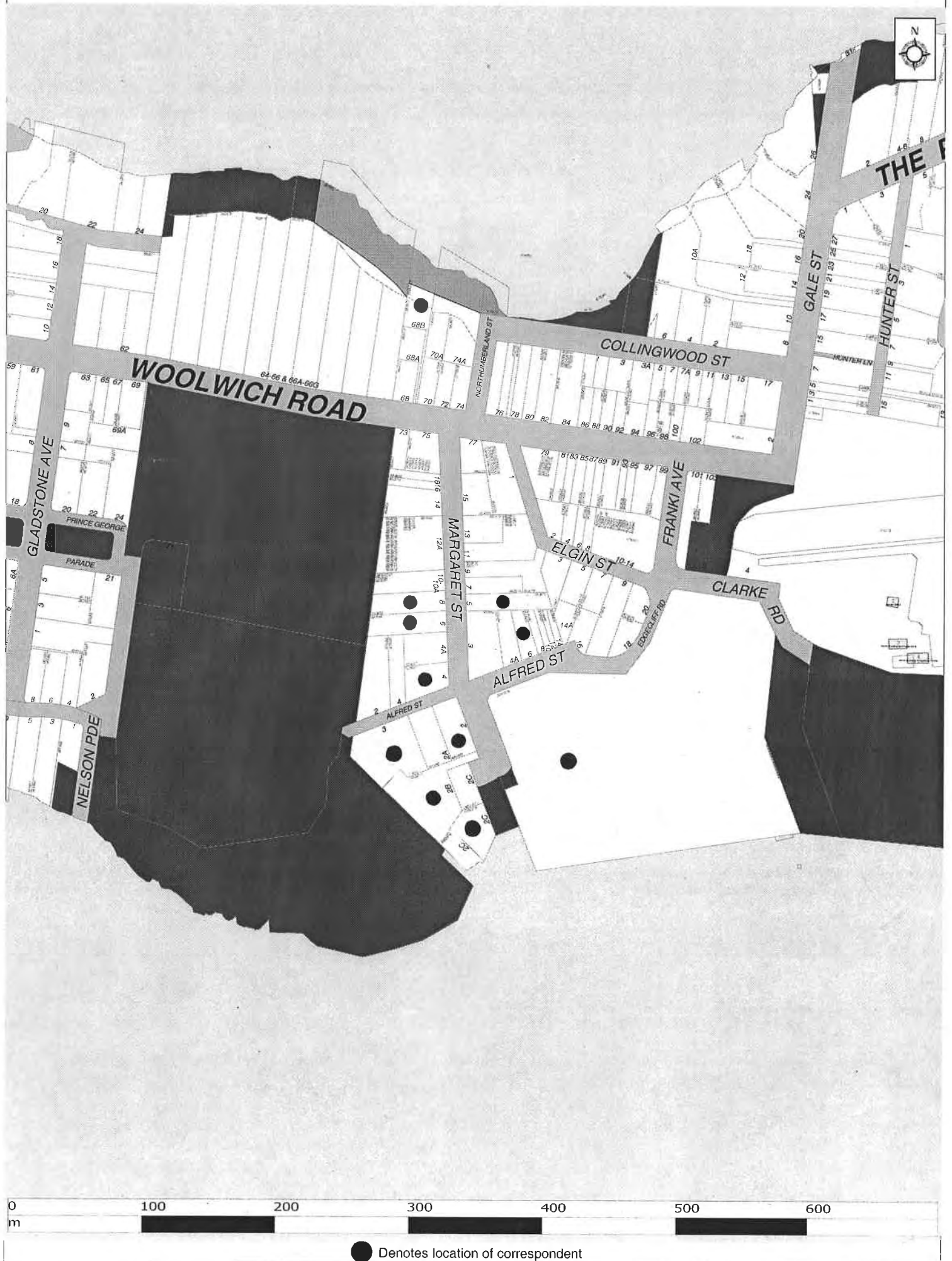


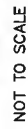
2C Margret Street Woolwich



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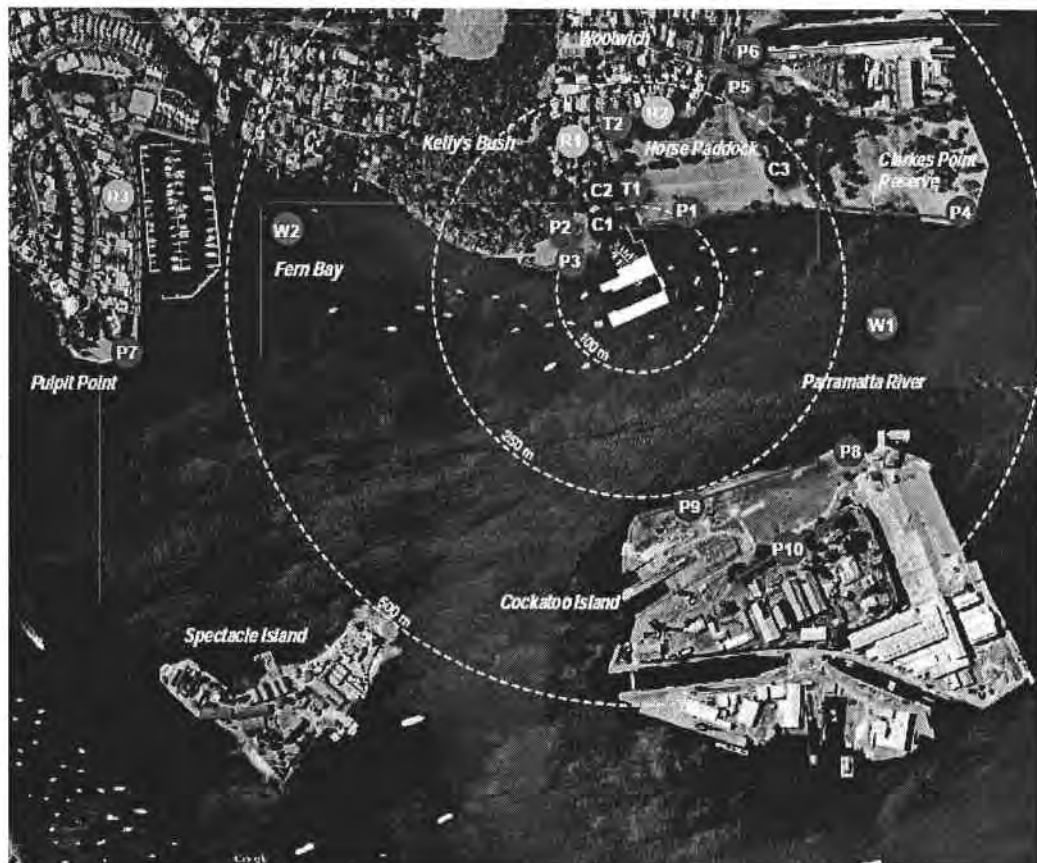
DRAWING LIST

6557-01-000	TITLE SHEET, LOCATION PLAN AND DRAWING LIST
6557-01-001	SITE PLAN
6557-01-002	PROPOSED MARINA LAYOUT

[illegible]



WOOLWICH MARINA ENVIRONMENTAL ASSESSMENT



Receptor Location Map

KEY

- C1** Commercial
- T1** Public Roads/Transport
- R1** Residential
- P1** Foreshore Public open space
- W1** Adjoining waterways

[illegible]



WorleyParsons

resources & energy

Incorporating
Planning Workshop Australia

Infrastructure & Environment

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www.worleyparsons.com
ABN 61 001 279 812

16 March 2010

Ref: 301015-01904
File: Letter to Council 160310

Mr Steve Kourepis
Group Manager Development & Regulatory Control
Hunters Hill Council
PO Box 21, Hunters Hill 2110

Dear Sir

RE: DEVELOPMENT APPLICATION 2009-1128, FLOATING MARINA, 2C MARGARET STREET, WOOLWICH

I refer to Council's letter dated 9 March 2010 and request to address certain aspects of the development proposal. Council's questions along with our response, is set out below.

Paragraph 2.

a) On the assumption that larger boats up to 18 metres in length will be able to moor at the upgraded facility than that which currently exists at the moment, will there be more disturbance of the river bed and the foreshore seawall/beaches due to wave moment?

The current marina accommodates boats up to 16 metres in length and is located in water depths of 2m- 6.5m. The proposed redeveloped marina includes the provision of **only two** berths for vessels in excess of 16m and is located in water depths of 5m-10m. This is considered to be a very minor change in the maximum sized vessels to be berthed at the marina. There will be no increased disturbance of the river bed as the proposed floating pontoon structure will be located in deeper water than the existing fixed timber structure.

In relation to disturbance of the foreshore seawall/beaches, the existing wave climate was a key consideration in the redevelopment of the marina. An assessment of the wave climate was carried out and considered locally generated wind waves and waves caused by vessel wash (refer Section 2.4.3 of the Environmental Impact Statement (EIS)). The assessment found that the site experiences boat wake waves (wash) predominantly from vessels sailing across the harbour and from Rivercats and Harbourcats. Section 3.4 of the EIS provides:

"AS3962-2001 outlines the criteria for the recommended maximum wave climate in small harbours/marinas. To meet the recommended guidelines, it is proposed that all the outer pontoons would be breakwater pontoons. The layout of the marina also avoids orientation of berths beam-on to the regular wave front from passing Rivercats and Harbourcats. These measures would reduce the effect of the waves on the proposed marina to an acceptable level."



Having regard to the above assessment it is considered that the proposed layout and design of the floating marina facility, including breakwater pontoons on all outer arms, will in fact dissipate wave energy, thus providing a form of buffer from the boat wake waves as they travel toward the foreshore /seawall. It is considered that the design makes a positive contribution to mitigating the impacts that are presently occurring on the seawall.

b) What is likely to be the breakdown of yachts to powerboats that are likely to use the upgraded facility on the river?

I refer to Section 3.1 – Proposal Description of the EIS which states that *"The redeveloped marina would accommodate power vessels and yachts up to 18m in length"*. The mix is likely to vary from time to time.

c) Will there be more cars and parking demands associated with larger boats to be moored at the facility.

In relation to this query, reference is made to Section 8.2 - Traffic and Access of the EA and to the **Traffic and Parking Report** (refer Appendix J to the EIS). As indicated, the Report applied the parking rates for marinas derived from AS3962-2001 *"Guidelines for Design of Marinas"*. AS3962-2001 specifies car parking spaces to be provided per wet berth, per dry berth, per swing mooring and per employee. AS3962-2001 does not differentiate between the sizes of vessels.

The Report concludes:

"The proposed development is supportable on traffic and parking grounds. The summary of the proposed impact is as follows:-

- The subject proposal requires one (1) additional car parking space for visitors to the marina. However the additional 1 space required by the proposed changes to the marina can be readily absorbed by the abundance of existing on-street parking within close proximity to the site that is currently under utilised.*
- In essence the additional traffic generation effects will be very low and will not create any adverse effects in terms of traffic flow efficiency considerations at the driveways serving the site and within the local road system surrounding site.*
- Current levels of service at nearby intersections will not change as a consequence of the proposed development..."*

Paragraph 3

a) How will the sewerage pump out system work from the floating facility and what environmental safeguards will there be put in place to ensure that no spill into the river will occur? That is, will the removal of sewerage take place from the water or by tankers using Margaret Street? What will be the environmental and amenity safeguards in respect of the likely public usage of the pump-out system on the floating pontoon?

It is understood that Council's engineers would prefer that the sewage pump-out facility be connected to the sewer in Margaret Street instead of removed via water. Both options alleviate additional vehicle movements in Margaret Street.



Whilst this is a significant additional cost for the project, our Client has considered Council's proposition and would be amenable to discuss a condition requesting connection to sewer to be imposed as part of any development consent.

Use and management of the sewage pump-out facility would be in accordance with the **Operational Environmental Management Plan** for the marina (refer Appendix K to the EIS).

Paragraph 4

a) It is stated in your development application form that the hours of operation will be between 7am and 5pm Monday to Saturdays only with a security gate to be locked outside of business hours. However, in your Statement of Environmental Effects, it is stated that the operation will be 24 hours per day 7 days per week, 'via a security gate.' If the latter stated operating times is the case, what protection will be afforded those residents living close to the site relating to night time traffic and boat movements?

The hours of operation of the associated on-shore marina offices, slipway and maintenance services (not part of this Development Application) are 7am - 5pm Monday to Saturday.

As is presently the case, it is proposed that marina berth holders will continue to gain access to their vessels 24 hours a day, 7 days a week, via a pedestrian security gate with an authorised security code. The pedestrian security gate is unlocked during the business hours of the on-shore operations 7am - 5pm Monday to Saturday.

A Noise and Air Quality Assessment was undertaken as part of the EIS (refer Appendix L to the EIS). The noise assessment considered 24-hour access for boat owners and modelled typical daytime, evening and night time periods, with predictions for resultant noise levels assessed against the project specific noise criteria. The assessment concludes:

"A review of predicted noise levels at surrounding residences indicates that compliance with established noise criteria is indicated.

...noise from persons on the marina will be well below established sleep disturbance criteria at residences.

Traffic noise at the 'façade of residences in Margaret Street' was predicted using the *Calculation of Road Traffic Noise (CORTN)* traffic noise prediction model. The model takes into account the following factors:

- Peak hourly traffic flows;
- Vehicle speeds (50km/hr);
- Distance to residences from each traffic lane.

The assessment concludes:

"..traffic noise generated by the development will be acoustically acceptable."

Management of noise during construction is addressed in the *Construction Environmental Management Plan (CEMP)* (refer Appendix F to the EIS). Management of noise post construction



is addressed in the *Operational Environmental Management Plan (OEMP)* (refer Appendix K to the EIS).

b) In terms of management of the overall facility and the fact that the marina on-shore is separated from general access by way of security gates, how will this set of circumstances relate to the new security arrangement proposed for the floating marina? That is, will there be a co-ordination of access and security between the on-shore and off-shore marina for the persons ultimately involved in the development?

The existing management and security remains unchanged for the onshore operations which is not part of this DA. As indicated at the response to Paragraph 3a) above, the pedestrian security gate fronting Margaret Street is unlocked during the business hours of the on-shore operations 7am - 5pm Monday to Saturday. Outside of these hours, boat owner access will continue to be via the gate on Margaret Street. In addition, a new security gate on the main walkway of the marina is proposed. This will have an authorised security code for access to the berths.

Paragraph 5

a) As stated in volume 1, page 17, of the Statement of Environmental Effects, there are concentrations of certain metals locally on the seabed and that this will be subject of a geotechnical investigation to be undertaken prior to detailed design of the marina structure. What protective mechanisms are likely to be implemented should the survey prove problematic for the development after it has been granted development consent by the Panel?

The statement at page 17 of the EIS, that "*A geotechnical investigation would be undertaken prior to detailed design of the marina structure*" relates to the structural design of the piles (including depth of embedment) and does not relate to the concentrations of metals on the seabed.

Management of the surface sediment during construction is addressed at Section 4 - 'Environmental Impacts and Control Plans' of the CEMP. Management of the surface sediment during operation of the redeveloped marina is addressed at Section 4 - 'Environmental Impacts and Control Plans' of the OEMP.

b) Further, it is stated that there is a high level of acid sulphate soil material and it is unlikely that the existing wave climate and water velocities at the site would allow formation of monosulfidic. It is requested that this matter be further and definitively addressed to justify this statement.

At Section 2.4.6- Sediments of the EIS, under the heading 'Acid Sulfate Soils', reference is made to the Acid Sulfate Soils (ASS) Risk Map, particularly Map 2.1. It is noted that there will be no dredging "*at any stage of the proposed marina redevelopment*". The *Construction Environmental Management Plan (CEMP)* describes the management regime of monosulfides during the construction phase of the proposed development. It is upon this management regime that it has been concluded that "*It is unlikely that the existing wave climate and water velocities at the site would allow formation of monosulfidic.*"



Paragraph 6

a) Will the parking area that is normally locked up in front of the existing marina building be opened up to be used for staff car parking as distinct from forcing the greater number of employees from parking in Margaret Street? This current arrangement would appear to be contrary to the conditions of development consent of 1978.

Four car parking spaces are currently provided for and used by the marina management, sail, shipwright and slipway operations on Lot 3 DP 880264. There are also two car parking spaces available for courier and delivery parking. Residential parking is also provided on Lot 3 DP 880264 in the garage under the house.

Paragraph 7

a) Based on the information in the EIS, the question is why provide for a 32 berth floating marina structure (up from 20 berths) when it is stated that 'swing moorings are used more often than marina berths'?

The comment at section 4.1 of the EIS that '*studies have shown that swing moorings are used more than marina berths*' related to traffic and parking matters and not berth demand. The question of usage is invariably linked with location and ease of accessibility.

Paragraph 8

a) In the Statement, it is stated that the main reasons for the upgrade work is to overcome O.H. & S issues. Will there be such similar issues for works that could be carried out on the boats using the pontoon /deck for storage of materials and equipment?

The current OH & S issues relate to the existing pedestrian access arrangements, which requires passing through the slipway operations to gain access the marina berths.

The proposed redevelopment removes this requirement and thus provides a significantly enhanced and safer facility for boat owners, and a facility which meets the requirements of AS3962-2001 *Guidelines for the Design of Marina*.

No storage of materials or equipment is proposed on the pontoon /deck.

Paragraph 9

a) Arguments have been raised that the floating pontoon style berthing provides a sterile view inconsistent with what would commonly be associated with a heritage area. The size and scale of the new facility is inappropriate and fails to protect and improve the natural assets and natural and cultural scenic quality of the surrounding area, particularly when viewed from waters in this zone (W5 – Water Recreation) or from areas of public access. A further argument is that the larger area between the first row of boats and the edge of Kelly's Bush has the additional effect of mooring boats further out into the harbour and adds to the loss of water views and increases the negative visual impact of the development.



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In relation to comments regarding the association of the proposed development with "a heritage area", it is important to recognise and indeed to understand what might be meant by a heritage area. As indicated in the Heritage Impact Assessment (HIA), there was no impact on the six items referred to in the HIA. The site of the marina is within an area that has been part of the industrial maritime activity of Sydney Harbour and its environs for many decades. Indeed, it is considered that it is this industrial maritime activity that constitutes the heritage significance of the locality within which the proposed development is to be carried out. The proposed development makes an important contribution to the maintenance of the above stated heritage significance of the locality. The proposed development continues the historic use of the locality for maritime purposes and developments associated with those maritime purposes.

In relation to views, reference is made to the Visual Impact Assessment (refer Appendix G to the EIS). The Assessment concludes that:

"No significant mid or long distance views are obscured by the proposal.

The new pontoons are of a floating variety therefore reducing the visual profile of the structure in lower tides.

The new layout of the marina consolidates boats in berths on an approximate north south orientation along two jetties. This has the potential to reduce the overall visual mass when viewed along the foreshore such as in Horse Paddock where views to Pulpit Point are less obscured."

I am happy to discuss any aspect of the above matters with you at your convenience. I can be contacted on 8456 7385.

Yours faithfully

Sofie Zivanovic
Principal Environmental Planner

cc Greg Newton

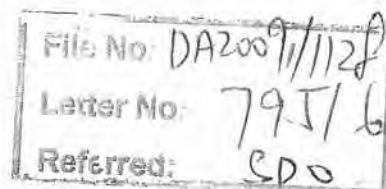
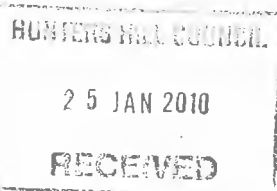
Letters

from

Authorities



Office
of Water



The General Manager
Hunters Hill Municipal Council
PO Box 21
Hunters Hill NSW 2110

Contact: Greg Daley
Phone: 02 9895 6154
Fax: 02 9895 7501
Email: greg.daley@dnr.nsw.gov.au

Our ref: 10 ERM2009/1311
Our file: 9052933
Your ref: DA20091128

Attention: Xenia Kyriacou

22 January 2010

Dear Sir/Madam

**Re: Integrated Development Referral – General Terms of Approval
DA20091128 - Proposal Woolwich Marina Redevelopment
Lot 3 & Lot 4 DP880264 - 2C Margaret Street WOOLWICH**

I refer to your recent letter regarding an Integrated Development Application (DA) proposal for the subject property. Attached, please find the NSW Office of Water's General Terms of Approval (GTA) for 'works' requiring a Controlled Activity Approval under the *Water Management Act 2000* (WMA), as detailed in the subject DA.

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

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

- The NSW Office of 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 (ie in or within 40 metres from top of highest bank of a watercourse, foreshore, or lake). Once notified, the NSW Office of 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 the 'works' do not appear in the original documentation.
- The NSW Office of Water should be notified if Council receives an application to modify the consent conditions. **Failure to notify may render the consent invalid.**
- The NSW Office of Water requests notification of any legal challenge to the consent.

Under Section 91A(6) of the EPAA, Council must provide the NSW Office of Water with a copy of any determination/s including refusals.

Department of
Environment, Climate Change and Water NSW



As a controlled activity (ie the 'works') cannot commence before the applicant obtains a Controlled Activity Approval, the NSW Office of Water recommends that 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 the NSW Office of Water) for a Controlled Activity Approval after consent has been issued by Council but before the commencement of any 'works'.

Finalisation of a Controlled Activity Approval can take up to 8 weeks from the date the NSW Office of Water receives all documentation (to its satisfaction). Applicants must complete and submit (to the undersigned) an application form together with any required plans, documents, the appropriate fee and security (ie bond, if applicable) and proof of Council's development consent.

Application forms for the Controlled Activity Approval are available from the undersigned or from the NSW Office of Water's website

<http://www.water.nsw.gov.au/Water-Licensing/Approvals/Controlled-activities/default.aspx>

The NSW Office of Water requests that Council provide a copy of this letter to the applicant.

Yours Sincerely



Greg Daley
Natural Resource Officer
NSW Office of Water
Licensing South



General Terms of Approval – for works requiring a Controlled Activity Approval under the Water Management Act 2000

Our Reference		10 ERM2009/1311	File No:	9052933
Site Address		Lot 3 & Lot 4 DP880264 - 2C Margaret Street WOOLWICH		
DA Number		DA20091128		
LGA		Hunters Hill Municipal Council		
Number	Condition			
Plans, standards and guidelines				
1	<p>These General Terms of Approval (GTA) only apply to the controlled activities described in the plans and associated documentation relating to DA20091128 and provided by Council:</p> <p>(i) Site plan, map and/or surveys</p> <p>(ii) Structural design and specifications</p> <p>Any amendments or modifications to the proposed controlled activities may render these GTA invalid. If the proposed controlled activities are amended or modified the NSW Office of Water must be notified to determine if any variations to these GTA will be required.</p>			
2	<p>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 the NSW Office of Water. Waterfront land for the purposes of this DA is land and material in or within 40 metres of the top of the bank or shore of the river identified.</p>			
3	<p>The consent holder must prepare or commission the preparation of:</p> <p>(i) Rehabilitation Plan</p> <p>(ii) Erosion and Sediment Control Plan</p>			
4	<p>All plans must be prepared by a suitably qualified person and submitted to the NSW Office of Water for approval prior to any controlled activity commencing. Plans must be prepared in accordance with the NSW Office of Water guidelines located at www.dwe.nsw.gov.au/water_trade/rights_controlled.shtml</p> <p>(i) Vegetation Management Plans</p> <p>(ii) Laying pipes and cables in watercourses</p> <p>(iii) In-stream works</p>			
5	<p>The consent holder must (i) carry out any controlled activity in accordance with approved plans and (ii) construct and/or implement any controlled activity by or under the direct supervision of a suitably qualified professional and (iii) when required, provide a certificate of completion to the NSW Office of Water.</p>			
Rehabilitation and maintenance				
6	<p>The consent holder must carry out a maintenance period of two (2) years after practical completion of all controlled activities, rehabilitation and vegetation management in accordance with a plan approved by the NSW Office of Water.</p>			
7	<p>The consent holder must reinstate waterfront land affected by the carrying out of any controlled activity in accordance with a plan or design approved by the NSW Office of Water.</p>			

