Project Proposal

Que River Supplementary Diesel Generation

30 March 2016
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1. Introduction

1.1 The purpose of this report

Hydro Tasmania proposes to install temporary diesel electricity generation at various sites around Tasmania. Additional generation is required to supplement the existing electricity network which is currently experiencing severe constraints through historically low inflows into Hydro Tasmania’s dams. This natural occurrence has been exacerbated by a fault in the Basslink interconnector which may take several months to rectify.

This report relates specifically to a proposal to locate up to 36 containerised diesel generation units and associated infrastructure adjacent the Que River Substation.

This report accompanies an activity referral to the Environmental Protection Authority under s.27(1) of the Environmental Management and Pollution Control Act 1994 (EMPC Act) as a Level 2 activity seeking a determination that an assessment is not required.

Figure 1: View of proposed project site adjacent the Que River Substation.
1.2 Overview of proposal

The Que River Substation, located approximately 19km northeast of the town of Tullah, is owned and operated by Tasnetworks (Figure 1 above), while the surrounding area is Crown land managed by Forestry Tasmania. This substation forms part of the electricity transmission network and supplies power to the nearby Que River mine.

This proposal seeks to generate up to 36MW of electricity via containerised diesel generation units for transmission via the existing substation. The generation units and associated infrastructure will be located on Crown land managed by Forestry Tasmania.

Selection of the other sites, based on technical, social and environmental considerations is ongoing however, separate activity referrals will be submitted for all sites.

Other options of load reduction and generation are currently being actively pursued by Hydro Tasmania. The temporary generation units will only be used in the event of a prolonged period of low inflows and the failure of other options to provide Tasmania with a reliable electricity supply. Their installation is considered both prudent and necessary to enable Hydro Tasmania to meet the energy demands of the Tasmanian community.

This proposal contains sufficient investigation and assessment of all relevant matters to demonstrate that the activity will not cause serious or material environmental harm, particularly in consideration of the restricted operating period and temporary nature of the installation.

1.3 The proponent

The proponent for this activity is the Hydro-electric Corporation (ABN 48 072 377 158), trading as Hydro Tasmania. Hydro Tasmania is a government business enterprise and is primarily responsible for the generation of hydropower and wind power in Tasmania.

1.3.1 Environmental Management System

Environmental management is an integral component of Hydro Tasmania's strategic and daily operations. New and stronger environmental laws, increasing levels of public expectation, the need to efficiently use resources and the marketing advantages associated with "clean and green" products provide a basis for improving environmental performance.

Hydro Tasmania operates under an externally accredited Health Safety and Environmental Management System which requires compliance, certification and review in accordance with OHSAS18001: Health and Safety Standard and ISO14001: Environmental Management System. This provides a framework to evaluate how business activities, products and services interact with the environment and to ensure continual improvement of environmental and sustainability management.
Figure 2: Location of Que River Substation
The temporary generation units will be generally managed in accordance with Hydro Tasmania’s Health Safety and Environmental Management System and supplemented, where appropriate, with site specific operating procedures developed by Hydro Tasmania or provided by the supplier, Aggreko.

1.3.2 Operator

Overall responsibility for the operation of the activity and site of the temporary generation units will rest with Hydro Tasmania, while Aggreko will provide operational and maintenance support as required.

Aggreko have over 50 years’ experience providing supplementary power generation solutions and have operated in Australia and the Pacific region since 1988.

Aggreko provides a variety of allied solutions and technical support worldwide. As examples of this technology being utilised in an Australian context, Aggreko provided containerised temporary generation solutions for emergency services and impacted communities in response to the 2009 Victorian bushfires as well as providing temporary support for a mining site in Western Australia for BHP Billiton until a Transmission line could be connected to the site.

Aggreko will operate and maintain the temporary generation units and associated infrastructure. Aggreko operate in accordance with a Global Environmental Health and Safety Management system. In Australia, their Environmental Management System and Quality Management System have been accredited in accordance with ISO 14001 and ISO 9001 respectively.

1.4 Contact person

The contact person for the purpose of the activity is:

Mr Ian Jones
Environmental Policy Advisor
Hydro Tasmania
4 Elizabeth Street, Hobart Tasmania 7000
GPO Box 355, Hobart Tasmania 7001 Australia
Mobile: 0402 822 265
Email ian.jones@hydro.com.au
2. Background

2.1 Current Generation Constraints

2.1.1 Low rainfall

The record low rainfall over recent months and the extended fault in the Basslink interconnector are both very rare events, the combination of which has not previously been experienced in Tasmania.

The combination of a strong El Nino and a positive Indian Ocean Dipole (IOD) event in Spring 2015 led to extremely low rainfall in Hydro Tasmania’s catchments since September 2015, as shown in Figure 3.

![Figure 3: Actual vs budgeted inflows January 2015 - January 2016](image.png)

The onset of the positive IOD was both extremely strong and very sudden, and this severity was not predicted.

The record dry in Spring 2015 saw inflows of less than half the previously worst result in the past 30 years on record for that period.
Following the Basslink outage in late December, the owners initially predicted the repair would take two months, but later revised that to three months before advising that the return to service date is to be estimated once the cable fault is found.

2.1.2 Basslink outage timeline
- Basslink outage commenced at 2.10pm (market time) on 20 December 2015.
- BPL issued a media release on 22 December 2015 that the outage had been caused by a fault on the subsea cable. At this time BPL indicated that a repair would take 60 days.
- BPL issued a media release on 14 January 2016, with a revised return-to-service date of 19 March 2016 (90-day outage).
- BPL issued a media release on 27 January 2016 that provided an update on progress.
- BPL issued a media release on 12 February 2016 indicating there were problems identifying the cable fault location and that the 19 March return to service date would not be achieved.
- BPL issued a media release on 25 February 2016 providing an activity update but no information on a return to service date.
- BPL issued a media release on 8 March 2016 providing an activity update and identified a likely return to service in Late May 2016.
- BPL issued a media release on 29 March 2016 providing an activity update and identified a likely return to service in Mid June 2016.

2.1.3 Initial response
Hydro Tasmania imported additional energy across Basslink from October 2015, which helped manage hydro storage levels. We also reviewed our plant utilisation across the state, including deferring planned maintenance at our power stations.

In November 2015 (prior to the failure of Basslink) Hydro Tasmania began the process of returning the Combined Cycle Gas Turbine (CCGT) from dry layup. It was returned to service on 20 January 2016.

2.1.4 Overview of additional response
Tasmania had been importing up to 40 per cent of the state’s energy needs across Basslink. The failure of the interconnector has meant we have had to secure alternative generation options.

Hydro Tasmania now plans to be able to meet all Tasmanian energy demand even if Basslink repair is significantly further delayed.

In addition to continuing to run all available units at the TVPS, we plan to restore the full capacity of the open cycle units (FT8s and the Trent unit). We have negotiated voluntary commercial load reductions in cooperation with major industrial users. We have also worked
with TasNetworks and others across government to develop a plan for the implementation of temporary diesel generation.

In total, the generation from gas and temporary diesel, along with voluntary load reductions, will be well in excess of the import capacity of Basslink.

At the end of December, hydropower was supplying 90 per cent of Tasmanian demand. By the end of April, that will reduce to 40 per cent.

### 2.2 Expected storage position and forecast inflows

Given continued uncertainty about the return to service date of Basslink, Hydro Tasmania has enacted plans to meet all Tasmanian energy demand without Basslink in operation, even in the event of a cool, dry May, and with allowance for an additional adverse event that would have an impact on energy generation, such as loss of a major power station.

The storage position at 21 March 2016 is 14.6 per cent.

Over the past fortnight, moderate rainfall resulted in positive inflows to the north-west catchments, slowing the draw on those storages.

Assuming normal rainfall over the next two months, the low level for storages is expected to be around 12 per cent at 1 June 2016. However, the Basslink cable is not expected to be back to service until mid June.

The start of winter means that the storages are likely to stay level or even rebuilding through May and June as expected winter rains arrive. Figure 4 shows expected inflows by month for the remainder of the calendar year.

