

JOINT REGIONAL PLANNING PANEL (Sydney West)

JRPP No	2015SYW155
DA Number	DA-781/2015
Local Government Area	Liverpool City Council
Proposed Development	<p>Construction and operation of a Marina (Georges Cove Marina). The development consists of:</p> <ul style="list-style-type: none"> ▪ A maritime building which will house a dry berth facility providing 250 berths, a function centre, tourist, entertainment, recreation and club facilities, a petrol storage tank (60,000 litres) and a diesel storage tank (60,000 litres). ▪ A wet berth facility for 186 craft (including casual berths) which will consist of a marina basin, rock protection of the basin and foreshore, including embellishment and revegetation of the river foreshore, construction of a navigation channel, construction of public recreational facilities on the foreshore, floating berths and walkways, fuel pumping facilities, sewage pumpout facilities and emergency berth access. ▪ Construction of three external car parking areas and basement car park providing a total of 637 car spaces. ▪ A private marina clubhouse. ▪ All associated works and support infrastructure including power, water and sewerage. ▪ A site access road ▪ Construction and use of the offsite intersection of Brickmakers Drive and the link road accessing the site.
Street Address	<p>Lot 7 DP 1065574 146 Newbridge Road, Moorebank</p>
Applicant/Owner	Benedict Industries Pty Ltd Tanlane
Number of Submissions	8
Regional Development Criteria (Schedule 4A of the Act)	<ul style="list-style-type: none"> ▪ Proposal has a CIV over \$20 million (Clause 3 Schedule 4A EP&A Act) ▪ Proposal is a particular designated development being a Marina (Clause 8 Schedule 4A EP&A Act)
List of All Relevant s79C(1)(a) Matters	<p>Section 79C(1)(a)(i) Matters</p> <ul style="list-style-type: none"> ▪ Liverpool Local Environmental Plan 2008 ▪ State Environmental Planning Policy No 19 – Bushland in Urban Areas ▪ State Environmental Planning Policy No 33 – Hazardous and Offensive Development ▪ State Environmental Planning Policy No.55 – Remediation of Land. ▪ State Environmental Planning Policy No 71 – Coastal Protection ▪ State Environmental Planning Policy (State and Regional Development) 2011. ▪ State Environmental Planning Policy (Infrastructure) 2007. ▪ Greater Metropolitan Regional Environmental Plan No. 2 – Georges River Catchment.

	<p>Section 79C(1)(a)(ii) Matters</p> <ul style="list-style-type: none"> No draft Environmental Planning Instruments apply to the site. <p>Section 79C(1)(a)(iii) Matters</p> <ul style="list-style-type: none"> Liverpool Development Control Plan 2008. Part 1 – General Controls for all Development. Part 2.10 – Development in Moorebank East <p>Section 79C(1)(a)(iiia) Matters</p> <ul style="list-style-type: none"> Voluntary Planning Agreement executed between Liverpool City Council and Tanlane Pty Ltd on 11 June 2008 <p>Section 79C(1)(a)(iv) Matters</p> <ul style="list-style-type: none"> EP&A Regulations. No additional matters for consideration. <p>Section 79C(1)(a)(v) Matters</p> <ul style="list-style-type: none"> Georges River Coastal Zone Management Plan
Does the DA require Special Infrastructure Contributions conditions (s94EF)?	No
List all documents submitted with this report for the panel's consideration	<p>Architectural Plans</p> <ul style="list-style-type: none"> Environmental Impact Statement prepared by EMM dated 30 July 2015; Application clarification letter prepared by EMM dated 22 April 2016; Bushfire Assessment prepared by EMM dated 26 October 2015; Georges Cove Marina, Moorebank, Preliminary Marina Concept Design and Environmental Assessment – Worley Parsons October 2010; Assessment of the Impact of the Proposed Bridge on Flooding in the vicinity of the George's Cove Marina prepared by Cardno dated 23 May 2014; Flood Risk Management Report prepared by NPC dated November 2013; Flood Impact Assessment Report prepared by Cardno dated 29 January 2013; Preliminary Investigation of Contamination prepared by EMM dated 28 July 2015; Supplementary Preliminary Investigation prepared by EMM dated 11 March 2016; Remediation Action Plan prepared by EMM dated 11 March 2016; Terrestrial Ecological Assessment prepared by EMM dated 30 April 2015; Flora and Fauna Assessment prepared by Total Earth Care dated 25 October 2011; Aquatic Ecology Aspects and Environmental Assessment of Marina Concept Design prepared by Marine Pollution Research Pty Ltd dated 25 June 2010;

	<ul style="list-style-type: none"> • Update of Aquatic Ecology Impact Report for Georges Cove Marina prepared by Marine Pollution Research Pty Ltd dated 17 April 2015; • Traffic and Parking Assessment prepared by EMM dated 28 July 2015; • Traffic Signal Warrant Assessment prepared by EMM dated 12 May 2016; • Addendum Visual Impact Review prepared by RLA dated 15 April 2015; • Visual Impact Assessment prepared by RLA dated 22 September 2010; • Projection Estimates of Plant Heights of Potential Native Vegetation Reconstruction Plantings at Benedict Industries George Cove Marina Site prepared by Ecohort Pty Ltd dated 30 August 2010; • Noise Impact Assessment prepared by EMM dated 21 July 2015; • Addendum Air Quality Assessment prepared by Todoroski Air Sciences dated 20 April 2015; • Air Quality Assessment prepared by Todoroski Air Sciences dated 14 December 2011; • Aboriginal Heritage Assessment prepared by EMM dated 10 April 2015; • Aboriginal Archaeology Assessment prepared by Mary Dallas Consulting Archaeologists dated 1 October 2004; • Addendum Non-indigenous Heritage Assessment prepared by EMM dated 7 May 2015; • Non-indigenous Heritage Assessment prepared by Heritech Consulting dated 1 May 2003; • Acid Sulfate Soil Management Plan for Georges Cove Marina; • Waste Management Plan for Georges Cove Marina. • Navigation Assessment prepared by EMM dated 29 April 2016 • Voluntary Planning Agreement
Recommendation	Approval (subject to conditions)
Report by	David Smith
Report date	September 2016

1. EXECUTIVE SUMMARY

1.1 Reasons for the Report

The proposed development for the construction and operation of a marina has a capital investment value that exceeds \$20 million for the purposes of 'General Development' and is a 'particular designated development' with respect to Clause 3 and Clause 8 of Schedule 4A of the Environmental Planning and Assessment Act 1979 respectively.

Consequently, the subject Development Application is referred to the Sydney West - Joint Regional Planning Panel for determination in accordance with State Environmental Planning Policy (State and Regional Development) 2011.

1.2. The proposal

The proposed development includes the construction and operation of the following main elements:

- The Maritime Building located near the western boundary of the marina site. This structure will house:
 - a dry berth facility providing 250 berths for small craft;
 - a function centre;
 - tourist, entertainment and recreational and club facilities; and
 - a petrol tank (about 60,000 L) and a diesel tank (about 60,000 L).
- A wet berth facility for 186 small craft (including casual berths) which will consist of:
 - a marina basin;
 - rock protection of the basin and foreshore including embellishment and revegetation of the river foreshore;
 - construction of public recreational facilities on the foreshore including bike paths, barbeque facilities and shelters;
 - floating berths and walkways;
 - fuel pumping facilities;
 - sewage pump-out facilities; and
 - emergency berth access.
- Three external car parking areas and basement car parking providing a total of 637 car spaces;
- A Private Marina Clubhouse;
- All associated works and support infrastructure - including power, water and sewerage;
- A site access road;
- Construction and use of the off site intersection of Brickmakers Drive and the link road accessing the site

The proposal is Designated Development pursuant to Section 77A of the Environmental Planning and Assessment Act 1979. The proposal is identified as Nominated Integrated Development and Integrated Development under Section 91 of the Environmental Planning and Assessment Act 1979 for the purposes of the:

- Water Management Act 2000 (DPI Water);
- Protection of the Environment Operations Act 1997 (NSW Environment Protection Authority EPA);

- Fisheries Management Act 1994 (NSW Department of Primary Industries - Fisheries NSW).

1.3 The Issues

The key issues which emerged during the assessment process include:

- Flooding Impacts;
- Access and Traffic Impacts;
- Contamination Issues;

The above issues have been addressed and are discussed in detail throughout this report.

1.4 The site

The subject site is identified as Lot 7 in DP 1065574 being No.146 Newbridge Road, Moorebank.

1.5 Exhibition of the proposal

The subject Development Application was placed on public exhibition on two separate occasions from:

- 4 November 2015 to 4 December 2015 (30 day exhibition period with advertisement run twice as required by the Regulations for a Designated Development)
- 4 May 2016 to 3 June 2016 (30 day exhibition period with advertisement run twice as required by the Regulations for a Designated Development)

The application was re-exhibited due to the submission to Council of additional information which included clarification of the development components, a Supplementary Preliminary Investigation, Remediation Action Plan and a Bushfire Report.

A total of eight (8) submissions were received. The matters raised in the submissions are canvassed later in this report.

1.6 Conclusion

The subject Development Application was assessed having regard to the matters of consideration pursuant to Section 79C of the Environmental Planning and Assessment Act 1979 (EP&A Act 1979). The proposed marina is considered to be an appropriate form of development and an efficient use of land in keeping with the recreational use of the area as reflected in the zoning of the site.

2. SITE DESCRIPTION AND LOCALITY

2.1 The Site

The subject site is located on the southern side of Newbridge Road, Moorebank and is irregularly shaped with a total site area of approximately 22.3 hectares.

A site locality plan is included as Figure 1 below.



Figure 1: Aerial photograph of the site (Source: Liverpool City Council, accessed August 2016)

The application for the Marina is on the southern portion of Lot 7 DP 1065574 (146 Newbridge Road, Moorebank). The proposal development will utilise about 13 ha of Lot 7 DP 1065574.

Figure 2 details the portion of Lot 7 DP 1065574 to be utilised for the Marina.



Figure 2: Aerial photograph of southern portion of Lot 7 DP 1065574 (Source: Marina EIS, July 2015)

The marina site is in a generally flat landscape typical of the Georges River floodplain. Currently, the marina site is largely made up of a dredge pond created by the extractive industry operations. The surface level of the marina site was 2.8m before extractive industry operations started. Surveying records indicate that the marina site sloped gently from the riverbank (approximately 2m AHD) to approximately 4m AHD along the western boundary of the marina site.

Existing vehicular access to Lot 7 DP 1065574 is from Newbridge Road. This access will be decommissioned and vehicular access to the marina site will only be permitted via the approved road link and bridge to Brickmakers Drive.

2.2 The Locality

The site is located adjacent to the Georges River to the east, Newbridge Road to the north and Georges Fair residential estate to the west. Land to the east of the Georges River is located within the Bankstown Local Government Area and is characterised as expansive recreational open space.

A residential development is planned to the immediate north of the marina site on part Lot 7 DP 1065574. A concept plan showing the future development of Lot 7 DP 1065574 is shown in Figure 3. It is important to note, that this planned residential development has yet to receive development consent.



Figure 3: Concept plan Moorebank Cove Residential Development (Source: Mirvac)

2.3 Site Affectations

The site is:

- Flood affected;
- Bushfire Prone;
- Contains Acid Sulfate Soils; and
- Contains Environmentally Significant Land.

Maps showing these affectations are below:

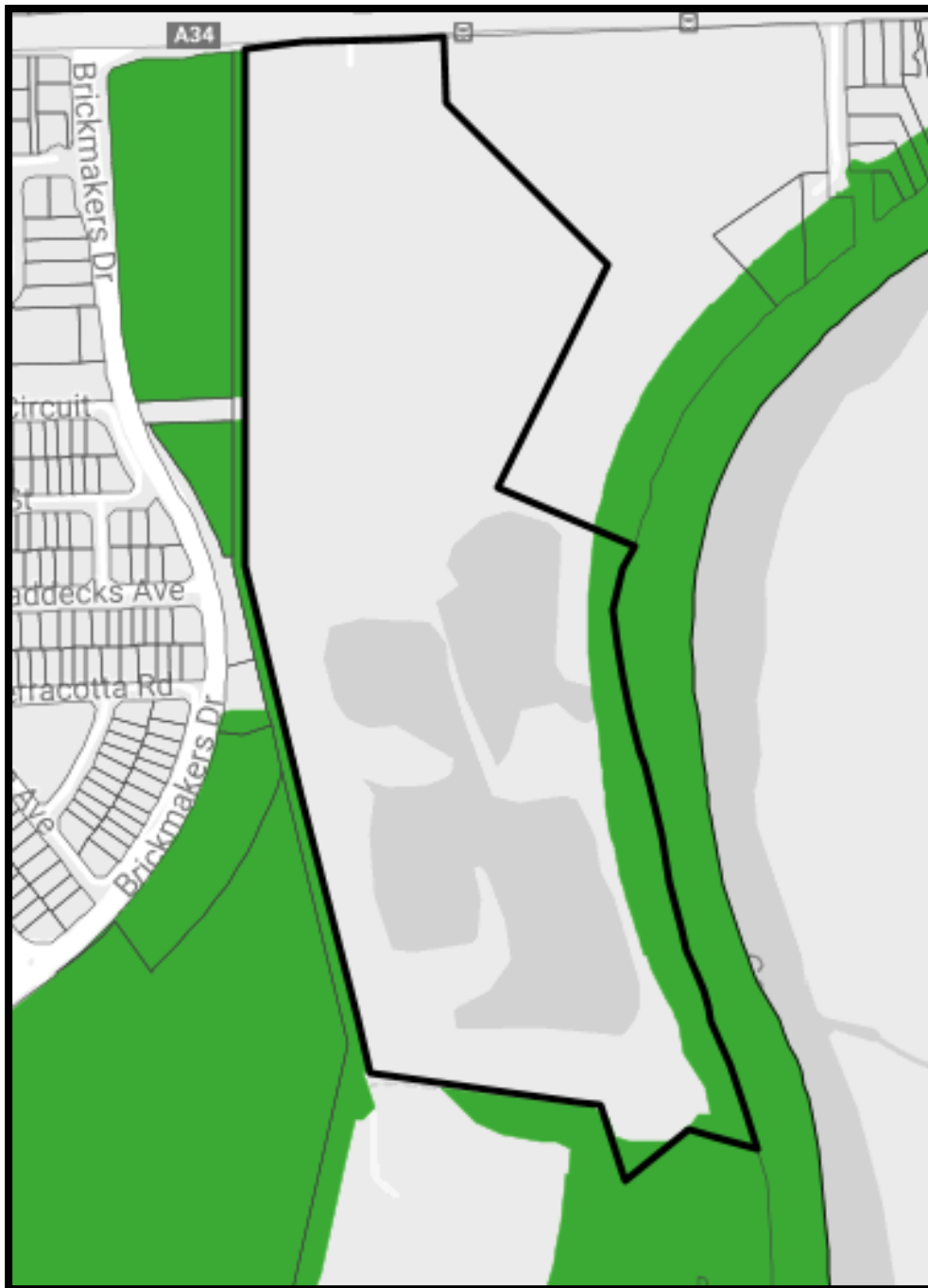


Figure 4: Maps showing Environmentally Significant Land (Source: Liverpool City Council)

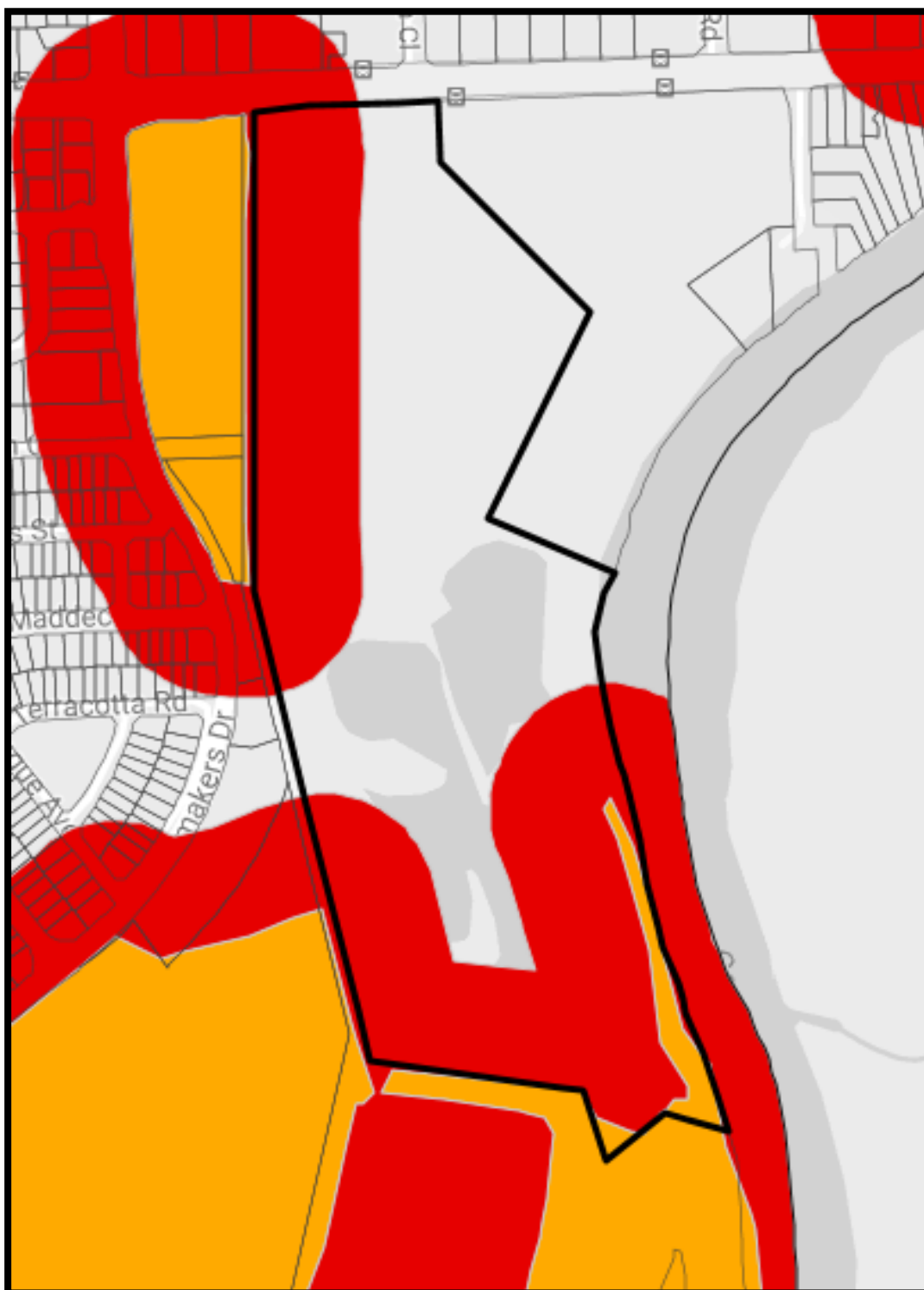


Figure 5: Maps showing Bushfire Prone Land (Source: Liverpool City Council)

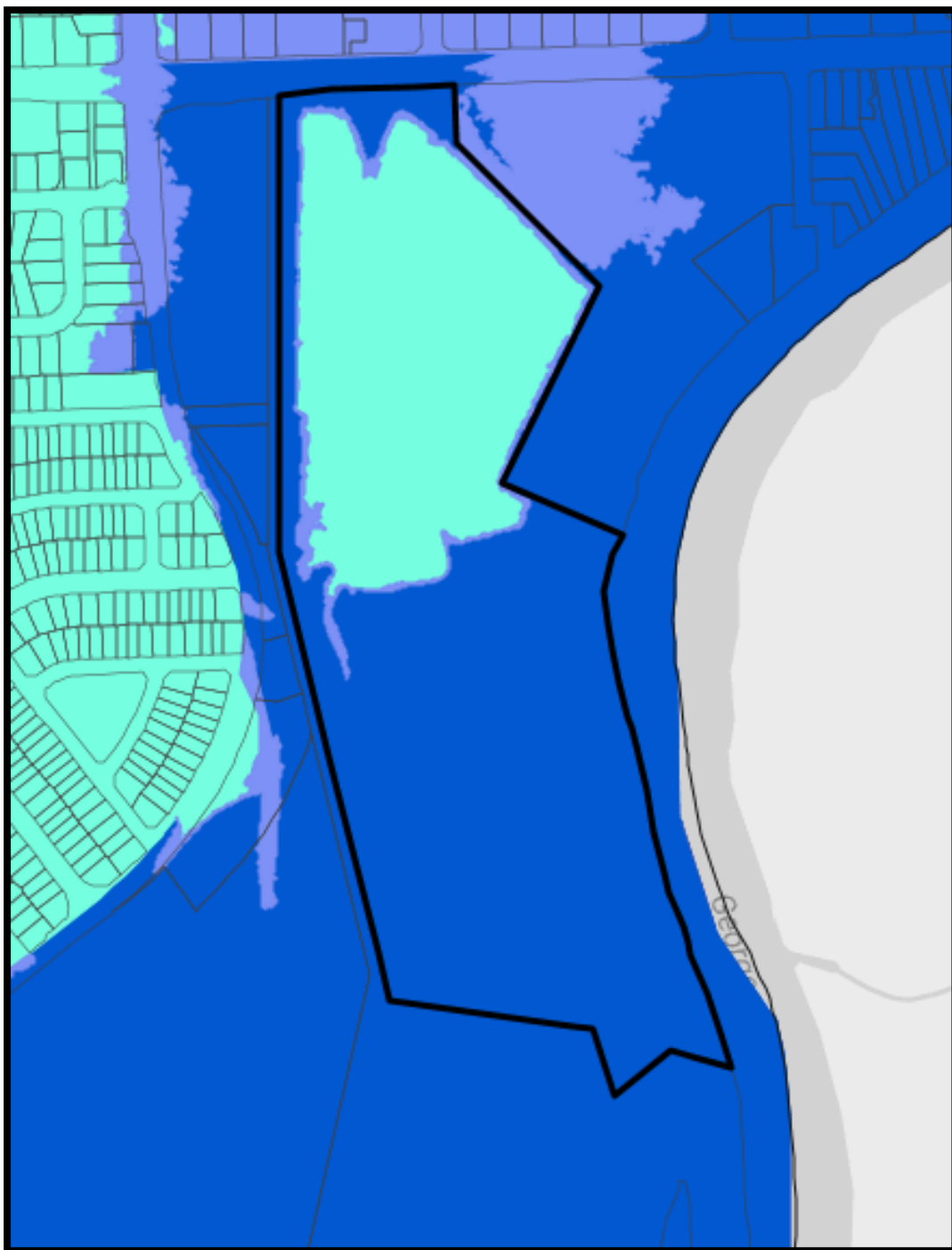


Figure 6: Maps showing Flood Prone Land (Source: Liverpool City Council)

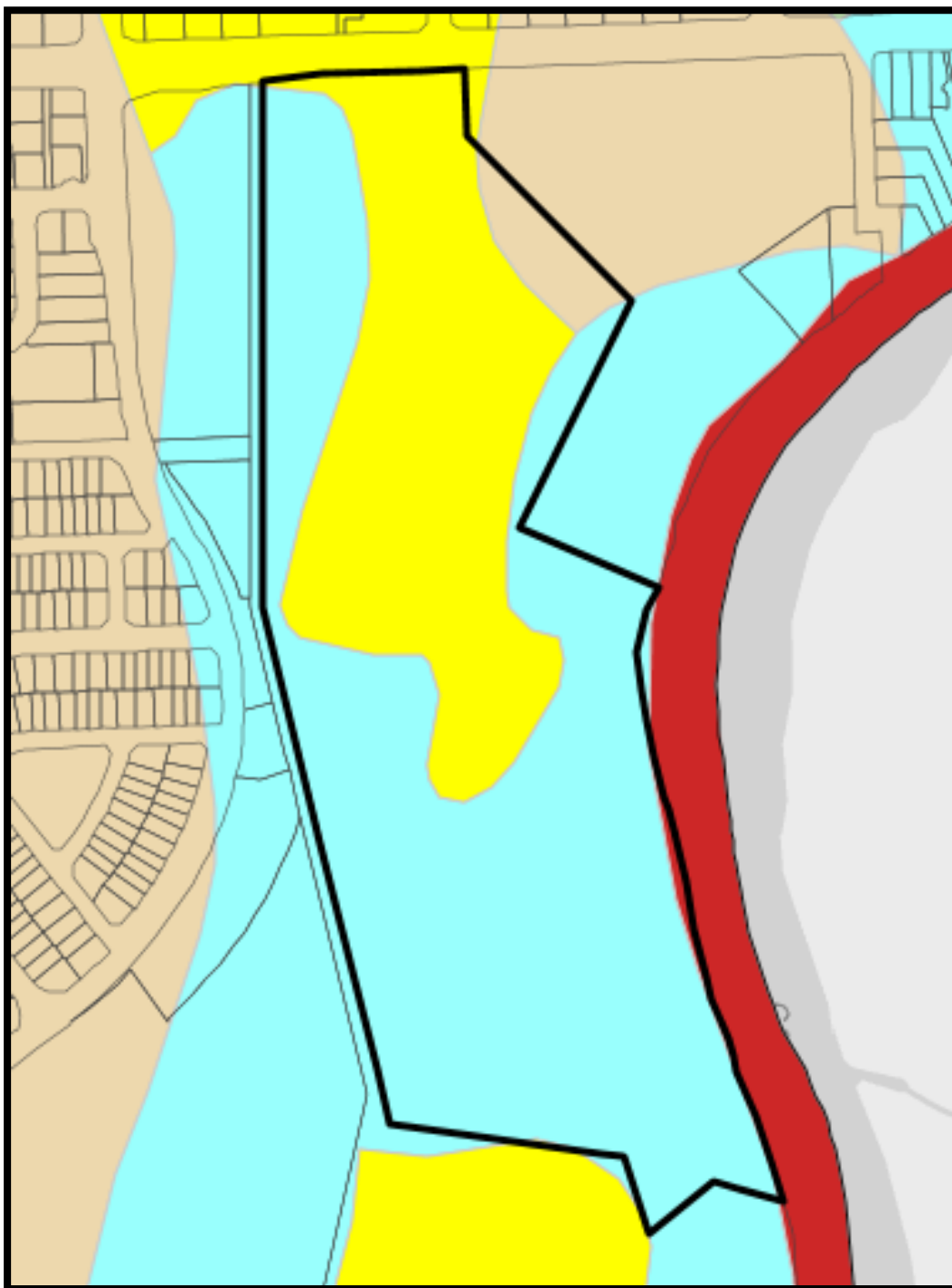


Figure 7: Maps showing Acid Sulfate Soils (Source: Liverpool City Council)

3. BACKGROUND

3.1 Currently approved site activities

In 1993, the Land and Environment Court granted consent for the extraction of sand from the overall site (Lot 7) via dredging and dry extraction methods.

The consent for the sand extraction was granted by the New South Wales (NSW) Land and Environment Court in *Maron Investments Pty Limited v Liverpool City Council* [1993] NSWLEC25 on 31 March 1993. The approval requires the rehabilitation of the site (Lot 7) on cessation of extractive industries with the importation and processing of waste materials permitted to fill empty cells and return these areas to their natural landform.

The extractive industries on the site are reaching the end of their economic life. The quarry consent and Environmental Protection Licences permit the restoration of the site back to natural surface levels via the importation of waste materials. Approval of the marina proposal will remove this need.

Final restoration of the site has not yet commenced and the dredge ponds created from the sand extraction operations remain. However, the final years of dredge operations have anticipated the development of the marina and current configuration of the dredge pond closely meets the requirements of the proposed marina basin.

Development of the marina requires the use of the dredge basin which would be largely unfilled. This will greatly reduce the quantity of virgin excavated natural material (VENM) that would be needed to restore the site back to natural surface levels. However, some VENM and rocks (but no other waste materials) will still be imported to assist with shaping the marina basin, restoring landforms and for bank armouring.

3.2 Other associated approvals

The following approvals are associated with the planned activities:

- DA-1552/2006 was approved by Council on 24 April 2007 for the construction of a road bridge connecting the marina site to Council land. The consent did not involve connection to Brickmakers Drive. The road bridge required an easement to enable a right of carriageway over an existing portion of an access handle adjacent to Lot 7 DP 1065574.
- DA-1552/2006 was subject to Class 4 legal proceedings in the NSW Land and Environment Court. The judgment in *Moorebank Recyclers Pty Ltd v Liverpool City Council* [2009] NSWLEC 100 concluded that the consent was valid. The matter was appealed in the NSW Court of Appeal with judgment made in *Tanlane Pty Ltd v Moorebank Recyclers Pty Ltd* [2008] NSWSC 1341 which was dismissed.
- Subsequent legal proceedings in the Supreme Court which sought to grant an easement over Moorebank Recycler's land pursuant to Section 88K of the Conveyancing Act 1919 were heard in *Tanlane Pty Ltd v Moorebank Recyclers Pty Ltd (No 2)* [2011] NSWSC 1286. The matter was appealed in the NSW Court of Appeal in *Moorebank Recyclers Pty Ltd v Tanlane Pty Ltd* [2012] NSWCA 445. The judgment granted an easement for the purposes of construction, maintenance, repair and use over the access handle associated with Lot 6 DP 1065574 with an additional order in relation to compensation to the owner of Lot 6 for the imposition of that easement.

The alignment, design, construction and use of the link road have been approved by Council under DA-1552/2006 (as modified) and DA-61/2014. This is shown in Figure 4 below.



Figure 8: Location of easement on Lot 6 DP 1065574

NSW Land and Environment Court proceedings (NSW LEC 30141, 2013) considered an intersection design prepared by Cardno (2013a) for the link road intersection on Brickmakers Drive. This included the potential for traffic signals as detailed in a plan of the intersection prepared by McLaren (2013). The proposed link road and its intersection with Brickmakers Road will be physically identical to that considered by the NSW Land and Environment Court (i.e the layout prepared by Cardno).

A Voluntary Planning Agreement (VPA) pursuant to Section 93F of the EP&A Act was agreed between Liverpool City Council and Tanlane Pty Ltd on 11 June 2008. The VPA applies to the marina site and contains a series of contributions/works which are summarised below:

- Embellishment of river foreshore land;
- Dedication of river foreshore land to Council subject to a 50 metre wide easement for maritime vessel access as well as two easements for the drainage of water;
- Development of a Vegetation Management Plan;
- Completion of works described in the Vegetation Management Plan;
- Conduct maintenance works described in the Vegetation Management Plan;
- Construction of a Bike/Pedestrian path through the river foreshore land;
- Construction of passive recreation facilities on the river foreshore land;
- Dedication of a drainage channel;
- Construction and dedication of a road bridge over drainage channel, embankment and road to Brickmakers Drive;
- Construction and dedication of Pedestrian Access to Newbridge Road and a pedestrian path within the public verge along the entire length of the land frontage to Newbridge Road;
- Dedication of an easement over land for access for the purpose of allowing Council to undertake maintenance to the river foreshore land.

3.3 Previous Georges Cove Marina Development Application

3.3.1 Previous Determination

A previous application for the proposed Georges Cove Marina by Benedict Industries (acting for the owner, Tanlane Pty Ltd) was made to Liverpool City Council (Development Application DA-846/2012). The environmental impact statement (EIS) supporting this application was prepared in accordance with Director General's Environment Assessment Requirements (DGR 563) received on 29 July 2011.

An EIS (Benedict 2012) and application for development of the marina was submitted to Liverpool City Council and the Department of Planning in January 2012.

The assessment of the proposal included public exhibition of the Georges Cove Marina EIS (Benedict Industries 2012). The development application was placed on public exhibition on three separate occasions from 28 March 2012 to 3 May 2012, 9 May 2012 to 8 June 2012 and from 3 July 2013 to 2 August 2013. Each exhibition period observed a minimum 30 day public exhibition period in accordance with the Environmental Planning and Assessment Regulation 2000 (EP&A Regulation) and the DCP. A total of six separate submissions were received. Four expressed support for the proposal and two submissions, from the same author (Moorebank Recyclers) raised specific objection to vehicular access arrangements.

Consent for the Georges Cove Marina was granted to Tanlane Pty Ltd by the Sydney West JRPP on 22 August 2014 (JRPP Reference Number 2012SYW035).

3.3.2 NSW Land and Environment Court ruling

The validity of the consent was challenged by the proposal's sole objector, Moorebank Recyclers, in the NSW Land and Environment Court. This was on the basis that Benedict (acting for the owner, Tanlane Pty Ltd) did not technically comply with Clause 7 (2) of State Environmental Planning Policy No 55—Remediation of Land (SEPP No 55) as described below.

In his 18 March 2015 judgement, Justice Preston CJ ruled in favour of the objector, declaring that the Consent was invalid because the application did not include a "Preliminary Investigation" of contamination and, therefore, that the JRPP could not have, in the judge's view, properly considered the application. The judge ruled that Tanlane should commission a Preliminary Investigation, reapply for a consent and supply the Preliminary Investigation to the JRPP as part of the application.

As a result of this ruling, Benedict is re-applying for consent for the proposed Georges Cove Marina, 146 Newbridge Road, Moorebank. The proposal is unchanged from that approved by the JRPP on 22 August 2014 and includes a Preliminary Investigation of Contamination.

3.3.3 Joint Regional Planning Panel Briefing Meetings

Two briefing meetings were held with the JRPP on 25 November 2015 and 13 April 2016.

3.3.4 Design Excellence Panel

The application was considered by the Council's Design Excellence Panel on 30 November 2015.

