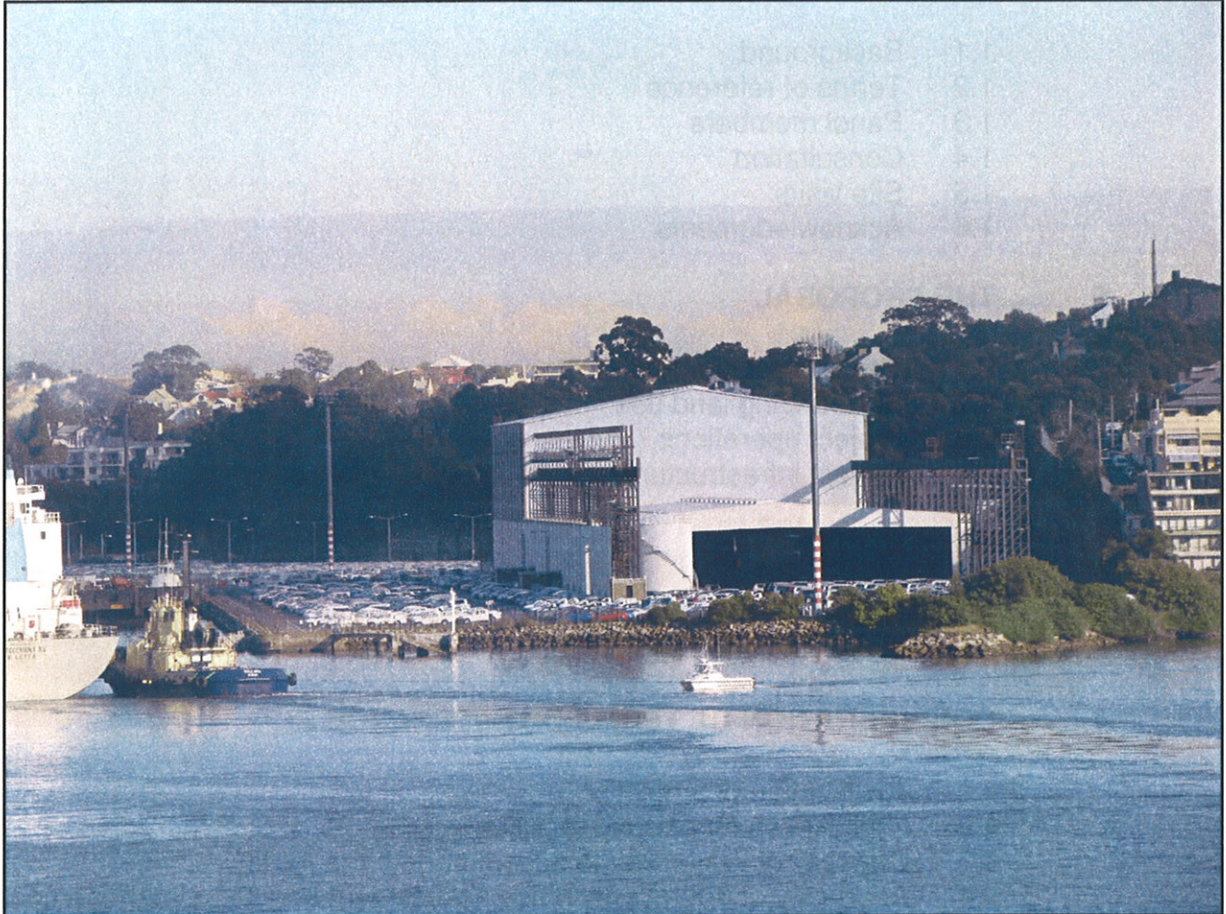


PANEL OF EXPERTS

BAILEY'S MARINE REFUELLING AND SUPPLY FACILITY BERTH 6, WHITE BAY



REPORT TO THE HONOURABLE

FRANK SARTOR MP

MINISTER FOR PLANNING

8 JULY 2008

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EXECUTIVE SUMMARY

On 6 November 2007, the Honourable Frank Sartor MP, Minister for Planning, appointed a Panel of Experts to review, investigate and report on certain aspects of a proposal by Bailey's Marine Fuels Pty Ltd to construct and operate a Marine Refuelling and Supply Facility (MRSF) at Berth 6, White Bay, Balmain.

The appointed Panel comprised Dr Andrew Refshauge (Chair), Matthew Taylor and John Wasserman.

The terms of reference set by the Minister for the Panel were as follows:

1. Justification for a refuelling facility within the inner harbour of the scope proposed, having regard for other facilities that might serve the same market;
2. Implications the proposal will have on existing refuelling facilities;
3. Capacity of White Bay to accommodate the facility;
4. Adequacy of operational and management measures proposed, including noise mitigation, environmental performance and resultant benefits; and
5. Basis of the operational need for the facility and its likely noise impacts, whether the operation of a 24 hour facility is required and justified in this location.

The Panel invited written submissions, and conducted a two day open public hearing on Monday 4 and Tuesday 5 February 2008, at Leichhardt Council Chambers.

Thirty four written submissions were received, and 27 people/organisations made verbal presentations to the hearings, some of which included written material.

The Panel conducted three separate site visits during the course of their consideration and assessment of the proposed MRSF. The Panel inspected the subject site and its immediate surrounds on 4 December 2007. On 13 December 2007, the Panel viewed a number of commercial and recreational refuelling facilities on Sydney Harbour. The Panel also inspected the NSW Water Police facility at Camerons Cove on 7 March 2008.

Discussions were also held with Department Environment and Climate Change (DECC), Sydney Ports Corporation, Sydney Ferries Corporation, NSW Maritime Authority, NSW Water Police and Leichhardt Council.

The key issues that emerged from the written submissions and public hearings include the following:

- noise impacts associated with 24 hour operations particularly during evening and night time periods;
- inadequate and inaccurate noise impact assessment;
- increase in traffic movements and resultant impacts on the surrounding road network;
- inadequate and inaccurate traffic impact assessment;
- safety and security concerns;
- environmental impacts;
- inappropriate use;

- out of date master plan and the need for a new master plan to be developed for the area; and
- the need for a facility on Sydney Harbour due to a lack of viable alternative sites.

FINDINGS AND RECOMMENDATIONS

Following the deliberations of the Panel, observations, site visits and the input of information through submissions and the hearings process, the recommendations below are made against each of the Terms of Reference.

The recommendations should be read in conjunction with the environmental issues and assessment sections located in the body of the report.

The Panel found that, in regard to:

1. Justification

There is a need for a refuelling facility of the type proposed by Bailey's in Sydney Harbour. There is a notable absence of existing operations in Sydney Harbour that have the capacity to undertake the range of activities and offer the variety of services as the proposed MRSF.

2. Implications

While the proposed MRSF is expected to increase competition between existing commercial and recreational refuelling facilities in Sydney Harbour, increasing demand for refuelling services that cater to a wide range of vessel types will ensure the market is able to accommodate an additional supplier.

3. Capacity

There are a number of aspects of the White Bay site that contribute to its capacity to be developed for a MRSF, namely its existing and surrounding land use, site characteristics and strategic location. The site has the capacity to accommodate the proposed facility. The facility itself would not be contrary to the Sydney Regional Environmental Plan No 26 – City West.

4. Adequacy of operational and management measures

The Panel considers the additional noise information provided by the proponent, including the operational noise assessment and proposed noise mitigation is adequate, and conforms to the NSW Government Industrial Noise Policy (INP). This is consistent with advice from DECC who are required to licence the facility once operating.

Notwithstanding the lack of detail in the operational noise management plan, the Panel considers that the proposed noise management measures proposed are adequate and are confident that adequate environmental performance can be achieved. This would be achieved by conditions on any approval and through the required licensing by DECC.

5. Operational need for the facility

The site is considered to be an acceptable location for the facility. The Panel does agree that there is justification for the facility. The Panel accepts that in relation to commercial vessel refuelling and pumping sewage, but not other kinds of refuse (e.g. empty bottles), there is some a need to operate on a 24 hour basis as there is limited opportunity currently in Sydney Harbour. With regard to other site activities specific operational times are recommended.

The Panel recommends:

a) The following operational times:

Activity	Hours of Operations
Refuelling and sewage pump out for commercial vessels	7 days - 24 hours per day
Commercial boat arrivals & departure & mooring	
Refuelling and s sewage pump out for recreational vessels	7 days – 5 am to 10 pm
Recreational boat arrivals & departure & mooring	
Office building mechanical services e.g. A/C plant, compressors for chiller room, etc	7 days - 24 hours per day
Truck movements to and from site	Mon – Sat 7 am to 6 pm Sun 8 am to 6 pm
All activities on the Hardstand/laydown area e.g. power tools, forklift, pallet jacks, cranes, travel lift and roll-on roll-off ramp	Mon – Sat 7 am to 6 pm Sun 8 am to 6 pm
Mixed marine tenancies commercial storage/work shed	Mon – Sat 7 am to 6 pm Sun 8 am to 6 pm

It should be noted that the operation of trucks entering and leaving the site, all activities on the hardstand and laydown area, and mixed marine tenancies have been restricted to daytime only.

- b) Facility staff are to be on site at all times of operation, and should be responsible for safety and noise management.
- c) Commercial vessels should be encouraged to refuel during the day and evening. Reasons for all night time refuelling should be logged as part of the operational noise management plan.
- d) The Proponent be required to implement an Operational Noise Management Plan and commission a noise monitoring report.

1. INTRODUCTION

1.1 BACKGROUND

In October 2006, the proponent Bailey's Marine Fuels Pty Ltd, lodged their Environmental Assessment (EA) for the proposed MRSF pursuant to Part 3A of the *Environmental Planning and Assessment Act 1979* (the Act). The EA for the project was advertised in the Sydney Morning Herald on the 8 November 2006 and placed on public exhibition from 8 November 2006 until 8 December 2006.

