Industry Assessments
Contact: Patrick Copas
Phone: (02) 9274 6273
Email: patrick.copas@planning.nsw.gov.au

Mr Philip Towler
Associate Director
EMM Consulting
PO Box 21
ST LEONARDS NSW 1590

OBJ15/05521
SEAR 912 – Updated

Dear Mr Towler

Georges Cove Marina – 146 Newbridge Road, Moorebank (Lot 7 DP 1065574)
Updated Planning Secretary's Environmental Assessment Requirements (SEAR) 912

Thank you for your request for updated Planning Secretary's Environmental Assessment Requirements (SEARs) for the preparation of an Environmental Impact Statement (EIS) for the above development proposal. I have attached a copy of these updated requirements.

In support of your original application, you indicated that your proposal is both designated and integrated development under Part 4 of the *Environmental Planning and Assessment Act 1979*, and requires an approval under the *Protection of the Environment Operations Act 1997* and the *Water Management Act 2000*.

In preparing the updated SEARs, the Department of Planning and Environment (the Department) has re-consulted with the Department of Industry – Lands and Water Division and the Department of Primary Industries. Their additional comments/requirements for the EIS have been included in **Attachment 1**.

The Department has also re-consulted with the Environment Protection Authority and the Roads and Maritime Services. Unfortunately, these authorities did not respond in time, and you are required to consult with them directly regarding their additional comments/requirements for the EIS.

A copy of the authorities' original responses has been included in **Attachment 2**. You must ensure you address both their original and updated comments/requirements as part of your EIS.

If any other integrated approvals are identified before the Development Application (DA) is lodged, you must undertake direct consultation with the relevant agencies, and address their requirements in the EIS.

If your proposal contains any actions that could have a significant impact on matters of National Environmental Significance, then it will require an additional approval under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). This approval is in addition to any approvals required under NSW legislation. If you have any questions about the application of the EPBC Act to your proposal, you should contact the Commonwealth Department of the Environment and Energy on (02) 6274 1111.

Should you have any further enquiries, please contact Patrick Copas, Planning Services, at the Department on the details above.

Yours sincerely

9/10/18.

Chris Ritchie
Director
Industry Assessments
as delegate of the Planning Secretary

Planning Secretary's Environmental Assessment Requirements

Section 4.12(8) of the *Environmental Planning and Assessment Act 1979*. Schedule 3 of the *Environmental Planning and Assessment Regulation 2000.*

Designated Development

SEAR Number	912 – Updated
Proposal	Construction and operation of a marina comprising the following main elements: • a dry berth facility providing 250 berths for small craft • a wet berth facility for 186 small craft berths • three carparks providing approximately 489 car spaces • private marina club house • associated support infrastructure.
Location	146 Newbridge Road, Moorebank (Lot 7 DP 1065574), in the Liverpool local government area.
Applicant	Benedict Industries Pty Ltd
Date of Issue	9 October 2018
General Requirements	The Environmental Impact Statement (EIS) must meet the minimum form and content requirements in clauses 6 and 7 of Schedule 2 of the *Environmental Planning and Assessment Regulation 2000.*
Key Issues	The EIS must include an assessment of all potential impacts of the proposed development on the existing environment (including cumulative impacts if necessary) and develop appropriate measures to avoid, minimise, mitigate and/or manage these potential impacts. As part of the EIS assessment, the following matters must also be addressed: • **strategic context** – including: – a detailed justification for the proposal and suitability of the site for the development – a demonstration that the proposal is consistent with all relevant planning strategies, environmental planning instruments, development control plans (DCPs), or justification for any inconsistencies – a list of any approvals that must be obtained under any other Act or law before the development may lawfully be carried out. • **air quality** – including: – a description of all potential sources of air and odour emissions – an air quality impact assessment in accordance with relevant Environment Protection Authority guidelines – a description and appraisal of air quality impact mitigation and monitoring measures. • **noise and vibration** – including: – a description of all potential noise and vibration sources during construction and operation, including road traffic noise – a noise and vibration assessment in accordance with the relevant Environment Protection Authority guidelines – a description and appraisal of noise and vibration mitigation and monitoring measures. • **soil and water** – including: – a description of local soils, topography, drainage and landscapes – details of water usage for the proposal including existing and proposed water licencing requirements in accordance with the *Water Act 1912* and/or

	the *Water Management Act 2000* – details of sediment and erosion controls – a detailed site water balance – an assessment of impacts associated with dredging, reclamation and seawall construction and operation – an assessment in accordance with ASSMAC Guidelines for the presence and extent of acid sulfate soils (ASS) and potential acid sulfate soils (PASS) on the site and, where relevant, appropriate mitigation measures – an assessment of potential impacts on the quality and quantity of surface and groundwater resources – details of the proposed stormwater and wastewater management systems (including sewage), water monitoring program and other measures to mitigate surface and groundwater impacts – a description and appraisal of impact mitigation and monitoring measures. • **contamination** – including: – a detailed assessment of the extent and nature of any contamination of the soil, groundwater and marine sediments – conceptual site model detailing the potential risks to human health and the environmental receptors in the vicinity of the site – the preparation of a Remedial Action Plan (RAP) for the site, in accordance with the relevant guidelines produced or approved under the *Contaminated Land Management Act 1997*. • **traffic and transport** – including: – details of road transport routes and access to the site – road traffic predictions for the development during construction and operation – an assessment of impacts to the safety and function of the road network and the details of any road upgrades required for the development. • **marine safety and navigation** – including an assessment of the impacts on water-based traffic and the existing users of the Georges River in the vicinity of the marina. • **biodiversity** – including: – accurate predictions of any vegetation clearing on site or for any road upgrades – a detailed assessment of the potential impacts on any threatened species, populations, endangered ecological communities or their habitats, groundwater dependent ecosystems and any potential for offset requirements in accordance with the current Office of Environment and Heritage legislation and guidelines – a detailed assessment of potential impacts to fish stocks and fish habitat – details of weed management during construction and operation in accordance with existing State, regional or local weed management plans or strategies – a detailed description of the measures to avoid, minimise, mitigate and offset biodiversity impacts. • **waste management** – including: – details of waste handling including, transport, identification, receipt, stockpiling and quality control including off-site reuse and disposal – the measures that would be implemented to ensure that the proposed development is consistent with the aims, objectives and guidelines in the *NSW Waste Avoidance and Resource Recovery Strategy 2014-21.* • **visual** – including an impact assessment at private receptors and public vantage points. • **heritage** – including Aboriginal and non-Aboriginal cultural heritage.