4. DETAILS OF THE PROPOSAL

The proposed development includes the construction and operation of the following main elements:

1. The Maritime Building located near the western boundary of the marina site. This structure will house:
 - a dry berth facility providing 250 berths for small craft;
 - a function centre;
 - tourist, entertainment and recreational and club facilities; and
 - a petrol tank (about 60,000 L) and a diesel tank (about 60,000 L).
2. A wet berth facility for 186 small craft (including casual berths) which will consist of:
 - a marina basin;
 - rock protection of the basin and foreshore including embellishment and revegetation of the river foreshore;
 - construction of public recreational facilities on the foreshore including bike paths, barbeque facilities and shelters;
 - floating berths and walkways;
 - fuel pumping facilities;
 - sewage pump out facilities; and
 - emergency berth access.
3. Three external car parking areas and basement car parking providing a total of 637 car spaces;
4. A Private Marina Clubhouse;
5. All associated works and support infrastructure - including power, water and sewerage;
6. A site access road;
7. Construction and use of the off-site intersection of Brickmakers Drive and the link road accessing the site



Figure 9: Artist's impression (Source: Marina EIS)



Figure 10: Artists impression view from eastern bank of Georges River (Source: Marina EIS)

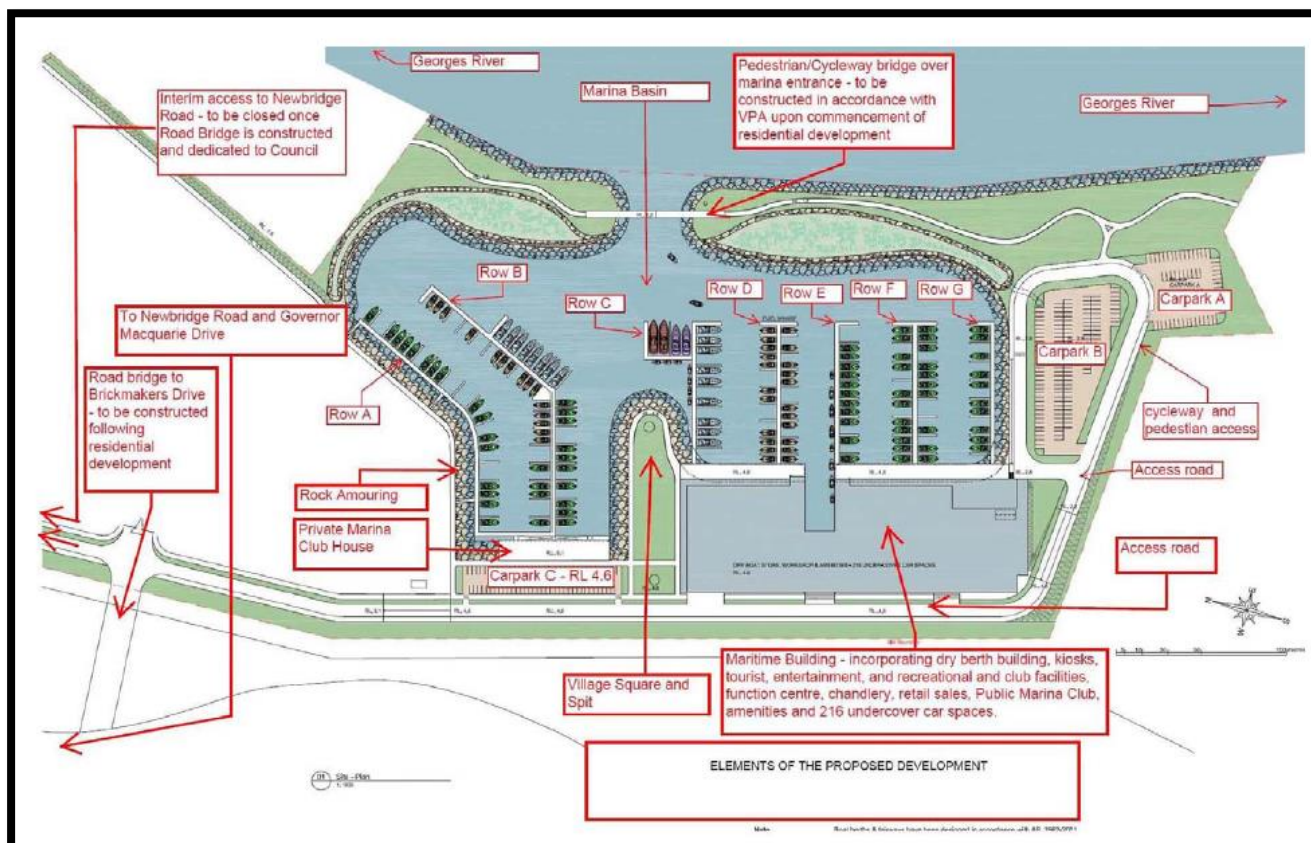


Figure 11: Georges Cove Marina – Key elements (Source: Marina EIS)

4.1 The Maritime Building

The Maritime Building will include the areas listed below:

Maritime Building area	Area (m ²) ¹
Dry berth store	5,946
Circulation	3,119
Hardstand storage	1,848
Small craft display	1,606
Function centre	1,355
Kiosks, commercial, tourist and recreational and club facilities	1,202
Undercroft - kiosks, commercial, tourist and recreational and club facilities	543
Public marina club lounge	450
Amenities	271
Workshops	249
Marina office	151
Function centre - kitchen	110
Function centre - bar/servery	96
Sub-total (gross floor area)	16,946
Carparking	11,994
Function centre - terrace	1,059
Public marina club lounge - terrace	127
Total	30,127

Note: 1. Areas are preliminarily based on the initial concept stage and may vary depending on the final mix of use determined in the internal fit out and designs to be undertaken at construction certificate stage.

The Maritime Building will comprise a concrete slab, steel framing, and colourbond cladding and has been architecturally designed to minimise visual impacts. The building will have a maximum height of 24.4 m AHD (from FFL 4.6 m AHD). The colours of the cladding (light greys and other suitable colours) were determined in consultation with visual assessment expert, Richard Lamb to minimise visual impact. In addition, panelling on the outside of the building will include a large component of translucent panels to maximise the use of natural light within the interior of the dry store building.

Blade walls will be a prominent architectural feature of the Maritime Building, seeking to create significant visual articulation of the building elevation when viewed from the public domain. The blade walls will traverse from ground level and will protrude past ridge height to create visual interest, which in combination with the substantial surface area and glazing, will create a modern appearance.

Significant attention has been paid to ensure that the design and implementation of the project maximises the connectivity between the marina/maritime precinct as well as the kiosks, tourist, entertainment, recreational and club facilities and function centre to provide the best outcome for the entire development and the planned Mirvac Georges Cove residential development to the north.

Roof water will be harvested and stored in a large tank for irrigation and ground maintenance purposes as well as for use in grey water applications such as toilet flushing.

4.1.1 Dry Berth Facility

The dry berth facility has been designed to accommodate approximately 250 small craft between 4m and 8m long.

Type	Boat length	Number of dry berths
Small craft	≥4 m to <6 m	125
Small craft	≥6 m to <8 m	125
Total		250

Boat launching and retrieval from the facility will be undertaken by a lifting device assisted by a large forklift or internal gantry crane which will operate on the ground floor of the dry berth facility. The forklift/gantry crane will remove small craft from the vertical lift for placement into the racking system in the building.

Dry berth facilities provide significant advantages over wet berths including:

- reduced maintenance and repair costs due to reduced exposure to the weather and the effects of saltwater corrosion;
- reduced environmental impact from the effects of anti-foul on boats' hulls as the small craft will be stored out of the water and so will not require anti-foul;
- reduced costs for owners from savings due to not having to use anti-foul; and
- quick and easy launching and retrieval, eliminating the need for trailering and storing on residential premises and removing the inconvenience and stress associated with towing and parking trailers as part of the normal launching and retrieval of small craft. Normal operations in such facilities involve the booking of launching and retrieval times in a similar fashion to booking tee off times for a round of casual golf.

4.1.2 Function Centre

The function centre will include shared amenities and marina offices. These will cater for corporate events, weddings, celebrations and the like, in a similar fashion to traditional function centres.

4.1.3 Kiosk, commercial, tourist, recreational and club facilities

The kiosk, commercial, tourist, recreational and club facilities will be in the northern and eastern portion of the Maritime Building and will service casual visitors using the wider marina, including the Marina Spit Park between the main Maritime Building and the Private Marina Clubhouse. This is detailed further in the report.

4.1.4 Public Marina Clubhouse

The Public Marina Clubhouse portion of the Maritime Building will incorporate a public marina club lounge and a terrace for public marina members. This will be a separate clubhouse to the Private Marina Clubhouse. The Public Marina Club facilities will include male and female showers, change and locker rooms, bar and servery facilities and a dining space.

4.1.5 Chandlery, retail area and small craft sale showroom

The chandlery, retail area and small craft sale showroom will be split into two main areas within the Maritime Building:

- the chandlery and retail area will provide for all the maritime, hardware and supplies required for day-to-day boat maintenance; and
- the small craft sales showroom and sales administration.

4.1.6 Workshop

A workshop will provide service and maintenance facilities for marina club members. The workshop will only be able to accommodate up to four small craft (i.e craft less than 15 m long).

4.1.7 Fuel storage

Separate tanks storing about 60,000 L of diesel and about 60,000 L of petrol will be installed on the hardstand at RL 7.3 and well above 1:100 year flood levels.

4.2 Wet berth (floating) facility

The wet (floating) berth facility is described below. The wet berth facility design was guided by the Australian Standard (AS) 3962-2001, Guidelines for Design of Marinas.

4.2.1 Marina Basin

The marina basin will be about 150 m wide east to west and 350 m long north to south. The basin will open to the Georges River with a short entrance channel that will be 40 m to 50 m wide.

The marina basin will provide wet berths for small craft and vessels as listed below:

Type	Boat length	Number of wet berths
Small craft	≥8 m to <10 m	52
Small craft	≥10 m to <12 m	110
Small craft	≥12 m to <15 m	20
Vessels	≥15 m to <18 m	2
Vessels	<20 m	2
Vessels	≥20 m	0
Total wet berths		186

The marina basin has been designed to alleviate the potential for the formation of poorly flushed corners and will assist to maintain good water quality and visual appearance.

The marina basin will be located on a relatively straight section of the Georges River. These sections are generally more stable and less prone to the significant variations in flow velocity at bends in the river. These velocity variations typically result in sediment deposition on the inside of the bend and significant erosion on the outside of the bend. The location of the marina will provide more stable bank and bed conditions and less potential for sedimentation in the marina basin or entrance.

As described above, the marina basin will be formed by filling parts of the existing quarry basin to shape it to the final landform.

4.2.2 Floating berths and walkways

A floating berthing system is proposed rather than fixed jetties because it will be more convenient to users (including people with a disability) and will minimise the visual impact of the berths, particularly at low tide.

The marina berths will comprise a floating system of walkways, with finger units branching off at right angles to the walkways, creating the berthing pens and providing access alongside the moored boats. The floating berths will be held in place by flexible lines that extend to the basin bed which will stretch when flood loads occur, or will be attached to pylons (of a sufficient height to allow for floods) driven into the base of the basin.

The walkway widths will satisfy the requirements of AS 3962-2001, ie:

- walkways less than 100 m long will be at least 1.5 m wide;
- walkways 100 m to 200 m long will be at least 1.8 m wide; and
- walkways more than 200 m long will be at least 2.4 m wide.

The fingers leading from the walkways will be from 0.9 to 2 m wide. This will be dependent on the nominated size of the boat that the berth is servicing. These finger widths will comply with the AS 3962-2001 requirement for the purposes of safe embarkation and disembarkation. The finger length will equal the length of the longest boat that may use the berth.

The final widths of walkways and fingers may vary to a minor degree depending on the proprietary flotation system adopted for the marina, of which there are a number to select from, and the final detailed design.

4.2.3 Casual public berths

In addition to permanent berths, the marina will be accessible to the public who are generally making use of the marina facilities to pick-up and drop-off passengers during marina business hours.

4.2.4 Channel and fairways

A navigation channel at least 40 m wide will be created. This is well in excess of the minimum channel width required for safe navigation.

Adequate widths will be provided for boat manoeuvring at the fuel and sewage pump-out facilities and so that the berths are visually aesthetic. No mooring or anchoring will be allowed within the navigation channel or within the marina basin other than in the berths.

The width of internal channels ('fairways') within the marina will vary depending on the size of the craft in the adjoining berths. As a minimum, and as recommended by AS 3962-2001, fairways will be 1.5 times the length of the longest boat using that fairway.

4.2.5 Foreshore embellishment and road armouring

An important component of development will be foreshore embellishment and rock armouring for protection. These works will include:

- removal of surface waste and fill on the foreshore;
- removal of noxious weeds; and
- restoration and enhancement of vegetation in keeping with indigenous species.

The photomontage developed as part of the visual impact assessment included modelling of the revegetated foreshores based on a species list recommended by Echohort Pty Ltd consultants. The list includes species from Council's recommended species list.

The foreshore works will be protected by rock revetment to protect the stretch of the river foreshore from the effects of flooding and erosion. These works will be carried out in accordance with the VPA agreed between Liverpool City Council and Tanlane Pty Limited on 11 June 2008. The VPA requires a detailed vegetation management plan (VMP) to be submitted to Council. There is already a financial security mechanism and legally binding agreement in place to procure these works prior to the dedication of this embellished foreshore zone back to Council once they are completed.

4.2.6 Signage

The details and locations of proposed signage do not form part of this application and will be confirmed at construction certificate stage. The signage will likely include:

- individual marina berths including restricted berths where applicable;
- casual public berthing;
- maintenance holding area;
- no berthing or tie up;
- fuel/pumpout berths and safety instructions on usage;
- fire/safety notices; and
- placarding of fuel storage facilities.

4.2.7 Provision of services to berths

The wet berths will be supplied with potable water, power, lighting and communications (telephone, internet and cable television). These services will be available to the berths via low service pedestals (approximately 900 mm tall). The service pedestals will be located at the junctions between fingers and the walkway. On the longer runs of the walkway, where there are no fingers, pedestals with lights only will be provided at a spacing of about 10 m.

Services to the pedestals will be supplied from the land-based infrastructure via pipework and conduits which will run down the access gangway (incorporating flexible couplings). These will be fitted under the floating walkway deck and will be out-of-view but accessible for inspection and maintenance.

4.2.8 Security gates

The main walkways of the marina will be available to the public during marina opening hours. Access control gates will be located at the walkways leading to the marina berths. These will control access 24 hours a day. Access control gates will also be located at the base of each gangway. These will be locked at night to provide security, particularly against vandalism, property damage and theft.

A key card system (or similar) will be available to boat owners and marina staff to operate the security gates.

4.2.9 Fuel wharf

Fuel bowzers will be located on the dedicated fuel wharf on the end of berth row D. Fuel bowzers will be installed in accordance with the requirements of relevant authorities. In particular, the following requirements will be met:

- at least two fire extinguishers will be provided, selected from the following type and minimum size:
 - 9 kg dry chemical type;
 - 9 kg halogenated hydrocarbon type; and
 - 9 L foam type.
- drip trays will be provided under and around the bowzers. Trays will be of sufficient size to hold any jerry cans being filled;
- a holding tank will be provided onsite to collect and retain the wastes from the drip trays;
- provision will be made for regular emptying and disposal of the holding tank contents to a licensed system or site;
- oil/fuel booms will be provided to contain any accidental fuel spillage; and
- oil absorbent material will be provided to absorb petroleum products spilt on the water surface.

AS 3962-2001 notes the need for particular precautions when supplying fuel over water, such as use of double containment lines. All of these precautions will be adopted in the design and installation of relocated facilities.

4.2.10 Sewage pump-out

The facility will incorporate a water supply for rinsing. The sewage pump out system will not have holding tanks in order to prevent an odour problem and normal cleaning and maintenance will ensure that there will be no other odour problems associated with the facility.

A sewage pump out facility will be located adjacent to the fuel facilities to facilitate and encourage proper sewage disposal from boats. The pump out facility will discharge into the existing sewer connections on Lot 7. The co-location of the sewage pump out facilities with fuel facilities will result in high utilisation rates.

There are various proprietary pump out systems available with a choice of pump size. Due to the number of connection points, and the pumping distance from the furthest berths to shore, the pump will be a vacuum type, enclosed and appropriately acoustically shielded to meet the project sound goals. A vacuum pump moves sewage by creating a vacuum between the hose nozzle and an accumulator tank. When the accumulator tank is full, the vacuum is reversed, sending pressurised air into the tank and pushing the sewage out to the sewer for disposal.

The sewage pump out unit will incorporate a pump and accumulator tank located on the marina walkway adjacent to the pump out berths. The pump out unit will be approximately 1.5 m long by 1 m wide by 1.3 m tall (dependant on the system selected), and enclosed within a cabinet. When not in use, the pump out nozzle will be stored in a receptacle incorporating a drip tray. Only one user can be pumped out at any one time and marina staff will activate and manage pump out of all vessels.

The sewage pump out facilities will be for the use of all boats at the marina. The NSW Government has a policy requiring sewage holding tanks in all recreational boats fitted with a toilet so boats are generally expected to be fitted with an on-board holding tank allowing the sewage pump out to be used.

As the entire lot at 146 Newbridge Road will be connected to the sewerage main prior to development, the marina will be connected onto that upgraded connection. Based on consultation with Sydney Water, it is understood that sewage from the pump out facility can be discharged to

the main sewers, as long as the discharge does not exceed 2 L/s. This far exceeds the anticipated discharge from the pump out facility.

4.2.11 Bilge water pump-out

All marina berth holders will be inducted and supplied with a complimentary bilge water absorbing pad as part of the rules and regulations of the marina. Bilge absorbing pads will absorb any oil from the bilges. The bilge water will be disposed appropriately.

The discharge of bilge water within the marina basin will be prohibited. Signage to this effect will be displayed throughout the marina. A floating boom will be maintained at the site to contain any surface pollutants in the event of an accidental leakage of bilge water.

4.3 Private Marina Clubhouse

The private marina clubhouse will include the areas listed below:

Private Marina Clubhouse area	Area (m ²) ¹
Private Marina Clubhouse	216
Circulation	216
Kiosk	123
Amenities	108
Brokerage	72
Marina office	36
Sub-total (gross floor area)	771
Private Marina Clubhouse - terrace	194
Small craft store	117
Small craft circulation and ramp	278
Circulation on pontoons	221
Barbeque area	392
Kiosk - terrace	150
Total	2,124

Note: 1. Areas are preliminarily based on the initial concept stage and may vary depending on the final mix of use determined in the internal fit out and designs to be undertaken at construction certificate stage.

The Private Marina Clubhouse will provide the cornerstone for the marina precinct and will provide the waterfront access for the future Mirvac Georges Cove residential development on the northern portion of Lot 7 (subject to separate development applications and approvals). The Private Marina Clubhouse will include office space, dining areas, amenities and access to the wet berths.

The Private Marina Clubhouse will use steel and Colourbond materials to create a modern, outdoor lifestyle feel. It will incorporate large glassed areas to utilise natural light wherever possible. It will have a maximum height of 13.1 m AHD from a FFL 2.8 m AHD.

As with the Maritime Building, all of the roof water from the clubhouse will be harvested and stored in a large tank for irrigation and ground maintenance purposes, as well as use in grey water applications such as toilet flushing.

4.4 Marina Spit Park

The Marina Spit Park will be between the main Maritime Building and the Private Marina Clubhouse facilities. It will be a grassed area with some plantings that will be accessible to the public and will be surrounded by a path, including a section facing the marina basin.

4.5 Public recreation facilities on the foreshore

The following public recreation facilities will be constructed on the river foreshore and, once complete, will be dedicated back to Council under the terms of the VPA:

- a bike/pedestrian path through the river foreshore land; and
- passive recreation facilities (e.g. picnic tables).

An access easement will be dedicated over land on the marina site to allow Council to undertake maintenance of the foreshore land.

4.6 Access and parking

4.6.1 Public Access

Public access to the marina (by car, bicycle and on foot) will be provided during normal operating hours from Brickmakers Drive.

Access to the wet berths will be controlled by access control gates.

Equipment and products to the marina will be delivered by road during normal working hours, Monday to Friday. Given that public use of the marina will be highest on weekends, no significant access conflicts are envisaged.

The Maritime Building, Private Marina Clubhouse and wet berth walkways design will comply with relevant disability access standards through the extensive use of ramps and the floating berth configuration.

4.6.2 Site access

Vehicular access from Brickmakers Drive to the proposed marina will be provided. The design, construction and use of the link road have been approved by Liverpool City Council (DA-61/2014 and DA 1552/2006 (as modified)).

The construction of this bridge and associated works will meet the VPA requirement for the construction and dedication of a road bridge over the drainage channel, embankment and road to Brickmakers Drive.

A combined pedestrian and cycle access path from Brickmakers Drive will be constructed along the northern side of the link road. This will be the primary pedestrian and cycle access route between the marina site and Newbridge Road, where the existing traffic signals allow pedestrians to cross at the Governor Macquarie Drive and Brickmakers Drive intersection. The path along the link road will extend to the Georges River foreshore. In combination with the proposed foreshore path within the Flower Power site (to the north east) these paths will provide public access to the Georges River foreshore from the marina site to the recreation area on Davy Robinson Drive.

4.7 Hours of operation

The proposed hours of the marina berthing operations are as follows:

- Seven days a week, 7.00 am to 10.00 pm

It is proposed that the Private Marina clubhouse, Marina Function Centre and associated venues be permitted to operate from 7 am to 12 midnight.

The proposed construction hours are:

- Monday to Friday: 7.00 am to 5.00 pm; and
- Saturday: 7.00 am to 1.00 pm.

No construction will take place on Sundays or public holidays.

5. STATUTORY CONSIDERATIONS

Development consent is required under Part 4 of the EP&A Act 1979, pursuant to the provisions of the Liverpool LEP, relevant EPIs and the Liverpool DCP. Liverpool City Council is the consent authority and the Sydney West JRPP is the determining authority.

5.1 Designated Development

The proposed development has been identified as 'Designated Development' pursuant to Section 77A of the EP&A Act 1979 which is prescribed in part as follows: -

"77A Designated development

- (1) Designated development is development that is declared to be designated development by an environmental planning instrument or the regulations."*

Pursuant to Clause 23 of Schedule 3 of the Environmental Planning and Assessment Regulation 2000, 'Marinas' are outlined in part as follows:

"23 Marinas or other related land and water shoreline facilities

- (1) Marinas or other related land or water shoreline facilities that moor, park or store vessels (excluding rowing boats, dinghies or other small craft) at fixed or floating berths, at freestanding moorings, alongside jetties or pontoons, within dry storage stacks or on cradles on hardstand areas:*
- (a) that have an intended capacity of 15 or more vessels having a length of 20 metres or more, or*
 - (b) that have an intended capacity of 30 or more vessels of any length and:*
 - (i) are located in non-tidal waters, or within 100 metres of a wetland or aquatic reserve, or*
 - (ii) require the construction of a groyne or annual maintenance dredging, or*
 - (iii) the ratio of car park spaces to vessels is less than 0.5:1, or*
 - (c) that have an intended capacity of 80 or more vessels of any size.*
- (2) Facilities that repair or maintain vessels out of the water (including slipways, hoists or other facilities) that have an intended capacity of:*
- (a) one or more vessels having a length of 25 metres or more, or*
 - (b) 5 or more vessels of any length at any one time."*

The proposal has an intended capacity exceeding 80 vessels of any size and therefore, the application is considered to be Designated Development.

An Environmental Impact Statement has been prepared in accordance with the Secretary's Environmental Assessment Requirements (SEARs).

5.2 Nominated Integrated Development and Integrated Development

Pursuant to Section 91 of the EP&A Act 1979, the application is defined as 'Integrated Development,' and 'Nominated Integrated Development.' Concurrence pursuant to the applicable legislation was sought from the following authorities:

- Department of Primary Industries Water (DPI Water) - *Water Management Act 2000 (Nominated Integrated Development)* as the proposal requires a Controlled Activity Approval pursuant to s91 of the Water Management Act 2000;
- NSW Environmental Protection Authority (EPA) – *Protection of the Environment Operations Act 1997 (Nominated Integrated Development)* as it requires a licence for scheduled development work and/or scheduled activities pursuant to Part 3.2 of the POEO Act 1997; *and*
- Fisheries NSW – *Fisheries Management Act 1994* as the proposal requires a permit to cover harm of marine vegetation pursuant to Section 205 of the Fisheries Management Act 1994.

General Terms of Approval have been issued by each authority.

5.3 Threatened Species Conservation Act 1995 (NSW)

The provisions of the Threatened Species Conservation Act 1995 are not applicable as there are no threatened animal or plant species located in the area of the development, nor does the development site constitute a significant part of the habitat of such species. It can therefore be concluded that there would be no significant effect on threatened species, populations or ecological communities or their habitats arising from the construction or use of the proposed development.

5.4 Environment Protection and Biodiversity Conservation Act 1999 (Cth)

The Environmental Protection and Biodiversity Conservation Act 1999 (EPBC Act) requires approval from the Commonwealth Minister for the Environment for actions that will have a significant effect on matters of national environmental significance, including identified threatened species. The proposal would not have an impact on matters of national environmental significance as listed in the EPBC Act and accordingly, a referral is not required to the Commonwealth Minister for the Environment.

6. PLANNING ASSESSMENT

The proposal has been assessed with due regard to relevant legislation and planning instruments cited as follows:

- State Environmental Planning Policy No 19 – Bushland in Urban Areas
- State Environmental Planning Policy No.33 – Hazardous and Offensive Development;
- State Environmental Planning Policy No.55 - Remediation of Land;
- State Environmental Planning Policy No 71 – Coastal Protection
- State Environmental Planning Policy (Infrastructure) 2007;
- State Environmental Planning Policy – (State and Regional Development) 2011
- Greater Metropolitan Regional Environmental Plan No. 2 – Georges River Catchment;
- Georges River Coastal Zone Management Plan
- Liverpool Local Environmental Plan 2008;
- Liverpool Development Control Plan 2008.

The proposal has been assessed in accordance with Section 79C of the EP&AA 1979 and *Environmental Planning and Assessment Regulation 2000*. A detailed assessment against relevant planning considerations is detailed as follows:

6.1 Section 79C(1)(a)(i) – Any Environmental Planning Instrument

6.1.1 State Environmental Planning Policy No.19 – Bushland in Urban Areas

State Environmental Planning Policy No. 19 – Bushland in Urban Areas (SEPP 19) aims to protect and preserve bushland within the urban areas and maintain its value to the community as part of the natural heritage and its aesthetic value and recreational, educational and scientific resource.

SEPP No.19 includes the following relevant definition:

“bushland” means land on which there is vegetation which is either a remainder of the natural vegetation of the land or, if altered, is still representative of the structure and floristics of the natural vegetation.”

The marina site both adjoins and contains land zoned RE1 Public Recreation under LLEP 2008. Accordingly, Council is required to undertake a merit assessment of the proposed development against Clause 9 *Land adjoining land zoned or reserved for public open space*. Following is a table summarising the matters for consideration in determining development application and compliance:

9 Land adjoining land zoned or reserved for public open space	Comment
(1) This clause applies to land which adjoins bushland zoned or reserved for public open space purposes.	The site adjoins and contains RE1 Public Recreation land.
(2) Where a public authority: (a) proposes to carry out development on land to which this clause applies, or (b) proposes to grant approval or development consent in relation to development on land to which this clause applies, the public authority shall not carry out that development or grant the approval or development consent unless it has taken into account:	The application involves granting of development consent on land to which this clause applies.
(c) the need to retain any bushland on the land,	A Voluntary Planning Agreement has been executed with the property owner and Council and contains work which requires the property owner to re-vegetate the river foreshore in accordance with a Vegetation Management Plan (VMP) to be submitted in accordance with the agreement. The VMP needs to demonstrate how weeds will be removed and the site managed into the future.
(d) the effect of the proposed development on bushland zoned or reserved for public open space purposes and, in particular, on the erosion of soils, the siltation of streams and waterways and the spread of weeds and exotic plants within the bushland, and	A VMP is to be prepared as mandated by the Voluntary Planning Agreement. In consideration with the general terms of approval issued from DPI Water; DPI Fisheries and NSW Environmental Protection Authority, the overarching VMP and other approval required to carry out work would sufficiently address these matters.

(e) any other matters which, in the opinion of the approving or consent authority, are relevant to the protection and preservation of bushland zoned or reserved for public open space purposes.	The VMP is considered to be sufficient in preserving and embellishing bushland areas with the intent to enhance these areas for public benefit.
--	---

The provisions of SEPP 19 are considered to have been satisfactorily addressed.

6.1.2 State Environmental Planning Policy No.33 – Hazardous and Offensive Development

State Environmental Planning Policy No.33 – Hazardous and Offensive Development (SEPP 33) aims to identify measures to be employed to reduce the impact of the development, to ensure there is sufficient information to assess whether the development is hazardous or offensive and to impose conditions to reduce or minimise any adverse impact. Two separate tanks storing 60,000 L of diesel and 60,000 L of petrol will be installed on the Maritime Building hardstand at RL 7.3 m and well above 1:100 year flood levels. The proposal does not include storage of any significant quantities of other types of fuels or of hazardous chemicals on the marina site although small quantities may be used in the workshop and for facility maintenance.

The fuel tanks will be approximately 50 m from the western boundary of the marina site. Petrol is a dangerous good as it is classified as a Class 3 Flammable Liquid under the Australian Code for the Transport of Dangerous Goods by Road and Rail Edition 7.3 (Commonwealth of Australia 2014). Diesel is not listed in the code and is, therefore, not regarded as a dangerous good.

Facilities which store petrol could qualify as potentially hazardous development. This is determined by comparing the quantities stored and the distance of the storage from the facility boundary using figures 8 and 9 of Applying SEPP 33 – Hazardous and Offensive Development (NSW Department of Planning 2011). The proposed facility does not qualify as a potentially hazardous development as storage of 60,000 L (about 45 tonnes) of petrol 50 m from the facility boundary does not fall in the “potentially hazardous region” in the above figures. Therefore the facility is not considered to be “potentially hazardous” and a preliminary hazard analysis (PHA) for the proposed facility is not required.

6.1.3 State Environmental Planning Policy No. 55 – Remediation of Land

State Environmental Planning Policy No.55 – Remediation of Land (SEPP 55) aims to promote the remediation of contaminated land for the purpose of reducing the risk of harm to human health or any other aspect of the environment.

Council must consider Clause 7 of SEPP 55 as follows: -

“7 Contamination and remediation to be considered in determining development application

- (1) A consent authority must not consent to the carrying out of any development on land unless:*
 - (a) it has considered whether the land is contaminated, and*
 - (b) if the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out, and*
 - (c) if the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for that purpose.”*

The site is noted to have conducted extractive industry for a number of decades. An examination of Table 1 to the Planning Guidelines for Contaminated Land identifies 'extractive industries' as a potential contaminating activity.

Section 7(3) of the SEPP states the following: -

"The applicant for development consent must carry out the investigation required by subclause (2) and must provide a report on it to the consent authority. The consent authority may require the applicant to carry out, and provide a report on, a detailed investigation (as referred to in the contaminated land planning guidelines) if it considers that the findings of the preliminary investigation warrant such an investigation."

A Preliminary Investigation of Contamination (PI) prepared in accordance with the Guidelines for Consultants Reporting on Contaminated Land (OEH 2011) was submitted with the application.

A supplementary Preliminary Investigation (SPI) was submitted following the initial public exhibition of the application along with a Remediation Action Plan (RAP).

The preliminary investigation was completed in July 2015 to assess the contamination potential of the southern portion of Lot 7 DP 1065574, which is referred to as the "marina site". Soil, dredge pond sediment and dredge pond water samples were collected and analysed.

This preliminary investigation was submitted to Council for review, with a follow up meeting with Council and the EPA on 30 October 2015. At the meeting, it was agreed that a further investigation should be undertaken to evaluate the nature and potential risk of ammonia in the dredge pond sediment and water. In addition, a higher sampling density for all mediums (soil, groundwater, dredge pond water and sediment) was requested to definitively determine the sites suitability for its proposed use.

The supplementary preliminary investigation reports the results of additional sampling to provide improved spatial and statistical confidence in the levels and distribution of potential contaminants on the site.

The results of historic and recent sampling indicate that the land is contaminated under the definition of contaminated land in Section 145A Part 7A of the EP&A Act 1979.

Contaminated land means land in, on or under which any substance is present at a concentration above the concentration at which the substance is normally present in, on or under (respectively) land in the same locality, being a presence that presents a risk of harm to human health or any other aspect of the environment.

However the PI and SPI results indicated that contaminants were limited in number and extent at the marina site. Sampling has not identified any exceedances of the ASC NEPM human health guideline values. The two exceedances of ecological assessment criteria identified in site soils were either considered to be irrelevant, present a low and acceptable risk and can be managed in the context of the proposed future land use.

Accordingly, the SPI confirmed the original conclusions of the PI, that contamination issues would not preclude the proposed future land use as a proposed marina development as well as for high-density residential dwellings with minimal opportunities for soil access.

There is the potential for metal, nutrients and nutrient concentrations in the dredge pond sediment and water to impact ecological values in the Georges River when the marina basin is first opened to the river (acute impacts) and/or during of marina operations (chronic impacts).

Based on the results of the PI and SPI, the following recommendations were stated in the supplementary preliminary investigation report:

- Any material in the stockpiles or fill mounds present at the marina site that is proposed for on-site reuse should be characterised for land use suitability relative to the appropriate land use criteria in the ASC NEPM.