![Figure 4: Long-term average inflows (GWh) for the remainder of 2016](image-url)
2.2.1 Rainfall forecast

The 3-month outlook from the Bureau of Meteorology released on 25 February covers March-May 2016 and forecasts a 55-65 per cent chance of better than median rainfall in our catchments. The outlook also indicates a higher than 80 per cent chance of above median minimum and maximum temperatures for the next 3 months. Continued high temperatures will drive significant evaporative losses from some storages and reduce the conversion of rainfall to inflows to storages.

Longer term rainfall outlooks (greater than 3 months) do not provide information that is useful for our modelling.

Forecasts of key drivers that affect inflows to our storages, such as El Nino and the Indian Ocean Dipole, are for neutral conditions through winter and spring, which indicates that rainfall during this period is likely to be close to average. Note that the forecasts can change significantly through autumn and early winter and will need to be monitored closely.

2.2.2 Environmental impacts and mitigation

The ongoing dry conditions and extended Basslink outage are having an environmental impact on our storages.

Hydro Tasmania’s approach to environmental monitoring and risk management enables the business to assess impacts and respond appropriately. The key points are:

- Low lake levels, particularly in Great Lake and Woods Lake, are putting pressure on some aquatic species. We are monitoring those impacts carefully, adjusting management approaches where reasonable (within climate constraints and generation needs).
- In Great Lake we are monitoring impacts on native fish populations, invertebrates and aquatic vegetation. We will continue to monitor how these species are impacted and how they respond and recover when the lakes refill after expected autumn/winter rains.
- We are monitoring water quality impacts in Great Lake and Woods Lake and will extend this work to include Lake Echo and Lake King William.
- We are working with our key stakeholders, including the Inland Fisheries Service (IFS) and DPIPWE, to keep them informed.
- We are accessing the best available expertise and information from previous research and current monitoring programs to inform our environmental risk assessment and mitigation measures.

2.2.3 Impact on other water users

We recognise that low lake levels are having an impact across all of our larger storages and on a range of stakeholders who use or depend on these storages.

Due to low lake levels, a number of boat ramps have been closed at popular angling spots. These sites include Great Lake, Lake Burbury, and Lake Echo. These ramps were closed on
advice of Marine and Safety Tasmania (MaST) and will remain closed until water levels increase to a level that permits safe launching.

Up to date information on access to water bodies managed by Hydro Tasmania is available on Hydro Tasmania’s website at http://www.hydro.com.au/community/recreational-sites

While not all of our storages will be affected by record low rains, there will be an impact on the use of, and access to, some popular angling spots as we manage our declining storages for the benefit of all Tasmanians. We understand anglers’ concerns and frustration and we continue to work with them through what is a very challenging dry period.

We are also in close contact with the Department of Primary Industries, Parks, Water and Environment and Tasmanian Irrigation stakeholders regarding access to water for irrigation.

There is sufficient water available in the hydro storages to meet the existing obligations to provide irrigation water for the balance of the 2015/16 irrigation season.

2.3 Planned response

Hydro Tasmania and the State Government have a plan to manage energy security and that plan is being implemented.

A range of actions are being initiated as required, in response to the unprecedented situation.

2.3.1 Gas generation

All of Hydro Tasmania’s gas generation is located at the Tamar Valley Power Station.

The combined cycle gas turbine, with a capacity of 208 megawatts, was returned to service on 20 January. It has operated reliably on a round-the-clock basis since that time.

In addition, three FT8 units (open cycle gas turbines) are in operation. Their full output is 120 megawatts. They are currently operating at 90 megawatts and expected to progressively reach full output by late June.

The Rolls Royce ‘Trent’ unit (open cycle gas turbine), with a capacity of 58 megawatts, has been undergoing warranty repair and its return to Tasmania has been expedited. Hydro Tasmania personnel are currently in Abu Dhabi inspecting the unit, prior to it being returned to the state during March and it’s expected to be ready for service in early April.

With all plant running at TVPS the station can provide up to 386 MW. Figure 5 illustrates the timeline for increasing capacity at TVPS.
2.3.2 Load reduction

In January 2016, TEMCO made a business decision to reduce its power consumption by approximately 30 MW. Hydro Tasmania and TEMCO have negotiated an arrangement under which TEMCO will further reduce load. An additional reduction of 35 MW will take effect from early March and be in place until the end of April. The reduction will be achieved by shutting down an additional furnace at its Bell Bay manganese plant.

This is in addition to reductions of 43 MW at Norske Skog’s Boyer Mill for one week, and 40 MW by Bell Bay Aluminium since February.

Figure 5 illustrates the contribution made by load reduction.

Our approach favours additional supply options over further voluntary load reductions in order to minimise any impacts on economic activity. However, given the very challenging circumstances we face they cannot be ruled out.

Hydro Tasmania remains in close contact with all our major energy users.

Figure 6 illustrates the changing generation supply to Tasmania since August 2015, showing that the inflow shortfall being met by Basslink prior to its failure is now increasingly being met by gas generation and voluntary load reduction.
2.3.3 Temporary diesel generation

Hydro Tasmania, TasNetworks and others across government are delivering a plan that will have up to 100 megawatts of temporary diesel generation progressively available for operation by the end of March. This involves ongoing and rapid investigations to identify and prepare proposed sites, including the management of technical, logistical and regulatory issues.

Work is also progressing on a number of options to enable a further 100 MW to be available for generation from the end of April.

A number of sites are being investigated to meet the government’s commitment on diesel generation. Some key sites are being prioritised for site works and installation, and a number of additional sites are being investigated in parallel. Sites are chosen for the ability to connect additional generation to the grid, ability to supply diesel to the generators and to minimise impact on nearby residents. These include sites in the north and south of the state at Hydro Tasmania power stations, TasNetworks substations and industrial sites.

Sites where diesel generation is currently installed include; Catagunya Power Station, Meadowbank Power Station and George Town Substation. Other prioritised sites include Port Latta Substation and Savage River Substation.
Engagement with stakeholders is underway and Hydro Tasmania has been working closely with a number of councils on the necessary approvals and with the EPA on environmental approvals.

Figure 7 shows the locations currently being prioritised for additional diesel generation.

![Figure 7: Northern and southern locations](image)

Shortlisting of available sites has been based on the following key selection criteria:

**Existing electrical connection point**

The site must be within close proximity to an existing electrical connection point. As available hire equipment is mainly suitable for 22kV and 11kV supply potential sites are generally restricted to existing substations where connection can be readily made. Connection directly at 110kV or 22kV is likely to take significantly longer and require specialised equipment with long delivery times.

**Existing earth grid**

Within the substation sufficient area must be available within the existing switch yard so that new equipment can be installed over the Earth Grid.

**Acceptable fault levels**

The locations require the fault levels to be acceptable for the temporary equipment to be connected. This tends to eliminate existing power station locations as the transformers are too large to minimise fault currents. Fault currents are consistent with short circuit faults and associated impact on electrical equipment under these worst case conditions for which the equipment must be designed to.
Adjacent land use and minimising stakeholder impacts

Sites are located to minimise adverse impacts to local residences and businesses. Critical consideration has been given to noise and air emissions and truck movements.

Fuel supply

It is estimated that up to five tanker deliveries a day will be required to maintain sufficient operating capacity for a 36MW installation.
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3. **Proposal description**

3.1 **General**

Hydro Tasmania proposes to install 36MW of containerised diesel electricity generation at Que River Substation comprising:

- Thirty six containerised diesel generator units each with nominal 1MW continuous electrical generating capacity;
- Six containerised 6.3MVA transformers and switchgear assemblies;
- Four bulk fuel storage tanks to supply generator units;
- Power cabling from the 6.3MVA transformers and to the existing Que River Substation and power cabling and fuel lines from the generator units to the transformers and bulk fuel storage units;
- Infrastructure to support the installation including a hardstand areas for the generators, transformers and fuel tanks, site workshop, storage, and security fencing;

A general arrangement outlining the siting and location of the necessary infrastructure is included as Appendix A.

3.2 **Equipment**

3.2.1 **Generators**

Hydro Tasmania proposes to install 36MW of diesel generation (electrical output) that is comprised of 36 x 1250kVA generation units (KTA50G3). Each container is approximately 2.4m wide, 6m long and 2.9m high. Engine exhaust will be discharged 3.0m above ground level. An example of a generation unit is shown in Figure 8.

