

# Infrastructure approval

Section 115ZB of the *Environmental Planning and Assessment Act 1979*

I grant approval to the State Significant Infrastructure application referred to in Schedule 1, subject to the conditions in Parts A-D.

These conditions are required to:

- prevent, minimise, and/or offset adverse environmental impacts, including any heritage impacts;
- set standards and performance measures for acceptable environmental performance;
- require regular monitoring and reporting; and
- provide for the ongoing environmental management of the SSI.



The Hon Brad Hazzard MP  
**Minister for Planning and Infrastructure**

Sydney      20 . 12 .      2013

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## SCHEDULE 1

<b>Application No.:</b>	SSI-4951
<b>Applicant:</b>	Roads and Maritime Services
<b>Consent Authority:</b>	Minister for Planning and Infrastructure
<b>Land:</b>	Parts of Old Bridge Street, Bridge Street, George Street, Wilberforce Road, Freemans Reach Road, The Terrace, Thompson Square Conservation Area, Hawkesbury River and other adjacent areas in Windsor
<b>Approved Development:</b>	Windsor Bridge Replacement Project, including: <ul style="list-style-type: none"><li>• Construction and operation of a replacement bridge, northern and southern approach roads, intersections and associated infrastructure crossing the Hawkesbury River;</li><li>• Removal of the existing Windsor Bridge and approach roads</li><li>• Ancillary works including rehabilitation and landscaping.</li></ul>

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## DEFINITIONS

Act, the	<i>Environmental Planning and Assessment Act, 1979.</i>
Ancillary Facility	Temporary facility for construction, including for example an office and amenities compound, construction compound, batch plant (concrete or bitumen), materials storage compound, maintenance workshop, testing laboratory or material stockpile area.
Applicant	Roads and Maritime Services.
Construction	Includes all work in respect of the SSI other than: a) survey, acquisitions, building/ road dilapidation surveys; b) investigative drilling, excavation, or salvage; c) minor clearing or translocation of native vegetation; d) establishing ancillary facilities/ construction work sites (in locations meeting the criteria identified in the Conditions of Consent); e) installation of environmental impact mitigation measures, fencing, enabling works; f) other activities determined by the Environmental Representative to have minimal environmental impact (e.g. minor access roads, minor adjustments to services/ utilities). Work where heritage, threatened species, populations or endangered ecological communities would be affected that work is classified as construction, unless otherwise approved by the Director-General in consultation with the Environment Protection Authority.
CEMP	Construction Environmental Management Plan
Council	Hawkesbury City Council
Department	Department of Planning and Infrastructure.
Director-General	Director-General of the Department of Planning and Infrastructure.
DPI	Department of Primary Industries
EEC	Endangered Ecological Communities
EIS	Environmental Impact Statement
EPA	Environment Protection Authority.
EPL	Environment Protection Licence under the <i>Protection of the Environment Operations Act 1997</i> .
Feasible and Reasonable	Consideration of best practice taking into account the benefit of proposed measures and their technological and associated operational application in the NSW and Australian context. <b>Feasible</b> relates to engineering considerations and what is practical to build. <b>Reasonable</b> relates to the application of judgement in arriving at a decision, taking into account mitigation benefits and cost of mitigation versus benefits provided, community views and nature and extent of potential

improvements.

Where requested by the Director-General, the Applicant must provide evidence as to how feasible and reasonable measures were considered and taken into account.

Heritage	Encompasses both Aboriginal and historic heritage including sites that predate European settlement, and a shared history since European settlement such as a shared associations in pastoral landscapes as well as associations linked with the mission period.
Heritage Item	An item as defined under the <i>Heritage Act 1977</i> , and assessed as being of Local, State and/ or National heritage significance, and/or an Aboriginal Object or Aboriginal Place as defined under the <i>National Parks and Wildlife Act 1974</i>
High-noise impact activities and work	Jack hammering, rock breaking or hammering, pile driving, vibratory rolling, cutting of pavement, concrete or steel or other work occurring on the surface that generates noise with impulsive, intermittent, tonal or low frequency characteristics.
Incident	A set of circumstances that: <ul style="list-style-type: none"><li>• causes or threatens to cause material harm to the environment; and/or</li><li>• breaches or exceeds the limits or performance measures/criteria in this consent.</li></ul>
Low-noise impact activities and work	Deliveries, site access, equipment pre-start, refuelling, office works, foot-based and manual activities using hand tools, work in ancillary activities, and finishing works and clean-up.
Minister	Minister for Planning and Infrastructure.
NOW	NSW Office of Water
NSW Heritage Council	Heritage Council of NSW or its delegate.
OEH	Office of Environment and Heritage
Operation	Operation of the SSI, but does not include commissioning trials of equipment or temporary use of parts of the SSI during construction.
Sensitive receiver	Residence, education institution (e.g. school, university, TAFE college), health care facility (e.g. nursing home, hospital), religious facility (e.g. church) and children's day care facility.
SSI	The infrastructure approved under this consent and as generally described in Schedule 1.
Thompson Square Conservation Area	The heritage items listed on State Heritage Register known as the 'Thompson Square Conservation Area', listing number 00126 in the area shown on the map in Appendix 2 Strategic Conservation Management Plan study area of this Consent

## PART A

## ADMINISTRATIVE CONDITIONS

### TERMS OF APPROVAL

- A1. The Applicant shall carry out the SSI generally in accordance with the:
- (a) State Significant Infrastructure Application SSI-4951;
  - (b) *Windsor Bridge Replacement Project Environmental Impact Statement Volumes 1, 2, 3 and 4* prepared by Sinclair Knight Merz for Roads and Maritime Services, dated November 2012;
  - (c) *Windsor Bridge Replacement Project Submissions Report incorporating Preferred Infrastructure Report*, dated April 2013 prepared by Sinclair Knight Merz for Roads and Maritime Services, including the revised Statement of Commitments contained therein;
  - (d) Any plans and/or documentation submitted to satisfy the Pre-Construction Conditions of this consent as approved in writing by the Director-General; and
  - (e) The conditions of this consent.
- A2. If there is any inconsistency between the plans and documentation referred to in condition A1, the most recent document shall prevail to the extent of the inconsistency. However, conditions of this consent prevail to the extent of any inconsistency.
- A3. The Applicant shall comply with any reasonable requirement(s) of the Director-General arising from the Department's assessment of:
- (a) any reports, plans or correspondence that are submitted in accordance with this consent; and
  - (b) the implementation of any actions or measures contained within these documents.

### LIMITS ON APPROVAL

- A4. This consent shall lapse 5 years after the date on which it is granted, unless the works the subject of this SSI consent are physically commenced on or before that date.

### STAGING

- A5. The Applicant may elect to construct and/or operate the SSI in stages. Where staging is proposed, the Applicant shall submit a Staging Report to the Director-General prior to the commencement of the first proposed stage. The Staging Report shall provide details of:
- (a) how the SSI would be staged, including general details of work activities associated with each stage and the general timing of when each stage would commence; and
  - (b) details of the relevant conditions of consent, which would apply to each stage and how these shall be complied with across and between the stages of the SSI.

Where staging of the SSI is proposed, these conditions of consent are only required to be complied with at the relevant time and to the extent that they are relevant to the specific stage(s).

The Applicant shall ensure that an updated Staging Report (or advice that no changes to staging are proposed) is submitted to the Director-General prior to the commencement of each stage, identifying any changes to the proposed staging or applicable conditions.

- A6. The Applicant shall ensure that all plans, sub-plans and other management documents required by the conditions of this consent and relevant to each stage (as identified in the Staging Report) are submitted to the Director-General no later than one month prior to the commencement of the relevant stages, unless otherwise agreed by the Director-General.

**STAGED SUBMISSION OF PLANS OR PROGRAMS**

A7. With the approval of the Director-General, the Applicant may:

- (a) submit any strategy, plan or program required by this consent on a progressive basis; and/or
- (b) combine any strategy, plan or program required by this consent.

**COMPLIANCE**

A8. In the event of a dispute between the Applicant and a public authority, in relation to an applicable requirement in this consent or relevant matter relating to the activity, either party may refer the matter to the Director-General for resolution. The Director-General's determination of any such dispute shall be final and binding on the parties.