There have been a total of 790 public submissions received on the project application, which include those received during the public hearings. The majority were objections though some were in support, particularly those from industry groups and organisations. Submissions were also received from seven government agencies.

On 6 July 2007, Bailey's lodged their Preferred Project Report (PPR) which included responses to submissions and a further noise impact assessment.

Following the extent of interest shown by the community, the Minister for Planning appointed a Panel of Experts on 6 November 2007 to investigate and report on a number of aspects and issues associated with the proposed MRSF.

1.2 TERMS OF REFERENCE

The terms of reference for the MRSF review were to consider and advise on:

1. Justification for a refuelling facility within the inner harbour of the scope proposed, having regard for other facilities that might serve the same market;
2. Implications the proposal will have on existing refuelling facilities;
3. Capacity of White Bay to accommodate the facility;
4. Adequacy of operational and management measures proposed, including noise mitigation, environmental performance and resultant benefits; and
5. Basis of the operational need for the facility and its likely noise impacts, whether the operation of a 24 hour facility is required and justified in this location.

1.3 PANEL MEMBERS

The Panel comprised the following members:

- Dr Andrew Refshauge (Chair), former Deputy Premier and Minister for Planning
- Matthew Taylor, former CEO of NSW Maritime Authority
- John Wasserman, Noise Consultant, Wilkinson Murray

1.4 CONSULTATION

1.4.1 Proponent presentation

On 5 December 2008, Bailey's Marine Fuels Pty Ltd presented to the Panel. The presentation described the site, project and proposed operations in detail and addressed the Panel's terms of reference. Bridges Acoustics, acting on behalf of Bailey's, attended the presentation and gave a summary of the noise impact analysis undertaken for the project.

1.4.2 Site visits

The Panel conducted three separate site visits during the course of their consideration and assessment of the proposed MRSF.

The Panel inspected the subject site and its immediate surrounds on 4 December 2007. Staff from the Foreshore Authority and Sydney Ports Corporation accompanied the Panel.

On 13 December 2007, the Panel viewed a number of commercial and recreational refuelling facilities in Sydney Harbour. These included the NSW Maritime facility in Rozelle Bay, Shell Gore Bay terminal, Royal Sydney Yacht Squadron in Kirribilli, Captain Cook Cruises in Neutral Bay, D'Albora Marina Rushcutters Bay, Royal Motor Yacht Club and Rose Bay Marina. In attendance were NSW Maritime Authority and the Foreshore Authority.

The Panel inspected the NSW Water Police facility at Camerons Cove on 7 March 2008. In attendance were members from the NSW Water Police and the Foreshore Authority.

1.4.3 Notification

The appointment of the Panel of Experts and holding of public hearings were publicly notified by advertisements in the Sydney Morning Herald and The Glebe on Thursday 20 December 2007. An additional advertisement was placed in The Glebe on Thursday 17 January 2008.

Notification letters were sent out to persons who made submissions on the proposal, including Government agencies, notifying them of the panel appointment and of the public hearing.

1.4.4 Written submissions

A total of 34 written submissions were made to the Panel prior to the public hearings. Some members of the public lodged a written submission and presented at the public hearing. Twelve submissions objected to the proposal while 22 were in support.

1.4.5 Public hearings

The Panel held a two day public hearing to allow and listen to persons who have made or wished to make a submission on the proposal. The public hearing was held on Monday 4 and Tuesday 5 February 2008 at Leichhardt Council Chambers.

A total of 27 people made presentations before the Panel at the public hearing, with 23 presenters objecting to the proposal, and four in support. A number of presenters provided a written text of their presentation to the Panel.

1.4.6 Government agencies

The Panel conducted a number of meetings with Government agencies to discuss the proposed MRSF and raise any issues or concerns respective agencies might have with the facility. On 29 February 2008, a meeting was held with Sydney Ferries Corporation, NSW Maritime Authority, Sydney Ports Corporation and Leichhardt Council. Officers from the Foreshore Authority also attended the meeting.

2. THE PROPOSAL

2.1 THE SUBJECT SITE

The subject site is known as Berth 6, White Bay and is located at the north-eastern end of White Bay, Balmain. The site has an irregular rectangle shape. Its northern boundary adjoins an internal private access road and Camerons Cove and is approximately 200 metres in length. The southern boundary fronting White Bay is approximately 185 metres. The western (Berth 5) and eastern (water) boundaries of the subject site are approximately 100 metres in length. The total area of Berth 6 is approximately 15,880 m².

The waterside area is approximately 5,000 m² and extends from the existing breakwater to the north and eastern end of the foreshore. A large steel gantry and storage sheds still occupy the site. The site is currently used for the storage of motor vehicles that arrive via ships at Glebe Island.

2.2 SURROUNDING LAND USE

The White Bay and Glebe Island precinct is occupied by port related uses principally bulk storage, including bulk liquid storage (Berth 4), car storage (Berths 5 and 6), sugar storage (Glebe Island), and cement and gypsum storage (Glebe Island). The goods and materials are transported by ship to the sites and are then distributed throughout Sydney and NSW. Existing structures are a mix of gantries, large storage sheds, storage tanks, silos and administrative buildings.

Figure 1 below identifies the location of the site and its surrounding context.

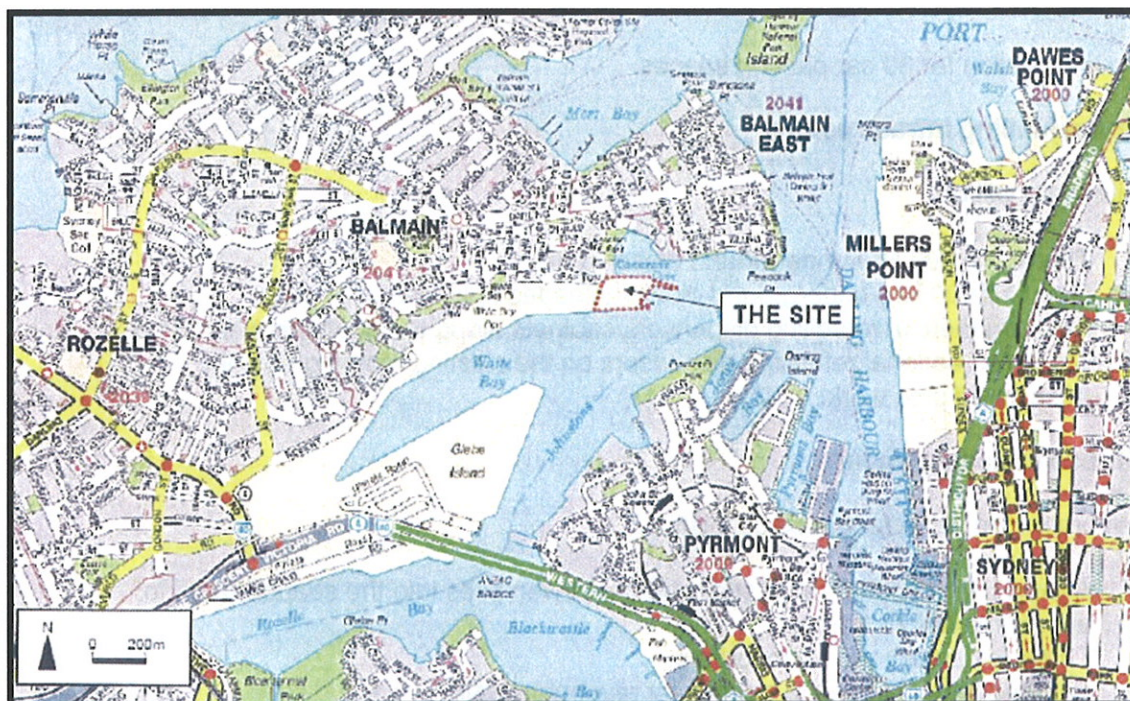


Figure 1: Regional Context

The precinct is defined by Victoria Road to the west, Rozelle Bay to the south, Johnstons Bay to the east and Camerons Cove to the north. White Bay separates the common user berths of Glebe Island to the south with those of White Bay to the north.

The subject site is bound to the north by residential land uses. The closest residences are found at Grafton Street which sits above the site. The closest residential properties located at No 1 Grafton Street are approximately 2 metres from the site. North across Camerons Cove are the residential Jubilee and Datchett Streets which are approximately 100 to 150 metres north-east of the site. The NSW Water Police headquarters lines the northern foreshore of Camerons Cove and is approximately 50 metres from the site.

To the west of the site is port land and comprises common user Berths 1-6. Berth 5 adjoins the subject site while Berth 1 is approximately 900 metres to the west.

South across Johnstons Bay is Pyrmont Point, Pyrmont Point Park and Pyrmont residential areas. The closest residential properties are approximately 250 metres from the site.

2.3 PROJECT INFRASTRUCTURE

Land based development

The land based development consists of two buildings.

The first is approximately 11 metres in height and 50 metres in length. It is to be used for bulk storage and also has a small number of offices leased for commercial marine service businesses.

The second building is approximately 10 metres in height and 50 metres in length. It is for bulk indoor storage space for marine equipment including rope, buoys, lifeboats and other marine hardware.

There is provision for 30 car parking spaces.

Marine refuelling infrastructure

On site there will be:

- Three 110,000 litre underground diesel tanks.
- One 110,000 litre underground diesel/unleaded split tank.
- Five commercial refuelling dispensers/cabinets along the southern wharf face.
- Three recreational refuelling dispensers on the existing mooring dolphin.
- Associated pipe work.

Water based development

Development that is water based consists of:

- A fixed roll-on roll-off ramp supported by driven piles into the seabed rated to approximately 75 tonnes.
- Three temporary vessel moorings.
- Wooden jetty adjacent to south east revetment wall.
- Three floating pontoons adjacent to existing mooring dolphin.
- 75 tonne travel lift ramp adjacent to the roll-on roll-off ramp.