Fuel usage rates, estimated from the supplier's data sheets, are 263L/hour per unit at 1034kVA output for the 36 x KTA50G3 generation units. This gives a total estimated fuel consumption of 9,468 L/hour at the proposed 36 MW output. Daily fuel consumption at prime load is estimated to be approximately 227,232L.

Each generating unit has an internal fuel tank with up to 1,350L capacity and are self-contained and internally bunded to 120% of the volume of fuel and oil spills to comply with AS1940-2004. The equipment data sheet for the proposed generator units is included as Appendix B.
Figure 8: An example of typical a KTA50G3 generation unit (stack not shown).

3.2.2 Fuel storage

Fuel storage for the diesel generation units will be supplied by four containerised fuel storage tanks, 2 x TransTank T68 (61,300L Safe fill level) and 2 x Transtank T30 (28,000L Safe fill level), resulting in a total onsite capacity of 178,600L. An example of a self-contained fuel storage unit is shown in Figure 9. The fuel storage units are self-contained and internally bunded to contain any fuel spills and comply with AS1940-2004.

Data sheets and a general arrangement for the fuel storage tanks have been included in Appendix B.

Figure 9: Example of a TransTank T68 fuel storage unit.
3.2.3 Transformers and switchgear
Four containerised 6.3MVA transformers will be connected to the generators and existing transmission infrastructure via ground mounted cabling and conduits. The four transformers are containerised and self-bunded and comply with AS1940-2004.

3.3 Construction
Construction activities associated with the temporary generation are considered relatively minor and are not expected to result in any significant environmental impacts. New gravel hardstand areas will be established over existing hardstands or adjacent disturbed land for the generators, switchgear and fuel tanks. All fuel lines, cabling and conduits will be above ground. All generation units, fuel storage, transformers and associated infrastructure will be removed from site when no longer required for temporary generation.

As the facility will be required to be manned or operators available on call for 24 hours per day, some ancillary structures such as workshops and storage facilities.

3.4 Operation
Overall responsibility for the operation of the diesel generator units will rest with Hydro Tasmania, while the supplier, Aggreko will provide maintenance and operational support as required.

If the diesel generation units are required to run, it is expected they will operate 24 hours per day, 7 days a week, for a period up to 4 months. However, the length of time the generation units will ultimately be required for is depend on a number of factors including the timing of repairs to the Basslink cable and inflows into Hydro Tasmania storages across the State.

The diesel generating units will require servicing every 400 hours. Services will be carried out on site by suitably qualified personnel. All waste, including used oils and hazardous materials, will be removed from site by an appropriately licenced contractor on a regular basis.

The site will be manned or operators available on call for 24 hours per day to ensure that the generators operate efficiently. Site operators will be responsible for safety and environmental management on the site, including daily checks on the infrastructure and equipment.

3.4.1 Fuel deliveries
Based on the estimated daily fuel consumption for the 36 generators of 227,232L, it is estimated of up to 5 fuel deliveries will be required per day during full operation of the facility.

All fuel deliveries will be made between 0700-1800 to minimise impacts on sensitive receivers along the access road from the Lyell Highway. Fuel deliveries will be made by an experienced and appropriately licenced contractor.
3.5 Site and location

The site, located adjacent the Que River Mine is part of 2100ha parcel of land (PID 3391086) situated approximately 19km north of Tullah off the Murchison Highway and accessed via Que River Mine Road (Figure 2). The site for the supplementary generation is an existing hardstand adjacent the mine and existing transmission line easement. The location of the proposed project site for the diesel generator units and associated infrastructure are shown in Figure 10.
Figure 10: Proposed development site.
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4.  **Statutory approval framework**

4.1  **Land Use Planning and Approvals Act 1993**

Use and development within Tasmania is normally controlled through the provision of the Land Use Planning and Approvals Act 1993 (LUPA Act). However, exemptions apply through s.60A(2) of the LUPA Act as well as s.57 of the Electricity Supply Industry Act 1995 (ESI Act). Specifically the ESI Act exempts work in the following circumstances:

- an electricity entity proposes to carry out work on the construction, installation, modification, maintenance, demolition or replacement of electricity infrastructure; and
- the work is of a kind classified by the regulations as work of minor environmental impact.

The term minor environmental impact is defined under s.7(g) of the Electricity Supply Industry Regulations 2008.

7.  **Work of minor environmental impact**

For sections 52(5) and 57(b) of the Act, the following work is classified as being of minor environmental impact:

(a) the removal, repair, maintenance or modification of existing powerlines for the transmission, distribution or supply of electricity;

(b) the removal, repair, maintenance or modification of an existing substation or a transformer associated with the transmission, distribution or supply of electricity;

(c) the installation or erection of powerlines along any public street, road or highway and on public land for the distribution or supply of electricity;

(d) the laying, removal, repair, maintenance or modification of any underground cable for the distribution or transmission of electricity;

(e) the clearing or lopping of trees, branches or other vegetation to the extent necessary for the protection of electricity infrastructure or public safety;

(f) the installation and erection of any substation or transformer associated with the distribution or supply of electricity;

(g) the installation, erection, removal, repair, maintenance, modification, or use, on land, of any electricity-generating plant that –
(i) is not used, or intended by the Hydro-Electric Corporation to be used, to generate electricity for more than 12 months after the plant is installed or erected on the land; and

(ii) is installed or erected on land that is, or on land that is adjacent to, land on which there is already situated an electricity-generating plant, substation or switchyard or on which not less than 200 gigawatt hours of electricity was consumed during the 2015 calendar year.

As this proposal is for the installation of electricity infrastructure for temporary generation and is on or adjacent to an existing substation, s.7(g) applies and the proposal does not require a permit under the LUPA Act.

4.2 Environmental Management and Pollution Control Act 1994

The proposal is subject to the Environmental Management and Pollution Control Act 1994 (EMPC Act) as a Level 2 Activity which undertakes fuel burning at a rate at, or in excess of, one tonne per hour (Schedule 2(7)(a)).

As a Level 2 activity which does not require a permit under the LUPA Act, this proposal must be referred to the EPA in accordance with s27(1) of the EMPC Act. However, Hydro Tasmania requests the Board to determine, in accordance with s.27(4) of the Act, that an assessment is not required as the proposal will not result in serious or material environmental harm.

This request has been made in consideration of the extreme circumstances in which Hydro Tasmania has been placed due to the extended period of low inflows and the unfortunate coincidence of a fault in Basslink. To support this request, this comprehensive report has been prepared which describes the potential impacts and proposed mitigation and management the Hydro Tasmania will implement during the construction and operation of the temporary diesel generating units.

4.3 Work Health Safety Act 2012

The Work Health Safety Act 2012 (WHS Act) provides a framework to protect the health, safety and welfare of all workers at work and of other people who might be affected by the work. The WHS Act aims to:

- protect the health and safety of workers and other people by eliminating or minimising risks arising from work or workplaces;
- help businesses and workers achieve a healthier and safer working environment;
- promote information, education and training on work health and safety; and
- provide effective compliance and enforcement measures.

In furthering these aims, regard is also given to the use and handling of hazardous chemical at a workplace. In accordance with specific obligations under the Work Health and Safety Regulations 2012, the use of diesel, oils and lubricants as part of the operation and maintenance of the facility will require Hydro Tasmania to:
• Notify Worksafe Tasmania that the facility is a manifest quantity workplace (S.347) as the proposed quantities of diesel (a category 4 hazardous chemical) exceed amounts in Schedule 11 of the Work Health and Safety Regulations 2012 (100,000L).

• Prepare an Emergency Plan (S.43) as the proposed quantities of diesel (a category 4 hazardous chemical) exceed amounts in Schedule 11 of the Work Health and Safety Regulations 2012 (100,000L); and

• Maintain a hazardous chemical register required (s.346) as we are using hazardous chemicals.

