

EXECUTIVE SUMMARY
TABLE OF CONTENTS

EXECUTIVE SUMMARY	III
The Proponent, Roles and Responsibilities.....	III
The Wood Centre Development.....	III
Quantity of Production.....	VII
Source of Wood	VII
Tasmania’s Forests.....	viii
Planning Issues.....	IX
Social and Economic Issues.....	IX
Tourism.....	x
Transport and Roads.....	X
Environmental Management Issues	XIII
Terrestrial Issues	xiii
Atmospheric Emissions.....	xiii
<i>Diffuse And Point Source Emissions</i>	<i>xiii</i>
<i>Greenhouse Gases.....</i>	<i>xiii</i>
Hydrology, Water Supply and Wastewater Emissions.....	xiii
Noise Emissions.....	xvi
Solid Waste Generation and Disposal.....	xvii
Hazardous Materials.....	xix
Health Impact Assessment	xix
<i>Hazard Analysis and Risk Assessment</i>	<i>xxii</i>
<i>Fire Fighting and Emergency Services</i>	<i>xxiii</i>
Flora and Fauna.....	xxiii
Archaeology and Cultural Heritage.....	xxvi
Visual Impact	xxvi
Energy Use.....	xxvii
Monitoring	xxix
Commitments	XXX
Conclusions.....	XXX

FIGURES

Figure I Wood Centre Location (Map Sheet 4823 Glen Huon).....	iv
Figure II Conceptual Site Plan.....	vi
Figure III Wood Centre Wood Flow.....	vii
Figure IV Transport Routes and Ownership.....	xii
Figure V Wood Centre Water Balance	xv
Figure VI Wood Product and Waste Flow.....	xviii
Figure VII Wood Centre Hazardous Materials Stores and Emission Sources	xx
Figure VIII Wood Centre Flora	xxv
Figure IX Conceptual Visual Impact of the Wood Centre.....	xxviii
Figure X Wood Centre Planning Approval Process.....	xxxiii

TABLES

Table 1 Estimated Volumes of Merchantable Wood Over Time.....	viii
Table 2 Land Tenure in the Huon Forest District	viii

LIMITATIONS STATEMENT

This Development Proposal and Environmental Management Plan (DPEMP) has been prepared in accordance with the scope of services agreed upon by SEMF Holdings Pty Ltd (SEMF) and Forestry Tasmania ('the Client'). To the best of SEMF's knowledge, the proposal presented herein represents the Client's intentions at the time of printing of the report.

Forestry Tasmania affirms that the Development Proposal and Environmental Management Plan represents the intentions for the development of this stage.

However, the passage of time, manifestation of latent conditions or impacts of future events may result in the actual project and its impact differing from that described in this report.

In preparing this report, SEMF has relied upon data, surveys, analyses, designs, plans and other information provided by the Client and other individuals and organisations referenced herein. Except as otherwise stated in this report, SEMF has not verified the accuracy or completeness of such data, surveys, analyses, designs, plans and other information.

Prepared by Forestry Tasmania & SEMF Holdings Pty Ltd

Published by Forestry Tasmania

Project No. 14759

EXECUTIVE SUMMARY

The Proponent, Roles and Responsibilities

Forestry Tasmania (FT) is the proponent for the Wood Centre Development (approx 90 ha), the location of which is shown in Figure I and Figure IV. The latter figure shows the location in the regional context. The aim of the Wood Centre project is to focus local value-added processing of hardwood and special timber resources in the Huon District State forest, to enable the integration of different wood processing activities, greater recovery of hardwood timber and beneficial use of wood residues and processing by-products.

This will be implemented through the development of the proposed site to an investment-ready state, and the concurrent and subsequent attraction of private sector investment for the proposed timber-processing facilities.

An infrastructure company will undertake the development of the site and the ongoing management of site infrastructure (e.g. roads, stormwater, wastewater and process/potable water supply and disposal).

Each processing facility on the site is expected to have an individual operator who will hold a sub-lease with the infrastructure company and be responsible for meeting the environmental permit conditions for their respective leases. A site wide Environmental Management Committee will be established to ensure the coordinated management of environmental issues across the site.

A community consultative committee will meet regularly with the Site Manager to review potential impacts on neighbouring communities including:

- Traffic;
- Changes in noise environment;
- Air Quality;
- Water Quality; and
- General effect on community fabric.

The Wood Centre Development

The hardwood and special timber processing facilities to be established on-site will include:

- A merchandising yard;
- A regrowth sawmill;
- A rotary peeled veneer mill;
- A wood fibre production facility; and
- A wood-residue-fired power station.

Figure I Wood Centre Location (Map Sheet 4823 Glen Huon)



Not to Scale

Figures II and IX illustrate the proposed location of these facilities on the site. Hardwood resource will be distributed through the site from the Merchandising Yard. At the Merchandising Yard, timber will be segregated and sorted into saleable products that will be temporarily stored and, where necessary, prepared for receipt by other wood processing operations. The aim of the centralisation of wood resources at the site is to improve recovery of materials for value-adding processes.

The site rezoning that has been proposed allows for other value-adding timber industries to locate at the site in the future. Each of these industries will lodge their own development application and separate DPEMP where applicable.

The sawmill will process regrowth logs on-site, air and kiln dry the timber product, which may also be dressed and moulded on-site and then sawn timber will be transported to market.

The rotary peeled veneer mill will be the first facility using state-of-the-art equipment of its kind in the state. Suitable logs will be peeled, veneer sheets produced, kiln-dried, composed (where necessary), stacked, and packaged. This material will then be transported to market.

The hardwood fibre production facility will generate wood fibre that will be transported off site for export and/or use in the State.

The proposed hardwood residue-fired power station will use forest residue from logged coupes as fuelwood to produce power from a renewable resource for the site and sale to the community. The burning of these residues in a power station rather than on the forest floor will greatly reduce burn intensity and the levels of smoke emissions.

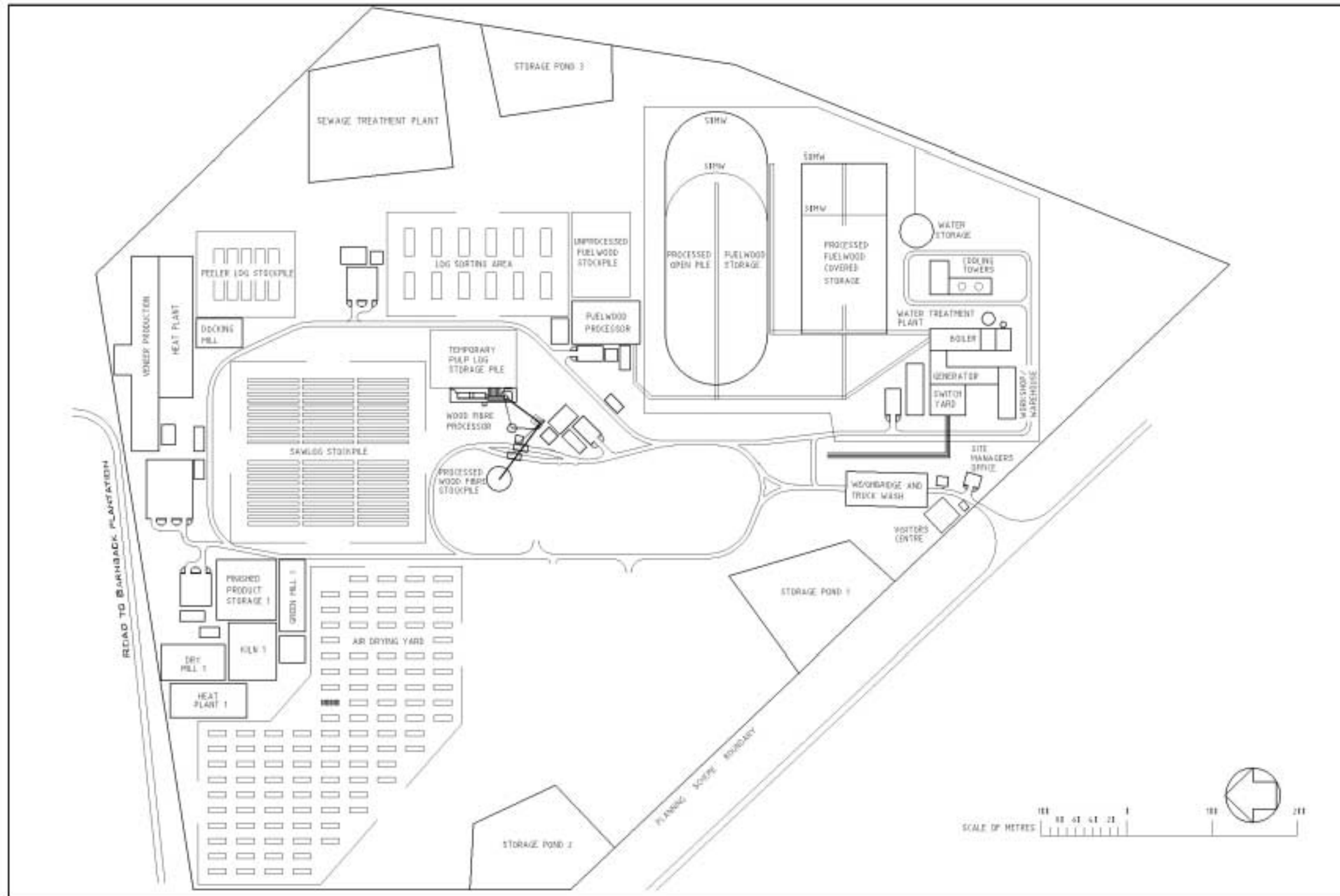
Processing of forest residues at the fuelwood processor will involve using a hogger; a large rotating horizontal drum with a series of radial “hammers” that break up pieces of wood against an anvil to produce fuel to the required specification.

