

## Director General's Requirements

Section 75F of the *Environmental Planning and Assessment Act 1979*

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| <b>Application number</b> | MP10_0047 & MP10_0048                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Project</b>            | MP10_0047 Barangaroo Headland Park & Northern Cove – Early Works<br>MP10_0048 Barangaroo Headland Park & Northern Cove – Main Works                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Location</b>           | Hickson Road, Barangaroo, Sydney                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Proponent</b>          | Barangaroo Delivery Authority                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Date issued</b>        | 6 May 2010                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Expiry date</b>        | If the environmental assessment is not exhibited within 2 years after this date, the applicant must consult further with the Director General in relation to the preparation of the environmental assessment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Key issues</b>         | <p>The Environmental Assessment (EA) must address the following key issues:</p> <ol style="list-style-type: none"> <li><b>1. Relevant EPI's, policies and guidelines</b> <ul style="list-style-type: none"> <li>Planning provisions applying to the site, including permissibility and the provisions of all plans and policies including: <ul style="list-style-type: none"> <li>State Environmental Planning Policy (Major Development) 2005;</li> <li>State Environmental Planning Policy 55 - Remediation of Land;</li> <li>Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005;</li> <li>Sydney Harbour Foreshores and Waterways Area Development Control Plan 2005;</li> <li>NSW State Plan, Sydney Metropolitan Strategy and the draft Sydney City Subregional Strategy; and</li> <li>An outline of the nature and extent of any non-compliance with relevant environmental planning instruments, plans and guidelines and justification for any non-compliance.</li> </ul> </li> </ul> </li> <li><b>2. Concept Plan</b> <ul style="list-style-type: none"> <li>The EA shall demonstrate consistency with the terms of approval of Concept Plan MP06_0162 (as amended) and justify any areas of inconsistency.</li> </ul> </li> <li><b>3. Urban Design and Public Domain (in relation to MP10_0048)</b> <ul style="list-style-type: none"> <li>A Public Domain Plan is to be prepared for the Headland Park and Northern Cove, which is to address: <ul style="list-style-type: none"> <li>all planning, accessibility and design issues related to the connectivity of the Headland Park to its surrounding environment, including integration of walking and cycling connections within and to the site;</li> <li>event management and recreational capacity, including passive and active opportunities;</li> <li>proposals and options to increase cultural experiences at the Headland Park;</li> <li>measures to provide for diverse activation of the Headland Park while being sensitive to local community needs;</li> <li>Crime Prevention Through Environmental Design (CPTED) safety strategies;</li> <li>heritage conservation and adaptive reuse as part of the urban and landscape design, including management and interpretation;</li> <li>sustainability program for the Headland Park at design, construction and operations stages; and</li> <li>compliance with the Disability Discrimination Act.</li> </ul> </li> <li>An event plan of management is to be developed to support the proposal for events in the public domain, which will also need to inform traffic management.</li> <li>Proposals and options to increase cultural experiences at the Headland Park are to be supported by a local and regional Cultural Needs Analysis.</li> </ul> </li> </ol> |

#### **4. Landscape Design**

- The EA is to demonstrate that the final landform shape of the Headland Park has been determined by relevant design principles, rather than an engineering/fill driven outcome. Such principles may include:
  - o finished levels on the eastern edge of Headland Park should align with, and not exceed, the levels of adjacent streets and public domain;
  - o views over the Headland Park are to be maintained, particularly from adjacent streets and public open spaces;
  - o level grade access into the Headland Park is to be maximised;
  - o the gradient is to be designed to maximise accessibility and the gradient transition from central parkland to Headland Park is to provide accessible walking and cycle paths, and grading should create a variety of topographic experiences, including maximising useable passive recreation spaces;
  - o any structures within the Headland Park (including a possible cultural facility) are to integrate with the landscape design of the public domain to maximise opportunities for activation of the surrounding parkland;
  - o accessible paths to all public/cultural facilities within the Headland Park are to be provided from the central parkland (stage 2) area.
- Detailed documentation of the proposed grading and finished levels is to be provided with the Project Applications, including detailed spot levels and multiple sections through the site particularly relating to useable spaces and access points.

#### Further in relation to MP10\_0048

- A detailed landscape design plan is to be prepared for the Headland Park and Northern Cove, incorporating, among other matters:
  - o a hierarchy of spaces;
  - o detailed levels, edge conditions and pedestrian pathways;
  - o materials and plantings (including planting of non invasive plant species);
  - o street furniture;
  - o lighting;
  - o public art;
  - o a way finding strategy;
  - o an Interpretation Strategy; and
  - o signage.