4.4 Other relevant legislation and policy

4.4.1 Environment Protection and Biodiversity Conservation Act 1999

The Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) provides for the protection of matters of national environmental significance and the conservation of Australia’s biodiversity. Whilst the States are primarily responsible for environmental impact assessment, where an action is likely to result in a ‘significant’ impact on a MNES the proponent of the action is required to refer the project to the Commonwealth Environment Minister, who must make a decision on whether the action would require further assessment of the potential impacts as a ‘controlled action’.

The temporary diesel generation at Que River Substation will not have a significant impact on a matter of ‘national environmental significance’ as it does not involve a place of world or national heritage value, nor are there impacts to nationally-listed threatened species, ecological communities or migratory species. Accordingly, approval under this Act is not required.

4.4.2 Historic Cultural Heritage Act 1995

As the Que River site is not listed on the Tasmanian Heritage Register, a works permit in accordance with section 32 of the Historic Cultural Heritage Act 1995 is not required for any works.

4.4.3 Aboriginal Relics Act 1975

The Aboriginal Relics Act 1975 (AR Act) provides for the protection of Aboriginal relics in Tasmania. Under the Act it is an offence to disturb, damage or destroy any Aboriginal relics without a permit.

The potential for the disturbance of Aboriginal relics is considered low as the proposed development is to be sited an existing hardstand area immediately adjacent the Que River Substation and no significant excavations are required. As such it is considered unlikely that a permit under the AR Act is required.

4.4.4 Threatened Species Protection Act 1995

Under the Tasmanian Threatened Species Protection Act 1995 (TSP Act), in the absence of a permit:
- no listed species may be killed, injured or collected
- listed species on land subject to an interim protection order must not be disturbed
- there must be no disturbance to listed species contrary to a land management agreement
- Any interim protection order made to conserve the critical habitat of a listed taxon of flora or fauna must be complied with. In the absence of a permit, no activity may be undertaken on land subject to an interim protection order.

While the proposed infrastructure is located on an existing hardstand and will not directly impact on any known threatened species in the area.

4.4.5 Forest Practices Act

The Forest Practices Act 1985 (FP Act) provides that the Forest Practices Code (FPC) prescribes the manner in which forest practices are to be conducted which includes the clearance and conversion of native vegetation. The FP Act and the FPC also provide for the protection of the natural and cultural values.

Forest Practices Plans (FPPs) are required when clearing trees or clearance and conversion of Threatened Native Vegetation Communities listed on Schedule 3A of the Nature Conservation Act 2002.

In accordance with ss.4(l) of the Forest Practices Regulation 2007, a FPP is not required for the harvesting of timber or the clearing of trees on any land, or the clearance and conversion of a threatened native vegetation community on any land, to enable the construction and maintenance of electricity infrastructure.

4.4.6 State Policies

State Policies are made under the State Policies and Projects Act 1993. Currently, there are three State Policies addressing environmental management issues.

4.4.6.1 The Tasmanian Coastal Policy

It is considered that the State Coastal Policy 1996 is not applicable to this application as the proposed development site is more than 1 kilometre from the coast (as defined).

4.4.6.2 The State Policy on the Protection of Agricultural Land

The development does not occur on any designated Prime Agricultural Land. The land capability index of the site is 4.

Irrespective of this, the temporary use of the site for electricity generation will have no impact on any nearby agricultural land.
4.4.6.3 The State Policy on Water Quality Management

The objectives of the State Policy on Water Quality Management 1997 are considered met as there are no waterways adjacent to the site, the units are self-bunded in accordance with AS1940. In addition, procedures are in place for the prevention and containment of spills.

4.4.7 National Environment Protection Measures (NEPMs)

National Environment Protection Measures (NEPMs) are also taken to be State Policies in Tasmania. NEPMs are made under Commonwealth legislation, and given effect in Tasmania through the State Policies and Projects Act.

Table 1 below lists the NEPMs and provides a response in relation to the proposal development.

<table>
<thead>
<tr>
<th>National Environment Protection Measure</th>
<th>Relevance to Proposal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Used packaging materials</td>
<td>The proposal cannot influence this NEPM.</td>
</tr>
<tr>
<td>Ambient air quality</td>
<td>Given that there are no residential properties within 15km of the proposed project site, it is considered that pollution concentrations over this distance will be highly dispersed and will be below the limits prescribed under the Environment Protection Policy (Air Quality) 2004.</td>
</tr>
<tr>
<td>Movement of controlled waste</td>
<td>Any controlled waste management will be undertaken in accordance with the Environmental Management and Pollution Control (Controlled Waste Tracking) Regulations 2010.</td>
</tr>
<tr>
<td>National pollutant inventory</td>
<td>Hydro Tasmania will assess compliance obligations under the NPI and ensure notification of relevant pollutants in its annual reporting cycle.</td>
</tr>
<tr>
<td>Assessment of site contamination</td>
<td>The proposal does not involve ground disturbance nor introduce a sensitive use on a site of potential contamination. All units are bunded in excess of the standard articulated in AS1940. Spill management and incident management procedures have been adopted and are detailed in section 7 of this document.</td>
</tr>
<tr>
<td>Air toxics</td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>

Table 1: National Environment Protection Measures
4.5 Environment Protection Policies

EPPs are made under section 96K of the EMPC Act. During the development of an EPP, the EPP Review Panel has an important role in considering public submissions on the draft policy, and providing recommendations to the Minister on the adoption of the draft policy.

There are currently two EPPs:

- Environment Protection Policy (Air Quality)
- Environment Protection Policy (Noise)

The potential impact of noise and air quality has been assessed in accordance with the policies and is considered to comply with these requirements. Details of these assessments are provided in section 7 of this report.

4.6 Other legislative requirements

In addition to the requirements of legislative obligations identified in section 4.3 of this document the following legislation and policies have been considered in the identified and management of environmental impacts:

- Dangerous Goods (Road and Rail Transport) Act 2010
- Environmental Management and Pollution Control (Waste Management) Regulation 2010
- Environmental Management and Pollution Control (Controlled Waste Tracking) Regulations 2010
- Fire Services Act 1979
- Water Management Act 1999
- Weed Management Act 1999
- Wildlife (General) Regulations 2010
5. Stakeholder engagement

A Stakeholder Engagement Plan (SEP) has been prepared to guide the engagement of affected landowners, local community, Council and broader Tasmanian community for the establishment of temporary diesel generation adjacent the existing Que River Substation. The SEP (Appendix C) describes stakeholders potentially sensitive land uses and provides an outline of the issues and stakeholders identified together with the planned stakeholder engagement activities communications and complaints management protocols and procedures.

5.1 Objectives

The SEP aims to:

- Proactively engage and collaborate with key governance bodies in the municipality
- Proactively engage with affected local stakeholders (particularly nearby residents and businesses)
- Inform the broader Tasmanian community about the project
- Support approvals processes for the project
- Manage and mitigate risks and impacts where practicable to local community
- Manage and mitigate risks to Hydro Tasmania’s reputation and accountability standards

5.2 Our Stakeholder Commitments

Hydro Tasmania makes the following commitments to its stakeholders:

- Minimising the impacts of our operation on its stakeholders within our commercial, regulatory and safety constraints.
- Being open and trustworthy in accordance with good corporate citizenship, with the aim of developing long term constructive relationships with its stakeholders.
- Providing objective, balanced and timely information about our operations to relevant stakeholders.
- Accepting and valuing that people who live, work and recreate around the site, value, use, care about or otherwise have an interest in the area.
- Ensuring community feedback is considered and, where possible, incorporated within the constraints outlined.
- Building and maintaining positive relationships with stakeholders and to provide opportunities for stakeholders to contribute.
• Heritage and environmental issues and values will be carefully considered and managed.

5.3 Consultation to date

As of 27th March 2016 the following stakeholders have been informed of intent and project details:

• Waratah-Wynyard Council have via meeting and formal letter.
• Bass Metals Pty Ltd as the owner of the adjacent Que River Mine.
• TasNetworks and the owner and operator the Que River Substation.

Refer to Que River Stakeholder engagement plan for future planned activities.
6. **Existing environment**

6.1 **Biophysical environment**

6.1.1 **Proposed development site**

The site, located adjacent the Que River Mine and Que River Substation, is an existing hardstand of approximately 4696m² in area adjacent the mine and existing transmission line easement. The location of the proposed project site for the diesel generator units and associated infrastructure are shown in Figure 10.