## PART B

## PRE-CONSTRUCTION CONDITIONS

Conditions B1 to B8 have been imposed in accordance with the following objectives:

- (a) To minimise impacts on heritage sites, including sites within the Thompson Square Conservation Area and archaeological sites in, and in the vicinity of, the site;
- (b) To salvage and interpret any impacted heritage sites, including historical archaeologically significant sites within, and in the vicinity of, the site;
- (c) To conduct archival recording and further research of the Thompson Square Conservation Area;
- (d) To enhance and conserve the Thompson Square Conservation Area, the heritage items identified in Table 1 of Appendix 1, with the exception of Item 3 (the Thompson Square lower parkland area) and Item 20 (Windsor Bridge) and any archaeological sites within, and in the vicinity of, the site, while providing for the construction of a replacement bridge at Windsor; and
- (e) To incorporate changes in the final design of the SSI, where practical, to achieve Objectives (a), (b) and (d) above.

### CULTURAL HERITAGE

- B1. The Applicant shall submit a **Strategic Conservation Management Plan (CMP)** to the Director-General for the project area on the southern side of the Hawkesbury River as shown in Appendix 2 Strategic Conservation Management Plan study area. The CMP shall be prepared by appropriately qualified and/or experienced heritage consultants. The nominated heritage consultant(s) is to have appropriate experience and skills including land and maritime archaeology, landscape, engineering and built heritage expertise and documented experience in the preparation and implementation of CMPs.

The Applicant shall not carry out any pre-construction or construction activities on the southern side of the Hawkesbury River for the SSI before the CMP has been approved by the Director-General. The CMP is to provide for the heritage conservation of the Thompson Square Conservation Area. The CMP shall be prepared in consultation with the Heritage Branch, OEH and in accordance with the relevant guidelines of the NSW Heritage Council and include, but not be limited to:

- (a) identification of the heritage value of the Thompson Square Conservation Area, including statements of significance for the Thompson Square Conservation Area and any individual listings within the conservation area of any local, state or national heritage items;
- (b) the development of heritage design principles for the project to retain the heritage significance of the Thompson Square Conservation Area and any individually listed item within the conservation area or in proximity to the site, with the exception of Item 3 (the Thompson Square lower parkland area) and Item 20 (Windsor Bridge) in Table 1 of Appendix 1;
- (c) specific mitigation measures for the Thompson Square Conservation Area and individually listed items to minimise impact and to ensure that final measures selected are appropriate and the least intrusive option; and
- (d) changes to the detailed design of the SSI to mitigate heritage impacts.

The Applicant shall prepare and submit a detailed **Interpretation Plan** prior to the commencement of pre-construction and construction activities for the Thompson Square Conservation Area including individually listed sites, non-Aboriginal archaeology and Aboriginal archaeology for the approval of the Director-General. The detailed Interpretation Plan must be prepared in consultation with the OEH and include specific media design, content, location and materials, prepared in accordance with the Guidelines of the NSW Heritage Council.

- B2. Prior to the commencement of pre-construction works on the southern side of the Hawkesbury River, the Applicant shall complete a detailed **Archival Recording** of all historic heritage sites within the Strategic Conservation Management Plan study area in accordance with the Guidelines issued by the NSW Heritage Council and to the satisfaction of the Director-General and in consultation with the NSW Heritage Council. The recording shall include, but not be limited to:
- (a) detailed survey and analysis of Thompson Square Conservation Area, Windsor Bridge and the immediate surrounds using 3D laser scanning; and
  - (b) photographic and archival recording of all affected heritage sites, as identified in the specialist reports prepared as part of the Environmental Impact Statement for the project. Recording is to be completed.
- Copies of these recordings should be made available to the Director-General, the NSW Heritage Council, the Local Studies Library and the Local Historical Society in Windsor.

## ARCHAEOLOGY

- B3. The Applicant shall undertake an **Archaeological Investigation Program comprising Aboriginal and non-Aboriginal Heritage** in the project area on the southern side of the Hawkesbury River, prior to the commencement of pre-construction and construction activities in the southern area. The program shall be conducted to the satisfaction of the Director-General and in accordance with:
- (a) the Heritage Council's *Archaeological Assessments Guideline* (1996) using a methodology prepared, in consultation with the NSW Heritage Council for non-Aboriginal heritage; and
  - (b) prepared in consultation with the OEH (Aboriginal heritage) and the Aboriginal stakeholders.

The Archaeological Investigation Program is to be undertaken by an archaeological heritage consultant approved by the Director-General in consultation with the NSW Heritage Council and by the OEH (Aboriginal heritage) and by an Excavation Director who shall demonstrate an ability to comply with the Heritage Council's Criteria for the *Assessment of Excavation Directors* (July 2011) and in particular must be able to demonstrate compliance with Criterion A.4 that: 'work under any approvals previously granted by the Heritage Council has been completed in accordance with the conditions of that consent and the final report has been submitted to the NSW Heritage Council.

The Archaeological Investigation Program shall include archaeological testing and geophysical investigation, as required for the significance assessment.

The results of the Archaeological Investigation Program are to be detailed in a **Historic Archaeological Report** and a **Detailed Salvage Strategy** comprising the non-Aboriginal and Aboriginal heritage findings. These are to be prepared in consultation with the OEH (Heritage Branch and Aboriginal heritage) and to the satisfaction of the Director-General, and shall include, but not necessarily be limited to:

- (a) detailed recommendations for further archaeological work;
- (b) consideration of measures to avoid or minimise disturbance to archaeology sites, where archaeology of historical and Aboriginal heritage archaeological significance are found to be present;
- (c) where impacts cannot be avoided by construction of the SSI, recommend actions to salvage and interpret salvaged sites, conduct further research and archival recording of the historic heritage and Aboriginal heritage value of each site, and to enhance and preserve the archaeology of historical non-Aboriginal and Aboriginal heritage significance;
- (d) consideration of providing visual evidence of heritage sites within the final landscape design of the SSI to preserve and acknowledge the heritage value of the Thompson Square Conservation Area and the site;



- (e) management and mitigation measures to minimise impacts due to pre-construction and construction activities; and
- (f) preparation of a **Hawkesbury Region Sand Bodies Study** to the satisfaction of the Director-General and undertaken by suitably qualified and experienced persons whose appointment has been approved by the Director-General, in the event that any Pleistocene and/or early Holocene is encountered during the works referred to in condition B3. This study is required to be prepared in consultation with the Department, the OEH and Aboriginal stakeholders and is required to:
  - (i) be undertaken in accordance with a research design and action plan approved by the Director-General prior to the study commencing;
  - (ii) be directed towards locating and evaluating sand bodies likely to contain evidence of early Aboriginal habitation in the Hawkesbury River area, in the project location in areas disturbed by construction of the project, including the existing Windsor Bridge and new bridge locations;
  - (iii) findings are to be made publicly available; and
  - (iv) make recommendations concerning the preservation and future management of any finds.

In the event that any Pleistocene and/or early Holocene is encountered, the recommendations of the Hawkesbury Region Sand Bodies Study are to be fully complied with.

- B4. The Applicant shall undertake an **Archaeological Investigation Program comprising Aboriginal Heritage** in the northern side of the Hawkesbury River project area, prior to the commencement of pre-construction and construction activities in the northern area. The program shall be conducted to the satisfaction of the Director-General and prepared in consultation with the OEH (Aboriginal heritage) and the Aboriginal stakeholders.

The results of the Archaeological Investigation Program conducted in the project area on the northern side of the Hawkesbury River are to be detailed in a **Historic Archaeological Report** and a **Detailed Salvage Strategy** comprising the Aboriginal heritage findings in northern side of the Hawkesbury River. These are to be prepared in consultation with the OEH (Aboriginal heritage) and to the satisfaction of the Director-General, and shall include but not necessarily be limited to:

- (a) detailed recommendations for further Aboriginal archaeological work;
- (b) consideration of measures to avoid or minimise disturbance to Aboriginal sites, where archaeology of Aboriginal heritage archaeological significance are found to be present;
- (c) where impacts cannot be avoided by construction of the SSI, recommend actions to salvage and interpret salvaged sites, conduct further research and archival recording of the Aboriginal heritage value of each site, and to enhance and preserve the Aboriginal heritage significance;
- (d) consideration of providing visual evidence of heritage sites within the final landscape design of the SSI to preserve and acknowledge the Aboriginal heritage value of the northern project area;
- (e) management and mitigation measures to minimise impacts due to pre-construction and construction activities; and
- (f) preparation of a **Hawkesbury Region Sand Bodies Study** as detailed in Condition B3(f)

## HYDROLOGY

- B5. The Applicant shall not commence construction of the project on or within those areas likely to alter flood conditions until such time as works identified in the Hydrological Mitigation Report, required under condition C27, have been completed, unless otherwise agreed by the Director-General.

## **URBAN DESIGN AND LANDSCAPE PLAN**

B6. Terracing is not approved as part of landscaping for the SSI.