#### **5. Visual Impact and Views**

- A visual impact assessment is to be provided of the proposed final design of the Headland Park, including any proposed buildings and structures, when viewed from key vantage points (including, but not limited to, from McMahons Point (Blues Point), Pyrmont, Balmain East, Walsh Bay and Millers Point). Photomontage images are to be prepared to demonstrate the impact of the proposed works.

#### **6. Traffic Management and Accessibility Impacts**

- Assess the likely impacts from the proposed works on surrounding areas and residents during the construction, demolition and excavation phases (including the impact on nearby intersections and the need/associated funding for upgrading or road improvement works (if required)), major arterial and local road networks, local public transport (including proposed light rail on Hickson Road), pedestrians and cyclists in the vicinity of the site.
- Assess the cumulative impacts associated with other construction activities on the Barangaroo site.
- Details of anticipated truck movements to and from the site.
- Details of access arrangements for workers to/from the site, emergency vehicles and service vehicle movements.
- Details of construction vehicle access, movements and queuing.

- Details of any proposed transportation of waste materials via the Harbour and proposed locations for handling materials.
- Navigation and safety impacts on other water based traffic and ferry commuter services from any barging of contaminated materials, including navigation in and around Darling Island, King Street Wharf, Johnstons Bay and White Bay.
- Impact of shoreline works (particularly the creation of the Northern Cove) on navigation in Sydney Harbour.

Further in relation to MP10\_0048

- Justification for the headland car park, including quantum of parking spaces, and its relationship and function with the Barangaroo site, with regard to public transport usage and mode split assumptions.
- Likely traffic impacts on local street network and intersections.
- Pedestrian and cycle accessibility.
- Details on the use and management of the car parking area.
- Potential provision for a water taxi stop.
- Provision for taxis and coaches.
- Potential for integration with light rail along Hickson Road, as announced by the Government in the *Metropolitan Transport Plan*.
- Demonstrate how the entry and exit to the headland car park will not have a detrimental impact upon visual amenity and pedestrian safety.
- Traffic and accessibility impacts and transport management for major events or cultural activities (including pedestrian movements) held at the Headland Park and Northern Cove.

**7. Remediation Action Plan (in relation to MP10\_0047)**

The Environmental Assessment must include a site wide Remediation Action Plan and a detailed Remediation Action Works Plan(s) for the relevant section(s) of the site. The Remediation Action Works Plan(s) must be prepared in accordance with the Guidelines for Consultants Reporting on Contaminated Sites (NSW EPA 1997), the relevant components of other guidelines made or approved under section 105 of the Contaminated Land Management Act 1997 and also include:

- Characterisation of the nature and extent of contaminated material.
- A description of the overall remediation strategy for the site, including the:
  - o objectives of the remediation strategy;
  - o proposed staging of the strategy; and
  - o relationship between the various stages of the strategy.
- Details of the proposed remediation process, including on-site and off-site treatment methodologies and the location, and transportation options, of any off-site treatment facility, and details of contingency processes.
- Details of the proposed remediation management measures, including justification of the remediation criteria to be applied to all or respective parts of the site and proposed disposal or re-use of materials and management of wastewater, including agreements for disposal of trade wastes, including treated water from the contaminated areas.
- Plans of any proposed containment cell(s) for contaminated material, including:
  - o demonstration that the design and integrity of the cells would be consistent with best practice standards;
  - o demonstration that any material incompatibilities between the cell(s) and material to be stored in the cell(s) have been identified;
  - o management procedures to address incompatibility issues must be provided; and
  - o demonstration that the cell(s) would adequately contain the materials to be stored without impacting on the surrounding environment.
- Site validation plan.
- Details of compliance with the Contaminated Land Management Act 1997 and remediation to address the current regulation on the site.
- Final landform following remediation and the suitability of fill material.

- On-going management and responsibility of the site following remediation.

The Remediation Action Works Plan(s) must clearly demonstrate that the site will be remediated to a standard commensurate with the final intended land use. The plans must be audited by an EPA Accredited Sites Auditor, and include a site audit statement detailing the findings of the audit.

Proposed remediation criteria must be developed consistently with National Environment Protection (Assessment of Site Contamination) Measure 1999 (NEPM). Where contaminants are present on the site that are not listed under the NEPM, specific remediation criteria for those contaminants must be derived having regard to relevant NSW standards, national standards, then international standards and justification for the use of any criterion not currently endorsed by the NSW Department of Environment, Climate Change and Water.

