence	Risk rating	Discussion
Traffic and transport	Increased traffic movements during construction of storage sheds and coating kitchen	Increase in traffic on the local road network as a result of construction activities	Possible	Low	Low	The proposed modification involving construction of storage sheds and the coating kitchen would result in a minor increase in traffic during construction, which would be considered to have negligible impact upon the surrounding road network. It would be managed with the implementation of standard traffic controls provided in the original EA (2007).
	Movement of heavy vehicles during operations and increased use of transport infrastructure	Increase in traffic as a result of operation impacting safety and traffic along the local road network.	Unlikely	Low	Low	The generation of traffic during operation is considered to have negligible impact upon the surrounding road network due to the small scale of the proposed modification and the implementation of standard controls provided in the original EA (2007). The original EA (2007) indicated truck movements to be a low impact on the road network. The proposed modification would result in a 2% decrease in truck movements compared to the original EA (2007) through operational efficiencies, such as back-loading Visy Key Operating Parameters (Appendix B). The reduction in heavy vehicle movements would result in a long term improvement in traffic and safety on the local road network.
	Modified onsite transport conditions from coating kitchen and storage sheds internal transport redirection	Altered internal road configuration impacting safety and risk on site	Possible	Low	Low	The proposed modification involving construction of storage sheds and the coating kitchen would result in a minor redirection of traffic onsite within the internal ring road area. The new access requirements will improve traffic flow and safety within the site.

Environmental aspect	Source of risk	Potential impact (without mitigation)	Likelihood	Consequence	Risk rating	Discussion
Air emissions	Air emissions (dust and exhaust) during construction and operation	Dust and exhaust emissions causing nuisance to receptors	Possible	Medium	Medium	Construction activities would be minor and temporary in nature. With the implementation of standard controls provided in the original EA (2007). Potential impacts on air quality during construction are considered minimal. The new buildings proposed as part of the modification will not introduce any new processes or emission sources to the approved mill
Noise emissions	Noise emissions from traffic movements	Increase in noise levels from the heavy vehicle movements associated with the proposal	Possible	Medium	Medium	There is anticipated to be a small number of additional traffic movements during construction, which will not alter the typical site operations. Heavy vehicle movements will decrease following the implementation of the proposed modification and standard controls provided in the original EA (2007) such as increased back-loading of product and waste transport.
	Increased noise emissions during construction	Increase in noise levels from the additional plant impacting on neighbours	Unlikely	Medium	Low	Construction activities would generate only minimal noise emissions as the proposed modification would be undertaken within the existing facility shielded from surrounding land uses. Construction scenarios modelled within the original EA (2007) indicated that predicted construction noise combined with existing plant noise levels would generally satisfy noise criteria licensing limits. With the implementation of standard controls provided in the original EA (2007), potential noise impacts during construction would be appropriately minimised. However, noise monitoring at residential locations during the busiest period of construction is recommended.

Environmental aspect	Source of risk	Potential impact (without mitigation)	Likelihood	Consequence	Risk rating	Discussion
Flora and fauna	Construction of storage sheds and coating kitchen causing removal or damage to native flora and fauna	Loss of habitat and degradation to landscape	Unlikely	Low	Negligible	The proposed modification would be undertaken within the boundary of the existing mill. The construction of the storage sheds and coating kitchen would be located in a highly modified environment. Past construction activities at the site including road and building development have cleared the site and removed any biological values Due to the highly modified nature of the site, there is little to no valuable fauna habitat available in or adjacent to the site. No threatened species, populations or ecological communities were recorded in the previous surveys at the mill. No further assessment on flora and fauna has been undertaken as part of this EA.
Odour	Odour from additional buildings and storage sheds	Odour emissions with the potential for offsite impacts	Unlikely	Medium	Low	The proposed modification will not introduce new odour sources or increase the potential for odour generation from the site. The proposed odour management measures in the original EA (2007) would be implemented in the event that odour complaints are received.
Chemical usage and storage	Increased chemical usage and storage	Chemical spill or accidental release during handling or transport impacting environment (onsite and surrounds)	Rare	High	Low	The quantity and use of chemicals in the mill process proposed as part of the original EA (2007) was considered potentially hazardous under SEPP 33 and a PHA was undertaken. Information provided by Visy (Key Operating Parameters) (Appendix B) indicates hazardous chemical storage quantities outlined in the original EA (2007) will not be increased with the proposed modification and the current management practices will be continued in site operations.