B7. The Applicant shall prepare an **Urban Design and Landscape Plan** prior to the commencement of pre-construction and construction activities in the southern side of the Hawkesbury River to guide the landscaping for the project. The Plan shall be prepared in consultation with the OEH, and Hawkesbury Council and shall present an integrated urban design for the project that is sympathetic to the heritage values and significance of the Thompson Square Conservation Area and shall be prepared in accordance with the requirements of condition C47.

## **REVISED DESIGN**

B8. The project is to be revised to incorporate the following amendments. The new design of the SSI shall be provided to the Director-General for approval prior to the commencement of pre-construction and construction activities in the southern side of the Hawkesbury River:

- (a) the raising of the southern approach road by approximately 1 metre is not approved. The height/clearance of the southern approach road shall be designed ensure consistency with the EIS;
- (b) public access to the existing wharf is to be maintained and alternative coach access, arrangements for pedestrians/cyclists and consultation undertaken are to be detailed;
- (c) access to numbers 4 and 6 Bridge Street is to be maintained at all times. Alternative access arrangements to those proposed shall be investigated to the satisfaction of the Director-General;
- (d) the northern roundabout shall be designed to ensure consistency with the *Austroads Guide to Road Design: Part 4B*, particularly in relation to geometry and lane designations.

In the event that further design amendments are required as a consequence of compliance with conditions B1 to B7, any such revised designs must be approved by the Director-General.

## **PART C**

## **ENVIRONMENTAL PERFORMANCE**

### **HERITAGE IMPACTS**

- C1. During all stages of the project, the Applicant must comply with all programs and reports prepared by the Applicant in accordance with conditions B1 to B8 of this consent.
- C2. In the event that any Pleistocene and/or early Holocene is encountered during any construction activities, condition B3(f) applies as if the relevant construction works were works carried out under condition B3.
- C3. This consent does not allow the Applicant to disturb any human remains found on the site without further approval from the Director-General, and/or the NSW Police Force
- C4. Prior to the commencement of pre-construction works the Applicant shall nominate, for the approval of the Director-General, a specialist Heritage Manager and Heritage Consultant team for the construction works. The consultant(s) shall have appropriate qualifications and experience commensurate with the scope of the works, which shall include land and maritime archaeology, landscape, engineering and built heritage expertise and have demonstrated experience in the implementation of CMPs. During pre-construction and construction works, the specialist Heritage Manager and heritage consultant team shall:
  - (a) advise on the detail design resolution of new works, inspect new works, advise on design and installation of services (to minimise impacts on significant fabric and views) and undertake on-site Heritage inductions;
  - (b) provide input to the compliance reporting required under condition D6; and
  - (c) prepare a report (illustrated by works' photographs) to be submitted to the Director-General for approval within 6 months of the completion of the works which describes the work, any impacts/damage and corrective works carried out and includes a revised Statement of Significance in accordance with NSW Heritage Council guidelines.
- C5. Within 12 months of completing the work required under conditions B3 and B4, the Applicant shall, in consultation with the NSW Heritage Council, the OEH (Aboriginal heritage) and to the satisfaction of the Director-General, prepare and submit a further report containing:
  - (a) an executive summary of the archaeological programme;
  - (b) the findings of the excavations, including detailed artefact analysis for non-Aboriginal and Aboriginal heritage;
  - (c) the identification of a final repository for finds of non-Aboriginal heritage significance;
  - (d) artefact analysis and Aboriginal Site Impacts Recording Forms (ASIR), and the identification of final storage location for all Aboriginal objects recovered (testing and salvage), prepared in consultation with the Aboriginal stakeholders, the OEH (Aboriginal heritage) and to the satisfaction of the Director-General.
  - (e) detailed information on the excavation including the aim, the context for the excavation, procedures, treatment of artefacts (cleaning, conserving, sorting, cataloguing, labelling, scale photographs and/or drawings, location of repository) and analysis of the information retrieved;
  - (f) nominated repository for the items, which has agreed to take the items;
  - (g) conclusions from the archaeological programme. This information must include a reassessment of the site's heritage significance comprising non-Aboriginal and Aboriginal heritage, statement(s) on how archaeological investigations at this site have contributed to the community's understanding of the Site and other

- Comparative Site Types and recommendations for the future management of the site/s;
- (h) details of how this information about the excavations have been publicly disseminated (for example, include copies of press releases, public brochures and information signs produced to explain the archaeological significance of the sites).

## **AIR QUALITY**

- C6. The Applicant shall carry out all reasonable and feasible measures to minimise dust generated by the SSI, including wind-blown and traffic-generated dust.
- C7. During construction, the Applicant shall ensure that:
- (a) all vehicles on site do not exceed a speed limit of 30 kilometres per hour;
  - (b) all loaded vehicles entering or leaving the site have their loads covered; and
  - (c) all loaded vehicles leaving the site are cleaned of dirt, sand and other materials before they leave the site, to avoid tracking these materials on public roads.

## **ANCILLARY FACILITIES**

- C8. Unless otherwise approved by the Director-General, the location of Ancillary Facilities shall:
- (a) be located more than 50 metres from a waterway;
  - (b) be located within or adjacent to land where the SSI is being carried out;
  - (c) have ready access to the road network or direct access to the construction corridor;
  - (d) be located to minimise the need for heavy vehicles to travel through residential areas;
  - (e) be sited on relatively level land;
  - (f) be separated from nearest residences by at least 200 metres (or at least 300 metres for a temporary batching plant);
  - (g) not require vegetation clearing beyond that already required by the SSI;
  - (h) not be located within the Thompson Square Conservation Area;
  - (i) not impact on Heritage items (including identified Aboriginal cultural value and archaeological sensitivity) beyond those already impacted by the SSI and not have any additional impacts to those heritage items impacted by the proposal;
  - (j) not unreasonably affect the land use of adjacent properties;
  - (k) be above the 20 ARI flood level unless a contingency plan to manage flooding is prepared and implemented; and
  - (l) provide sufficient area for the storage of raw materials to minimise, to the greatest extent practical, the number of deliveries required outside standard construction hours.

The location of the ancillary facilities shall be identified in the Construction Environment Management Plan.

- C9. Ancillary sites that do not meet the criteria set out in this consent shall be approved by the Director-General prior to establishment. In obtaining this approval, the Applicant shall assess the ancillary facility against the criteria set out in this consent to demonstrate how the potential environmental impacts can be mitigated and managed to acceptable standards. Such assessment(s) can be submitted separately or as part of the Construction Environment Management Plan required under this consent. The assessment shall include, but not necessarily be limited to:
- (a) a description of the Ancillary Facility, its components and the surrounding environment;
  - (b) details on the activities to be carried out at the facility, including the hours of use and the storage of dangerous and hazardous goods;

- (c) an assessment of the environmental impacts on the site and the surrounding environment, including, but not limited to noise, vibration, air quality, traffic access, flora and fauna, heritage and light spill;
- (d) details on the mitigation, monitoring and management procedures specific to the Ancillary Facility that would be implemented to minimise the environmental impacts or, where this is not possible, feasible and reasonable measures to offset these impacts and an assessment of the adequacy of the mitigation or offsetting measures. This shall include consideration of restrictions on the hours of use or exclusion of certain activities;
- (e) details on the timing for the completion of activities at the ancillary facility and how the site will be decommissioned (including any necessary rehabilitation); and
- (f) demonstrated overall consistency with the approved project.

The Applicant shall demonstrate to the satisfaction of the Director-General that there will be no additional significant adverse impact from that Ancillary Facility's construction or operation.

C10. The Director-General's approval is not required for minor Ancillary Facilities (e.g. lunch sheds, office sheds, and portable toilet facilities, etc.) that do not comply with the criteria set out in condition C8 of this consent and which:

- (a) are located within an active construction zone within the approved project footprint; and
- (b) have been assessed by the Environmental Representative to have:
  - (i) no additional adverse impact on the Thompson Square Conservation Area;
  - (ii) minimal amenity impacts to surrounding residences, with consideration to matters such as noise and vibration impacts, traffic and access impacts, dust and odour impacts, and visual (including light spill) impacts, and
  - (iii) minimal environmental impact in respect to waste management, and no impacts on flora and fauna, soil and water, and heritage beyond those approved for the project; and
- (c) have environmental and amenity impacts that can be managed through the implementation of environmental measures detailed in a CEMP for the project.

C11. All Ancillary Facilities shall be rehabilitated to at least their pre-construction condition, unless otherwise agreed by the Director-General.