The validation of the remediation of the Barangaroo site, including the containment at Headland Park will need to be subject of a Site Audit undertaken by a NSW EPA accredited site auditor.

## **8. Soil and Water**

- Assess impacts on water quality of Sydney Harbour and proposed management, mitigation and monitoring measures.
- Erosion and sediment controls during remediation and excavation.
- Details of water quality monitoring program for Sydney Harbour, with a focus on turbidity and key contaminants.
- Assess the impacts of the proposal on surface and groundwater hydrology and quality.
- Assess the potential impacts on marine vegetation and aquatic ecology.
- Management measures for any barging of any excavated or contaminated material.
- Stormwater management and strategies during construction.
- Assess impacts on estuarine circulation, estuarine water quality and aquatic ecology of land formation works (including impacts on aquatic vegetation from direct smothering and any changes that may result from altered hydrological regimes of surrounding waters and bays). Any modification of estuarine foreshores (including the incorporation of measures to improve the habitat value of newly created waters (such as environmentally friendly seawalls) should consider *Environmentally Friendly Seawalls - A Guide to Improving the Environmental Value of Seawalls and Seawall-lined Foreshores in Estuaries* (DECC, 2009).
- Assess the potential impacts on aquatic habitat from altered hydrological regimes, contaminated sediments and potential acid sulphate soils from dredging activities whilst constructing the Northern Cove.
- The discharge of stormwater or other water should be assessed by comparison to the relevant water quality objectives and environmental values for Sydney Harbour estuarine waters, see: <http://www.environment.nsw.gov.au/ieo/index.htm> for NSW Water Quality Objectives; and refer to related Australian and New Zealand Guidelines for Fresh and Marine Water Quality (2000): [http://www.mincos.gov.au/publications/australian\\_and\\_new\\_zealand\\_guidelines\\_for\\_fresh\\_and\\_marine\\_water\\_quality](http://www.mincos.gov.au/publications/australian_and_new_zealand_guidelines_for_fresh_and_marine_water_quality).
- Consideration of the collection, treatment and management of contaminated surface and groundwater across the site. No contaminated or treated site waters (surface, collected groundwater, or contaminated construction waters) are permitted to enter Sydney Harbour and should be discharged under a trade waste agreement with Sydney Water.

## **9. Waste Management**

- Provide details of the quantity and type of liquid and non-liquid waste generated, handled, processed or disposed of on-site. Waste must be classified according to the DECCW's Waste Classification Guidelines 2008.
- Provide details of the quantity, type and specifications for all output products proposed to be produced. The description should include the physical, chemical and biological characteristics

(including contaminant concentrations) of those output products as well as relevant accredited standards against which the products would comply.

- Provide details of intended (or potential) end uses for output products and the relevant product standards used against which those products would be assessed.
- Provide details of the layout, the treatment process and the environmental controls of the proposal.
- Provide details of liquid waste and non-liquid waste management, including:
  - o the transportation, assessment and handling of waste arriving at or generated at the site;
  - o any stockpiling of wastes or recovered materials at the site;
  - o any waste processing related to the proposal, including reuse, recycling, reprocessing or treatment both on- and off-site;
  - o the method for disposing of all wastes or recovered materials;
  - o the emissions arising from the handling, storage, processing and reprocessing of waste; and
  - o the proposed controls for managing the environmental impacts of these activities.
- Provide details of spoil disposal (if applicable) with particular attention to:
  - o the quantity of spoil material likely to be generated;
  - o proposed strategies for the handling, stockpiling, reuse/recycling and disposal of spoil;
  - o the need to maximise reuse of spoil material in the construction industry;
  - o identification of the history of spoil material and whether there is any likelihood of contaminated material, and if so, measures for the management of any contaminated material; and
  - o designation of transportation routes for transport of spoil.
- Provide details of 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.
- 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.
- In documenting or describing the composition of output products and/or wastes generated, reference should be made to DECCW's Waste Classification Guidelines 2008.

#### **10. Air, Noise and Odour Impacts**

- Identify potential air quality, noise and odour impacts and appropriate mitigation measures.
- An assessment of odour from the excavation, transport and storage of contaminated sediments.
- Details of an air quality monitoring program, including the identification of air quality criteria.
- In particular the following must be addressed:

##### Air and Odour

The Environmental Assessment must include an Air Quality Impact Assessment that is prepared strictly in accordance with the *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales 2005*, available at: <http://www.environment.nsw.gov.au/resources/air/ammodelling05361.pdf>.