Environmental Planning Instruments and other policies	The EIS must assess the proposal against the relevant environmental planning instruments, including but not limited to: • *State Environmental Planning Policy (Infrastructure) 2007* • *State Environmental Planning Policy (Coastal Management) 2018* • *State Environmental Planning Policy No. 33 – Hazardous and Offensive Development* • *State Environmental Planning Policy No. 55 – Remediation of Land* • *Greater Metropolitan Regional Environment Plan No. 2 – Georges River Catchment* • *Liverpool Local Environmental Plan 2008* • *Greater Sydney Region Plan – A Metropolis of Three Cities* • *Western City District Plan* • relevant development control plans and section 94 plans.
Guidelines	During the preparation of the EIS you should consult the Department's Register of Development Assessment Guidelines which is available on the Department's website at planning.nsw.gov.au under Development Proposals/Register of Development Assessment Guidelines. Whilst not exhaustive, this Register contains some of the guidelines, policies, and plans that must be taken into account in the environmental assessment of the proposed development.
Consultation	During the preparation of the EIS, you must consult the relevant local, State and Commonwealth government authorities, service providers and community groups, and address any issues they may raise in the EIS. In particular, you should consult with the: • Environment Protection Authority • Office of Environment and Heritage • Department of Industry – Lands and Water • Department of Primary Industries • Roads and Maritime Services • Greater Sydney Commission • Liverpool City Council • the surrounding landowners and occupiers that are likely to be impacted by the proposal. Details of the consultation carried out and issues raised must be included in the EIS.
Further consultation after 2 years	If you do not lodge an application under Section 4.12(8) of the *Environmental Planning and Assessment Act 1979* within 2 years of the issue date of these SEARs, you must consult with the Planning Secretary in relation to any further requirements for lodgement.

ATTACHMENT 1
2018 Responses – Public Authorities

Department of Industry

OUT18/14453

Patrick Copas
Planning Officer
Industry Assessments
NSW Department of Planning and Environment

patrick.copas@planning.nsw.gov.au

Dear Mr Copas

Georges Cove Marine SEAR 912
Comment on the Secretary's Environmental Assessment Requirements (SEARs)

I refer to your email of 12 September 2018 to the Department of Industry (DoI) in respect to the above matter.

Comment has been sought from relevant branches of Lands & Water and Department of Primary Industries (DPI), and all advice in the original SEARs is still applicable.

Any further referrals to Department of Industry can be sent by email to landuse.enquiries@dpi.nsw.gov.au.

Yours sincerely

Alison Collaros
A/Manager, Assessment Advice
28 September 2018

ATTACHMENT 2
Original Requirements – Public Authorities

Our reference: DOC15/111855
Contact: Alex Bowlay 02 9995 5257

Mr Matthew Meyerson
Industry Assessments
Department of Planning & Environment
GPO Box 39
SYDNEY NSW 2001

Dear Matthew,

Proposal - Georges Cove Marina, Liverpool SEARs ID No. 912

The Environment Protection Authority (EPA) refers to your email dated 25 March 2015 requesting input to the Secretary's Environmental Assessment Requirements (SEARs) for the Georges Cove Marina project based on information provided by EMGA Mitchell McLennan (the Applicant) on behalf of Benedict Industries Pty Ltd (the Proponent).

The EPA has identified a range of environmental issues from supporting information provided in the email that require consideration in the Environmental Impact Statement (EIS). These are outlined in Attachment A.

The EPA also notes that the types of work to be undertaken for the project and their proximity to a number of sensitive receivers and to commercial and recreational vessels operations on the Georges River will present certain challenges. Accordingly, the EPA recommends that the EIS includes comprehensive consideration of the following issues:

- odour and other air emission controls (e.g. dust) throughout land restoration processes and operation of the marina
- noise from both mobile and stationary sources used in any aspect of the development
- sediment controls during the excavation of any material at the site during the construction phase
- the discharge of treated wastewater and stormwater from the site to the Georges River
- contaminated soil and water issues relating to prolonged historical use of the site for extractive activities, and proposed connection of dredged ponds with the Georges River
- incident risks and contingencies in the event that the planned mitigation measures are insufficient
- marine foreshore construction and the need to use uncontaminated material

Should you wish to discuss any of the above information please contact Operations Officer Alex Bowlay on 9995 5257.

