



11 September 2015

Mr Daniel Keary
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Department of Planning and Environment
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Attention: Andrew Hartcher
(by email to Andrew.Hartcher@planning.nsw.gov.au)

Dear Mr Keary

Barangaroo Remediation – Block 5 (SSD 14-6533) - Objection

Lend Lease (Millers Point) Pty Limited ("Lend Lease") has submitted a Response to Submissions ("RTS") relating to the above development application. The Department of Planning has, by public re-exhibition, provided a further opportunity to lodge submissions on the development application by 11 September 2015.

Jemena previously lodged a submission to the original development application by way of objection dated 7 November 2014. Lend Lease has prepared a detailed response to Jemena's submission (section 2.8.2 and Appendix A of the RTS).

Jemena has reviewed the RTS and maintains its objection to the application.

Background

By way of background, BDA is carrying out the Barangaroo project in accordance with the Barangaroo Concept Plan which was initially approved in 2007. The carrying out of the Barangaroo Project in accordance with the Concept Plan requires significant excavations to construct buildings, car parks and works within Blocks 4 and 5 of the project area irrespective of any existing contamination.

The Environment Protection Authority ("EPA") later made a contaminated site declaration in 2009 under the *Contaminated Land Management Act 1997 (NSW)* ("Act"). The Declaration related to parts of Block 4 and Block 5 within the project area and Hickson Road.

In 2010, BDA appointed Lend Lease to carry out the Barangaroo development within Blocks 1 – 4, to develop the remediation action plan ("RAP") and to carry out the remediation of the Declared Area (including Block 5).

Lend Lease and BDA developed a RAP which identified the remediation works to remove the Declaration based on the continued use of Blocks 4 and 5 the Declared Area for paved open space. The RAP proposes remediation based on excavating the contaminated material within Blocks 4 and 5 and disposing of the material off-site.

The RAP was approved by the EPA under the conditions of an initial voluntary management proposal made under the Act following the preparation by Lend Lease of a Human Health and Environmental Risk Assessment ("VMP HHERA"), Remediation Extent Report. BDA is seeking approval for a second voluntary management proposal from the EPA for the purposes of carrying out the remediation works described in the RAP. This second voluntary management proposal has not yet been approved by the EPA.

It is expected that BDA will then seek to recover the costs of undertaking the VMP remediation works from Jemena (as operator of the former gas works on the site nearly 100 years ago).

Jemena has lodged objections with the EPA in relation to the RAP and BDA's application for approval of the second voluntary management proposal for the carrying out of the RAP.

Objection

Jemena objects to the proposed remediation approach in the RAP and the Block 5 DA because:

- The works described as remediation in the RAP for Blocks 4 and 5 are excavation works which are actually part of the Barangaroo project (as they create the voids necessary to construct the car parks and buildings) or have been selected to facilitate the Barangaroo development.
- The remediation in the RAP involving excavation and offsite disposal is one of the least preferred remediation approaches under the relevant guidelines adopted by the EPA. The more preferred remediation approaches involve dealing with the contamination on site to minimise environmental harm.
- If there was no development or Barangaroo Concept Plan, there would be different and less intrusive remediation works which could be undertaken to manage and/or treat the contamination on site to remove the Declaration consistently with the remediation guidelines adopted by the EPA which prefer addressing the remediation on site. These alternative remediation methods would minimise impact on the environment, be more cost effective and would properly manage the actual risks from the contamination.
- The main risks identified in the risk assessment underlying the RAP for the remediation approach either do not exist in respect of Block 5, or can be adequately managed. For example:
 - in relation to the risk of impact to groundwater dependent ecosystems ("GDE"s) between the Declared Area and the harbour – this risk does not arise because the GDEs do not exist; and
 - in regards to the impact to a worker digging a 2m trench wearing no personal protective equipment ("PPE") - this risk does not exist because of the levels of contamination in Block 5 which are not sufficiently high enough to create such a risk. In any event, as a practical matter, this could be managed by requiring such workers to wear PPE which is consistent with current practice on the site.
- The remediation approach in the RAP, although stated to be based on the continued use of paved open space, has actually taken into account the Barangaroo development. The paved open space use on which the remediation approach and Block 5 DA is based is inconsistent with the development use which is authorised under the Concept Plan.