## **HAZARDS AND RISK**

C12. Dangerous goods, as defined by the Australian Dangerous Goods Code, shall be stored and handled strictly in accordance with:

- (a) all relevant Australian Standards;
- (b) for liquids, a minimum bund volume requirement of 110% of the volume of the largest single stored volume within the bund; and
- (c) the Environment Protection Manual for Authorised Officers: Bunding and Spill Management, Technical Bulletin (Environment Protection Authority, 1997).

In the event of an inconsistency between the requirements listed from (a) to (c) above, the most stringent requirement shall prevail to the extent of the inconsistency.

## **NOISE AND VIBRATION**

C13. Construction activities associated with the SSI shall be undertaken during the following standard construction hours:

- (a) 7:00am to 6:00pm Mondays to Fridays, inclusive; and
- (b) 8:00am to 1:00pm Saturdays; and
- (c) at no time on Sundays or public holidays.

- C14. Construction works outside of the standard construction hours identified in condition C13 may be undertaken in the following circumstances:
- (a) construction works that generate noise that is:
    - (i) no more than 5 dB(A) above rating background level at any residence in accordance with the *Interim Construction Noise Guideline* (Department of Environment and Climate Change, 2009); and
    - (ii) no more than the noise management levels specified in Table 3 of the *Interim Construction Noise Guideline* (Department of Environment and Climate Change, 2009) at other sensitive receivers; or
  - (b) for the delivery of materials required outside these hours by the NSW Police Force or other authorities for safety reasons; or
  - (c) where it is required in an emergency to avoid the loss of lives, property and/or to prevent environmental harm; or
  - (d) works as approved through the out-of-hours work protocol outlined in the CEMP.
- C15. Activities resulting in impulsive or tonal noise emission (such as rock breaking, rock hammering, pile driving) shall only be undertaken:
- (a) between the hours of 8:00 am to 5:00 pm Monday to Friday;
  - (b) between the hours of 8:00 am to 1:00 pm Saturday; and
  - (c) in continuous blocks not exceeding three hours each with a minimum respite from those activities and works of not less than one hour between each block.
- For the purposes of this condition 'continuous' includes any period during which there is less than a one hour respite between ceasing and recommencing any of the work the subject of this condition.
- C16. Wherever feasible and reasonable, piling activities shall be undertaken using quieter alternative methods than impact or percussion piling, such as bored piles or vibrated piles.
- C17. Where feasible and reasonable, operational noise mitigation measures shall be implemented at the start of construction (or at other times during construction) to minimise construction noise impacts.
- C18. All feasible and reasonable noise mitigation measures shall be implemented and any activities that could exceed the construction noise management levels shall be identified and managed in accordance with the CEMP.
- Note: The Interim Construction Noise Guideline identifies 'particularly annoying' activities that require the addition of 5dB(A) to the predicted level before comparing to the construction NML.*
- C19. The SSI shall be constructed with the aim of achieving the following construction vibration goals:
- (a) for structural damage, the vibration limits set out in the *German Standard DIN 4150-3: Structural Vibration - effects of vibration on structures*; and
  - (b) for damage to other buildings and/or structures, the vibration limits set out in the British Standard BS 7385-1:1990 – Evaluation and measurement for vibration in buildings. Guide for measurement of vibration and evaluation of their effects on buildings; and
  - (c) for human exposure, the acceptable vibration values set out in the *Environmental Noise Management Assessing Vibration: A Technical Guideline* (Department of Environment and Conservation, 2006).
- C20. Unless otherwise agreed by the Director-General, within 6 months of commencing construction, the Applicant shall, in consultation with the EPA, prepare and submit for the approval of the Director-General, a review of the operational noise mitigation measures proposed to be implemented for the project. The review shall:

- (a) confirm the operational noise predictions of the project based on detailed design. This operational noise assessment shall be based on an appropriately calibrated noise model (which has incorporated additional noise monitoring, where necessary for calibration purposes);
  - (b) review the suitability of the operational noise mitigation measures identified in the documents listed under condition A2 to achieve the criteria outlined in condition C14 based on the operational noise performance of the project predicted under (a) above; and
  - (c) where necessary, investigate additional feasible and reasonable noise mitigation measures to achieve the criteria outlined in the *Road Noise Policy* (DECCW, 2011).
- C21. During construction, affected educational institutions shall be consulted and reasonable steps taken to ensure that noise generating construction works in the vicinity of affected buildings are not timetabled during examination periods where practicable, unless other reasonable arrangements to the affected institutions are made at no cost to the affected institution.
- C22. The SSI shall be operated with the objective of not exceeding the road noise criteria outlined in the NSW Road Noise Policy (DECCW, 2011).

## SOIL AND WATER QUALITY

- C23. Soil and water management measures consistent with *Managing Urban Stormwater - Soils and Construction Vol 1* (Landcom, 2004) shall be employed during the construction of the SSI to minimise soil erosion and the discharge of sediment and other pollutants to land and/or waters.
- C24. The Applicant shall prepare and implement a **Water Quality Management Program** to monitor and minimise the impacts of the project on surface and groundwater quality and resources and wetlands, during construction and operation of the SSI. The Program shall be developed in consultation with the OEH, EPA, DPI (Fishing and Aquaculture) and NOW and shall include but not necessarily be limited to:
- (a) identification of surface and groundwater quality monitoring locations (including watercourses and waterbodies) which are representative of the potential extent of impacts from the project;
  - (b) the results of the groundwater modelling undertaken under this consent;
  - (c) identification of works and activities during construction and operation of the project, including emergencies and spill events, that have the potential to impact on surface water quality of potentially affected waterways;
  - (d) development and presentation of parameters and standards against which any changes to water quality will be assessed, having regard to the *Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2000* (Australian and New Zealand Environment Conservation Council, 2000);
  - (e) representative background monitoring of surface and groundwater quality parameters for a minimum of six months (considering seasonality) prior to the commencement of construction, to establish baseline water conditions, unless otherwise agreed by the Director-General;
  - (f) a minimum monitoring period of three years following the completion of construction or until the affected waterways and/ or groundwater resources are certified by an independent expert as being rehabilitated to an acceptable condition. The monitoring shall also confirm the establishment of operational water control measures (such as sedimentation basins and vegetation swales);
  - (g) contingency and ameliorative measures in the event that adverse impacts to water quality are identified; and
  - (h) reporting of the monitoring results to the Department, OEH, EPA and NOW.

The Program shall be submitted to the Director-General for approval 6 months prior to the commencement of construction of the project, or as otherwise agreed by the Director-General. A copy of the Program shall be submitted to the OEH, EPA, DPI (Fishing and Aquaculture) and NOW prior to its implementation.

- C25. Prior to the commencement of site preparation and excavation activities, or as otherwise agreed by the Director-General, in areas identified as having a moderate to high risk of contamination, a site audit shall be carried out by a site auditor. A site audit report is to be prepared by the site auditor detailing the outcomes of Phase 2 contamination investigations within these areas. The site audit report shall detail, where relevant, whether the land is suitable (for the intended land use) or can be made suitable through remediation.

A site audit statement(s) must be prepared verifying that the site has been remediated to a standard consistent with the intended land use. The site audit statement(s) shall be submitted to the Director-General prior to operation of the SSI, unless otherwise agreed by the Director-General.

*Note: Terms used in this condition have the same meaning as in the Contaminated Land Management Act 1997.*

## **HYDROLOGY AND FLOODING**

- C26. The Applicant shall ensure, where feasible and reasonable, that the project is designed to not exceed the afflux and other flooding criteria within the vicinity of the project as identified or predicted in the documents listed under condition A2.

- C27. The Applicant shall develop a **Hydrological Mitigation Report** for properties in the Hawkesbury River floodplain areas where flood impacts are predicted to increase as a result of the project. The Report shall be based on detailed floor level survey and associated assessment of potentially flood affected properties in those areas. The Report shall:

- (a) identify properties in those areas likely to have an increased flooding impact and detail the predicted increased flooding impact;
- (b) identify mitigation measures to be implemented where increased flooding is predicted to adversely affect access, property or infrastructure;
- (c) identify measures to be implemented to minimise scour and dissipate energy at locations where flood velocities are predicted to increase as a result of the project and cause localised soil erosion and/or pasture damage;
- (d) be developed in consultation with the relevant Council, NSW State Emergency Service and directly-affected property owners; and
- (e) identify operational and maintenance responsibilities for items (a) to (c) inclusive.