If timing issues associated with the independent development of the projects dictate, forest and wood residues fired heat plants will be established on-site at the sawmill and rotary peeled veneer mill. Fuelwood material for these facilities will be collected from harvested forest coupes and timber by-products generated on-site by timber processing operations.

Detailed descriptions of each of the timber processing operations proposed at this stage are provided in the relevant environmental management plan section of this DPEMP.

A flow diagram showing the wood flow through the Wood Centre is provided in Figure III.

Figure II Conceptual Site Plan



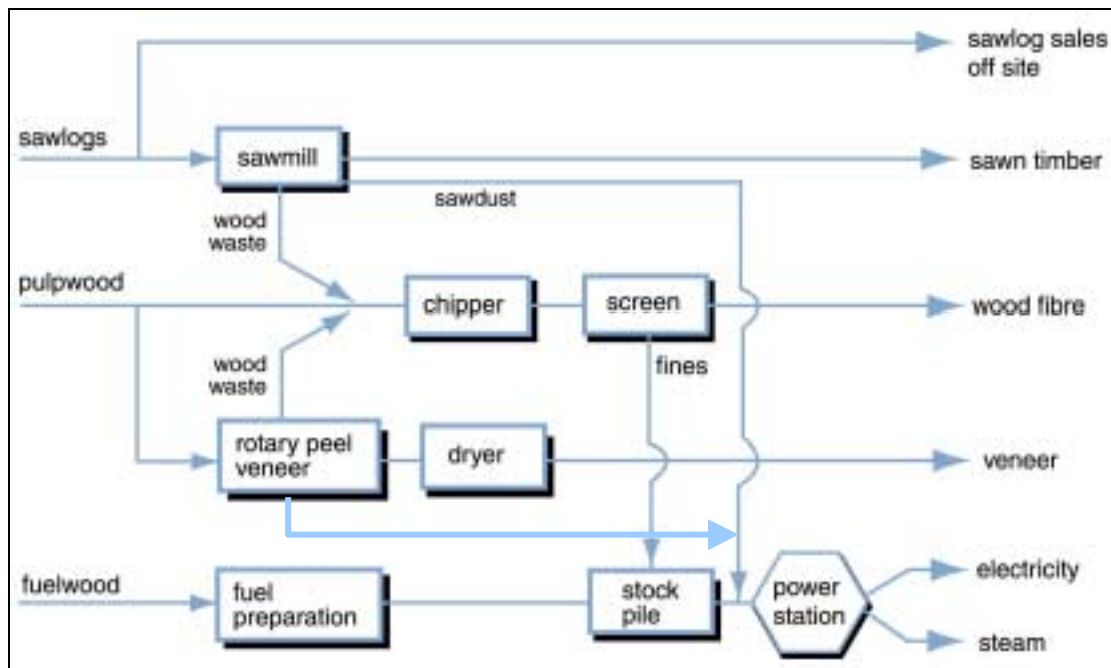
Quantity of Production

The estimated average annual hardwood and special timber inflow and product outflow is outlined below.

Raw Materials	Green wood inflow (pa)
Sawlogs	88,000 m ³
Pulpwood	300,000 T
Rotary Peeler Logs	150,000 T
Forest Residue	300,000 T
Total	838,000 T

Product	Estimated product outflow (pa)
Sawn timber and sawlogs	64,000 m ³
Wood fibre product	340,000 T
Dried rotary peeled veneer with packaging	57,000 T
Electricity (+steam)	30-50 MW
Total	461,000 T

Figure III Wood Centre Wood Flow



Source of Wood

Wood processed in the Wood Centre will be sourced from the Southern hardwood forests in accordance with the Huon and Derwent Forest District Forest Management Plans (FT, 1999) and Regional Forest Agreement (RFA). The development will not

result in any change to the areas of State forest that are harvested on a sustainable basis, in compliance with the RFA and the Forestry Act.

Tasmania's Forests

In total Tasmania has over 3,350,000 ha under forest. State forest managed by Forestry Tasmania comprises about 1.5 million ha, about 30% (1,035,000 ha) of Tasmania's forests are privately owned.

The estimated volumes of merchantable wood in forest areas that will be placed in production over time are shown below (Source: State of the Forest Nov 1998).

Table 1 Estimated Volumes of Merchantable Wood Over Time

Total area	Multiple use forest	1,770,000 ha
	Private forest	1,040,000 ha
Forest area available for production	Multiple use forest	780,000 ha
	Private forest	550,000 ha
Standing volume sawlog	Multiple use forest	18,600,000 m ³
	Private forest	7,300,000 m ³
Standing volume pulpwood	Multiple use forest	142,000,000 tonnes
	Private forest	46,600,000 tonnes

All native forest on public land that is harvested is regenerated, mostly back to native forest but some is converted to plantation.

The Huon Forest District comprises 762,800 ha of land, the land tenure of which is shown in Table 2.

Table 2 Land Tenure in the Huon Forest District

Tenure	Area (Ha)	% Total Area	Total Afforested Area (Ha)	Old Growth Area (Ha)
Reserved under the National Parks and Wildlife Act 1970	503,600	66	172,200	139,100
Private Land	125,500	17	59,500	2,600
Multiple-use State forest, includes 5,000 ha of old growth forest protected by Management Decision Classification (MDC)	115,800	15	101,700	20,600
State forest Reserves and other areas	7,300	1	6,000	1,300
Other Crown Land	10,700	1	5,100	400

(Source: Forestry Tasmania June 2001)

The area available for wood production from Multiple-use State forest totals 95,100 ha (77% of the total FT managed area) including areas that require special management because of identified values. Within the wood production area, 7,900 ha are managed for special species timber production in accordance with the Forests and Forest Industry Strategy for continuing supplies of these species. The timber harvesting plans for the next 10 years will result in about 2000 ha of State forest being

harvested and regenerated each year.

Planning Issues

The proposed Wood Centre site is currently zoned Rural. The intent of the Rural Zone does not match the existing or potential use of the site. In the Rural Zone a Timber Mill is discretionary and Light and General Industry are not permitted which includes the wood fired power station and rotary peeled veneer plant. It is noted that the use "land clearing" is a permitted use in the Rural Zone. The site is currently bushland with poor soils and is not suitable for agricultural use. The subdivision minimum in the Rural Zone is 20 ha. In many cases developments proposed for the site will require less than 20 hectares.