- The environmental impact and risks associated with the proposed remediation of Block 5 are greater than the human health and environment risks identified in the risk assessment underpinning the RAP and Block 5 DA and the consent authority should refuse the Block 5 DA in accordance with clause 12 of SEPP 55 (noting that the consent authority has already approved complete excavation of Block 4).
- The applicant should clearly state that the Concept Plan approves buildings in the area proposed for the remediation. The development proposed by BDA in accordance with the Concept Plan should be described and presented in the Block 5 DA to enable a proper assessment of impacts and consistency of the Block 5 DA with the Concept Plan to be made.

For these reasons, Jemena submits that the application should be refused.

The detailed reasons for the objection to the development application are set out in the attachment.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Shaun Reardon', with a long horizontal flourish extending to the right.

SHAUN REARDON
Executive General Manager Strategy, Regulation and Markets

CC: Andrew Tompson, Barangaroo Delivery Authority

Annexure – Objection

This annexure sets out the detail of the objection to the Block 5 DA following review of the RTS.

1. Characterisation of Development - The objective of the Block 5 DA is stated as to enable the EPA declaration to be removed and not for the intended future land uses of the site. Jemena remains of the view that this statement should be treated with caution.

The applicant contends that it is seeking approval for the Block 5 Remediation Works because such works are required to enable the removal of the EPA Declaration from Block 5. The applicant further states that the remediation is not intended to facilitate any future land uses at the site. That is put forward by the applicant as a justification for a grant of development consent for the Block 5 DA.

However, it is clear that these assertions are not accurate and the responses provided in the RTS do not remove the concern.

The works, if carried out, go substantially beyond what is “required” or “appropriate” to facilitate the removal of the EPA Declaration. In reality the works described as remediation works have been designed to serve the separate purpose of the Barangaroo development. It is an artificial construct to describe and justify the works as being specifically for remediation to enable the removal of the Declaration and not either for, or related to, the separate purpose of facilitating the Barangaroo development. This is so for at least the following reasons:

- a) BDA (through its predecessor SHFA) applied for and obtained approval for the Barangaroo Concept Plan in 2007 before the EPA Declaration was made in 2009. The Barangaroo Concept Plan approved the construction of significant buildings and underground car parks the footprints of which are in the Declared Area including Block 5. To implement the Barangaroo Concept Plan, BDA must excavate Block 5 within the Declared Area to construct the buildings and car parking requirements within Block 5. Any development application proposed for Block 5 is required to be consistent with the Barangaroo Concept Plan.
- b) The nature and extent of the actual contamination identified in AECOM's reports for Block 5 does not warrant remediation to the scale proposed. An objective analysis in Block 5 demonstrates that the proposed excavations are out of proportion to the nature and extent of the contamination within Block 5. This is evident from the documents presented in the EIS:
 - the bore hole data presented in Figures F5-F9 of the RAP prepared by AECOM (Appendix G of the EIS) shows very few exceedances of relevant criteria of contamination within Block 5;
 - table 4.1 of the Remediation Extent document (Appendix H of the EIS) states there is only one sample within Block 5 which contains contamination described in the document as separated phase gasworks waste and tar (“SPGWT”);
 - the Remediation Extent document (Appendix H of the EIS) confirms that around 2.3% of the total contamination mass in and in, and outside of, the Declared Area is located within Block 5 (and much of this 2.3% is actually outside of the Declared Area); and
 - the Waste Management Plan (Table 4 in Appendix G of the RTS) explains that around 90% of the material proposed to be excavated in Block 5 as part of the

Block 5 DA (around 40,000 cubic metres) does not require any form of treatment and is proposed to be excavated and disposed of offsite rather than returned into the excavated area in conformance with the remediation hierarchy in the EPA guidelines.

- c) The RAP for the Block 5 remediation works makes it clear on page 94 that Lend Lease would select the appropriate remediation approach only after decisions had been made about the nature of the proposed development of the site. The section states that selection of the preferred remediation approach will depend in part on "project requirements".
- d) The EIS contemplates that Block 5 will be used for the Barangaroo project and that further applications will be made for the buildings to be located on Block 5. The EIS uses the consistency of the excavation with the Barangaroo Concept Plan and future development to justify the remediation approach (see page 3). The Declared Area is zoned Mixed Use and the Concept Plan specifies the footprints of buildings within Block 5 which will necessarily require deep excavations for foundations and car parks to facilitate their construction. On page 30-31 of the EIS it is stated that:

"Following remediation, the excavated areas would be backfilled with suitable excavated material won on-site or imported fill, and compacted. However, backfilling may not occur if development works involving excavation at Block 5 have been approved under a separate development application. In this circumstance any such approved Block 5 development works (which include excavation of Block 5) would be carried out following completion of remediation works without the need to backfill the remediation excavations".

