

# Infrastructure approval

## Section 115ZB of the *Environmental Planning & Assessment Act 1979*

I grant approval to the State significant infrastructure application referred to in schedule 1, subject to the conditions in schedule 2.

These conditions are required to:

- prevent, minimise, and/or offset adverse environmental impacts including economic and social 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 Rob Stokes MP  
Minister for Planning

Sydney

25<sup>th</sup> February,

2016

### SCHEDULE 1

Application no.:	SSI-6622
Proponent:	Roads and Maritime Services
Approval Authority:	Minister for Planning
Land:	Generally located in the vicinity of Warringah Road, Allambie Road, Frenchs Forest Road, Forest Way and Wakehurst Parkway at Frenchs Forest
State Significant Infrastructure:	<p><b>Northern Beaches Hospital Road Connectivity and Network Enhancement – Stage 2</b></p> <ul style="list-style-type: none"><li>▪ provision of four through lanes on Warringah Road (two lanes in each direction) within a 1.3 km grade-separated open slot road;</li><li>▪ widening of Warringah Road from west of Fitzpatrick Avenue East through to the west of Allambie Road;</li><li>▪ construction of surface level bridges over the slot road at the intersections of Warringah Road with Forest Way, Hilmer Street, and Wakehurst Parkway;</li><li>▪ upgrades and adjustments to the existing intersections of Warringah Road with Fitzpatrick Avenue East, Rodborough Road, and Allambie Road;</li><li>▪ widening of Wakehurst Parkway between the intersection of Warringah Road and south of Aquatic Drive;</li><li>▪ provision of a new intersection at Aquatic Drive and Wakehurst Parkway;</li><li>▪ provision of new shared pedestrian and cyclist bridges crossing Warringah Road west of the intersection with Forest Way (involving replacement of the existing crossing), and also in the vicinity of Hilmer Street;</li><li>▪ shared paths and footpaths along sections of Warringah Road, Wakehurst Parkway, Forest Way, Aquatic Drive and Allambie Road; and</li><li>▪ drainage works, landscaping, and ancillary works for construction such as compound sites.</li></ul>
Staged State Significant Infrastructure:	The proposal is for a State significant infrastructure by virtue of Section 115ZD of the <i>Environmental Planning and Assessment Act 1979</i> .

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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.
ARI	Average Recurrence Interval: The average, or expected, value of the periods between exceedances of a given rainfall total accumulated over a given duration.
Conditions of approval	The Minister's conditions of approval for the SSI.
Construction	Includes all work in respect of the SSI other than: <ul style="list-style-type: none"> <li>a) survey works including general alignment survey and survey controls (including installation of global positioning system (GPS)), repeater stations, survey of existing and future utilities or building/road dilapidation surveys;</li> <li>b) further investigations including investigative drilling, excavation or salvage; remediation of contaminated sites or work undertaken in accordance with a strategy or salvage operation required by the conditions of this approval;</li> <li>c) minor clearing or translocation of native vegetation, as identified in the Environmental Impact Statement, Submissions Report, or in accordance with approved strategies, plans, programs and other documents required by the conditions of this approval;</li> <li>d) establishing and operating ancillary facilities/construction work sites (in approved locations or locations meeting the criteria identified in the conditions of approval), or where criteria are not fully satisfied, those ancillary facility sites which have been assessed against criteria, and approved in accordance with condition D26. This includes the establishment of ancillary facilities access roads and the provision of services to the facility and installation of erosion and sedimentation controls;</li> <li>e) installation of environmental impact mitigation measures (including erosion and sedimentation control, temporary exclusion fencing for sensitive areas, and at-house acoustic treatment) and measures identified in approved strategies, plans, programs and other documents required by the conditions of this approval;</li> <li>f) property acquisition adjustment works including the installation of property fencing, demolition and removal of buildings;</li> <li>g) other activities determined by the Environmental Representative to have minimal environmental impact (e.g. minor access roads, minor adjustments to services/ utilities, temporary relocation of pedestrian and cycle paths and property access, etc); and</li> <li>h) maintenance.</li> </ul> <p><i>Note:</i></p> <p><i>Work where heritage, threatened species, populations or endangered ecological communities would be affected that work is classified as construction, unless otherwise approved by the Secretary in consultation with the Office of Environment and Heritage.</i></p>
Council	Warringah Council.
DEC	Department of Education and Communities.
DECCW	The former Department of Environment, Climate Change and Water.
Department, the	Department of Planning and Environment.
DPI Water	Division of Water within the NSW Department of Primary Industries.
EEC	Endangered ecological community.
Environmental Impact Statement (EIS)	<i>Northern Beaches Hospital Connectivity and Network Enhancement Project – Stage 2 - Environmental Impact Statement, prepared by SMEC Australia and dated July 2015.</i>