2.4 PROJECT OPERATIONS

The EA and PPR prepared for the project outlines the proposed operations of the MRSF as follows:

Refuelling

The five refuelling bowers on the wharf apron would service vessels up to 70 metres in length including recreational, commercial fishing, commercial charter, commercial marine and government (Sydney Ferries, Navy, Customs, NSW Water Police) through a swipe card system and automated dispensers. Refuelling of commercial vessels is proposed 24 hours a day, 7 days a week.

Three refuelling bowsers servicing smaller recreational and commercial vessels will be located on floating pontoons adjacent to the existing mooring dolphin. Recreational refuelling is proposed between 5 am and 10 pm, 7 days a week.

Trucks are proposed to refuel the underground storage tanks 24 hours a day, 7 days a week.

Grey water and sullage

Grey water and sullage facilities will remove waste from commercial and recreational vessels using a Sanivex pump out system. The waste will be discharged stored on site in tanks and transported off site. Commercial vessels will use the facilities 24 hours a day, 7 days a week. Recreational vessels will use them from 5 am to 10 pm, 7 days a week.

Marine tenancies and office space

Marine tenancy and office/administration activities are proposed to be undertaken in the marine office building that runs parallel to the wharf apron. Marine businesses that would use the building include marine electronics, life raft servicing, marine surveyors and engineers. These businesses would operate in conjunction with the marine refuelling facility.

Bulk storage

The marine storage building located between the gantry structures on site will be used for bulk storage of marine equipment including pollution control, emergency equipment and marine vessels.

Hardstand/laydown

This area is proposed to be used for the temporary storage of goods and materials for the boating and marine construction industry. These will be stored on site and transported via the roll-on roll-off ramp to harbour islands and other foreshore redevelopment sites.

The hardstand area will also house vessels that have been hauled out of the water via the travel lift ramp or have arrived on site by road.

Activities proposed to be undertaken on the vessels include, detailing and polishing, interior fitout, fitting electronic equipment, rigging, upholstery, trimming and detailing of vessels for export and dry docking.

Machinery and equipment used on the hardstand area will include forklifts, travel lift ramp, trucks and delivery vehicles, pallet jacks, high pressure water cleaner, electric power tools and occasionally cranes when the site may be used for commercial ship mooring and unloading of vessels.

Roll-on roll-off ramp

Construction materials and goods are proposed to be brought in via trucks and barges for use on harbour islands and foreshore areas with limited road access. Vehicles carrying these goods will simply roll-on to a fixed ramp and drive onto an awaiting barge. The barge will then transport trucks and materials in and around the harbour to various construction sites. The roll-on roll-off ramp is proposed to operate from 7 am to 6 pm Monday to Saturday, and 8 am to 6 pm Sunday.

Travel lift and ramp

The travel lift ramp supports the travel lift to enable it to lift and retrieve vessels out of the water as well as launch vessels into the water. The travel lift will transfer and lift boats into and out of slips on the hardstand area and bulk storage building. Once the vessels are transferred into the slips minor repair and pre-commissioning activities can be undertaken.

3. ISSUES

3.1 NATURE OF SUBMISSIONS

A total of 790 public submissions have been lodged with the Foreshore Authority in response to the exhibition of the EA, PPR and as part of the public hearing process. There have been 752 objections, 38 submissions in support. The objections lodged comprised 631 pro-formas, 106 individual submissions and 15 website generated emails. Seven public agencies have also lodged submissions.

Twenty seven people presented to the Panel during the public hearing.

In some cases there were numerous submissions received from one author. These were treated as a single submission.

3.2 ISSUES RAISED IN SUBMISSIONS

The issues raised in submissions during the public exhibition period, public hearing and during consultation include:

- noise from commercial vessels, traffic, refuelling, loading of goods and servicing operations;
- health, safety and environmental risks – fuel spills, pollution and fumes, fuel stored near peoples homes;
- 24 hour operations inappropriate in residential area;
- increased traffic and inadequate traffic impact assessment;
- use of site excessive placing demands on local infrastructure as well as public transport;
- boat numbers and risks;
- limits public access and public transport opportunities;
- inappropriate use of the site;
- area should be public open space;
- lighting impacts to surrounding residential areas;
- visual impacts in particular to views;
- terrorism threat and security implications;
- ad hoc development;
- cumulative impacts;
- decreasing property values;
- interference with recreational activities;
- lack of consultation;
- noise assessment inadequate;
- multiple government agencies;
- project description & drawings ambiguous;
- air quality report inadequate;
- refuelling not supervised;
- EA insufficient – use of roll-on roll-off operations;
- inconsistent with master plan and proposal is an ‘illegal use’;
- mitigation measures inadequate e.g. fuel spillages from boats;
- working harbour theory outdated;
- should be ferry terminal;
- impacts on ecology;

- lack of economic analysis;
- no water treatment plan / water quality assessment inadequate;
- no visual drawings of travel lift;
- no impact assessment on water traffic;
- breach of the *Protection of Environment Operations Act 1997*;
- contrary to *Environmental Planning and Assessment Act 1979*;
- soil assessment inadequate;
- must apply State Environmental Planning Policy 11 - Traffic Generating Developments;
- no rigorous assessment of Sydney Regional Environmental Plan No 26 – City West;
- hazards and Risks – vandalism etc;
- impacts on re use – Power Station;
- too many generalised statements – ‘where possible’ – ‘will be encouraged’; and
- the need for a new master plan as the current master plan out of date.

In addition to the key issues of concern outlined above, there were a number of key issues raised in support of the proposal which include:

- the need for a facility on Sydney Harbour due to a lack of viable alternative sites;
- ideal central harbour location;
- Bailey’s stringent environmental management practices and safeguards that ensure best practice;
- increased vessel ownership and increasing size of vessels requiring a commercial marine refuelling operation offering a range of activities and services; and
- investment in maritime and waterway infrastructure is critical for the industry.

4. CONSIDERATION OF TERMS OF REFERENCE

4.1 JUSTIFICATION OF PROJECT

4.1.1 Strategic context

In May 2000, the Minister for Planning adopted the master plan for Glebe Island and White Bay subject to a number of variations.

Key principles outlined in the master plan include the following:

- recognise the continued role of White Bay/Glebe Island as the significant commercial port facility in Sydney Harbour and facilitate continued use;
- provide for improved port efficiency and competitiveness;
- provide for enhanced environmental performance;
- define a set of development standards for future development activities with the Port to improve the appearance of the port; and
- accommodate forecast trade growth.

The preparation of the Glebe Island and White Bay Master Plan was a requirement of the *Sydney Regional Environmental Plan No 26 – City West* (SREP 26). SREP 26 includes the site within the 'Port and Employment' zone. The provisions of this zone provide for the proposed MRSF as permissible development with consent.

In October 2003 the State Government announced the *Ports Growth Plan* which provided the framework for growth and development of port capacity in NSW. Its intention for White Bay was to remove cars and containers out of White Bay and retain dry bulk storage and passenger operations. This ensured White Bay remained under Sydney Ports Corporation ownership and designed for 'working maritime uses'.

Following the release of the *Ports Growth Plan*, SPC released an expression of interest (EOI) for the leasing of land at Berth 6, White Bay. The proposed MRSF was accepted as the most appropriate use of the site as it met the EOI objectives in relation to land use, asset management, environmental management, Occupational Health and Safety, planning regulations, security obligations and berthing.

The Panel notes that a Bays Precinct Taskforce has been established which includes a number of NSW Government agencies. It is currently looking at future land use in the Bays Precinct. A number of submissions stated the assessment and review of the proposed MRSF should be placed on hold until the Bays Precinct Taskforce completes its study and finalises its recommendations. In addition, many submissions referred to the master plan and its vision for White Bay as outdated.

The Panel's Terms of Reference do not allow consideration of whether there is a need for a new master plan. Similarly, the Panel has not been directed to defer its review and a recommendation until the Bays Precinct Taskforce review is completed. It is not the intention of the Panel to debate the validity or relevance of the current master plan. This issue has been referred to the Minister.

The Panel has reviewed the master plan and SREP 26 and believes the proposed MRSF is consistent with the strategic vision for White Bay as a site for working maritime uses.

4.1.2 Geographical context

The site at Berth 6, White Bay is located approximately 1.5 kms west of the Sydney CBD. The site has an appropriate land water interface, with direct connections in the metropolitan arterial road network, through Victoria Road, City West Link Road and the Western Distributor. The Panel does however note potential truck noise concerns, and this is dealt with further in this report.

The site also has direct deep water access, and being close a number of locations where commercial vessels are currently stored in the inner harbour, particularly King Street Wharf, Rozelle and Blackwattle Bays, the site is strategically located.

The Panel considers that there are no other sites in the inner harbour that were available and that were appropriately zoned, which could accommodate the proposed MRSF.

Ballast Point while previously canvassed is no longer viable due to location constraints and future use of the site for public open space.

4.1.3 Environmental performance

Over the past decade there has been environmental improvement measures put in place to improve the performance of marine operators including marinas, boatsheds and slipways in the inner harbour. This has resulted in some operators closing down while others have improved their environmental performance.

The *Protection of Environment Operations Act 1997* is the principal piece of environmental legislation that controls the activities of marine operators which may have water, noise, land, air and waste management impacts. The proposed MRSF requires a licence under the *Protection of Environment Operations Act 1997*. DECC have indicated the proposed MRSF will be able to obtain a licence, subject to strict licensing conditions.