Environmental aspect	Source of risk	Potential impact (without mitigation)	Likelihood	Consequence	Risk rating	Discussion
		Vapour explosion or fire	Rare	High	Low	No increase of hazardous chemical storage is expected. Chemical storage would be appropriately managed with the implementation of the controls outlined in the original EA (2007) and associated PHA (2006).
		Chemical release into surrounding environment through waste streams	Rare	High	Low	No increase of hazardous chemical storage is expected. Chemical storage would be appropriately managed with the implementation of the controls outlined in the original EA (2007) and associated PHA (2006).
Fresh water usage	Increased water requirements	Increased freshwater demand and impact on local rivers and catchment	Unlikely	Medium	Low	Information provided by Visy (Key Operating Parameters) (Appendix B) indicates freshwater demand outlined in the original EA (2007) will not be increased with the proposed modification.
Wastewater	Increase in wastewater generation	Poor quality wastewater entering the surrounding environment	Unlikely	High	Medium	Information provided by Visy (Key Operating Parameters) (Appendix B) indicates wastewater generation outlined in the original EA (2007) will not be increased with the proposed modification.
		Irrigation of excessive quantity of treated wastewater impacting soil and/or groundwater	Unlikely	High	Medium	Information provided by Visy (Key Operating Parameters) (Appendix B) indicates waste water irrigation quantities outlined in the original EA (2007) will not be increased by the proposed modification. Continual monitoring should continue to occur to manage any changes in impacts.
Solid waste	Increased waste generation as a result of proposed modification	Increase in disposal of additional volumes of solid waste impacting the surrounding environment	Unlikely	Negligible	Negligible	Information provided by Visy (Key Operating Parameters) (Appendix B) indicates solid waste quantities outlined in the original EA (2007) will not be affected by the proposed modification.
Mill power demand	Increased GHG emissions	Further release of GHG into the atmosphere	Unlikely	High	Medium	Information provided by Visy designates no increase to gas usage or mill power demand with this proposed modification.

Environmental aspect	Source of risk	Potential impact (without mitigation)	Likelihood	Consequence	Risk rating	Discussion
Socio-economic	Construction of new buildings and storage	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 (2007).
Visual amenity	Additional buildings and storage on site	Visual impacts on neighbours	Unlikely	Low	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.

5. Impact Assessment

5.1 Introduction

Detailed assessment of impacts associated with the current Project Approval (PA 06_0159) phased expansion were undertaken as part of the original mill expansion EA (2007) and subsequently as part of ongoing Monitoring and Management compliance programs (Visy EA 2007 and Visy EPL #10323).

The risk analysis presented in Section 4 highlighted that the proposed modification is not anticipated to introduce any new environmental risks to the approved development. The mill will continue to operate in accordance with the existing project approval and fall within the assessment parameters for each environmental aspect previously assessed as part of the original EA.

A review of how the proposed modification will relate to the approved project for key environmental aspects is highlighted below. Impacts that were identified in the risk assessment table in Section 4 of being at a risk equal to or greater than medium, were further assessed in detail.