Environmental Representative (ER)	Refer to Condition D1.
EPA	Environment Protection Authority.
EPL	Environment Protection Licence under the <i>Protection of the Environment Operations Act 1997</i> .
Feasible and Reasonable	<p>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 expectations and nature and extent of potential improvements.</p> <p>Where requested by the Secretary, the Proponent must provide evidence as to how feasible and reasonable measures were considered and taken into account.</p> <p><i>Note:</i></p> <p><i>Community expectations must be taken into account but it is not expected that specific community consultation will be required in every instance.</i></p>
Health Infrastructure	NSW Health Infrastructure within the NSW Ministry of Health.
Heritage	Encompasses both Aboriginal and non-Aboriginal 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> .
Minister, the	Minister for Planning.
NBH	Northern Beaches Hospital.
NML	Noise management level.
OEH	Office of the Environment and Heritage.
Operation	Means the operation of the SSI, but does not include commissioning trials of equipment or temporary use of parts of the SSI during construction.
Proponent	Roads and Maritime Services (RMS).
Publicly available	Available for inspection by a member of the general public (for example available on an internet website).
Secretary	Secretary of the Department of Planning and Environment.
Secretary's approval, agreement or satisfaction	<p>A written approval from the Secretary (or delegate/nominee).</p> <p>Where the Secretary's approval, agreement or satisfaction is required under a condition of this approval, the Secretary will endeavour to determine the request within one month of its receipt. The Secretary may ask for additional information if the request is considered incomplete. When further information is requested, the time taken for the Proponent to respond in writing will be added to the one month period.</p>
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	Means the Stage 2 State significant infrastructure approved under this approval and as generally described in Schedule 1 (SSI-6622).
SSI boundary	The boundary of the SSI as defined in the documents referred to in condition A1.
SSI Footprint	That area within the SSI boundary physically impacted by construction activities.

Standard Construction Hours	<p>The standard construction hours are:</p> <ul style="list-style-type: none"> <li>• 7.00am to 6.00pm Monday to Friday;</li> <li>• 8.00am to 1.00pm Saturdays; and</li> <li>• at no time on Sundays or public holidays.</li> </ul>
Stage 1 Project	<p>Activities carried out under the State significant infrastructure approval SSI 6434, approved on 29 June 2015 by the Executive Director, Infrastructure and Industry Assessments</p>
Submissions Report	<p><i>Northern Beaches Hospital Road Connectivity and Network Enhancement Project - Stage 2 Submissions Report</i> – prepared by SMEC Australia and dated November 2015</p>

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**SCHEDULE 2****PART A****ADMINISTRATIVE CONDITIONS****OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT****TERMS OF APPROVAL**

- A1 The Proponent must carry out the SSI in accordance with the conditions of this approval and generally in accordance with the:
- (a) State significant infrastructure application SSI-6622;
  - (b) Environmental Impact Statement; and
  - (c) Submissions Report.
- A2 In the event of an inconsistency between:
- (a) the conditions of this approval and any document listed from condition A1(a) to A1(c) inclusive, the conditions of this approval prevail to the extent of the inconsistency; and
  - (b) any document listed from condition A1(a) to A1(c) inclusive, and any other document listed from condition A1(a) to A1(c) inclusive, the most recent document prevails to the extent of the inconsistency.
- A3 The Proponent must comply with any reasonable requirement(s) of the Secretary arising from the Department's assessment of:
- (a) any reports, plans or correspondence that are submitted in accordance with this approval; and
  - (b) the implementation of any actions or measures contained within these reports, plans or correspondence.

**LIMITS OF APPROVAL**

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

**STATUTORY REQUIREMENTS**

- A5 The Proponent must ensure that all licences, permits and approvals are obtained as required by law and maintained as required throughout the life of the SSI. No condition of this approval removes the obligation for the Proponent to obtain, renew or comply with such licences, permits or approvals.

**STAGING**

- A6 The Proponent may elect to construct and/ or operate the SSI in stages. Where staging is proposed, the Proponent must submit a **Staging Report** to the Secretary prior to the commencement of construction of the first proposed stage. The Staging Report must 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 approval, which would apply to each stage and how these will be complied with across and between the stages of the SSI.

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

- A7 The Proponent may revise any documentation prepared for the Stage 1 Project to incorporate the requirements of this SSI Approval.

**SUBMISSION OF ANY STRATEGY, PLAN OR PROGRAM**

- A8 The Proponent must ensure that all plans, sub-plans and other management documents required by the conditions of this approval and relevant to each stage (as identified in the Staging Report) are submitted to the Secretary no later than one month prior to the commencement of the relevant stages, unless otherwise agreed by the Secretary.

**Notes:**

- While any strategy, plan or program may be submitted on a progressive basis, the Proponent will need to ensure that the existing operations on site are covered by suitable strategies, plans or programs at all times; and
- If the submission of any strategy, plan or program is to be staged, then the relevant strategy, plan or program must clearly describe the specific stage to which the strategy, plan or program applies,

*the relationship of this stage to any future stages, and the trigger for updating the strategy, plan or program.*

## COMPLIANCE

- A9 The Proponent must ensure that employees, contractors and sub-contractors are aware of, and comply with, the requirements of the conditions of this approval relevant to their respective activities.
- A10 The Proponent will be responsible for any breaches of the conditions of approval resulting from the actions of all persons that it invites onto the site, including contractors, sub-contractors and visitors.

### Compliance Tracking Program

- A11 The Proponent must develop and implement a **Compliance Tracking Program** to track compliance with the requirements of this approval. The Program must be submitted to the Secretary for approval prior to the commencement of construction and operate for a minimum of 18 months following commencement of operation.

The Program must include, but not necessarily be limited to:

- (a) provisions for the notification of the Secretary prior to the commencement of construction and prior to the commencement of operation of the SSI (including prior to each stage, where works are being staged);
- (b) provisions for periodic review of the compliance status of the SSI against the requirements of this approval;
- (c) provisions for periodic reporting of compliance status to the Secretary, including but not limited to:
  - (i) a **Pre-Construction Compliance Report** prior to the commencement of construction;
  - (ii) **Construction Compliance Reports**, at six months intervals following commencement of construction and subsequent submission timeframes to be directed by the Secretary if necessary, following review of the Reports for the duration of construction; and
  - (iii) a **Pre-Operation Compliance Report** prior to the commencement of operation;
- (d) a program for independent environmental auditing in accordance with *AS/NZS ISO 19011:2014 - Guidelines for Auditing Management Systems*;
- (e) mechanisms for recording environmental incidents during construction and actions taken in response to those incidents;
- (f) provisions for reporting environmental incidents to the Secretary during construction, in accordance with conditions A12 and A13;
- (g) procedures for rectifying any non-compliance identified during environmental auditing, review of compliance or incident management; and
- (h) provisions for ensuring all employees, contractors and sub-contractors are aware of, and comply with, the conditions of this approval relevant to their respective activities.

## INCIDENT REPORTING

- A12 The Proponent must notify the EPA in relation to any pollution incident in carrying out the SSI as required by the *Protection of the Environment (Operations) Act 1997* as required by that Act. The Proponent must provide the Secretary with a record of any such notification.
- A13 The Proponent must notify the Secretary (using the contact name and phone number notified by the Department from time to time) of any incident (other than those relating to the *Protection of the Environment (Operations) Act 1997*) with actual or potential significant off-site impacts on people or the biophysical environment within 24 hours of becoming aware of the incident on weekdays, or the following business day on weekends. The Proponent must provide full written details of the incident to the Secretary within seven days of the date on which the incident occurred.
- A14 The Proponent must meet the requirements of the Secretary or relevant public authority (as determined by the Secretary) to address the cause or impact of any incident, as it relates to this approval, reported in accordance with condition A13, within such period as the Secretary may require.