Any material proposed for off-site disposal or reuse should be characterised for waste classification in accordance with the NSW EPA (2014) Waste Classification Guidelines, Part 1: Classifying Waste, or with regard to a relevant resource recovery order and exemption issued under the POEO Act. Upon removal, validation sampling of the footprints of the stockpiles and fill mound should be performed to confirm the suitability of the underlying soils for the proposed land use.

- Given the inherent heterogeneity of fill material present at the marina site, an unexpected finds protocol with clear instructions for identifying and managing potential undiscovered contamination issues during development should be prepared. In particular, although no evidence of asbestos containing material (ACM) was encountered during the PI, ACM is commonly associated with uncontrolled fill material in Australia and the potential presence of ACM should be proactively assessed during any civil works involving disturbance of fill material at the marina site.
- A remediation action plan should be prepared to address potential acute and/or chronic impacts to the Georges River as a result of elevated metal, nutrient and PAH concentrations in the dredge pond water and sediment. The preliminary remediation action plan should list the conditions for opening the dredge pond to the Georges River to prevent acute impacts. The risk of chronic impacts should be evaluated and appropriate management measures identified.

A RAP has been submitted to Council and was available during the second round of public exhibition from 4 May 2016 to 3 June 2016.

The conclusions and recommendations of the RAP are outlined below:

Site Suitability

A marina development is proposed on the site. The PI and SPI (EMM 2015a and 2016) characterised the site. These preliminary investigations found there is a risk that metals, ammonia and nutrients in the dredge pond water, and these contaminants plus PAHs in the sediment, may impact ecological values in the Georges River when the marina basin is first opened to the river (acute impacts) and/or during of marina operations (chronic impacts).

The RAP identifies a range of actions to minimise risks to human health or ecology within the marina basin and adjoining George River.

The land is suitable in its contaminated state (or will be suitable, after remediation) for the proposed future land use as a proposed marina development as well as for high-density residential dwellings with minimal opportunities for soil access.

Management Actions

The RAP identifies the following management actions to ensure that the risks to human health or ecology within the marina basin and adjoining George River are minimised:

- During marina construction:
 - Cease dredging to allow suspended particulates in the dredge pond to settle. (Dredging ceased in February 2016).

- Complete all marina construction activities that may result in sediment resuspension and then allow time for metals to be adsorbed and for particles in the water column to settle to the bed sediment.
 - Monitor basin water prior to opening basin. Only open basin once concentrations in the basin are in the range occurring in the river.
 - Monitor Georges River water quality to establish a contemporary baseline and establish site specific water quality assessment criteria.
 - Use silt curtains to minimise water with high TSS concentrations entering the river surface water from the marina basin.
 - If required, investigate contingencies to reduce contaminant concentrations in the basin to meet site-specific water quality assessment criteria.
- During marina operations:
 - The marina basin is designed to promote frequent flushing, preventing contaminant accumulation in the water column and increasing contaminant concentrations.
 - Prevent basin sediment resuspension from propeller wash by: providing adequate under keel clearance (2.9 m low tide water depth) and enforcing the speed limit within the marina basin (4 knots).
 - Cease processing to the north of site.
 - Prevent surface water runoff from offsite running directly into the basin.
 - Direct surface runoff to the treatment area in north-west of the basin to minimise solids, organic matter and nutrients entering the basin.
 - Excavate the marina entrance to a depth that leaves a 'lip' at the entrance that extends above the base of the basin and river. Armour the lip with rock to prevent erosion by water moving into and out of the basin.
 - Monitor Georges River water quality and sediment quality for five years to validate that marina operations are not having an unacceptable risk to the ecology of river or to recreational users.

Conclusions

There are a range of offsite sources contributing contaminants to the Georges River in the vicinity of the site. These contaminants enter the river directly through surface water flow (e.g. urban runoff) and indirectly through seepage to groundwater followed by discharge of groundwater to the river. Development of the marina would not materially change these inputs.

The identified contamination on the site is largely associated with the basin, particularly bed sediments and suspended particulate matter.

There will be no ecological or recreational contact risk from the development of the marina before the basin is opened. There are a range of active and passive management measures that will reduce contaminant concentrations in the basin water before it is opened to the river. Benedict Industries has committed to only opening the marina basin to the Georges River once the water quality is similar to the Georges River.

Ecological or recreational contact risks in the river during marina operations will be generally associated with the movement of sediment along the bed or as a result of sediment resuspension. There are a range of management measures that will reduce these risks to acceptable levels.

Monitoring during marina construction, following opening the marina basin and during marina operations will be required to confirm that risks are acceptable based on established and site-specific criteria.

6.1.4 State Environmental Planning Policy No 71 – Coastal Protection

SEPP No 71 aims to ensure a consistent and strategic approach to coastal planning and management and to ensure there is a clear development assessment framework for the coastal zone. It requires a consent authority to take into account specified matters in the determination of development applications including public access to and along the coastal foreshore, site suitability, impact on the amenity of the coastal foreshore, scenic qualities, coastal processes and hazards, water quality, Aboriginal and non-Aboriginal heritage, flora and fauna issues, and cumulative impacts.

The proposed development is not within the area mapped as coastal zone maps so SEPP No 71 does not apply.

6.1.5 State Environmental Planning Policy (Infrastructure) 2007

The proposal includes a club and recreational facilities and parking for in excess of 200 vehicles; which is identified in Schedule 3 of State Environmental Planning Policy (Infrastructure) 2007 as a traffic generating development.

Pursuant to Clause 104, the application was referred to the Roads and Maritime Service for comment.

The RMS does not support the proposed traffic lights at the intersection of the link road and Brickmakers Drive as the warrants for installing traffic signals has not be met at this time. However, the RMS recommended that the infrastructure to support the traffic signals, including cabling and conduits are installed. The submitted traffic assessment and warrant assessment detailed the warrants would be met in the future given the ongoing development of the Moorebank East area. The RMS position is that they will only support traffic signals at this intersection once the warrants have been met.

As a result, a condition of consent has been recommended that a channelised intersection plan including line marking plan is to be submitted to Council and the Local Traffic Committee for approval prior to the issue of a Construction certificate and the installation of the traffic signals will be bonded so they can be installed once the warrants for installing the traffic signals have been met.

6.1.6 State Environmental Planning Policy – (State and Regional Development) 2011

State Environmental Planning Policy – State and Regional Development 2011 confers functions on Joint Regional Planning Panels to determine development applications. Clause 3 of Schedule 4A of the EPAA specifies development that has a capital investment value of more than \$20 million is to be determined by a JRPP.

In addition, Clause 8 specifies that particular designated development including marinas are to be determined by the JRPP.

6.1.7 Greater Metropolitan Regional Environmental Plan No. 2 – Georges River Catchment (Deemed SEPP)

The Greater Metropolitan Regional Environmental Plan No. 2 – Georges River Catchment (GMREP No.2) generally aims to maintain and improve the water quality and river flows of the Georges River and its tributaries.

When a consent authority determines a development application, planning principles are to be applied (Clause 7(b)). Accordingly, a table summarising the matters for consideration in determining Development Application (Clause 8 & Clause 9) and compliance with such is provided below:

Clause 8 General Principles	Comment
(a) the aims, objectives and planning principles of this plan,	The proposed development seeks to maintain and improve the water quality of the Georges River.
(b) the likely effect of the proposed plan, development or activity on adjacent or downstream local government areas,	The proposal provides soil and erosion control measures, embellish river foreshore land and provide site drainage facilities. Therefore, it will improve the environmental performance of the marina site.
(c) the cumulative impact of the proposed development or activity on the Georges River or its tributaries,	<p>A Vegetation Management Plan is to be prepared for the site which will embellish the river foreshore land along the Georges River.</p> <p>Conditions recommended from the NSW EPA, DPI Water and DPI Fisheries contains requirements which would address acid sulfate soils, contamination, vegetation, aquatic impact, erosion and sediment control and existing basin water.</p>
(d) any relevant plans of management including any River and Water Management Plans approved by the Minister for Environment and the Minister for Land and Water Conservation and best practice guidelines approved by the Department of Urban Affairs and Planning	<p>Biodiversity of the Georges River Catchment The development will assist biodiversity in the Georges River catchment by restoring the existing extractive industry site to provide habitat in the RE1 foreshore zone. The foreshore area will be embellished and stabilised with a rockwall and be revegetated with native species in accordance with a Vegetation Management Plan as required by the VPA.</p> <p>Georges River Catchment Built Environment and Foreshore Access Study This study identified planning and management measures to improve the scenic environment and access to the waterways. In a specific local context it is noted that the Boat ramp on Davey Robinson Drive was identified as demonstration site for future development and enhancement. The demonstration sites are intended to illustrate the widest range of development and design opportunities for foreshore improvements, to consider access, recreation, built form, environment, cultural heritage and scenic quality.</p> <p>The proposed marina development meets the main criteria for future development as reflected in the suggested demonstration sites as it will:</p> <ul style="list-style-type: none"> • provide a range of levels of access to the river; • enhance the natural values and recreational amenity of the foreshore areas and reduces adverse impacts on the waterway; • provide existing or potential links between access points and recreation areas; • link existing open space with foreshore bushland and enhance the riparian zone; • build on existing programs and projects in the area; • enhance the focus on the river;

	<ul style="list-style-type: none"> • improve the ecological environment by controlling access; and • have significant scenic amenity values. <p>Georges River Catchment: Better Practice Guidelines for Foreshore Works</p> <p>The proposed development would be consistent with the principles set out in these guidelines.</p>
(e) the <i>Georges River Catchment Regional Planning Strategy</i>	The proposal would meet the initiatives of this strategy.
(f) all relevant State Government policies, manuals and guidelines of which the council, consent authority, public authority or person has notice,	The proposed development has been issued with general terms of approval by the NSW Environmental Protection Authority, DPI Water and DPI Fisheries.
(g) whether there are any feasible alternatives to the development or other proposal concerned.	The marina site currently accommodates an extractive industry. The locality has been rezoned to accommodate for residential, business and recreational uses which is in keeping with the surrounding residential area. Alternative land uses were outlined in the EIS.
Clause 9 Specific Principles	Comment
(1) Acid sulfate soils	The marina site has been identified on the LLEP map as containing acid sulfate soils. An acid sulfate soil management plan has been provided.
(2) Bank disturbance	No disturbance of the bank or foreshore along the Georges River and its tributaries is proposed other than during construction when the marina entrance will be opened and rock armouring that will be installed as part of foreshore embellishment.
(3) Flooding	The marina site is flood prone and this is addressed in the flooding section later in this report.
(4) Industrial discharges	There will be no industrial discharges from the marina site.
(5) Land degradation	The proposed development will provide a stable landform with appropriate drainage, including along the foreshore. Erosion prevention and sediment control measures will be implemented during construction.
(6) Onsite sewage management	The marina site will be connected to the sewer mains
(7) River-related uses	River foreshore land to be embellished as per the VPA.
(9) Urban/stormwater runoff	Drainage details to be provided as a condition of consent.
(10) Urban development areas	Flooding controls to be implemented.
(11) Vegetated buffer areas	River foreshore land to be embellished as per the VPA which will include vegetation enhancement.
(12) Water quality and river flows	An assessment has been made which confirms that the proposed development would have an unlikely impact on water quality, subject to compliance with the remediation action plan.

(13) Wetlands	River foreshore land to be embellished as per the VPA.
Clause 11 Planning Control Table	
15 Marinas And Slipways A Vegetation Management Plan is to be prepared for the site which aims to embellish the river foreshore land along the Georges River. Conditions recommended from the NSW EPA, DPI Water and DPI Fisheries contain requirements which would address acid sulfate soils, contamination, vegetation, aquatic impact, erosion and sediment control and existing basin water.	

It is considered that the proposal satisfies the provisions of the GMREP No.2 and would have minimal impact on the Georges River Catchment.

6.1.8 Georges River Coastal Zone Management Plan

The Georges River Coastal Zone Management Plan aims to “preserve and enhance the environmental values of the estuary amid the burgeoning urban development across the catchment, which presently accommodates more than 1.2 million people”. The primary goal of this document has been defined as “to conserve and improve the existing natural environment of the Georges River Estuary, and to improve the water quality of the estuary through targeted pollution reduction”.

The proposed development would meet these aims and objectives for the future management of the Georges River estuary.

6.1.9 Liverpool Local Environmental Plan 2008

Permissibility

The subject site (Lot 7 DP 1065574) is part zoned B6 Enterprise Corridor, R3 Medium Density Residential, SP2 Infrastructure, Public Recreation RE1 and Private Recreation RE2 pursuant to the Liverpool Local Environmental Plan 2008 (LLEP 2008).

The “marina site” is zoned RE1 Public Recreation, RE2 Private Recreation and SP2 Infrastructure.

An extract from the LLEP zoning map is shown below:

- *To protect and enhance the natural environment for recreational purposes.*
- *To provide sufficient and equitable distribution of public open space to meet the needs of residents.*
- *To ensure the suitable preservation and maintenance of environmentally significant or environmentally sensitive land.*

“Zone RE2 Private Recreation

- *To enable land to be used for private open space or recreational purposes.*
- *To provide a range of recreational settings and activities and compatible land uses.*
- *To protect and enhance the natural environment for recreational purposes.*
- *To enable land uses that are compatible with, and complimentary to, recreational uses.”*

With respect to the objectives of the zone, the following comments are offered:

- The current activities being carried out at the site for the purposes of extractive industries and resource recovery are to cease operation and all existing infrastructure would be removed in preparation for the development.
- The proposed marina is considered to be an appropriate form of development in keeping with the recreational use of the area as reflected in the zoning of the land.
- The proposal is considered to be a significant project for Liverpool and would be a high quality design benchmark and an iconic development for the local area and the greater region.
- The proposed development is considered an appropriate form of development for the site with a number of measures which would mitigate the impacts identified during the assessment process.
- The proposed development represents a significant opportunity to reactivate an inaccessible and highly degraded stretch of the Georges River and would seek to return the natural landscape to the community through a development that enables active and passive forms of recreation.
- The proposal represents substantial economic and social benefits for the Liverpool and the greater community and maintains the environmental quality of the area and embellishment of the riverine character of the land.

It is considered that the proposal is consistent with the relevant objectives for the zones.

Principal Development Standards

The following development standards apply to the proposal development:

Clause 4.1 – Minimum subdivision lot size

Subdivision of the site is not proposed as part of this application. Notwithstanding, the “marina site” is 13 ha in area and the minimum lot size for the marina site under the LEP is 10,000m².

Clause 4.3 - Height of buildings

Clause 4.3(2) - Height of buildings states the following:

(2) The height of a building on any land is not to exceed the maximum height shown for the land on the Height of Buildings Map.

The subject site contains a partial maximum height requirement of 15 metres and 21 metres. The

majority of the proposed buildings at the site are to be located on land identified within the maximum height requirement of 21 metres.

The proposed maritime building maintains the largest built form. At basin level of 2.8m AHD, the maritime building achieves a maximum height of 23.8m AHD. With consideration of architectural blade walls, the maritime building will have a maximum height of 24.4m AHD which represents a maximum building height of 21.6 metres.

The proposal will exceed the maximum building height by 0.6 metres. Notwithstanding, consideration of architectural roof features is outlined in LLEP 2008 Clause 5.6 which enables such roof features to exceed the height of buildings development standard with consent.

Clause 5.6 – Architectural Roof Features

Clause 5.6 states:

- (2) Development that includes an architectural roof feature that exceeds, or causes a building to exceed, the height limits set by clause 4.3 may be carried out, but only with development consent.*
- (3) Development consent must not be granted to any such development unless the consent authority is satisfied that:
 - (a) the architectural roof feature:
 - (i) comprises a decorative element on the uppermost portion of a building, and*
 - (ii) is not an advertising structure, and*
 - (iii) does not include floor space area and is not reasonably capable of modification to include floor space area, and*
 - (iv) will cause minimal overshadowing, and**
 - (b) any building identification signage or equipment for servicing the building (such as plant, lift motor rooms, fire stairs and the like) contained in or supported by the roof feature is fully integrated into the design of the roof feature”**

The portion of the building that exceeds the maximum building height meets this criteria.

The blade wall is a prominent architectural feature of the maritime building which seeks to create significant visual articulation of the building elevation when viewed from the public domain. The blade walls traverse from ground level with protrusion past ridge height to create visual interest with the combination of substantial surface area for glazing to create a modern appearance.

Council's Design Excellence Panel has reviewed the proposal in accordance with Councils adopted Design Excellence Panel Charter, and is supportive of the design.

It is considered that the increase in building height is relatively minor and relates to architectural roof features which seeks to create visual distinction having regard to the bulk and scale of the proposed development. Accordingly, the use of the architectural roof feature is supported in this instance.

Clause 4.4 - Floor space ratio

Clause 4.4(2) states the following:

- (2) The maximum floor space ratio for a building on any land is not to exceed the floor space ratio shown for the land on the Floor Space Ratio Map.*

The floor space ratio applicable to the “marina site” is 0.25:1.

The subject site has a total area of 22.3 hectares, however the “marina site” has an area of 13 ha. The proposal involves a development footprint of 131,470m² and has a gross floor area of

17,717m² (i.e excluding car parking and terraces and balconies with outer walls less than 1.4m high). It therefore, will have a floor space ratio of 0.13:1 which would meet this requirement.

Clause 5.1 - Relevant acquisition authority

Portions of the subject property are zoned SP2 Infrastructure for drainage purposes and RE1 Public Recreation under the LLEP 2008. Council is required to acquire these portions of land and a Voluntary Planning Agreement has been executed between the land owner and Council to facilitate the dedication of the required land.

Clause 5.1A - Development on land intended to be acquired for a public purpose

Land zoned RE1 Public Recreation is identified as per Clause 5.1 of the LLEP to be acquired by Council.

The proposal involves earthworks to enable the rehabilitation of the site and establishment of a seawall which is consistent with Clause 5.1A. Moreover, recreation areas are proposed along this portion of land comprising of grassed open space, footpaths and a pedestrian bridge for connectivity. It is considered that that the proposal has met these requirements.

Clause 5.7 - Development below mean high water mark

Clause 5.7 prescribes the following:

- (1) The objective of this clause is to ensure appropriate environmental assessment for development carried out on land covered by tidal waters.*
- (2) Development consent is required to carry out development on any land below the mean high water mark of any body of water subject to tidal influence (including the bed of any such water).*

The river foreshore is to be embellished for the purposes of public land and will provide for a basin entry of approximately 40 to 50 metres in width leading into the marina.

A tidal hydrodynamic model for tidal movements in the Georges River from Picnic Point, downstream of the marina site, to Lansvale upstream of the Chipping Norton lakes system (and upstream of the marina site) was developed by Worley Parsons. The Worley Parsons assessment report found that:

- The model results indicated that a high degree of exchange will occur between the river and the marina, due to the relatively wide marina entrance. The river is approximately 80 m wide in this location, while the entrance is at least 40 m wide. The water levels in the marina mimic those in the river, indicating that the entrance does not control flows entering and leaving the marina basin.
- The model indicated that flow velocities due to tidal flows were low. Velocities in the marina basin were below 0.05 m/s and velocities in the river adjacent to the proposed marina were generally less than 0.3 m/s.
- Although the tidal flow velocities are low, other factors also affect bank stability. The 1.5 year ARI flow is considered to be the “bank forming” flow, during which velocities will likely be higher than those during tidal flow conditions. Waves generated by boats on the river also affect bank stability. The bank protection will be designed to withstand these forces.

Clause 5.9 - Preservation of trees or vegetation

A series of ecological assessments have been completed for the marina site. While the proposal will require the removal and modification of small areas of terrestrial habitat, it will result in an overall improvement in the quality and amount of available habitat within the site, in part due to the implementation of the VPA and associated VMP.

Clause 7.6 - Environmentally Significant Land

Clause 7.6(2) prescribes the following:

- “(2) Before determining an application to carry out development on environmentally significant land, the consent authority must consider such of the following as are relevant:*
- (a) the condition and significance of the vegetation on the land and whether it should be substantially retained in that location,*
 - (b) the importance of the vegetation in that particular location to native fauna,*
 - (c) the sensitivity of the land and the effect of clearing vegetation,*
 - (d) the relative stability of the bed and banks of any waterbody that may be affected by the development, whether on the site, upstream or downstream,*
 - (e) the effect of the development on water quality, stream flow and the functions of aquatic ecosystems (such as habitat and connectivity),*
 - (f) the effect of the development on public access to, and use of, any waterbody and its foreshores.”*

The subject site has been identified as having environmentally significant land being the RE1 – Public Recreation land. The proposed development associated with this land is mandated by the Voluntary Planning Agreement, which requires amongst other things to revegetate the land with endemic species.

Clause 7.7 - Acid Sulfate Soils

Clause 7.7(3) states the following:

- “(3) Development consent must not be granted under this clause for the carrying out of works unless:*
- (a) an acid sulfate soils management plan has been prepared for the proposed works in accordance with the Acid Sulfate Soils Manual and has been provided to the consent authority, and*
 - (b) a copy of the plan and a copy of the development application have been provided to the Director-General of the Department of Environment and Climate Change and the consent authority has considered any comments of the Director-General made within 21 days after those copies were provided to the Director-General.”*

The subject site is identified on the LLEP 2008 Acid Sulfate Soils map. An Acid Sulfate Soil Management Plan had been submitted in support of the subject application. It is noted that the site is currently licensed by the EPA for the disposal of acid sulfate soils as well as virgin excavated natural materials (VENM). Moreover, such information has been prescribed in conditions recommended from the NSW EPA.

The provisions of Clause 7.7 have therefore been satisfied.

Clause 7.8 - Flood Planning

Clause 7.8(3) prescribes the following:

“(3) Development consent must not be granted to development on flood prone land (other than development for the purposes of residential accommodation) unless the consent authority is satisfied that the development:

- (a) will not adversely affect flood behaviour and increase the potential for flooding to detrimentally affect other development or properties, and*
- (b) will not significantly alter flow distributions and velocities to the detriment of other properties or the environment, and*
- (c) will enable the safe occupation and evacuation of the land, and*
- (d) will not have a significant detrimental affect on the environment or cause avoidable erosion, siltation, destruction of riparian vegetation or a reduction in the stability of any riverbank or watercourse, and*
- (e) will not be likely to result in unsustainable social and economic costs to the flood affected community or general community as a consequence of flooding, and*
- (f) if located in the floodway, will be compatible with the flow of flood waters and with any flood hazard on that floodway.”*

An extensive flood assessment as well as detailed hydraulic modelling has been undertaken by Worley Parsons, Cardno and NPC and submitted with the application.

During the assessment of the proposal, minor amendments were made to the development to permit the passage for flood flows onto Council reserve to ensure flood storage areas are fully utilised during flood events. The flood reports confirmed that the proposed development would have a negligible impact on the behaviour of flooding in the flood storage area located southwest of the proposed marina and nil or negligible impacts on any other adjacent properties.

The proposal therefore has satisfied the provisions of Clause 7.8.

Clause 7.9 - Foreshore building line

Clause 7.9 is prescribed in part:

- “(2) Subject to the other provisions of this Plan, development may be carried out, with development consent, for the purposes of a building on land in the foreshore area only if:*
- (a) the levels, depth or other exceptional features of the site make it appropriate to do so, or*
 - (b) the development involves the extension, alteration or rebuilding of an existing building that is erected wholly or partly in the foreshore area and the consent authority is satisfied that the building as extended, altered or rebuilt will not have an adverse impact on the amenity or aesthetic appearance of the foreshore, or*
 - (c) the development is for the purposes of any of the following:*
 - (i) boat sheds,*
 - (ii) sea walls,*
 - (iii) wharves, slipways, jetties,*
 - (iv) waterway access stairs,*
 - (v) swimming pools at or below ground level (existing),*
 - (vi) fences,*
 - (vii) picnic facilities, cycleways, walking trails or other outdoor recreation facilities.*
- (3) Development consent must not be granted to development referred to in subclause (2) unless the consent authority is satisfied that the development:*
- (a) will contribute to achieving the objectives for development in the zone in which it is to be carried out, and*
 - (b) will be compatible in its appearance with the surrounding area, as viewed from both the waterway concerned and the adjacent foreshore areas, and*

- (c) *will not cause environmental harm, such as:*
 - (i) *pollution or siltation of the waterway, or*
 - (ii) *an adverse effect on surrounding uses, marine habitat, wetland areas, flora or fauna habitats, or*
 - (iii) *an adverse effect on drainage patterns, and*
- (d) *will not cause congestion of, or generate conflicts between, people using open space areas or the waterway, and*
- (e) *will not compromise opportunities for the provision of continuous public access along the foreshore and to the waterway, and*
- (f) *will maintain any historic, scientific, cultural, social, archaeological, architectural, natural or aesthetic significance of the land on which the development is to be carried out and of surrounding land."*

The site is identified with a foreshore building line as set out in the LLEP 2008 and specifically applies to the land that is zoned RE1 Public Recreation. The only works within the RE1 Public Recreation zone are those associated with the restoration of the river foreshore and recreational facilities such as footpaths, picnic shelters, bike paths, etc. as prescribed in the Voluntary Planning Agreement executed between the land owner and Liverpool City Council.

Consequently, the development will comply with this requirement.

Clause 7.31 – Earthworks

Clause 7.31(3) prescribes the following:

- (3) *Before granting development consent for earthworks, the consent authority must consider the following matters:*
 - (a) *the likely disruption of, or any detrimental effect on, existing drainage patterns and soil stability in the locality,*
 - (b) *the effect of the proposed development on the likely future use or redevelopment of the land,*
 - (c) *the quality of the fill or the soil to be excavated, or both,*
 - (d) *the effect of the proposed development on the existing and likely amenity of adjoining properties,*
 - (e) *the source of any fill material and the destination of any excavated material,*
 - (f) *the likelihood of disturbing relics,*
 - (g) *the proximity to and potential for adverse impacts on any watercourse, drinking water catchment or environmentally sensitive area.*

The site has been subject to extractive industry for a number of years and in its current state is highly degraded. As part of the original Development Consent granted for extractive industry activities at the site, the rehabilitation of the land was also approved in ensuring that the site be returned to a restored landform. The proposed development utilises part of the existing landform to create the marina basins as well as some works to accommodate the proposed development.

Concurrence approvals issued from DPI Water, EPA and DPI Fisheries contain numerous requirements for vegetation, earthworks and water quality. Council's heritage officer has advised that there are no identified Aboriginal sites and that the site is highly disturbed that there is practically no possibility of in-situ Aboriginal cultural heritage deposits.

6.2 Section 79C(1)(a)(ii) - Any Draft Environmental Planning Instrument

No draft planning instruments apply to the site.

6.3 Section 79C(1)(a)(iii) - Any Development Control Plan

Liverpool Development Control Plan 2008

The following parts of DCP 2008 are applicable to the proposed development:

- Part 1 – General Controls for all Development;
- Part 2.10 – Moorebank East (Benedict Sands).

Compliance with the above components of DCP 2008 are addressed in the table below:

CONTROLS	COMMENT	COMPLIES
PART 1		
Chapter 2: Tree Preservation	This has been addressed in the assessment above under Clause 5.9 of LLEP 2008.	Yes
Chapter 3: Landscaping	The revegetation of the river foreshore is to be carried out in accordance with a VMP which forms part of the executed VPA applying to the site.	Yes
Chapter 4: Bushland And Fauna Habitat Preservation	This has been addressed in the assessment above under Clause 5.9 of LLEP 2008.	Yes
Chapter 5: Bush Fire Risk	<p>A bushfire assessment report has been submitted with the application as the site is identified as bushfire prone land.</p> <p>The report concludes that development can be undertaken on the site subject to:</p> <ul style="list-style-type: none"> • all buildings constructed with adoption of appropriate construction standards, • provision of Asset Protection Zones where appropriate, • construction of a perimeter road for access for fire fighting vehicles, • provision of services; and • landscaping. <p>GTAs have been issued by the RFS</p>	Yes
Chapter 6: Water Cycle Management	<p>The proposed Maritime Building and the Private Marina Clubhouse would harvest roof water for storage and utilisation from large storage tanks on site. Additionally, the design of the marina basin has incorporated the construction of large wetlands for treatment of storm water run-off from the development.</p> <p>Stormwater run-off from the site would be directed to the large stormwater channel running along the eastern boundary of the subject site.</p>	Yes
Chapter 7: Development near a watercourse	The proposed development is identified as Nominated Integrated Development for the purposes of the Water Management Act 2000 required under Section 91 of the Environmental Planning and Assessment Act 1979. The application was referred to DPI Water of which general terms of approval were issued for the purposes of a Controlled Activity Approval. As part of the general terms of approval, matters relating to:	Yes

	<ul style="list-style-type: none"> • Vegetation Management Plan; • Works Schedule; • Erosion and Sediment Control Plan; • Soil and Water Management Plan <p>In addition, conditions recommended from the NSW EPA and DPI Fisheries include requirements which deal with vegetation, water quality and erosion and sediment control.</p> <p>Moreover, as part of the Vegetation Management Plan, embellishment of foreshore land is required. It is anticipated that the VMP would be prepared in accordance with the general terms of approval and the applicable controls in this clause.</p>	
Chapter 8: Erosion And Sediment Control	<p>Erosion and sediment control measures will be implemented during construction.</p> <p>There will be no discharges to natural watercourses prior to the thorough testing and certification of the water quality of the marina basin prior to the opening of the marina basin to the Georges River as detailed in the remediation action plan.</p>	Yes
Chapter 9: Flooding Risk	Flooding risk has been addressed in the assessment under Clause 7.8 of LLEP 2008.	Yes
Chapter 10: Contaminated Land Risk	This has been addressed in the SEPP 55 assessment above.	Yes
Chapter 11: Salinity Risk	<p>The applicant has undertaken an investigation in accordance with the NSW Department of Natural Resources Guidelines (Western Sydney Salinity Code of Practice, 2003) and advised that:</p> <p><i>“The site is not within high salinity potential area as evidenced by the DIPNR Western Sydney Salinity Hazard Map. The site is in an area as identified on this plan only as a moderate salinity potential area. However, given the location of the site on a flood plain it is inappropriate to undertake any investigation; as such an investigation would serve no purpose. This is because salinity is a function of rising water tables. This site is clearly in the flood plain and the water table is naturally high in this environment. More importantly, the water table will remain high for as long as the site remains in the flood plain.”</i></p> <p>In light of the above, a detailed salinity assessment has not been carried out as the ground water conditions are noted to be dictated by the site being in a flood plain and directly adjacent to the Georges River.</p>	Yes
Chapter 12: Acid Sulfate Soils Risk	Refer to assessment under Clause 7.7 of LLEP 2008	Yes

Chapter 13: Weeds	As part of the Voluntary Planning Agreement, the applicant is required to embellish the river foreshore including the removal of noxious weeds. These works are to be detailed in a Vegetation Management Plan required by the VPA applying to the site.	Yes
Chapter 14: Demolition Of Existing Development	No demolition of any existing buildings is proposed as part of this development application.	Yes
Chapter 15: On-site Sewage Disposal	The site will be connected to Sydney Water reticulated sewer	Yes
Chapter 16: Aboriginal Archaeology	Studies have been carried out which confirm that there are no indigenous or non-indigenous heritage or archaeological sites on site.	Yes
Chapter 17: Heritage And Archaeological Sites	The application was accompanied with studies undertaken by Mary Dallas Consulting Archaeologists and Heritech Pty Ltd for aboriginal archaeology and non-indigenous relics respectively. Both reports indicated that there was no archaeological or heritage values in existence on the site.	Yes
Chapter 18: Notification Of Applications	The proposal was placed on public exhibition. This is discussed later in this report.	Yes
Chapter 20: Car Parking	A total of 637 parking spaces are provided. Council's Traffic Engineering Department has reviewed the proposal and notes that sufficient demonstration has been made that the total contingent of parking is sufficient for the needs of the proposed development. In addition, the access to the site from an internal road connecting to the approved road bridge is included in this application as is the connection of the link road to Brickmakers Drive. The access to Newbridge Road will be discontinued.	Yes
Chapters 22 and 23: Water and Energy Conservation	The development proposal includes the use of the roofs of the proposed Maritime Building and the Private Marina Clubhouse to harvest water for reuse on site. In addition, the maritime building in particular will incorporate significant use of translucent/clear panels to provide the maximum amount of natural light to use inside the structure. Additional energy saving features will be detailed in the construction certificate and detailed design stage.	Yes
Chapter 24: Landfill	This section of the DCP does not apply where cut and fill occurs in conjunction with a DA for a building.	N/A
Chapter 25: Waste Management	A Waste Management Plan has been submitted.	Yes
Chapter 26: Outdoor Advertising	No advertising structures are proposed as part of the subject application.	N/A

Chapter 27: Social Impact Assessment	Council's Community Planning Department have raised no social impact concerns with the proposed development.	Yes
Part 2.10 – Development in Moorebank East		
2.1 Street Network	Information has been submitted which demonstrates that vehicular access from Brickmakers Drive to the proposed marina can be provided. Moreover, the information submitted indicates that roads to be constructed as part of this application would be consistent with the DCP.	Yes
2.2 Pedestrian and Cyclist Amenity	As part of the Voluntary Planning Agreement, pedestrian/cycleway access is to be provided throughout the site including provision for a road bridge from Brickmakers Drive to the site and along the river foreshore area with connection to Newbridge Road to the north.	Yes
2.4 Open Space	Access to public open space areas with frontage to the Georges River will be made with the embellishment of the river foreshore and construction of a pedestrian/cycleway and dedicated for public use as required by the Voluntary Planning Agreement.	Yes
2.6 Foreshore Access	Access to public open space areas with frontage to the Georges River will be made with the embellishment of the river foreshore and construction of a pedestrian/cycleway and dedicated for public use as required by the Voluntary Planning Agreement.	Yes
2.7 Drainage	Drainage channel to service the development is to be provided as part of the Voluntary Planning Agreement.	Yes

The proposed development is considered satisfactory in respect to the LDCP 2008.