5.2 Air and dust emissions

Detailed assessment of air and dust emissions undertaken in the 2007 Tumut Mill expansion EA indicated a range of potential pollutant emission sources from mill operations outlined below:

Table 7 Summary of sources of emissions to atmosphere from the original EA 2007

Discharge point	Potential emission source	Potential emissions
Stack 1	Recovery boiler, lime kiln and power boiler	CI, CO, NOx, HCL, SO2, TSP, sulphuric acid mist, dioxins, HF, TRS (including H2S), methanol, VOCs, As, Sb, Be, Cd, Cr, Co, Pb, Mn, Hg, Ni, Se, Sn, V, Cu and smoke (opacity)
Stack 2	Recovery boiler, lime kiln and natural gas boiler	CI, CO, NOx, HCL, SO2, TSP, sulphuric acid mist, dioxins, HF, TRS (including H2S), methanol, VOCs, As, Sb, Be, Cd, Cr, Co, Pb, Mn, Hg, Ni, Se, Sn, V, Cu and smoke (opacity)
Stack 2	Recovery boiler, lime kiln and multi fuel boiler	CI, CO, NOx, HCL, SO2, TSP, sulphuric acid mist, dioxins, HF, TRS (including H2S), methanol, VOCs, As, Sb, Be, Cd, Cr, Co, Pb, Mn, Hg, Ni, Se, Sn, V, Cu and smoke (opacity)
Stack 3	Gas turbine	CO, NOxm SO2, TSP and VOCs

The previous assessments indicated that all emissions associated with the phased expansion would fall within the applicable standard of concentration of emissions to atmosphere and fall within the impact assessment criteria at nearby receivers.

There has been a single complaint on 25th July 2014 related to air emissions. The complainant indicated that the emissions emitting from one of the main stacks was irregular in colour opacity. Visy investigated and reported on the possible opacity exceedance to the EPA immediately. The exceedance was due to recovery boiler B being tripped from a foreign object entangled within the conveyor system. No other air emission complaints have been observed.

The proposed modification of housing construction involves no additional loads or emission sources to the mill operations, and therefore will not affect operational air and dust emissions.

Construction operations, including dust and exhaust of heavy vehicle movements involved with the housing construction, would be minor in impact and temporary. Standard controls from the Visy construction management plan and the 2007 EA will manage and mitigate these risks.

5.3 Noise emissions

A detailed assessment of noise emissions was undertaken as part of the mill phased expansion by Benbow Environmental for the Visy EA in 2007. It assessed the then cumulative and the proposed operational impacts that would occur over a continuous 24 hour period, 7 days a week in alignment to the then DEC's Industrial Noise Policy 2000 (now the NSW EPA's Industrial Noise Policy (2000)). Visy has also conducted subsequent noise assessments as part of its Project Approval (06_0159) and EPL compliance.

The site operations contribute to noise emissions through a combination of noise sources with the dominant noise sources from mill processes. The boilers and several other noise sources operate 24 hours a day 7 days a week.

Visy's current conditions of approval for noise limits are outlined below:

Table 8 Noise limits for current project approval

Location	Day LAeq (15 minute)	Evening LAeq (15 minute)	Night LAeq (15 minute)	Night LAmax
'Pleasant view'*	40	40	40	45
'Deep creek'*	39	39	39	45
'Reka'* and 'Glengarry'*	36	36	36	45
Any other residence	35	35	35	45

* refers to residences identified in Visy EA (2007).

Predicted noise levels for the phased expansion from the original EA (2007) indicated that noise emission levels would meet the current EPL compliance limits during neutral weather conditions.

Results from ongoing compliance monitoring (Visy Environmental Compliance and Monitoring Report 2014) (ECMR 2014) also indicate current noise limits to be compliant with respect to climatic variations as identified in the NSW EPA's Industrial Noise Policy (2000). Visy has also developed noise management strategies (Visy Noise Mitigation Action Plan) in 2014 to assist in compliance monitoring and reducing its noise footprint.

There have been four complaints registered since August 2013 regarding noise. Each noise complaint has been linked to operational mill processes such as Paper Machine hood fan vibrations.

The proposed modification will not result in any additional operational noise sources to mill processes. Temporary construction noise will be increased during the construction of the housing and buildings.

Construction noise established during the proposed modification will be managed using the Visy construction management plan and standard controls established within the 2007 EA.

5.4 Waste water

The site has had extensive improvements to waste water infrastructure and transport through the phased expansion. Drainage to the site flows to an existing stormwater drainage and storage dam system and an onsite waste water treatment facility (WWTP) where it is processed and either re-used in the system or used for offsite irrigation at Gadara Park, a Visy run property that surrounds the Visy Tumut Paper and Pulp mill.

The original EA (2007) and a recent compliance monitoring report (Monitoring of Gadara Park Environmental Report 2013-14), completed by DM McMahon Pty Ltd, conducted detailed assessments for waste water storage and subsequent application. The 2007 EA identified a number of changes required to appropriately manage onsite stormwater, yet indicated that wastewater sources from the phased expansion will be identical to those produced by existing operations. Existing WWTP infrastructure and holding ponds were designed to tolerate the phased expansion. Visy actively manage Gadara Park and have evaluated the short term and long term effects of offsite irrigation.

The existing onsite system and Gadara Park irrigation system were designed to handle the phased expansion and associated additional wastewater production. Management controls outlined within the 2007 EA indicate current approved operations will not impact on soil or groundwater capacity or recharge and storage ponds have more than required storage capacity.

Information provided by Visy (Visy Key Operating Parameters, 2014) indicates the proposed modification will not involve an increase in wastewater production. Temporary construction work and building of the housing infrastructure will not produce a significant increase in wastewater production. Any minor increase of water run-off onsite during building construction will be captured by the stormwater systems, be treated in the WWTP and reused.

5.5 Mill power demand

Current mill power demand is 69 MW, with an approved usage of 75 MW (PA 06_0159). No increase in power demand is expected with the proposed modification.

Gas usage at current operating levels is well below the accepted usage assessed for the original project approval (PA 06_0159). In addition, from information provided by Visy the proposed modification for housing infrastructure will not involve an increase in gas usage.

Table 9 Gas usage for Visy Pulp and Paper mill phased expansion

Phase	Predicted gas usage from EA 2007 (TJ/yr)	Actual gas usage (TJ/yr)
2007 existing operations	347	347
Phase 1 mill expansion	2189	645
Phase 2 mill expansion	4179	833

5.6 Visual amenity

Impacts upon the visual amenity from nearby receivers are not anticipated to be a risk associated with the proposed modification. A full visual assessment was conducted within the initial EIS lodged in 1998 as part of the DA for the original Tumut mill, and a secondary assessment for the phased expansion was undertaken in the 2007 EA.

The initial assessment was approved with the approval of the original DA. The secondary assessment concluded that landscape changes as a result of the original phased expansion were deemed “relatively little”.

In addition, the incremental change associated with this proposed modification will have a negligible effect on visual amenity in context with the original development. All the new components proposed in this modification will be within the existing site boundary, and enclosed by existing infrastructure. Buildings will be constructed and clad with similar materials as existing and of a height lower or equal to existing.

5.7 Current performance

Visy has shown consistent dedication to improvement of environmental performance through its phased expansion. This has been recognised by the NSW EPA through letter correspondence (Appendix C) dated 16th December 2014. The EPA have indicated Visy's achievements in reporting, high level of compliance, and continued actions for improvement in environmental performance.

6. Conclusion

The proposed modification includes the construction of buildings and storage to enable previously approved upgrades to Visy plant and machinery. Specifically, White Pulp storage shed, Storage Sheds over existing laydown areas, and a Coating Kitchen building.

This document provides an environmental assessment of potential impacts associated with construction and operation of the proposed modification, using information provided by Visy.

Original project approval (PA 06_0159) and subsequent modifications had anticipated equipment upgrades and modifications. This means that most key environmental considerations pertaining to modified plant were anticipated and provided for prior to this proposed modification. Production components were conceptually incorporated into the existing plant footprint in the original EA (2007) and so, the proposed modification is considered more of a procedural matter to validate the existing approval. As seen from Sections 4 and 5 of this EA, there is no foreseeable adverse environmental impacts arising from construction or use of the proposed modification.