## PART B

## ENVIRONMENTAL PERFORMANCE

## SOIL, WATER QUALITY AND HYDROLOGY

## Hydrology and Flooding

- B1 The Proponent must design and construct the road drainage system generally as described in the documents referred to in condition A1, to achieve a minimum:
- (a) 10 year ARI hydrologic standard for surface roads; and
  - (b) 100 year ARI for unrelieved sag sections of the slot road for pavement surface drainage system, and 10 year ARI for longitudinal drainage system, unless otherwise agreed by the Secretary.
- B2 The proponent must implement all feasible and reasonable measures to limit operational groundwater inflows into the slot road to no greater than one litre per second across any given kilometre.
- B3 The Proponent must provide all relevant information to 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 SSI.
- B4 Prior to the commencement of operation, the Proponent must commission a **Wakehurst Parkway Flooding Study** which reviews the flooding characteristics of the Wakehurst Parkway between the NBH and the Sydney Academy of Sport and Recreation, in the Middle Creek catchment. The Study must be prepared in consultation with relevant Councils and:
- (a) consider previous flood studies for the study area;
  - (b) identify the locations on the Wakehurst Parkway which are likely to experience flooding during storm events and estimate the frequency of flood events at these locations;
  - (c) investigate options to improve stormwater management to minimise the frequency and duration of road closures due to flooding during relevant storm events;
  - (d) recommend reasonable and feasible measures to manage flooding impacts; and
  - (e) include a strategy for implementing the recommendation of the study.

## Water Quality Management

- B5 The Proponent must prepare and implement a **Water Management Plan (WMP)** for the SSI to ensure that the SSI is designed, constructed and operated to achieve the water quality and flow objectives of this approval. The WMP must include, but not be limited to:
- (a) the identification of works and activities during construction and operation of the SSI, including emergencies and spill events, that have the potential to impact on surface water quality and flows of potentially affected waterways and intercept groundwater;
  - (b) a description of the detailed designs and/or design principles for the SSI taking into consideration the water quality objectives of the WMP, and water sensitive urban design principles consistent with the *Guidelines for Riparian Corridors on Waterfront Land (DPI 2012)*, *Warringah Council Water Management Policy (2015)* and the *Warringah Council Creek Management Study 2004*;
  - (c) the identification and estimation of the type and quantity of pollutants that may be introduced into the water catchment by source and discharge point;
  - (d) a detailed description of the watercourses and groundwater systems that could potentially be affected by the SSI, including:
    - i) currently available data on existing water quality and flows in receiving waters, groundwater levels, yield and quality in the region, and privately-owned groundwater bores, that could be affected by the project; and/or
    - ii) a description of the procedures to obtain this information prior to the commencement of the relevant activities identified in condition B5(a);
  - (e) surface water and groundwater assessment criteria, including water quality objectives and trigger levels for investigating any potentially adverse impacts of the SSI, including consideration of:
    - i) *Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2000* (Australia and New Zealand Environment Conservation Council, 2000);
    - ii) *Warringah Council's PL850 – Water Management Policy (2015)*; and
    - iii) the *Interim Water Quality Objectives Design Guidelines* in Appendix F of the *Warringah Council Creek Management Study 2004*;
  - (f) a program to monitor and report on the potential surface water and groundwater impacts of the SSI, which includes a description of:
    - i) representative monitoring locations;
    - ii) the relevant analytes and parameters to monitor;



- iii) duration and frequency of monitoring; and
- iv) sampling distribution;
- (g) identification of measures to ensure natural flows are maintained, where feasible and reasonable, within local watercourses potentially affected by the project;
- (h) a plan to respond to any exceedances of the performance criteria, and monitor and/or mitigate any adverse surface water and/or groundwater impacts of the SSI;
- (i) a protocol for the periodic review of the plan, including the criteria to determine the need for ongoing monitoring; and
- (j) procedures for reporting monitoring results to the Secretary, EPA, DPI Water and Council.

The WMP must be prepared or reviewed by a suitably qualified expert in consultation with DPI Water and Council, and approved by the Secretary prior to the commencement of construction, unless otherwise agreed by the Secretary.

The WMP must be implemented for a minimum of three years following the commencement of operation, unless otherwise agreed by the Secretary. Any request to discontinue the implementation of the WMP must be supported by advice from an independent expert confirming that the criteria established by condition B5(i) are met.

The Proponent must provide a copy of the approved WMP, and any approved revisions to the plan, to the EPA, DPI Water and Council once approved. The results of all monitoring are to be made publicly available within 4 weeks of the completion of each monitoring period.

#### Land Contamination

- B6 Prior to the commencement of site preparation and excavation activities, or as otherwise agreed by the Secretary, in areas identified with contamination above investigation levels as described in the *Phase 2 Contamination Assessment: Northern Beaches Hospital – Stage 2 Network Enhancement Works, URS, June 2015*, the Proponent must prepare and implement a **Soil Contamination Report**. The report must be prepared by a suitably qualified person(s) in accordance with the requirements of the *Contaminated Land Management Act 1997* and associated guidelines. The report must detail, where relevant, whether the soil is suitable (for the intended land use) or can be made suitable through remediation and/or outline the potential contamination risks from the project to human health and receiving waterways.

For land to be disturbed by the SSI, where the investigations identify that the site is suitable for the intended operations and that there is no need for a specific remediation strategy, measures to identify, handle and manage potential contaminated soils and materials and groundwater must be identified in the report and incorporated into the Construction Environmental Management Plan required under conditions D27 and D28. Should a remediation strategy be required, the report must include a remediation plan for addressing the disturbed area, and how the environmental and human health risks will be managed during the disturbance, remediation and/or removal of contaminated soil or groundwater.

If required, the report must be accompanied by a Site Audit Statement(s), prepared by an accredited Site Auditor under the *Contaminated Land Management Act 1997*, verifying that the disturbed area has been or can be remediated to a standard consistent with the intended land use. A final Site Audit Statement(s), if required, must be prepared by an accredited Site Auditor, certifying that the contaminated disturbed areas have been remediated to a standard consistent with the intended land use and must be submitted to the Secretary and Council prior to operation of the site.

#### HERITAGE

- B7 The Proponent must implement reasonable and feasible measures to avoid and/or minimise impacts to heritage items within the SSI footprint. Where impacts during construction of the SSI are unavoidable, works must be undertaken in accordance with the strategy outlined in the Construction Heritage Management Plan required by condition D28(e).
- B8 The Proponent must not destroy, modify or otherwise physically affect any heritage items outside the SSI footprint, unless otherwise agreed by the Secretary following consultation with the OEH.
- B9 Measures to protect heritage sites near or adjacent to the SSI during construction must be detailed in the Construction Heritage Management Plan required under condition D28(e).

#### TRANSPORT AND ACCESS

- B10 Access to all properties must be maintained during construction and operation, where feasible and reasonable, unless otherwise agreed by the relevant property owner or occupier. Any access physically affected by the SSI must be reinstated to at least an equivalent standard, unless agreed with by the property owner.

- B11 In relation to new or modified local road, NBH access, parking, public transport, pedestrian and cycle infrastructure, the SSI must be designed and implemented:
- (a) in consultation with the Council, DEC, and Health Infrastructure and The Forest High School Working Group;
  - (b) to take into consideration existing and future demand, road safety, local access and traffic network performance, including meeting performance levels identified in the documents listed in condition A1;
  - (c) facilitate a high level of pedestrian accessibility and safety, including safe access to and from the NBH and the provision of pedestrian crossings on all four legs of intersections, or suitable alternative, where feasible and reasonable;
  - (d) to be compatible with local and regional cycle plans and to ensure that on and off road cycle infrastructure is delivered to provide seamless connectivity (including between Stage 1 and Stage 2); and
  - (e) to meet relevant design, engineering and safety standards and guidelines, including *Austrroads Guide to Traffic Engineering Practice*.
- B12 An independent road safety audit(s) is to be undertaken by an appropriately qualified and experienced person during detailed design to assess the safety performance of the subject road network and associated facilities and to ensure that they meet the requirements of condition B11(e). Audit findings and recommendations must be actioned prior to construction of that permanent design element and must be made available to the Secretary on request. The implementation of the audit findings must be reviewed by the person/s responsible for the audit, or suitable alternative person/s, prior to operation of the SSI.

### BIODIVERSITY

- B13 The Proponent must develop and implement a Wildlife Connectivity and Road Risk Minimisation Strategy in consultation with OEH. The Strategy must describe the measures to be implemented during the design, construction and operation of the SSI to mitigate fauna connectivity impacts and wildlife road kill from the SSI where reasonable and feasible.

### Ecological Monitoring

- B14 The proponent must develop and implement an **Ecological Monitoring Program** to monitor the effectiveness of project design and biodiversity mitigation measures implemented as part of the project. The program must be developed by a suitably qualified and experienced ecologist in consultation with the OEH and Council, and must include but not necessarily be limited to:
- (a) an adaptive monitoring program to assess the effectiveness of design and mitigation measures and recommend amendment to the measures if necessary. The monitoring program must nominate performance parameters and criteria against which the effectiveness of these measures will be evaluated, including but not limited to specific species such as the Long Nosed Bandicoot;
  - (b) mechanisms for developing additional monitoring protocols to assess the effectiveness of any additional mitigation measures implemented to address additional impacts in the case of design amendments or unexpected threatened species finds during construction (where these additional impacts are generally consistent with the biodiversity impacts identified for the project in the documents listed under condition A1);
  - (c) monitoring during construction (for construction-related impacts) and from opening of the project to traffic (for operation/ongoing impacts) until such time as the effectiveness of mitigation measures can be demonstrated to have been achieved over a minimum of three successive monitoring periods after opening of the project to traffic, unless otherwise agreed by the Secretary. The monitoring period may be reduced with the agreement of the Secretary in consultation with OEH, depending on the outcomes of the monitoring;
  - (d) provision for the assessment of the data, including data obtained under the Water Management Plan in condition B5, to identify changes to habitat usage and whether this can be directly attributed to the project including, but not limited to, the impacts on the Red-crowned Toadlet as a result of any drainage system redesign and peak flow diversion into or away from ESU 8 and ESU 12 and Curl Curl Creek;
  - (e) details of contingency measures that would be implemented in the event of changes to habitat usage patterns directly attributable to the construction or operation of the project; and
  - (f) provision for annual reporting of monitoring results to the Secretary and OEH, or as otherwise agreed by those agencies.