Yours sincerely

7 April 2015

JAMES GOODWIN
Unit Head, High Risk Facilities Unit
Environment Protection Authority

PO Box 668 Parramatta NSW 2124
Level 13, 10 Valentine Avenue, Parramatta NSW 2150
Tel: (02) 9995 5000 Fax: (02) 9995 6900
ABN 43 692 285 758
www.epa.nsw.gov.au

Attachment A

Request for Secretary's Environmental Assessment Requirements – SEAR 912 – Liverpool LGA - Georges Cove Marina Project, Moorebank

Environment Protection Licence and Appropriate Regulatory Authority role

The EPA has identified likely requirements for licensing under the *Protection of the Environment Operations Act* (POEO Act) and the need to identify the agency that will be the Appropriate Regulatory Authority for any non-licensed activities. The EPA has determined that at least some aspects of the project will likely require an Environment Protection Licence (EPL). The EPA will work with Liverpool City Council and the proponent to determine the most appropriate regulatory arrangement for administering the POEO Act requirements as they relate to the project.

It is possible that the project will involve undertaking scheduled development works requiring a scheduled development work licence under the POEO Act. The proposed provision of dry and wet berthing facilities for the number of small water craft indicated in the supporting information indicates that an environment protection licence (premises-based) may be required if the activity qualifies as a 'Marinas and boat repairs' scheduled activity under Schedule 1 of the POEO Act.

Under Schedule 1, a licence is required if the facility has the capacity to handle more than 80 vessels (excluding rowing boats, dinghies and other small craft) at any time as per the 'boat moorings and storage' activity threshold. Supporting information (Figure 8 Marina layout – parking and berth details) is unclear on the detail in this regard as the layout plan contains blurred details on proposed craft type, length and numbers however overall the number of proposed berths is known to exceed 430. It is not known whether maintenance of water craft will occur at the site, which has further implications for licencing depending on the nature of the craft.

The supporting information also makes reference to sewage pump out facilities and provision of support infrastructure that may require authorisation under an EPL.

Odour/ Air quality

Dust management from transportation of materials including untreated stockpiles, must be taken into specific consideration given the proximity to a range of sensitive receivers and commercial and recreational vessels on the George River. Any odour and/or dust suppressants being considered for use in operations must be detailed in the EIS and include investigation of low toxicity options.

An Air Quality Impact Assessment ("AQIA") should be undertaken for the project with the level of assessment being proportionate to the likely level of odour impacts and should consider the requirements of the *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales (2005)*.

The AQIA should also make appropriate reference to the *Assessment and Management of Odour from Stationary Sources in NSW: Technical Framework (2006)* and *Management of Odour from Stationary Sources in NSW: Technical Notes (2006)*.

The AQIA should also consider the requirements of the *Protection of the Environment Operations (Clean Air) Regulation 2010* if applicable.

Remediation/Contamination

The proposal is known to have received prior development consent from Liverpool City Council on 22 August 2014 however an adjoining landowner successfully challenged the consent on the grounds of clause 7 of State Environment Planning Policy 55 – Remediation of Land (SEPP 55).

A finding of the Land and Environment Court was that neither the preliminary investigation of the land nor the report of the preliminary investigation was carried out, and was not in compliance with relevant clauses of SEPP 55. The consent was declared invalid on 18 March 2015. The proponent is to carry out a preliminary investigation of the land and submit a report to the JRRP, and the JRRP is to undertake consideration under the requirements of SEPP 55 before determining the proponent's development application for consent to carry out development on the land.

The EPA is not aware of any records of contaminated land notices issued for the site however the proponent needs to demonstrate that land potential land or groundwater contamination issues have been addressed.

Supporting information included with the application indicates that restoration and remediation activities have not commenced after many years of extractive activities taking place at the site. Dredged ponds at the site will be retained for use as part of the marina proposal and will ultimately connect with the Georges River. Water and sediment in these ponds should be assessed accordingly before connection.

Underground Petroleum Storage Systems (UPSS)

The proposal includes installation of a 60,000 litre petrol tank and a 30,000 litre diesel tank, along with fuel pumping facilities. The *Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2014* may apply depending on whether the tanks are installed underground and any applicable exemptions to the provisions of the regulation.

Acid Sulphate Soils

The potential impacts identified for the project on acid sulphate soils must be assessed and managed in accordance with the relevant guidelines in the *Acid Sulphate Soils Manual* (Stone et al. 1998) and the *Acid Sulphate Soils Laboratory Methods Guidelines* (Ahern et al. 2004). If acid sulphate soils are identified on the premises the proponent must prepare an Acid Sulphate Soil Management Plan in accordance with the *Acid Soil Planning Guidelines*.

Noise impacts

This project has the potential to impact a number of sensitive receivers and recreational users of the land and water surrounding the project. A Noise Impact Assessment should be undertaken which considers construction and operational noise across the project, and must include the following:

- Operational noise from stationary aspects of the project should be assessed using the *NSW Industrial Noise Policy* (EPA, 2000). http://www.epa.nsw.gov.au/resources/noise/ind_noise.pdf

- Construction noise associated with the project should be assessed using the *Interim Construction Noise Guideline (*EPA, 2009). http://www.environment.nsw.gov.au/noise/constructnoise.htm

- Vibration from any construction activities to be undertaken on the premises should be assessed using the guidelines contained in the *Assessing Vibration: a technical guideline* (EPA, 2006). http://www.environment.nsw.gov.au/noise/vibrationguide.htm

Waste treatment, discharge and management

The EIS should provide details of liquid waste and non-liquid waste management, including:

- the transportation, assessment and handling of waste generated at the site
- any stockpiling of wastes materials at the site
- any waste processing related to the project including on-site treatment
- the method for disposing of all waste materials,
- and proposed controls for managing the environmental impacts of these activities.

Chemicals

The EIS should provide details of:

- the type and quantity of any chemical substances to be used or stored and describe arrangements for their safe use and storage, and
- procedures for the assessment, handling, storage, transport and disposal of all hazardous and dangerous materials used, stored, processed or disposed of, in addition to the requirements for liquid and non-liquid wastes.