For the integrated timber processing operation to occur on the subject land an amendment to the planning scheme is required.

It is considered that the tenor of the *Huon Planning Scheme 1979* supports the development of an integrated timber-processing site. For example, the development of the Wood Centre will assist in preserving the economic viability of the local economy without destroying the rural and scenic character of the Municipality, which the planning scheme iterates as its main aim. Good agricultural land will not be destroyed nor will an environmentally sensitive area. There is nothing in the tenor of the planning scheme that suggests the proposed amendment should not be approved.

In accordance with Section 43A of the *Land Use Planning and Approvals Act 1993* a request has been made to amend the *Huon Planning Scheme 1979* to introduce a specific zone for the subject site to permit the proposed current and future intended uses.

Social and Economic Issues

The proposed project will deliver significant economic and social benefits to Tasmania and the Huon Valley in particular.

Employment resulting from the proposed development will include stability for the 15 to 20 harvesting contracting companies, currently employing some 100 to 150 operational staff in the area. A further 200 to 250 new jobs will be created at the Wood Centre. There are no identifiable negative impacts on employment opportunities in existing industries from the Wood Centre development. All existing wood supply contracts to local mills will be retained.

This employment will contribute about \$8.1 million a year in wages and salaries to the economy. The construction period will also create around 200 direct jobs over a period of 12 months. The flow on effects will mean that at least the same number of jobs (200), will be created indirectly.

There will be additional benefits to existing sawmillers including:

- Improved inventory control with reduced log holding capacity required by sawmillers;
- Improved safety for forest workers preparing logs;
- Improved log specification and quality control as a result of improved log

grading and preparation within the Merchandising Yard; and

- Improved delivery lead times as a result of improved transport efficiencies and stockholding.

There will be a greater volume of timber recovered to solid wood products locally.

Modifications in traffic flows should have positive regional social benefits by reducing log traffic through several major population centres. Further, by moving processing facilities closer to the forest, most of the wood that is moved away from the site will be in enclosed vehicles. Redirection of the traffic flow will impact on some smaller centres.

Electricity generation on-site will assist in increasing the reliability of power supply south of Huonville. Additional generating capacity at the end of the transmission network provides an attractive method of improving reliability of the network as a whole.

The Wood Centre will make a significant contribution to the Huon Valley Municipality rate base.

A community advisory committee has been established and will be maintained, to ensure that along with local government input, there is a direct opportunity for the community to have ongoing input to the project.

Tourism

Creation of the Wood Centre as a showcase for hardwood and special timber processing includes the opportunity for visitors to view the operations. An on-site visitor centre and conducted tours of the site are part of the development plan. Viewing galleries and vantage-points around the site will allow visitors to see the operations and gain a greater knowledge on how value is created from our forests.

The Huon Valley has a growing tourism industry that in part depends on the forests. FT is seeking to enhance this tourism appeal through provision of interpretation in the forest and establishment of tourist-centred facilities such as the Tahune Forest AirWalk. Forestry and tourism have developed side-by-side over the past 100 years. Various tourist operators benefit from using infrastructure developed by FT to provide access to forest pursuits in State forest. These and new operations will continue to benefit from infrastructure improvements that are occurring. In addition, the public will be able to view the hardwood and special timber processing in the Wood Centre as a showcase.

In support of this positive social and economic development, the proposed Wood Centre will cause a minimal impact to the visual integrity of the forests while increasing productivity and maximising use of residues.

Transport and Roads

The potential impacts of traffic movements to and from the Wood Centre include:

- Noise, dust and vibration associated with truck movement;
- Increased traffic;

-
- Deterioration of road surfaces due to heavy vehicle movements;
 - Incompatibility with the present design standard of the roads; and
 - Interference with school bus times and/or other sensitive activities along the transport route.

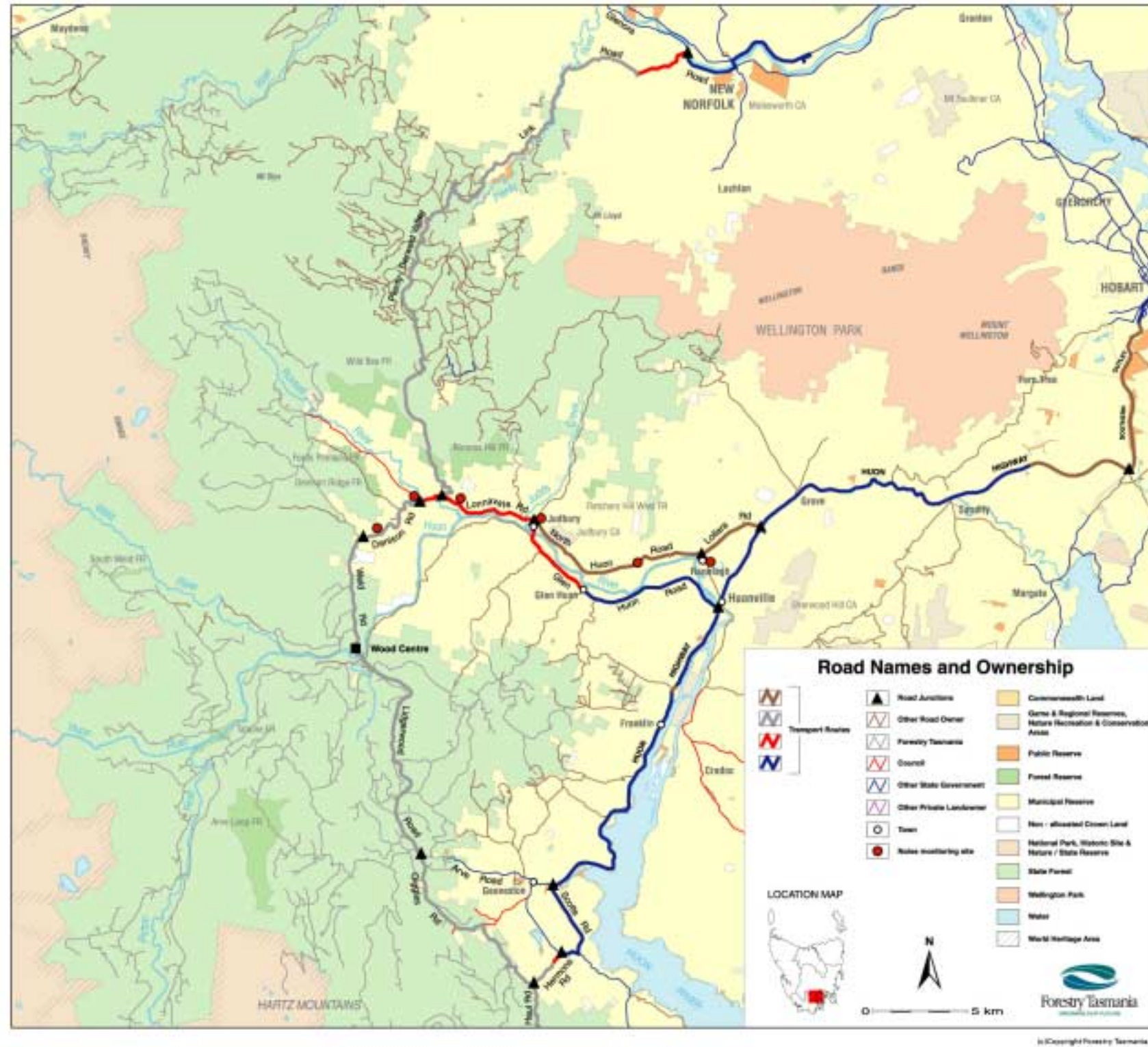
These potential impacts have been assessed in detail along the proposed transport routes to and from the Wood Centre. An assessment of the indirect transport costs (in terms of environmental noise, greenhouse emissions, local air pollution, water pollution, road construction and maintenance, and road accidents) of the existing transport arrangements when compared to those proposed for the Wood Centre, identified that there would be a decrease in these costs of about 40% for the preferred transport option.

A wide range of mitigation measures will be undertaken to minimise the potential transport impacts. These include:

- Upgrading of transport routes to Department of Infrastructure, Energy and Resources and AUSTROADS standards;
- Stormwater Management during construction to Soil and Water Management Guideline Standards (June 1999);
- Use of a modern, well maintained transport fleet;
- Training of drivers for operations on the transport routes;
- Development and implementation of a comprehensive Traffic Management Plan, covering all aspects of the transport operation; and
- Regular monitoring and enforcement of the transport operation.

While the transport associated with the Wood Centre will result in the redirection of the traffic flow through some smaller population centres (Figure IV), it will result in an overall reduction in log traffic and total traffic through several major population centres. It is considered that the transport impacts on the community are capable of being satisfactorily managed, once an agreed range of remedial work, identified with the community to ameliorate these impacts, are implemented.

Figure IV Transport Routes and Ownership



Environmental Management Issues

The proposed development will be constructed and operated in accordance with the principles of best practice environmental management as defined in the *Environmental Management and Pollution Control Act 1994*.

Terrestrial Issues

The development is to be established in an area on the top of a ridge, which has no significant land constraints. The significant fluvio-glacial terrace escarpment that encircles the ridge will be mapped and records kept where excavations are likely to intercept it.

Atmospheric Emissions

Diffuse And Point Source Emissions

Management measures are to be implemented within each on-site wood processing facility to minimise potential dust emissions from vehicular movements, storage and handling of wood materials and emission of particulates.

A potential contributor to aerosol emissions may arise from wastewater irrigation. The issue of irrigation will be fully assessed and documented in an Irrigation Management Plan to be submitted separately from this DPEMP.

The main point source atmospheric emissions to be associated with the operation of the Wood Centre are stack emissions from the power station and heat plants at the sawmill and rotary peeled veneer mill. The effective design, operation and monitoring of these facilities using best commercially available technology will ensure that emissions meet regulatory standards.

Greenhouse Gases

The Wood Centre development will impact on the global greenhouse environment as follows:

- In the Tasmanian context, the release of CO₂ will effectively remain the same. This is because the same amount of CO₂ will be released whether the wood is burnt in the power station, or on the forest floor in the establishment of new forests.
- By reducing fuel used for transport, less CO₂ will be emitted from this source.

In summary, the CO₂ production of the power industry will remain the same, while the CO₂ produced by forestry activities will be reduced.

Hydrology, Water Supply and Wastewater Emissions

The proposed maximum extraction of 5 Megalitres a day from the Huon River for use within the Wood Centre wood processing operations represents only 0.07% of the average flow conditions (1% of minimum flow conditions) and so no adverse impact are expected to the existing ecology of the Huon River.

Figure V illustrates the water balance for the Wood Centre. Contaminated stormwater and process wastewater from the wood processing facilities will be managed in accordance with a comprehensive collection, treatment and reuse system. Each facility will maximise the reuse of wastewater on-site, and any excess wastewater treated prior to release to the site-wide storage ponds. Additional water requirements for each facility will be drawn from these ponds as required to minimise the need for raw water from the Huon River.

During high rainfall events, excess wastewater will be released from the storage pond in a controlled manner. For the purpose of this document a “high rainfall event” is defined as a one in ten year, 72 hour rainfall event.

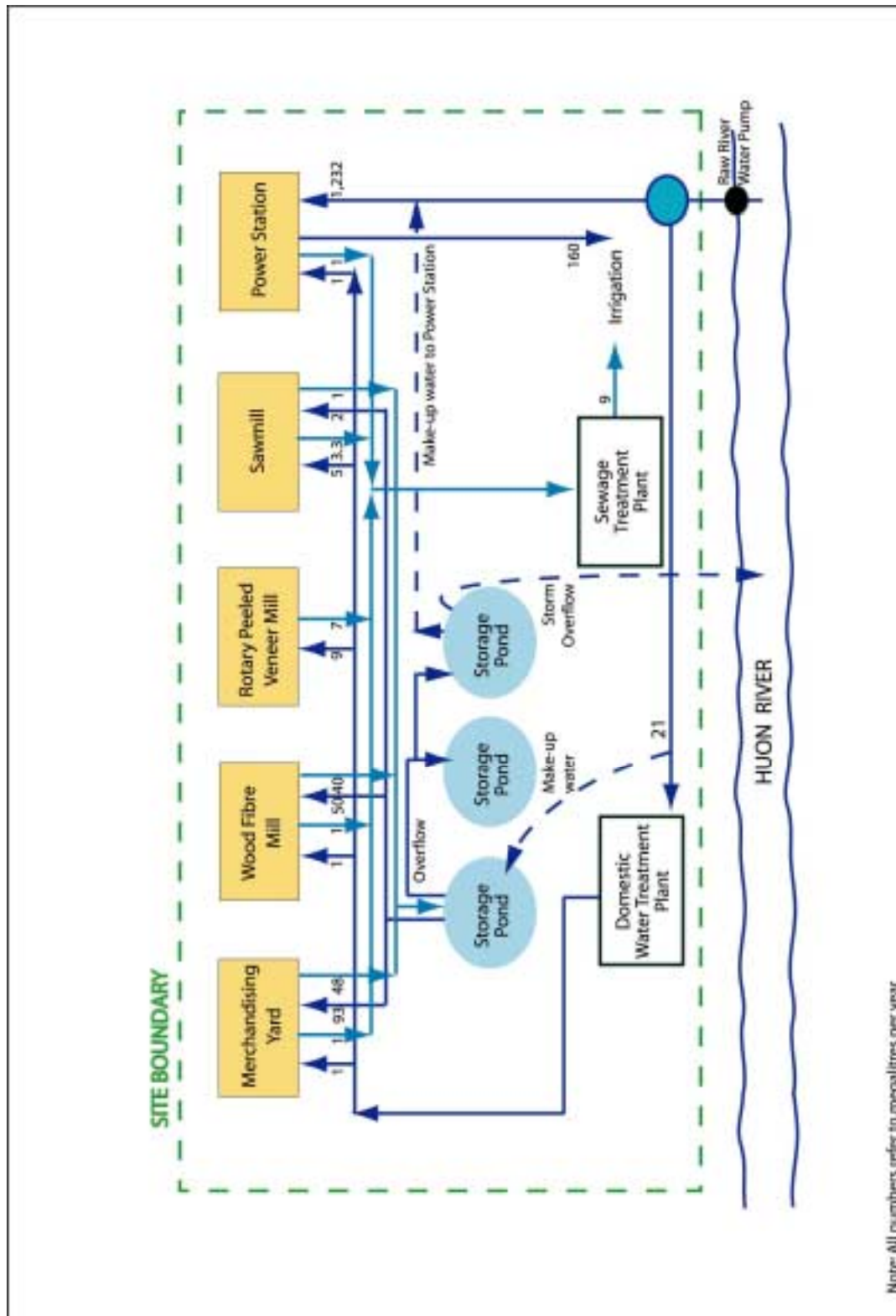
The wastewater management approach proposed for the site will provide a multi-level protection system for any on-site spills or accidents, thereby minimising the opportunity for off-site environmental harm.

The domestic wastewater generated on-site will be directed to a sewage treatment plant for treatment, prior to pumping to an area off-site for controlled irrigation.

An extensive water monitoring program will be implemented. Monitoring will include process water streams from each of the facilities, recycled wastewater, ground water at the irrigation site, river water quality upstream and downstream from the site.

Publication of results via a regularly maintained Wood Centre website will be provided on www.southwoodresources.com.au .

Figure V Wood Centre Water Balance



Noise Emissions

The sound pressure level for the site as a whole was derived from the anticipated main noise sources from the wood processing facilities.

The main noise sources at each facility area follows.

Merchandising Yard

- Log drops
- Log loaders
- Chainsaw
- Fuelwood processor

Sawmill

- Log drops
- Log loader
- Chainsaw

Rotary Peeled Veneer Mill

- General machine hall noise
- Log drops
- Log loader
- Chainsaw

Wood Fibre Mill

- General chipping operations

Wood Fibre Power Station

- General power station operations
- Transformer.

The wood fibre processor is the main noise source on the Wood Centre site. This facility will be fully enclosed in a sound absorbing structure, oriented so that its opening is not directed towards off-site residences. In addition, where possible fuelwood processors (hoggers and/or tub grinders) will be situated behind other buildings so that the buildings provide additional noise barriers in the direction of residences. The proposed location of potential noise producing equipment is shown in Figure VII.

The calculated noise level at the nearest residence, 6 kilometres from the Wood Centre is Leq 28.4 dB(A) compared to a background noise level of Leq 38-44 dB(A).

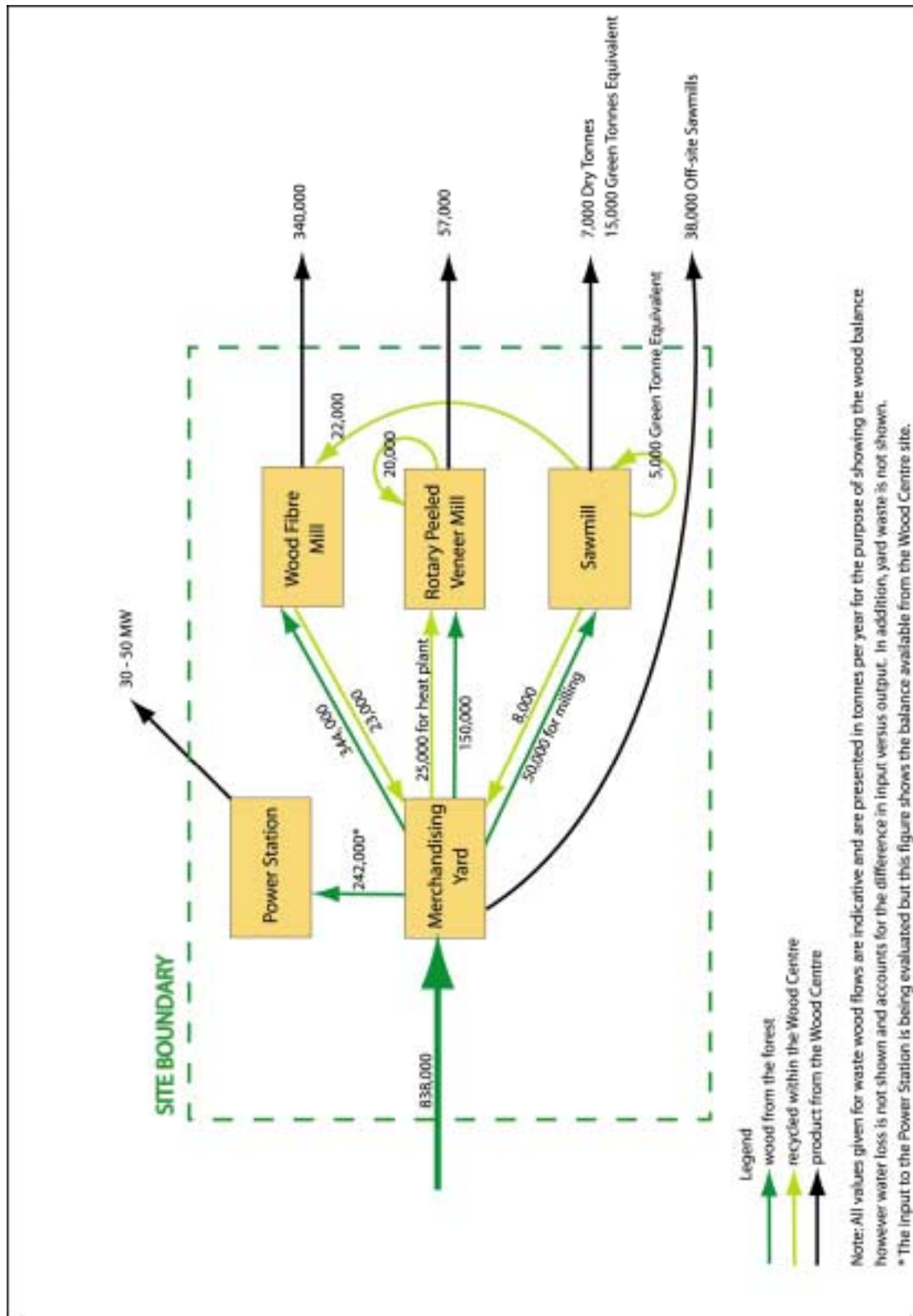
Due to the isolated nature of the proposed development and the management measures proposed for implementation, noise from the operation is considered to have a very low potential for nuisance to any residence.

These noise emissions relate to the emissions from the site whereas noise that may affect the health of employees on site is considered as a component of the Health Impact Assessment.

Solid Waste Generation and Disposal

Solid wastes generated on-site will be managed in accordance with the waste management hierarchy of waste avoidance and minimisation, resource recovery and disposal. The establishment of the wood processing operations on the Wood Centre site will enable maximum recovery of wood and reuse of the wood by-products generated, predominantly as fuelwood in the wood fired power station and heat plants (Figure VI). The environmental impact of solid waste generation will be minimal.

Figure VI Wood Product and Waste Flow



Hazardous Materials

The main types of hazardous material to be stored and handled on the Wood Centre site are petroleum hydrocarbons (e.g. diesel) in relatively small volumes. Minor quantities of other materials such as LPG, water and wastewater treatment chemicals, herbicide, and paints will also be stored on-site. There is a low potential for spillage of these materials during storage, as secure stores and bunds will be provided in accordance with relevant Australian Standards and statutory requirements. The locations of the stores are shown in Figure VII.

In the event of spillage, contingency measures will be in place on each wood-processing site for the containment and clean-up of materials, including:

- Standard response procedures and training of site personnel in response;
- Maintenance of spill kits on-site;
- Establishment of bunds where necessary;
- Ability to collect and recover spillages in wastewater collection sumps; and
- Implementation of incident reporting procedures.

The *Environmental Management and Pollution Control Act* (1994) provides penalties for companies and individuals for breaches of the Act.

Health Impact Assessment

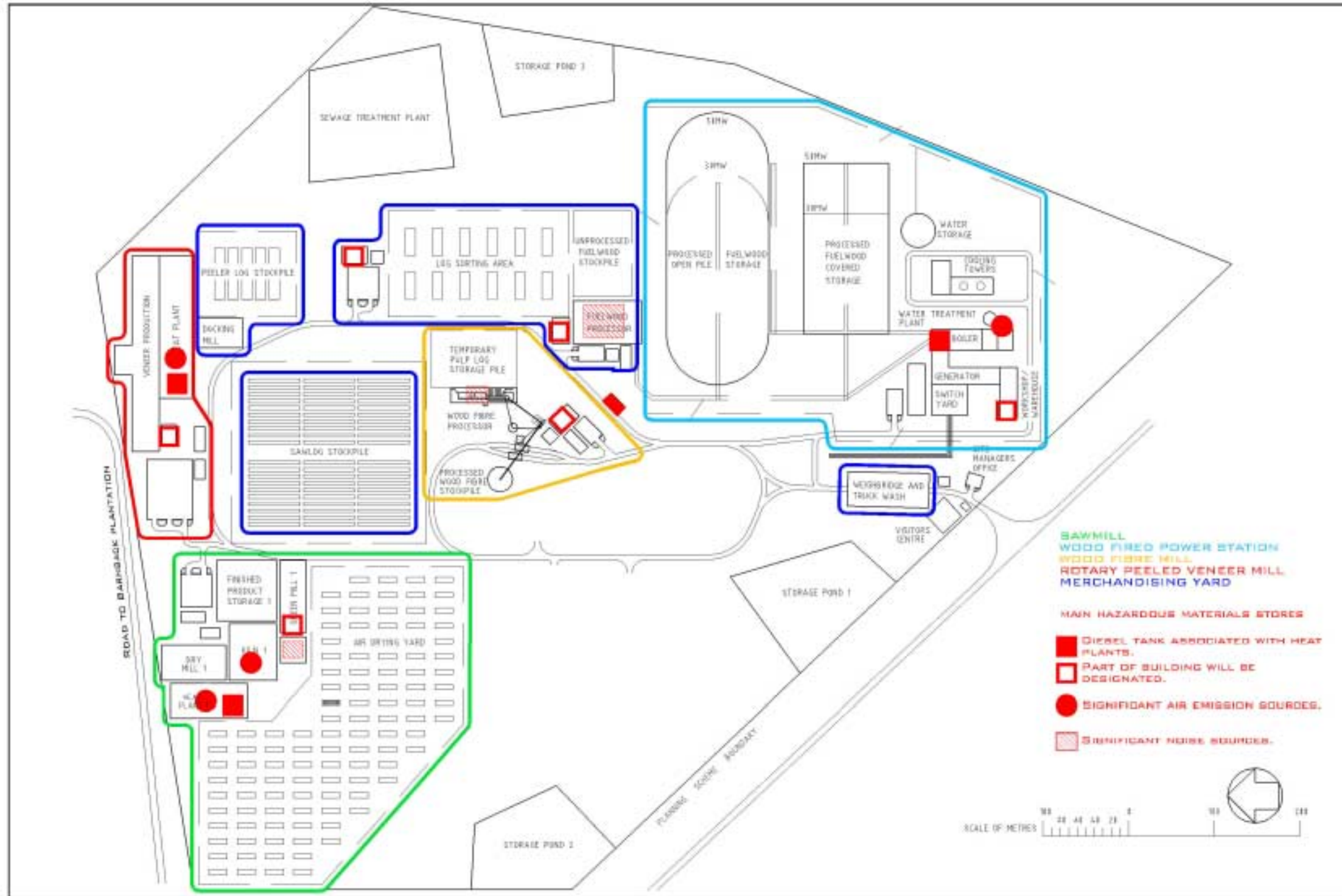
The key health issues associated with this project have been identified and include:

- Noise;
- Air pollution;
- Wastewater management;
- Control of biological hazards;
- Occupational health and safety; and
- Transport related impacts.

The most significant noises that may affect the health of employees on-site are those generated by the breakdown of wood, movement of logs between operating units, vehicle noises, and operating machinery. Of these, the chipper at the wood fibre plant is considered the loudest. The operation of this equipment within enclosed facilities will confine the potential noise impact for off-site receptors, with no off-site impacts anticipated.

The most significant air emissions will originate from the power plant boiler. Location of the 40 m boiler stack on higher ground and the use of best commercially available pollution control measures will reduce the risk of off-site impacts.

Figure VII Wood Centre Hazardous Materials Stores and Emission Sources



The Wood Centre development reduces open-air regeneration burning. Further advantages include:

- Particulate emissions are reduced due to filtration of the combustion gases;
- Dispersion of emissions is better controlled since there is only one point source; and
- Better combustion process and control resulting in lower levels of emissions.

Implementing the mitigation measures proposed means that the increased human health impact of air emissions will be negligible compared to existing levels.

Wastewater generated during on-site processing will be directed to storage ponds and reused on-site with minimal releases to the external environment. Domestic sewage is to be treated in an on-site sewage treatment plant, and irrigated in accordance with an irrigation management plan. No significant health impact is likely to occur once the defined management measures are implemented.

A number of measures will be incorporated in the design of the power station's cooling tower to prevent the potential risks associated with *Legionella*, including the following:

- Exclusion of sunlight;
- Stainless steel cooling tower construction;
- Monitoring and dosing the water; and
- Location of towers away from any type of disturbance and fresh air intake vents.

To minimise the risk associated with mosquitoes in the on-site storage ponds, it is proposed that continuous monitoring of the ponds will be carried out to check for mosquito larvae, at critical times of the year.

Occupational health and safety standards will be followed at each facility. The procedures and measures to be taken by operators will be defined in the facility standard operating procedures prior to commissioning.

Transport of logs and products to and from the site will result in changed traffic movements and an increase in traffic and associated noise in some areas along the route but decreased noise in other areas. A wide range of mitigation measures will be undertaken in consultation with the community including:

- Treatment of wood fibre transport bins to minimise drumming noises when empty;
- Minimising the number of fleet vehicles;
- Reducing transport vehicle speed;
- Keeping the trucks well maintained; and
- Using electro-magnetic rather than engine exhaust braking.

The transport related safety issues involve consideration of the roads, the vehicles,

and the drivers, to ensure that the overall transport operations are safe, and follow best practice.

It is considered that the transport impacts on the community are capable of being satisfactorily managed.

In summary, the detailed assessment of each of the potential health issues has concluded that, provided contemporary occupational health and safety practices and procedures are implemented, and the proposed environmental management and mitigation measures are in place, adverse health impacts will be minimised.

Hazard Analysis and Risk Assessment

A preliminary hazard identification and risk assessment was conducted on the power station. The potential hazards were systematically identified using a preliminary Hazard and Operability Study (HAZOP) in conjunction with the schematic process flow diagram for the power station.

The HAZOP study identified the following areas of the power station as having the potential to kill, injure, or cause significant engineering and environmental damage, resulting from abnormal operating conditions or accident based activities:

- Fuel Stockpile;
- Boiler;
- Steam Lines;
- Turbine;
- Cooling Tower;
- Particulate Filter System;
- Air Circulation System; and
- Chemical Storage.

Each of these identified areas has been assessed under the Rapid Environmental Risk Assessment Checklist (RERAC) method.

The Hazard Identification above was then used to assess the risk of the most critical hazards present within the power plant site. The RERAC methodology was used to quantify the likelihood and severity of an incident or hazard. This resulted in a ranking of each hazard in terms of total assessed risk (TAS). Events which are ranked the greatest TAS should be given the highest priority in terms of preventative action.

$$\text{TAS} = \text{Likelihood} \times \text{Severity}$$

There were no Category One hazards (requiring immediate action) identified. The vast majority of all RERAC assessments fell under a TAS ranking of 5, the recommended level for industry operations.

Only one hazard fell under Category Two (requiring medium term action), and that was the hazard associated with ruptures of lines containing high-pressure steam. Whilst deemed hazardous, it is generally not a catastrophic event. There are no direct

environmental effects associated with this hazard.

This preliminary RERAC study did not identify any catastrophic environmental hazard event scenarios. Based upon the HAZOP and RERAC studies, it was concluded that if the actions and recommendations outlined in the *Preliminary Hazard Analysis and Risk Assessment for the Wood Centre Development* (Appendix T) are acted upon, then there is little risk associated with hazards, which have significant environmental consequences.

Fire Fighting and Emergency Services

The temporary storage and processing of stockpiles of wood material on the Wood Centre site is a potential source of fuel in the event of a fire. Other potential fire hazards include the:

- Storage of fuels for loaders and equipment used on-site;
- Conducting vehicle and equipment maintenance, and possibly oxy-acetylene activities within workshop areas; and
- Location of the site within bushland.

A number of management measures will be implemented on-site including:

- Storage of fuels in approved facilities and wood materials will not be stored in close proximity to fuels;
- Maintenance of site fire main and adequate numbers of appropriate fire extinguishers on-site;
- Construction of buildings with cladding exteriors; and
- All vehicle and equipment maintenance and oxy-acetylene activities will be undertaken within confined areas with appropriate separation to stored flammable materials (e.g. workshop areas).

A fire service system will be installed at the site in accordance with the requirements of the Tasmania Fire Service and the relevant Australian Standards, including the Building Code of Australia.

In addition, a Fire Management Plan and an Emergency Response Plan will be developed for the site by the Site Manager to meet the requirements of the Tasmania Fire Service and the State Emergency Service, which will contain more specific plans for the respective facilities.