7. References

NSW *Environmental Planning and Assessment Act 1979*

NSW Environmental Protection Authority (1999) *NSW Industrial Noise Policy* (2000)

NSW Environmental Protection Authority letter correspondence *'Re: Visy Pulp and Paper Tumut – Environmental Compliance and Monitoring Report 2014'* (December 2014)

Visy Pulp and Paper Pty Ltd *Environmental Assessment for a Major Project Tumut Mill Expansion* (January 2007)

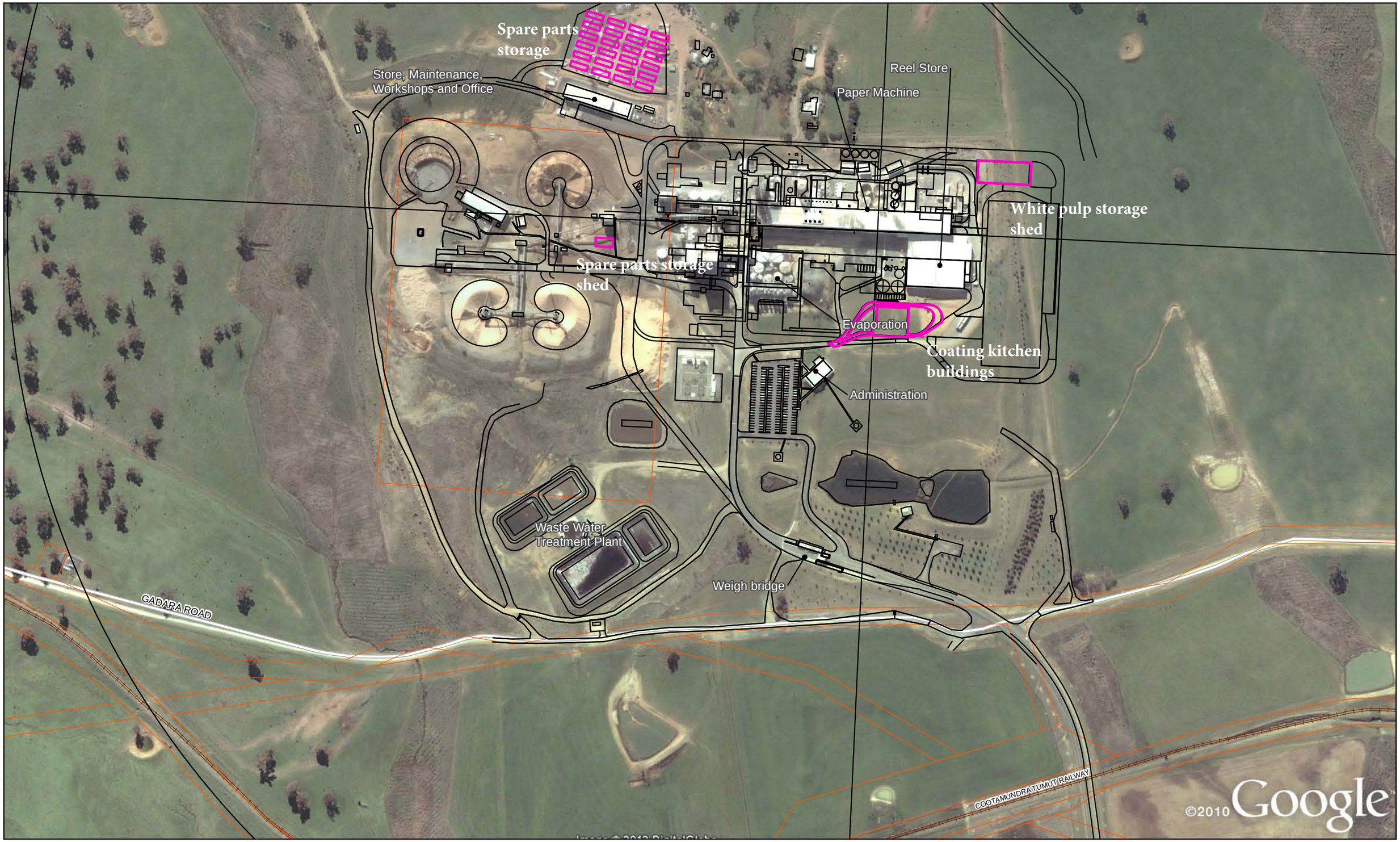
Visy Pulp and Paper Pty Ltd *Environmental Compliance and Monitoring Report* (2014)

Visy Pulp and Paper Pty Ltd *Key Operating Parameters* data (December 2014)

Visy Pulp and Paper Pty Ltd *Independent Environmental Audit 2014 – NGH environmental* (January 2015)

Appendices

Appendix A - MoA component locations



1:4,000 (at A3)

0 20 40 80 120 160

Metres

Map Projection: Transverse Mercator
Horizontal Datum: Geocentric Datum of Australia (GDA)
Grid: Map Grid of Australia 1994, Zone 56

LEGEND

- Proposed modification
- Design
- Road
- Railway
- Cadastre

Visy Pulp and Paper Pty Ltd
Tumut Mill Expansion s75W

Job Number	21-24378
Revision	0
Date	03 Jul 2015

Site layout

N:\AU\Orange\Projects\21\24378\GIS\Maps\Working\21_24378_WorkingQC.mxd

© 2010. While GHD has taken care to ensure the accuracy of this product, GHD and DATA CUSTODIAN, make no representations or warranties about its accuracy, completeness or suitability for any particular purpose. GHD and DATA CUSTODIAN, cannot accept liability of any kind (whether in contract, tort or otherwise) for any expenses, losses, damages and/or costs (including indirect or consequential damage) which are or may be incurred as a result of the product being inaccurate, incomplete or unsuitable in any way and for any reason.

Data Source: NSW Department of Lands: Cadastre - Jan 2011; LPMA Topo March 2012; Geoscience Australia: 250k Data - Jan 2011. Google Earth Pro, Imagery accessed 06092012 Created by: qjchung

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

Appendix B - Visy Key Operating Parameters

Key Operating Parameters - Recrystalisation Project

		EA 2007			
	Units	**Phase 1**	**Phase 2**	**2013/2014 Current**	**2015 Upgrade**
Production	tonnes/yr	700,000	700,000	648,456	648,456
Pulpwood	tonnes/yr	1,190,000	1,190,000	1,310,064	1,371,960
Sawmill	tonnes/yr	710,500	710,500	494,968	474,400
Total Sawmill Residues & Pulpwood	tonnes/yr	1,930,500	1,930,500	1,805,032	1,846,360
Purchased Pulp (Bleached Kraft pulp)	tonnes/yr	30,000	-	-	-
Wastepaper (RCF)	tonnes/yr	175,000	220,000	185,338	185,338
Internal Boiler Fuel Supply	tonnes/yr	135,714	188,970	79,633	79,633
External Boiler Fuel Supply	tonnes/yr	92,966	253,714	44,501	44,501
Chemcial Use	tonnes/yr	36,732	36,732	35,491	42,438
Mill residue & waste	tonnes/yr	71,245	44,545	55,688	54,915
Mill Power Demand	MW	71	75	69	69
On site Generation	MW	43	83	29	29
Gas Usage	TJ/yr	2,189	645	833	833
Gas Usage incl Gas turbine	TJ/yr	-	3,534	-	-
Freshwater Consumption	ML/yr	1,827	1,827	2,217	2,217
Mill Wastewater production	ML/yr	826	826	536	536
Truck Movements	Average/day	488	531	490	490