Incident Management

The EIS should include a comprehensive assessment of the potential for incidents to occur at any stage of the project, the measures to be used to minimise the risk of incidents and the procedures to be employed in the event of an incident. In addition, information is required about contingency actions in the event that planned incident mitigation measures are inadequate.

Community liaison

The EPA is not aware of community engagement activities for planning processes associated with the project to date. It is recommended that the proponent embark on a program of ongoing consultation throughout the project, from commencement until completion, and this should be detailed in the EIS.

2 April 2015

RMS Ref: SYD15/00381 (A8903906)
Your Ref: SEAR 912

Manager – Industry Assessment
Department of Planning and Environment
GPO Box 39
Sydney NSW 2001

Attention: Matthew Meyerson

REQUEST FOR SEARS FOR GEORGES COVE MARINA
146 NEWBRIDGE ROAD, MOOREBANK (DGR 563)

Dear Sir/Madam,

Reference is made to your email dated 25 March 2015 requesting Roads and Maritime to provide details of key issues and assessment requirements regarding the abovementioned development for inclusion in the Secretary's Environment Assessment Requirements (SEAR's).

Roads and Maritime require the following issues to be included in the transport and traffic impact assessment of the proposed development:

1. Daily and peak traffic movements likely to be generated by the proposed development including the impact on nearby intersections and the need/associated funding for upgrading or road improvement works (if required).

2. Details of the proposed accesses and the parking provisions associated with the proposed development including compliance with the requirements of the relevant Australian Standards (ie: turn paths, sight distance requirements, aisle widths, etc).

3. Roads and Maritime will require in due course the provision of a traffic management plan for all demolition/construction activities, detailing vehicle routes, number of trucks, hours of operation, access arrangements and traffic control measures.

Any inquiries in relation to this development application can be directed to Jana Jegathesan on 8849-2313.

Yours sincerely

Pahee Rathan
Senior Land Use Planner
Network and Safety Management

Transport
Roads & Maritime
Services

7 April 2015

Director – Industry Assessments
DEPARTMENT OF PLANNING AND ENVIRONMENT
GPO Box 39
SYDNEY NSW 2000

Attention: Matthew Meyerson

Dear Sir/Madam,

Requirements for the preparation of an Environmental Impact Statement (EIS) for the proposed Georges Cove Marina, 146 Newbridge Road, Moorebank - ID No.912

I write in response to your email to Roads and Maritime Services (Development Sydney) dated 25 March 2015 requesting requirements for the above proposal. As the proposal is located adjacent to a navigable waterway, Development Sydney forwarded the referral to Maritime Division to review and provide comment.

The size of the proposed marina will generate a significant increase in vessel movements within the adjacent waterway (Georges River). To assess any impact that this will have on navigation and safety within the waterway, a *Navigational Assessment* should be undertaken. This assessment should consider the impacts of additional vessel movements within the waterway and incorporate safety/mitigation measures to ensure that all users of the waterway are not adversely impacted upon by the development.

Please note that these requirements only relate to maritime issues and that the Roads Division of Roads and Maritime Services will provide separate requirements.

If you have any further questions, please do not hesitate to contact the undersigned on 8588 4581 or at scott.schimanski@rms.nsw.gov.au.

Yours sincerely

Scott Schimanski
Senior Planner
Property, Strategy and Planning

Department of Primary Industries
Office of Water

to Matthew Meyerson
Industry Assessments
Department of Planning & Environment

from Mohammed Ismail
Water Regulation Officer
NSW Office of Water
Mohammed.ismail@dpi.nsw.gov.au

date 15/04/2015

Request for Secretary's Environmental Assessment Requirements for the Construction of a Marina and relative Facilities adjoin Georges River, EARs ID No. 912, (our Ref: ERM2011/304)

I refer to your e-mail dated 25/3/2015 requesting the Secretary's Environmental Assessment Requirements (SEARs) from NSW Office of Water and provide the following comments below, and further detail in **Attachment A**.

It is recommended that the EIS be required to include:

- Details of water proposed to be taken (including through inflow and seepage) from each surface and groundwater source as defined by the relevant water sharing plan.
- Assessment of any volumetric water licensing requirements (including those for ongoing water take following completion of the project).
- The identification of an adequate and secure water supply for the life of the project. Confirmation that water can be sourced from an appropriately authorised and reliable supply. This is to include an assessment of the current market depth where water entitlement is required to be purchased.
- A detailed and consolidated site water balance.
- Assessment of impacts on surface and ground water sources (both quality and quantity), related infrastructure, adjacent licensed water users, basic landholder rights, watercourses, riparian land, and groundwater dependent ecosystems, and measures proposed to reduce and mitigate these impacts.
- Full technical details and data of all surface and groundwater modelling.
- Proposed surface and groundwater monitoring activities and methodologies.
- Assessment of any potential cumulative impacts on water resources, and any proposed options to manage the cumulative impacts.
- Consideration of relevant policies and guidelines.
- A statement of where each element of the SEARs is addressed in the EIS (i.e. in the form of a table).

Should you require further information please contact Mohammed Ismail, Water Regulation officer on 0288387535.

Office of Water contact details:

Mohammed Ismail| Water Regulation Officer
NSW Department of Primary Industries | Office of Water
T: 02 8838 7535 | F: 02 8838 7554 | E: mohammed.ismail@dpi.nsw.gov.au
W: www.dpi.nsw.gov.au | www.water.nsw.gov.au

ATTACHMENT A

NSW Office of Water Comments on Secretary's Environmental Assessment Requirements
Marina, Liverpool EARs ID No. 912

The following detailed assessment requirements are provided to assist in adequately addressing the assessment requirements for this proposal.