Block 5 is designated for commercial development. The Concept Plan depicts the location of these buildings in Block 5 which will need to be excavated to facilitate that development. The statement above confirms that the applicant knows the excavations need to occur to implement the approved Concept Plan irrespective of the contamination and is consistent with the applicant selecting the remediation approach of excavation to facilitate the future development of the Barangaroo site.

If the applicant is proposing to use the site for basements and the Barangaroo development, the applicant should clearly state this in the application and include the development in the Block 5 DA to enable a proper assessment of impacts of the proposal and consistency with the Concept Plan to be made. This is information relevant to the application and assessment.

- e) Whilst the Block 5 DA provides indicative lines in Appendix E of the EIS for the boundaries of the excavation, the Block 5 DA seeks approval for the excavation within the total nominated area. The circumstances in which Lend Lease may elect to excavate out the entire area are not clearly presented in the EIS.
- f) The Block 5 DA includes the construction of "temporary walls". There is limited information provided about how and where these will be constructed and how they will relate to the location and nature of basement walls for carparks for future buildings.
- g) The development application involves excavation outside of the Declared Area. The EPA expressly determined that the area outside of the Declared Area was not contaminated so as to warrant regulation. The area outside of the Declared Area was initially declared by the EPA as an investigation area under the Act but later revoked following the Declaration being made over the smaller area.

- h) The EIS eliminates options for remediation such as in situ stabilisation or solidification because this may be inconsistent with future land use (sections 6.1 and 6.2) The RAP (see section 10 clearly states that the remediation options were assessed against the key remediation objectives for the site which are "namely:
"- *ability to reduce the significant risk of harm identified by the EPA declaration; and*
- ability to facilitate the proposed future land use".

This is inconsistent with continuation of the Declared Area as paved open space which is the basis of the Block 5 DA. Further, a review of the remediation options analysis in Appendix A in the RAP makes it abundantly clear that Lend Lease has directly taken account of the proposed development in developing the remediation options (see for example the downgrading of the re-using the ex-situ stabilisation and re-use approach because "*based on the proposed development plan it is unlikely that a significant volume of material can be re-used due to the cut fill balance of the development*" – in other words, the material cannot be left in-situ because the excavated area is required for the development – which is inconsistent with the use being for paved open space). No proper consideration has been given to in-situ remediation options which may have less substantial environmental impacts because they are incompatible with the proposed development on the site and the Barangaroo Concept Plan.

- i) The proposed splitting and staging of the remediation has been adopted solely for the purpose of the Barangaroo development. Blocks 4 and 5 (where ex-situ remediation is proposed) are development blocks. Hickson Road (where in-situ remediation is proposed) is a public road outside of the Barangaroo development area. The need to split and stage remediation is driven by the Barangaroo development (see for example section 19.2.1 of the RAP). The RTS does not explain why, absent the development, the remediation has been split into Block 4 and Block 5 and why, for example, a wall needs to be constructed between Block 4 and 5 for works to remove the Declaration. Clearly this is development related and has nothing to do with removing the declaration based on paved open space.
- j) A HHERA dated 2011 was prepared for the applicant for the development works in the declaration area which assume that Block 5 will be excavated for basement car parking and the HHERA develops remediation criteria based on the excavations occurring and basements being installed. This HHERA was approved by the EPA pursuant to condition A8 of Project Approval MP10-0023 on 9 June 2011 and submitted to the Department of Planning prior to development of the VMP HHERA and RAP. It is noted that the development HHERA is different to the VMP HHERA. However, they both relate to the same area and the development HHERA was approved by the EPA and adopted by the consent authority before the VMP HHERA and RAP was prepared. This suggests that the excavation approach to remediation was pre-determined before preparation of the VMP HHERA and RAP.

In these circumstances, the Block 5 DA and its supporting material should be treated with caution. It would be an error for the Department and the Minister to proceed on the basis that the proposal is justified from a planning perspective because the proposed development in Block 5 is required to remove the EPA Declaration.

If the applicant needs to excavate Block 5 for the purposes of the Barangaroo project and for implementation of the Barangaroo Concept Plan irrespective of the contamination, then this is a matter which should be disclosed and made clear and properly assessed as part of the development application and EIS.

2. Reliance on the HHERA and RAP to justify the Block 5 DA - The applicant's reliance on the previous HHERA risk assessment and RAP to justify the remediation approach is flawed. The HHERA states that the contamination in the Declared Area presents unacceptable risks because an unprotected maintenance worker may dig 2 metres below the surface of the site and that the existing contamination may impact on groundwater dependent ecosystems (GDEs) within the vicinity of the site or possibly Darling Harbour. The HHERA concludes that these are unacceptable risks which drive the need to remediate the contamination. The HHERA is flawed and inconsistent with the excavation approach in the development application because:

- a) The HHERA does not consider that workers accessing service trenches on the site could wear personal protective equipment as part of a management plan. The RAP and Block 5 DA, however, propose the excavation of the contamination which will directly expose workers and surrounding residents to the contamination. The health risk assessment accompanying the Block 5 DA and also the 2011 Development HHERA is based on the workers wearing protective equipment as well as management plans and odour control systems. If a valid comparison is to be made between the health risks of managing the contamination in situ and ex situ removal, then the HHERA and the health risk assessment for the application should use the same assumptions about use of personal protective equipment. Instead, the unreasonable assumption that maintenance workers would not use personal protective equipment when excavating the existing site is used to drive a result that all the contamination should be removed from the site. This does not make sense and fails to take into account practical realities. The fallacy of this approach is demonstrated by the applicant currently using the Declared Area for its construction activities, the use of the site to accommodate 100,000 people for the papal visit, the installation and use of Sydney Water's underground sewer pumping station and other services under Block 5, the way the site has been managed for close to 100 years by the NSW Government and the applicant's use of such measures to manage the risk in actively exposing the contamination to the environment through its proposed remediation approach.
- b) There is no analysis presented in the HHERA on the workers accessing service trenches within Block 5. Block 5 is much less contaminated than Block 4 and Hickson Road. The risk to unprotected workers presented in the HHERA are evaluated on the maximum contamination values which were detected across the Declared Area. These were in Block 4 and Hickson Road and not Block 5. The risks to unprotected workers are much less on Block 5 than those presented in the HHERA which are based on the maximum values detected in Block 4 and Hickson Road and insufficient to support the remediation proposed for Block 5.
- c) The HHERA is based on an assumption that GDEs are present and that these need to be protected. It uses this as justification for unacceptable risk which drives the asserted need to remediate the site. The HHERA is inconsistent with the development HHERA approved by the EPA on 9 June 2011 which does not mention GDEs. Further, all other development applications relating to the Barangaroo site which have been or are being assessed by the Minister for Planning, including the development applications for major excavations between the Declared Area and Darling Harbour, do not identify the presence of GDEs as an ecological receptor. Further, the development applications for Block 4 and Block 5 now state that there are no GDEs on the site and are used to justify a conclusion that the environmental impacts of are acceptable because excavation will not impact on GDEs. The RTS makes it abundantly clear that the EPA, Site Auditor have based the HHERA, Remediation Extent and RAP and remediation approach on the presence of GDEs within the groundwater in the fill between the site and Darling Harbour. There are no

GDEs. The precautionary principle has been misapplied. The RAP is therefore flawed and cannot be used to justify the granting of the Block 5 DA. This is sufficient basis alone to refuse the consent.