6.4 Section 79C(1)(a) (iiia) any planning agreement that has been entered into under section 93F, or any draft planning agreement that a developer has offered to enter into under section 93F, and

A Voluntary Planning Agreement (VPA) pursuant to Section 93F of the EP&AA 1979 has been executed between Liverpool City Council and Tanlane Pty Ltd dated 11 June 2008. The VPA applies to the subject site and contains a series of contributions/works which are summarised as follows:

1. *Embellishment of river foreshore land;*
2. *Dedication of river foreshore land to Council subject to a 50 metre wide easement for maritime vessel access as well as two easements for the drainage of water;*
3. *Development of a Vegetation Management Plan;*
4. *Completion of works described in the Vegetation Management Plan;*
5. *Conduct of maintenance works described in the Vegetation Management Plan;*
6. *Construction of a Bike/Pedestrian Oath through the river foreshore land*
7. *Construction of passive recreation facilities on the river foreshore land*
8. *Dedication of a drainage channel;*
9. *Construction and dedication of a road bridge over drainage channel, embankment and road to Brickmakers Drive;*
10. *Construction and dedication of Pedestrian Access to Newbridge Road and a pedestrian path within the public verge along the entire length of the land frontage to Newbridge Road; and*
11. *Dedication of an easement over land for access for the purpose of allowing Council to undertake maintenance to the river foreshore land.*

The VPA contains the timeframes for completion of the various items and are noted to be activated either by the registration of subdivision of residential land or on completion of embellishment of river foreshore land.

It is likely that the items outlined in the VPA would be carried out in conjunction with the construction of the proposed development, which will include:

- Removal of waste and fill, visible surface waste on foreshore, contamination;
- Stabilisation of the river bank/wall;
- Removal of noxious weeds;
- Restoration and enhancement of vegetation in keeping with indigenous species;
- Construction of the pathway along the entire length of the river foreshore area;
- Street furniture comprising of benches and covered areas; and
- Flood free vehicular access

6.5 Section 79C(1)(a)(iv) – The Regulations

As the proposal is designated development, the Secretary of the Department of Planning and Environment issued SEARs for the proposed development on 24 April 2015.

Council is satisfied that the EIS addressed all the requirements outlined in the SEARs.

7. THE LIKELY IMPACTS OF THE DEVELOPMENT

7.1 Impacts on the Natural Environment

7.1.1 Flooding Impacts

The site for the Marina is located within the Georges River floodplain, downstream of the Moorebank Voluntary Acquisition Scheme boundary. In a 100 year ARI flood, the maximum depth of flooding of the site is estimated to be in excess of 3.0m and under probable maximum flood (PMF) depth of inundation is approximately 8.0m.

The proposed development satisfies requirements of Clause 7.8 (3) of Liverpool LEP 2008 as outlined below:

Development consent must not be granted to development on flood prone land (other than development for the purposes of residential accommodation) unless the consent authority is satisfied that the development:

- a) Will not adversely affect flood behaviour and increase the potential for flooding to detrimentally affect other development or properties, and*
- b) Will not significantly alter flow distributions and velocities to the detriment of other properties or the environment, and*
- c) Will enable the safe occupation and evacuation of the land, and*
- d) Will not have a significant detrimental effect on the environment or cause avoidable erosion, siltation, destruction of riparian vegetation or a reduction in the stability of any riverbank or watercourse, and*
- e) Will not be likely to result in unsustainable social and economic costs to the flood affected community or general community as a consequence of flooding, and*
- f) If located in the floodway, will be compatible with the flow of flood waters and with any flood hazard on that floodway.*

The detailed flood impact assessment undertaken by the applicant demonstrated that the proposed development will not adversely impact flood behaviour and will not adversely impact on the flood behaviour on adjacent properties, which is considered satisfactory.

The proposed marina structures are located outside the main flood flow areas and are located in a flood storage area with low velocities. As such, there is no adverse impact on flood flow distributions and velocities. This has been demonstrated by the flood impact assessment undertaken by the applicant.

Flooding in the Georges River has a 12 hour warning time issued by the Bureau of Meteorology for severe flooding; as such considerable flood warning time will be available to allow for an orderly evacuation. The proposed marina will have a site emergency response flood plan and will be managed on site by the manager of the marina. In addition, there is refuge available in the upper floors of the main building, which is above the PMF level. The site emergency response flood plan would be formulated in detail as required by Council's proposed consent conditions.

The proposed marina development will incorporate rock walls around the marina basin perimeter and on the outer walls along the river. This will stabilise the banks and prevent erosion. As the flood velocities are low, any erosion potential would be low.

As the development does not cause any significant change to the flow distribution and velocities, the development would not induce any new instability in the riverbank.

There will be a low rate of siltation in the marina basin due to sediment laden flood flow. The estimated rate of siltation in the marina basin is approximately 120mm over 100 years. This will not cause any significant problems as a siltation allowance of 300mm has been incorporated into the selection of the design depth of the basin.

The proposed marina has been designed to minimise the potential flood related damages in terms of the building form, materials selection and adopted floor levels. Also, flood safety has been an important design principle. The proposed development is in accordance with the NSW Government Floodplain Development Manual and thus, along with the above design approach, ensures that the development offers a sustainable approach to the social and economic costs of the local and general community. Importantly, it does not require significant additional flood related infrastructure or resources to support the proposed development.

The development is not located within a floodway however it still is compatible with the flood flow and hazard. The buildings have been specifically located west of the main flood flows and designed to comply with its flood hazard and the associated requirements of LLEP 2008 and LDCP 2008 for example, the building structures will be constructed from flood compatible building components. The building design would incorporate piles and columns capable of resisting the flood forces. A well designed building would be able to resist the hydraulic loads from a flood in the proposed conditions.

Conditions have been recommended requiring a report to be submitted from a certified engineer at the construction certificate stage confirming these requirements have been satisfied.

The NSW Government's Flood Prone Land Policy and Floodplain Development Manual support the wise and rational development of flood prone land. The policy acknowledges that flood prone land is a valuable resource that should not be sterilised by unnecessarily precluding its development and that development should be treated on its merits rather than through the application of rigid and prescriptive criteria. The manual specifies a process for appropriate risk management which requires Councils to undertake a flood study followed by a flood management study which should lead to the formulation of a floodplain management plan.

Liverpool City Council has developed the Georges River Floodplain Risk Management Study and Plan in accordance with the requirements and guidelines of the NSW Governments Flood Prone Land Policy and Floodplain Development Manual. The requirements have also been integrated into the LLEP 2008 (Section 7.8) and the LDCP 2008 (Section 9 Flooding Risk). The DCP specifies an industry best practice approach based on a matrix system which provides guidance on allowable development depending on flood risk category, land use risk category and planning

controls.

The proposed marina is located westwards of the main river flood flow paths and protected from these flows by the high lands immediately north and south of the site. The detailed 2D flood modelling of the proposed development by Cardno reaffirmed this behaviour with low peak flow velocities in the 100 year ARI flood of mainly 0 to 0.3 m/s with some isolated areas of higher velocity up to 0.5m/s. The floodway was located in the main river with velocities around 0.5 to 2 m/s (refer to figure 3-18 in Cardno report). The proposed marina and the area to the south west is a flood storage area which also plays an important part in the flood behaviour. The proposed marina was designed to minimize any loss of flood storage. The Cardno report demonstrated that the proposed marina would not have a significant adverse impact on flood levels and velocities.

Therefore, flooding matters have been appropriately addressed to satisfy relevant legislation / guidelines and provisions of the Floodplain Development Manual and Council's Flood Policy.

The buildings have been specifically located west of the main flood flows and designed to comply with flood hazard and the associated requirements of LLEP 2008 and LDGP 2008. The development has addressed flood flow and flood hazards and risks.

The buildings will be open structures up to the flood planning level (FPL: 1% AEP flood level plus 0.5m freeboard) thereby limiting the force on the structures in a flood. The low velocities within the marina will also assist to alleviate the forces on the structures. The building design would incorporate piles and columns capable of resisting the flood forces. An engineer's report is conditioned to be provided to confirm the structures can withstand forces of floodwater, debris and buoyancy up to the FPL. In addition, all structures have flood compatible building components below the FPL.

The above requirements are required to be satisfied by a report from a certified engineer and to provide this evidence at the construction certificate stage. There is a consent condition requiring this design and a report from a certified engineer.

The site emergency response flood plan is to be formulated in detail as required in Council's recommended consent conditions prior to the issue of an Occupation Certificate. The approach and structure of this plan is discussed below.

The Plan would be managed on site by the manager of the marina. The leases for the onsite activities would identify the manager of the plan and provide the manager with authority to order various activities under the plan such as training drills and evacuations. Flooding in the Georges River has a 12 hour warning time issued by the Bureau of Meteorology for severe flooding. This warning can be issued electronically direct to the marina manager and other dedicated staff in the marina facility. In addition to this warning, there would be water readers located at the water's edge which issue an electronic warning and sound an audible alarm when the river reaches RL 1.3m AHD. The marina manager would then assess the flood risk and decide on the appropriate course of action.

In considering the appropriate actions, the manager would review whether advice has been received from the SES. The first action would be to clear any cars parked in the southern car park to areas offsite above the PMF level. If the flooding was considered to be severe then the manager would instigate an orderly evacuation of the site. The evacuation would involve:

- Locking down the moored boats;
- Storing any hazardous materials into designated areas above the FPL; and
- Requiring all persons to evacuate by the designated route and remove cars from the northern car park.

The marina pontoons and pile supports would be designed to cater for flood levels, flood flows and debris imposed by the 100 year ARI flood. A back up anchor pile and chain system would

hold in place the marina pontoons. All craft could be readily tied to the chain system with quick lock features when a severe flood warning was received. The marina manager would act as the flood warden and would have a number of designated assistant flood wardens. It would be the responsibility of the assistant flood wardens to ensure all people and cars in the facility have been evacuated.

The designated evacuation route would be east along the rising marina road to the proposed bridge to Brickmakers Drive and up to Nuwarra Road. Nuwarra Road is above the PMF flood level and provides opportunities for refuge. Flood warning signs would be provided in the car parks indicating that evacuation may be required and providing directions as to the evacuation route. Each lease provided in the marina would include a flood management package alerting leasees of the potential flood risk, the evacuation plan and the need to follow the directions of the flood warden.

The flood warden would be responsible for providing flood training at the beginning of each new lease and organising flood evacuation training for all employees on site at least once a year. The flood risk management on site is relatively straight forward as the people on site will be either employees or visitors to the site all under the control and management of the marina manager. There is also considerable flood warning time allowing for an orderly evacuation. Importantly, there is a failsafe back up evacuation plan which should not need to be used but if for some reason a person does not evacuate the site in time, there is refuge available in the upper floors of the main building in areas above the PMF flood level.

Accordingly, the marina development is supported subject to flood related development consent conditions being imposed. General Terms of Approval have been issued by the EPA, DPI Water and DPI Fisheries for the marina.

7.1.2 Air Quality

Todoroski Air Sciences conducted an air quality and greenhouse gas assessment in 2011. The assessment found that airborne emissions (particulates, odour and toxic substances) from the proposed operation will comply with NSW guidelines to prevent amenity and health impacts. Todoroski Air Sciences reviewed the air quality assessment in 2015 and confirmed that the project will comply with the relevant guidelines for amenity and health.

Mitigation measures to minimise potential impacts include:

- installation of vapour recovery systems to minimise the volatile emissions from petrol sales;
- implementation of measures to avoid potential odour nuisance regarding sewerage;
- implementation of measures to minimise the potential dust emission from boat maintenance operations; and
- the use of a paint booth with a small stack for the release of volatile organic compounds from paint operations.

General Terms of Approval have been issued by the EPA, DPI Water and DPI Fisheries.

7.1.3 Terrestrial Ecology

A flora and fauna assessment was completed in 2004 by Total Earth Care as part of the 2006 rezoning application. This information was incorporated and updated in the flora and fauna assessment undertaken for the Georges Cove Marina EIS in 2011.

Desktop ecological searches were completed within a 5 km radius from the project area in 2004 and 2011. Three field surveys (23 August 2004, 11 January 2005 and 5 September 2011) were also undertaken.

The 2011 assessment recorded 87 plant species, including 49 introduced species. Four plant communities were identified. Of the four, two met the description of endangered ecological communities (EECs) listed under the TSC Act: River Flat Eucalypt Forest and Swamp Oak Floodplain Forest.

An assessment of significance under Section 5A of the EP&A Act was not completed for the EECs as only a small area of each occurs within the project area and these areas are degraded. Four plant species of regional significance were identified: Blue Box (*Eucalyptus baueriana*), River Peppermint (*Eucalyptus elata*), Fringed Wattle (*Acacia fimbriata*) and Gosford Wattle (*Acacia prominens*). These occurred along the western and southern drainage channels. None of these are listed as Rare or Threatened Australian Plants (ROTAP) species or threatened species under the TSC Act or the EPBC Act.

No threatened fauna species were identified during the surveys. However, the riparian woodland along the Georges River was considered to provide potential habitat for number of species recorded in the adjacent Boral site (ERM 2002):

- Cumberland Plain Land Snail (*Meridolum corneovirens*);
- Eastern Bentwing Bat (*Miniopterus schreibersii oceansis*);
- Southern Myotis (*Myotis macropus*);
- Eastern Freetail-bat (*Mormopterus norfolkensis*);
- Yellow-bellied Sheathtail Bat (*Saccolaimus flaviventris*); and
- Grey-headed Flying Fox (*Pteropus poliocephalus*).

An assessment of significance under Section 5A of the EP&A Act was completed for potential impacts on the Eastern Freetail-bat and Yellow-bellied Sheathtail Bat. The assessment concluded that potential impacts would not be significant on these species.

The 2011 assessment concluded that the proposed marina is unlikely to have a significantly impact on native flora and fauna in the marina site.

EMM completed updated ecological searches on 8 April 2015 and prepared a supplementary flora and fauna assessment to accompany this application. An additional eight threatened species that could occur in the area were identified during the searches, which had not been considered in the previous assessments:

- Australasian Bittern (*Botaurus poiciloptilus*);
- Eastern Osprey (*Pandion cristatus*);
- Koala (*Phascolarctos cinereus*);
- Marsdenia viridiflora R. Br. subsp. viridiflora population;
- Netted Bottle Brush (*Callistemon linearifolius*);
- Scarlet Robin (*Petroica boodang*);
- Spotted Harrier (*Circus assimilis*); and
- Tadgell's Bluebell (*Wahlenbergia multicaulis*) population.

All the species listed above were considered to have low potential or are unlikely to be impacted by the proposed development.

Recent records also occur in proximity to the project area for the following species:

- Little Lorikeet (*Glossopsitta pusilla*) – recorded adjacent to the marina site;
- Varied Sittella (*Daphoenositta chrysoptera*) – recorded on the other side of the Georges River; and
- Little Eagle (*Hieraaetus morphnoides*) – recorded adjacent to the marina site.

As these species are highly mobile and habitat is available in areas adjacent to where they were recorded, the impacts of the proposed development on these species will be minimal.

Site surveys completed for the earlier assessments were not adequate to identify some of the threatened flora and fauna species that could occur. To compensate for this, and as no nocturnal surveys were completed, the assessment assumed that threatened microbats would occur at the marina site. It is considered that all threatened species that have the potential to occur at the site have now been adequately assessed and impacts are unlikely to be significant.

No significant impacts to threatened species, populations and communities are anticipated from the construction and operation of the marina. Therefore, an SIS is not required.

Councils Natural Environment Officer has reviewed the EIS and concludes that the application can be approved subject to conditions of consent. In addition, General Terms of Approval have been issued by DPI Water and DPI Fisheries and the EPA.

7.1.4 Aquatic Ecology

An aquatic ecology assessment was completed by Marine Pollution Research in (2010). The assessment included a review of literature and water quality monitoring data as well as field studies to identify the aquatic ecological attributes of the marina site and surrounds. The work conducted in 2010 was reviewed in April 2014 to determine if there have been any changes to the aquatic environment that would change the findings of the original assessment. The preliminary investigation of contamination also considered potential ecological risks, particularly to the aquatic and marine environment.

The aquatic ecology field surveys included:

- a preliminary survey on 11 August 2004;
- a detailed survey of aquatic habitats on 30 April 2007;
- an aquatic ecology survey of the quarry pond on 30 May 2007; and
- a short site visit on 14 April 2015 to inspect the current state of the aquatic ecology habitats.

Aquatic habitats identified at the marina site include:

- earth banks and masonry intertidal banks on the Georges River edge which support small stands of Grey Mangrove (*Avicennia marina*) and River Mangrove (*Aegiceras corniculatum*);
- intermittent shallow sub-tidal banks along the toe of the intertidal bank which support small patches of seagrass (*Zostera capricorni*);
- riparian cover along the unnamed creek to the south of the marina site which is freshwater for most of its length, with grassy banks; and
- three drainage ponds (these ponds have now been combined to form a single pond) which contains benthic sediment, water pools and pond riparian edge habitats.

One of the quarry ponds was brackish and supported vigorous growth of *Ruppia* spp. The quarry ponds also support a number of fish species including the Dusky Flathead (*Platycephalus fuscus*), Mullet (*Mugil cephalus*) and introduced species including the European Carp (*Cyprinus carpio*) and Mosquito Fish (*Gambusia affinis*) that also occur in the Georges River.

No species listed under the FM Act or the EPBC Act were noted or observed during the field surveys. Given the aquatic habitats available, none are considered likely to occur. While individual saltmarsh plants were identified along the margins of the internal waterways, these were not considered to form a viable saltmarsh community, which would meet the description of the EEC listed under the TSC Act.

While the Georges River once supported a thriving oyster farming industry there are now no aquaculture activities in the Georges River. The closest aquaculture operations are located in Botany Bay - native Sydney Rock and triploid Pacific oyster farming in Woollooware Bay and Mulloway farming off Silver Beach.

It was concluded in 2010 that the marina can be constructed and operated without any significant impact on river water quality. This was confirmed by the 2014 review. There may be some impacts from the construction of the marina to aquatic ecosystems and species, particularly from opening the pool to the river. However, the proposal will result in an overall increase in the area and diversity of aquatic habitat in the locality.

It is also noted that General Terms of Approval have been issued by the EPA, DPI Water and DPI Fisheries.

7.1.5 Water Quality Impacts

A water quality assessment was completed for the marina site and proposed development (Worley Parsons 2010). The Georges River encompasses a large part of the Sydney urban area catchment and, therefore, receives pollutant loads from urban runoff and sewage overflows/discharges from the sewerage system and sewage treatment works.

Other than the Georges River or groundwater inflow (see below), potential pollutant sources in the marina will be from runoff from the land, copper from antifouling paints on the hulls and uncontrolled discharge of sewage from craft while at the marina berths (discharge of sewage will be banned). Therefore, the key pollutants considered in the water quality assessment were copper, suspended solids, nitrogen and phosphorus. Water quality in the marina was modelled for these parameters. Particular attention was paid to stormwater quality as well as the impact of copper leaching from antifouling. Water quality trigger values were identified with reference to the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC/ARMCANZ 2000).

‘Flushing’ is the exchange of water between a marina and the river, and it is an important mechanism for removal of pollutants from marinas. Natural flushing is driven by tidal flows, wind, density currents, stormwater inflows and diffusion. The impact of these discharges at Georges Cove Marina will depend upon the extent of flushing of the marina basin. Tidal and stormwater flows will be the most important flushing processes for the proposed marina. The hydrodynamic modelling indicated that the marina basin, layout and entrance configuration will not constrain tidal flushing.

Based on the conservative (effectively, worst-case) modelling, the labile copper concentration in the marina basin is predicted to meet the ANZECC/ARMCANZ (2000) trigger value for the protection of 90% of marine species and to be just above the trigger value for the protection of 95% of marine species. It is predicted that the copper concentrations in the marina basin will be slightly lower than the concentrations recorded in the Georges River close to the marina site. The conservative analysis shows the development of the marina would not have a significant impact on the existing copper concentrations in the Georges River.

With the implementation of the proposed environmental management measures, and the Remediation Action Plan, the proposed marina will not degrade water quality of the Georges River.

Council’s Environmental health Officers have reviewed the application and raise no objections subject to conditions of consent. Similarly, General Terms of Approval have been issued by the NSW EPA, DPI Water and DPI Fisheries.

7.2 Impacts on the Built Environment

7.2.1 Traffic, Parking and Vehicular Access Impacts

Existing Access

Newbridge Road is adjacent to the northern boundary of Lot 7. It provides an east-west arterial road past the proposed development. At present, access to the quarry site is via a left in, left-out access at Newbridge Road. This incorporates a RMS approved deceleration and turn in lane.

There is adequate space on site to enable heavy vehicle manoeuvring and parking for all the quarry staff and visitors. No traffic issues have been identified in relation to the existing operations.

Site Access

Access to the marina site will be via an approved link road and road bridge from Brickmakers Drive to the site. It is proposed to construct an intersection between the link road and Brickmakers Drive as part of this application. This intersection is approximately 300m south of Newbridge Road and is proposed to be a signalised intersection. Further discussion of this element of the proposal is identified below.

All internal site roads will comply with Council's design standards and AS 2890.1.

The construction of the road bridge connecting from the subject site to Brickmakers Drive was approved by Council on 24 April 2007 in DA-1552/2006 (as modified). An easement burdens Moorebank Recyclers land (Lot 6 DP 1065574) for access from the site to Brickmakers Drive.

The subject application does not seek consent for the use of the bridge as this aspect has been considered by Council in DA-61/2014.

Traffic Generation

The current (June 2015) background traffic volumes on Brickmakers Drive, Newbridge Road and Governor Macquarie Drive are approximately:

- 54,000 vehicle movements daily for Newbridge Road, east of Governor Macquarie Drive;
- 40,000 vehicle movements daily for Newbridge Road, west of Governor Macquarie Drive;
- 16,000 vehicle movements daily for Governor Macquarie Drive, north of Newbridge Road; and
- 12,500 vehicle movements daily for Brickmakers Drive south of Newbridge Road.

There will be a total of 637 car parking spaces at the marina site. This parking will be a combination of 267 surface level car parking spaces located in parking areas A, B and C and 370 undercover car parking spaces located in two basement car park levels within the Maritime Building.

The proposed development of the marina site including boat storage, boat showroom, function centre, cafe, clubhouse and boat repair workshop uses will generate approximately 1,289 additional daily traffic movements. It is estimated that there will be approximately 98 additional car traffic movements during the weekday morning peak hours and 197 additional car traffic movements during the weekday afternoon peak hours. During the later evening peak periods on both Friday and Saturday evenings, there may be higher peak hour traffic movements. These will primarily be generated by the site club/restaurant and function centre uses which may generate up to 220 hourly car traffic movements.

Future Traffic Volumes

The proposed Georges Cove Marina development will increase traffic volumes by about 1% on Newbridge Road, Governor Macquarie Drive and the section of Brickmakers Drive south of the link road intersection. This will have a negligible impact on traffic flows, traffic safety and residential amenity along these routes.

The proposed development will increase traffic volume by about 9.3% on the 300 m section of Brickmakers Drive north of the link road intersection. However, the traffic increases will remain well within the typical daily traffic capacity for Brickmakers Drive as a continuous two lane road. Brickmakers Drive will not require additional traffic calming or other traffic management measures.

Brickmakers Drive / Link Road Intersection

NSW Land and Environment Court proceedings (NSW LEC 30141, 2013) considered an intersection design prepared by Cardno (2013a) for the link road intersection on Brickmakers Drive. The proposed link road and its intersection with Brickmakers Road will be physically identical to that considered by the NSW Land and Environment Court (i.e the layout prepared by Cardno).

It is important to note that the DA for the Marina seeks consent for the construction and use of the off-site intersection of Brickmakers Drive and the road accessing the site.

The Planning Assessment Commission (PAC) considered this same issue when deciding to approve Moorebank Recyclers development application for a Resource Recovery Facility on Lots 308, 309 and 310 DP 1118048.

The PAC imposed the following condition on Development Consent MP 05_0157:

Operational Traffic

- C20. The Proponent shall construct the new access and intersection to Brickmakers Drive in accordance with the requirements of condition C21 and to the satisfaction of Council, prior to the commencement of operation.
- C21. The intersection shall be controlled by a roundabout or alternative treatment, to safely facilitate access from the link road onto Brickmakers Drive. The intersection treatment shall be:
- a) designed by a suitably qualified person, in consultation with the Proponent, RMS and Council;
 - b) designed based on the most recent traffic data and include consideration of additional measures to be implemented to ensure traffic slows and adequate sight distances are able to be met;
 - c) designed with consideration given to the plans of the bridge and associated ramps (Appendix D); and
 - d) endorsed by a suitably qualified practitioner, in accordance with AS 2890.1 - 2004 and AS 2890.2 – 2002.

Council does not consider a roundabout as a suitable traffic control device for this intersection. This is due to the anticipated traffic volumes along Brickmakers Drive and that generated from the approved materials recycling facility, the marina and the residential development in the Moorebank East release area.

As discussed above, Council's preference is for traffic signals at this intersection. However, the RMS will not support traffic signals until such time as traffic volumes warrant it. It is proposed to address this issue via conditions of consent as discussed above.

The impacts of additional traffic on the link road and Brickmakers Drive intersection have been assessed using estimated hourly development traffic volumes for the normal weekday morning and afternoon traffic peak periods and the Friday and Saturday evening peak recreational traffic flows. The assessment included the additional traffic flows which would be using Brickmakers Drive from the completion of the Georges Fair residential development (967 dwellings) and the residential and clubhouse traffic from the recently approved New Brighton Golf Course development.

The intersection traffic assessments for the marina development showed that the intersection will operate at Level of Service A for the morning peak hour, afternoon peak hours and Saturday late evening peaks (with the average intersection traffic delay for all movements of 5.4, 10.1 and 1.5 seconds respectively).

The future intersection weekday peak hour degrees of saturation will be between 0.588 and 0.674 during the morning and afternoon peak hours and will be lower during the late evening peaks.

The assessments of the potential cumulative impacts of the Georges Cove Marina, Georges Cove residential development and the potential materials recycling facility found that the intersection will operate at Level of Service A but with marginally higher degrees of saturation and marginally longer queues.

Conclusion

The proposed development was reviewed by Council's Traffic Engineering Department which concluded the following:

The traffic report accompanying the development application has identified that the proposed development will result in an increase of approximately 1,289 daily traffic movements with a corresponding peak traffic volume of 220 vehicles per hour during Friday evenings and on weekends.

The significant traffic impact of the proposed development would be at the proposed intersection with Brickmakers Drive as well as traffic conditions along Brickmakers Drive. To provide a safe and efficient intersection the development is proposing to signalise the intersection with Brickmakers Drive. This requires RMS approval and in particular whether the intersection would meet the RMS warrant for traffic signals.

Should the traffic signals be supported, it should be installed at full cost to the developer.

As required by SEPP (Infrastructure), the application has been referred to Roads and Maritime Services. The RMS do not support the installation of traffic signals at the Brickmakers Drive intersection with the link road at this point in time. The traffic signal warrant assessment provided by the applicant identified that the warrants for traffic signals will be met once the marina development and the residential development to the north are completed.

The RMS have instead agreed to allow the developer to install traffic signal support infrastructure including cabling and conduits in anticipation to allow the signals to be installed once the warrants for traffic signals have been met.

Council's Traffic and Transport department are satisfied with this approach and have recommended two conditions of consent. The first condition is that prior to the issue of an occupation certificate for the marina, the intersection with Brickmakers Drive must be upgraded in accordance with the Cardno plan with traffic signal support infrastructure installed. The second condition is that a bond is to be paid to Council for Council to install the traffic signals once the traffic signal warrants have been met.

In consideration of traffic impact, the proposed development is considered to be satisfactory.

7.2.2 Visual Impacts and Urban Design

The marina site is located on a broad, low-lying floodplain of the Georges River. Currently, the northern portion of Lot 7 is used for processing and recycling activities and the southern portion (i.e the marina development site) is used for sand extraction. The marina site has been cleared of vegetation except along the site boundaries. As a result, the landform of the marina site has

been extensively modified and has low visual amenity as a result of clearing and existing land uses.

The marina site has low external visibility due to the relatively level landscape in which it is located, as well as the presence of screening vegetation along the property boundaries and the river. This screening prevents views to the site from surrounding land uses and the river.

A visual impact assessment was undertaken by Richard Lamb and Associates in 2010. The assessment included the development of computer generated photomontages using the design drawings and plans for the marina site. The photomontages were used to assess the potential visual impacts of the proposed development. Given the recent residential development to the west of the site, an Addendum Visual Impact Review was prepared by Richard Lamb and Associates in 2015. This included re-visiting the marina site and the locality and assessing the potential for change in impact on views from the selected locations.

The following potentially impacted vistas were identified:

- the Georges River itself or from the banks of the river directly to the east of the development; and
- from the Georges Fair residential development directly to the west of the marina site.

The visual assessment concluded that the overall visibility of the structures and activities on the project area would be minimal based on the heights of the proposed buildings. Mitigation of these minor impacts will include screen planting using appropriate tree species on the eastern boundary of the marina site adjacent to the river as part of foreshore embellishment and the use of appropriate colours and materials for the Maritime Building and Private Marina Clubhouse.

Overall, the proposed development will result in an improvement to the vista when viewed from the river. In this regard, it is considered that the development would have a positive effect on the visual qualities compared to the site's current use.

The 2015 review of the visual assessment found that project area and proposed development remain the same as assessed in 2010, aside from minor changes as a result of continued quarrying activity. The only significant change in the visual environment has been the development of the Georges Fair residential estate to the west, the residential component of which is nearing completion.

The review confirmed that the proposed development will have minimal external visibility. The Maritime Building will be partly visible over the trees on the boundary between the Georges Fair residential estate and the proposed development. However, the overall visibility from this area will be lower than had been assessed in 2010 as a result of predominantly two-storey residential development on the Georges Fair residential estate which minimises potential views and confines them to the fringe along a short section of Brickmakers Drive.

The continued development of Georges Fair will further reduce the visual exposure of the proposed development compared to the 2010 assessment. Therefore the visual impacts of the proposed development remain low to moderate.

Design Excellence Panel

The proposed development was reported to Council's Design Excellence Panel who raised no issues with the proposed development.

The proposed development is considered to be satisfactory in respect to urban design and would exhibit a modern and contemporary design that responds to its surrounds while provide functionality. In addition to the passive recreation offered by the proposal, positive public benefits would be achieved by intended landscaping of the riverbank which is the subject of a VPA, and

which provides for pedestrian and cycle paths.

7.2.3 Noise Impacts

The marina site is surrounded by noise sensitive land uses including residential properties and recreational land. The Georges Cove residential estate is planned for the area immediately north of the marina.

The applicant conducted unattended and short-term operator attended noise surveys to validate previous noise assessments of the area and to provide background noise levels for the assessment. It was noted during operator attended monitoring that noise levels in the area were dominated by distant and local traffic, typical suburban noise, occasional aircraft noise and natural noise sources such as birds and wind in trees. The monitoring shows that background noise levels during the day decrease as distance from Newbridge Road increases. Background noise levels during the night stay consistent irrespective of the distance from Newbridge Road.

Council's Environmental Health Officers reviewed the noise impacts of the proposed marina. Their comments are summarised below:

Potential noise issues associated with the site include: construction activities; Marina operations including boat movements and refuelling; music and patron noise from the restaurant and function centre; and road traffic noise.

Noise emissions were assessed at the nearest sensitive receivers (R1-10). Attended and short-term unattended noise surveys were completed to validate background noise levels detailed by Wilkinson Murray (2012). Unattended noise monitoring was undertaken between 20 May 2015 and 4 June 2015. Data affected by adverse meteorological conditions was excluded from the assessment.

Project-specific noise levels were derived as the most stringent of the intrusive and amenity criteria. Consequently, the intrusive criteria formed the noise goals for the development. Consideration was also given to sleep disturbance, traffic noise and OLGR noise criteria in assessing the impacts of the development. Predicted noise levels from the site were based on meteorological conditions provided in Table 3.5 of the report.

Operational noise levels satisfied sleep disturbance criteria at all assessment locations. Predicted noise levels also generally satisfied the INP PSNL during all periods, with the exception of R10 during the day and evening periods. These exceedances were attributed to boat movements directly south of the assessment location.

Exceedances were also noted for energy in the 31.5 and 63 Hz octave band centre frequencies for OLGR criteria. EMGA Mitchell McLennan Pty Limited suggested that this exceedance was due to low frequency noise from the function centre and could be corrected with improved glazing and ongoing monitoring of the public address system.

Exceedances of the OLGR criteria at R10 may be reduced by limiting patron numbers on the northern balconies during the evening and night. Management and mitigation measures for construction noise were recommended. Predicted traffic noise levels will satisfy the RNP criterion. The following operational noise management and mitigation will be adopted:

- *A two metre high acoustic barrier will be constructed to the west of the Marina Clubhouse car park;*
- *Partial acoustic screening will be installed on the northern balconies of the Marina clubhouse and Marina building;*
- *The public address system in the function centre will be fitted with a noise limiter. Alternatively improved glazing will be used in the function centre; and*

- A noise management plan will be implemented outlining procedures for patron management.