- C28. Based on the mitigation measures identified in this consent, the Applicant shall prepare a final schedule of feasible and reasonable flood mitigation measures proposed at each directly-affected property in consultation with the property owner. The schedule shall be provided to the relevant property owner(s) prior to the implementation/ construction of the mitigation works, unless otherwise agreed by the Director-General. A copy of each schedule of flood mitigation measures shall be provided to the Department and the relevant Council prior to the implementation/ construction of the mitigation measures on the property.

- C29. In the event that the Applicant and the relevant property owner cannot agree on feasible and reasonable flood mitigation measures to be applied to a property within one month of the first consultation on the measures (as required by this consent), the Applicant shall employ a suitably qualified and experienced independent hydrological engineer, who has been approved by the Director-General, to resolve this dispute prior to the commencement of construction in the floodplain areas affected by increased



afflux from the project. The independent hydrological engineer shall advise and assist affected property owners in negotiating feasible and reasonable mitigation measures.

- C30. The Applicant shall provide assistance to the relevant council and/ or NSW State Emergency Service, to assist in the preparation of any new or necessary update(s) to the relevant plans and documents in relation to flooding, to reflect changes in flooding levels, flows and characteristics as a result of the project.
- C31. If a flood event occurs during construction the works on-site shall be suspended if instructed by either the Applicant or emergency services. The Applicant shall keep Hawkesbury City Council informed of the status of the works during a flood event and before recommencing activity after the peak of a flood event.
- C32. A flood warning sign of durable material shall be permanently fixed in a prominent location within the vicinity of the SSI. The sign shall advise members of the public that the area may be subject to inundation during times of flood. The design and location of this sign shall be determined in consultation with Hawkesbury City Council, the OEH and submitted for the approval of the Director-General prior to operation.
- C33. The outlet structure for the water quality basin must be consistent with the *Controlled Activities on Waterfront Land: Guidelines for Outlet Structures on Waterfront Land* (NSW Office of Water, July 2012).

## BIODIVERSITY

- C34. A riparian corridor consisting of vegetation from the relevant local native vegetation communities shall be established along the Hawkesbury River bank areas disturbed by the project with the exception of those areas required for scour protection for the safety of the bridge. The riparian corridor is to be consistent with the *Controlled Activities on Waterfront Land: Guidelines for Riparian Corridors on Waterfront Land* (NSW Office of Water, July 2012).
- C35. A **Vegetation Management Plan** (VMP) is to be prepared consistent with the *Controlled Activities on Waterfront Land: Guidelines for Vegetation Management Plan on Waterfront Land* (NSW Office of Water, July 2012) that demonstrates the protection of remnant native riparian vegetation and the rehabilitation of the riparian corridor. The VMP must be complied with.
- C36. Seed sources used for the rehabilitation of the riparian corridor are to be from local native botanical provenance where possible.
- C37. A minimum two year monitoring and maintenance period is required for the riparian zone commencing after final planting, or until such time as a minimum 80 per cent survival rate of each species planted and a maximum 5 per cent weed cover for the treated riparian corridor is achieved. The monitoring program is to include weed control monitoring.

## WASTE MANAGEMENT

- C38. The Applicant shall maximise the reuse and/or recycling of waste materials generated on site as far as practicable, to minimise the need for treatment or disposal of those materials off site.
- C39. All waste materials removed from the site shall only be directed to a waste management facility or premises lawfully permitted to accept the materials.

- C40. All liquid and/or non-liquid waste generated on the site shall be assessed and classified in accordance with *Waste Classification Guidelines* (Department of Environment, Climate Change and Water, 2009), or any superseding document.

## **UTILITIES AND SERVICES**

- C41. Utilities, services and other infrastructure potentially affected by construction and operation of the SSI shall be identified prior to construction to determine requirements for access to, diversion, protection, and support. Consultation with the relevant owner and/or provider of services that are likely to be affected by the SSI shall be undertaken to make suitable arrangements for access to, diversion, protection, and/or support of the affected infrastructure as required. The cost of any such arrangements shall be borne by the Applicant, or carried out in accordance with existing agreements.
- C42. The cost of repairing any damage to existing utilities or services shall be borne by the Applicant.
- C43. The existing 50mm rising sewer main that is attached to the existing Windsor Bridge that services Hawkesbury City Council's toilet block in Macquarie Park is to be relocated prior to the commencement of works at the existing Windsor Bridge.

## **TRANSPORT AND ACCESS**

- C44. The SSI shall be designed with the objective of minimising adverse changes to existing access and services for other transport modes and, where feasible, and reasonable facilitate an improved level of access and service to other transport modes compared to the existing situation.
- C45. Access to private property shall be maintained during construction unless otherwise agreed with the property owner in advance. A landowner's access that is physically affected by the SSI shall be reinstated to at least meet the relevant Australian standard, in consultation with the property owner.
- C46. Any proposed closure of the right turn movement from Bridge Street southbound into George Street shall be sequenced to occur outside business hours (9:00am to 5:00pm Monday to Friday). Hawkesbury City Council shall be provided with a minimum one month notice of any planned closure in writing.

## **URBAN DESIGN AND LANDSCAPING**

- C47. The **Urban Design and Landscape Plan** referred to in condition B7 must be prepared and implemented and the works approved by that Plan must be completed within 12 months of the commissioning of the project. The Plan shall be prepared in consultation with the OEH, and Hawkesbury Council and shall be consistent with the CMP referred to in condition B1 and include, but not necessarily be limited to:
- (a) the proposed landscaping of Thompson Square Conservation Area, as shown on the map in Appendix 2 Strategic Conservation Management Plan study area;
  - (b) use of the heritage design principles developed under the CMP, and take into account appropriate landscaping in the vicinity of heritage items to minimise heritage impacts;
  - (c) a description of locations along the project corridor directly or indirectly impacted by the construction of the project (e.g. temporary ancillary facilities, access tracks, etc.) and details of the strategies to progressively rehabilitate regenerate and/or revegetate the locations with the objective of promoting biodiversity outcomes and visual integration. Details of species to be replanted/ revegetated shall be provided, including their appropriateness to the area and considering existing vegetation and habitat for threatened species;

- (d) location of existing vegetation and proposed landscaping (including use of indigenous and endemic species where possible) and design features;
- (e) graphics such as sections, perspective views and sketches for key elements of the project (including, but not limited to built elements such as retaining walls, cuttings, abutments and street furniture);
- (f) final design details of the proposed external materials and finishes, including schedules and a sample board of materials and colours; including justification for sustainability of materials including design and installation techniques as well as long term maintenance and their suitability in terms of:
  - (i) function (ability to withstand heavy vehicle usage and public setting);
  - (ii) architectural period/style (respecting the simple Colonial Georgian style);
  - (iii) landscape suitability (i.e. suited to both usage and context); and
  - (iv) heritage context.
- (g) location and design treatments for any associated footpaths and cyclist elements, and other features such as seating, lighting (in accordance with AS 4282-1997 Control of the Obtrusive Effect of Outdoor Lighting), fencing, and signs;
- (h) take into account appropriate roadside plantings and landscaping in the vicinity of heritage items and ensure no additional heritage impacts;
- (i) detailed design drawings of the proposed works including, but not limited to, road pavements, pedestrian pavements, kerb treatments, abutments, garden beds;
- (j) strategies for progressive landscaping of other environmental controls such as erosion and sedimentation controls, drainage and noise mitigation;
- (k) the lighting, street furniture and other fixtures shall be consistent with Crime Prevention Through Environmental Design Principles (CPTED) where possible;
- (l) the installation of services to support events such as lighting, electricity, water, sewer, vehicle access and communications technology should be considered and be inherent in the design. Refer to Council's Sustainable events Policy (on Council's web site:  
<http://council.hawkesbury.nsw.gov.au/masterviewui/modules/documentmaster/getdocument.aspx?docsetid=3701656>);
- (m) monitoring and maintenance procedures for the vegetated built elements, rehabilitated vegetation and landscaping (including weed control) including performance indicators, responsibilities, timing and duration and contingencies where rehabilitation of vegetation and landscaping measures fail; and
- (n) evidence of consultation with the NSW Heritage Council, Hawkesbury City Council and community on the proposed strategy prior to its finalisation.

C48. External Lighting shall comply with AS4282: 1997 Control of the Obtrusive Effects of Outdoor Lighting. Upon installation of External Lighting, but before it is finally commissioned, the Applicant shall submit to the Certifying Authority, in consultation with the relevant Council, evidence from an independent qualified practitioner demonstrating compliance in accordance with this condition.