The Air Quality Impact Assessment must also make appropriate reference to the *Assessment and Management of Odour from Stationary Sources in NSW: Technical Framework 2006* and *Assessment and Management of Odour from Stationary Sources in NSW: Technical Notes 2006*, available at: <http://www.environment.nsw.gov.au/air/odour.htm>.

The key air quality issues for the proposal will depend on the methods used to manage and remediate the contaminated material. Potential matters that must be covered in the Air Quality Impact Assessment include, where applicable:

- the identification of the pollutants of concern, including individual toxic air pollutants, dust and

- odours;
- the identification and assessment of all relevant fugitive and point source emissions;
- appropriate coverage of all aspects of the remediation, including the excavation, storage, transport and treatment of contaminated material; and
- proposed air quality management and monitoring procedures during remediation.

The Air Quality Impact Assessment must consider the requirements of the *Protection of the Environment Operations (Clean Air) Regulation 2002*.

#### Noise

The Environmental Assessment should include an assessment of noise and vibration impacts, prepared in consultation with DECCW. All feasible and reasonable noise impact mitigation measures should be implemented. The assessment should be prepared in accordance with the NSW government's *Interim Construction Noise Guideline, Industrial Noise Policy and Application Notes, Environmental Criteria for Road Traffic Noise and Assessing Vibration: A Technical Guide*, as appropriate, available at <http://www.environment.nsw.gov.au/noise/>.

#### **11. Health Impacts**

- Assessment of the health implications of the projects (including extraction of sediments, off-site transport and treatment as well as disposal of sediments), during and following remediation, including details of human exposure scenarios and demonstration that the projects will not have unacceptable acute or chronic health effects.

#### **12. Climate Change and Sea Level Rise**

- An assessment of the risks associated with sea level rise on the proposal as set out in the *draft NSW Coastal Planning Guideline: Adapting to Sea Level Rise*.

#### **13. Heritage**

- An assessment of the likely impacts of the proposal on heritage and archaeological items and proposed conservation – including the MWS&DB Sewage Pumping Station, existing sandstone seawall and Sydney Harbour Control Tower – and mitigation measures.

#### **14. Environmental, Construction and Site Management Plan**

The EA shall provide an Environmental and Construction Management Plan for the proposed works, and is to include:

- Community consultation, notification and complaints handling;
- Impacts of construction on adjoining development and proposed measures to mitigate construction impacts;
- Noise and vibration impacts on and off site;
- Air quality impacts on the neighbourhood;
- Odour impacts;
- Visual impacts, with particular regard to the Temporary Cruise Passenger Terminal;
- Water quality management for the site; and
- Waste and chemical management.

#### **15. Infrastructure and Services Provision**

- Detail the existing infrastructure and services on site and outline what infrastructure and services will be decommissioned.
- Outline proposed infrastructure and services, including sustainability infrastructure and wastewater treatment facility and identify possible impacts.
- Provide information on the required water and wastewater services and any augmentation that may be required for the proposed development.
- Detail measures to mitigate the impacts of the proposal on any remaining infrastructure items,

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|                              | <p>including proposed relocation.</p> <ul style="list-style-type: none"> <li>• Provide an <i>Integrated Water Management Plan</i>, which should include any proposed alternative water supply, proposed end uses of potable and non-potable water, demonstration of water sensitive urban design and water conservation measures.</li> </ul> <p><b>16. Temporary Structures</b></p> <ul style="list-style-type: none"> <li>• Detail the proposed temporary structures on site, including sheds, compounds, hoardings and identify possible visual and amenity impacts.</li> <li>• Detail measures to mitigate the impacts of the temporary structures on roads, streets and public domain areas.</li> </ul> <p><b>17. Staging</b><br/>Details regarding the staging of the proposed development.</p> <p><b>18. Ecologically Sustainable Development (ESD)</b><br/>Identify how the development will incorporate ESD principles in the design, construction and ongoing operation phases of the development including water sensitive urban design measures, water re-use, energy efficiency, energy minimisation/generation, recycling and waste disposal.</p> <p><b>19. Consultation</b><br/>Undertake an appropriate and justified level of consultation in accordance with the Department's Major Project Community Consultation Guidelines October 2007.</p> |
| <b>Deemed refusal period</b> | 60 days                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |