Director General's Requirements

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

Application number	MP10_0026
Project	Remediation and land forming works
Location	Hickson Road, Barangaroo, Sydney
Proponent	Lend Lease Development Pty Ltd
Date issued	23 March 2010
Expiry date	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.
Key issues	The Environmental Assessment (EA) must address the following key issues: **1. Relevant EPI's policies and guidelines** • Planning provisions applying to the site, including permissibility and the provisions of all plans and policies including: o State Environmental Planning Policy (Major Development) 2005; o State Environmental Planning Policy 55 - Remediation of Land; o Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005; o Sydney Harbour Foreshores and Waterways Area Development Control Plan 2005; o NSW State Plan, Sydney Metropolitan Strategy and the draft Sydney City Subregional Strategy; and o 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. **2. Concept Plan** • The EA shall demonstrate compliance with the Concept Plan approval MP06_0162 (as amended) and justify any areas of non-compliance. **3. Remediation Action Plan** 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;
  - demonstration that any material incompatibilities between the cell(s) and material to be stored in the cell(s) have been identified;
  - management procedures to address incompatibility issues must be provided; and
  - 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 site 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.

4. 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:
  - the transportation, assessment and handling of waste arriving at or generated at the site;
  - any stockpiling of wastes or recovered materials at the site;
  - any waste processing related to the proposal, including reuse, recycling, reprocessing or treatment both on- and off-site;
  - the method for disposing of all wastes or recovered materials;
  - the emissions arising from the handling, storage, processing and reprocessing of waste; and
  - the proposed controls for managing the environmental impacts of these activities.
- Provide details of spoil disposal (if applicable) with particular attention to:
  - the quantity of spoil material likely to be generated;
  - proposed strategies for the handling, stockpiling, reuse/recycling and disposal of spoil;
  - the need to maximise reuse of spoil material in the construction industry;
  - 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
  - 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.

5. Soil and Water

- Assess impacts on water quality of Sydney Harbour and proposed management, mitigation and monitoring measures.
- Erosion and sediment controls during remediation.
- 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, with the works to be designed so that the area and quality of riparian and aquatic habitat types is improved and any further impact on the aquatic environment is minimised.
- Management measures for any barging of contaminated material.
- Stormwater management 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 coves and connecting canal.
- 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.

6. Health Impacts

- Assessment of the health implications of the project (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 project will not have unacceptable acute or chronic health effects.

7. 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.
- Air quality impact assessment of the remediation works, including measures to collect and control air emissions.
- 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/.

8. Traffic Management and Accessibility Impacts

- Assess the likely impacts from the proposed works on surrounding areas (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.
- Cumulative impacts associated with other construction activities on the Barangaroo site are to be considered.
- 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 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.
- Impacts on the temporary cruise ship terminal.

9. 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;
- Water quality management for the site; and
- Waste and chemical management.

	10. 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.* **11. Heritage** • An assessment of the likely impacts of the proposal on any heritage or archaeological items and proposed mitigation and conservation measures. **12. Visual** • Identify and assess the visual impacts of the project. **13. Staging** • Details regarding the staging of the proposed development. **14. Ecologically Sustainable Development (ESD)** • Identify how the development will incorporate ESD principles in the design and construction phases of the development. **15. Consultation** • Undertake an appropriate and justified level of consultation in accordance with the Department's Major Project Community Consultation Guidelines October 2007.
Deemed refusal period	60 days

Plans and Documents to accompany the Application

General	The Environmental Assessment (EA) must include: 1. An executive summary; 2. A thorough site analysis including site plans, areal photographs and a description of the existing and surrounding environment; 3. A thorough description of the proposed development: 4. An assessment of the key issues specified above and a table outlining how these key issues have been addressed; 5. An assessment of the potential impacts of the project and a draft Statement of Commitments, outlining environmental management, mitigation and monitoring measures to be implemented to minimise any potential impacts of the project; 6. The plans and documents outlined below; 7. A signed statement from the author of the Environmental Assessment certifying that the information contained in the report is neither false nor misleading; 8. A Quantity Surveyor's Certificate of Cost to verify the capital investment value of the project (in accordance with the definition contained in the Major Projects SEPP; and 9. A conclusion justifying the project, taking into consideration the environmental impacts of the proposal, the suitability of the site, and whether or not the project is in the public interest.
Plans and Documents	The following plans, architectural drawings, diagrams and relevant documentation shall be submitted (where relevant); 1. An **existing site survey plan** drawn at an appropriate scale illustrating; • the location of the land, boundary measurements, area (sq.m) and north point; • the existing levels of the land in relation to buildings and roads; • location and height of existing structures on the site; and • location and height of adjacent buildings and private open space. • all levels to be to Australian Height Datum. 2. A **Site Analysis Plan** must be provided which identifies existing natural elements of the site (including all hazards and constraints), existing vegetation, footpath crossing levels and alignments, existing pedestrian and vehicular access points and other facilities, slope and topography, utility services, boundaries, orientation, view corridors and all structures on neighbouring properties where relevant to the application (including windows, driveways, private open space etc), levels and building elements to be retained. 3. A **locality/context plan** drawn at an appropriate scale should be submitted indicating: • significant local features such as parks, community facilities and open space and heritage items; • the location and uses of existing buildings, shopping and employment areas; • traffic and road patterns, pedestrian routes and public transport nodes. 4. **Architectural drawings** at an appropriate scale illustrating: • the location of any existing building envelopes or structures on the land in relation to the boundaries of the land and any development on adjoining land; • detailed floor plans, sections and elevations of the proposed buildings; • elevation plans providing details of external building materials and colours proposed; • fenestrations, balconies and other features; • accessibility requirements of the Building Code of Australia and the Disability Discrimination Act; • the height (AHD) of the proposed development in relation to the land; • the level of the lowest floor, the level of any unbuilt area and the level of the ground;

	• any changes that will be made to the level of the land by excavation, filling or otherwise. 5. **Other plans (where relevant)**: • **Stormwater Concept Plan** - illustrating the concept for stormwater management; • **Erosion and Sediment Control Plan** – plan or drawing that shows the nature and location of all erosion and sedimentation control measures to be utilised on the site; • **Geotechnical Report** – prepared by a recognised professional which assesses the risk of Geotechnical failure on the site and identifies design solutions and works to be carried out to ensure the stability of the land and structures and safety of persons; • **Landscape plan** - illustrating treatment of open space areas on the site, screen planting along common boundaries and tree protection measures both on and off the site. • **Shadow diagrams** showing solar access to the site and adjacent properties at summer solstice (Dec 21), winter solstice (June 21) and the equinox (March 21 and September 21) at 9.00 am, 12.00 midday and 3.00 pm.
Documents to be submitted	• 1 copy of the EA, plans and documentation for the Test of Adequacy; • 12 hard copies of the EA (once the EA has been determined adequate); • 12 sets of architectural and landscape plans to scale, including one (1) set at A3 size (to scale); and • 1 copy of the Environmental Assessment and plans on CD-ROM (PDF format), not exceeding 5Mb in size.