## PART D ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING

### ENVIRONMENTAL MANAGEMENT

- D1. The Applicant shall engage a suitably qualified person to prepare a pre-construction dilapidation report prior to the commencement of construction and a post-construction dilapidation report at the completion of construction works. These reports are to ascertain the:
- (a) structural condition of local roads likely to be used by the project's construction traffic identified in the Traffic Management Sub-plan required under condition D5(a).
  - (b) structural condition of footpaths, buildings and other utilities in the vicinity of the SSI;
  - (a) whether the construction works resulted in any structural damage to roads, buildings and other utilities in the vicinity of the SSI. In ascertaining whether adverse structural damage has occurred to adjoining buildings, infrastructure and roads, the post-construction dilapidation report must:
    - (i) compare the post-construction with the pre-construction dilapidation report; and
    - (ii) have written confirmation from the relevant authority that there is no adverse structural damage to their infrastructure and roads.

The pre-construction and post-construction dilapidation reports shall be prepared in consultation with Hawkesbury City Council and submitted for the approval of the Director-General.

- D2. The Applicant shall undertake road pavement deflection testing of the construction truck routes at 20 metre intervals along all wheel paths prior to commencement of construction. At completion of construction, the Applicant shall undertake road pavement deflection testing of the truck routes. If the deflection tests show an increase in deflection, the Applicant shall undertake pavement rehabilitation of the affected road pavements to achieve the pavement deflection that existing prior to the commencement of works.
- D3. The Applicant shall bear the cost of all repair works to Hawkesbury City Council's property damaged during the course of construction of the SSI.

### CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN (CEMP)

- D4. The Applicant shall prepare and (following approval) implement a **Construction Environmental Management Plan** for the project. The Plan shall outline the environmental management practices and procedures that are to be followed during construction, and shall be prepared in consultation with the relevant agencies and in accordance with the *Guideline for the Preparation of Environmental Management Plans* (Department of Infrastructure, Planning and Natural Resources, 2004). The Plan shall include, but not necessarily be limited to:
- (a) a description of activities to be undertaken during construction of the project or stages of construction, as relevant;
  - (b) statutory and other obligations that the Applicant is required to fulfil during construction including approvals, consultations and agreements required from agencies and key legislation and policies. Evidence of consultation with relevant

agencies shall be included identifying how issues raised by these agencies have been addressed in the CEMP;

- (c) a description of the roles and responsibilities for relevant employees involved in the construction of the project including relevant training and induction provisions for ensuring that employees, including contractors and sub-contractors are aware of their environmental and compliance obligations under these conditions of consent;
- (d) identification of ancillary facility site locations, including an assessment against the location criteria outlined in this consent;
- (e) an environmental risk analysis to identify the key environmental performance issues associated with the construction phase and details of how environmental performance would be monitored and managed to meet acceptable outcomes including what actions will be taken to address identified potential adverse environmental impacts. In particular, the following environmental performance issues shall be addressed in the Plan:
  - (i) measures to monitor and manage **dust emissions** including dust from stockpiles, blasting, traffic on unsealed public roads and materials tracking from construction sites onto public roads;
  - (ii) measures to minimise **hydrology** impacts, including measures to stabilise bed and bank structures as required,
  - (iii) measures to monitor and manage impacts associated with the construction and operation of **ancillary facilities**,
  - (iv) measures for the handling, treatment and management of **contaminated materials**,
  - (v) measures to monitor and manage **waste** generated during construction including but not necessarily limited to: general procedures for waste classification, handling, reuse, and disposal; use of secondary waste material in construction wherever feasible and reasonable; procedures for dealing with green waste including timber and mulch from clearing activities; and measures for reducing demand on water resources (including the potential for reuse of treated water from sediment control basins);
  - (vi) measures to monitor and manage spoil, fill and materials **stockpile sites** including details of how spoil, fill or material would be handled, stockpiled, reused and disposed and a stockpile management protocol detailing locational criteria that would guide the placement of stockpiles and management measures that would be implemented to avoid/ minimise amenity impacts to surrounding residents and environmental risks (including to surrounding water courses). Stockpile sites that affect heritage, threatened species, populations or Endangered Ecological Communities require the approval of the Director-General, in consultation with the OEH;
  - (vii) measures to monitor and manage **hazard and risks** including emergency management; and
  - (viii) the issues identified in condition D7;
- (f) details of community involvement and complaints handling procedures during construction, consistent with the requirements of conditions D11 to D13;
- (g) details of compliance and incident management consistent with the requirements of conditions D7 and D8 ; and
- (h) procedures for the periodic review and update of the CEMP and sub-plans required under this consent respectively, as necessary (including where minor changes can be approved by the Environmental Representative).

The Plan shall be submitted for the approval of the Director-General no later than one month prior to the commencement of construction, or within such period otherwise

agreed by the Director-General. Construction works shall not commence until written approval has been received from the Director-General.

D5. As part of the CEMP for the project, the Applicant shall prepare and implement the following sub plan(s):

- (a) a **Construction Traffic Management Sub-plan**, prepared in accordance with the Roads and Maritime Service's *QA Specification G10 – Control of Traffic and Traffic Control at Work Sites Manual* (2003) to manage disruptions to traffic movements as a result of construction traffic associated with the project. The sub-plan shall be developed in consultation with the relevant council and shall include, but not necessarily be limited to:
  - (i) identification of construction traffic routes and quantification of construction traffic volumes (including heavy vehicle/ spoil haulage) on these routes;
  - (ii) details of vehicle movements for construction sites and site compounds including parking, dedicated vehicle turning areas, and ingress and egress points;
  - (iii) details of potential impacts to traffic on the existing road network, including, intersection level of service and potential disruptions to pedestrians, public transport, parking, cyclists and property access;
  - (iv) details of temporary and interim traffic arrangements to address potential impacts;
  - (v) a response procedure for dealing with traffic incidents; and
  - (vi) mechanism for the monitoring, review and amendment of this sub-plan.
- (b) a **Construction Flora and Fauna Management Sub-plan** to detail how construction impacts on ecology will be minimised and managed. The sub-plan shall be developed in consultation with the OEH and DPI (Fishing and Aquaculture) and shall include, but not necessarily be limited to:
  - (i) details of pre-construction surveys undertaken by a suitably qualified and experienced ecologist to verify the construction boundaries/ footprint of the project based on detailed design and to confirm the vegetation to be cleared as part of the project (including tree hollows, threatened flora and fauna species and riparian vegetation);
  - (ii) updated sensitive area/ vegetation maps based on (i) above and previous survey work;
  - (iii) details of general work practices and mitigation measures to be implemented during construction to minimise impacts on native fauna and native vegetation (particularly threatened species and EECs) not proposed to be cleared as part of the project, including, but not necessarily limited to: fencing of sensitive areas, a protocol for the removal and relocation of fauna during clearing, engagement of a suitably qualified and experienced ecologist to identify locations where they would be present to oversee clearing activities and facilitate fauna rescues and re-location, clearing timing with consideration to breeding periods, measures for maintaining existing habitat features (such as bush rock and tree branches etc), seed harvesting and appropriate topsoil management, construction worker education, weed management (including controls to prevent the introduction or spread of *Phytophthora cinnamomi*), erosion and sediment control and progressive re-vegetation;
  - (iv) specific procedures to deal with EEC/ threatened species anticipated to be encountered within the project corridor including re-location, translocation and/or management and protection measures;
  - (v) a procedure for dealing with unexpected EEC/threatened species identified during construction including cessation of work and notification of the OEH,