6.2 **Planning aspects**

6.2.1 **Land tenure and title**

The proposed project site is part of a larger 2100ha parcel of land (PID 3391086) situated approximately 19km north of Tullah off the Murchison Highway and accessed via Que River Mine Road (Figure 2). The land identified as Crown land managed by Forestry Tasmania. Hydro Tasmania will enter into an agreement with Forestry Tasmania as land owner of the land prior to operation of supplementary generation at this site.

6.2.2 **Planning controls and zoning**

In accordance with s.57 of the *Electricity Supply Industry Act 1995* and s.7(g) of the *Electricity Supply Industry Regulations 2008*, the installation of electricity generating plant by the Hydro-Electric Corporation that is not intended to be used, to generate electricity for more than 12 months after the plant is installed or erected on the land, is to be considered as “works of minor environmental impact” and not considered to be development for the purpose of the *Land Use Planning and Approvals Act 1993* and is not subject to that Act in any other way.

Notwithstanding this exemption from the need for a planning permit under the *Land Use Planning and Approvals Act 1993*, the site is zoned Rural Resource under the Wynyard-Waratah Interim Planning Scheme 2013. The purpose of this zone is to land for major utilities installations and corridors.

6.2.3 **Surrounding land uses and sensitive receivers**

The surrounding land use is largely passive in nature and in not considered to comprise sensitive land use. To the immediate west and north of the site is bushland owned and managed by Forestry Tasmania. To the immediate east of the site is the Que River Mine and an electricity transmission line, while to the south is the Que River Substation. Land tenure and ownership of adjacent properties is identified in Figure 11.
Based on the land ownership and land tenure within 5km of the proposed development site, there are no potentially sensitive receivers (houses) within this area. The closest of these is located approximately 15km to the south at Tullah.

6.2.4 Land use history
The proposed project site forms part of the adjacent the Que River Mine and has been subject to significant ground disturbance for an extended period of time. The Que River Mine has been operating since 1987 and is subject to a current mining lease and is operated by Bass Metals. The mine is currently in care and maintenance.

6.3 Socio-economic aspects
In a State-wide context, a reliable and adequate supply of electricity is an important requirement for the maintenance of the State's domestic, commercial and industrial life. If supplementary generation capacity of the type proposed in this document is not installed there is a probability that there will be insufficient electrical power available to the State until the Basslink cable is repaired and sufficient inflows into the hydro-electric storages occur. As such this mitigation measure forms part of a prudent energy management action to avoid such potential impacts.
Figure 11: Land tenure in the vicinity of the proposed development site
This page has been left blank intentionally.
7. Potential impacts

7.1 Air quality

7.1.1 Legislative, Policy and Performance Requirements

The air emissions generated by the proposed development must fulfil the requirements of the following legislative and policy requirements:

- Work Health and Safety Regulations 2012
- National Environment Protection Measure (Air) (NEPM)
- Environment Protection Policy (Air Quality) 2004
- Environment Management and Pollution Control 1994

7.1.2 Potential impacts

Adverse air emissions could occur during the construction and operational phases of the proposed development. The primary air pollutant sources are considered to include:

- Exhaust emissions including Oxides of Nitrogen (NOx), particulate matter (PM), sulphur dioxide and carbon monoxide from the operation of the diesel generator units.
- Exhaust emissions from the operation of construction and transportation equipment.
- Dust generated from site preparation and heavy vehicle movements.

Given that there are no residential properties within 15km of the proposed project site, it is considered that pollution concentrations over this distance will be highly dispersed and will be below the limits prescribed under the Environment Protection Policy (Air Quality) 2004.

While the proposed project will not exceed prescribed limits at sensitive receivers, air emissions above the 1 hours 246µg/m³ NO₂ 40% concentration may, in some circumstance, occur on the site and land beyond the boundaries of the project site, including Reynolds Falls Nature Recreation Area and other publicly owned land. Hydro Tasmania will consult with the owners of the Que River Mine and other potentially affected land owners and users to ensure they are aware of the potential health impacts.

Heavy vehicle movements will be limited to four daily deliveries of fuel, and are not anticipated to adversely impact on the amenity of land owners adjoining the site or transport routes.

7.1.3 Management commitments

While no material adverse impacts on air quality are anticipated as a result of the proposed development, Hydro Tasmania will established an issues handling procedure under the
stakeholder engagement plan for the project that will require prompt management of complaints.

7.2 Surface water and ground water quality

7.2.1 Legislative, Policy and Performance Requirements
The management of impact on surface water quality from the proposed development must fulfil the requirements of the following legislative and policy requirements:

- State policy on Water Quality Management 1997
- Environmental Management and Pollution Control Act 1994
- Water Management Act 1999

7.2.2 Potential impacts
The establishment of containerised generation infrastructure adjacent the Que River Substation will not impact existing surface water quality at the site. All the containerised units are internally bunded in accordance with AS1940:2004. In the unlikely event of a failure of any of the containerised units hazardous materials would be contained and would not impact the adjacent any major waterways or groundwater systems.

The containerised units will be installed on an existing hardstand and surface water drainage will be maintained. Gravel placed for the new hardstand will be washed prior to transport to site to prevent sediment runoff. There will be minor collection of rainwater on the containerised units. Drainage from each of the units will be directed to the existing hardstand drainage.

It is highly unlikely that the project will impact groundwater at the site or in the general vicinity. All infrastructure and equipment will be located above-ground and no excavation will be required on site.

There is potential for spills of diesel fuel and oil to occur during re-filling of the two containerised fuel storage tanks and during maintenance of plant and equipment. However, the likelihood of this occurring and the potential impacts to surface or ground water quality will be minimised by the use of a dedicated re-fuelling procedure (ENV OP 005 Spill Prevention and Response Procedure) and the use of temporary mobile bunds (ENV OP 006 Bunding Procedure procedure) between the fuel tanker and the storage tank when re-filling is occurring.

Hydrocarbon spills and site clean-up will be managed using ENV OP 005 Spill Prevention and Response Procedure.

7.2.3 Management commitments
The following surface water and ground water quality management commitments will be adopted at the proposed development site:
Re-fuelling or maintenance of any plant or equipment shall be undertaken in accordance with **ENV OP 005 Spill Prevention and Response Procedure** and the use of temporary bunds in accordance with **ENV OP 006 Bunding Procedure**.

- Hydrocarbon spills and site clean-up will be managed using **ENV OP 005 Spill Prevention and Response Procedure**.
- Hydrocarbon spills that are likely to cause an environmental harm will be notified to the Tasmanian Environmental Protection Authority within 24 hours.

### 7.3 Noise emissions

#### 7.3.1 Legislative, Policy and Performance Requirements

The noise emissions generated by the proposed development must fulfil the requirements of the following legislative and policy requirements:

- **Environmental Management and Pollution Control Act 1994**
- **Environment Protection Policy (Noise) 2009**

#### 7.3.2 Potential impacts

Noise will be generated during the construction and operation of the generation units. Key sources of noise include:

- Noise generated by the operation of the 36 diesel generating units.
- Noise generated by the movement of heavy vehicles used for the transport of fuel.
- Noise generated from onsite construction activities including the movement of heavy vehicles and operation of machinery.

Noise emissions have the potential to cause nuisance at sensitive receivers. The closest sensitive receivers (occupied residences) to the Que River Substation site is approximately 15km to the south at Tullah. Given the significant distance to noise sensitive receivers it is considered that the proposed project will comply with the **Environment Protection Policy (Noise) 2009**.

Heavy vehicle movements are common on the Murchison Highway and the increase in heavy vehicle movements used for construction and refuelling the generator units is unlikely to be significant. Nonetheless, the delivery of fuel will be restricted to between 0700-1800 to minimise impacts to potential sensitive receivers on the transport route. Noise emitted during construction will be of short duration and unlikely to be at levels likely to cause a significant nuisance.