In July 2007, DECC released '*Environmental Action for Marinas, Boatsheds and Slipways*'. The guide was principally developed to provide information to help marine operators improve their environmental performance, and this identifies a number of key environmental issues for consideration and which are relevant to the Terms of Reference. The key issues cited in the guide include:

- water pollution caused by allowing any material other than rainwater to enter waterways;
- air pollution and land contamination caused by releasing: VOCs into the environment due to solvent or paint use; dust, including particles that may contain organic compounds, metals and metal complexes, due to sanding and blasting;
- handling and disposing of dangerous goods such as solvents, fuel and paint wastes;
- waste management, including reuse, recycling and disposal;
- noise affecting the amenity of the surrounding community;
- water use;
- greenhouse gas emissions from energy use; and
- design, installation and operation of underground petroleum storage systems.

The Panel has reviewed the EA and PPR and believes that the proposed MRSF is consistent with current policy. Its features can be summarised as follows:

- facility will be state of the art and environmentally compliant;
- Bailey's have an Environmental Management System (EMS) in place which is certified and compliant with ISO 14001 Environmental Management System Standard. They are the only fuel supplier in the country to have this accreditation;
- site induction training for all customers;
- safety designs including quick release coupling and automatic shut-off valves and dry break couplings on loading and unloading lines to control spillage;
- installation of leak detection monitoring and vapour recovery hoses attached to tankers;
- overfill protection valves for underground tanks, with level indication and alarms;
- double skimmed tanks with vacuum monitoring;
- effluent and sullage from vessels will be removed through a single action diaphragm pump, discharging effluent to the closed sewer main through a sealed line;
- underground fuel storage area will be bunded thus containing any pollution for collection;
- facility will ensure appropriate spill kits are available on site to contain and collect spillage on site;
- installation of rainwater tanks to collect water from the two buildings to be used on site;
- stormwater management system will collect and treat water; and
- facility will install usage metering, monitoring and reporting devices for managing consumption.

4.1.4 Demand and need

There has been an increase in vessel registrations in NSW from 160,822 registrations in 1987 to 231,387 in 2007, an increase of 32% in a decade.

Although the state of the economy will vary the yearly sales activity, it is expected that the increase experienced over the last decade will continue over the next decade.

As a result, the demand for refuelling capacity on the Harbour will continue to grow.

The proposed MRSF offers a range of services not easily available in Sydney Harbour, such as:

- sullage and pump out facilities;
- supply point for commercial vessels to pick up pre ordered supplies;
- commercial land based refuelling facility in Sydney Harbour;
- a site that can accommodate medium sized commercial/recreational vessels; and
- roll-on roll-off ramp to support water and foreshore based construction thus supporting a working harbour.

The Panel noted that some aspects of the working harbour are currently undergoing a degree of change, largely due to the relocation of existing port activities to other locations. The Panel did not think that these changes would significantly affect the proposed MRSF as there would continue to be demand for refuelling from other commercial and recreational vessels.

Accordingly, it is seen reasonable to make the marine supply market in Sydney Harbour more competitive.

4.2 IMPLICATIONS FOR EXISTING FACILITIES

4.2.1 Existing commercial and recreational refuelling facilities

The Panel were informed that the majority of recreational vessels that use the inner harbour are transported via trailers, petrol driven and refuelled at service stations. A smaller number use refuelling facilities at marinas.

Some commercial marine industries/operators purchase unleaded fuel at service stations and transport them to their site via 20 litre drums. These are stored on site and used when needed. Licensing restrictions and cost of infrastructure limit the number of operators who store large amounts of fuel on site for their own operations.

Tables 4.1 and 4.2 below provide a summary of existing commercial and recreational refuelling facilities in the inner harbour. The sites listed do not include marine related businesses that have their own refuelling facilities, such as Captain Cook Cruises in Neutral Bay, or a number of recently approved developments in Rozelle Bay (Dry Boat Store, Sydney Slipways).

Also absent from the tables are Government owned/operated sites which have their own fuel depots. These include Customs, Navy (Garden Island) Sydney Ferries (Mort Bay and Manly), and NSW Water Police at Camerons Cove.

Table 4.1 Recreational facilities

Facility	Infrastructure	Hours of operation	Public Facility	Self Service
D'Albora Marinas Cabarita Point	2 diesel dispensers 2 premium dispensers 1 sullage/sewerage pump out	24 hrs 7 days a week	Yes	Yes
Clontarf Marina	1 diesel dispenser 1 unleaded dispenser	8am-6pm (daylight saving) 7 days a week	Yes	No
Royal Motor Yacht Club of NSW Point Piper	2 diesel dispensers 2 premium dispensers 1 unleaded dispenser	8.30am-5.30pm midweek 7.30am – dusk weekends	Yes	No
D'Albora Marinas Rushcutters Bay	1 diesel dispenser 1 premium unleaded dispenser 1 sullage pump out	8.30am-4.00pm 7 days a week	Yes	Yes
D'Albora Marinas The Spit, Mosman	1 diesel dispenser 1 premium unleaded dispenser	8.30am-4.30pm 7 days a week	Yes	Yes
Rose Bay Marina	1 diesel 1 premium unleaded	8.00am-4.30om 7 days a week	Yes	No

Table 4.2 Commercial facilities

Facility	Infrastructure	Hours of Operation	Types of boats
Gore Bay, Shell Terminal, Greenwich	Diesel – 20 large storage tanks	24 hrs, 7 days a week (must book)	Vessels up to 100,000 tones
NSW Maritime and Rozelle Bay Super Yacht Marina	1 diesel dispenser 2 unleaded	24 hours	NSW Maritime vessels, water taxis, yachts
Amorena	Large barge (1,000,000 litre)	24 hours	Large commercial vessels
Ability Barge Services (Mobile operator)	Diesel 10,000 litre	7am-3.00pm Monday-Saturday	N/A
Sydney Fuel & Barge	Small barge (20,000 litre)	-	Charter boats and fishing boats

The Rozelle Bay Super Yacht Marina accommodates vessels up to 50 metres in length, however the larger vessels have difficulties in refuelling, and some have to be refuelled by barge, road tanker or use alternative harbour facilities.

4.2.2 Commercial implications

The proposed MRSF will provide for the refuelling of commercial vessels, some of which presently use the Shell facility Gore Bay for their refuelling.

Shell's Gore Bay terminal is a receiving and storage facility which provides all the crude oil for Shell's Clyde Refinery. The crude oil is imported by ships and unloaded on site.

Once the crude oil is transferred from the ships it is then piped underground to the Clyde refinery to produce a range of petroleum products. This includes diesel, unleaded and heavy fuel oil which are the principal fuels used on Sydney Harbour.

Diesel is used by the majority of small to medium commercial vessels. Unleaded petrol is used widely in recreational boats, while heavy fuel oil is used by large ships including tankers and cruise liners.

The Shell Terminal at Gore Bay also operates a commercial refuelling facility and is the only commercial operator in Sydney Harbour.

The site has the capacity to store approximately 12 million litres of diesel, and 8 to 13 million litres of heavy fuel oil. While the site can store roughly equal amounts of diesel and heavy fuel oil, it typically holds greater volumes of heavy fuel oil due to greater demand and annual throughput. The fuel is stored in above ground storage tanks.

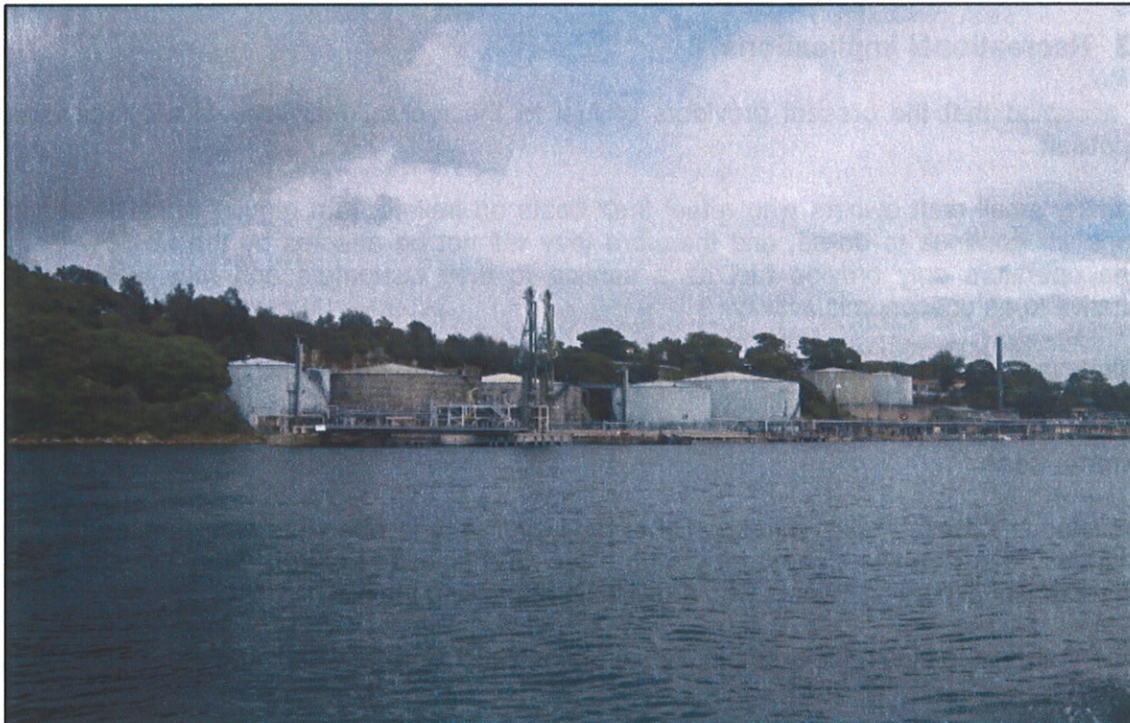


Figure 2: Shell Gore Bay Terminal

Customer base

The Shell facility refuels medium size commercial vessels and tankers. It also refuels bunker barges including the Amorena which then supply heavy fuel oil and diesel to large ships that cannot berth at the facility.