Flora and Fauna

No plant species of local, state-wide or national conservation significance were located on the site during survey of the site and review of literature and databases regarding flora in the region. During construction of the new bridge across the Huon River, *Westringia angustifolia* was identified. This is a rare listed species occurring mainly in the riparian zone. Any activities that have the potential to impact on the riparian zone will be preceded by a flora survey.

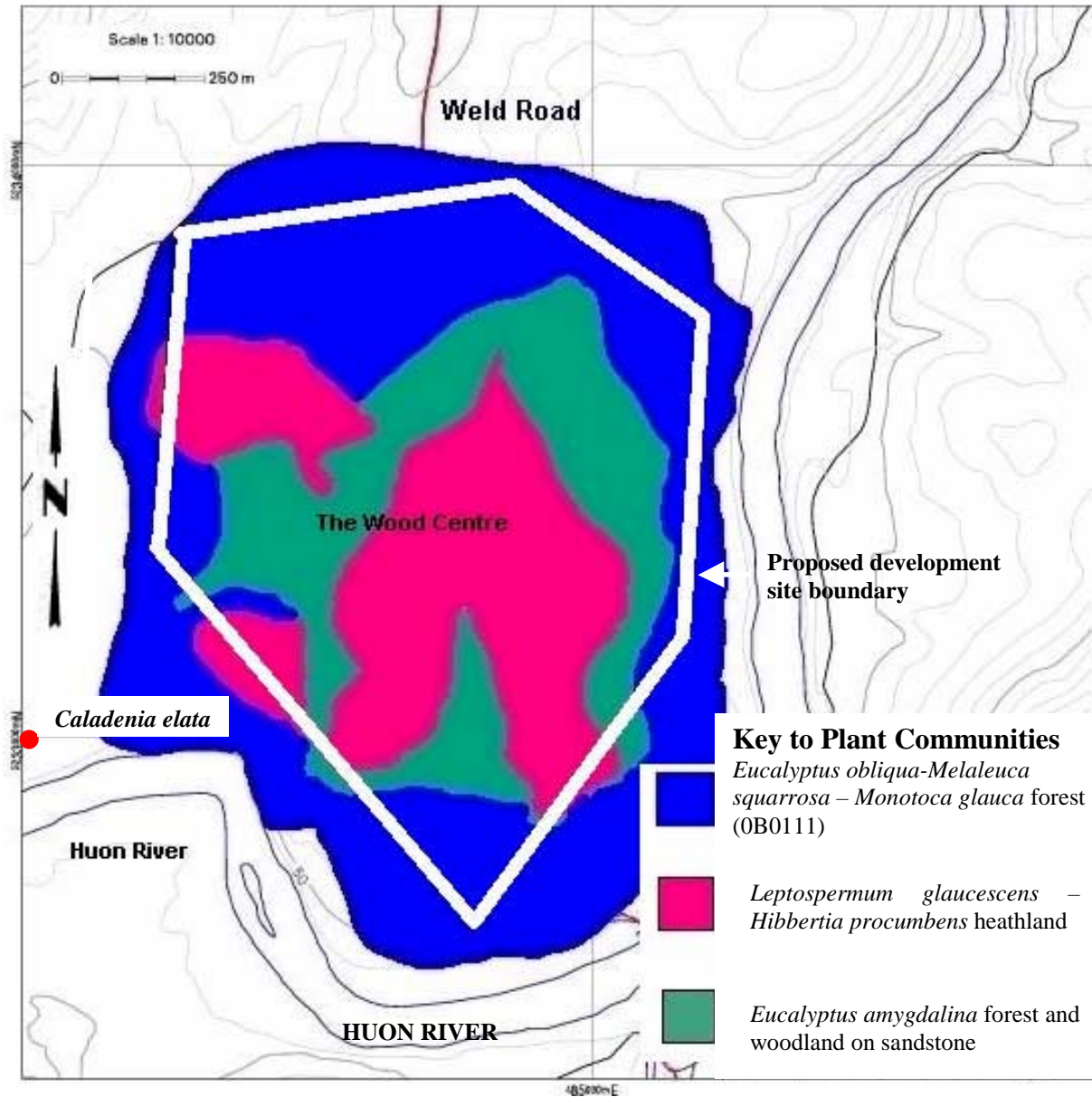
The proposed development will result in some loss of the intermittent remnant copses of *Eucalyptus amygdalina* woodland community (Figure VIII). This impact is not considered to be significant as this forest type is considered to be sufficiently protected under the RFA (pers. com., Stephen Casey 2001). An occurrence of *Caladenia elata* occurs near the site, this plant was previously considered endangered, it is far enough from the site not to be disturbed.

Seven faunal species of conservation significance are known, or are likely, to occur in the area of the proposed development. The proposed development will, however, only have potential to directly impact on one of these species, the Mt Mangana Stag Beetle. This impact is due to the necessity for clearing of some areas of wet *Eucalyptus obliqua* forest vegetation situated around the periphery of the site that is potential habitat for the stag beetle. A survey will be undertaken prior to construction to determine if the stag beetle is present within the wet *E.obliqua* forest around the periphery of the site. The areas, if found, will be delineated in order to protect the species. Where this is not possible, a permit to relocate due to damage to the area will be sought from DPIWE.

Management measures will be implemented to limit the extent of disturbance during construction and any disturbed areas will be rehabilitated as defined in the landscape master plan.

The project was referred to the Federal Minister for Environment under the *Environmental Protection and Biodiversity Conservation Act* who determined that there were no controlled actions.

Figure VIII Wood Centre Flora



Archaeology and Cultural Heritage

The Wood Centre development will not impact on European heritage sites, as no sites are known to occur on, or within six kilometres of, the site. The site of a 1950's spot mill is known to occur on the creek to the north of the Wood Centre.

No Aboriginal cultural heritage sites were discovered on the Wood Centre site during a site investigation, nor records of known sites located on the Tasmanian Aboriginal Site Index. Although no Aboriginal sites were located due to poor visibility of the ground surface, clearing of the site in preparation for development may uncover relics or features that were not previously evident due to the presence of thick vegetation.

As a precaution, an additional investigation of representative areas will be undertaken during the construction period to determine if any Aboriginal cultural heritage features are present and management measures will be implemented for the protection of any Aboriginal sites located during construction activities.

Visual Impact

The site is situated on top of a ridge within State forest, and has been partially modified in several areas by quarrying activities and associated vehicle tracks and a major new road. No designated vantage-points are situated within the vicinity of the site that are accessible by vehicles.

Potential areas that may overlook the site are as follows:

- Top of Barn Back from a Forestry Tasmania road;
- A 200 metre section of Bermuda Road (Forestry Tasmania section);
- Hartz Mountain looking north; and
- Edwards Road (Forestry Tasmania road).

In general, the views that are provided from these areas are restricted and distant from the site (Plate 1). The site may also be viewed during flights in the vicinity of the Wood Centre.

Given this and the measures to be used to mitigate any potential visual impacts including, use of similar architecture of the main buildings; the use of building and roof colours to minimise contrast with the surrounding vegetation; and the development of a landscape plan for the site, the visual impact of the Wood Centre will be minimal (Figure IX).

Plate 1 View from Edwards Road

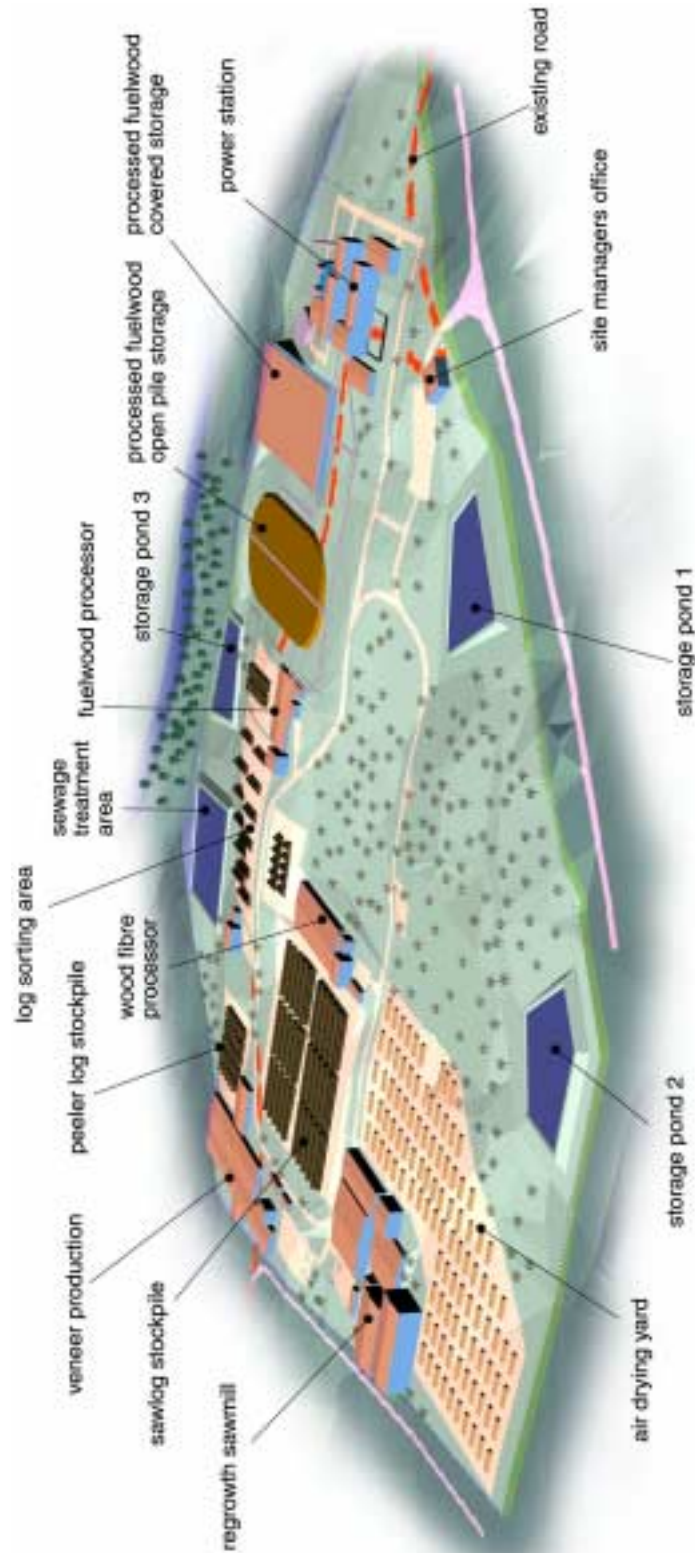


Energy Use

Electrical power demand for the site is estimated to be up to 10 MW. In addition to electrical power, the Rotary Peeled Veneer (RPV) mill and Sawmill will require thermal power for drying and conditioning.

The establishment of the wood-fired power station for power and thermal generation on the site means that, on the whole, the site will be a net exporter of energy.

Figure IX Conceptual Visual Impact of the Wood Centre



The following management measures will be implemented:

- Overall energy use will be minimised by selecting where possible motors, lighting and drying equipment that are efficient with respect to power usage;
- The detailed process design will maximise the potential to recover process heat and considerable use will be made of regenerative heat exchangers to achieve the aim; and
- The heat plants will include flue gas economisers for heat recovery.

Monitoring

The effectiveness of management measures associated with the development and operation of the Wood Centre and its wood processing components will be monitored to ensure impact on the environment is minimised, statutory requirements are met, and environmental management commitments are implemented. In summary, monitoring of site operations will include:

- Construction operations;
- Water quantity extracted from the Huon River and comparison to flow data;
- Water quality in the Huon River;
- Discharge of wastewater from wood processing sites to the site-wide management system (for internal management purposes);
- Discharge into and from the storage ponds;
- Soil and groundwater at the irrigation sites;
- Ambient noise monitoring;
- Obscuration monitoring of combustion plant discharges;
- Recording of noise level emissions associated with noisy equipment (as necessary);
- Monitoring of surface waters in the vicinity of the wastewater irrigation site(s).
- Observation of dust generation from highly trafficked areas (for internal management purposes);
- Maintenance of solid waste records (for internal management purposes);
- Maintenance of hazardous materials records for each wood processing operation (for internal management purposes);
- Complaints and incident recording, investigation and rectification; and
- Quantity of raw materials being used.

In addition, a site environmental committee will be established to oversee environmental management issues on the site.

Commitments

Forestry Tasmania is committed to operating the Wood Centre responsibly with respect to the environment. This includes not only meeting the specific regulatory requirements of the relevant agencies, but where possible, achieving best practice environmental management.

FT has identified more than 350 environmental commitments for this development, which are detailed in Table 89, Chapter 12. This table summarises each commitment according to the operational site and identifies the timing to carry out the commitment.

It is expected that many of these commitments will be converted to conditions on the development permit.

Conclusions

This DPEMP describes all aspects of the proposed Wood Centre including the critical environmental effects, both positive and negative.

This project meets the commitment by FT to promote sustainable work and innovative practices. By initiating a project that involves the manufacture of value added wood products on a central site within the forests, FT is allowing for local employment opportunities and improved transport efficiencies.

The Wood Centre development focuses on maximising overall returns and achieving greater resource recovery from existing levels of timber supply in the Southern Forests without significant impact on the natural environment.

The site has been selected and the proposed development will be managed in accordance with best practice environmental management techniques and procedures and the *Environmental Management and Pollution Control Act 1994*(EMPCA). These techniques and procedures have included:

- A detailed site selection process;
- The provision of a buffer zone around the site;
- The proposed development of the site;
- The proposed minimisation of waste production;
- Detailed environmental management and site operations;
- The progressive and final site rehabilitation; and
- The proposed monitoring and reporting procedures.

FRONTISPIECE

Details of Proponent

Forestry Tasmania
ARBN 91 628 769 359
79 Melville Street
HOBART TAS 7000

Function of the Development Proposal and Environmental Management Plan

The Development Proposal and Environmental Management Plan (DPEMP) has been prepared to support a Development Application by Forestry Tasmania (FT), to the Huon Valley Council ("the Council")

The DPEMP aims to provide information about the proposal to the decision making authorities, the Board of Environmental Management and Pollution Control (the Board), the Council, the Resource Planning and Development Commission (RPDC), State and Commonwealth Government referral Agencies and to the general public.

It provides information on the present environment of the proposed Wood Centre development, including such matters as zoning, land use, flora, soils and climate. It also describes the proposed timber processing activities in detail, the emission sources, and the development timetable. The environmental management plan sections of the DPEMP identify each of the potential environmental issues associated with the proposed developments, and provide detail regarding how each of these issues will be addressed. The infrastructure issues and the social and economic issues of the proposed development are also discussed.

The DPEMP generally follows the guidelines produced by the Board and provided in Appendix A.

Role in the Approval Process

An application for rezoning of the site will be considered concurrently with the permit application in accordance with Section 43 A of the *Land Use Planning and Approvals Act 1993* (LUPAA). FT have submitted a development application to the Council and a request for the Council to amend the Huon Planning Scheme. The development application will be supported by the DPEMP and the planning amendment by a planning report.

Upon receipt of the permit application the Council will refer the application to the Board, who will release the DPEMP for public comment. The Board will assess the DPEMP, and the public comments received and make a decision on the permit application, and will then advise the Council of the conditions to be imposed if the development is to proceed. The Board may request FT to provide a supplement to the DPEMP following this comment period.

The Council will then make a decision on the permit application and exhibit the draft permit for public comment.

In parallel with the permit process, the council considers the planning scheme amendment and may certify the draft amendment, which is then placed on public exhibition with the draft planning permit.

The Council and the Board then submit reports to the Resource Planning and Development Commission (RPDC) on the application and representations received.

The RPDC will then hold public hearings on the proposed planning amendment and the permit application, and then make a final decision on both the amendment and the permit. The planning approval process is illustrated in Figure X.

Figure X Wood Centre Planning Approval Process