Key Operating Parameters - RCF Upgrade Project

		EA 2007			
	Units	**Phase 1**	**Phase 2**	**2013/2014 Current**	**2015 Upgrade**
Production	tonnes/yr	700,000	700,000	648,456	700,000
Pulpwood	tonnes/yr	1,190,000	1,190,000	1,310,064	1,371,960
Sawmill	tonnes/yr	710,500	710,500	494,968	474,400
Total Sawmill Residues & Pulpwood	tonnes/yr	1,930,500	1,930,500	1,805,032	1,846,360
Purchased Pulp (Bleached Kraft pulp)	tonnes/yr	30,000	-	-	-
Wastepaper (RCF)	tonnes/yr	175,000	220,000	185,338	220,338
Internal Boiler Fuel Supply	tonnes/yr	135,714	188,970	79,633	79,633
External Boiler Fuel Supply	tonnes/yr	92,966	253,714	44,501	44,501
Chemcial Use	tonnes/yr	36,732	36,732	35,491	47,302
Mill residue & waste	tonnes/yr	71,245	44,545	55,688	63,190
Mill Power Demand	MW	71	75	69	74
On site Generation	MW	43	83	29	29
Gas Usage	TJ/yr	2,189	645	833	833
Gas Usage incl Gas turbine	TJ/yr	-	3,534	-	-
Freshwater Consumption	ML/yr	1,827	1,827	2,217	2,217
Mill Wastewater production	ML/yr	826	826	536	536
Truck Movements	Average/day	488	531	490	500

Key Operating Parameters - White Top Liner Project

		EA 2007			
	Units	**Phase 1**	**Phase 2**	**2013/2014 Current**	**2015 Upgrade**
Production	tonnes/yr	700,000	700,000	648,456	700,000
Pulpwood	tonnes/yr	1,190,000	1,190,000	1,310,064	1,371,960
Sawmill	tonnes/yr	710,500	710,500	494,968	474,400
Total Sawmill Residues & Pulpwood	tonnes/yr	1,930,500	1,930,500	1,805,032	1,846,360
Purchased Pulp (Bleached Kraft pulp)	tonnes/yr	30,000	-	-	20,000
Wastepaper (RCF)	tonnes/yr	175,000	220,000	185,338	220,338
Internal Boiler Fuel Supply	tonnes/yr	135,714	188,970	79,633	79,633
External Boiler Fuel Supply	tonnes/yr	92,966	253,714	44,501	44,501
Chemcial Use	tonnes/yr	36,732	36,732	35,491	47,302
Mill residue & waste	tonnes/yr	71,245	44,545	55,688	63,190
Mill Power Demand	MW	71	75	69	74
On site Generation	MW	43	83	29	29
Gas Usage	TJ/yr	2,189	645	833	833
Gas Usage incl Gas turbine	TJ/yr	-	3,534	-	-
Freshwater Consumption	ML/yr	1,827	1,827	2,217	2,217
Mill Wastewater production	ML/yr	826	826	536	536
Truck Movements	Average/day	488	531	490	500

Recrystalisation Project

Key Parameter Calculations - Truck Movements

Current Items	**Tonne/yr**	**Tonnes/day**	**Trucks/day**
Input - Make up (2x trucks/week)	3,200	8.77	0.27
Output - Saltcake offsite (2013/2014)	1,179	3.23	0.10
Output - Brine (2013/2014)	457	1.25	0.04
Total additonal truck movements Avg/day			**0.41**

Future Items	**Tonne/yr**	**Tonnes/day**	**Trucks/day**
Input - Make up (0.5x trucks/week)	800	2.19	0.07
Output - Saltcake offsite	0	0.00	0.00
Output - Brine (88% increase)	863	2.36	0.07
Total additonal truck movements Avg/day			**0.14**

Brine production currently 1.5 - 1.8m3/day. Increase expected to be 1.6m3/day (88%)

Overall reduction in truck movements of 0.27 trucks/day average (1.9 trucks/week)