Due to infrastructure limitations, safety and communication concerns, the Shell Gore Bay Terminal, while capable of servicing commercial vessels, does not have the physical and operational flexibility of Bailey's.

Implications

The Panel notes that Shell state they have had a strong and successful relationship with Bailey's over the past twenty years, and that the relationship is mutually beneficial.

Shell supports the proposed MRSF as it will provide required alternative supply options for smaller vessels accessing Port Jackson, similar to other ports around Australia.

Bailey's do not intend on supplying heavy fuel oil, which is the primary fuel sold from the Shell facility, removing any potential competition in this section of the market.

Bailey's are an existing customer of Shell and will continue to purchase diesel and unleaded fuel for their refuelling facilities around Australia. The proposed MRSF at White Bay will increase the demand for the supply of fuels from Shell in Sydney Harbour which is considered to enhance their 'mutually beneficial relationship'.

Bailey's have a significantly different customer base from that which uses the Shell Gore Bay Terminal. The Panel does not consider that the proposed MRSF will have any negative impact on the operation of the Shell facility.

4.2.3 Recreational implications

It is accepted that the present providers of fuel to the recreational vessels will face direct competition.

The many small craft owners who refuel their boats on trailers from regular roadside service stations will continue to do so, and therefore they will not be affected by the MRSF. Some marina operators only provide fuel as a service to their customers and may welcome an alternative to an uneconomic activity.

It is likely the vessel owners will benefit from a new state of the art refuelling and supply facility, either directly or through competition.

Customer base

The customer base consists of recreational boat owners and operators who temporarily and permanently moor on site. They refuel with diesel and unleaded petrol. They will also serve some recreational boating owners who are visiting or passing the site.

Members of private clubs, for example, Royal Motor Yacht Club will continue to use their club's facilities.



Figure 3: Royal Motor Yacht Club Point Piper

Implications

There will be a certain amount of competition from the MRSF to the limited number of recreational fuel suppliers in the inner harbour.

It is likely that those providers who only continue because there is no realistic alternative for their customers may consider ceasing their provision. The supply of fuel at these facilities is ancillary to their primary operations. Hence the facilities only buy small parcels of fuel which ensures the cost of purchasing the fuel remains high. On site fuel capacity constraints further limit fuel supply which impedes the site's ability to increase fuel throughput.

Bailey's are a national purchaser of marine fuels who have accounts with all the fuel distributors including Shell, Caltex, BP and Mobil.

Bailey's only sell marine fuels and are the largest marine fuel supplier in the country. They purchase economic parcels – minimum single barrel tankers at 37,000 litres which keeps prices low.

The proposal brings a new entrant into the market which has the capacity to purchase large volumes of fuel which can sell fuel at a more competitive rate.

Despite increased competition, existing recreational fuel facilities will retain their appeal. The familiarity of these sites and amenities offered by recreational facilities may influence their decision to purchase their fuel where they always have.

It is therefore expected that existing customers would still choose to refuel their boats at these locations where it is time efficient and more convenient. The Panel considers that for these reasons any implications will be relatively minor.

4.2.4 Bunker barge implications

Bunker barges are mobile refuelling vessels which have two primary functions, namely refuelling large ships and commercial vessels, and refuelling on-shore fuel storage tanks.

Bunker barges can also be used for marine refuelling when there is restricted road access to a site, for example, the Sydney Ferries Corporation facility at Mort Bay.

Customers

The customers of the Amorena bunker barge include large ships requiring heavy fuel oil. The smaller bunker barges service medium size commercial vessels and some marine contractors.

Implications

The MRSF will be in direct competition to the small bunker barges.

The implications for the operations of the Amorena will be less due to its large capacity. The MRSF will be more directly in competition with the small bunker barges. These also have an expensive operation with high business operation costs, particularly due to having a crew and also having a relatively small fuel capacity.

Both large and small barges have the advantage of their mobile operations, and therefore can still service large land based facilities and vessels that cannot go to the proposed MRSF.

Bailey's will offer fuel at a lower price and bunker barges may find it difficult to compete in the small to medium commercial vessel refuelling market.

As a result small bunker barges may need to increase their fuel capacity to achieve cost and supply savings.

However large bunker barges such as the Amorena will still have a place in the market due to their large storage capacity.

The Panel anticipates that the two operations can co-exist and that limiting the ability for a new entrant into the marine fuel supply market would eliminate price competition.

The Panel expects that all current suppliers should be able to continue to operate at some capacity.

4.3 CAPACITY OF WHITE BAY TO ACCOMMODATE THE FACILITY

4.3.1 Current use of the site

Berth 6 currently is used for the storage of motor vehicles that arrive via ships at Glebe Island. The site operates 24 hours a day, 7 days a week.

The motor vehicles arrive to Berth 6 from Glebe Island via an internal access track. The motor vehicles are then picked up and transported off site by trucks. The trucks exit the site using an internal access road running along the northern perimeter of the site before reaching Roberts Road.

Sydney Ports Corporation has provided information to the Panel which indicates approximately 15,000 vehicles are stored on site per year. The site has the ability to accommodate up to 2000 motor vehicles at any one time. Trucks transporting vehicles off site can carry up to a maximum of seven vehicles at a time.

Using these figures, the use of the site generates approximately 30,000 motor vehicle and 4284 truck movements per annum. This equates to approximately 82 vehicle and 12 truck movements a day, the majority of which take place during daylight hours.

The use of the site is expected to cease in November 2008 to make way for the proposed MRSF.

4.3.2 Land use

The site is within the area identified on Map 1 as 'City West' and is located within the "Bays Precinct". The land is zoned 'Port and Employment'.

The SREP outlines the role and land use activities of the Bays Precinct as follows:

- *"Development should reinforce and complement the role of the Precinct as a major inner-harbour port and maritime location. Development should recognise that the port operates for 24 hours of the day and that the generation of noise, lighting and traffic movement is necessarily associated with its operation."*
- *"Development in the Precinct is to provide for a mixture of commercial port, port-related, employment, waterfront and recreational uses, but is not to include residential development. The existing diversity and maritime character of the Precinct, particularly the mixed use of waterfront areas, should be retained."*
- *"Development is to take full advantage of the Precinct's locations and its infrastructure, particularly rail or light rail facilities, for the port and other employment generating activities."*
- *"Development is to encourage the environmental rejuvenation of the Precinct. Where possible, future development is to encourage the segregation of port traffic from residential and recreational areas."*
- *"Development is to make efficient use of surplus government owned land."*
- *"Development is to encourage the conservation of and adaptation for reuse of existing heritage items and structures for uses compatible with new development."*

- *“Development is to contribute to improved water quality in Rozelle Bay and Blackwattle Bay is to enhance the environmental quality of those areas for all users.”*

The Panel considers that this area of White Bay has the capacity to accommodate the proposed facility. The facility itself would not be contrary to the objectives of SREP 26.

4.3.3 Site characteristics

The site has been specifically designed to cater to large commercial ships and vessels and storage of goods associated with port operations. There are no threatened or endangered animals or plants on the site.

The location is advantageous because of the close access to arterial roads, CBD and to the areas where vessels operate.

Its large land base can accommodate buildings, structures and vessels comfortably. Because it is flat, there will be little to no excavation, nor will any extensive remoulding of the site be required.

Its deep water frontage provides sufficient draft (8 metres to 11 metres), for vessels so that dredging will not be required. There is also adequate clearance to prevent mobilisation of underlying sediments by vessels using the MRSF.

The proposed MRSF maintains an aspect of ‘working harbour activity’ in this location, and it would not adversely impact on the function of the greater White Bay area, or its capacity to accommodate a wide range of other permissible uses.

4.4 ADEQUACY OF OPERATIONAL NOISE ASSESSMENT AND NOISE MANAGEMENT MEASURES AND BASIS OF OPERATIONAL NEED AND ITS LIKELY NOISE IMPACTS.

The Terms of Reference require the Panel to consider the “*adequacy of operational and management measures*” and the “*basis of the operational need for the facility*”.

Although there are several areas where the proposed facility could give rise to environmental impacts, the principle issue to be addressed in regard to these two Terms of Reference is that of noise. This was also the primary issue of concern raised in submissions.

The Panel does however note the stringent environmental management measures that will be adhered to by the proponent in operating this facility. This is referenced in section 4.1.3 above. The Panel considers that after reviewing the documentation available, it is satisfied that environmental management matters will be adequately addressed through conditions of any approval, and by compliance with other relevant regulations and requirements.

An assessment of the noise and vibration impacts of the proposed MRSF was undertaken for the operational stage of the proposal consistent with the Minister's request.

The Panel's review of the noise impacts of the project is based on the following information:

- Chapter 8 of the White Bay Berth 6 Proposed Marine Supply Facility Environmental Assessment Volume 1 – Main Report, Social and Economic impact assessment. (Kellogg Brown & Root Pty Ltd, September 2006);
- *Noise Impact Assessment Proposed Marine Supply Base, Wharf 6 White Bay – Report J0114-04-R3*, 3 May 2006);
- Chapter 3 of the White Bay Berth 6 Proposed Marine Supply Facility Preferred Project Report, Responses to Submissions. (Kellogg Brown & Root Pty Ltd, July 2007);
- *Noise Impact Assessment Proposed Marine Supply Base, Wharf 6 White Bay – Report J0114-04-R8*, 29 June 2007); and
- White Bay Berth 6 Proposed Marine Supply Facility Addendum to Preferred Project Report. (Kellogg Brown & Root Pty Ltd, November 2007)

In general the process used to assess the operational noise was to:

- identify closest residential receivers;
- identify background noise levels of the area;
- establish operational noise assessment criteria;
- consider appropriate noise mitigation measures to implement;
- calculate noise levels to the surrounding area; and
- compare predicted noise levels with the appropriate criteria.

The noise assessment states that noise assessment has been conducted consistent with the NSW *Industrial Noise Policy* (INP). The INP is the correct policy to use to conduct the noise assessment for the MRSF.