Our Reference	10 ERM2009/1311	File No:	9052933
Site Address	Lot 3 & Lot 4 DP880264 - 2C Margaret Street WOOLWICH		
DA Number	DA20091128		
LGA	Hunters Hill Municipal Council		
Number	Condition		
Reporting requirements			
8	The consent holder must use a suitably qualified person to monitor the progress, completion, performance of works, rehabilitation and maintenance and report to the NSW Office of Water as required.		
Security deposits			
9	The consent holder must provide a security deposit (bank guarantee or cash bond) - equal to the sum of the cost of complying with the obligations under any approval - to the NSW Office of Water as and when required.		
10 - 13	N/A		
Culvert			
14	The consent holder must ensure that no materials or cleared vegetation that may obstruct flow, wash into the water body or cause damage to river banks are left on waterfront land other than in accordance with a plan approved by the NSW Office of Water.		
15 - 16	N/A		
Erosion control			
17	The consent holder must establish all erosion and sediment control works and water diversion structures in accordance with a plan approved by the NSW Office of Water. These works and structures must be inspected and maintained throughout the working period and must not be removed until the site has been fully stabilised.		
Excavation			
18	The consent holder must ensure that no excavation is undertaken on waterfront land other than in accordance with a plan approved by the NSW Office of Water.		
19	The consent holder must ensure that any excavation does not result in (i) diversion of any river (ii) bed or bank instability or (iii) damage to native vegetation within the area where a controlled activity has been authorised, other than in accordance with a plan approved by the NSW Office of Water.		
Maintaining river			
20	The consent holder must ensure that (i) river diversion, realignment or alteration does not result from any controlled activity work and (ii) bank control or protection works maintain the existing river hydraulic and geomorphic functions, and (iii) bed control structures do not result in river degradation other than in accordance with a plan approved by the NSW Office of Water.		
21 - 27	N/A		
END OF CONDITIONS			



Industry & Investment



DA 2009/1128
78849
MDE ✓

Our ref: OUT09/16934; Your ref: 1455/2C

Hunter's Hill Council
(Attn: Xenia Kyriacou)
PO Box 21
HUNTERS HILL NSW 2110

Dear Xenia

Re: Development Application No. DA 20091128
Property: 2C Margaret Street WOOLWICH NSW 2110
Proposal: Marina Redevelopment

Thankyou for your letter dated 15 December 2009 requesting Industry and Investment (I&I) (formerly NSW Department of Primary Industries) comment on the above proposal. I&I NSW has reviewed the above proposal in light of the policies and provisions under the *Fisheries Management Act 1994* and has no objections providing the following general terms of approval are included in any development consent issued for this proposal:

1. Environmental safeguards (silt curtains, booms etc.) are to be used during the proposed dredging works to ensure there is no escape of turbid plumes into the aquatic environment. Turbid plumes caused by run off, pile driving etc. have the potential to smother aquatic vegetation and have a deleterious effect on benthic organisms.
2. No harm to any marine vegetation, including via shading, occurs without a permit from this Department.
3. Demolition waste is deposited appropriately on land.
4. The materials used for construction should not be deleterious to marine life, for example antifouling paints or treated woods must not be used. These materials inhibit marine growth and reduce the habitat available to marine life.
5. All other relevant authorities have no objections to this proposal.

For any further information please telephone me on (02) 9527 8552.

Yours sincerely,

Carla Ganassin
Conservation Manager
Aquatic Habitat Protection Unit

22 December 2009

Cronulla Fisheries Centre
PO Box 21, Cronulla NSW 2230
202 Nicholson Parade, Cronulla
Tel: 02 9527 8411 Fax: 02 9527 8576
ABN 72 189 919 072 – 002 www.industry.nsw.gov.au



Planning

20 October 2009

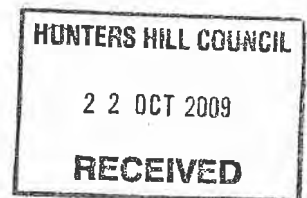
Contact: Jonathan Cleary
Phone: (02) 9228 6467
Fax: (02) 9228 6466
Email: jonathan.cleary@planning.nsw.gov.au

General Manager
Hunters Hill Council
PO Box 21
HUNTERS HILL NSW 2110

File: 9043360

Dear General Manager

**Director General's Requirements
Upgrade of Woolwich Marina, Woolwich
DGR ID No: 464**



For your information, I have attached a copy of the Director-General's requirements for the preparation of an Environmental Impact Statement (EIS) provided to WorleyParsons Ltd for the above proposal.

If a Development Application (DA) and EIS are subsequently lodged with Council, you should forward three (3) copies of the documents to the Department (marked "Attention: Director, Major Development Assessment") prior to the commencement of the public exhibition period. This will enable the concurrent exhibition of the DA and EIS in the Department's Head Office and, where appropriate, relevant regional office.

As soon as practicable after the exhibition period, Council must send the Department a copy of all the submissions it has received on the proposal, in accordance with Clause 81 of the *Environmental Planning and Assessment Regulation 2000*. If the Department does not respond within 21 days of receiving these submissions, Council or the Joint Regional Planning Panel may determine the application. **Please note, the Department will only respond during the 21 day statutory period if there is an issue of major significance involved.**

Following determination, it would be appreciated if Council would forward a copy of the determination of the Development Application to the Department.

Should you have any enquiries regarding the above, please contact me on (02) 9228 6467.

Yours sincerely,

Jonathan Cleary
Student Planner
Major Development Assessment

Noted [initials] 22/10/09
WJG 18



Sofie Zivanovic
WorleyParsons Ltd
Level 12, 141 Walker Street
NORTH SYDNEY NSW 2060

Our ref: 9043360

Dear Ms Zivanovic

**Director-General's Requirements
Upgrade of Woolwich Marina, Woolwich
DGR ID No: 464**

I refer to your request for the Director-General's requirements for the preparation of an Environmental Impact Statement (EIS) for the redevelopment of the waterside component of Woolwich Marina adjacent to 2c Margaret Street, Woolwich (*Maritime Lease Area: RP 5298*) in the Hunters Hill local government area.

Statutory Issues

Attachment No. 1 outlines the statutory matters that must be included in any EIS under clauses 71 and 72 of the *Environmental Planning and Assessment Regulation 2000* (the EP&A Regulation).

Specific Issues

Under clause 73(1) of the EP&A Regulation, the Director-General requires the EIS to address the following specific issues:

1. **Description of the Proposal:** The EIS must include a full description of the proposal, clearly identifying the site, the proposed works (including any rehabilitation works) and the duration and intensity of construction and operation.
2. **Justification for the Proposal:** The EIS must include a detailed justification of the proposal.
3. **Environmental Planning Instruments:** The EIS must assess the proposal against the relevant provisions of *Regional Environmental Plan (Sydney Harbour Catchment) 2005 (Deemed SEPP)*; *State Environmental Planning Policy No. 55 – Remediation of Land*; *Hunters Hill Local Environmental Plan No. 1*; *Sydney Harbour Foreshores and Waterways Area Development Control Plan 2005* and relevant development control plans and section 94 plans.
4. **Key Issues:** The EIS must assess the following potential impacts of the proposal during construction and operation, and describe what measures would be implemented to avoid, minimise, mitigate, offset, manage and/or offset these potential impacts:
 - **visual impact of the proposal** including height, scale and lighting, particularly from:
 - any adjoining properties along the foreshore areas between Clarkes Point and Pulpit Point;
 - water users of Parramatta River and Fern Bay; and
 - significant vantage points of the public domain such as roads or parks, including Cockatoo Island;
 - **water and soils** including:
 - details of proposed erosion and sediment controls (during construction);
 - potential disturbance of contaminated sediments during construction;
 - acid sulphate soils; and
 - management measures for the containment of pollutants (e.g. fuel and sewage);
 - **traffic impact** including construction and operation traffic, parking and access;
 - **navigation and safety** including an assessment of impacts on water based traffic; and
 - **noise and vibration** including construction, operation and traffic particularly with regard to nearby noise sensitive receivers;
 - **public access;**
 - **aquatic flora and fauna** particularly with regard to critical habitats, protected species, threatened species, populations or ecological communities, or their habitats, as well as marine vegetation. The

ATTACHMENT No. 1 – MANDATORY ISSUES FOR ALL ENVIRONMENTAL IMPACT STATEMENTS

1. a statement containing the following information:
 - a) the name, address and professional qualifications of the person by whom the Environmental Impact Statement is prepared;
 - b) the name and address of the person by whom the development application was made;
 - c) the address of the land in respect of which the development application was made;
 - d) a description of the development to which the Environmental Impact Statement relates;
 - e) an assessment by the person by whom the Environmental Impact Statement is prepared of the environmental impact of the development to which the Statement relates, dealing with the matters referred to in clause 72 of the *Environmental Planning and Assessment Regulation 2000*;
 - f) a declaration by the person by whom the Environmental Impact Statement is prepared to the effect that:
 - i) the Environmental Impact Statement has been prepared in accordance with clauses 72 and 73 of the *Environmental Planning and Assessment Regulation 2000*;
 - ii) the Environmental Impact Statement contains all available information that is relevant to the environmental assessment of the development to which the Statement relates;
 - iii) that the information contained in the statement is neither false nor misleading;
2. a summary of the environmental impact statement;
3. a statement of the objectives of the development;
4. an analysis of any feasible alternatives to the carrying out of the development, having regard to its objectives, including the consequences of not carrying out the development;
5. an analysis of the development, including:
 - a) a full description of the development;
 - b) a general description of the environment likely to be affected by the development, together with a detailed description of those aspects of the environment that are likely to be significantly affected;
 - c) the likely impact on the environment of the development;
 - d) a full description of the measures proposed to mitigate any adverse effects of the development on the environment;
 - e) a list of any approvals that must be obtained under any other Act or law before the development may lawfully be carried out.
6. a compilation (in a single section of the Environmental Impact Statement) of the measures referred to in point 5d) above;
7. the reasons justifying the carrying out of the development in the manner proposed, having regard to biophysical, economic and social considerations, including the following principles of ecologically sustainable development:
 - a) the **precautionary principle**, namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. In the application of the precautionary principle, decisions should be guided by:
 - i) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment;
 - ii) an assessment of the risk-weighted consequences of various options;
 - b) **inter-generational equity**, namely, that the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations;
 - c) **conservation of biological diversity and ecological integrity**, namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration;
 - d) **improved valuation, pricing and incentive mechanisms**, namely, that environmental factors should be included in the valuation of assets and services, such as:
 - i) polluter pays, that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement;
 - ii) the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste;
 - iii) environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.

archaeological and economic aspects of the environment should be described to the extent necessary for assessment of the environmental impact of the proposed development.

Details of land and marine flora and fauna and any items of environmental heritage should be included, within the anticipated area of influence of the proposal together with details of the hydrological regime of the waterway taking into account the effect of tides, wave and sand movements (including beach erosion) and floods. Back up studies to account for such data should be included in an appendix to the EIS.

3. Analysis of Environmental Impacts.

Environmental impacts usually associated with marinas are listed below. Where relevant to the specific proposal, these should be addressed in the EIS, taking into account the adequacy of safeguards proposed to minimise them.

(a) Dredging/Landfill Impacts

This section should account for the assessed physical and biological, constructional, and short and long term operational impacts that may arise from excavation, dredging and reclamation works associated with the proposal. Information provided should include but may not necessarily be limited to the following on which the impacts of dredging and landfill proposed should be assessed:

- The extent of dredging and reclamation proposed including plans showing the depth of dredging and the anticipated final alignment and slope of batters, together with an indication as to whether this work will result in a stable alignment or if recurrent maintenance dredging will be required.
- Quantification of the quality and quantity of dredged spoil and/or fill material involved including proposals for adequate disposal of dredged spoil, and safeguards required to deal with leachate problems arising therefrom.
- Description of the techniques proposed for dredging, handling and/or disposing of dredged spoil, including any requirements to meet the water quality standards imposed by the Environment Protection Authority with regard to the classification of waters relevant thereto.
- Assessment of the anticipated changes in the hydrodynamics of the site arising from the proposal including the effects of the proposed works on tidal flushing, currents, wave patterns where such changes may cause shoreline instability, stagnant water and sediment movements.
- Proposals for mitigation of siltation, turbidity and disruption to the aquatic environment by the proposed earth works.

(b) Other Environmental Impacts

The EIS should provide a comprehensive analysis of the impacts of the scheme as a whole and the individual components of it on the various aspects of the environment that are affected. This should clearly set out the benefits of the scheme and its disadvantages both during the construction phase and its ultimate operation both for the short and long term. The analysis should cover social and economic as well as physical aspects of the environment.

Information on the proposed design, construction and operational safeguards should be provided sufficient to account for the mitigation of the constructional and short and long term operational impacts assessed as well as an analysis of the likely efficacy of proposed safeguards.

Particular matters to be included and suitably quantified should relate to:

- Control of air pollution;
- Control of water pollution, including dredging, bilge control, sewage disposal, stormwater, oil and workshop wastes, rubbish disposal etc;
- Hydrological matters and potential for erosion, siltation and flooding;
- Control of noise including for existing and predicted noise levels (day and night), proposed noise sources and proposals to minimise noise generation, and residences or land uses (existing and proposed) which may be affected by noise. A schedule of noise producing equipment as well as of proposed noise abatement equipment should be included;

ATTACHMENT No. 3 – AGENCY REQUIREMENTS