Similarly a noise management plan is required for construction noise. EMGA Mitchell McLennan Pty Limited concluded that predicted operational noise levels would comply during calm and worst-case meteorological conditions. Furthermore, maximum noise level events during the night-time period are predicted to satisfy the NSW EPA sleep disturbance criteria. The remaining noise impacts attributed to construction activities, the function centre and its patrons will be alleviated by appropriate management strategies.

Given the mitigation measures proposed, noise impacts from the proposed marina are considered to be satisfactory. General Terms of Approval have also been issued by the EPA, DPI Water and DPI Fisheries.

7.2.4 River Navigation Impacts

The subject application was referred to the Roads and Maritime Service and no objection has been raised.

Rock armouring will be installed along the marina foreshore to protect the bank against the effects of waves and vessel wake. Armouring will span approximately 550 m along the marina foreshore and there will be a 40 m wide marina entrance.

A floating silt curtain along the length of the works will be installed to contain and control silt and sediment runoff during construction. The silt curtain will be approximately 3–5 m from the shore. Georges River is approximately 125 m wide at this point and therefore, it is unlikely that commercial or recreational boating activities will be affected by these works. The silt curtain will be marked by buoys and, being close to the bank, will not be a significant safety hazard.

The physical layout of Georges Cove Marina will have very little impact on river navigation as the entire development will be outside of the Georges River channel. No structures of any kind will be erected in the river channel.

Currently, boats are launched backwards at Davey Robinson boat ramp. These craft either remain at idle in the river channel while the trailers are parked or manoeuvre across to the public jetty where they are tied up to await the return of the driver after parking the vehicle and boat trailer. In either case, a considerable portion of the channel can be occupied with boats manoeuvring at low speed, often in reverse. These boats present safety risks in the river channel.

Boats entering the river from the marina will do so via an entrance about 40 m wide. They will be travelling forward, will not need to wait in the river for the car driver to return, and will quickly integrate with any other boat traffic on the river (subject to speed limits).

As this stretch of the George's River is not speed limited, it is considered appropriate that a 'Boating Management Plan' be conditioned as part of the consent which will address, but not be limited to:

- internal speed limits within the marina basin;
- identification of laneways for navigation throughout marina basin with respect to type of size of watercraft; and
- identify appropriate means of access/egress from the marina basin to the Georges River as well as speed.

It is considered that the proposed marina would operate satisfactorily with appropriate measures in place which address river navigation as well as management practices within the basin for safety of all users.

7.2.5 Heritage Impacts

Aboriginal heritage

In 2004, Mary Dallas Consulting Archaeologists undertook an Aboriginal archaeological assessment and field survey of the project area accompanied by a site officer from the Gandangara Local Aboriginal Land Council (GLALC). No Aboriginal archaeological sites were identified in the project area during background research or the survey. Due to past land use disturbances and major sub-surface destruction on the project area, it was concluded that there was little to no potential for buried deposits.

The applicant reviewed the 2004 assessment in April 2015 and completed an updated search of the Aboriginal Heritage Information Management System (AHIMS) register. The search of AHIMS register covered a 1 by 2 km area. This confirmed that Aboriginal sites have not been recorded, and are not likely to exist, in the project area. No further field survey was required because the project area is the same as that surveyed for the 2004 assessment.

The 2004 assessment and updated AHIMS register search fulfil the requirements of the due diligence guidelines. Therefore, no further investigation is required for the project area.

Council's heritage officer concurs with this assessment.

Non-Aboriginal heritage

A non-Aboriginal heritage assessment was undertaken by Heritech Consulting in 2003. The assessment involved historical research and a field survey of the project area. The marina site was noted to be extensively disturbed by previous operations on the north of the marina site and sand processing operations on the south of the marina site. No historic items or areas of archaeological potential were identified in the project area.

The applicant reviewed the 2003 assessment in April 2015. This included searching relevant statutory historic heritage databases to determine if protected heritage items have been listed in the project area. Aerial imagery from 1943 was referenced to identify any historic items or potential archaeological deposits. No historical items were identified within the project area.

No listed historic heritage items will be impacted by the project. It is unlikely to have archaeological potential as the project area has been highly disturbed. Therefore, no further investigation or field surveys are required.

Council's heritage officer concurs with this assessment.

7.3 Social and Economic Impacts

The proposed development is considered to provide for substantial social benefit. These benefits include:

- The proposal would see the cessation of extractive industries on the subject site which has degraded the land and rendered it inaccessible to the public for a number of years. The current use is incompatible with the surrounding context of the area which is predominantly characterised with residential development and natural vegetation. The current impact of traffic generation from heavy vehicles and noise, dust and air emanation would cease on conclusion of extractive industry activities at the site.
- The approval granted for the site enables the rehabilitation of the land with waste material to facilitate the formation and return of the land to its natural landform. Waste management uses would not be carried out as a result of the proposed development and would therefore remove the continued environmental impact of what is essentially an industrial use.

- The proposal is considered to be a significant project for Liverpool and would exhibit a high quality design benchmark and be an iconic development for the local area and the greater region.
- The proposed development represents a significant opportunity to reactivate an inaccessible and highly degraded stretch of the Georges River and would seek to return the natural landscape to the community through a development.
- The development would provide for numerous active and passive forms of recreation that represents substantial economic and social benefits for the Liverpool and the greater community.
- The development encourages a new recreational facility to the area with casual public berths for small craft and water taxis to pick-up and drop-off passengers and access provisions from the marina facilities. Public access to fuel and sewage pump out facilities would be made available to boat users and thereby encourage patronage to the area.
- The development would be made accessible for all people and those with a disability.
- The development would increase the environment quality of the area through managed revegetation with species endemic to the area. The ongoing management of these areas along the river foreshore coupled with the provision of embellished public open space in the form of pedestrian and cycleway, bridge and street furniture would provide a sense of place for the area and create ownership of residents and users of the development.
- The proposed development is anticipated to increase economic activity of retail sales of marine equipment, leisure activities and recreational uses by way of function/receptions spaces, food and beverage option both casual and high-end and storage of vessels.
- The number of construction employees would vary over the duration of the project dependant on the particular activities taking place at any one time. It is expected that between and 35 equivalent full time construction jobs would be created over the construction period.
- The proposed would increase local employment opportunities in management, brokerage and chandlery sales, marine staff, workshop, the function centre and food and beverage operators.

8 SECTION 79C(1)(C) – THE SUITABILITY OF THE SITE FOR THE DEVELOPMENT

The land is zoned for open space both in public and private recreation. The proposed development is in keeping with the vision of the site as anticipated in the zoning of the land and support and complements the surrounding uses identified for the Moorebank East precinct.

The proposed development has demonstrated that the potential impacts have been addressed and a number of measures and safeguard are to be implemented to manage any impacts. The development would seek to embellish the area both in terms of the natural and built environment through the agreement of Council and the property owner with works that would see the land return to the community with a high quality outcome.

The proposed development represents an opportunity to rehabilitate the highly degraded site which is currently used for extractive industry. The cessation of this industrial use and expedition of the rehabilitation of the site is a significant benefit for the land and would fast track the use of the land for the benefit of the community. Accordingly, it is considered that the proposed development is suitable for the site.

9 SECTION 79C(1)(D) – ANY SUBMISSIONS MADE IN RELATION TO THE DEVELOPMENT

(a) Internal Referrals

The following comments have been received from Council's Internal Departments:

Internal Department	Status and Comments
Building Department	No objection raised, subject to conditions.
Heritage Officer	No objections raised. Not integrated development under the NPW Act.
Land Development Engineering	No objection raised, subject to conditions.
Traffic Engineering	No objection raised, subject to conditions.
Environmental Health	No objection raised, subject to conditions.
Natural Environment	No objection. The general terms of approval issued by the NSW EPA, DPI Water and DPI Fisheries provide sufficient opportunity to address matters relating to aquatic ecology and vegetation.
Property Services	No objection raised.
Economic Development	Support the proposal
Flooding and Drainage	No objection raised, subject to conditions.
Design Excellence Panel	No objection raised.
Strategic Planning	No objection raised.

(b) External Referrals

External Authority	Status and Comments
Department of Primary Industries – Water – <i>Water Management Act 2000 (Nominated Integrated Development)</i> ;	General Terms of Approval issued
Environmental Protection Authority – <i>Protection of the Environment Operations Act 1997 (Nominated Integrated Development)</i> ;	General Terms of Approval issued
Department of Primary Industries - Fisheries	General Terms of Approval issued
Roads and Maritime Services (RMS)	No objection raised subject to traffic signals only being installed at the intersection of link road and Brickmakers Drive once warrants for traffic signals have been met. No objection subject to condition relating to a Boating Management Plan.

Police	No objection raised subject to conditions.
Endeavour Energy	No objections raised
Sydney Water	No objections, subject to conditions
Department of Planning and Environment	SEARs issued. No matters of State Significance raised in submissions.
NSW Rural Fire Service	No objections raised. Bushfire Safety Authority issued.

(c) Community Consultation

The subject Development Application was placed on public exhibition on two separate occasions from:

- 4 November 2015 to 4 December 2015 (30 day exhibition period with advertisement run twice as required by the Regulations for a Designated Development)
- 4 May 2016 to 3 June 2016 (30 day exhibition period with advertisement run twice as required by the Regulations for a Designated Development)

The application was re-exhibited due to the submission to Council of additional information which included clarification of the development components, a Supplementary Preliminary Investigation, Remediation Action Plan and a Bushfire Report.

Each exhibition period observed a minimum 30 day public exhibition period in accordance with the Environmental Planning and Assessment Regulation 2000 and the Liverpool Development Control Plan 2008. It is also noted that the application was exhibited at the office of the Department of Planning and Environment.

A total of eight (8) separate submissions were received from seven parties.

Submission 1: A letter of support has been received from the Moorebank Residents' Action Group, which represents more than 800 local residents. The reasons for support are:

- The development is in line with the amenity of the Moorebank region, particularly the area surrounding Georges Fair and the newly developed New Brighton Golf Course development;
- The marina with the function centre, dining outlets and public spaces would enhance the already vibrant community in Moorebank and allow public access to the river.

Comments:

The assessment of the application concludes that the proposed development is in line with the anticipated amenity for the area and that the proposal will enhance the area.

Submission 2: A letter of support has been received by another local resident. They believe the development will be great for the west but there should be an 8Kn speed limit on the river to reduce the risks of the river bank being eroded by boat wash.

Comments

Navigation Impacts has been addressed above and a boating management plan has been conditioned. Speed limits on the Georges River is a RMS matter.

Submission 3: A letter of support was received from Flower Power to the north east of the site. They state they are generally supportive of the proposal however are concerned that a future proposed collector road identified in the Moorebank East DCP should be conditioned to be built. They are also concerned that the proposed road will be used by Marina patrons.

Comments

The DCP collector road will be conditioned to be constructed on any future subdivision application of Lot 7 DP 1065574. The traffic using this proposed road once constructed may well be Marina traffic, traffic entering the future residential development on the northern part of Lot 7 or traffic accessing the future development site on the Flower Power site, or indeed through traffic. This is to be expected, given the role of the proposed road as a collector road.

Submission 4: Following the exhibition of the application for the second time, another submission was received, reinforcing the need for the DCP collector road to be conditioned as part of any development application on either the Benedict site or the Flower Power site.

Comments

The DCP collector road will be conditioned to be constructed on any future subdivision application of Lot 7 DP 1065574. The traffic using this proposed road once constructed may well be Marina traffic, traffic entering the future residential development on the northern part of Lot 7 or traffic accessing the future development site on the Flower Power site, or indeed through traffic. This is to be expected, given the role of the proposed road as a collector road.

Submission 5: A submission was received from Bankstown City Council. The concerns raised by the Council are:

- Any engineered hard surfaces on the Liverpool LGA side of the Georges River will increase the velocity of water on the foreshore land on the Bankstown LGA side, and that frequent boat movements will cause wake which will exacerbate existing bank erosion. Bankstown Council seeks the assessment of potential impact on the foreshore riverbanks along the Bankstown LGA side.
- Bankstown Council is concerned that the development will cause negative impacts on the surrounding regional road network, especially the intersection of Milperra Road and Henry Lawson Drive. Bankstown Council states that Transport for NSW / RMS must provide solutions that will improve the performance of the intersection.
- Bankstown Council states that the EIS does not reference the Georges River Estuary Coastal Zone Management Plan, Liverpool Councils Water strategy 2004, Draft Regional Boating Plan Botany Bay, Georges River and Port Hacking Region and Boating Safety Plan for Botany Bay, Georges River, Woronora River, Cooks River.

Comments

A detailed assessment of the impacts of the marina on traffic in the surrounding area is provided in the EIS. The marina will increase traffic by approximately 1% on Newbridge Road east of the intersection of Brickmakers Drive and Newbridge Road. This will not alter the performance of the Milperra Road / Newbridge Road and Henry Lawson Drive intersection. The general performance of this intersection is a matter for RMS consideration.

The existing Georges River bank on the development site is largely devoid of vegetation but will be rehabilitated and stabilised as part of the marina development to re-establish riparian vegetation. The impact of the project on bank stability was assessed by Worley Parsons. It was found that:

The marina would result in additional craft using the adjacent stretch of water in the Georges River compared to current conditions, however this would not necessarily impact the river banks, as the reach is already currently heavily used at high speeds.

The marina design incorporates bank stabilisation works (on the Liverpool LGA side of the river), which would be an improvement on the existing scenario, where the river bank is eroding. The bank stabilisation works would be undertaken in consideration of the boat generated waves in the river, hence resulting in a more stable stretch of foreshore.

Council's engineers have raised no concerns about the potential for an increase in bank erosion on the Bankstown LGA side of the river. It is also noted, that GTAs have been issued by DPI Water.

Bankstown Council also raised concerns that the application does not reference the Georges River Estuary Coastal Management Plan. The EIS does reference this plan in Table 3.2. In addition, the Council raised concerns that the EIS did not consider other documents as described above. These are all non-statutory documents which the SEARs did not require to be addressed.

Submission 6: A letter of support was received from a local resident who believe the marina will improve the areas demographic and sense of belonging.

This letter of support is noted.

Submission 7: A letter not stipulating either support or objection to the application has been received by a local resident. The concerns raised in the submission are centred on development of flood prone land and potential liability of developing this land in relation to damage caused in flood to the marina and properties downstream of the marina.

In relation to effects on downstream property owners from the marina being developed on flood prone land, the flooding assessment above has addressed this issue.

Submission 8: Moorebank Recyclers Pty Ltd

A detailed submission in opposition has been received from Moorebank Recyclers Pty Ltd who own property to the immediate south and west of the subject site being Lot 6 DP 1065574.

The issues raised by Moorebank Recyclers and Council officers' response are detailed below.

- No assessment of the approved Materials Recycling Facility

Moorebank Recyclers have stated that they have not been consulted during the preparation of the application. The applicant has stated that proper and adequate consultation with Moorebank

Recyclers was facilitated in a letter to it by the applicants planning consultant EMM on 6 May 2015 asking it whether it wished to raise any objection to the proposal.

Moorebank has, in preparing a detailed objection to the application, then reviewed the exhibited EIS. It has not been deprived of an opportunity to make an objection or to raise queries in respect of the ambit of the application.

In *Leichhardt Municipal Council v Minister for Planning* (1992) 78 LGERA 306, the Court of Appeal considered the requirements of consultation under s.45 of the EP & A Act (in its then form) and stated:

"The Parliament must be taken to have chosen the word "consultation" conscious of its use historically in this legislation. In this case proper consultation pursuant to s.45 required that the Council know what was proposed before it was expected to give its views and that the Council be given a reasonable opportunity to state its views."

In coming to that view the Court cited with approval what had been said in the English case of *Rollo v Minister of Town & Country Planning* [148] 1 All ER 13 at 17:

"A certain amount has been said as to what consultation means. In my view, it means that, on the one side, the Minister must supply sufficient information to the local authority to enable them to tender advice and, on the other hand, a sufficient opportunity must be given to the local authority to tender that advice."

When one considers the history of this application (including the stark similarity between the previous application and the Application and takes into account Moorebank's actions in reviewing the EIS and making an objection it is clear that consultation has occurred.

As a result of certain minor modifications to various chapters of the EIS, the application was re-exhibited to ensure any further comments could be made.

The Materials Recycling Facility on Lot 6 DP 1065574 was approved by the Planning Assessment Commission on 11 September 2015. The marina development application has been assessed against the relevant environmental planning instruments and policies and has been found not to have any detrimental impacts on the environment or neighbouring properties subject to conditions of consent.

The submission has not indicated how they believe the proposed marina will impact on the approved materials recycling facility. It is also noted that this approval is subject to an appeal in the Land and Environment Court.

- The land the subject of the application

Moorebank state that the subject site should also include the access road from the bridge to the marina site. The application was amended to include the access road from the bridge to the marina site. These amendments were included in the re-exhibited application.

- Access

Moorebank raise concerns that the EIS provides no detail of the access arrangements to the site and no assessment of the impact on the safety and function of the road network. They also state that the application does not indicate a timeframe for the construction and dedication of the road bridge.

This is inaccurate. The EIS contains a traffic and parking assessment that was exhibited and this report provides a detailed assessment of access and traffic impacts.

Development consent for the use of the road bridge is not sought in this application as this has been approved by Council in DA-61/2014. The EIS, however, clarifies the role the approved road bridge has in securing access to the site. Conditions have been recommended regarding access, particularly that no occupation certificate can be issued until such time as the road bridge is constructed and opened to traffic.

Moorebank also state that the road bridge traverses the pan handle owned by Moorebank and it does not consent to the transfer of ownership of this land.

It is assumed that Moorebank is referring to the requirement in the existing VPA between Council and Benedict that requires Benedict to dedicate the road bridge to Council. Moorebank Recyclers do not agree to the dedication of the portion of the bridge crossing their land.

Council is in discussions with Benedict to address this objection which may also include the Council compulsorily acquiring the stratum above Moorebank's access handle to allow the dedication of the road bridge as public road. However, this has no impact on the construction of the bridge and legal access to the marina site. If a portion of the road bridge cannot be dedicated, then Council may look at varying the VPA accordingly. This is considered unlikely.

Moorebank also state that there is no consent to use the road bridge to access the development as that consent (DA-61/2014) referred to a marina development DA-846/2012 which was declared invalid by the Court. Whilst the DA referred to was declared invalid, there has been no such declaration from the Court for DA-61/2014. The description of the development of DA-61/2014 is the subject of a s96 modification application to more accurately reflect the use of the bridge to provide access to Lot 7 DP 106557 rather than referring to a specific DA number for a proposed marina.

Moorebank also raise concerns about the proposed installation of traffic signals at the proposed link road and Brickmakers Drive intersection. Council's traffic department support traffic signals at this intersection, however the RMS will not approve traffic signals at this point in time as the traffic warrants have not been achieved. Conditions of consent have been recommended for a channelised intersection design to be approved prior to the issue of a construction certificate. Moorebank also raise concerns that no detail of the intersection at the junction of the eastern end of the road bridge and the site is provided and no details have been provided of the road on the western boundary of the site.

The junction of the link road with the Marina access road will be a 'T' intersection in the interim. Council is in discussion with Mirvac who is developing the northern portion of the site about appropriate intersection treatments at this intersection as part of the development application for the subdivision of the site which is to be lodged with Council shortly.

Council's preference longer term is for this intersection to be controlled by a small roundabout and this will form part of a future development application involving the residential subdivision of the site.

Moorebank also raise the question as to whether the road bridge is to be a public road or whether any road accessing Brickmakers Drive from the development site for the purposes of the proposed development is permissible with development consent pursuant to the LLEP 2008.

The bridge is to be a public road and the Council has entered into a VPA with Benedict to dedicate the road as 'public road'. As stated above, there are issues with Moorebank not agreeing to the dedication of the portion of the road bridge traversing their land however Council is investigating options for the compulsory acquisition of the stratum above Moorebank land to enable the bridge to be dedicated as public road.

"Roads" are permissible with consent in the R3, E2 and SP2 zones.

- Landowner's consent

Moorebank state that development consent is required to access the site via the road bridge and the application does not seek consent to do so and there is no owners consent from Council or Moorebank Recyclers.

As addressed above, the road bridge has development consent, and there is development consent to use the road bridge to access the site. Therefore, this matter has been addressed and the application has been properly made and accepted by Council.

- Extractive Industry

Moorebank content that current activities occurring at the site are in contravention of their existing approvals. This is a compliance matter and has no bearing on the assessment of this application. In addition, if Moorebank so wishes, they have the opportunity to commence proceedings pursuant to Section 123 of the Act. They have not done so.

Moorebank also raise concerns that the application does not include details of the extraction of the site and does not provide an assessment of the impact of the extraction. The applicant advises in their application that the extraction required to form the basin for the marina and to construct the modified landform are authorised under their existing development consent granted by the Land and Environment Court on 31 March 1993 (Maron Investments v Liverpool City Council (1993) NSWLEC 25).

- Contamination

Moorebank contend that contamination matters still haven't been fully addressed by the applicant. Council disagrees with this assertion. The site has been subject to extensive site contamination assessments and a remediation action plan has been prepared. In addition both Councils Environmental health Department and the EPA agree that the site is suitable for the proposed use and that SEPP 55 has been addressed properly.

10 SECTION 79C(1)(E) – THE PUBLIC INTEREST

The proposed development is consistent with the zoning of the land and would represent a high quality development that accommodates active and passive recreational uses. Moreover, the proposal involves works which would embellish the site and surrounds to create attractive public places for the benefit of the community. In additional, these works seek to enhance the environmental quality of the area. The operation of the proposed marina would contain a number of safeguards and measures which would manage the impacts identified in the assessment.

In addition to the social and economic benefit of the proposed development, it is considered to be in the public interest.

11 CONCLUSION

In conclusion, the following is noted:

- The subject Development Application has been assessed having regard to the matters of consideration pursuant to Section 79C of the Environmental Planning and Assessment Act 1979 and is considered satisfactory.
- The proposal would see the cessation of extractive industries on the subject site which has degraded the land and rendered it inaccessible to the public.

- The proposed development represents a significant opportunity to reactivate an inaccessible and highly degraded stretch of the Georges River. It seeks to return the natural landscape to the community by enabling active and passive forms of recreation that delivers substantial economic and social benefits for Liverpool and the greater community while maintaining the environmental quality of the area and embellishing the riverine character of the land.
- The application was referred to a number of external authorities including the Roads and Maritime Services, DPI Water, DPI Fisheries and the EPA, of which no objection was raised, subject to conditions.
- The subject site is identified with a maximum high flood risk. The application has been accompanied with a flood modelling report which concludes that the proposed development would have a negligible impact on the behaviour of flooding in the flood storage area located to the southwest of the proposed marina and nil or negligible impact on any other adjoining property.
- The subject site has experienced a long history of legal proceedings in addressing vehicular access to the surrounding street network. It is confirmed that this matter has been resolved in the NSW Land and Environment Court and the NSW Court of Appeal. The final vehicular access arrangements have been determined by Council through DA-1552/2006/B and DA-61/2004.
- Council Officers have considered traffic impacts and have concluded that vehicular access to the proposed development is satisfactory and would not have an adverse traffic impact to the surrounding street network.

It is for these reasons that the proposed development is considered to be satisfactory and notwithstanding the submissions received, the subject application is recommended for approval, subject to conditions.

12 ATTACHMENTS

- 1. Recommended conditions of consent**
- 2. General Terms of Approval – DPI Water**
- 3. General Terms of Approval – DPI Fisheries**
- 4. General Terms of Approval – NSW EPA**
- 5. General Terms of Approval – NSW RFS**
- 6. Plans of the proposal (uploaded to JRPP dropbox)**
- 7. EIS and supporting documentation (uploaded to JRPP dropbox)**
- 8. Submissions (uploaded to JRPP dropbox)**

ATTCHMENT 1: RECOMMENDED CONDITIONS OF CONSENT

A. THE DEVELOPMENT

Approved Plans

1. Development the subject of this determination notice must be carried out strictly in accordance with the following plans/reports marked as follows:

- (a) Architectural plans:

Drawing Title	Drawing No.	Issue	Prepared by	Date
Site Plan – General Layout	DA-001	E	MFA	1/4/15
Site Plan – Diagram – Levels & Contours	DA-002	C	MFA	1/4/15
Site Plan – Numbers	DA-003	G	MFA	22/4/15
Site – Sections	DA-020	B	MFA	26/3/15
Maritime Building Plans – Levels 1 & 2	DA-100	E	MFA	22/4/15
Maritime Building Plans – Level 3 & Roof	DA-101	D	MFA	22/4/15
Maritime Building Plans – Sub Level Car Park	DA-102	F	MFA	22/4/15
Maritime Building Elevations – Comparisons	DA-115	D	MFA	26/3/15
Maritime Building Elevations – Comparisons	DA-116	D	MFA	26/3/15
Maritime Building Sections	DA-120	C	MFA	26/3/15
Maritime Building Sections – Comparisons	DA-125	D	MFA	26/3/15
Private Marina Clubhouse Floor Plan	DA-200	C	MFA	1/5/15
Private Marina Clubhouse Elevations	DA-210	B	MFA	26/3/15
Private Marina Clubhouse Sections	DA-220	B	MFA	26/3/15

- (b) Environmental Impact Statement prepared by EMM dated 30 July 2015;
- (c) Application clarification letter prepared by EMM dated 22 April 2016;
- (d) Bushfire Assessment prepared by EMM dated 26 October 2015;
- (e) Georges Cove Marina, Moorebank, Preliminary Marina Concept Design and Environmental Assessment – Worley Parsons October 2010;
- (f) Assessment of the Impact of the Proposed Bridge on Flooding in the vicinity of the George's Cove Marina prepared by Cardno dated 23 May 2014;
- (g) Flood Risk Management Report prepared by NPC dated November 2013;
- (h) Flood Impact Assessment Report prepared by Cardno dated 29 January 2013;
- (i) Preliminary Investigation of Contamination prepared by EMM dated 28 July 2015;

- (j) Supplementary Preliminary Investigation prepared by EMM dated 11 March 2016;
- (k) Remediation Action Plan prepared by EMM dated 11 March 2016;
- (l) Terrestrial Ecological Assessment prepared by EMM dated 30 April 2015;
- (m) Flora and Fauna Assessment prepared by Total Earth Care dated 25 October 2011;
- (n) Aquatic Ecology Aspects and Environmental Assessment of Marina Concept Design prepared by Marine Pollution Research Pty Ltd dated 25 June 2010;
- (o) Update of Aquatic Ecology Impact Report for Georges Cove Marina prepared by Marine Pollution Research Pty Ltd dated 17 April 2015;
- (p) Traffic and Parking Assessment prepared by EMM dated 28 July 2015;
- (q) Traffic Signal Warrant Assessment prepared by EMM dated 12 May 2016;
- (r) Addendum Visual Impact Review prepared by RLA dated 15 April 2015;
- (s) Visual Impact Assessment prepared by RLA dated 22 September 2010;
- (t) Projection Estimates of Plant Heights of Potential Native Vegetation Reconstruction Plantings at Benedict Industries George Cove Marina Site prepared by Ecohort Pty Ltd dated 30 August 2010;
- (u) Noise Impact Assessment prepared by EMM dated 21 July 2015;
- (v) Addendum Air Quality Assessment prepared by Todoroski Air Sciences dated 20 April 2015;
- (w) Air Quality Assessment prepared by Todoroski Air Sciences dated 14 December 2011;
- (x) Aboriginal Heritage Assessment prepared by EMM dated 10 April 2015;
- (y) Aboriginal Archeology Assessment prepared by Mary Dallas Consulting Archaeologists dated 1 October 2004;
- (z) Addendum Non-indigenous Heritage Assessment prepared by EMM dated 7 May 2015;
- (aa) Non-indigenous Heritage Assessment prepared by Heritech Consulting dated 1 May 2003;
- (bb) Acid Sulfate Soil Management Plan for Georges Cove Marina;
- (cc) Waste Management Plan for Georges Cove Marina.
- (dd) Navigation Assessment prepared by EMM dated 29 April 2016

except where modified by the undermentioned conditions.

General Terms of Approval

2. All General Terms of Approval shall be complied with prior, during, and at the completion of construction and if required during the operation of the marina as required in accordance with the General Terms of Approval. A copy of the General Terms of Approval are attached to this decision notice and include:

- (a) Department of Primary Industries – Water – *Water Management Act 2000* dated 29 October 2015;
- (b) Department of Primary Industries – NSW Fisheries – *Fisheries Management Act 1994* dated 7 September 2015;
- (c) Environmental Protection Authority – *Protection of the Environment Operations Act 1997*, dated 15 July 2016;
- (d) NSW Rural Fire Service – *Rural Fires Act 1997* dated 7 March 2016
- (e) Roads and Maritime Service - *State Environmental Planning Policy (Infrastructure) 2007*.

Works at no cost to Council

- 3. All roadworks, drainage works and dedications, required to effect the consented development shall be undertaken at no cost to Liverpool City Council.

B. PRIOR TO ISSUE OF A CONSTRUCTION CERTIFICATE

The following conditions are to be complied with or addressed prior to issue of a Construction Certificate by the Principal Certifying Authority:

Voluntary Planning Agreement

- 4. Any monetary contributions payable, any actions or works to be undertaken, or any other requirements of the VPA are to be in accordance with the executed Voluntary Planning Agreement applying to this site.

Provision of Services

- 5. An application to obtain a Section 73 Compliance Certificate under the Sydney Water Act 1994, must be lodged with Sydney Water. To facilitate this, an application must be made through an authorised Water Servicing Coordinator. Please refer to the “building and developing” section of Sydney Water’s web site at www.sydneywater.com.au, or telephone 13 20 92.

The Water Servicing Coordinator will need to ensure that submitted infrastructure designs are sized and configured according to the Water Supply Code of Australia (Sydney Water Edition WSA 03-2002) and the Sewerage Code of Australia (Sydney Water Edition WSA 02-2002).

Following receipt of the application, a ‘Notice of Requirements’ will detail water and sewer extensions to be built and charges to be paid. Please make early contact with the Coordinator, since building of water/sewer extensions can be time consuming and may impact on other services and building, driveway or landscape design. A copy of the ‘Notice of Requirements’ must be submitted to the PCA.

- 6. Written clearance from Endeavour Energy, stating that electrical services have been made available to the development or that arrangements have been entered into for the provision of services to the development must be submitted to the PCA.
- 7. Prior to the issue of a Construction Certificate, the Principal Certifying Authority shall be satisfied that telecommunications infrastructure may be installed to service the premises which complies with the following:

- The requirements of the Telecommunications Act 1997:
 - For a fibre ready facility, the NBN Co's standard specifications current at the time of installation; and
 - For a line that is to connect a lot to telecommunications infrastructure external to the premises, the line shall be located underground.

Unless otherwise stipulated by telecommunications legislation at the time of construction, the development must be provided with all necessary pits and pipes, and conduits to accommodate the future connection of optic fibre technology telecommunications.

Fee Payments

8. Unless otherwise prescribed by this consent, all relevant fees or charges must be paid. Where Council does not collect these payments, copies of receipts must be provided. For the calculation of payments such as Long Service Levy, the payment must be based on the value specified with the Development Application/Construction Certificate.

The following fees are applicable and payable:

- (a) Damage Inspection Fee – relevant where the cost of building work is \$20,000 or more, or a swimming pool is to be excavated by machinery.
- (b) Fee associated with Application for Permit to Carry Out Work Within a Road, Park and Drainage Reserve.
- (c) Long Service Levy – based on 0.35% of the cost of building work where the costing of the CC is \$25,000 or more.

These fees are reviewed annually and will be calculated accordingly.

All fees associated with a road opening permit required for the connection, extension or amplification of any services within Council's road reserve must be paid to Council and receipts provided to the PCA. A separate form must be submitted in conjunction with payment of the fees. The fees include the standard road opening permit fee and any restoration fees that may be required as a result of the works.

Site Development Work

9. Site development work in the form of excavation, underpinning or shoring works must not take place, until such time as a CC has been issued.
10. All aspects of construction shall comply with the applicable Performance Requirements of the National Construction Code. Compliance with the Performance Requirements can only be achieved by:
 - (a) Complying with the Deemed to Satisfy Provisions; or
 - (b) Formulating an Alternative Solution, which complies with the Performance Requirements or is shown to be at least equivalent to the Deemed to Satisfy Provision, or a combination of (a) and (b).

Notification

11. The certifying authority must advise Council, in writing of:
 - (a) The name and contractor licence number of the licensee who has contracted to do or intends to do the work, or
 - (b) The name and permit of the owner-builder who intends to do the work.

If these arrangements are changed, or if a contract is entered into for the work to be done by a different licensee, Council must be immediately informed.

Fire Safety Measures

12. A schedule specifying all of the essential fire safety services, both existing and proposed, which are required for the building, shall be attached to the CC and submitted to Council, in compliance with the provisions of the EP&A Regulation.

S138 Roads Act –Minor works in the public road

13. Prior to the issue of a Construction Certificate a S138 Roads Act application/s, including payment of fees shall be lodged with Liverpool City Council, as the Roads Authority for any works required in a public road. These works may include but are not limited to the following:
 - Vehicular crossings (including kerb reinstatement of redundant vehicular crossings)
 - Road opening for utilities and stormwater (including stormwater connection to Council infrastructure)
 - Road occupancy or road closures

All works shall be carried out in accordance with the Roads Act approval, the development consent including the stamped approved plans, and Liverpool City Council's specifications.