4.4.1 Submissions to the Panel with regard to operational noise

A variety of noise issues were raised in the submissions on the EA and to the Panel as previously stated in this report. The two main noise issues highlighted to the Panel were:

- inadequate and inaccurate noise impact assessment; and
- noise impacts associated with 24 hour operations particular during evening and night time periods

During the Panel Hearing additional acoustic information was presented to the Panel by the White Bay Joint Steering Committee in the form of an acoustic review (Report No. 8196-1-108 Review of Noise Impact Assessment Prepared for the proposed MRSF at Berth 6, White Bay, and Related Documentation dated 31 January 2008) by Louis Challis an acoustic consultant.

As a result of the Panel's review and the additional information from Mr Challis the following issues were highlighted to the proponent and additional information requested:

Issue 1 – Background Noise Monitoring

The Challis report provides a commentary and many opposing opinions on the Bridges report. However the most useful information presented in the report was additional noise monitoring in the East Balmain area at three locations conducted in late January 2008. The Challis monitoring presents substantially lower background noise levels in the area compared to those presented in the Bridges report.

It should be noted that the monitoring methodology used by Mr Challis included a -6 dB correction as the microphone was installed on the façade. This correction for background noise measurement is not consistent with the methodology presented in the INP however is consistent with ISO1996. The Panel considered that the background noise monitoring should be conducted consistent with the guidance presented in the INP.

The Panel did however consider that the Challis report highlights an important deficiency, in that the Bridges report did not include any contemporary noise monitoring around East Balmain, in particular around Camerons Cove.

Identifying the correct background noise levels is essential in developing the correct industrial noise criteria according to the INP.

Therefore it was requested that the proponent conduct additional attended and unattended noise monitoring around Camerons Cove to verify the background noise levels presented in the Bridges report.

Issue 2 – Operations and their time.

It was unclear through the different reports; EA, PPR and the Addendum of PPR (Table 3-1) what operations are proposed for day, evening and night. It was requested that the proponent summarise what operations are proposed for day, evening and night.

Issue 3 – Noise Levels that can be achieved at the closest residential receivers.

DECC indicated in their letter to the Foreshore Authority dated 6 August, that the MRSF can be licensed under the PoEO Act with the incorporation of noise limits within the licence.

The noise limits presented in the DECC letter refer to:

- Grafton Street, Balmain;
- East Balmain;
- Balmain; and
- Pyrmont.

It was requested that the proponent confirm if the proposed noise limits presented in the DECC letter ($L_{Aeq}(15 \text{ min})$ and $L_{A1}(1 \text{ min})$) can be achieved at the closest residential receivers (address) in each relevant area and that the proponent present an aerial photograph showing the closest residential receivers.

The Challis report also presented information from a marina operator that travel lifts could operate for more than 5 minutes (which was assumed in the EA). It was requested that MRSF confirm that the activity durations used in the noise assessment (e.g. the travel lift), is consistent with the actual business operations and practices proposed by MRSF, and that these operational practices can be effectively managed in that way using operational management tools and practices, for example 'Operational Noise Management Procedures'.

Issue 4 – Operational Noise Mitigation Measures.

Many of the community members that presented to the Panel were concerned how these management procedures would be implemented.

To provide some certainty of how these management procedures are implemented, a draft Operational Noise Management Plan was requested by the Panel to help finalise its recommendations.

4.4.2 Additional information

As a result of the issues raised by the Panel, the proponent provided the following documents:

- White Bay Berth 6 Proposed Marine Supply Facility, Additional Noise Information for Panel Experts. (Kellogg Brown & Root Pty Ltd, April 2008); and
- White Bay Berth 6 Proposed Marine Supply Facility, Draft Operational Noise Management Plan (Kellogg Brown & Root Pty Ltd, April 2008).

These documents provided information addressing the issues highlighted by the Panel.

4.4.3 Noise assessment and monitoring locations

The EA identified 15 noise monitoring locations where previous noise monitoring has been conducted around the proposed MRFS site, namely:

- RTA 1 – 18 Johnston Street, Balmain;
- RTA 2 – 18 Grafton Street, Balmain;
- RTA 3 – 33 Donnelly Street, Balmain;
- RTA 4 – 90 Buchanan Street, Rozelle;
- RTA 5 – 39 Mansfield Street, Rozelle;
- RTA 6 – 47 Crescent Street, Rozelle;
- RTA 7 – 13 Hornsby Street, Rozelle;
- RTA 8 – 48 Burt Street, Lilyfield;
- RTA 9 – 15 Bayview Crescent, Annandale;
- RTA 10 – 14 Oxley Street, Glebe Point;
- RTA 11 – 202 Refinery Drive, Pyrmont;
- RTA 12 – 114 Bowman Street, Pyrmont;
- ERM 1 – White Bay Berth 1 site;
- ERM 2 – 1 Batty Street, Rozelle; and

- ERM 3 – 6 Bradford Street, Balmain.

The EA noise assessment used these background noise levels to develop noise criteria for various catchments around the site. These catchments have been previously used for other noise assessments in the area, and are not all relevant to this proposal. The Proponent has confirmed to the Panel that the most affected residential receivers around the MRSF are:

- Location 1 - 1 Grafton Street, Balmain;
- Location 2 - 24 Datchett Street, East Balmain;
- Location 3 - 33 Adolphus Street, Balmain; and
- Location 4 - 2 Point Street, Pyrmont.



Figure 4 Noise assessment locations used in the EA

The assessment locations are presented in Figure 4, above. The Panel considers that these noise assessment locations are appropriate for this proposal.

4.4.4 Background noise levels

As requested by the Panel additional noise monitoring was undertaken by Bridges Acoustics between 14 and 26 March 2008. The background noise levels (as rating background levels (RBL)) were determined as recommended in the INP.

Two noise loggers were placed around the critical locations on Camerons Cove at the elevated Grafton Street boundary of the site, and on the eastern boundary of the Water Police facility in Camerons Cove. These two sites were used to gather long term unattended monitoring data. The Panel considered that additional noise monitoring was not required at Adolphus Street, Balmain, and 2 Point Street Pyrmont.

A comparison of the EA, recent measurements and the Challis report is provided in Table 4.3.

Table 4.3 Comparison of recorded $L_{A90(15\text{ min})}$ levels from the EA, recent monitoring and the Challis report

Receiver Area	Measured Background Level, $L_{A90(15\text{min})}$								
	Day			Evening			Night		
	EA**	Recent	Challis*	EA**	Recent	Challis*	EA**	Recent	Challis*
Grafton St	45	48.6	45	43	47.6	42	44	43.8	35
Datchett St	46	44.8	43	42	43.1	43	39	38.9	35

* The Challis levels have been correct by -6 dB as the microphones were installed on the façade.

** Based on monitoring at 18 Grafton Street and 18 Johnston Street, Balmain.

Table 4.3 shows the EA adopted background noise levels to be consistent with the recent measurement results. The only situation that may require correction is at Datchett Street during the day where the EA background level could have been 1 dB(A) higher. The Panel considers that the unconventional measuring, i.e. the installation of the microphone on the façade with a -6 dB correction, as used in the Challis report, results in uncertainty over the actual background noise levels.

DECC states in their letter dated 5 May 2008 *“that the results of additional ambient background noise monitoring at Balmain and East Balmain largely supports the appropriateness of the ambient noise data used in the Environmental Assessment (EA) for the purpose of deriving noise criteria. The additional ambient noise data supplied in the aforementioned document does not require a rethink or adjustment to the noise limits previously recommended by DECC for this project.”*

The Challis report has also questioned the validity of using background noise data obtained by Renzo Tonin & Associates (RTA) in the EA. While the Challis report is technically correct in terms of the age of this data, the Panel has no reason to doubt the accuracy of RTA's monitoring. In any event, the recent measurements have confirmed the older monitoring results to be reasonable.

The Panel had requested the proponent to investigate the background noise level for the morning shoulder period (5 am to 7 am). The analysis indicates that the background noise level in the shoulder period is marginally (1-2 dB) higher than the overall night time level.

4.4.5 Noise criteria

For operational noise, relevant criteria are described in the INP. Two forms of criteria are described, known as ‘intrusiveness’ and ‘amenity’ criteria.

The intrusiveness criterion applies to the L_{Aeq} noise emission level for the introduced industrial source, measured over a period of 15 minutes. It requires that this should not exceed the rating background level by more than 5 dB.

The amenity criterion sets an absolute limit on the value of the L_{Aeq} noise level measured over a day, evening or night period. In this case, the relevant receiver locations would generally be described as being in an ‘urban’ area, and the relevant ‘acceptable’ noise levels are 60, 50 and 45 dB(A) for the day, evening and night periods respectively. These limits apply to the total noise from all industrial sources affecting a receiver location.

Peak noise level events, such as reversing beepers, noise from heavy items being dropped or other high noise level events, have the potential to cause sleep disturbance. The potential for high noise level events at night and effects on sleep should be addressed. The INP does not specifically address sleep disturbance from high noise level events. The current DECC screening sleep disturbance criterion is that the $L_{A1} (1 \text{ min})$ should not exceed the $L_{A90} (15 \text{ min})$ by more than 15 dB(A).

A summary of the operational noise criteria for the project is presented in Table 4.4 at the four critical receiver locations. The amenity criteria are based on acceptable levels based on the urban industrial interface category due to the long history of activity and short distances from the site to the nearest residential boundary of $L_{Aeq} (11 \text{ hours})$ of 60 dBA daytime, $L_{Aeq} (4 \text{ hours})$ of 50 dBA in the evening and $L_{Aeq} (9 \text{ hours})$ of 45 dBA night time.