- d) There is no evidence that the contamination of Block 5 poses a threat to Darling Harbour. The discharge study undertaken by the Barangaroo Delivery Authority's consultants which is referred to in the RAP confirms that the contaminants from the EPA Declaration area do not impact on the harbour because of tidal flux in the imported fill. We draw the Department's attention to the tables in the mass flux discharge studies attached to the Remediation Extent document (Appendix H of the EIS – see Appendix D of the Remediation Extent document) which conservatively estimates the existing mass discharge into Darling Harbour from the existing contamination is negligible and orders of magnitude less than the MWQC – see table 3. The licensed discharge approved by the EPA for the existing water treatment operated by Lend Lease on the site has higher permitted concentration levels of contaminants than the predicted discharges into Darling Harbour from the existing contamination. The EIS on page 92 states that the remediation works will remove contaminate mass within Block 5 such that the site is safe for its current and ongoing use and the *"discharge of groundwater into Sydney Harbour is improved to the point where it approaches the MWQC"*. There is no evidence that the contamination is presently discharging or likely to discharge into Darling Harbour in excess of the MWQC without the remediation occurring – the evidence presented in the EIS is to the contrary. The RTS refers to the need to reduce contaminate mass load (the RAP says to around 90%). The EIS confirms that the total mass load within Block 5 is actually around 2.3%. There is no analysis presented in the EIS of the contribution of the minimal contamination mass within Block 5 to the risk to Darling Harbour or workers.

3. Failure to Adequately Consider Alternatives - The applicant has not properly considered the options for remediation of Block 5. In this regard, the National Environmental Protection (Assessment of Contaminated Land) Measure (**NEPM**) which is given effect in NSW as an EPA guideline under section 105 of the *Contaminated Land Management Act 1997 (NSW)* relevantly provides that:

(16) Attainment of environmental outcome

In general, to achieve the desired environmental outcome, the process of the assessment of site contamination should be placed within the context of the broader site assessment and management process. In particular, in assessing the contamination, the site assessor and others should take into account the preferred hierarchy of options for site clean-up and/or management which is outlined as follows:

- on-site treatment of the contamination so that it is destroyed or the associated risk is reduced to an acceptable level; and
- off-site treatment of excavated soil, so that the contamination is destroyed or the associated risk is reduced to an acceptable level, after which soil is returned to the site; or,

if the above are not practicable,

- consolidation and isolation of the soil on site by containment with a properly designed barrier; and
- removal of contaminated material to an approved site or facility, followed, where necessary, by replacement with appropriate material;

or,

- where the assessment indicates remediation would have no net environmental benefit or would have a net adverse environmental effect, implementation of an appropriate management strategy.

When deciding which option to choose, the sustainability (environmental, economic and social) of each option should be considered, in terms of achieving an appropriate balance between the benefits and effects of undertaking the option.

In cases where no readily available or economically feasible method is available for remediation, it may be possible to adopt appropriate regulatory controls or develop other forms of remediation.

It should be emphasised that the appropriateness of any particular option will vary depending on a range of local factors. Acceptance of any specific option or mix of options in any particular set of circumstances is therefore a matter for the responsible participating jurisdiction.

Further, the Guidelines for the NSW Site Auditor Scheme (2006) identifies the soil remediation and management is to be implemented in the following preferred order:

1. on-site treatment of the soil so that the contaminant is either destroyed or the associated hazard is reduced to an acceptable level.
2. off-site treatment of excavated soil so that the contaminant is either destroyed or the associated hazard is reduced to an acceptable level, after which the soil is returned to the site;
3. removal of contaminated soil to an approved site or facility, followed where necessary by replacement with clean fill
4. consolidation and isolation of the soil on-site by containment within a properly designed barrier.

The applicant has not properly applied the NEPM requirements or the 2006 EPA Guidelines in section 6.2.3 of the EIS based on the stated objective of removing the Declaration. In particular, the applicant has not considered the environmental, economic and social impacts of each option in the context where excavation is not required for the Barangaroo development. It is instructive to note that the remediation approach selected by Lend Lease and BDA is removal of contaminated material to an approved site or facility followed by replacement with appropriate material. This is amongst the least preferred remediation approach under the NEPM Guidelines and the second least approach under the EPA's guidelines. A proper consideration of these issues would demonstrate that the proposed excavation of the site is not the best environmental, social or economic way of remediating the site (unless of course the purpose of the excavations is to facilitate the Barangaroo development) in accordance with the EPA guidelines.

4. Proposed Excavation Exceeds Remediation Extent - The development involves excavation of a large area of land which is much larger than the "blue" shaded area of the plan which is identified in the applicant's own HHERA/Remediation Extent/RAP documentation as requiring remediation (see pages 45 and 46 of EIS). The RTS explains that additional land is required for "battering" to access the excavations and further excavation. The "blue area" overestimates the area requiring remediation in any event. The proposed excavations are larger than what is actually required to address the contamination.