Note:

1. Approvals may also be required from the Roads and Maritime Service (RMS) for classified roads.

Retaining walls on boundary

14. All retaining walls shall be of masonry construction and must be wholly within the property boundary, including footings and agricultural drainage lines. Construction of retaining walls or associated drainage works along common boundaries shall not compromise the structural integrity of any existing structures.

Where a retaining wall exceeds 600mm in height, the wall shall be designed by a practicing structural engineer and a construction certificate must be obtained prior to commencement of works on the retaining wall.

s138 Roads Act – roadworks requiring approval of civil drawings

15. Prior to the issue of a Construction Certificate for building or subdivision works the Certifying Authority shall ensure that a S138 Roads Act application, including the payment of application and inspection fees, has been lodged with, and approved by Liverpool City Council (being the Roads Authority under the Roads Act), for provision of road and drainage in Brickmakers Drive and Newbridge Road.

Engineering plans are to be prepared in accordance with the development consent, Liverpool City Council's Design Guidelines and Construction Specification for Civil Works, Austroad Guidelines and best engineering practice.

Note:

1. Where Liverpool City Council is the Certifying Authority for the development the Roads Act approval for the above works may be issued concurrently with the Construction Certificate.

Construction Certificate – All works

16. Prior to the issue of a Construction Certificate for all works the Certifying Authority shall ensure that engineering plans are consistent with the stamped approved concept plan/s and that all works have been designed in accordance with conditions of this consent, Liverpool City Council's Design Guidelines and Construction Specification for Civil Works, any Roads Act approval issued, Austroad Guidelines and best engineering practice.

The works may include but are not limited to the following:

- Public and private roads
- Stormwater drainage including water quantity and quality treatment measures
- Interallotment drainage
- Private access driveways
- Sediment and erosion control measures
- Overland flowpaths
- Flood control measures
- Traffic facilities including roundabouts, intersection treatments, car parks, bus stops, cycleways, pathways etc.
- Earthworks
- Bridges, culverts, retaining walls and other structures
- Landscaping and embellishment works

Road Design

17. Prior to the issue of a Construction Certificate the Certifying Authority shall ensure that the proposed roads have been designed in accordance with Liverpool City Council's Design Guidelines and Construction Specification for Civil Works and the following criteria: add table

Road No.	Road Reserve Width	Carriageway Width	Verge	Footpath (1.5m wide)	ESA
New road	20	13	3.5	1.5	2x10 ⁶

Road Safety Audit

18. A Stage 3 (detailed design) Road Safety Audit (RSA) shall be undertaken on the proposed roadworks by an accredited auditor who is independent of the design consultant. A copy of the RSA shall accompany the design plans submitted with the Construction Certificate or Roads Act application.

Prior to the issue of the Construction Certificate or Roads Act approval, the Certifying Authority shall ensure that the recommendations of the RSA have been addressed in the final design.

Stormwater Concept Plan

19. A stormwater drainage system shall be provided generally in accordance with the concept plan/s lodged for development approval, prepared by MFA Pty Ltd, reference number 0914, Revision E dated 1 April 2015.
- The proposed development and stormwater drainage system shall be designed to ensure that stormwater runoff from upstream properties is conveyed through the site without adverse impact on the development or adjoining properties.

Engineering plans and supporting calculations for the stormwater drainage system are to

be prepared by a suitably qualified engineer and shall accompany the application for a Construction Certificate. The plan shall indicate the method of disposal of all stormwater and must include rainwater tanks, existing ground levels, finish surface levels and sizes of all pipes.

Prior to the issue of a Construction Certificate the Certifying Authority shall ensure that the stormwater drainage system has been designed in accordance with Liverpool City Council's Design Guidelines and Construction Specification for Civil Works.

Water Quality

20. Prior to the issue of a Construction Certificate the Certifying Authority shall ensure that details of a stormwater pre-treatment system have been provided on the stormwater plans and that the design meets pollutant retention criteria in accordance Council's Development Control Plan.

The Construction Certificate must be supported by:

- Specification & installation details of the stormwater pre-treatment system
- The approval of an operation and maintenance manual/ schedule for the stormwater pre-treatment system

A copy of the approved operation and maintenance manual/ schedule shall be submitted to Liverpool City Council with notification of the Construction Certificate issue.

21. Erosion and sediment control measures shall be designed in accordance with the requirements of Liverpool DCP and Council specifications, and to the satisfaction of the PCA. Approved measures shall be implemented prior to commencement and maintained during construction and until all disturbed areas have been revegetated and established to the satisfaction of the PCA.

Access, Car Parking and Manoeuvring – general

22. Prior to the issue of a Construction Certificate the Certifying Authority shall ensure that vehicular access, circulation, manoeuvring, pedestrian and parking areas associated with the subject development are in accordance with AS 2890.1, AS2890.2, AS2890.6 and Liverpool City Council's Development Control Plan.

Foreshore Protection Works

23. Any Construction Certificate that is issued must include but is not limited to all foreshore works including rock work, bank stabilisation works and revegetation works in accordance with approved DA plans and associated construction specifications.

Brickmakers Drive / Link Road intersection upgrade plan

24. The developer is to submit concept plans of an ultimate traffic control signal and associated interim unsignalised channelised treatment at the intersection of Brickmakers Drive and the proposed new link road to the Marina development to Council for approval of the intersection treatment.

The concept plans are to be based on the SIDRA intersection performance analysis for the full development of the Marina and adjoining urban development.

The channelised intersection treatment should show required signs and line marking, and details of required conduits, ducts and cabling for the future traffic control signals.

The concept plan of the ultimate traffic control signal, is to be submitted to the RMS for

their in-principal approval to the proposed traffic signals.

Traffic

25. The developer is to submit a concept design of a roundabout, at the intersection of the proposed new link road and the proposed north-south access road, prepared in accordance with Austroads and RMS Guidelines, showing signs, line marking and swept path analysis of the longest vehicle to service the development, or 12.5m whichever is the longest, to Council's Traffic and Transport Unit for approval.
26. The developer is to submit a concept design of the marina access road, prepared in accordance with the Liverpool Development Control Plan, to Council's Manager Development Engineering's for approval.
27. A Construction traffic management plan is to be submitted for Council's endorsement. Works within the road reserve shall not commence until the traffic management plan has been endorsed. The traffic management plan is to be prepared by an accredited designer and a copy of endorsed plan should be available at the worksite at all times.
28. The traffic management plan is to be prepared by an accredited designer and submitted to and stamp approved by Council via a standard Section 138 Roads Act Permit application available at Council's customer service counter. The stamped approved Roads Act Permit is to be obtained by the PCA. A copy of the stamped approved Roads Act Permit and traffic management plan is to be available on the works site for inspection at any time by an authorised Council officer.
29. A detailed car park plan is to be prepared for review by Council's Traffic and Transport Unit in accordance with AS 2890 parts 1, 2 and 6.
30. No work or craning shall be undertaken within the adjoining public lands without the prior written consent of Council. In this regard Council may require a Traffic Management Plan to be submitted before giving its approval.

Flooding

31. DA documentation shall include "Flood Impact Assessment for the proposed Georges Cove Marina, Moorebank" by Cardno (NSW/ACT) Pty Ltd, Ref: NA49913037-L02:BCP/bcp, dated: 29 January 2013; "Georges Cove Marina Flood Risk Management" by National Project Consultants (NPC), dated: November 2013 and Assessment of the Impact of the Proposed Bridge on Flooding in the Vicinity of the Georges Cove Marina, Moorebank, Cardno, Ref : NA49913037:BCP/bcp, dated: 23 May 2014.
32. The development of the proposed marina shall be undertaken as indicated in the flood impact assessment report (Flood Impact Assessment for the proposed Georges Cove Marina, Moorebank, Cardno, Ref: NA49913037-L02:BCP/bcp, dated: 29 January 2013) and drawings by Micheal Fountain Architects Pty Ltd (Site – Plan, General Layout, Job No. 0914, Drawing No. DA-001, Issue E, dated: 01 April 2015 and accompanying plans, elevations and sections approved under this application).
33. There shall be no net loss of floodplain storage volume below the 1% AEP flood. An additional flood storage volume of 4780 cum shall be compensated within the proposed marina site as indicated in the drawing by Micheal Fountain Architects Pty Ltd (Site – Plan, General Layout, Job No. 0914, Drawing No. DA-001, Issue E, dated: 01 April 2015) and flood impact assessment report of proposed bridge connecting Brickmakers Drive and the Benedict site (Assessment of the Impact of the Proposed Bridge on Flooding in the Vicinity of the Georges Cove Marina, Moorebank, Cardno, Ref : NA49913037:BCP/bcp, dated: 23 May 2014).

34. The eastern and western walls of the buildings shall remain open below the 1% AEP flood plus half a metre freeboard (i.e. $5.6\text{m} + 0.5\text{m} = 6.1\text{m}$ Australian Height Datum) to provide free and unobstructed flow of flood waters at all times.
35. Any types of screen or façade or fencing shall not be allowed to be erected below the 1% AEP flood plus half a metre freeboard (i.e. $5.6\text{m} + 0.5\text{m} = 6.1\text{m}$ Australian Height Datum) on the eastern and western boundaries.
36. All floor levels shall be no less than the 1% AEP flood plus half a metre freeboard (i.e. $5.6\text{m} + 0.5\text{m} = 6.1\text{m}$ Australian Height Datum).
37. The structure shall be constructed from flood compatible building components below the 1% AEP flood plus half a metre freeboard (i.e. $5.6\text{m} + 0.5\text{m} = 6.1\text{m}$ Australian Height Datum).
38. An engineers report shall be required to certify that the structure can withstand the forces of floodwater including debris and buoyancy up to and including a 1% AEP flood plus half a metre freeboard (i.e. $5.6\text{m} + 0.5\text{m} = 6.1\text{m}$ Australian Height Datum).
39. The car parks shall have suitable warning system, signage and exits to ensure safe evacuation during flooding.
40. Barriers shall be provided to the car parking site to prevent floating vehicles from leaving the site during a flood event. The barriers shall be designed with large openings only to hold the cars from floating without providing obstruction to flood waters.
41. Reliable access for pedestrians or vehicles shall be provided from the lowest floor level to a location above the Probable Maximum Flood.

Recommendations of Acoustic Report

42. The recommendations provided in the approved acoustic report shall be implemented and incorporated into the design and construction of the development and shall be shown on plans accompanying the CC application.
43. Prior to Issue of Construction Certificate, detailed specifications, floor and section plans for the Marina comprising the mechanical workshop, wash bays, holding tanks and fuel dispensing facilities shall be submitted to Liverpool City Council and the Principal Certifying Authority for review and approval. The plans to be submitted with the application for the Construction Certificate shall include design certification by a suitably qualified and experienced person to verify compliance with the following legislation and standards:
 - The Protection of the Environment Operations Act 1997 and Regulations;
 - Department of Environment and Climate Change NSW (now Office of Environment and Heritage) guidelines titled 'Environmental Action for Marinas, Boatsheds and Slipways' (DECC 2007/108) dated June 2007 and any subsequent revision approved by the NSW Environment Protection Authority (EPA);
 - Australian Standard (AS) 3962-2001 Guidelines for Design of Marinas;
 - Australian Standard (AS) 1940–2004: The storage and handling of flammable and combustible liquids;
 - Australian Standard (AS) 1657-2013 Fixed platforms, walkways, stairways and ladders – Design, construction and installation.
 - Australian Standard (AS) 1692-2006 Steel tanks for flammable and combustible liquids; and/or
 - Australian Standard (AS) 4897-2008: Design, Installation and Operation of Underground Petroleum Storage Tanks

The plans to be submitted with the application for the Construction Certificate shall also make provision for the following:

- Trafficable bunds installed at the entry and exits of the maintenance workshop, storage facilities, fuel storage and dispensing facilities and wash bays for vehicles, boats, garbage bins and equipment;
- All work and storage areas where spillage may occur shall be bunded. The capacity of the bunded area shall be calculated as being equal to 110% of the largest storage or process vessel/container in the area or 10% of the total volume of vessels/containers accommodated in the area, whichever is the greater.
- The roof covering the fuel storage and dispensing facilities, maintenance workshop, storage facilities and wash bays for vehicles, boats, garbage bins and equipment shall contain an overhang of at least 10° to prevent rainwater intrusion. Uncontaminated rainwater shall be directed from the canopy and other roofed areas into stormwater drains;
- The location of spill kits, stormwater pits and stormwater drainage infrastructure;
- Fuel deliveries shall be conducted within the forecourt containment area or in an area with separate bunding;
- The location of the oil/water separator or pre-treatment device for the maintenance workshop, storage facilities and wash bays and their connection to Sydney Water's sewer in accordance with a Trade Waste Agreement;
- The garbage/waste storage area shall be clearly identified on the site plan and be located within the proposed building. The designated garbage/waste storage area shall comply with the following requirements:
 - The room shall be fully enclosed and provided with a concrete floor, and with concrete or cement rendered walls coved to the floor;
 - The room shall have a floor waste which is to consist of a removable basket within a fixed basket arrestor and is to comply with Sydney Water requirements; and
 - The door to the room must be tight-fitting and self-closing

C. PRIOR TO WORKS COMMENCING

The following conditions are to be complied with or addressed prior to works commencing on the subject site/s:

Construction Certificates

44. Detailed Civil engineering plans and specifications relating to the work shall be endorsed with a CC, in accordance with Section 81A of the Act, and a copy registered with Council.
45. Detailed engineering plans and specifications relating to the work shall be endorsed with a CC, in accordance with Section 81A of the EP&A Act, and a copy submitted to Council, with payment of any relevant fees.
46. Any CC that may be issued in association with this development consent must ensure that any certified plans and designs are generally consistent (in terms of site layout, site levels, building location, size, external configuration and appearance) with the approved Development Application plans.

47. Where this consent requires both engineering and building works to be undertaken, a separate construction certificate shall be issued for each category of works ie., a separate Civil Engineering CC and a separate Building CC.

Notification/Principal Certifying Authority

48. The applicant shall advise Council of the name, address and contact number of the Accredited Certifier, in accordance with Section 81A (4) of the Act.
49. The PCA must advise Council of the intended date to commence work which is the subject of this consent by completing a notice of commencement of building works or subdivision works form, available from Council's Customer Service Centre. A minimum period of two (2) working days notice must be given.

Facilities

50. Toilet facilities must be available or provided at the work site and must be maintained until the works are completed at a ratio of one toilet plus one additional toilet for every 20 persons employed at the site.

Each toilet must:

- (a) be a standard flushing toilet connected to a public sewer, or
- (b) have an on-site effluent disposal system approved under the *Local Government Act 1993*, or
- (c) be a temporary chemical closet approved under the *Local Government Act 1993*.

Site Facilities

51. Adequate refuse disposal methods and builders storage facilities shall be installed on the site. Builders' wastes, materials or sheds are not to be placed on any property other than that which this approval relates to.

Site Notice Board

52. A sign must be erected in a prominent position on the premises on which work is to be carried out. The sign is to be maintained during work, and removed at the completion of work. The sign must state:
- (a) The name, address and telephone number of the principal certifying authority for the work; and
 - (b) The name of the principal contractor (if any) for any building work and a telephone number on which that person may be contacted outside working hours; and
 - (c) Unauthorised entry to the premises is prohibited.

Notification of Service Providers

53. The approved development must be approved through the 'Sydney Water Tap in' service to determine whether the development will affect any Sydney Water wastewater and water mains, stormwater drains and/or easements, and if any requirements need to be met. A receipt must be provided to Council.

Please refer to the website www.sydneywater.com.au for more information.

“DIAL BEFORE YOU DIG”

54. Underground assets may exist in the area that is subject to your application. In the interest of health and safety and in order to protect damage to third party assets please contact Dial before you dig at www.1100.com.au or telephone 1100 before excavating or erecting structures (This is the law in NSW). If alterations are required to the configuration, size, form or design of the development upon contact the Dial before You Dig service, an amendment to the development consent (or a new development application) may be necessary. Individuals owe asset owners a duty of care that must be observed when working in the vicinity of plant or assets. It is the individual's responsibility to anticipate and request the nominal location of plant or assets on the relevant property via contacting the Dial before you dig service in advance of any construction or planning activities.

Reports

55. No work or craning shall be undertaken within the adjoining public lands without the prior written consent of Council. In this regard Council may require a Traffic Management Plan to be submitted before giving its approval.

Food Premises – Restaurant/Take-Away/Bakery

56. Plans and specifications demonstrating compliance with the nominated standards and requirements for the following aspects of the development shall be submitted and approved by the PCA:
- (a) all proposed, altered and required mechanical ventilation systems (Building Code of Australia & Australian Standard 1668 Part 1 & 2)
 - (b) the commercial garbage and recycling storage room (Liverpool DCP 2008)
 - (c) the layout, disposition and method of installation of fixtures and fittings, together with wall, floor, and ceiling finishes to all preparation, storage areas and cool rooms (AS4674, the Food Act 2003 and Regulations thereunder).

Waste Classification

57. Prior to the exportation of waste (including fill or soil) from the site, the material shall be classified in accordance with the provisions of the POEO Act and NSW DECCW, (EPA) 'Environmental Guidelines: Assessment, Classification and Management of Non-Liquid Wastes'. The classification of the material is essential to determine where the waste may be legally taken. The POEO Act provides for the commission of an offence for both the waste owner and transporters if waste is taken to a place that cannot lawfully be used as a waste facility for the particular class of waste. For the transport and disposal of industrial, hazardous or Group A liquid and non liquid waste advice should be sought from the DECCW (EPA).

Sediment & Erosion Control

58. Adequate soil and sediment control measures shall be installed and maintained. Furthermore, suitable site practices shall be adopted to ensure that only clean and unpolluted waters are permitted to enter Council's stormwater drainage system during construction/demolition. Measures must include, as a minimum:
- (a) Siltation fencing;
 - (b) Protection of the public stormwater system; and
 - (c) Site entry construction to prevent vehicles that enter and leave the site from tracking loose material onto the adjoining public place.

Traffic Control

59. Prior to commencement of works a Traffic Control Plan including details for pedestrian management, shall be prepared in accordance with AS1742.3 "Traffic Control Devices for Works on Roads" and the Roads and Traffic Authority's publication "Traffic Control at Worksites" and certified by an appropriately accredited Roads and Traffic Authority Traffic Controller.

Traffic control measures shall be implemented during the construction phase of the development in accordance with the certified plan. A copy of the plan shall be available on site at all times.

Note:

A copy of the Traffic Control Plan shall accompany the Notice of Commencement to Liverpool City Council.

Dilapidation Report

60. Prior to the Commencement of Works a dilapidation report of all infrastructure fronting the development in Brickmakers Drive is to be submitted to Liverpool City Council. The report is to include, but not limited to, the road pavement, kerb and gutter, footpath, services and street trees and is to extend 50m either side of the development.
61. Work on the development shall not commence until:
- a Construction Certificate (if required) has been issued,
 - a Principal Certifying Authority has been appointed for the project, and
 - any other matters prescribed in the development consent for the subdivision and the Environmental Planning and Assessment Act and Regulation have been complied with.

A Notice of Commencement is to be submitted to Liverpool City Council two (2) days prior to commencement of engineering works or clearing associated with the subdivision.

62. Prior to the commencement of construction works, a Scheduled Development Works licence shall be issued by the NSW Environment Protection Authority under the Protection of the Environment Operations Act 1997, to ensure that potential emission sources (including discharges to water) are adequately controlled.
63. Prior to the commencement of any controlled activity (works) on waterfront land, the consent holder must obtain a Controlled Activity Approval (CAA) under the Water Management Act from Department of Primary Industries Water.

D. DURING CONSTRUCTION

The following conditions are to be complied with or addressed during construction:

64. In the case of a class 5, 6, 7, 8 or 9 building, critical stage inspections must be carried out by the appropriate person in accordance with EP&A Regulation, with Compliance Certificates issued for each inspection. The last critical stage inspection must be carried out by the PCA. The following components of construction are relevant:
- (a) after excavation for, and before the placement of, any footings, and
 - (b) prior to covering any stormwater drainage connections; and
 - (c) after the building work has been completed and prior to any occupation certificate being issued in relation to the building.

Note: These certificates or documentary evidence must be submitted to Council with any OC issued for the development

Identification Survey Report

65. The building and external walls are not to proceed past ground floor/reinforcing steel level until such time as the PCA has been supplied with an identification survey report prepared by a registered surveyor certifying that the floor levels and external wall locations to be constructed, comply with the approved plans, finished floor levels and setbacks to boundary/boundaries. The slab shall not be poured, nor works continue, until the PCA has advised the builder/developer that the floor level and external wall setback details shown on the submitted survey are satisfactory.

In the event that Council is not the PCA, a copy of the survey shall be provided to Council within three (3) working days.

On placement of the concrete, works again shall not continue until the PCA has issued a certificate stating that the condition of the approval has been complied with and that the slab has been poured at the approved levels.

Hours of Construction Work and Deliveries

66. Construction work/civil work/demolition work, including the delivery of materials, is only permitted on the site between the hours of 7:00am to 6:00pm Monday to Friday, 8:00am to 1:00pm Saturday. No work will be permitted on Sundays or Public Holidays, unless otherwise approved by Council.

Security Fence

67. A temporary security fence to WorkCover Authority requirements is to be provided to the property during the course of construction.

Note. Fencing is not to be located on Council's reserve area.

Disabled Access

68. Access, parking and facilities for persons with disabilities to be provided in accordance with the provisions of the National Construction Code.

General Site Works

69. Alterations to the natural surface contours must not impede or divert natural surface water runoff, so as to cause a nuisance to adjoining property owners.
70. All dangerous and/or hazardous material shall be removed by a suitably qualified and experienced contractor, licensed by WorkCover NSW. The removal of such material shall be carried out in accordance with the requirements of WorkCover NSW. The material shall be transported and disposed of in accordance with DECCW (EPA) requirements.

Erosion and Sediment Control

71. Erosion and sediment control measures shall remain in place and be maintained until all disturbed areas have been rehabilitated and stabilised.

Street Lighting

72. Street lighting is to be provided for all new and existing streets within the proposed subdivision to Liverpool City Council's standards.

The developer shall submit a Public Lighting Design Brief to Council for approval for the provision of street lighting on all new public roads dedicated to Council. A street lighting design plan must be prepared by an accredited service provider for approval prior to construction. All street lighting must comply with the electricity service provider Street Lighting Policy and illumination requirements and Council's Street Lighting policy.

All cost associated with the installation of street lighting shall be borne by the developer.

Drainage Connection

73. Prior to the connection of private drainage to Council's drainage system, an inspection is to be carried out by Liverpool City Council's Development Engineering Unit. A fee will be charged in accordance with Council's adopted Fees and Charges, and is to be paid prior to the inspection.

Major Filling / Earthworks

74. All earthworks shall be undertaken in accordance with AS 3798 and Liverpool City Council's Design Guidelines and Construction Specification for Civil Works.

The level of testing shall be determined by the Geotechnical Testing Authority/ Superintendent in consultation with the Principal Certifying Authority.

Car Parking Areas

75. Car parking spaces and driveways must be constructed of a minimum of two coat finish seal or better. The spaces must be clear of obstructions and columns, permanently line marked and provided with adequate manoeuvring facilities. The design of these spaces must comply with Council's DCP 2008, and Australian Standard 2890.1 Parking Facilities – Off Street Car Parking.

All car parking areas to be appropriately line marked and sign posted in accordance with the approved plans. All customer/visitor/staff parking areas are to be clearly signposted limiting car parking for customers/visitors/staff only. The applicant is to cover the costs of installation and maintenance of the signage.

The on-site parking spaces shown in the approved plans must be identified in accordance with A.S.2890.1 Parking Facilities – Off-Street Car Parking.

76. Directional signage indicating the location of customer parking, "in" and "out" crossings and directional arrows are to be provided in accordance with the approved plans.

Traffic Management

77. All works within the road reserve are to be at the applicant cost and all signage is to be in accordance with the RMS Traffic Control at Worksites Manual and the RMS Interim Guide to Signs and Markings.
78. If a works zone is required, an application must be made to Council's Transport Planning section. The application is to indicate the exact location required and the applicable fee is to be included. If parking restrictions are in place, an application to have the restrictions moved, will need to be made.

79. Notice must be given to Council's Transport Planning section of any interruption to pedestrian or vehicular traffic within the road reserve, caused by the construction of this development. A Traffic Control Plan, prepared by an accredited practitioner must be submitted for approval, 48 hours prior to implementation. This includes temporary closures for delivery of materials, concrete pours etc.
80. Applications must be made to Council's Transport Planning section and referred to RMS as appropriate for any road closures. The applicant is to include a Traffic Control Plan, prepared by a suitably qualified person, which is to include the date and times of closures and any other relevant information.
81. The approved interim intersection treatment with Brickmakers Drive is to be constructed in accordance with Council's approval and the RMS in-principal approved traffic signal plan including providing conduits, ducts and cabling.
82. An endorsed construction traffic management plan is to be implemented.

Waste Management Plan

83. The Waste Management Plan submitted to and approved by Council must be adhered to at all times throughout all stages of the development. Supporting documentation (receipts/dockets) of waste/recycling/disposal methods carried out, is to be kept and must be produced upon the request of Council or any other authorised officer.

Note: Any non-compliance with this requirement will result in penalties being issued.

Aboriginal Relics / Artefacts

84. If any Aboriginal relics/artefacts are uncovered during the course of any construction works including demolition, work is to cease immediately. Government agencies shall be contacted and no further work shall be undertaken until relevant assessments/approvals/salvage excavation has been undertaken and permission is given by the relevant authorities to re commence works.

Acid Sulfate Soils

85. The excavation and treatment of all potential and actual acid sulfate soils shall be carried out in strict accordance with the provisions of the approved Acid Sulfate Soils Management Plan prepared for the site.

Contamination

86. The development, including all civil works and demolition, must comply with the requirements of the Contaminated Land Management Act, 1997, State Environmental Planning Policy No. 55 – Remediation of Land, and Managing Land Contamination – Planning Guidelines (Planning NSW/EPA 1998).
87. All fill introduced to the site must undergo a contaminated site assessment. This assessment may consist of either:
 - (a) a full site history of the source of the fill (if known) examining previous land uses or geotechnical reports associated with the source site to determine potential contamination as per the NSW DECCW 'Waste Classification Guidelines' April 2008; or
 - (b) clearly indicate the legal property description of the fill material source site;
 - (c) provide a classification of the fill material to be imported to the site in accordance with the 'NSW DECCW 'Waste Classification Guidelines' April 2008.

- (d) a chemical analysis of the fill where the site history or a preliminary contamination assessment indicates potential contamination or contamination of fill material; and
 - (e) must provide Council with copies of validation certificate verifying the material to be used is free of contaminants and fit for purpose re use in residential, commercial or industrial use.
88. Records of the following must be submitted to the principal certifying authority monthly and at the completion of earth works:
- (a) The course (including the address and owner of the source site), nature and quantity of all incoming loads including the date, the name of the carrier, and the vehicle registration;
 - (b) The results of a preliminary contamination assessment carried out on any fill material used in the development.
 - (c) The results of any chemical testing of fill material.

Site Remediation Works

89. Remediation and validation works must be carried out in accordance with remediation plan identified in Condition 1. Any variation to the proposed remediation works must be approved in writing by Council or the PCA prior to the commencement of these works. The applicant must inform Council or the PCA in writing of any proposed variation to the remediation works. Council or the PCA must approve these variations in writing prior to commencement of works approved under the development consent.
90. Any new information which comes to light during remediation, demolition or construction works which has the potential to alter previous conclusions about site contamination and remediation must be notified to Council and the accredited certifier immediately after discovery. A Section 96 Application under the EP&A Act shall be made for any proposed works outside the scope of the approved development consent.

Air Quality

91. Dust screens shall be erected and maintained in good repair around the perimeter of the subject land during land clearing, demolition, and construction works.
92. Where operations involve excavation, filling or grading of land, or removal of vegetation, including ground cover, dust is to be suppressed by regular watering until such time as the soil is stabilised to prevent airborne dust transport. Where wind velocity exceeds five knots the PCA may direct that such work is not to proceed.
93. All vehicles involved in the delivery, demolition or construction process departing from the property shall have their loads fully covered before entering the public roadway.
94. Vehicular access to the site shall be controlled through the installation of wash down bays or shaker ramps to prevent tracking of sediment or dirt onto adjoining roadways. Where any sediment is deposited on adjoining roadways is shall be removed by means other than washing. All material is to be removed as soon as possible and the collected material is to be disposed of in a manner which will prevent its mobilisation.

Water Quality

95. All topsoil, sand, aggregate, spoil or any other material shall be stored clear of any drainage line, easement, water body, stormwater drain, footpath, kerb or road surface and there shall be measures in place in accordance with the approved erosion and sediment control plan.

Pollution Control

96. Building operations such as brick cutting, mixing mortar and the washing of tools, paint brushes, form-work, concrete trucks and the like shall not be performed on the public footway or any other locations which may lead to the discharge of materials into Council's stormwater drainage system.
97. The developer is to maintain all adjoining public roads to the site in a clean and tidy state, free of excavated "spoil" material.

Ventilation

98. The premises shall be ventilated in accordance with the requirements of the BCA (if using deemed to satisfy provisions: AS 1668, Parts 1 & 2)
99. The design, construction, installation and commissioning of the mechanical ventilation systems(s) serving the premises shall be carried out in accordance with Australian Standard 1668 Parts 1 & 2.
100. The mechanical exhaust discharge point shall be designed and installed by an appropriately qualified person, and shall be positioned to comply with Section 3.7 of Australian Standard 1668 Part 2 – 1991.

Food Premises

101. The construction, fitout and finishes of the premises shall comply with the AS 4674, Food Act 2003 and Regulations and the requirements of Attachment A, Points 1,2,3,4,5,6,7,9,10,11,12,13,14,15,16,17.
102. The Construction Environmental Management Plan and Construction Noise Management Plan approved by the NSW Environment Protection Authority shall be complied with at all times during construction of the Georges Cove Marina.
103. Construction noise shall not exceed the management levels defined within the Noise Impact Assessment (Report_J14149RP2, Version V1 Final) prepared by EMGA Mitchell McLennan Pty Limited dated 21 July 2015 and the Interim Construction Noise Guideline published by the NSW Department of Environment and Climate Change dated July 2009;
104. Applicant must ensure that the following is available for the life of the Development:
 - (a) a postal address to which written complaints may be sent;
 - (b) an email address to which electronic complaints may be transmitted; and
 - (c) a telephone contact line to enable complaints associated with the Development to be registered by the community.
105. A Complaints Handling Register shall be maintained for the duration of construction works at the subject premises. The Complaints Register is to be kept by the Site Manager or other suitable staff members and is to include the following:
 - (a) the date and time, where relevant, of the complaint;
 - (b) the means by which the complaint was made (telephone, mail or email);
 - (c) any personal details of the complainant that were provided, or if no details were provided, a note to that effect;
 - (d) the nature of the complaint;
 - (e) any action(s) taken in response to the complaint, including any follow-up contact with the complainant; and
 - (f) if no action was taken in relation to the complaint, the reason(s) why no action was taken.

(g) allocate an individual “complaint number” to each complaint received.

The Complaints Register must be made available for inspection when requested by Liverpool City Council.

E. PRIOR TO ISSUE OF OCCUPATION CERTIFICATE

The following conditions are to be complied with or addressed prior to issue of either an Interim or Final Occupation Certificate by the Principal Certifying Authority:

Certificates

106. The premises must not be utilised until an Occupation Certificate is issued by the PCA. Copies of all documents relied upon for the issue of the OC must be attached to the OC and registered with Council.
107. The Principal Certifying Authority (Building) and/or the Accredited Certifier (Subdivision) shall ensure that all compliance certificates required by this development consent are referenced to the condition consent number. The Compliance Certificate is to state that the works as constructed comply fully with the required condition of consent being acted on by the certifier.
108. All required Compliances Certificates for the critical stage inspections carried out prior, during and at the completion of construction, must be submitted to Council together with the required registration fee payment.
109. A final fire or interim safety certificate is to be attached to any OC, except in the case of a Class 1a or Class 10 building(s). This must include all the “essential fire services” installed in the building.
110. Should the construction of the development (bulkheads etc) reveal that the smoke alarms cannot operate effectively, additional smoke alarms may be required to be installed in order that the alarms effectively protect the occupants of the building in accordance with the provisions of National Construction Code Part 3.7.2.

Bridge and Road Access

111. Prior to occupation or use of the site, or the issue of any Occupation Certificate, the bridge crossing to Brickmakers Drive, the link road from Brickmakers Drive to the marina carpark (known as the Marina access road), the upgrade to the Brickmakers Drive / Link Rd intersection and the roundabout at the Marina access road / proposed north-south access road must be completed and dedicated to Council as public road and be opened to the public for vehicular access. All works must be to the satisfaction of the Council and in accordance with Council’s design and construction specifications
112. All engineering works including car parking must be completed to Council’s satisfaction.
113. Prior to the issue of any occupation certificate, a bond to fund traffic signals at the Brickmakers Drive / Link Road intersection is to be entered into with Council. This bond will be prepared by Council at the applicant’s expense and will provide security for the installation of traffic signals at this intersection.

Landscaping

114. Upon completion of the approved landscape works associated with the development and prior to the issue of any OC, an Implementation Report is to be submitted to the PCA

attesting to the satisfactory completion of the landscape works in accordance with the approved landscape plan. The report is to be prepared by a suitably qualified person.