Table 4.4 Proposed noise criteria for the proposed MRSF

Residential location	Intrusive noise criteria			Amenity noise criteria			Sleep Disturbance
	Day	Evening	Night	Day	Evening	Night	Night
	$L_{Aeq} (15 \text{ min})$	$L_{Aeq} (15 \text{ min})$	$L_{Aeq} (15 \text{ min})$	$L_{Aeq} (11 \text{ hrs})$	$L_{Aeq} (4 \text{ hrs})$	$L_{Aeq} (9 \text{ hrs})$	$L_{A1} (1 \text{ min})$
1 Grafton St, Balmain	50	48	49	60	50	45	59
Datchett St, Balmain	51	47	44	60	50	45	54
33 Adolphus St, Balmain	52	51	50	60	50	45	60
2 Point St, Pymont	55	53	51	60	50	45	61

The Panel considers that the noise criteria used in the EA have been developed consistent with the INP and appear reasonable for an urban environment affected by existing traffic and past industrial facility noise. DECC have stated that the proposed noise criteria have been developed consistent with the procedures stated in the INP.

4.4.6 Operational noise sources and operating hours

The Challis report has suggested that the sound power level data used for the noise modelling can not be justified and should not be claimed as being fit for purpose or technically valid, in particular the use of the travel lift.

A review of Wilkinson Murray's data base of equipment sound power levels has been undertaken, and the Panel considers that the nominated levels are not unreasonable overall, and some sources are marginally lower than what would be expected while others are marginally higher.

The additional noise information for the Panel supplied an analysis regarding travel lift operations from other developments. Table 4.5 summarises typical operational times. This table indicates an average movement duration of 20 minutes, including 15.5 minutes of idle and 4.5 minutes of full engine speed operation. Also the additional noise information provided to the Panel indicates a typical travel lift is 15 dB(A) quieter at idle compared to at full engine speed. The analysis presented indicates the assumed duration of 5 minutes for a travel lift movement is appropriate. The Panel accepts this detailed analysis that demonstrates the appropriateness of the assumed travel lift sound power level and assumed operational duration.

Table 4.5 Comparison of usage of existing marine travel lifts to that proposed in the MRSF

Site Descriptions Summary	Half Moon Bay	Akuna Bay	Nelson Bay	Gold Coast Marine Centre	Baileys Marine Balmain #	Baileys Marine Balmain *
Travel lift Machine	75t	25t	40t	70t	75t	75t
Hardstand Vessel Capacity	100	4	6	80	8	up to 20
Average Daily Total Vessels Lifted	13	2	4	12	6	6
Hardstand land size sq mtrs	17000	200	400	12000	300	up to 2000
Furthest distance machine travels mtrs	250	35	75	180	100	100
Movements per annum	3000	500	1000	2800	1400	1400
Machine Engine Hours per annum	800	100	200	650	350	350
Average duration of each Movement (minutes)	45	15	20	40	20	20
Average Duration Machine at 75 dBA (min)	18	4	5	15	4.5	4.5

It was unclear through the different reports: EA, PPR, and the Addendum of PPR (at Table 3-1) what operations were proposed for day, evening and night. The additional information provided to the Panel (Table 4.6) indicates Bailey's proposed operational hours.

Bailey's proposed that the following operations and plant operate at night:

- trucks delivering fuel and goods;
- onshore compressor plant; and
- commercial refuelling and sillage operations.

Additionally Table 4.6 shows that night time shoulder period operations (starting 5 am) are proposed for refuelling and grey water pump out for recreational water craft.

Table 4.6 Proposed Operational times proposed for the MRSF.

Machinery / Tools / Plant	Activity Type involving machinery / tools / plant	Operations involved in Activity	Operational hours Summary	Breakdown of operational hours to periods			
				Day period (7am - 6pm Mon - Sat Sun - 6am Sunday and Public Holidays)	Evening Period (6pm - 10pm)	Night Period (10pm - 5am)	Night Shoulder Period (5am - 7am Mon - Sat Sun - 8am Sunday & Public Holidays)
Trucks	Truck movements to & from site for fuel & goods delivery & collection	Trucks arriving and leaving site	7 days a week: 24 hours a day	Yes	Yes	Yes	Yes
Forklift	<ul style="list-style-type: none"> Commercial supply deliveries Provision of bulk storage Provision of retail supplies Use of hardstand laydown area Boat pre-commissioning and launching activities 	Transfer of materials around the site including from trucks to storage sheds and hardstand areas	Mon - Sat 7am - 8pm Sun 8am - 6pm	Yes	Yes	No	No
Pallet Jacks	<ul style="list-style-type: none"> Commercial supply deliveries Provision of bulk storage Provision of retail supplies Use of hardstand / laydown area 	Transfer of materials around the site including from trucks to storage shed and hardstand area	Mon - Sat 7am - 8pm Sun 8am - 6pm	Yes	Yes	No	No
Cranes	<ul style="list-style-type: none"> Only occasional use associated with transfer of materials for: Commercial supply deliveries Provision of bulk storage 	Transfer of materials around the site including from trucks to storage sheds and hardstand area	Mon - Sat 7am - 8pm Sun 8am - 6pm	Yes	Yes	No	No

Machinery / Tools / Plant	Activity Type involving machinery / tools / plant	Operations involved in Activity	Operational hours Summary	Breakdown of operational hours to periods			
				Day period (7am - 6pm Mon - Sat 8am - 6pm Sunday and Public Holidays)	Evening Period (6pm - 10pm)	Night Period (10pm - 5am)	Night Shoulder Period (5am - 7am Mon - Sat 8am - 8am Sunday & Public Holidays)
Travel Lift	<ul style="list-style-type: none"> Provision of bulk storage Boat pre-commissioning and launching activities Use of hardstand / laydown area 	<ul style="list-style-type: none"> Boat launching Retrieval of boats from river Transfer and lifting of boats into slips on hardstand 	Mon - Sat: 7am - 6pm Sun 8am - 6pm	No	No	No	
Roll-on Roll-off Ramp (Ro-Ro Ramp)	Transfer of materials from the hardstand/laydown area to water based vessels via the Ro-Ro ramp	Operation of the ro-ro ramp	Mon - Sat: 7am - 8pm Sun 8am - 6pm	No	No	No	
High Pressure Water Cleaner	Boat pre-commissioning activities	Pre-delivery, warranty and service work activities on boat	Mon - Sat: 7am - 8pm Sun 8am - 6pm	No	No	No	
Electric Power Tools, i.e. electric power polishing equipment	Boat pre-commissioning activities	Pre-delivery, warranty and service work activities on boat	Mon - Sat: 7am - 8pm Sun 8am - 6pm	No	No	No	
Boat engines and navigation signal testing (in sheds and on hardstand area associated with pre-commissioning activities)	Boat pre-commissioning activities	Pre-delivery, warranty and service work activities on boat	Mon - Sat: 7am - 8pm Sun 8am - 6pm	No	No	No	
Air conditioning plant	Associated with offices accommodation for marine businesses	Operation of air conditioning plant for office accommodation temperature regulation	7 days a week: 5am - 10pm	Yes	No	No	
Compressor units for internal chiller room	Provision of supplies retail (Storage of chilled goods)	Operation of compressor units for chilled goods storage	7 days a week: 24 hours a day	Yes	Yes	Yes	

Activity Class	Operations involved in Activity	List of Machinery / Tools / Plant involved	Operational hours summary	Day period (7am - 6pm Mon - Sat 8am - 6pm Sunday and Public Holidays)	Evening Period (6pm - 10pm)	Night Period (10pm - 5am)	Night Shoulder Period (5am - 7am Mon - Sat 5am - 8am Sunday & Public Holidays)
Refuelling - COMMERCIAL	<ul style="list-style-type: none"> Refuelling 	<ul style="list-style-type: none"> Fuel Bowser Submersible pumps at tank farm Dual storage Solenoid valve at pump 	7 days a week, 24 hrs a day	Yes	Yes	Yes	Yes
Boat arrivals and departure / boat moorings COMMERCIAL	<ul style="list-style-type: none"> Boats docking - turn engine off Engines restarted - boat departs 	<ul style="list-style-type: none"> Boat engines 	7 days a week, 24 hrs a day	Yes	Yes	Yes	Yes
Great water and sillage facilities COMMERCIAL	<ul style="list-style-type: none"> Attach hose to remove grey water and sillage from vessel 	<ul style="list-style-type: none"> Sauvax pump-out system (single action diaphragm pump) Vacuum pump 	7 days a week, 24 hrs a day	Yes	Yes	Yes	Yes
Refuelling - RECREATIONAL	<ul style="list-style-type: none"> Refuelling 	<ul style="list-style-type: none"> Fuel Bowser Submersible pumps at tank farm Dual storage Solenoid valve at pump 	7 days a week, 24 hrs a day	Yes	Yes	No	Yes
Boat arrivals and departures RECREATIONAL	<ul style="list-style-type: none"> Boats docking - turn engine off Engines restarted - boat departs 	<ul style="list-style-type: none"> Boat engines 	7 days a week, 5am to 10pm	Yes	Yes	No	No
Grey water and sillage facilities RECREATIONAL	<ul style="list-style-type: none"> Attach hose to remove grey water and sillage from vessel 	<ul style="list-style-type: none"> Sauvax pump-out system (single action diaphragm pump) Vacuum pump 	7 days a week, 5am to 10pm	Yes	Yes	No	Yes

Activity Class	Operations involved in Activity	List of Machinery / Tools / Plant involved	Operational hours summary	Day period (7am - 6pm Mon - Sat 8am - 6pm Sunday and Public Holidays)	Evening Period (6pm - 10pm)	Night Period (10pm - 5am)	Night Shoulder Period (5am - 7am Mon - Sat 8am - 8am Sunday & Public Holidays)
Landscaping	<ul style="list-style-type: none"> Maintenance, watering and weeding 	<ul style="list-style-type: none"> Hoses attached to pumps connected to rainwater tank Whipper snipper and other standard gardening equipment 	Mon - Sat 7am to 6pm Sun 8am - 6pm	Yes	No	No	No

4.4.7 Noise modelling results

The noise predictions presented in the EA were carried out using simple spreadsheet calculations. A summary of the predicted noise levels for the project is presented in Table 4.7 at the four critical receiver locations.