#### 7.3.3 Management commitments

The delivery of fuel will be restricted to between 0700-1800 to minimise impacts to potential sensitive receivers on the transport route.
7.4 Waste management

7.4.1 Legislative, Policy and Performance Requirements
The management of waste generated by the proposed development must fulfil the requirements of the following legislative and policy requirements:

- *Environmental Management and Pollution Control (Waste Management) Regulations 2010*
- *Environmental Management and Pollution Control (Controlled Waste Tracking) Regulations 2010*
- *National Pollution Inventory Measure (Movement of Controlled Waste)*

7.4.2 Potential impacts
Waste materials expected to be produced as part of the construction, operation, and decommissioning phases include:

- Solid oily wastes (e.g. oil filters, oily rags).
- Liquid oily wastes (e.g. used lubrication oil).
- Minor quantities of organic material, soils and rocks
- Packing materials and general construction waste.
- General refuse.

The diesel generator units will require servicing every 400 hours. The service of each unit will produce approximately 177 L of waste oil and filters. Waste oil and other hazardous substances from servicing the generators will be removed from site at the time of servicing.

As with any construction site poor housekeeping practices will result in a messy site and can be indicative of, or promote, poor waste management practices.

7.4.3 Management commitments
All waste generated as part of the proposed development will be managed in accordance with Hydro Tasmania’s Waste Management Procedure (HSEP0914). This procedure details consideration of the following matters:

- Risk assessing waste products
- Review of waste management
- Record management
- General waste management
- Controlled waste management

In addition, the following site specific management commitments include:

- Waste collection facilities will be provided for to collect all non-oily solid wastes produced at the site.
All waste materials will be disposed of offsite to an appropriately approved or licensed facility, in accordance with EPA and/or Waratah-Wynyard Council requirements.

Waste oil, other oily waste and controlled waste will be collected, transported and disposed of by a registered Controlled Waste Transporter under the Environmental Management and Pollution Control (Controlled Waste Tracking) Regulations 2010.

7.5 Dangerous goods and hazardous chemicals

7.5.1 Legislative, Policy and Performance Requirements

The management of dangerous goods and hazardous chemicals to be used in the proposed development must fulfil the requirements of the following legislative and policy requirements:

- Dangerous Goods (Road and Rail Transport) Act 2010
- Dangerous Goods (Road and Rail Transport) Regulations 2010
- Environmental Management and Pollution Control (Waste Management) Regulations 2010
- Work Health and Safety Act 2012
- Work Health and Safety Regulations 2012

7.5.2 Potential impacts

The main hazards presented by the use and storage of manifest quantities of diesel (greater than 100,000L) and oil used in transformers relate to fire hazards due to its combustible nature and potential contamination of soil and water if the fuel is allowed to escape into the environment.

Fuel storage for the temporary generation will be supplied by four containerised fuel storage tanks (2 x TransTank T68 and 2 x TransTank T30) with a total onsite capacity of 178,600L. In addition, each generator unit includes a day tank holding up to 1431L, with a combined total of 51,516L. Both fuel storage units and generator units are self-contained and internally bunded to contain any fuel or oil spills to comply with AS1940-2004.

Each of the generator transformers contains approximately 2000-3000 litres of PCB-free insulating oil. The transformer units are self-contained and internally bunded to contain any fuel or oil spills to comply with AS1940-2004.

Fuel delivery systems will incorporate low-pressure emergency shut off facilities, alarms and one-way valves in case of equipment failure. The generator containers are internally bunded in order to contain any fuel or lubricating oil leaks inside the containers. Spill containment (including floating booms for use on the river below the Power Station) and clean up kits will be kept on site.

In accordance with the s.347 of the Work Health Safety Act 2012, the proposed development will constitute a manifest quantity workplace as the proposed quantities of diesel (a
category 4 hazardous chemical) exceed amounts in Schedule 11 of the \textit{Work Health and Safety Regulations 2012} (100,000L). This requires notification to Worksafe Tasmania at least 4 days prior to the operation of the facility. Section 43 of the Act requires the preparation of an Emergency Plan as the proposed quantities of diesel (a category 4 hazardous chemical) exceed amounts in Schedule 11 of the \textit{Work Health and Safety Regulations 2012} (100,000L). The Act also required that a hazardous chemical register be maintained detailing all (s.346) hazardous chemicals used and stored on site.

7.5.3 Management commitments

The management of dangerous and hazardous goods used by the proposed development must fulfil the requirements of the following legislative and policy requirements:

- Hazardous chemicals will generally be managed in accordance with HSEP0921 Oil and Chemical management procedure.
- Notify Worksafe Tasmania that the facility is a manifest quantity workplace (S.347) as the proposed quantities of diesel (a category 4 hazardous chemical) exceed amounts in Schedule 11 of the \textit{Work Health and Safety Regulations 2012} (100,000L).
- Prepare and emergency Plan (S.43) as the proposed quantities of diesel (a category 4 hazardous chemical) exceed amounts in Schedule 11 of the \textit{Work Health and Safety Regulations 2012} (100,000L); and
- Maintain a hazardous chemical register required (s.346) as we are using hazardous chemicals.
- Contaminated materials resulting from any fuel or oil spills will be managed as Controlled Waste in Materials accordance with the \textit{Environmental Management and Pollution Control (Waste management) Regulations 2010}.
- Re-fuelling or maintenance of any plant or equipment shall be undertaken in accordance with \textit{ENV OP 005 Spill Prevention and Response Procedure} and the use of temporary bunds in accordance with \textit{ENV OP 006 Bunding Procedure}.
- Hydrocarbon spills and site clean-up will be managed using \textit{ENV OP 005 Spill Prevention and Response Procedure}.
- Hydrocarbon spills that are likely to cause an environmental harm will be notified to the Tasmanian Environmental Protection Authority within 24 hours.
- Spill kits will be available during construction, operation and decommissioning of the facility.

7.6 Biodiversity and natural values

7.6.1 Legislative, Policy and Performance Requirements

The management biodiversity and natural values impacted by the proposed development must fulfil the requirements of the following legislative and policy requirements:

- \textit{Environment Protection and Biodiversity Conservation Act 1999 (Cth)}
• Threatened Species Protection Act 1995
• Conservation Act 2002
• Forest Practices Act 1985
• Weed Management Act 1999

7.6.2 Potential impacts

A flora and fauna desktop assessment of the proposed Que River Substation site has been carried out using the Natural Values Atlas, maintained by DPIPWE.

The assessment concluded that installation of the containerised diesel generator units and associated infrastructure at the proposed site at Que River Substation site is unlikely to have an impact on flora species, fauna species or ecological communities listed under the TSP Act, Nature Conservation Act 2002 or the Commonwealth EPBC Act.

The site is previously disturbed and supports no native vegetation. It is mapped as Urban Miscellaneous (FUM) on TASVEG 3 which is a non-native vegetation community.

**Threatened flora**

There are no threatened flora records within 500 m or within 5 km of the proposed supplementary generation site.

The proposed location for the diesel generators is hardened and clear of vegetation and is mapped as Urban Miscellaneous (FUM) on TASVEG 3, which is a non-native vegetation community.

It is unlikely that the location of diesel generator at the Que River Mine site will have an impact on flora species or ecological communities listed under the TSP Act, Nature Conservation Act 2002 (NC Act) or the EPBC Act.

**Threatened fauna**

There are no threatened fauna records within 500 m of the proposed generation site. There are records of the Tasmanian devil (Sarcophilus harrisii), spotted-tailed quoll (Dasyurus maculatus subsp. maculatus) and ptunarra brown butterfly (Oreixenica ptunarra) within 5 km of the site. However, the two mammal species are unlikely to be affected by the supplementary generation modules given the high levels of human disturbance associated with the mine site. There is no suitable habitat for the ptunarra butterfly which is a grassland species at or near the proposed supplementary generation site. There are no wedge-tailed eagle nests recorded within 5 km of the site.