Recommendations of Acoustic Report

115. A Compliance Certificate or other documentation deemed suitable to the PCA is to be submitted to the PCA, detailing compliance with the following:
- (a) Certification is to be obtained from a qualified acoustic consultant certifying that the building has been constructed to meet the noise criteria in accordance with the approved acoustic report and that all recommendations have been adopted.

Air Conditioners

116. If a water cooling system is to be installed at the subject premises.

All air handling, evaporative cooling, humidifying, warm water and water cooling systems installed on the premises shall comply with the Public Health Act 2010 and Public Health Regulation 2012, in accordance with the following:

- (a) All water cooling and warm water systems shall be designed, constructed and installed in accordance with AS 3666.1:2011, the Public Health Act 2010 and Public Health Regulation 2012 before being commissioned.
- (b) All cooling towers and warm water systems shall be operated and maintained in accordance with AS 3666.2:2011, (or AS 3666.3:2011 subject to prior notification to Council) the Public Health Act 2010, and Public Health Regulation 2012.
- (c) A true copy of the annual certificate as stipulated in Clause 10 of the Public Health Regulation 2012 that certifies the effectiveness of the process of disinfection used for the water cooling system, shall be submitted to Council prior to the period ending 30 June each year.
- (d) The owner or occupier of the building shall be advised of the need to register and provide particulars of any water cooling, and warm-water systems as required under the provisions of the Public Health Act, 1991 and Regulation thereunder. Registration forms are available from Council.

Site Contamination Validation Report

117. After completion of the remedial works and prior to the commencement of works associated with the built form of the development (excluding building work directly related to remediation), a copy of the Validation Report shall be submitted to the PCA and Liverpool City Council. This Report shall be prepared in accordance with guidelines made and approved by the NSW EPA under the Contaminated Land Management Act 1997 and must:
- (a) describe and document all works performed;
 - (b) include results of validation testing and monitoring;
 - (c) include validation results of any fill imported on to the site;
 - (d) outline how all agreed clean-up criteria and relevant regulations have been complied with; and
 - (e) include clear justification as to the suitability of the site for the proposed use and the potential for off-site migration of any residual contaminants.

Site Audit Statement and Report

118. Prior to the commencement of works associated with the built form of the development (excluding building work directly related to remediation), a Site Audit Statement and accompanying Site Audit Report shall be obtained from a NSW EPA accredited Site Auditor and be submitted to Liverpool City Council, Principal Certifying Authority and Appropriate

Regulatory Authority for review and approval. The Site Audit Statement and accompanying Site Audit Report must verify compliance with the approved Remediation Action Plan and confirm the suitability of the: remedial action; validation methods; and long-term management plan for the site. Conditions on the Site Audit Statement shall form part of the consent.

Food Premises – Restaurant

119. Council's Health & Building section shall be notified in writing that the premises will be used for the preparation, manufacture or storage of food for sale. The premises will be registered on Council's database.
120. Trading shall not commence until an OC has been issued by the PCA.
121. A Trade Waste application shall be submitted and approved by the Sydney Water Corporation regarding the installation of proposed pre-treatment equipment, eg basket and grease arrestors. A copy of the plumber's certificate of compliance for the installation of pre-treatment equipment, and of the Trade Waste Agreement, shall be furnished to the PCA.
122. Certificates of design compliance and system performance for the proposed mechanical ventilation system shall be provided to the PCA, certifying the design, and upon commissioning of the mechanical ventilation system(s), certifying performance. The certificate of performance shall be issued to the certifying authority and be accompanied by details of the test carried out in respect of: -
 - (a) Ventilation
 - (b) Acoustics
123. All waste water, chemicals, solvents, oils, fluids or the like shall not be discharged into Council's stormwater drain or creeks. A trade waste contract shall be obtained by Sydney Water. All liquid waste shall be discharged into the sewer in accordance with Sydney Water requirements.

Flooding

124. A flood emergency response plan shall be developed and maintained in consultation with the SES for the entire Georges Cove Marina site (in agreement with the NPC letter reports dated 10 April 2014 and 25 November 2013). The flood emergency response plan shall include a suitable flood warning system that has specific evacuation triggers and communication mechanisms for emergency evacuation of all areas, signage and exits to ensure the fail safe evacuation of people during floods up to and including the Probable Maximum Flood. The flood warning system shall include the following:
 - Water level monitoring system at Georges River to monitor overtopping of river banks near the Marina site.
 - Suitable arrangements to alert all occupants of the entire Marina site.
 - Necessary arrangement for site evacuation before the Marina site becomes fully isolated by floodwaters.

The flood warning system shall be put in operation prior to, during and after a flood to manage activities at Georges Cove Marina, including evacuation arrangements for all occupants of Georges Cove Marina.

Roads Act / Local Government Act

125. Prior to the issue of an Occupation Certificate, the Principal Certifying Authority shall ensure that all works associated with a S138 Roads Act approval or S68 Local Government Act approval have been inspected and signed off by Liverpool City Council.

Works as executed - General

126. Prior to the issue of an Occupation Certificate, works-as-executed drawings and compliance documentation shall be submitted to the Principal Certifying Authority in accordance with Liverpool City Council's Design Guidelines and Construction Specification for Civil Works.

An original set of works-as-executed drawings and copies of compliance documentation shall also be submitted to Liverpool City Council with notification of the issue of the Occupation Certificate where Council is not the Principal Certifying Authority.

Stormwater Compliance

127. Prior to the issue of an Occupation Certificate the Principal Certifying Authority shall ensure that the:

- a) Stormwater pre-treatment system/s
 - b) Overland flowpath works
- Have been satisfactorily completed in accordance with the approved Construction Certificate and the requirements of this consent.
 - Have met the design intent with regard to any construction variations to the approved design.
 - Any remedial works required to been undertaken have been satisfactorily completed.

Details of the approved and constructed system/s shall be provided as part of the Works-As-Executed drawings.

Rectification of Damage

128. Prior to the issue of an Occupation Certificate any damage to Council infrastructure not identified in the dilapidation report, as a result of the development shall be rectified at no cost to Liverpool City Council.

Any rectification works within Brickmakers Drive will require a Roads Act application. The application is to be submitted and approved by Liverpool City Council prior to such works commencing.

Line marking & Signage

129. Prior to the issue of an Occupation Certificate and installation of regulatory / advisory line marking and signage, plans are to be lodged with Liverpool City Council and approved by the Local Traffic Committee.

1. Allow eight (8) weeks for approval by the Local Traffic Committee.

Maintenance bond

130. Prior to the issue of an Occupation Certificate a maintenance bond is to be lodged with Liverpool City Council for road and drainage works.

The value of the bond shall be determined in accordance with Liverpool City Council's Bond

Policy. The bond will be administered in accordance with this policy.

Compliance Documentation

131. Prior to the issue of an Occupation Certificate the following compliance documentation shall be submitted to the Principal Certifying Authority. A copy of the following documentation shall be provided to Council where Council is not the Principal Certifying Authority:
- a) The WAE drawings shall clearly indicate the 1% Annual Exceedence Probability flood lines (local and mainstream flooding).
 - b) CCTV footage in DVD format to Council's requirements and a report in "SEWRAT" format for all drainage within future public roads and public land. Inspections are to be carried out in accordance with the Conduit Inspection Reporting Code of Australia WSA 05-2006. Any damage that is identified is to be rectified in consultation with Liverpool City Council.
 - c) Surveyor's Certificate certifying that all pipes and services are located wholly within the property or within appropriate easements and that no services encroach boundaries.
 - d) Documentation for all road pavement materials used demonstrating compliance with Council Design Guidelines and Construction Specification.
 - e) A Geotechnical Report certifying that all earthworks and road formation have been completed in accordance with AS3798 and Council's Design Guidelines and Construction specifications. The report shall include:
 - Compaction reports for road pavement construction
 - Compaction reports for bulk earthworks and lot regrading.
 - Soil classification for all residential lots
 - Statement of Compliance
 - f) Structural Engineer's construction certification of all structures

Service Providers

132. Written evidence (Section 73 Certificate) is to be submitted to the PCA prior to the issue of the subdivision certificate.
133. Notification of arrangement for the development from Endeavour Energy shall be submitted to Council.
134. Compliance Certificate for the development from an approved local telecommunications carrier shall be submitted to Council.

Boating Management Plan

135. A Boating Management Plan shall be submitted to, and approved by NSW Maritime and shall address, but not be limited to:
- (a) Internal speed limits within the marina basin;
 - (b) Identification of laneways for navigation throughout marina basin with respect to type of size of watercraft; and
 - (c) Identify appropriate means of access/egress from the marina basin to the Georges River as well as speed and the like.

Mechanical Plant and Equipment

136. The public address system, mechanical plant and equipment shall be selected in consultation with a suitably qualified and experienced acoustic consultant in accordance

with the recommendations of Noise Impact Assessment (Report_J14149RP2, Version V1 Final) prepared by EMGA Mitchell McLennan Pty Limited dated 21 July 2015.

Operational Environmental Management Plan

137. Prior to the issue of an Occupation Certificate, an Operational Environmental Management Plan (OEMP) shall be prepared by a suitably qualified and experienced environmental consultant. The OEMP shall provide a comprehensive and complete action and implementation plan to mitigate environmental impacts that may arise during operation of the Georges Cove Marina. The Plan shall address means by which the commitment in the Environmental Impact Statement, environmental assessment reports and approval/Environment Protection Licence will be fully implemented.

The OEMP shall also provide a framework for managing and mitigating environmental impacts for the life of the development and make provisions for auditing the effectiveness of the proposed environmental protection measures and procedures. Suitable management and control measures are to be included within the Plan to prevent adverse impacts on the environment. As a minimum, the EMP shall:

- a) Provide the strategic context for the management of the development;
- b) Identify all the statutory requirements of the development and any specific environmental standards;
- c) Impose mitigation measures for daily operations and management of the fuel storage and dispensing facilities (including any policies, procedures and staff training).
- d) Detail mitigation measures to minimise acoustic impacts (Noise Management Plan);
- e) Specify mitigation requirements to maintain air quality (Air Quality Management Plan);
- f) Outline mitigation measures to maintain water quality (Groundwater/Surface Water Management Plan);
- g) Address sediment and erosion control during operation; and
- h) Include community consultation and complaints management procedures.

A copy of the Operational Environmental Management Plan shall be submitted to Liverpool City Council, Principal Certifying Authority and Appropriate Regulatory Authority for review and approval prior to the issue of the Occupation Certificate.

Environmental Monitoring Program

138. An Environmental Monitoring Program shall form part of the Operational Environmental Management Plan. The Environmental Monitoring Program shall be prepared by a suitably qualified and experienced environmental consultant to evaluate the adequacy of adopted site operation, water management and pollution mitigation measures at the Georges Cove Marina.

The Program shall outline sample site selection, frequency of sampling, sample collection methods, analytes and sampling personnel. It shall also address any monitoring requirements contained within the conditions of consent and/or Environment Protection Licence. A copy of the Environmental Monitoring Program shall be forwarded to Liverpool City Council, Principal Certifying Authority and Appropriate Regulatory Authority for review and approval prior to the issue of the Occupation Certificate.

139. Prior to issue of the Occupation Certificate, a Compliance Certificate prepared by a suitably qualified and experienced environmental consultant shall be submitted to Liverpool City Council certifying that all components of the development comply with the approved Operational Environmental Management Plan and that all recommendations have been adopted.

140. Prior to issue of the Occupation Certificate, documentation prepared by a suitably qualified and experienced person shall be submitted to Liverpool City Council, Principal Certifying Authority and Appropriate Regulatory Authority certifying that:

- The Marina comprising the fuel storage and dispensing facilities was designed, installed and constructed in accordance with appropriate legislative requirements and standards including but not limited to:
- The Protection of the Environment Operations Act 1997 and Regulations;
- Department of Environment and Climate Change NSW (now Office of Environment and Heritage) guidelines titled 'Environmental Action for Marinas, Boatsheds and Slipways' (DECC 2007/108) dated June 2007 and any subsequent revision approved by the NSW Environment Protection Authority (EPA);
- Australian Standard (AS) 3962-2001 Guidelines for Design of Marinas;
- Australian Standard (AS) 1940-2004: The storage and handling of flammable and combustible liquids;
- Australian Standard (AS) 1657-2013 Fixed platforms, walkways, stairways and ladders – Design, construction and installation.
- Australian Standard (AS) 1692-2006 Steel tanks for flammable and combustible liquids; and/or
- Australian Standard (AS) 4897-2008: Design, Installation and Operation of Underground Petroleum Storage Tanks

Sydney Water Approval

141. Prior to the issue of an Occupation Certificate (Interim or Final), submit to Liverpool City Council written evidence from Sydney Water stating that they agree to accept the following:

- a) Waste liquids and solids being discharged into the sewer.
- b) Waste from the proposed pre-treatment facilities being discharged to sewer.

General Terms of Approval

142. Any applicable requirements stipulates in the General Terms of Approval issued for the application are to be addressed and confirmed to the relevant authority.
143. Confirmation must be provided to the PCA that any monetary contributions payable, any actions or works to be undertaken, or any other requirements of the VPA have been undertaken in accordance with the executed Voluntary Planning Agreement applying to this site.

F. CONDITIONS RELATING TO USE

The following conditions relate to the ongoing use of the premises:

Goods in Building

144. All materials and goods associated with the use shall be contained within the building at all times.

Graffiti

145. Any graffiti carried out on the property shall be removed, within 48 hours, at full cost to the owner/occupier of the site.

Waste

- 146. All solid and liquid waste is to be removed from the site by a registered waste contractor.
- 147. All waste materials generated as a result of the development are to be disposed at a facility licensed to receive such waste.
- 148. All solid waste stored on site is to be covered at all times.

Waste Storage Area

- 149. Waste bins must be stored in designated garbage/ trade refuse areas, which must be kept tidy at all times. Bins must not be stored or allowed to overflow in parking or landscaping areas, must not obstruct the exit of the building, and must not leave the site onto neighbouring public or private properties.
- 801. Waste must be adequately secured and contained within designated waste areas and must not leave the site onto neighbouring public or private properties.
- 802. Any bin bays must be:
 - a) Provided with mechanical ventilation;
 - b) Provided with a hose cock for hosing the garbage bin bay and a sewerage drainage point in or adjacent to the bin storage area. The drainage point should have a fine grade drain cover sufficient to prevent coarse pollutants from entering the sewer. If the hose cock is located inside the bin storage bay, it is not to protrude into the space indicated for the placement of bins;
 - c) Provided with sufficient light to permit usage at night;
 - d) Allocated with sufficient space within the bin bay to allow for access to all required bins by residents and waste collectors, as well as manoeuvring of bins within the bay and for the removal and return of bins by the waste collector;
 - e) Provided with signage to be prominently displayed in each bin bay, or waste service room, as appropriate indicating that:
 - f) Garbage is to be placed wholly within the garbage bins provided;
 - g) Only recyclable materials accepted by Council are to be placed within the recycling bins;
 - h) The area is to be kept tidy;

Car Parking/Loading

- 150. The car park and associated signage and line marking are to be maintained to Council's satisfaction.

Advertising

- 151. A separate Development Application shall be lodged for any signage in association with the development.

Hours of Operation

- 152. The hours of operation of the premises are limited to:

7.00 am to 10.00 pm Monday to Sunday with the exception of the private marina clubhouse, marina function centre and associated venues which are permitted to operate between 7.00am to 12.00 midnight, Monday to Saturday and 8.00am to 10.00pm Sunday and public holidays.

Maintenance of watercraft on the premises must only take place between 7.00am to

10.00pm Monday to Saturday and 8.00am to 10.00pm Sunday and Public Holidays.

The premises may operate on public holidays between the hours specified for Sundays.

Delivery Hours and Vehicles

153. Delivery and service vehicles are limited to the following hours of operation:

*7.00am to 10.00pm Monday to Saturday; and
8.00am to 10.00 pm on Sundays and Public Holidays*

Environment Protection License

154. The facility shall operate in accordance with the Environment Protection License issued by the NSW Environment Protection Authority.

Environmental Audit

155. Within twelve (12) months of the commencement of operations, and every twelve (12) months thereafter unless Liverpool City Council directs otherwise, the operator shall at its own expense commission an independent Environmental Audit of the project. This audit must:

- a) Be carried out by a suitably qualified, experienced and independent audit team;
- b) Be consistent with guidelines and standards relating to principles of environmental auditing including but not limited to ISO 19011:2011 – Guidelines for Auditing Management Systems / AS/NZS ISO 19011:2014 Guidelines for auditing management systems;
- c) Include consultation with Liverpool City Council and the Appropriate Regulatory Authority;
- d) Assess whether the project is complying with the approved Environmental Management Plan, conditions of both this consent and any licence issued by any other Authority;
- e) Assess whether the project is being carried out in accordance with industry best practice; and
- f) Recommend measures or actions to improve the environmental performance of the project.

Within three months of commissioning this audit, the proponent shall submit a copy of the audit to Liverpool City Council and relevant authorities, with a response to any recommendations contained within the audit report. The operator shall comply with any reasonable requests of Council in respect to the implementation of any measures arising from the audit, within such time as Council may agree.

Following each Independent Environmental Audit, the proponent shall review and if necessary revise the Environmental Management Plan (and any other plans/strategies required under this approval) to the satisfaction of Liverpool City Council. The revised Environmental Management Plan and other plans/strategies must be submitted to Liverpool City Council within three months of submitting the audit report.

Acoustic Report

156. An acoustic report shall be prepared by a suitably qualified and experienced acoustic consultant and be submitted to Council for its assessment and approval within three (3) months of occupation/completion of the development. The report shall include but not be limited to the following information:

- a) Noise measurements taken at the nearest noise sensitive locations as indicated in the

b) Verification that noise levels at the nearest potentially affected receiver comply with all relevant assessment criteria detailed in the abovementioned report;

c) All complaints received from local residents in relation to the operation of the premises/development; and

d) Where noise measurements required under point a) above indicate that the relevant assessment criteria are exceeded, recommendations shall be provided in relation to how noise emissions can be satisfactorily reduced to comply with the assessment criteria.

Following written approval from Liverpool City Council, any recommendations provided under point d) above shall be implemented fully.

157. The operation of the Georges Cove Marina shall comply with the approved Operational Environmental Management Plan and Pollution Incident Response Management Plan at all times.

158. The unloading and loading of all boats, trailers, goods and materials used in conjunction with the development must take place only on the subject site.

159. The wheels of all vehicles leaving the site are to be clean and free of dust, dirt and mud.

160. A Complaints Handling Register shall be prepared for the operation of the Georges Cove Marina. The Complaints Register is to be kept by the operator or other suitable staff members and is to include the following:

- (a) the date and time, where relevant, of the complaint;
- (b) the means by which the complaint was made (telephone, mail or email);
- (c) any personal details of the complainant that were provided, or if no details were provided, a note to that effect;
- (d) the nature of the complaint;
- (e) any action(s) taken in response to the complaint, including any follow-up contact with the complainant; and
- (f) if no action was taken in relation to the complaint, the reason(s) why no action was taken.
- (g) allocate an individual "complaint number" to each complaint received.

The Complaints Register must be made available for inspection when requested by Liverpool City Council.

Deliveries

161. Vehicles servicing the site shall comply with the following requirements:

a. All vehicular entries and exits shall be made in a forward direction.

b. All vehicles awaiting loading, unloading or servicing shall be parked on site and not on adjacent or nearby public roads.

Unreasonable Noise and Vibration

162. The industry, including but not limited to the operation of vehicles, boats, mechanical plant, equipment and patrons shall be conducted so as to avoid unreasonable noise or vibration and cause no interference to adjoining or nearby occupations. Special precautions must be

taken to avoid nuisance, particularly from machinery, plant, vehicles, warning sirens, public address systems and the like.

In the event of a noise or vibration problem arising at the time, the person in charge of the premises shall when instructed by Council, cause to be carried out, an acoustic investigation by an appropriate acoustic consultant and submit the results to Council. If required by Council, the person in charge of the premises shall implement any or all of the recommendations of the consultant and any additional requirements to Liverpool City Council's satisfaction.

163. All work and storage areas where spillage may occur shall be bunded. The capacity of the bunded area shall be calculated as being equal to 110% of the largest storage or process vessel/container in the area or 10% of the total volume of vessels/containers accommodated in the area, whichever is the greater.

All bunded areas shall be graded to a blind sump or sewer to facilitate collection and disposal of wastewater in accordance with Sydney Water's requirements. All bunded areas shall be suitably treated to prevent ingress of stormwater.

Lighting

164. Illumination of the site is to be arranged in accordance with the requirements of Australian Standard 4282 1997 so as not to impact upon the amenity of the occupants of adjoining and nearby premises.
165. Waste and recyclable material shall be managed in a satisfactory manner that does not give rise to offensive odour or encourage pest activity. All waste material shall be regularly removed from the premises. Waste shall not be permitted to accumulate near the waste storage bins.

Wash Bays, Maintenance Workshop and Storage Facilities

166. The Georges Cove Marina shall comply with the following requirements:

a) All mechanical repairs shall be conducted within the workshop, the floor of which shall be graded to an internal drainage point connected to the sewer of Sydney Water in accordance with that Authority's requirements. Under no circumstances shall any mechanical work be conducted in external areas of the premises;

b) All vehicles, boats, outboard motors, garbage bins and equipment shall only be washed within approved wash bays, the floor of which shall be graded to an internal drainage point connected to the sewer of Sydney Water in accordance with that Authority's requirements. It is prohibited to wash any vehicles, boats, garbage bins or equipment in any other areas of the premises;

c) In-water bottom cleaning, hull scraping or any underwater process that could remove antifouling paint from the boat hull are strictly prohibited at the subject premises;

d) The external grounds of the facility shall be regularly maintained and kept free of oil contamination;

e) Waste oil shall be stored in a covered area pending regular removal to a waste oil recycler;

f) No motor vehicle, boat or part of a motor vehicle, boat or trailer that is in the custody of the Georges Cove Marina shall be left standing on any public road or footpath;

- g) All boats, trailers and equipment undergoing or awaiting repair shall be stored wholly within the building;
 - h) Spill-kits shall be provided on site at all times to clean-up any minor liquid spillages.
 - i) There shall be no parts stored or worked on outside on the external areas of the premises.
 - j) The subject premise has not been approved for panel beating or spray-painting. It is prohibited to undertake such activities without separate written development consent being obtained from Council.
167. Trafficable bunds shall be installed at the entry and exits of the maintenance workshop, storage facilities and wash bays to contain all substances and prevent the ingress of stormwater.

Garbage Storage Area

168. A designated garbage storage area shall be located on the premises for the storage of rubbish bins and waste containers. The garbage storage area shall be fully enclosed and provided with a concrete floor, with concrete or cement rendered walls coved to the floor. The floor shall be graded to an approved sewer connection incorporating a sump and galvanised grate cover or basket. A hose cock shall be provided within the room. Garbage rooms shall be vented to the external air by natural or artificial means. The garbage storage room shall provide a designated space for dry recycling facilities.

Waste Receipts

169. A permanent record of receipts for the removal of both liquid and solid waste from the site shall be kept and maintained up to date at all times. Such record is to be made available to Council's Officers upon request.
170. Waste and recyclable material generated from the operations of the business shall be managed in a satisfactory manner that does not give rise to offensive odour or encourage pest activity. Food residues, food scraps, and waste material shall be regularly removed from the premises. Waste shall not be permitted to accumulate near the allocated waste storage bins.
171. The operator shall provide an adequate garbage disposal and collection service and ensure that rubbish is regularly removed from the site.
172. All waste material is to be removed from the site by a registered waste contractor and disposed at a facility licensed to receive such waste.
173. All containment measures including trafficable bunds shall be designed, installed and constructed in a manner which: permits the safe passage of personnel and vehicles; maintains effective containment capacity and minimises intrusive/offensive noise impacts arising from vehicle operation.
174. All activities and operations shall not give rise to air pollution (including odour), offensive noise or pollution of land and/or water as defined under the Protection of the Environment Operations Act 1997.
175. Appropriate signage shall be located outside the building to encourage patrons to minimise noise when leaving the premises.
176. Emission of sound from the premises shall be controlled at all times so as not to unreasonably impact upon nearby owners/occupants.

Oil/Water Separator

177. The oil/water separator servicing the site shall be covered and bunded. The cover shall have an overhang of at least 100. The bunding shall have sufficient capacity to contain 110% of the capacity of the oil/water separator. The oil/water separator shall be connected to Sydney Water's sewer in accordance with a Trade Waste Agreement.

Storage of Flammable and Combustible Liquids

178. Flammable and combustible liquids shall be stored in accordance with AS 1940-2004- The Storage and Handling of Flammable and Combustible Liquids.

Storage of Dangerous Goods

179. A Hazardous Chemicals Notification shall be made to SafeWork NSW if 'dangerous goods' stored on the premises exceed the manifest quantity as prescribed in schedule 11 of the Work Health and Safety Regulation 2011.

Registration of Premises

180. The premises shall be registered with Council prior to the commencement of business. In this regard, Council's Health Business registration Application Form shall be completed and returned to Council for processing.

Inspection Fee

181. Council's Environmental Health Officers will carry out routine inspections of the premises under the Food Act 2003. Administration and inspection fees will be charged in accordance with Council's Pricing Policy and approved fees and charges.
182. Under the Food Act 2003, certain retail food businesses such as restaurants, cafes, takeaways, clubs and pubs are required to appoint at least one trained Food Safety Supervisor (FSS) in their business. Further information is available from the NSW Food Authority's website at www.foodauthority.nsw.gov.au.

Annual Fire Safety Statements

183. Annual fire safety statements are to be submitted to Council within (12) months after the last such certificate was given in accordance with clause 177, part 9, division 5 of the Environmental Planning and Assessment Regulation 2000. The annual fire safety statement shall be prominently displayed in the building in the location adjacent to the main entry/exit point to the building.
184. The annual fire safety statement must be to the effect that:
- (a) in respect of each essential fire safety measure, such measure has been assessed by a properly qualified person and was found, when it was assessed, to be capable of performing:
 - (i) in the case of an essential fire safety measure applicable by virtue of a fire safety schedule, to a standard no less than that specified in the schedule, or
 - (ii) in the case of an essential fire safety measure applicable otherwise than by virtue of a fire safety schedule, to a standard no less than that to which the measure was originally designed and implemented, and
 - (b) the building has been inspected by a properly qualified person and was found when it

was inspected to be in a condition that did not disclose any grounds for a prosecution under Part2, Division 7 of the Environmental Planning and Assessment Regulation, 2000.

Flooding

185. There shall be no storage of materials below the 1% AEP flood plus half a metre freeboard (i.e. 5.6m + 0.5m = 6.1m Australian Height Datum) which may cause pollution or be potentially hazardous during any flood.

Bushfire

186. Unrestricted access for fire-fighting personnel shall be provided around the property.

G. ADVISORY

- a) If you are dissatisfied with this notice of determination or the conditions contained within this notice of determination, Section 82A of the Environmental Planning and Assessment Act 1979 gives you the right to request a review of the determination within 6 months after the date on which the application is taken to have been determined.
- b) If you are dissatisfied with this decision, Section 97 of the Environmental Planning and Assessment Act 1979 gives you the right to appeal to the Land and Environment Court within 6 months after the date on which the application is taken to have been determined.
- c) In accordance with Section 95 of the Environmental Planning and Assessment Act 1979, unless otherwise stated by a condition of this consent, this consent will lapse unless the development is commenced within 5 years of the date of this notice.
- d) In accordance with Section 98 of the Environmental Planning and Assessment Act 1979, an objector who is dissatisfied with the determination of a consent authority to grant consent to a development application for designated development (including designated development that is integrated development), may, within 28 days after the date on which the application is taken to have been determined, appeal to the Land and Environment Court.
- e) These conditions are imposed to control development, having regard to 79C of the Environmental Planning and Assessment Act 1979.
- f) The approval of this application does not imply or infer compliance with the Disability Discrimination Act and that the developer should investigate their liability under the Act.
- g) The requirements of all authorities including the Environmental Protection Authority and the Work Cover Authority shall be met in regards to the operation of the building.
- h) TELECOMMUNICATIONS ACT 1997 (COMMONWEALTH)

Telstra (and its authorised contractors) are the only companies that are permitted to conduct works on Telstra's network and assets. Any person interfering with a facility or installation owned by Telstra is committing an offence under the Criminal Code Act 1995 (Cth) and is liable for prosecution.

Furthermore, damage to Telstra's infrastructure may result in interruption to the provision of essential services and significant costs. If you are aware of any works or proposed works which may affect or impact on Telstra's assets in any way, you are required to contact: Telstra's Network Integrity Team on Phone Number 1800 810 443.

- i) The obligation to comply with the Category 1 fire safety provisions may require building work to be carried out even though none is proposed or required by other conditions of this consent.
- j) The Liverpool City Council Local Government area soils and ground water may be subject to varying levels of Salinity. Whilst Council may require applicants to obtain Salinity reports relating to some developments, no assessment may be made by Council in that regard. Soil and ground water salinity levels can change over time due to varying factors. It is recommended that all applicants make their own independent inquiries as to appropriate protection against the current and future potential affect of Salinity to ensure the ongoing structural integrity of any work undertaken. Liverpool City Council will not accept any liability for damage occurring to any construction of any type affected by soil and or ground water Salinity.
- k) The cost of any necessary adjustments to utility mains and services shall be borne by the applicant.
- l) Care shall be taken by the applicant and the applicant's agents to prevent any damage to adjoining properties. The applicant or the applicant's agents may be liable to pay compensation to any adjoining owner if, due to construction works, damage is caused to such an adjoining property

H. ATTACHMENT (A)

Food Premises – Restaurant/Take-Away/Bakery

1. All walls (including partition walls) within the kitchen, food preparation, storage and display areas shall be of solid construction (eg., bricks, cement or other approved material). These walls are to be finished with glazed tiles, stainless steel or other approved material adhered directly to the wall to a height of 2 metres above floor level.
2. Walls within the kitchen, food preparation, storage and display areas which are not of solid construction (eg., stud walls) shall be finished in tiles or other approved material from the floor level to the underside of the ceiling.
3. The floors within the kitchen, food preparation, storage and display areas shall be constructed of a suitable material which is non-slip, durable, resistant to corrosion, non-toxic, non-absorbent and impervious to moisture. The floor is to be graded and drain to an appropriate floor waste fitted with a basket arrestor.
4. If the floor in the food preparation and storage areas is constructed of tiles, the joints between the tiles shall be of a material that is non-absorbent and impervious to moisture.
5. The intersection of walls with floors and exposed plinths in the kitchen, food preparation, storage and display areas are to be coved to a minimum radius of 25mm.
6. All plinths are to be constructed of a material which is of solid construction and impervious to moisture. The plinths shall be:
 - (a) at least 75mm high;
 - (b) finished level to a smooth even surface;
 - (c) recessed under fittings to provide a toe space of not more than 50mm;
 - (d) rounded at exposed edges; and
 - (e) coved at the intersection of the floor and wall to a minimum radius of 25mm.
7. The ceiling is to be constructed of a material that is rigid, smooth faced and impervious to moisture. The ceiling over the food preparation, storage and display areas shall be painted with a washable paint of a light colour. The surface finish is to be free of open joints, cracks, crevices or openings (drop ceiling panel is not permitted). The intersections of walls and the ceiling are to be tight jointed, sealed and dust-proof.
8. The drop-in panel ceiling in the food preparation and storage areas shall be replaced with an approved rigid, smooth faced and impervious material which is free of open joints, cracks, crevices or openings. The ceiling is to be painted with a light coloured washable paint.
9. All service pipes and electrical conduits shall be either:
 - (a) concealed in floors, walls, ceiling or concrete plinths, or

- (b) fixed with brackets so as to provide at least
 - i) 25mm clearance between the wall and the pipe/conduit; &
 - ii) 100mm between the floor and the pipe/conduit
 - (c) pipes so installed are not to run underneath fittings.
10. All architraves, skirting boards, picture rails and the like are not permitted within the kitchen, food preparation and storage areas.
 11. All openings in the walls, floors and ceilings through which service pipes and electrical conduits pass through are to be designed and constructed so as to prevent the access of vermin.
 12. The internal and external surfaces, including exposed edges to all benches, counters and shelving in the food preparation, storage, display and serving areas are to be finished with a rigid, smooth faced and non-absorbent material (eg laminate, stainless steel or other approved material) that is capable of being easily cleaned.
 13. All shelving shall be located at least 25mm off the wall or alternatively, the intersection of the shelf and the wall is to be completely sealed. NOTE: The lowest shelf shall be a minimum of at least 150mm above the floor level.
 14. The hot water service unit shall be positioned a minimum of 75mm clear of the adjacent wall surface and mounted a minimum of 150mm above the floor level on a stand of non-corrosive metal construction.
 15. A free standing, hands free hand wash basin shall be provided in a convenient position within the food preparation and serving areas. The hand wash basin shall be provided with hot and cold water supplied through a single outlet and fitted with an approved mixing device to enable hands to be washed under hot running water at a temperature of at least 40C.
 16. Cavities, false bottoms and similar hollow spaces capable of providing access and harbourage of vermin are not permitted to be formed in the construction of the premises or in the installation of fixtures, fittings and equipment.
 17. A double bowl sink or two-compartment tub shall be provided with hot and cold water supplied through a single spout in the kitchen/food preparation area. Double bowl sink or tubs shall be supplied with water of at least:
 - (a) 45C in one bowl for washing purposes; and
 - (b) 77C in the other bowl for rinsing purposes, together with a thermometer accurate to 10C.

ATTACHMENT 2: GENERAL TERMS OF APPROVAL – DPI WATER



Contact: Mohammed Ismail
Phone: 02 8838 7535
Fax: 02 9895 7501
Email: mohammed.ismail@dpi.nsw.gov.au
Our ref: 10 ERM2015/0801
Our file: 9055009
Your ref: DA2015/781

- 3 NOV 2015

Records & Archives

The General Manager
Liverpool City Council
Locked Bag 7064
LIVERPOOL BC NSW 1871

Attention: Kristy Moulds

29 October 2015

Dear Kristy

Re: Integrated Development Referral – General Terms of Approval

Dev Ref: DA2015/781

Description of proposed activity: Construction and operation of a marina georges cove marina

Site location: 146 Newbridge Road Moorebank

I refer to your recent letter regarding an integrated Development Application (DA) proposed for the subject property. Attached, please find DPI Water's (formerly the NSW Office of Water) General Terms of Approval (GTA) for works requiring a controlled activity approval under the *Water Management Act 2000* (WM Act), as detailed in the subject DA.

Please note Council's statutory obligations under section 91A (3) of the *Environmental Planning and Assessment Act 1979* (EPA Act) which requires a consent, granted by a consent authority, to be consistent with the general terms of any approval proposed to be granted by the approval body.

If the proposed development is approved by Council, DPI Water requests that these GTA be included (in their entirety) in Council's development consent. Please also note the following:

- DPI Water should be notified if any plans or documents are amended and these amendments significantly change the proposed development or result in additional works on waterfront land (which includes (i) the bed of any river together with any land within 40 metres inland of the highest bank of the river, or (ii) the bed of any lake, together with any land within 40 metres of the shore of the lake, or (iii) the bed of any estuary, together with any land within 40 metres inland of the mean high water mark of the estuary).
- Once notified, DPI Water will ascertain if the amended plans require review or variation/s to the GTA. This requirement applies even if the proposed works are part of Council's proposed consent conditions and do not appear in the original documentation.

- DPI Water should be notified if Council receives an application to modify the development consent and the modifications change any activities on waterfront land.
- DPI Water requests notification of any legal challenge to the consent.

As the controlled activity to be carried out on waterfront land cannot commence before the applicant applies for and obtains a controlled activity approval, DPI Water recommends the following condition be included in the development consent:

"The Construction Certificate will not be issued over any part of the site requiring a controlled activity approval until a copy of the approval has been provided to Council".

The attached GTA are not the controlled activity approval. The applicant must apply (to DPI Water) for a controlled activity approval **after consent** has been issued by Council **and before** the commencement of any work or activity on waterfront land.

Finalisation of a controlled activity approval can take up to eight (8) weeks from the date DPI Water receives all documentation (to its satisfaction). Applicants must complete and submit (to the undersigned) an application form for a controlled activity approval together with any required plans, documents, the appropriate fee and security deposit or bank guarantee (if required by the Office of Water) and proof of Council's development consent.

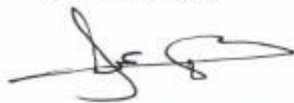
Application forms for the controlled activity approval are available from the undersigned or from DPI Water's website:

www.water.nsw.gov.au [Water licensing](#) > [Approvals](#) > Controlled activities

DPI Water requests that Council provide a copy of this letter to the applicant.

DPI Water also requests that Council provides DPI Water with a copy of the determination for this development application as required under section 91A (6) of the EPA Act.

Yours Sincerely



Mohammed Ismail
Water Regulation Officer
Water Regulatory Operations, Water Regulation Unit
NSW Department of Primary Industries – DPI Water

ATTACHMENT 3: GENERAL TERMS OF APPROVAL – DPI FISHERIES



Department of
Primary Industries

Our Ref: IDA15/75

Your Ref: DA-781/2015

7 September 2015

Liverpool City Council
(Attn: Ms Kristy Moulds)
Locked Bag 7064
LIVERPOOL BC NSW 1871

Dear Ms Moulds,

Proposal: IDA referral for construction and operation of a marina (Georges Cove Marina)
Property: 146 Newbridge Road, Moorebank – Lot 7 DP 1065574 – Georges River

Thank you for your referral of 24 August 2015 seeking comment on this proposal from Fisheries NSW, a division of NSW Department of Primary Industries.

Fisheries NSW is responsible for ensuring that fish stocks are conserved and that there is no net loss of key fish habitats upon which they depend. To achieve this, Fisheries NSW ensures that developments comply with the requirements of the *Fisheries Management Act 1994* (FM Act) (namely the aquatic habitat protection and threatened species conservation provisions in Parts 7 and 7A of the Act, respectively), and the associated *Policy and Guidelines for Fish Habitat Conservation and Management (2013)*. In addition, Fisheries NSW is responsible for ensuring the sustainable management of commercial, recreational and Aboriginal cultural fishing, aquaculture, marine parks and aquatic reserves within NSW.

Fisheries NSW has reviewed the proposal in light of those provisions and has no objections, subject to the proponent meeting the General Terms of Approval that follow. As per s.91A(3) of the *Environmental Planning and Assessment Act 1979*, any consent issued by Council must be consistent with these GTAs.

1. A Controlled Activities Approval (CAA) under the *Water Management Act* is to be obtained from DPI Water for excavation works within the riparian zone. Note that under s.199 of the *Fisheries Management Act* this authority is to consider comments raised by Fisheries NSW. If a CAA is not required for these works, a permit to dredge and reclaim under the *Fisheries Management Act* will be required prior to construction.
2. A permit to harm marine vegetation under s.205 of the *Fisheries Management Act* is to be obtained for Fisheries NSW prior to construction. This permit will cover the harm of marine vegetation (i.e. mangroves) that is likely to occur in the construction of foreshore revetment works. Current permit application forms are available at: <http://www.dpi.nsw.gov.au/fisheries/habitat/help/permit>
3. Fisheries NSW is to review and agree upon detailed plans of the foreshore protection works along the Georges River, prior to obtaining the permit to harm marine vegetation or providing comment under s.199 of the FM Act. There is to be no reclamation activities associated with these foreshore works. Harm to mangroves, especially those growing within the Georges River, is to be avoided where possible. It is highly recommended that the foreshore protection works are constructed to enhance aquatic habitats of the Georges River. Details of such 'Environmentally Friendly Seawall' designs can be obtained from: <http://www.environment.nsw.gov.au/publications/coasts/090328-env-friendly-seawalls-guide.htm>
4. Erosion and sediment control measures are to be used during construction to avoid subsequent impacts on the aquatic environment. Connection of the pond to the Georges River is to be delayed until all land forming works within the marine basin have been constructed. A sediment curtain is to be used during the entrance construction works to

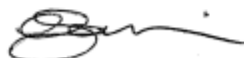
minimise the extent of turbidity arising from this activity. A sediment curtain is also to be used in the construction of foreshore revetment works along the Georges River.

5. High level site specific acid sulphate soil investigations are to be conducted prior to construction. These investigations are to inform the site specific implementation of the Acid Sulphate Soil Management Plan. The Department recommends that the implementation of this plan is approved of by the appropriate authority. It is important that there are no long-term impacts on the aquatic environment as a result of poor management of acid sulphate soils.
6. All other relevant authorities have no objection to this proposal.

Along with the above Fisheries NSW wish to express some concern regarding the high levels of ammonia in the groundwater at this site. Potential impacts need to be considered beyond the context of future land uses at this site. The concern is that once the marina is connected to the river, the high levels of ammonia may potentially negatively impact upon the aquatic organisms within the Georges River ecosystem. It is strongly recommended that Council seek comment on this specific matter from the State agency with the expertise and jurisdiction over contamination matters, which is the Environment Protection Authority, before further considering this development application.

If Council or the proponent requires any further information, please do not hesitate to contact me on 4222 8342.

Yours sincerely,



Carla Ganassin
Regional Assessment Officer (Metro)

ATTACHMENT 4: GENERAL TERMS OF APPROVAL – NSW EPA

Protection of the Environment Operations Act 1997

General Terms of Approval - Issued



Notice No: 1533694

Liverpool City Council
Liverpool BC NSW 2170

Attention: David Smith - Coordinator Development Assessment

Notice Number 1533694
File Number SF16/21494
Date 15-Jul-2016

Re: DA-846/2014 Construction and Operation of a Marina (Georges Cove Marina) comprising
250 dry berths, 186 wet berths, workshop, function centre, club house and carparking
146 Newbridge Road, Moorebank

Issued pursuant to Section 91A(2) Environmental Planning and Assessment Act 1979

I refer to the development application and accompanying information provided for the construction and operation of a marina (Georges Cove Marina) received by the Environment Protection Authority (EPA).

Following the Land and Environment Court's decision to nullify the JRPP approval: 2012SYW035, a meeting was held between Liverpool City Council, the NSW EPA and agents acting on behalf of the applicant to undertake additional sampling in order to determine the extent of contamination in the soil, groundwater, dredge pond water and sediment. The meeting was held on 30 October 2015.

Following the meeting, a Supplementary Preliminary Investigation Report (ref. J14149RP1, V3) and Remediation Action Plan (ref. J14149RP1, V2) was issued for review.

On 23 May 2016, the NSW EPA concluded that the additional sampling was sufficient to make an assessment around the current level of site contamination consistent with the requirements of cl 7(2) of SEPP 55. With exception of the preliminary site contamination investigation and the remedial action plan, it is understood that the proposal to develop the site is unchanged since the approval issued (ref. JRPP, 22 August 2016).

The information provided to the EPA indicates that the proposed use of the premises meets the scheduled activity threshold for 'Marinas and Boat Repairs' as prescribed in *Schedule 1* of the *Protection of the Environment Operations Act 1997* (POEO Act). An Environment Protection Licence will therefore be required for operation of the marina.

General Terms of Approval - Issued



Notice No: 1533694

Additionally, the NSW EPA recommends that construction of any approved development is managed through a Scheduled Development Works licence, issued under the *Protection of the Environment Operations Act 1997*, to ensure that potential emission sources (including discharges to water) are adequately controlled.

The applicant will need to make a separate application to the EPA to obtain the above licences.

The general terms of approval for this proposal are included at Attachment A. If Liverpool City Council grants development consent for this proposal these conditions should be incorporated into the consent. In the event that the development is modified either by the applicant prior to the granting of consent or as a result of the conditions proposed to be attached to the consent, it will be necessary to consult with the NSW EPA about the changes before the consent is issued.

If you have any questions, or wish to discuss this matter further please contact Tenille Lawrence on (02) 9995 6207.

Yours sincerely

A handwritten signature in purple ink, appearing to read 'James Goodwin'.

James Goodwin
Acting Manager
Metropolitan - Sydney Industry
(by Delegation)

General Terms of Approval - Issued



Notice No: 1533694

ATTACHMENT A

Administrative conditions

Note: Mandatory conditions for all general terms of approval

A1. What these General Terms of Approval authorise and regulate

- A1.1 These General Terms of Approval are limited to any activities that fulfil the meaning of scheduled development works as defined in section 47(3) of the *Protection of the Environment Protection Act 1997* and scheduled activities.
- A1.2 Any scheduled development works must not commence until the NSW EPA provides written approval to undertake contaminated soil and groundwater treatment at the premises.
- A1.3 These General Terms of Approval authorise the carrying out of the activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.

Scheduled Activity	Fee Based Activity	Scale
Contaminated Land and Water Treatment	Contaminated Land and Water Treatment	Any annual handling capacity
Marinas and Boat Repairs	Boat Mooring and Storage; Boat Construction/Maintenance; Boat Mooring and Storage	Capacity to handle: vessels 25m or longer; more than 5 vessels longer than 5m; more than 80 vessels at a time.

- A1.4 The proponent must not carry on any scheduled activities until the scheduled development works are completed.

A2. Premises to which this licence applies

- A2.1 These General Terms of Approval apply to the following premises:

Premises Details
146 Newbridge Road
Moorebank NSW
Lot 7, DP 1065574

A3. Information supplied to the EPA

- A3.1 Except as expressly provided by these general terms of approval, works and activities must be carried out in accordance with the proposal contained in:

- the development application DA 846/2012 submitted to Liverpool City Council on 6 March 2012;
- any environmental impact statement *Environmental Impact Statement for development of Georges Cove Marina at Moorebank, N.S.W.* (EIS) prepared for Benedict Industries Pty Ltd and

General Terms of Approval - Issued



Notice No: 1533694

- a. *Maritime Building Plans - Sub Level - Carpark Drawing No. DA-102 C*
 - b. *Maritime Building Elevations - Comparisons Drawing No. DA-115 C*
 - c. *Maritime Building Sections - Comparisons Drawing No. DA-125 C*
 - d. *Site Plan General Layout Drawing No. DA-001 C*
 - e. *Site Plan Numbers Drawing No. DA-003 C.*
- documents supplied to the EPA following the Land and Environment Court's decision on the 18 March 2015 to invalidate the development application JRPP 2012SYW035. Supplementary information reviewed includes:
 - f. Supplementary Preliminary Investigation Report and Remediation Action Plan (ref. J14149RP1, V3), March 2016 superseding Preliminary Investigation Report (Report J14149RP1, V1) noted in EIS submitted July 2015
 - g. Noise Impact Assessment proposed Georges Cove Marina EMGA Mitchell McLennan, Report J14149RP Version 1, July 2015.
 - h. Air Quality and Greenhouse Gas Assessment for the Proposed Construction and Operation of the Georges Cove Marina, Todoroski Air Sciences, April 2015 (ref. 11080033) superseding Air Quality Assessment for the Proposed Construction and Operation of the Georges Cove Marina, Todoroski Air Sciences, December 2011 (ref. 11080033).
 - i. Acid Sulfate Management Plan for Georges Cove Marina

A4. Fit and Proper Person

A4.1 The applicant must, in the opinion of the EPA, be a fit and proper person to hold a licence under the *Protection of the Environment Operations Act 1997*, having regard to the matters in s.83 of that Act.

General Terms of Approval - Issued



Notice No: 1533694

Limit conditions

L1. Pollution of waters

Note: Mandatory condition

L1.1 Except as may be expressly provided by a licence under the *Protection of the Environment Operations Act 1997* in relation of the development, section 120 of the *Protection of the Environment Operations Act 1997* must be complied with in and in connection with the carrying out of the development.

L2. Waste

Note: Mandatory conditions to be placed on all general terms of approval

L2.1 The licensee must not cause, permit or allow any waste generated outside the premises to be received at the premises for storage, treatment, processing, re-processing or disposal or any waste generated at the premises to be disposed of at the premises, except as expressly permitted by a licence under the *Protection of the Environment Operations Act 1997*.

L2.2 This condition only applies to the storage, treatment, processing, re-processing or disposal of waste at the premises if it requires an environment protection licence under the *Protection of the Environment Operations Act 1997*.

L3. Blasting

L3.1 All blasting activities are prohibited.

L4. Noise Limits - Operational Phase

L4.1 Maintenance of watercraft on the premises must only take place within the hours of 7.00am to 10.00pm Monday to Saturday, 8.00am to 10.00pm Sunday and Public Holidays.

L4.2 Noise generated at the premises must not exceed the noise limits presented in the table below.

All feasible and practicable noise mitigation measures shall be implemented to minimise noise impacts from the development. If noise exceeds the project specific noise goal, the proponent shall investigate, establish the reason and implement all additional feasible and practicable measures.

The locations referred to in the table below are indicated in the Figure 3.1 - *Assessment and background noise monitoring locations* and Table 3.1 *Noise sensitive assessment location* have been extracted from EMGA Mitchell McLennan Noise Impact Assessment (ref. J14149RP2, July 2015).

General Terms of Approval - Issued



Notice No: 1533694

Location	Period	Project Specific Noise Level (PSNL) dB(A)	
149 Maddecks Av, Moorebank	Day	47	LA,eq (15 min)
	Evening	45	LA,eq (15 min)
	Night	40	LA,eq (15 min)
2 Silverleaf Lane, Moorebank	Day	44	LA,eq (15 min)
	Evening	44	LA,eq (15 min)
	Night	39	LA,eq (15 min)
Milperra Sports Field	When in use	55	LA,eq, period
Future Industrial	When in use	70	LA,eq, period

Note for the purpose of condition L4.2:

- Day is defined as the period from 7am to 6pm Monday to Saturday and 8am to 6pm Sunday and Public Holidays;
- Evening is defined as the period 6pm to 10pm; and
- Night is defined as the period from 10pm to 7am Monday to Saturday and 10pm to 8am Sunday and Public Holidays.

L4.3 The noise limits set out in condition L4.2 apply under all meteorological conditions except for the following:

- wind speeds greater than 3 metres/second at 10 metres above ground level; or
- stability category F temperature inversion conditions and wind speeds greater than 2 metres/second at 10 metres above ground level; or
- stability category G temperature inversion conditions.

L4.4 To determine compliance:

- In relation to the LA,eq (15 min) noise limits in condition L4.2, noise measurements must be undertaken using noise measurement equipment located:
 - approximately on the boundary where any dwelling is situated 30 metres or less from the property boundary that is closest to the premises; or
 - within 30 metres of a dwelling facade, but not closer than 3m, where any dwelling on the property is situated more than 30 metres from the property boundary that is closest to the premises; or
 - within approximately 50 metres of the boundary of a National Park or a Nature Reserve.
- In relation to the noise limits in condition L4.2, noise measurements must be undertaken using noise measuring equipment located:
 - at the most affected point at a location where there is no dwelling at the location; or
 - at the most affected point within an area at a location prescribed by conditions L4.4 (a) and L4.4 (b).
- A non-compliance with condition L4.2 will still occur if noise generated from the premises in excess of the appropriate limit specified in condition L4.2 is detected:

General Terms of Approval - Issued



Notice No: 1533694

- in an area at a location other than an area prescribed by condition: L4.4 (a) and L4.4 (b);
- at a point other than the most affected point at a location.

L4.5 For the purposes of determining the noise generated at the premises the modification factors in Section 4 of the NSW Industrial Noise Policy must be applied, as appropriate, to the noise levels measured by the noise monitoring equipment.

Operating conditions

01. Activities must be carried out in a competent manner

01.1 Activities must be carried out in a competent manner. This includes:

- a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and
- b) the treatment, storage, processing, re-processing, transport and disposal of waste generated by the activity.

02. Maintenance of plant and equipment

02.1 All plant and equipment installed at the premises or used in connection with the scheduled development works:

- a) must be maintained in a proper and efficient condition; and
- b) must be operated in a proper and efficient manner.

03. Dust

03.1 The proponent must ensure that any scheduled development works and/or scheduled activities are carried out by any practical means necessary to minimise dust emission on the premises and implement all reasonable and feasible measure to minimise the release of dust from the premises.

04. Hours of Operation - Construction

04.1 All scheduled development works must:

- a) only be undertaken between 7:00am and 6:00pm Monday to Friday;
- b) only be undertaken between 8:00am and 1:00pm Saturday; and
- c) not be undertaken on Sunday or public holidays.

05. Potentially Offensive Odour

05.1 The proponent is required to take all reasonable measures to prevent and minimise the emission of offensive odours.

General Terms of Approval - Issued



Notice No: 1533694

O6. Waste Management - Construction

O6.1 The proponent must assess, classify and manage any waste generated at the premises in accordance with the EPA's Waste Classification Guidelines Part 1: Classifying Waste prior to dispatching waste off site.

O6.2 The licensee must not cause, permit or allow any waste generated:

- (a) outside the premises to be received at the premises, except for materials that meet the EPA's Resource Recovery Exemptions for engineered fill purposes
- (b) at the premises to be disposed of at the premises, except as permitted in Condition O6.3.

O6.3 Excavated material suitable for re-use within the premises may be transported from one part of the premises to another part by road in accordance with Condition O6.4.

O6.4 The proponent must ensure that:

- (a) the body of any vehicle or trailer, used to transport waste or excavation spoil from the premises, is covered before leaving the premises to minimise any spill or escape of any dust, waste, or spoil from the vehicle or trailer; and
- (b) mud, splatter, dust and other material likely to fall from or be cast off the wheels, underside or body of any vehicle, trailer or motorised plant leaving the premises, is removed to the greatest extent practicable before the vehicle, trailer or motorised plant leaves the premises; and
- (c) road surfaces subject to the tracking of material by vehicles leaving the premises are effectively cleaned at the end of each work day.

O7. Waste Management - Operational

O7.1 The proponent must ensure that any liquid and/or non liquid waste generated and/or stored at the premises is assessed and classified in accordance with the EPA's Waste Classification Guidelines as in force from time to time.

O7.2 All activities at the premises must be carried out in a manner that will prevent waste from polluting waters.

O7.3 The proponent must provide facilities to ensure the collection storage and disposal of waste generated at the premises so that it does not pollute waters.

O7.4 For the purposes of condition O7:

- a) Waste generated at the premises includes waste collected from vessels at the premises and may include but not be limited to contaminated bilge water, litter, garbage, fuel, oil and waste from abrasive cleaning, sanding, scraping and painting.
- b) Facilities may include but not be limited to tarpaulins, waste bins, pump-out facilities, signage and agreements with those operating on the site.

Note: All wastes that contain organotin biocides must be collected, stored and disposed of in accordance with the Organotin Waste Chemical Control Order 1989.

General Terms of Approval - Issued



Notice No: 1533694

O8. Construction Environment Management Plan

O8.1 Prior to the commencement of any construction works, an appropriately qualified person must prepare an Construction Environmental Management Plan (CEMP). The plan should include but need not be limited to:

- an Acid Sulfate Soils Management plan
- Dust (air quality) management strategy
- Procedures for validation of imported fill material and the proposed means of disposing overburden
- Waste and materials re-use on-site
- Community response and management procedure outlining the course of action to be undertaken following receipt of a complaint
- Chemical Handling and Dangerous Goods Management Plan
- Pollution Incident Response Management Plan
- the Construction Noise Management Plan required by Condition O9.

The CNMP must be submitted to to the Manager Sydney Industry at PO Box 668 Parramatta NSW 2124 or metro.regulation@epa.nsw.gov.au before any construction works take place.

O9. Preparation of a Construction Noise Management Plan

O9.1 Prior to the commencement of any construction works, an appropriately qualified person must prepare a detailed Construction Noise Management Plan (CNMP), prior to the commencement of scheduled development works, that will ensure compliance with the requirements of Condition O10 and includes, but is not necessarily limited to:

- a. identification of each work area, site compound and access route (both private and public)
- b. identification of the specific activities that will be carried out and associated noise sources at the premises and access routes
- c. identification of all potentially affected sensitive receivers, the construction noise and vibration objectives identified in accordance with the *Interim Construction Noise Guideline* (DECC 2009) and *Assessing Vibration: A Technical Guideline* (DEC 2006)
- d. assessment of potential noise and vibration from the proposed construction methods (including noise from construction traffic) against the objectives identified in (d)
- e. where the objectives are predicted to be exceeded an analysis of feasible and reasonable noise mitigation measures that can be implemented to reduce construction noise impact
- f. description of management methods and procedures and specific noise mitigation treatments that will be implemented to control noise and vibration during construction, including the early erection of operational noise control barriers
- g. procedures for notifying residents of construction activities that are likely to affect their noise and vibration amenity, and
- h. measures to monitor noise performance and respond to complaints.

The CNMP must be submitted to to the Manager Sydney Industry at PO Box 668 Parramatta NSW 2124 or metro.regulation@epa.nsw.gov.au before any construction works take place.

O10. Noise Management - Construction Phase

O10.1 All work and activities must be undertaken in a manner that will minimise noise and vibration impacts at sensitive receivers.

O10.2 The proponent must ensure that all feasible and practicable noise mitigation measures are implemented in accordance with the *Interim Construction Noise Guidelines* (DECC, 2009). If noise exceeds the project specific noise goals the proponent shall investigate, establish the reason for the exceedance and implement all additional feasible and practicable measures.

General Terms of Approval - Issued



Notice No: 1533694

O10.3 For the purposes of determining the noise generated at the premises the modification factors in Section 4 of the NSW Industrial Noise Policy must be applied, as appropriate, to the noise levels measured by the noise monitoring equipment.

O11. Erosion and Sediment Control - Construction Phase

O11.1 The proponent must implement erosion and sediment control measures to prevent pollution of waters in accordance with the *Soils and Construction: Managing Urban Stormwater (2004)* - 'the Blue Book'.

O11.2 All erosion and sediment control measures installed on the premises must be inspected and works undertaken to repair and/or maintain these controls:

- a) regularly during normal construction hours
- b) daily during rainfall events
- c) within 24 hours of the cessation of a rainfall event causing run off to occur from the premises.

The proponent must record all observations and actions from such inspections including any works undertaken to repair and/or maintain erosion and sediment control measures.

O12. Dangerous Goods/Chemical Management

O12.1 The proponent must ensure that environmental risks associated with the storage, procession and handling of hazardous materials and dangerous goods are minimised. Storage and handling of any dangerous goods must be undertaken in accordance with *The Storage and Handling of Dangerous Goods Code of Practice, 2005* which can be viewed online at:

http://www.workcover.nsw.gov.au/__data/assets/pdf_file/0019/17074/storage-handling-dangerous-goods-1354.pdf

O12.2 The type, quantity and location of all dangerous goods, chemicals and waste needs to be easily identified by site personnel and included in subsequent management plans/documentation for the premises.

O12.3 Effective controls need to be implemented and maintained in the storage, procession and handling of materials at the premises. These controls should also include operating and maintaining bunds or spill containment systems where necessary to minimise the risk of pollution from potential spills and leaks.

Information on bunding and spill management can be found online at: <http://www.epa.nsw.gov.au/mao/bundingspill.htm>

O13. Pollution Incident Response Management Plan

O13.1 A Pollution Incident Response Management Plan (PIRMP) needs to be developed for the premises (due to the premises requiring an EPA licence) which needs to follow requirements set out in the EPA's *Environmental Guidelines: Preparation of Pollution Incident Response Management Plans* which can be viewed online at <http://www.environment.nsw.gov.au/resources/legislation/201200227egpreppimp.pdf>

O13.2 The proponent should note and be aware of its responsibility to notify each relevant authority of any pollution incident, in accordance with Section 148 of the *Protection of the Environment Operations Act 1997*. This includes notifying the authorised relevant authority, which in this instance is likely to be the EPA. The PIRMP should detail incident triggers and notification protocols so that compliance with section 148 of the *Protection of the Environment Operations Act 1997* is achieved.

General Terms of Approval - Issued



Notice No: 1533694

Monitoring and recording conditions

M1. Monitoring records

M1.1 The results of any monitoring required to be conducted by the EPA's general terms of approval, or a licence under the *Protection of the Environment Operations Act 1997*, in relation to the development or in order to comply with the load calculation protocol must be recorded and retained as set out in conditions M1.2 and M1.3.

M1.2 All records required to be kept by the licence must be:

- in a legible form, or in a form that can readily be reduced to a legible form;
- kept for at least 4 years after the monitoring or event to which they relate took place; and
- produced in a legible form to any authorised officer of the EPA who asks to see them.

M1.3 The following records must be kept in respect of any samples required to be collected: the date(s) on which the sample was taken;

- the time(s) at which the sample was collected;
- the point at which the sample was taken; and
- the name of the person who collected the sample.

M2. Recording of pollution complaints

M2.1 The proponent must keep a legible record of all complaints made in relation to any pollution arising from any activity to which these General Terms of Approval apply.

M2.2 The record must include details of the following:

- a) the date and time of the complaint;
- b) the method by which the complaint was made;
- c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
- d) the nature of the complaint;
- e) the action taken by the proponent in relation to the complaint, including any follow-up contact with the complainant; and
- f) if no action was taken by the proponent, the reasons why no action was taken.

M2.3 The record of a complaint must be kept for at least 4 years after the complaint was made.

M2.4 The record must be produced to any authorised officer of the EPA who asks to see them.

M3. Telephone complaints line

The proponent must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.

The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.

This condition does not apply until 3 months after this condition takes effect.

General Terms of Approval - Issued



Notice No: 1533694

Reporting conditions

R1.1 The applicant must provide an annual return to the EPA in relation to the development as required by any licence under the *Protection of the Environment Operations Act 1997* in relation to the development. In the return, the applicant must report on the annual monitoring undertaken (where the activity results in pollutant discharges), provide a summary of complaints relating to the development, report on compliance with licence conditions and provide a calculation of licence fees (administrative fees and, where relevant, load based fees) that are payable. If load based fees apply to the activity the applicant will be required to submit load-based fee calculation worksheets with the return.

Special Conditions

S.1 Remediation of the Site

S1.1 The proponent must appoint a NSW EPA accredited contaminated site auditor to review the suitability of the RAP to ensure that the site can be made suitable for the proposed land use.

If satisfied that the RAP is appropriate, the site auditor must submit the Section B Site Audit Statement to the NSW EPA certifying that the site can be made suitable for the proposed land use. The Section B Site Audit Statement must be submitted to the Manager Sydney Industry at PO Box 668 Parramatta NSW 2124 or metro.regulation@epa.nsw.gov.au within one month of its preparation.

No earthworks or dredging activities are to be commenced at the premises until a Section B Site Audit Statement that certifies that the site can be made suitable for the proposed land use has been submitted to the EPA.

S1.2 Following the completion of all remediation works to the standards required by the RAP, the NSW EPA must then be provided with a Section A, Site Audit Statement, certifying that in the auditor's opinion, the site is suitable for the proposed land use.

The process must follow the NSW DECC (2006) *Contaminated Sites Guidelines for the NSW Site Auditor Scheme*.

The site auditor's report and site audit statement must be submitted to the Manager Sydney Industry at PO Box 668 Parramatta NSW 2124 or metro.regulation@epa.nsw.gov.au within one month of its preparation.

Definitions: For the purposes of Conditions S1.1 and S1.2, 'RAP' means the Remediation Action Plan contained within the document titled Remediation Action Plan – Proposed Georges Cove Marina – 146 Newbridge Road, Moorebank, NSW dated May 2011, prepared by EMGA Mitchell McLennan Pty Ltd (report J14149RP1 Rev 2) on behalf of Benedict Industries Pty Ltd.

S2. Sampling of the Marina Lake Water Prior to the Break Through to the Georges River

S2.1 The proponent must obtain approval from the NSW EPA prior to releasing waters from the marina lake to the Georges River. Validation sampling must be collected and made available to the NSW EPA for assessment. The validation sampling report must be addressed to the Manager of Sydney Industry at PO Box 668 Parramatta NSW 2124 or metro.regulation@epa.nsw.gov.au.

The proponent must ensure that the sampling plan is representative of the total water body noting that samples collected from the Georges River must be taken upstream of landfill impacted groundwater discharge, which includes the area of landfill to the north of the site.

The samples must be analysed by a NATA accredited laboratory for the list of substances listed below:

General Terms of Approval - Issued



Notice No: 1533694

- pH, temperature, electrical conductivity, dissolved oxygen and turbidity
- total suspended solids
- dissolved Al, Cd, Cu, Ni, Pb and Zn
- total and dissolved Hg
- polycyclic aromatic hydrocarbons (PAHs)
- ammonia, total P and total N
- biological oxygen demand (BOD) and chemical oxygen demand (COD).

The samples must be collected at an appropriate frequency and adequate time frame when making comparisons to the relevant assessment criteria to ensure all results are compliant. Development of any site specific criteria based on reference data must follow recommendations provided in *Australian and New Zealand Guidelines for Fresh and Marine Water Quality* (ANZECC 2000 Guidelines) requiring at least 24 data points collected over two years for determining 80th percentile values.

S2.3 The proponent must obtain the approval from the NSW EPA prior to using any flocculants in the treatment of the marina lake waters. The NSW EPA will request details of the flocculent including the name, toxicity data and dosing concentration prior to approving the application.

S2.4 All water sampling and analysis must be undertaken in accordance with the approved methods outline in the EPA's document titled *"Approved Methods for Sampling and Analysis of Water Pollutants in New South Wales"* dated March 2004".

S3. Construction of the Marina Lake Foreshores

S3.1 Only uncontaminated material can be used in the construction and back filling of the marina lakes foreshores.

General conditions

Copy of licence kept at the premises or on the vehicle or mobile plant

A copy of this licence must be kept at the premises or on the vehicle or mobile plant to which the licence applies.

The licence must be produced to any authorised officer of the EPA who asks to see it.

The licence must be available for inspection by any employee or agent of the licensee working at the premises or operating the vehicle or mobile plant.

ATTACHMENT 5: GENERAL TERMS OF APPROVAL – NSW RFS



NSW RURAL FIRE SERVICE



The General Manager
Liverpool City Council
Locked Bag 7064
LIVERPOOL BC NSW 1871

Your reference: DA-781/2015
Our reference: D15/3891
DA15121199855 CC

7th March 2016

Attention: David Smith

Dear Sir

Designated Development for 7/10665574 146 Newbridge Road Moorebank

Reference is made to Council's correspondence dated 10th December 2015 seeking general terms of approval for the above application for integrated development in accordance with Section 91 of the *Environmental Planning and Assessment Act 1979*.

The New South Wales Rural Fire Service advises that this response is be deemed to be a bush fire safety authority subject to compliance with the Bushfire Assessment prepared by EMM Consulting Pty Ltd, Report J14149RP10 and dated 26th October 2015.

If you have any queries regarding this advice, please contact Craig Casey, Development Assessment and Planning Officer, on 1300 NSW RFS.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'J. Maslen'.

Jason Maslen
Team Leader, Development Assessment and Planning
Customer Service Centre East