5. Incomplete Information - The EIS contemplates that Block 5 will be used for the Barangaroo project and that further applications will be made for the buildings on Block 5. The RTS claims that consistency with the Concept Plan has not been used to justify the remediation approach. However, section 10 of the RAP makes it abundantly clear that the future development of the site was one of the objectives taken into account in the analysis of remediation alternatives. Further, the remediation the subject of the development application is required by law to be consistent with the Concept Plan. The consent authority cannot properly evaluate this development application and its relationship with the Barangaroo project in the absence of the development applications for Block 5. In our submission, the consent authority cannot properly assess the application in the absence of this information.

6. Increased Risks Relevant to Current State - The applicant has failed to explain whether the undertaking of the works as proposed would result in a more significant risk of harm to human health or the environment than ongoing lawful use of the land in absence of the development work. The proposed development creates a health and environmental risk as it involves exposing the contamination to persons and creating and discharging contaminants into the harbour. These are the issues that the HHERA sought to prevent. The applicant should undertake a comparative risk and environmental analysis of managing the contamination in situ based on existing use and excavating the material and exposing it to the environment. The applicant has not done this. In this respect, a valid comparison would require an undertaking of risk and environmental analysis using the same human health and environmental risk assessment criteria for the development application (which contemplates exposing the contamination to the air, protected workers accessing the subsurface and direct discharge of treated wastewater to the harbour) as is used in the HHERA/RAP (which is based on the contamination being presently covered with concrete capping, an assumption that unprotected workers will access the subsurface, no evidence of discharge of elevated contaminants to the harbour but an assumption there are GDEs on the development site requiring protection).

Lend Lease has responded to this submission in the RTS (page 34 of Appendix A) by referring to the two risks identified in the VMP HHERA:

- a) risks to unprotected service maintenance workers digging and working in a 2m deep trench; and
- b) risks to GDEs in the groundwater between the Declared Area and the harbour.

The RTS states that the proposed remediation will remove contamination such that the remaining soil does not represent any significant risk of harm to human health or the environment under existing land use scenarios and comply with the remediation objectives in the RAP. It then states that the Block 5 remediation works can be carried out in a manner which can ensure that significant adverse environmental effects do not occur and environmental impacts will remain within acceptable limits through mitigation measures.

There is no evidence that the GDEs exist and all development applications for Barangaroo have proceeded on the basis that there are no such GDEs. This is not an ecological risk and this is confirmed by the technical consultant's documents appended to the Block 4 DA.

There is no evidence in the HHERA, RAP, EIS and RTS that the levels of contamination within Block 5 (as opposed to Block 4 and Hickson Road), present an unacceptable risk to an unprotected worker carrying out works. In any event, the risk can be managed by requiring such workers to wear PPE consistently with other risk assessments and procedures in respect of the site.

There is substantial evidence in the EIS of the significant environmental impacts which will occur as a result of the excavation of material in Block 5. These are outlined in detail in the multiple technical appendices to the EIS, the submissions from the Government Agencies, and the RTS (eg traffic, odour, air emissions, water discharges to the harbour) and are confirmed by the need to undertake extensive measures to try to mitigate but not eliminate these impacts.

No significant adverse effects from the contamination in Block 5 have been identified in the EIS other than the above two risks. No analysis or comparison is made of these risks against the actual environmental impacts of the project in respect of Block 5. An objective comparison would actually show that the environmental impacts of undertaking the works are much greater than the impacts of leaving the contamination on Block 5 in-situ.

7. Lack of Block 5 Remediation Detail in RAP - The RAP approved by the EPA is missing necessary detail about the proposed excavation of Block 5 and is insufficient, from a planning perspective, to justify granting consent to the development application. Whilst the RTS points out that excavation is only being sought to the extent specified in the RAP plus any "ancillary excavation" required to access this area, the EIS and RTS does not provide any real indication of the extent of excavation proposed, location of retention walls, relationship with proposed and existing development etc. and is insufficient to determine the application.

8. Ecologically Sustainable Development - The analysis of the development in the context of ecologically sustainable development is flawed. It does not properly consider and balance the environmental impacts and risk of the existing contamination within Block 5 (which is of less significance than the contamination on Block 4) against the environmental impacts and risks of excavating the contamination and exposing it to persons and the environment. It does not, for example, consider the quality of groundwater currently discharging or likely to into Darling Harbour arising from the existing contamination against the quality of water proposed to be disposed of by the applicant directly into the harbour as part of the development or the health risks of leaving the contamination in situ against exposing workers and residents by excavating the contamination.