The location and operation of the supplementary diesel generators at the Que River Mine site is unlikely to have any impact on flora and fauna species and ecological communities listed under the TSP Act, NC Act or EPBC Act.
7.7 Heritage

7.7.1 Legislative, Policy and Performance Requirements

The management of impacts on heritage values associated with the proposed development must fulfil the requirements of the following legislative and policy requirements:

- Historic Cultural Heritage Act 1995
- Environment Protection and Biodiversity Conservation Act 1999
- Central Highlands Interim Planning Scheme 2015

7.7.2 Historic heritage

There are no potential impacts on historic heritage values as the proposed site is not listed on any of the following registers or lists:

- Declared World Heritage Area properties and values;
- National Heritage List and values;
- Tasmanian Heritage Register (maintained by the Tasmanian Heritage Council), including consideration of cultural landscapes;
- Tasmanian Historic Places Inventory (maintained by the Tasmanian Heritage Office);
  or
- Heritage Code to the Wynyard-Waratah Interim Planning Scheme 2013;

7.7.3 Aboriginal heritage

The potential for the disturbance of Aboriginal relics is considered low as the proposed development is to be sited an existing hardstand area immediately adjacent the Que River Substation and no significant excavations are required.

7.7.4 Management

While no significant excavations are proposed as part of the project and the potential for impacts on Aboriginal heritage are considered to be unlikely, in the event any cultural heritage items or skeletal material is uncovered during construction, the Aboriginal Heritage Tasmania ‘Unanticipated Discovery Plan’ will be implemented.

7.8 Traffic impacts

7.8.1 Legislative, Policy and Performance Requirements

The management of traffic and transport impacts associated with the proposed development must fulfil the requirements of the following legislative and policy requirements:

- Dangerous Goods (Road and Rail Transport) Act 2010
- Dangerous Goods (Road and Rail Transport) Regulations 2010
7.8.2 Potential impacts
Heavy vehicle movements associated with daily fuel deliveries have the potential to adversely affect the amenity of residential land uses in close proximity to the development site. Access to the proposed project site is via Murchison Highway.

While the proposed development will include up to four fuel deliveries, all fuel deliveries will be made between 0700-1800 to minimise impacts on sensitive uses adjacent the Murchison Highway.

7.8.3 Management commitments
Fuel deliveries will be made by an experienced and appropriately licenced contractor.

All fuel deliveries will be made between 0700-1800 to minimise impacts on sensitive receivers along the access road from the Murchison Highway.

7.9 Decommissioning and rehabilitation
Decommissioning and rehabilitation of the proposed development site will be undertaken in accordance within the following commitments:

- Hydro Tasmania will advise the Environment Protection Authority, Waratah-Wynyard Council and WorkSafe Tasmania of cessation of the use within 1 week of the last use.

- All equipment and infrastructure will be removed from the site and gravelled hardstand areas restored to their original condition within one month of cessation of the use.
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8. Residual impacts

In accordance with the assessment of potential environmental impacts outlined in section 7 of this report, it is considered that there are no residual environmental impacts that would result in an environmental nuisance, material environmental harm or serious environmental harm.

As such Hydro Tasmania considers that the proposed development will not warrant formal assessment under s.27 of the EMPC Act if managed in accordance with project description and the summary of commitment identified in section 9.
This page has been left blank intentionally.
9. Summary of commitments

The commitments presentment below relate to the management measures identified in this report. These environmental management commitments will be included within a site Operational Environmental Management Plan and will form the basis for operation and management of the facility.

Table 3. Summary of commitments

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Aspect</th>
<th>Commitment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Stakeholder Management</td>
<td>Hydro Tasmania will implement stakeholder management and communications in accordance with the Stakeholder Management Plan appended to this document.</td>
</tr>
<tr>
<td>2</td>
<td>Stakeholder Management</td>
<td>Stakeholders will be engaged in accordance with section 5 of the Stakeholder Management Plan.</td>
</tr>
<tr>
<td>3</td>
<td>Stakeholder Management</td>
<td>Issue and complaint management will be undertaken in accordance with section 7.1 of the Stakeholder Management Plan.</td>
</tr>
<tr>
<td>4</td>
<td>Air Quality</td>
<td>Hydro Tasmania will notify users of the Reynold Falls Nature Recreation Area and of the potential presence of NOx emissions.</td>
</tr>
<tr>
<td>5</td>
<td>Surface Water &amp; Ground Water Quality Management</td>
<td>Re-fuelling or maintenance of any plant or equipment shall be undertaken in accordance with ENV OP 005 Spill Prevention and Response Procedure and the use of temporary bunds in accordance with ENV OP 006 Bunding Procedure.</td>
</tr>
<tr>
<td>6</td>
<td>Surface Water &amp; Ground Water Quality Management</td>
<td>Hydrocarbon spills and site clean-up will be managed using ENV OP 005 Spill Prevention and Response Procedure.</td>
</tr>
<tr>
<td>7</td>
<td>Waste Management</td>
<td>All waste generated as part of the proposed development will be managed in accordance with Waste Management Procedure (HSEP0914).</td>
</tr>
<tr>
<td>8</td>
<td>Waste Management</td>
<td>Waste collection facilities will be provided for to collect all non-oily solid wastes produced at the site.</td>
</tr>
<tr>
<td>9</td>
<td>Waste Management</td>
<td>All waste materials will be disposed of offsite to an appropriately approved or licensed facility, in accordance with EPA and/or Central Highland Council requirements.</td>
</tr>
<tr>
<td>10</td>
<td>Waste Management</td>
<td>Waste oil, other oily waste and controlled waste will be disposed of by registered as Controlled Waste Transporter under the Environmental Management and Pollution</td>
</tr>
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</tr>
<tr>
<td>---</td>
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<td></td>
</tr>
<tr>
<td><strong>Dangerous goods and hazardous chemicals</strong></td>
<td>Hazardous chemicals will generally be managed in accordance with HSEP0921 Oil and Chemical management procedure.</td>
<td></td>
</tr>
<tr>
<td><strong>Dangerous goods and hazardous chemicals</strong></td>
<td>Notify Worksafe Tasmania that the facility is a manifest quantity workplace (S.347) as the proposed quantities of diesel (a category 4 hazardous chemical) exceed amounts in Schedule 11 of the <em>Work Health and Safety Regulations 2012</em> (100,000L).</td>
<td></td>
</tr>
<tr>
<td><strong>Dangerous goods and hazardous chemicals</strong></td>
<td>Prepare and emergency Plan (S.43) as the proposed quantities of diesel (a category 4 hazardous chemical) exceed amounts in Schedule 11 of the <em>Work Health and Safety Regulations 2012</em> (100,000L); and</td>
<td></td>
</tr>
<tr>
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<td>Maintain a hazardous chemical register required (s.346) as we are using hazardous chemicals.</td>
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<td>Contaminated materials resulting from any fuel or oil spills will be managed as Controlled Waste in Materials accordance with the <em>Environmental Management and Pollution Control (Waste management) Regulations 2010</em>.</td>
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<td>Hydrocarbon spills that are likely to cause an environmental harm will be notified to the Tasmanian Environmental Protection Authority within 24 hours.</td>
<td></td>
</tr>
<tr>
<td><strong>Dangerous goods and hazardous chemicals</strong></td>
<td>Spill kits will be available during construction, operation and decommissioning of the facility.</td>
<td></td>
</tr>
<tr>
<td><strong>Aboriginal heritage</strong></td>
<td>In the event any cultural heritage items or skeletal material is uncovered during construction, the Aboriginal Heritage Tasmania ‘Unanticipated Discovery Plan’ will be implemented.</td>
<td></td>
</tr>
<tr>
<td><strong>Traffic management</strong></td>
<td>All fuel deliveries will be made between 0700-1800 to minimise impacts on sensitive receivers along the access road from the Lyell Highway</td>
<td></td>
</tr>
<tr>
<td><strong>Decommissioning and Rehabilitation</strong></td>
<td>Hydro Tasmania will advise the Environment Protection Authority, Waratah-Wynyard Council and WorkSafe Tasmania of cessation of the use within 1 week of the last use.</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>Decommissioning and Rehabilitation</td>
<td>All equipment and infrastructure will be removed from the site and gravelled hardstand areas restored to their original condition within one month of cessation of the use.</td>
</tr>
</tbody>
</table>
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Appendices
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A. General arrangement
Que River General Arrangement
B. Equipment data sheets
# KTA50G3 Generator Datasheet

**EQUIPMENT DATA SHEET**

<table>
<thead>
<tr>
<th>Model</th>
<th>Ref</th>
<th>NHC20/KTA50G3 (Stackable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part Number</td>
<td>Ref</td>
<td>602104</td>
</tr>
<tr>
<td>Specification</td>
<td>Ref</td>
<td>G320016</td>
</tr>
<tr>
<td>Installation Drawing</td>
<td>Ref</td>
<td>A050210</td>
</tr>
<tr>
<td>Maximum Ambient</td>
<td>°C (°F)</td>
<td>45 (113)</td>
</tr>
<tr>
<td>Electrical Output</td>
<td>Hz</td>
<td>50</td>
</tr>
<tr>
<td>ISO 8528-1</td>
<td>kW (kVA)</td>
<td>850 (1062)</td>
</tr>
<tr>
<td>- Continuous Power (COP)</td>
<td>kW (kVA)</td>
<td>1034 (1293)</td>
</tr>
<tr>
<td>- Prime Power (PRP)</td>
<td>%</td>
<td>70</td>
</tr>
<tr>
<td>- Permissible average of PRP</td>
<td>kW (kVA)</td>
<td>1157 (1446)</td>
</tr>
<tr>
<td>ISO3049/1</td>
<td>%</td>
<td>56</td>
</tr>
<tr>
<td>Single Step load application</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alternator</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class F Temp. Rise (105°C)</td>
<td>kW (kVA)</td>
<td>1100 (1375)</td>
</tr>
<tr>
<td>- Three phase</td>
<td>kW (kVA)</td>
<td>-</td>
</tr>
<tr>
<td>- Single phase</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ends Out</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Make &amp; Type</td>
<td></td>
<td>Cummins Generator Technologies PE734C2</td>
</tr>
<tr>
<td>AVR</td>
<td></td>
<td>MX321</td>
</tr>
<tr>
<td>Regulation</td>
<td>%</td>
<td>±0.5</td>
</tr>
<tr>
<td>Circuit Breaker</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Make &amp; Type</td>
<td></td>
<td>Schneider NW25</td>
</tr>
<tr>
<td>Number of poles</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Rating</td>
<td>Amps</td>
<td>2500</td>
</tr>
<tr>
<td>Trip Unit Type</td>
<td></td>
<td>Micrologic 5.0</td>
</tr>
<tr>
<td>Overload Protection Range</td>
<td>Amps</td>
<td>1000 - 2500 (Adjustable by selector)</td>
</tr>
<tr>
<td>Short Circuit Protection Range</td>
<td>Amps</td>
<td>1500 - 25000 (Adjustable by selector)</td>
</tr>
<tr>
<td>Load Terminals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type</td>
<td></td>
<td>Busbar M12</td>
</tr>
<tr>
<td>Fuel Consumption</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standby/Fuel Stop</td>
<td>l/hr (US gal/hr)</td>
<td>293 (77.4)</td>
</tr>
<tr>
<td>100% Prime Power</td>
<td></td>
<td>263 (69.6)</td>
</tr>
<tr>
<td>75%</td>
<td></td>
<td>203 (53.5)</td>
</tr>
<tr>
<td>50%</td>
<td></td>
<td>143 (36.2)</td>
</tr>
</tbody>
</table>

Technical Department – Dumbarton Approved by C Mercer 20.09.06 / J A Casey 21.09.06
## Equipment Data Sheet

### Diesel Generating Set
- **50Hz:** 1250kVA
- **60Hz:** 1250kW

### Engineering Details

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Running Hours</strong></td>
<td></td>
</tr>
<tr>
<td>Hours 100% Prime Power</td>
<td>4.9</td>
</tr>
<tr>
<td>Hours 75%</td>
<td>6.3</td>
</tr>
<tr>
<td>Hours 50%</td>
<td>9.0</td>
</tr>
<tr>
<td><strong>Exhaust Emissions</strong></td>
<td></td>
</tr>
<tr>
<td>Cummins Exhaust Emissions Data Sheet</td>
<td>100% Prime &gt;2% CPL227</td>
</tr>
<tr>
<td>NOx - Oxides of Nitrogen (g/kWh)</td>
<td></td>
</tr>
<tr>
<td>PM - Particulate Matter</td>
<td>0.20</td>
</tr>
<tr>
<td>CO - Carbon Monoxide</td>
<td>3.59</td>
</tr>
<tr>
<td>HC - Unburnt Hydrocarbons</td>
<td>0.17</td>
</tr>
<tr>
<td><strong>Exhaust Silencer</strong></td>
<td></td>
</tr>
<tr>
<td>Make &amp; Type</td>
<td>Industrial &amp; Marine Silencers</td>
</tr>
<tr>
<td>Certificate</td>
<td>M9149</td>
</tr>
<tr>
<td>Permissible back pressure (mm Hg)</td>
<td>13 (0.5&quot;)</td>
</tr>
<tr>
<td><strong>Engine</strong></td>
<td></td>
</tr>
<tr>
<td>Make &amp; Model</td>
<td>Cummins Diesel KTA 50 G3 CPL227</td>
</tr>
<tr>
<td>Cylinders &amp; Form</td>
<td>V16 60°</td>
</tr>
<tr>
<td>Aspiration</td>
<td>Turbocharged &amp; Aftercooled</td>
</tr>
<tr>
<td>Fuel Pump</td>
<td>Cummins PT</td>
</tr>
<tr>
<td>Governor Type</td>
<td>Electronic</td>
</tr>
<tr>
<td>Make &amp; Model</td>
<td>Cummins EFC</td>
</tr>
<tr>
<td>Steady State frequency</td>
<td>%</td>
</tr>
<tr>
<td>Battery Voltage</td>
<td>Volts</td>
</tr>
<tr>
<td></td>
<td>6.06 (20')</td>
</tr>
<tr>
<td></td>
<td>2.44 (80')</td>
</tr>
<tr>
<td></td>
<td>2.80 (80')</td>
</tr>
<tr>
<td><strong>Overall Dimensions</strong></td>
<td></td>
</tr>
<tr>
<td>- Length</td>
<td>Kg (lbs) 19000 (41800)</td>
</tr>
<tr>
<td>- Weight</td>
<td>Kg (lbs) 20216 (44475)</td>
</tr>
</tbody>
</table>

Technical Department – Dumbarton Approved by C Mercer 20.09.06 / J A Casey 21.09.06
### Capacities

- **Fuel**
  - Gross
  - Usable
- **Lub oil**
  - Total
  - Pan
- **Coolant**

### External fuel supply

- **Maximum above base**
- **Maximum below base**

---

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C Mercer 20.09.06 / J A Casey 21.09.06
KTA50G3/QST30G4 Generator – General arrangement
**TRANSTANK T68**

- Self bunded design
- Overall dimension – 12200mmL x 2450mmW x 2900mmH
- Safe fill level 61300 litres
- Bare Tank Weight 16000kg
- 80nb Camlock Male Tanker hose filler c/w Dust Cap connection
- Tanker fill point supplied c/w 80nb Full Bore, 2 piece, Fire Safe Flanged Ball Valve, and Water Style Non Return Valve
- Corner container lock castings
- CSC Plated as a 40ft Standard Shipping Container
- Overfill protection supplied with mechanical shutoff, and audible / visual alarm
- Anti-siphon valve
- Permanent ladder and platform for ease of inspection and access
- Designed and manufactured in accordance with AS1657
- 600mm dia manway access to internal tank
- Containment compartment (internal bunding) with pressure vent
- Bunded pump bay housing
- Air breather vents and fittings supplied complete with dust filter fitting
- Calibrated Anodised Fluid level dipstick
- Unit sandblasted to SA2
- Paint coating is Hempel Hempathane 55100 Colour Code 10000
- Primer coating is Hempel Hempadur 15560 colour code 1217
- Front mounted security doors c/w container lock handles
- Statutory signage
- Designed and manufactured in accordance with Australian Standards AS1940 and AS1692, Underwriters Laboratories standard UL 142 (USA) and Underwriters Laboratories standard UL/CORD-142,18-95 (Canada)
TransTank T68 - General arrangement
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C. Stakeholder Management Plan