For further information visit the NSW Office of Water website, www.water.nsw.gov.au

Key Relevant Legislative Instruments

This section provides a basic summary to aid proponents in the development of an Environmental Impact Statement (EIS), and should not be considered a complete list or comprehensive summary of relevant legislative instruments that may apply to the regulation of water resources for a project.

The EIS should take into account the objects and regulatory requirements of the *Water Act 1912* (WA 1912) and *Water Management Act 2000* (*WMA 2000*), and associated regulations and instruments, as applicable.

Water Management Act 2000 (WMA 2000)
Key points:

- Volumetric licensing in areas covered by water sharing plans
- Works within 40m of waterfront land
- SSD & SSI projects are exempt from requiring water supply work approvals and controlled activity approvals as a result of the *Environmental Planning & Assessment Act 1979 (EP&A Act)*.
- No exemptions for volumetric licensing apply as a result of the *EP&A Act*.
- Basic landholder rights, including harvestable rights dams
- Aquifer interference activity approval and flood management work approval provisions have not yet commenced and are regulated by the *Water Act 1912*
- Maximum penalties of $2.2 million plus $264,000 for each day an offence continues apply under the *WMA 2000*

Water Act 1912 (WA 1912)
Key points:

- Volumetric licensing in areas where no water sharing plan applies
- Monitoring bores
- Aquifer interference activities that are not regulated as a water supply work under the *WMA 2000*.
- Flood management works
- No exemptions apply to licences or permits under the *WA 1912* as a result of the *EP&A Act*.
- Regulation of water bore driller licensing.

Water Management (General) Regulation 2011
Key points:

- Provides various exemptions for volumetric licensing and activity approvals
- Provides further detail on requirements for dealings and applications.

Water Sharing Plans – these are considered regulations under the *WMA 2000*

Access Licence Dealing Principles Order 2004

Harvestable Rights Orders

Water Sharing Plans

The proposal is located within the area covered by the Water Sharing Plan for Greater Metropolitan Region. The EIS is required to:

- Demonstrate how the proposal is consistent with the relevant rules of the Water Sharing Plan including rules for access licences, distance restrictions for water supply works and rules for the management of local impacts in respect of surface water and groundwater sources, ecosystem protection (including groundwater dependent ecosystems), water quality and surface-groundwater connectivity.
- Provide a description of any site water use (amount of water to be taken from each water source) and management including all sediment dams, clear water diversion structures with detail on the location, design specifications and storage capacities for all the existing and proposed water management structures.
- Provide an analysis of the proposed water supply arrangements against the rules for access licences and other applicable requirements of any relevant WSP, including:
    - Sufficient market depth to acquire the necessary entitlements for each water source.
    - Ability to carry out a "dealing" to transfer the water to relevant location under the rules of the WSP.
    - Daily and long-term access rules.
    - Account management and carryover provisions.
- Provide a detailed and consolidated site water balance.
- Further detail on licensing requirements is provided below.

Relevant Policies and Guidelines

The EIS should take into account the following policies (as applicable):

- NSW Guidelines for Controlled Activities on Waterfront Land (NOW, 2012)
- NSW Aquifer Interference Policy (NOW, 2012)
- Risk Assessment Guidelines for Groundwater Dependent Ecosystems (NOW, 2012)
- Australian Groundwater Modelling Guidelines (NWC, 2012)
- NSW State Rivers and Estuary Policy (1993)
- NSW State Groundwater Policy Framework Document (1997)
- NSW State Groundwater Quality Protection Policy (1998)
- NSW State Groundwater Dependent Ecosystems Policy (2002)
- NSW Water Extraction Monitoring Policy (2007)

Office of Water policies can be accessed at the following links:
http://www.water.nsw.gov.au/Water-management/Law-and-policy/Key-policies/default.aspx
http://www.water.nsw.gov.au/Water-licensing/Approvals/Controlled-activities/default.aspx

An assessment framework for the NSW Aquifer Interference Policy can be found online at: http://www.water.nsw.gov.au/Water-management/Law-and-policy/Key-policies/Aquifer-interference.

Licensing Considerations

The EIS is required to provide:

- Identification of water requirements for the life of the project in terms of both volume and timing (including predictions of potential ongoing groundwater take following the cessation of operations at the site – such as evaporative loss from open voids or inflows).
- Details of the water supply source(s) for the proposal including any proposed surface water and groundwater extraction from each water source as defined in the relevant Water Sharing Plan/s and all water supply works to take water.
- Explanation of how the required water entitlements will be obtained (i.e. through a new or existing licence/s, trading on the water market, controlled allocations etc.).
- Information on the purpose, location, construction and expected annual extraction volumes including details on all existing and proposed water supply works which take surface water, (pumps, dams, diversions, etc).
- Details on all bores and excavations for the purpose of investigation, extraction, dewatering, testing and monitoring. All predicted groundwater take must be accounted for through adequate licensing.
- Details on existing dams/storages (including the date of construction, location, purpose, size and capacity) and any proposal to change the purpose of existing dams/storages
- Details on the location, purpose, size and capacity of any new proposed dams/storages.
- Applicability of any exemptions under the *Water Management (General) Regulation 2011* to the project.

Water allocation account management rules, total daily extraction limits and rules governing environmental protection and access licence dealings also need to be considered.

The Harvestable Right gives landholders the right to capture and use for any purpose 10% of the average annual runoff from their property. The Harvestable Right has been defined in terms of an equivalent dam capacity called the Maximum Harvestable Right Dam Capacity (MHRDC). The MHRDC is determined by the area of the property (in hectares) and a site-specific run-off factor. The MHRDC includes the capacity of all existing dams on the property that do not have a current water licence. Storages capturing up to the harvestable right capacity are not required to be licensed but any capacity of the total of all storages/dams on the property greater than the MHRDC may require a licence.

For more information on Harvestable Right dams, including a calculator, visit:
http://www.water.nsw.gov.au/Water-licensing/Basic-water-rights/Harvesting-runoff/Harvesting-runoff

Dam Safety

Where new or modified dams are proposed, or where new development will occur below an existing dam, the NSW Dams Safety Committee should be consulted in relation to any safety issues that may arise. Conditions of approval may be recommended to ensure safety in relation to any new or existing dams.

See www.damsafety.nsw.gov.au for further information.

Surface Water Assessment

The predictive assessment of the impact of the proposed project on surface water sources should include the following:

- Identification of all surface water features including watercourses, wetlands and floodplains transected by or adjacent to the proposed project.
- Identification of all surface water sources as described by the relevant water sharing plan.
- Detailed description of dependent ecosystems and existing surface water users within the area, including basic landholder rights to water and adjacent/downstream licensed water users.
- Description of all works and surface infrastructure that will intercept, store, convey, or otherwise interact with surface water resources.
- Assessment of predicted impacts on the following:
    - flow of surface water, sediment movement, channel stability, and hydraulic regime,
    - water quality,
    - flood regime,
    - dependent ecosystems,
    - existing surface water users, and
    - planned environmental water and water sharing arrangements prescribed in the relevant water sharing plans.

Groundwater Assessment

To ensure the sustainable and integrated management of groundwater sources, the EIS needs to include adequate details to assess the impact of the project on all groundwater sources.

Where it is considered unlikely that groundwater will be intercepted or impacted (for example by infiltration), a brief site assessment and justification for the minimal impacts may be sufficient, accompanied by suitable contingency measures in place in the event that groundwater is intercepted, and appropriate measures to ensure that groundwater is not contaminated.

Where groundwater is expected to be intercepted or impacted, the following requirements should be used to assist the groundwater assessment for the proposal.

- Works likely to intercept, connect with or infiltrate the groundwater sources.
- Any proposed groundwater extraction, including purpose, location and construction details of all proposed bores and expected annual extraction volumes.
- Bore construction information is to be supplied to the Office of Water by submitting a “Form A” template. The Office of Water will supply “GW” registration numbers (and licence/approval numbers if required) which must be used as consistent and unique bore identifiers for all future reporting.
- A description of the watertable and groundwater pressure configuration, flow directions and rates and physical and chemical characteristics of the groundwater source (including connectivity with other groundwater and surface water sources).
- Sufficient baseline monitoring for groundwater quantity and quality for all aquifers and GDEs to establish a baseline incorporating typical temporal and spatial variations.

- The predicted impacts of any final landform on the groundwater regime.
- The existing groundwater users within the area (including the environment), any potential impacts on these users and safeguard measures to mitigate impacts.
- An assessment of groundwater quality, its beneficial use classification and prediction of any impacts on groundwater quality.
- An assessment of the potential for groundwater contamination (considering both the impacts of the proposal on groundwater contamination and the impacts of contamination on the proposal).
- Measures proposed to protect groundwater quality, both in the short and long term.
- Measures for preventing groundwater pollution so that remediation is not required.
- Protective measures for any groundwater dependent ecosystems (GDEs).
- Proposed methods of the disposal of waste water and approval from the relevant authority.
- The results of any models or predictive tools used.

Where potential impact/s are identified the assessment will need to identify limits to the level of impact and contingency measures that would remediate, reduce or manage potential impacts to the existing groundwater resource and any dependent groundwater environment or water users, including information on:

- Any proposed monitoring programs, including water levels and quality data.
- Reporting procedures for any monitoring program including mechanism for transfer of information.
- An assessment of any groundwater source/aquifer that may be sterilised from future use as a water supply as a consequence of the proposal.
- Identification of any nominal thresholds as to the level of impact beyond which remedial measures or contingency plans would be initiated (this may entail water level triggers or a beneficial use category).
- Description of the remedial measures or contingency plans proposed.
- Any funding assurances covering the anticipated post development maintenance cost, for example on-going groundwater monitoring for the nominated period.

Groundwater Dependent Ecosystems

The EIS must consider the potential impacts on any Groundwater Dependent Ecosystems (GDEs) at the site and in the vicinity of the site and:

- Identify any potential impacts on GDEs as a result of the proposal including:
  - the effect of the proposal on the recharge to groundwater systems;
  - the potential to adversely affect the water quality of the underlying groundwater system and adjoining groundwater systems in hydraulic connections; and
  - the effect on the function of GDEs (habitat, groundwater levels, connectivity).
- Provide safeguard measures for any GDEs.

Watercourses, Wetlands and Riparian Land

The EIS should address the potential impacts of the project on all watercourses likely to be affected by the project, existing riparian vegetation and the rehabilitation of riparian land. It is

recommended the EIS provides details on all watercourses potentially affected by the proposal, including:

- Scaled plans showing the location of:
  - wetlands/swamps, watercourses and top of bank;
  - riparian corridor widths to be established along the creeks;
  - existing riparian vegetation surrounding the watercourses (identify any areas to be protected and any riparian vegetation proposed to be removed);
  - the site boundary, the footprint of the proposal in relation to the watercourses and riparian areas; and
  - proposed location of any asset protection zones.
- Photographs of the watercourses/wetlands and a map showing the point from which the photos were taken.
- A detailed description of all potential impacts on the watercourses/riparian land.
- A detailed description of all potential impacts on the wetlands, including potential impacts to the wetlands hydrologic regime; groundwater recharge; habitat and any species that depend on the wetlands.
- A description of the design features and measures to be incorporated to mitigate potential impacts.
- Geomorphic and hydrological assessment of water courses including details of stream order (Strahler System), river style and energy regimes both in channel and on adjacent floodplains.

Landform rehabilitation

The Environmental Impact Statement report should include:

- Justification of the proposed final landform with regard to its impact on local and regional surface and groundwater systems;
- A detailed description of how the site would be progressively rehabilitated and integrated into the surrounding landscape;
- Outline of proposed construction and restoration of topography and surface drainage features if affected by the project; and
- An outline of the measures to be put in place to ensure that sufficient resources are available to implement the proposed rehabilitation.

End Attachment A

Department of Primary Industries

Our ref: C15/112

Mr Matthew Meyerson
Student Planner, Industry Projects, Industry Assessments
NSW Planning & Environment
GPO Box 39
SYDNEY NSW 2001

Dear My Meyerson,

Request for input into Secretary's Environmental Assessment Requirements for a Marina at Liverpool (EARs ID No. 912)

Thank you for your email to NSW Department of Primary Industries dated 25 March 2015 requesting input into the draft Environmental Assessment Requirements (EARs) for the project stated above. This response incorporates comment from the Fisheries NSW Division of NSW DPI.

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 (FM) Act 1994* (namely the aquatic habitat protection and threatened species 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 and recreational fishing in NSW.

The Georges River is important key fish habitat within South West Sydney. Considering the provisions of the FM Act and the above mentioned policy, aspects of this proposal of concern to Fisheries NSW include potential:

- Erosion and sedimentation impacts to aquatic habitats during construction,
- Sedimentation of the Georges River from the marina cove during construction,
- Harm to marine and riparian vegetation during construction of the seawall,
- Harm to marine vegetation and increased erosion and sedimentation that may result from any associated increased boat usage in the area,
- Reclamation of the Georges Rive associated with the seawall,
- Removal of snags along the Georges River,
- Acid Sulphate Soil impacts from dredging, reclamation and spoil management, and
- Impacts on water quality during construction and from the ongoing use of the marina.

Fisheries NSW notes that a significant area of seawall is proposed to be constructed along the Georges River. Foreshore protection works in this area are to be designed so that harm of marine vegetation in the river is avoided where possible and any snags in this area are re-instated. There is to be no reclamation activities associated with this seawall. It is highly recommended that foreshore protection works along the river are constructed to enhance riparian and aquatic habitats of the river. Where foreshore protection using natural riparian vegetation and soft engineering techniques is not considered to be suitable, Fisheries NSW recommends that an environmentally friendly seawall design be used. Details of such designs are available from:
http://sydney.cma.nsw.gov.au/component/option,com_remository/Itemid,116/func,select/id,51/

NSW Department of Primary Industries
Locked Bag 1, Nelson Bay NSW 2315
Tel: 02 4254 5527 Fax: 02 4224 9056
www.dpi.nsw.gov.au

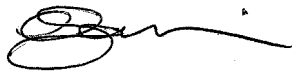
Any excavated material is to be treated and deposited appropriately on land according to its contamination and acid sulphate soil characteristics.

Information requirements that may be of assistance in the preparation of an EA for this proposal are listed in Attachment 1. It is important that the extent of the potential impacts on aquatic and riparian habitats above is addressed in the EA and proposed measures to minimise, mitigate, rehabilitate or compensate such impacts are detailed.

Please note that under s.205 of the FM Act, a permit to harm marine vegetation may be required for these works. Also, under s.201 or s.199 of the FM Act, a permit or formal notification will be required for the dredging and reclamation aspects of this proposal. These authorisations are only issued after development consent has been granted.

Should you require any further information concerning this proposal, please contact Carla Ganassin on 4222 8342 or carla.ganassin@industry.nsw.gov.au.

Yours sincerely,



Carla Ganassin
Resource Assessment Officer (Metro), Aquatic Ecosystems Unit

2 April 2015

Environmental Assessment Requirements for proposed Marina at Liverpool

Note: Fisheries NSW recommends that development proposals comply with the *Policy and Guidelines for Fish Habitat Conservation and Management (2013)* (referred to hereafter as P&GLs). A list of general information requirements for developments and standard precautions and mitigation measures are outlined in Section 3.1 of this document. See http://www.dpi.nsw.gov.au/fisheries/habitat/publications/policies,-guidelines-and-manuals/fish-habitat-conservation

A: General Requirements

- site address and contact details.
- property description (e.g. Lot and DP numbers).
- a clear description of the proposal including details of construction methods and materials.
- map(s) of the development area and adjacent areas - this should include nearby waterways, adjacent infrastructure (such as jetties) and land use.
- clear photographs of the site (at low and high tide in estuaries), including photographs of any riparian and aquatic vegetation present (including pest species such as *Caulerpa taxifolia*).
- a clear description of the physical and hydrological features of the development area (which may extend upstream and downstream of the development site in the case of flowing rivers or tidal waterways).
- approximate depth contours within 20 metres of the proposal.
- a clear description of aquatic environments including:
    - threatened and protected species, populations, ecological communities, pest species or presence of 'critical habitat' under the FM Act or EPBC Act,
    - an aquatic and riparian vegetation survey map of the area which shows the location and/or coverage of saltmarsh, mangrove, seagrass, macroalgae, macrophytes, riparian vegetation and snags,
    - description of aquatic habitat TYPE on site (see Table 1 in the P&GLs),
    - description of the waterway CLASS (see Table 2 in the P&GLs).
- details of the nature, timing, magnitude and duration of the proposed disturbance to the aquatic environment.
- assessments of predicted impacts upon any threatened species (fish and marine vegetation) (i.e. completion of a 7 part test and/or species impact statement(s)) and other aquatic flora and fauna.
- details of any mitigation measures to limit environmental impacts.
- details of the general regional context, any protected areas, other developments in the area, and/or cumulative impacts.
- In defining the proposal area, discussion must be provided in regard to possible indirect effects of the proposal on species/habitats in the area surrounding the subject site: for example, through altered hydrological regimes, soil erosion or pollution.
- notification of any other matters relevant to the particular proposal and of interest to NSW DPI.

Dredging and reclamation activities

- purpose of works
- type(s) and distribution of marine vegetation in the vicinity of the proposed works
- method of dredging to be used
- timing and duration of works
- dimension of area of works including levels and volume of material to be extracted or placed as fill
- nature of sediment to be dredged, including Acid Sulphate Soil, contaminated soils etc
- method of marking area subject to works
- environmental safeguards to be used during and after works
- measures for minimising harm to fish habitat under the proposal
- spoil type and source location for reclamation activities
- method of disposal of dredge material
- location and duration of spoil stockpiling, if planned

Activities that damage marine vegetation

- type of marine vegetation to be harmed
- map and density distribution of marine vegetation
- reasons for harming marine vegetation
- methods of harming marine vegetation
- construction details
- duration of works/activities
- measures for minimising harm to marine vegetation under the proposal and details of compensatory habitat development to replace lost vegetation.
- method and location of transplanting activities or disposal or marine vegetation.

B. Aquatic habitat assessment

The aim of the aquatic assessment should be to define the presence of 'key fish habitat' within the study site, adjacent areas (upstream and downstream), and the broader regional area. There may be a range of potential fish habitats that could be impacted by a particular activity. Some points to consider include:

- geomorphic characteristics of the waterway (i.e. what characteristics of a CLASS 1-4 waterway does it have (see Table 2 in P&GLs)? Is it a gully, intermittent stream or major river? Does it have deep pools or in-stream gravel beds? Is it a wetland? Does the watercourse connect with other watercourses upstream or downstream? What is the slope/gradient?),
- is it mapped as key fish habitat? (see www.dpi.nsw.gov.au/fisheries/habitat/protecting-habitats#KFH for maps of key fish habitat per Local Government Area),
- description of the water quality (e.g. discolouration, sedimentation, turbidity, pH, dissolved oxygen, nutrients),
- types of surrounding land use (e.g. agricultural, urban, aquaculture),
- condition of riparian vegetation (i.e. present or absent. Are the species native or exotic? Is the density of vegetation thick or sparse?),
- condition of freshwater aquatic vegetation (i.e. present or absent. Are the species native or exotic? Is the density of vegetation thick or sparse? Is it continuous or sparse in coverage? What is the aerial extent of major vegetation types? Is the vegetation healthy or degraded?),
- condition of marine vegetation (i.e. information on type, species, shoot density and/or percentage cover. Is the vegetation continuous or sparse in coverage? What is the aerial extent? Is the vegetation healthy or degraded? Is wrack (dead seagrass or macroalgae) present?),
- presence of wetlands nearby (including freshwater wetlands and saltmarsh) (i.e. are wetlands protected under any legislation (e.g. SEPP 14 coastal wetlands, Ramsar wetlands)? Are the wetlands in a healthy or degraded condition?)
- substrate type (e.g. rock, sand, gravel, silt),
- presence of refuge areas (e.g. adjacent wetlands, upstream pools),
- types of migratory fish or other aquatic species likely to inhabit the areas (based on known distribution range within the scientific literature),
- timing of construction in relation to any fish migration seasons,
- presence of any listed threatened or protected aquatic species or 'critical habitat' under the FM Act and EPBC Act.

C. Assessment of likely impacts

- indicate the location, nature and extent of habitat removal or modification (both direct and indirect) which may result from the proposed action;
- discuss the potential impact of the modification or removal of habitat (potential direct and indirect sources of impact are stated in the letter with this attachment).

Note: In defining the proposal area, discussion must be provided in regard to possible indirect effects of the proposal on species/habitats in the area surrounding the subject site: for example, through altered hydrological regimes, soil erosion or pollution.

D. Ameliorative measures

The environmental assessment should consider and provide detail on how the proposal has been or may be modified and managed to minimise impacts and conserve aquatic habitat on the subject site and in the study area.

From:	Andrew Docking
To:	Matthew Meyerson
Cc:	Landuse Enquiries
Subject:	Fwd: FW: Request for EARs - Marina, Liverpool LGA
Date:	Tuesday, 31 March 2015 11:17:40 AM
Attachments:	image001.png Untitled attachment 00385.txt Form A - SEAR 912.pdf

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Matthew

Agriculture NSW

Weed management during construction and operation accord with existing State, regional or local weed management plans or strategies. Destruction or removal of Noxious Weeds may require a permit from Department of Primary Industries
http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0015/170232/Application-for-noxious-weed-permit.pdf

Thanks

Regards

Andrew Docking | Resource Management Officer | Agriculture NSW
Postal: NSW Department of Primary Industries | Locked Bag 21 | ORANGE | NSW 2800
or landuse.ag@dpi.nsw.gov.au
T: 02 9842 8607| M: 0437 896 305
E: andrew.docking@dpi.nsw.gov.au | W: www.industry.nsw.gov.au

Land use planning information and guidelines are available at:
http://www.dpi.nsw.gov.au/agriculture/resources/lup
http://www.dpi.nsw.gov.au/agriculture/resources/lup/analysis-census-data

Building thriving, sustainable Agriculture for tomorrow's communities