Table 4.7 Predicted noise levels for the proposed MRSF.

Residential location	Intrusive noise level			Amenity levels
	Day	Evening	Night	Night
	L _{Aeq} (15 min)	L _{Aeq} (15 min)	L _{Aeq} (15 min)	L _{Aeq} (9hrs)
1 Grafton St, Balmain	54	48	48	45
Datchett St, Balmain	49	44	44	41
33 Adolphus St, Balmain	36	30	30	28
2 Point St, Pymont	39	34	34	31

Additionally noise predictions at 1 Grafton Street have been presented in detail for the different operating scenarios in the Addendum to the PPP. The predicted noise levels are summarised in Table 4.8.

Noise predictions are based on simple spreadsheet calculations using simple distance loss algorithms. The Panel considers that these calculations would generally be conservative as additional losses such as air absorption have not been considered.

Table 4.8 Detailed predicted noise levels for the proposed MRSF.

Activity	Predicted noise levels for 1 Grafton Street, Balmain		Time of operation
	L _{Aeq} (15 min)		
Refuelling for commercial vessels	23-23		Night
Commercial boat arrivals & departure & mooring	46-43		Night
Refuelling recreational vessels	23-22		Shoulder period (from 5am)
Recreational boat arrivals & departure & mooring	46-43		Shoulder period (from 5am)
Truck movements to and from site	52-45		Night
Refuelling of fuel tank farm	Inaudible		Night
Grey water and sullage facilities	15-10		Night
Office facilities	37		Day
Commercial supply deliveries	33-27		Day
Provision of bulk storage	39		Day

Provision of supplies - retail	37	Day
Cool room	33	Night
Hardstand/Lay down	39	Day
Boat commissioning and launching	44	Day

Tables 4.7 and 4.8 present *intrusive* noise predictions.

As well as being within the *intrusive* criteria, the noise assessments have also determined that during the day, evening and night time, acceptable *amenity* criteria would also be met.

The noise modelling showed that activities having the greatest contribution to the noise level were:

- truck movements to and from the site; and
- vessels arriving and departing.

It should be noted that the predictions show that the only exceedance of the proposed noise criteria is from truck movements. To mitigate the noise levels the following noise mitigation was proposed by the proponent:

- Fuel delivery and other truck movements on the site would be scheduled to avoid the night time period whenever possible; and
- site supervision would be provided for refuelling commercial vessels and for truck fuel deliveries.

4.4.8 Draft operational noise management plan

A draft operational noise management plan was requested to explain how the MRSF would effectively manage operational activities on site to ensure compliance with the noise limits.

The noise mitigation measures presented are not a lot more detailed in the EA and associated documentation. The document provides a brief and general overview of proposed engineering and operational noise controls, however, it lacks sufficient detail for effective implementation in its current form. It would appear that detailed implementation guidelines and procedures would need to be developed for a large proportion of the measures proposed.

Bailey's have achieved ISO 14001 Environmental Management System accreditation in 2003. ISO14001 is an internationally recognised standard that specifies a process for controlling and improving a company's environmental performance.

Notwithstanding the lack of detail in the operational noise management plan, the Panel considers that the proposed noise management measures proposed are adequate and are confident that adequate environmental performance can be achieved.

4.4.9 Adequacy of operational noise assessment, noise management measures and operational need

Bailey's has committed to achieving all applicable noise criteria established in the EA when the site is operational.

The Panel is satisfied that operational noise levels from the site can comply with the relevant noise criteria apart from a 4 dB exceedance over daytime noise criterion at Grafton Street. It is generally considered that an exceedance of the intrusive noise criterion between 2-5 dB(A) is considered marginal and can be managed through an operational management plan and continual improvement processes.

The predicted noise levels from trucks entering and leaving the site have the potential to exceed the appropriate night time and evening noise operational criteria and sleep disturbance criteria. The main reason for out of hours delivery appears to be to allow easy access to the site by avoiding peak congestion times. The Panel therefore considers a precautionary approach be taken for trucks entering and leaving the site and limiting them to daytime operations only.

The Panel is of the opinion, if there is a demonstrated need for night time truck movements, that there are potential noise mitigation measures available (e.g. different truck routes into the facility, local barriers, etc) to reduce truck noise from the site. Therefore it would be possible in the future that these hours could be extended; the extension of hours would of course only be provided on proof that noise limits can be met and the proponent's good environmental performance record.

The Panel expected that night time operational activities of commercial boat refuelling, sewage pump out and associated boat arrivals and departures would cause minimal disturbance to the surrounding area as the predicted noise levels are 2 to 3 dB below the appropriate operational noise criterion and up to 10 dB below sleep disturbance criterion at Grafton Street.

The Panel however recommends that site supervision should be provided for night time refuelling/sewage pumping of commercial vessels at all times. Additionally commercial vessels should be encouraged to refuel during the day and evening. Reasons for all night time refuelling should be logged as part of the operational noise management plan.

The Panel expects refuelling of recreational vessels to have minimal impact as the predicted noise levels are below the appropriate night time noise criterion at Grafton Street. The Panel recommends that site staff should be on site during operating hours to manage noise from people on boats, such as shouting etc. It should also be noted that background noise levels are higher in the shoulder period between 5am and 7am therefore intrusive noise from recreational vessels would be less noticeable.

With regard to general operations on the hardstand and laydown area which would include the operation of the roll-on and roll-off ramp, travel lift and fork lifts, water blasting etc the noise predictions indicate that the criteria can be met for daytime and evening. The Panel is however of the view that this type of work can be potentially more intrusive than the noise levels suggest and as such using the precautionary principle recommends these operations be limited to daytime.

The Panel's recommended operational times for the proposal are presented in Table 4.9.

Table 4.9 Hours of Operation

Activity	Hours of Operations
Refuelling and s sewage pump out for commercial vessels	7 days - 24 hours per day
Commercial boat arrivals & departure & mooring	
Refuelling and s sewage pump out for recreational vessels	7 days - 5 am to 10 pm
Recreational boat arrivals & departure & mooring	
Office building mechanical services e.g. A/C plant, compressors for chiller room, etc	7 days - 24 hours per day
Truck movements to and from site	Mon – Sat 7 am to 6 pm Sun 8 am to 6 pm
All activities on the Hardstand/laydown area, e.g. power tools, forklift, pallet jacks, cranes, travel lift and roll-on roll-off ramp	Mon – Sat 7 am to 6 pm Sun 8 am to 6 pm
Mixed marine tenancies commercial storage/work shed	Mon – Sat 7 am to 6 pm Sun 8 am to 6 pm

The Panel recommends that the proponent be required to meet the noise criteria, as presented in Table 4.10., through a condition of any approval. The Panel's proposed limits are consistent with DECC recommended noise limits.

Table 4.10 Noise Limits (dB(A))*

Residential location	Day	Evening	Night		
	L _{Aeq} (15 min)	L _{Aeq} (15 min)	L _{Aeq} (15 min)	L _{Aeq} (9hrs)	L _{A1} (1 min)
1 Grafton St, Balmain	54	48	48	45	59
Datchett St, Balmain	49	44	44	41	54
33 Adolphus St, Balmain	36	35	35	35	60
2 Point St, Pyrmont	40	35	35	35	61

* Noise limits are based on INP developed noise criteria and predicted levels as recommended by DECC.

It is also recommended that the proponent be required to implement an Operational Noise Management Plan and commission a noise monitoring report.

The proponent should employ best available management practices to minimise maximum noise levels from the site. Such practices should include:

- all feasible and reasonable noise mitigation measures;
- site supervision being provided for refuelling of all commercial vessels particularly at night;
- site supervision being provided for refuelling of all recreational vessels particularly early morning and in the evenings;
- a monitoring program and an assessment of the performance of the MRSF site against the noise limits;
- restrict hours of operation as presented in Table 4.10;
- a community information program to inform residents about the workings of the site; and
- a complaints handling and management program. Such program must ensure complaints are recorded and addressed in a timely and effective manner. The program should also include feedback on appropriate noise amelioration processes put in place in response to complaints and the timeframe for the introduction of these measures.

In conclusion, the Panel considers that with the additional noise information provided by the proponent that the operational noise assessment and considered noise mitigation is adequate and conforms to the INP. This is consistent with advice from DECC who are required to licence the facility once operating.

APPENDIX 1 – PUBLIC HEARING REGISTER

1. Cecilie Lewis (resident)
2. Dr Robert Marr (resident)
3. Catherine Dodd (resident)
4. Joy Fawcett Evans (resident)
5. John Paul (business owner)
6. Louis Challis (noise consultant)
7. Craig McLaren (traffic engineer)
8. Paul Cooper (White Bay Joint Steering Committee)
9. John Stamilos (White Bay Precinct Committee)
10. Carolyn Allen (Mayor of Leichhardt Council)
11. Christina Ritchie (White Bay Precinct Committee, Balmain Association)
12. Jane Marceau (resident)
13. Stuart McLachlan (noise consultant)
14. Richard Gould (resident)
15. Brian Zulaikha (resident)
16. Roy Privett (Boating Industry Association)
17. George Cooper (Glebe Island White Bay Community Liaison Group)
18. Frank Breen (Glebe Island White Bay Community Liaison Group)
19. David Cribb (Commercial Vessel Association of NSW)
20. John Mant (consultant)
21. Mal Hiley (business owner)
22. Val Moss (resident)
23. David Harvey (business owner)
24. Colin MacPherson (business owner)
25. Murray Prior (resident)
26. Jane Ward (resident)
27. Michael Jarvin (vessel owner)