- determination of appropriate mitigation measures in consultation with the OEH (including relevant re-location measures); and
- (vi) mechanism for the monitoring, review and amendment of this sub-plan;
- (c) a **Construction Noise and Vibration Management Sub-plan** to detail how construction noise and vibration impacts will be minimised and managed. The sub-plan shall be developed in consultation with the EPA and include, but not necessarily be limited to:
- (i) identification of nearest sensitive receptors and relevant construction noise and vibration goals applicable to the project;
  - (ii) identification of key noise and/or vibration generating construction activities (based on representative construction scenarios, including at ancillary facilities) that have the potential to impact on surrounding sensitive receivers including expected noise/ vibration levels;
  - (iii) identification of feasible and reasonable measures proposed to be implemented to minimise construction noise and vibration impacts (including construction traffic noise impacts);
  - (iv) procedures for dealing with out-of-hours works in accordance with condition C14, including procedures for notifying the Director-General concerning complaints received in relation to the extended hours approved under condition C14;
  - (v) procedures and mitigation measures to ensure relevant vibration and blasting criteria are achieved, including a suitable blast program, applicable buffer distances for vibration intensive works, use of low-vibration generating equipment/ vibration dampeners or alternative construction methodology, and pre- and post- construction dilapidation surveys of sensitive structures where blasting and/ or vibration is likely to result in damage to buildings and structures (including surveys being undertaken immediately following a monitored exceedence of the criteria);
  - (vi) procedures for notifying sensitive receivers of construction activities that are likely to affect their noise and vibration amenity, as well as procedures for dealing with and responding to noise complaints; and
  - (vii) a program for construction noise and vibration monitoring clearly indicating monitoring frequency, location, how the results of this monitoring would be recorded and, procedures to be followed where significant exceedences of relevant noise and vibration goals are detected;
- (d) a **Construction Soil and Water Quality Management Sub-plan** to manage surface and groundwater impacts during construction of the project. The sub-plan shall be developed in consultation with the OEH, EPA, DPI (Fishing and Aquaculture) and NOW and include, but not necessarily be limited to:
- (i) identification of potential sources of erosion and sedimentation, and water pollution (including those resulting from maintenance activities);
  - (ii) details of how construction activities would be managed and mitigated to minimise erosion and sedimentation consistent with condition C23;
  - (iii) where construction activities have the potential to impact on waterways or wetlands (through direct disturbance such as construction of waterway crossings or works in close proximity to waterways or wetlands), site specific mitigation measures to be implemented to minimise water quality, riparian and stream hydrology impacts as far as practicable, including measures to stabilise bed and/ or bank structures where feasible and reasonable, and to rehabilitate affected riparian vegetation to existing or better condition. The timing of rehabilitation of the waterways shall be identified in the sub-plan;

- (iv) a contingency plan, consistent with the *Acid Sulfate Soils Manual*, to deal with the unexpected discovery of actual or potential acid sulfate soils, including procedures for the investigation, handling, treatment and management of such soils and water seepage;
  - (v) a tannin leachate management protocol to manage the stockpiling of mulch and use of cleared vegetation and mulch filters for erosion and sediment control;
  - (vi) construction water quality monitoring requirements consistent with condition C24; and
  - (vii) a groundwater management strategy, including (but not necessarily limited to):
    - i. description and identification of groundwater resources (including depths of the water table and water quality) potentially affected by the project based on groundwater modelling undertaken in accordance with this consent;
    - ii. identification of surrounding licensed bores, dams or other water supplies and groundwater dependant ecosystems and potential groundwater risks associated with the construction of the project on these groundwater users and ecosystems;
    - iii. measures to manage identified impacts on water table, flow regimes and quality and to groundwater users and ecosystems;
    - iv. groundwater inflow control, handling, treatment and disposal methods; and
    - v. a detailed monitoring plan to identify monitoring methods, locations, frequency, duration and analysis requirements; and
- (e) a **Construction Heritage Management Sub-plan** to detail how construction impacts on Aboriginal and non-Aboriginal heritage will be avoided, minimised and managed. The sub-plan shall be prepared by an appropriately qualified heritage consultant(s) approved by the Director-General and the OEH (Aboriginal heritage) and be developed in consultation with registered Aboriginal stakeholders, and include, but not necessarily be limited to:
- (i) details of management measures and strategies for protection, excavation, salvage and archival recording, and/or conservation of heritage items and sites that will be directly or indirectly impacted during construction (including further archaeological investigations, salvage measures and/ or measures to protect unaffected sites during construction works in the vicinity);
  - (ii) procedures for dealing with previously unidentified non-Aboriginal and Aboriginal objects (excluding human remains) including cessation of works in the vicinity, assessment of the significance of the item(s) and determination of appropriate mitigation measures including when works can re-commence by a suitably qualified and experienced archaeologist in consultation with the Department, OEH and registered Aboriginal stakeholders and assessment of the consistency of any new non-Aboriginal and Aboriginal heritage impacts against the approved impacts of the project, and notification to the Department, and the OEH for Aboriginal heritage (in accordance with section 89A of the National Parks and Wildlife Act 1974) and the OEH for non-Aboriginal heritage (in accordance with Section 146 of the NSW Heritage Act 1977);
  - (iii) procedures for dealing with human remains, including cessation of works in the vicinity and notification of the Department, NSW Police Force, OEH and registered Aboriginal stakeholders and not



- recommencing any works in the area unless authorised by the Department and/ or the NSW Police Force); and
- (iv) induction processes (identification, protection) for construction personnel (including procedures for keeping records of inductions) and procedures for ongoing Aboriginal consultation and involvement.

## REPORTING

- D6. The Applicant shall develop and implement a **Compliance Tracking Program** to track compliance with the requirements of this consent. The Program shall be submitted to the Director-General for approval prior to the commencement of construction and relate to both the construction and operational phases of the project, and include, but not necessarily be limited to:
- (a) provisions for the notification of the Director-General of the commencement of works prior to the commencement of construction and prior to the commencement of operation of the project (including prior to each stage, where works are being staged);
  - (b) provisions for periodic reporting of compliance status against the requirements of this consent, including the Statement of Commitments, to the Director-General including at least one month prior to the commencement of construction and operation of the project and at other intervals during the construction and operation, as identified in the Program;
  - (c) a program for independent environmental auditing in accordance with *ISO 19011:2003 - Guidelines for Quality and/ or Environmental Management Systems Auditing*;
  - (d) mechanisms for reporting and recording incidents and actions taken in response to those incidents;
  - (e) provisions for reporting environmental incidents to the Director-General during construction and operation; and
  - (f) procedures for rectifying any non-compliance identified during environmental auditing, review of compliance or incident management.
- D7. The Applicant shall notify the Director-General and other relevant government agencies of any incident with actual or potential significant off-site environmental impacts on people or the biophysical environment as soon as practicable and within 24 hours after the occurrence of the incident. The Applicant shall provide full written details of the incident to the Director-General within seven days of the date on which the incident occurred.

Note: Where an incident also requires reporting to the NSW Heritage Council, the OEH and/or EPA the incident report prepared for the purposes of notifying the NSW Heritage Council, the OEH and/or EPA would meet this requirement.

- D8. The Applicant shall meet the requirements of the Director-General or relevant government agency (as determined by the Director-General) to address the cause or impact of any incident, as it relates to this consent, reported in accordance with this consent, within such period as the Director-General may require.

## AUDITING

### Operational Noise

- D9. Within 12 months of the commencement of operation of the project, or as otherwise agreed by the Director-General, the Applicant shall undertake operational noise monitoring to compare actual noise performance of the project against noise performance predicted in the review of noise mitigation measures required by this

consent, and prepare an **Operational Noise Report** to document this monitoring. The Report shall include, but not necessarily be limited to:

- (a) noise monitoring to assess compliance with the operational noise levels predicted in the review of operational noise mitigation measures required under consent and documents specified under condition A2 of this consent;
- (b) a review of the operational noise levels in terms of criteria and noise goals established in the *NSW Road Noise Policy* (EPA, 2011);
- (c) methodology, location and frequency of noise monitoring undertaken, including monitoring sites at which project noise levels are ascertained, with specific reference to locations indicative of impacts on sensitive receivers;
- (d) details of any complaints and enquiries received in relation to operational noise generated by the project between the date of commencement of operation and the date the report was prepared;
- (e) any required recalibrations of the noise model taking into consideration factors such as actual traffic numbers and proportions;
- (f) an assessment of the performance and effectiveness of applied noise mitigation measures together with a review and, if necessary, reassessment of all feasible and reasonable mitigation measures; and
- (g) identification of additional feasible and reasonable measures to those identified in the review of noise mitigation measures required by this consent that would be implemented with the objective of meeting the criteria outlined in the *NSW Road Noise Policy* (EPA, 2011), when these measures would be implemented and how their effectiveness would be measured and reported to the Director-General and the EPA.

The Applicant shall provide the Director-General and the EPA with a copy of the Operational Noise Report within 60 days of completing the operational noise monitoring referred to in (a) above or as otherwise agreed by the Director-General.

## **COMMUNITY INFORMATION AND INVOLVEMENT**

### **Provision of Electronic Information**

D10. Prior to the commencement of construction, the Applicant shall establish and maintain a new website, or dedicated pages within an existing website, for the provision of electronic information associated with the project. The Applicant shall, subject to confidentiality, publish and maintain up-to-date information on the website or dedicated pages including, but not necessarily limited to:

- (a) information on the current implementation status of the project;
- (b) a copy of the documents referred to under condition A2 of this consent, and any documentation supporting modifications to this consent that may be granted from time to time;
- (c) a copy of this consent and any future modification to this consent;
- (d) a copy of each relevant environmental approval, licence or permit required and obtained in relation to the project;
- (e) a copy of each current strategy, plan, program or other document required under this consent; and
- (f) the outcomes of compliance tracking in accordance with the requirements of condition D6.

### **Complaints and Enquiries Procedure**

D11. Prior to the commencement of construction, the Applicant shall ensure that the following are available for community complaints and enquiries during the construction period:

- (a) a 24 hour telephone number on which complaints and enquiries about construction and operation activities may be registered;
- (b) a postal address to which written complaints and enquiries may be sent; and

- (c) an email address to which electronic complaints and enquiries may be transmitted.

The telephone number, the postal address and the email address shall be published in a newspaper circulating in the local area prior to the commencement of construction and prior to the commencement of project operation. The above details shall also be provided on the website (or dedicated pages) required by this consent.

- D12. The Applicant shall prepare and implement a Construction Complaints Management System consistent with AS 4269 Complaints Handling prior to the commencement of construction activities and must maintain the System for the duration of construction activities.

Information on all complaints received, including the means by which they were addressed and whether resolution was reached and whether mediation was required or used, shall be maintained by the Applicant and included in a Complaints Register. The information contained within the System shall be made available to the Director-General on request.

### **Community Involvement**

- D13. The Applicant shall prepare and implement a **Community Communication Strategy** for the project. This Strategy shall be designed to provide mechanisms to facilitate communication between the Applicant, the Contractor, the Environmental Representative, the relevant council and the local community (broader and local stakeholders) on the construction and environmental management of the project. The Strategy shall include, but not necessarily be limited to:

- (a) identification of stakeholders to be consulted as part of the Strategy, including affected and adjoining landowners;
- (b) procedures and mechanisms for the regular distribution of information to stakeholders on the progress of the project and matters associated with environmental management;
- (c) procedures and mechanisms through which stakeholders can discuss or provide feedback to the Applicant and/ or Environmental Representative in relation to the environmental management and delivery of the project;
- (d) procedures and mechanisms through which the Applicant can respond to enquires or feedback from stakeholders in relation to the environmental management and delivery of the project; and
- (e) procedures and mechanisms that would be implemented to resolve issues/ disputes that may arise between parties on the matters relating to environmental management and the delivery of the project. This may include the use of an appropriately qualified and experienced independent mediator.
- (f) consultation to be undertaken for the bridge naming process.

Key issues that should be addressed in the Community Communication Strategy should include (but not necessarily be limited to):

- (i) traffic management (including property access, pedestrian access);
- (ii) heritage matters;
- (iii) landscaping/urban design matters;
- (iv) construction activities; and
- (v) noise and vibration mitigation and management.

The Applicant shall maintain and implement the Strategy throughout construction of the project. The Strategy shall be approved by the Director-General prior to the commencement of construction.

## **ENVIRONMENTAL REPRESENTATIVE**

D14. Prior to the commencement of construction, or as otherwise agreed by the Director-General, the Applicant shall nominate for the approval of the Director-General a suitably qualified and experienced Environment Representative(s) that is independent of the design and construction personnel. The Applicant shall employ the Environment Representative(s) for the duration of construction, or as otherwise agreed by the Director-General. The Environment Representative(s) shall:

- (a) be the principal point of advice in relation to the environmental performance of the SSI;
- (b) monitor the implementation of environmental management plans and monitoring programs required under this consent and advise the Applicant upon the achievement of these plans/ programs;
- (c) have responsibility for considering and advising the Applicant on matters specified in the conditions of this consent, and other licences and approvals related to the environmental performance and impacts of the SSI;
- (d) ensure that environmental auditing is undertaken in accordance with the Applicant's Environmental Management System(s);
- (e) be given the authority to approve/ reject minor amendments to the CEMP. What constitutes a "minor" amendment shall be clearly explained in the CEMP required under this consent;
- (f) be given the authority and independence to require reasonable steps be taken to avoid or minimise unintended or adverse environmental impacts, and failing the effectiveness of such steps, to direct that relevant actions be ceased immediately should an adverse impact on the environment be likely to occur; and
- (g) be consulted in responding to the community concerning the environmental performance of the SSI where the resolution of points of conflict between the Applicant and the community is required.

## **OPERATIONAL ENVIRONMENT MANAGEMENT SYSTEM**

D15. Prior to the commencement of operation, the Applicant shall incorporate the project into its existing environmental management systems.

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## APPENDIX 1 LISTED HERITAGE ITEMS

Adapted from Table 3: Summary of heritage listings (*Windsor Bridge Replacement Project Environmental Impact Statement Volume 2 — Working Paper 1: Windsor Bridge Replacement Project Historic Heritage Assessment & Statement of Heritage Impact*)

**Table 1 Listed heritage items**

	Register number	Name	Address; Lot/DP
1	SHR00126 Hawkesbury LEP I00126, C4	Thompson Square	Thompson Square including Bridge Street, Old Bridge Street, The Terrace, and George Street as well as the surrounding buildings identified on the SHR listing for Thompson Square and the separately listed buildings
2	SHR00126 Hawkesbury LEP C4	Thompson Square – upper parkland area	Thompson Square, Lot 7007 DP 1029964.
3	SHR00126 Hawkesbury LEP C4	Thompson Square – lower parkland area	1 Bridge Road, Lot 345 DP 752061. Also addressed as 3 Old Bridge Road and Thompson Square.
4	SHR00126 Hawkesbury LEP Part of I00126, C4	The Doctors House	1-3 Thompson Square; Lot B, DP 161643 and Lot 1, DP 196531
5	SHR00005 Hawkesbury LEP Part of I00126, C4	House and Outbuilding	No. 5 Thompson Square; Lot 1, DP 7450356
6	SHR00126 Hawkesbury LEP Part of I00126, C4	Hawkesbury Museum and Tourist Information Centre	No. 7 Thompson Square; Lot 1, DP 60716
7	SHR00041 Hawkesbury LEP Part of I00126, C4	Macquarie Arms Hotel	81 George Street (also addressed as Thompson Square); Lot 1, DP 864088;
8	SHR00126 Hawkesbury LEP Part of I00126, C4	House	No. 4 Bridge Street; Lot 10, DP 666894
9	SHR00126 Hawkesbury LEP Part of I00126, C4	House	No. 6 Bridge (also addressed as No. 8 Bridge Street); Lot 1, DP 995391
10	SHR00126 Hawkesbury LEP Part of I00126, C4	Building	No.10 Bridge Street; Part Lot A, DP 381403
11	SHR00126 Hawkesbury LEP Part of I00126, C4	Former School of Arts building	No. 14 Bridge Street; Lot 1, DP 136637; Lots 1 and 2, DP 1127620
12	LEP I147	Cottage	No. 20 Bridge Street; Part Lot 2, DP 420926
13	SHR00126 Hawkesbury LEP Part of I00126, C4	Cottage	No. 17 Bridge Street (also addressed as 68 George Street); Lot 1, DP 555685
14	SHR00126 Hawkesbury LEP Part of I00126, C4	Shops	Nos. 62 – 68 George Street; Lots 1 and 2, DP 555685.
15	SHR00126 Hawkesbury LEP Part of I00126, C4	Shops	Nos. 70 – 72 George Street (also addressed as 70 George Street); Lot 1, DP 1011887
16	SHR00126 Hawkesbury LEP Part of I00126, C4	AC Stern Building	No. 74 George Street; Lot 1, DP 87241

Register number	Name	Address; Lot/DP
17	SHR00126 Hawkesbury LEP Part of I00126, C4 LEP 273	Shops Nos. 80-82 George Street; Lots 10 and 11, DP 630209
18	SHR00126 (Lot 2 only) Hawkesbury LEP Part of I00126, C4 LEP 273	Shops 82 -88 or 84-88 George Street comprising of 2 lots: · Lot 2 DP 233054 · Lot 1 DP 233433
19	Hawkesbury LEP Part of I00126, C4	Shops 92 George Street; Lot 1 DP 730435
20	S.170 RTA 4309589 LEP I276	Windsor Bridge Variously addressed as Wilberforce Road, Hawkesbury River, Bridge Street, MR 182 and Bridge No.415.
21	I274	Bridgeview 27 Wilberforce Road, Freemans Reach; Lot A DP 370895
22	SHR 01843 LEP I172	Government Cottage 41 George Street, Windsor; Lot 1, 41 George Street, Windsor; Lot 1,

## **APPENDIX 2**

## **STRATEGIC CONSERVATION MANAGEMENT PLAN STUDY AREA**



## Strategic Conservation Management Plan study area