Key Parameter Calculations - Mill residue & waste

Current Items	**Tonne/yr**
Brine Waste (2013/2014)	457
Salt Cake (2013/2014)	1,179
Total	**1636**

Future Items	**Tonne/yr**
Brine Waste	863
Salt Cake	0
Total	**863**

Overall reduction in waste of 773 tonnes/yr

RCF Upgrade/White Top Liner Project

Key Parameter Calculations - Truck Movements

Additional Items	Tonnes/yr	Tonnes/day	Trucks/day
Paper production	50,000	136.99	4.3
Waste paper purchased	35,000	95.89	3.0
Bleached Kraft Pulp purchased	20,000	54.79	1.7
Rejects to landfill	7,502	20.55	0.6
Total additonal truck movements Avg/day			**9.6**

Key Parameter Calculations - Mill residue & waste

Item	Tonnes/yr	
Waste paper purchased (2013/2014)	185,338	18.9% increase = 220,338 tonnes/yr
RCF Rejects (2013/2014)	46,156	18.9% = 8,723.484 tonnes (86% landfill) = 7,502.2 tonnes (additional to landfill)

Tonnes to landfill (additional)	**7,502**

Appendix C - NSW EPA letter correspondence

Our reference: EF13/3800 DOC14/252375-04
Contact: Mark Enright 02 6022 0603

The General Manager
Visy Pulp and Paper Pty Limited
436 Gadara Road
TUMUT NSW 2720

Attention: Matt O'Donovan

Dear Mr Nouaze

Re Visy Pulp and Paper Tumut – Environmental Compliance and Monitoring Report 2014

I refer to your electronic mail and the attached annual Environmental Compliance and Monitoring Report 2014 (the Report) forwarded to the Environment Protection Authority (EPA) on 24 October 2014, and also to the annual return for your Environment Protection Licence No 10232.

As foreshadowed to your Matt O'Donovan during the meeting with our Mark Enright on the 27 November 2014, the EPA has reviewed the Report and the annual return and is pleased to note the improvements in environmental performance achieved over the past 12 months. Most noteworthy was the high level of compliance with stack emissions limits, the improvement in the accuracy and reliability of the continuous emission monitoring systems, and the reduction in odour emission rates which was also reflected in the third lowest number of odour complaints since operations commenced at Tumut.

The EPA is pleased to see this positive outcome of Visy Pulp and Paper Pty Limited's (Visy) environmental focus, and we look forward to continuing to work with Visy to resolve current issues such as the periodically high particulate emissions from the lime kiln/main stack, implementation of the agreed noise mitigation action plan, as well as the ever present challenge of controlling off site odour impacts.

If you have any further enquiries about this matter please contact Mark Enright by telephoning 02 6022 0603.

Yours sincerely

C. Bretherton 16.12.2014

CRAIG BRETHERTON
Manager South West
Environment Protection Authority

PO Box 544 Albury NSW 2640
Second Floor, Government Offices
512 Dean Street Albury NSW 2640
Tel: (02) 6022 0600 Fax: (02) 6022 0610
ABN 30 841 387 271
www.environment.nsw.gov.au

GHD

72 McNamara St, Orange, NSW 2800
PO BOX 950, Orange, NSW 2800
T: (02) 6393 6400 F: (02) 6393 6401 E: oagmail@ghd.com

© GHD 2015

This document is and shall remain the property of GHD. The document may only be used for the purpose for which it was commissioned and in accordance with the Terms of Engagement for the commission. Unauthorised use of this document in any form whatsoever is prohibited.

N:\AU\Orange\Projects\21\24378\WP\Visy_EA_s75W_150806.docx

Document Status

Rev No.	Author	Reviewer		Approved for Issue		
		Name	Signature	Name	Signature	Date
0	D. Galt	D. Mees & K. Rosen	*D. Mees**	K. Rosen	*K. Rosen**	August 2015

www.ghd.com