NSW EPA

Our reference: EF13/3893, DOC15/7069-04
Contact: John Goodwin

Cameron Sargent
Department of Planning and Infrastructure
GPO BOX 39
SYDNEY 2001

Dear Mr Sargent

SSD 6864 – SUMATRAN TIGER EXHIBIT REDEVELOPMENT

I am writing to you in reply to your invitation to the EPA to comment on the EIS for the Sumatran Tiger exhibit redevelopment project.

The EPA has identified the following site specific concerns based on the information in the Environmental Impact Statement as obtained from the Department's Major Projects web site:

(a) handling, transport and disposal of any asbestos waste encountered on site;

(b) demolition, bulk earthworks, construction and construction-related noise and vibration impacts (including recommended standard construction hours and intra-day respite periods for highly intrusive noise generating work);

(c) demolition, bulk earthworks, construction and construction-related dust control and management;

(e) demolition, bulk earthworks, construction and construction-related erosion and sediment control and management.

The EPA expands on its concerns in Attachment A to this letter.

Should you require clarification of any of the above please contact John Goodwin on 9995 6838.

Yours sincerely

9-7-15

FRANK GAROFALOW
Manager Metropolitan Infrastructure
Environment Protection Authority
Encl. Attachment A

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

ATTACHMENT A

- ENVIRONMENT PROTECTION AUTHORITY COMMENTS –

SUMATRAN TIGER EXHIBIT REDEVELOPMENT

1. General

The EPA considers that the project comprises two distinct phases (construction and operational) and has set out its comments on that basis.

2. Construction phase

The EPA anticipates a range of environmental impacts during the construction phase of the development and notes the proximity of surrounding residences, particularly to the west and north of the project site.

The EPA anticipates that demolition, site preparation, bulk earthworks, construction and construction-related activities will be undertaken in an environmentally responsible manner with particular emphasis on –

- detailed site contamination investigation and remediation,
- compliance with recommended standard construction hours,
- waste management consistent with the hierarchy of re-use, recycle and then disposal as the last resort,
- 'special waste' management (i.e. asbestos),
- feasible and reasonable noise and vibration minimisation and mitigation,
- intra-day respite periods from high noise generating construction activities (including jack hammering, rock breaking, pile boring or driving, saw cutting and vibratory rolling),
- effective dust control and management, and
- effective erosion and sediment control.

2.1 Site investigation and remediation

The EIS indicates that a preliminary site investigation was undertaken in conjunction with a survey for asbestos-containing materials. And, that asbestos containing materials are considered likely to be encountered in the course of demolition and site preparation works.

The EPA provides guidance material at its web-site via the following link

http://www.epa.nsw.gov.au/waste/asbestos.htm

The proponent should commit to satisfying the requirements of Part 7 of the Protection of the Environment Operations (Waste) Regulation 2014 in regard to the transport and disposal of any asbestos material encountered during the project.

The proponent should commit to consulting with Workcover NSW concerning the handling of any asbestos waste

Recommendation

That the proponent be required to prepare and implement measures for the proper handling, transport and disposal of any asbestos waste encountered on site during the course of the project.

2.2 Waste control and management (general)

The proponent should manage waste in accordance with the waste management hierarchy. The waste hierarchy, established under the Waste Avoidance and Resource Recovery Act 2001, is one that ensures that resource management options are considered against the following priorities:

Avoidance including action to reduce the amount of waste generated by households, industry and all levels of government

Resource recovery including reuse, recycling, reprocessing and energy recovery, consistent with the most efficient use of the recovered resources

Disposal including management of all disposal options in the most environmentally responsible manner.

All wastes generated during the project must be properly assessed, classified and managed in accordance with the EPA's guidelines to ensure proper treatment, transport and disposal at a landfill legally able to accept those wastes.

The EPA further anticipates that, without proper site controls and management, mud and waste may be tracked off the site during the course of the project.

Recommendation

The proponent be required to ensure that :

(1) all waste generated during the project is assessed, classified and managed in accordance with the "*Waste Classification Guidelines Part 1: Classifying Waste*" (Environment Protection Authority, November 2014);

(2) the body of any vehicle or trailer, used to transport waste or excavation spoil from the premises, is covered before leaving the premises to prevent any spill or escape of any dust, waste, or spoil from the vehicle or trailer; and

(3) mud, splatter, dust and other material likely to fall from or be cast off the wheels, underside or body of any vehicle, trailer or motorised plant leaving the site, is removed before the vehicle, trailer or motorised plant leaves the premises.

2.3 Dust control and management

The EPA considers dust control and management to be an important air quality issue during site preparation and subsequent construction. Bulk earthworks inevitably generate dust as a result of –

(a) the excavation, processing and handling of excavation spoil,

(b) wind action on spoil stock piles, and

(c) wind action on and plant movement across areas bare of vegetation or other cover.

The proponent should commit to:

(a) minimising dust emissions on the site, and

(b) preventing dust emissions from the site.

2.5 Erosion and sediment control

The Managing Urban Stormwater Soils and Construction, 4th Edition published by Landcom (the so-called 'Blue Book') provides guidance material for achieving effective erosion and sediment control on construction sites.

The 'Blue Book' Volumes 1 and 2A are available at the Office of Environment and Heritage web site via the following link –

http://www.environment.nsw.gov.au/stormwater/publications.htm

The EPA emphasises the importance of –

(a) not commencing earthmoving or vegetation removal until appropriate erosion and sediment controls are in place, and

(b) daily inspection of erosion and sediment controls which is fundamental to ensuring timely maintenance and repair of those controls.

2.4 noise and vibration

The EPA considers that the project is likely to generate significant noise impacts on surrounding residences during demolition, site preparation, bulk earthworks and construction.

The EPA's Interim Construction Noise Guideline (2009) provides guidance material concerning noise mitigation and management measures.

The proponent may download a copy of the above mentioned guidance material via the following link –

http://www.epa.nsw.gov.au/noise/

The proponent should commit to –

(a) identifying surrounding noise sensitive land uses, and

(b) undertaking a noise and vibration impact assessment of site preparation, bulk earthworks and construction activities, especially any such activities -

(i) likely to generate noise with annoying or intrusive characteristics, or

(ii) proposed to be undertaken outside the recommended standard hours discussed in Table 1 to the *Interim Construction Noise Guideline* (ICNG).

2.4.1 construction hours (including respite periods)

Demolition, site preparation, bulk earthworks, demolition, construction and construction-related activities should be undertaken during the recommended standard construction hours set out in ICNG Table 1.

The EPA accepts that certain emergency work may need to be undertaken urgently (other than during the standard recommended hours) in order to avoid –

- loss of life,
- damage to property, or
- environmental harm.

ICNG section 4.5 specifies construction activities proven to be particularly annoying and intrusive to nearby residents and school students. The EPA anticipates that those activities generating noise with particularly annoying or intrusive characteristics would be subject to a regime of intra-day respite periods where –

(a) they are only undertaken over continuous periods not exceeding 3 hours with at least a 1 hour respite every three hours, and.

(b) 'continuous' means any period during which there is less than an uninterrupted 60 minute respite between temporarily halting and recommencing any of the work referred to in ICNG section 4.5

The proponent should commit to :

(a) complying with the standard construction hours as recommended in Table 1 Chapter 2 of the Interim Construction Noise Guideline, July 2009;

(b) scheduled intra-day 'respite periods' for construction activities identified in the Interim Construction Noise Guideline as being particularly annoying to surrounding residents and other noise sensitive receivers.

2.6.2 reversing and movement alarms

The EPA has identified the noise from 'beeper' type plant movement alarms to be particularly intrusive and is aware of feasible and reasonable alternatives. Transport for NSW (nee Transport Construction Authority), Barangaroo Delivery Authority/Lend Lease and Leighton Contractors (M2 Upgrade project) have undertaken safety risk assessments of alternatives to the traditional 'beeper' alarms. Each determined that adoption of 'quacker' type movement/reversing alarms instead of traditional beepers on all plant and vehicles would not only maintain a safe workplace but also deliver improved outcomes of reduced noise impacts on surrounding residents.

Interim Construction Noise Guideline Appendix C provides additional background material on this issue.

The proponent should commit to undertaking a safety risk assessment of construction activities to determine whether it is practicable to use audible movement alarms of a type that would minimise the noise impact on surrounding noise sensitive receivers, without compromising safety.

3. Operational phase

The EPA considers that most significant environmental impacts likely to arise once the new exhibits commence operation can largely be averted by responsible environmental management practices.

The EIS confirms that solid and liquid wastes arising from the exhibits will be managed in accordance with existing practices. And in particular that, run off and waste water from the exhibits will be directed to the existing water recycling plant which is the subject of environment protection licence 1677.