9. Underlying Land Use to Remove Declaration - The EIS is silent on identifying the underlying land use which is required to remove the EPA Declaration. The EIS should expressly state what land use is required to remove the declaration so that the remediation can be properly considered and assessed.

The RTS confirms that the remediation criteria have been developed based on the existing land use being paved open space use. However, the remediation approach has been selected having regard to the Barangaroo Concept Plan which is to use the parts of Block 5 in the Declared Area for buildings.

10. Remediation Extent Overstates the Remediation Area – in the previous submission, Jemena noted that the remediation area presented in Figure F15 of the VMP Remediation Extent document is much larger than that which the underlying bore data supports. The remediation area identified in these remediation documents extends across parts of the EPA declaration area where no evidence of exceedances of the contamination criteria (SPGWT or CIM) has been reported and where no evidence of contamination exceeding the soil or groundwater SWTC has been found.

The RTS states that the remediation extent was determined on factors beyond merely identification of the SPGWT or CIM including ESD and relevant policies. The RTS does not say how these are applied in respect of *Block 5* to arrive at a much larger area than the SPGWT and CIM data supports. This is particularly important as the Remediation Extent and RAP confirms that around 2.3% of the contaminant mass load is in Block 5.

11. VMP 2 Has Not Been Approved – BDA is currently negotiating a Voluntary Management Proposal ("VMP 2") with the Environment Protection Authority for the carrying out of the works described as remediation for the purposes of removing the Declaration. Jemena has raised substantive issues with the EPA in relation to the content of and process for arriving at the HHERA, RAP and BDA's proposed terms of VMP 2 (including the absence of remediation works plans which are required to be prepared before VMP can be implemented). VMP 2 has not yet been approved nor has the earlier VMP requiring the formulation of the remediation plan been completed. Accordingly, the VMP cannot be used as a justification from a planning perspective for the carrying out of the works described by Lend Lease as remediation works to remove the Declaration.

12. The application should be refused – In the RTS, Lend Lease refers to clause 12(1) of SEPP 55 which states that:

"The consent authority must not refuse development consent for a category 1 remediation work unless the authority is satisfied that there would be a more significant risk of harm to human health or some aspect of the environment from the carrying out of the work than there would be from the use of the land concerned (in the absence of the work) for any purpose for which it may be lawfully be used".

Jemena submits that a proper application of this clause should lead the consent authority to refuse development consent for the following reasons:

- The clause needs to be applied to the application which is only for the remediation by way of excavation and offsite disposal for *Block 5*;
- The contaminate mass within Block 5 is 2.3% (97.7% of the contaminate mass is outside of Block 5. The main contamination is not on Block 5.
- The clause requires a comparison of risk of harm from the development against "use of the land concerned". The HHERA, RAP, EIS and RTS identify only one risk from the contamination on Block 5 from the use of the land for its current open space paved use. That risk is to an unprotected worker digging a 2m deep trench. The identified risk is based on the contaminate levels on Block 4 and Hickson Road not the actual levels on Block 5. In any event, the risk is removed by workers wearing PPE which is way the site is currently managed. There are no material risks arising from the existing lawful use of Block 5.
- The HHERA identifies the main ecological risk being the presence of GDEs in the groundwater between the Declared Area and the harbour. The EIS and RTS documents confirm that there is no evidence the contamination is impacting on Darling Harbour. The GDEs do not exist and, in any event are proposed to be mostly excavated as part of the Barangaroo development.
- The EIS, submissions from authorities and the RTS record in detail the significant environmental impacts which will arise from the excavations and require significant mitigation measures which will reduce but not eliminate the environmental and human health impacts. Whilst these measures may, in most but not all cases, comply with relevant guidelines, there is nevertheless still a significant environmental impact which would need to be compared against the risks of the existing contamination identified in the HHERA.
- Jemena submits that if an objective comparison is made of the human health and environmental risks of the existing contamination in Block 5 remaining in situ against the impacts of the development then the consent authority could, and should, refuse the development application consistently with clause 12.