The Program must be submitted to the Secretary for approval no later than six (6) weeks prior to the commencement of construction that would result in the disturbance of native vegetation, unless otherwise agreed by the Secretary.

**Biodiversity Offset Package**

**B15** The Proponent must develop and implement a **Biodiversity Offset Package** for the SSI. The Package must detail how the ecological values lost as a result of the SSI will be offset. The Package must be consistent with the *NSW Principles for the Use of Biodiversity Offsets in NSW* (DECCW, 2008) and align, as far as is feasible and reasonable, with the Biodiversity Offset Strategy requirements of the *NSW Biodiversity Offsets Policy for Major Projects*, OEH, 2014 and developed in consultation with and to meet the requirements of OEH unless otherwise agreed by the Secretary.

The Package must include, but not necessarily be limited to:

- (a) the identification of the extent and types of habitat that would be lost or degraded as a result of the final design of the SSI;
- (b) the objectives and biodiversity outcomes to be achieved;
- (c) the final suite of the biodiversity offset measures selected and secured in accordance with the Biodiversity Offsets Strategy outlined in the EIS for the SSI; and
- (d) the management and monitoring requirements (where a biobanking agreement is not being entered into) for compensatory habitat works and other biodiversity offset measures proposed to ensure the outcomes of the package are achieved, including:
  - i) the monitoring of the condition of species and ecological communities at offset (including translocation) locations;
  - ii) the methodology for the monitoring program(s), including the number and location of offset monitoring sites, and the sampling frequency at these sites;
  - iii) provisions for the annual reporting of the monitoring results for a set period of time as determined in consultation with the OEH; and
  - iv) timing and responsibilities for the implementation of the provisions of the Package.

Where feasible and reasonable, the Biodiversity Offset Package must be designed and implemented to include the offset requirements for the Stage 1 Project and with the objectives of securing areas containing Duffys Forest Ecological Community and improving connectivity in vegetation adjacent to the area impacted by the project.

Where land offsets cannot solely achieve compensation for the loss of habitat, additional measures must be provided to collectively deliver an improved or maintained biodiversity outcome for the region.

Where monitoring referred to in condition B14 indicates that biodiversity outcomes are not being achieved, remedial actions must be undertaken to ensure that the objectives of the Biodiversity Offset Package are achieved.

The Package must be submitted to the Secretary for approval within 12 months of the commencement of construction, unless otherwise agreed by the Secretary.

**WASTE MANAGEMENT**

- B16** Waste generated outside the site must not be received at the site for storage, treatment, processing, reprocessing, or disposal on the site, except as expressly permitted by a licence or waste exemption under the *Protection of the Environment Operations Act 1997*, if such a licence is required in relation to that waste.
- B17** The reuse and/or recycling of waste materials generated on site must be maximised as far as practicable, to minimise the need for treatment or disposal of those materials off site.
- B18** All liquid and/or non-liquid waste generated on the site must be assessed and classified in accordance with *Waste Classification Guidelines* (Department of Environment, Climate Change and Water, 2009).
- B19** All waste materials removed from the SSI site must only be directed to a licensed waste management facility or premises lawfully permitted to accept the materials.

**UTILITIES AND SERVICES**

- B20** Utilities, services and other infrastructure potentially affected by construction and operation of the SSI must be identified prior to construction to determine requirements for access to, diversion, protection, and/or support. Consultation with Council and the relevant owner and/or provider of services that are likely to be affected by the SSI must be undertaken to make suitable arrangements for access to, diversion, relocation, protection, and/or support of the affected infrastructure as required. All works must meet the safety standards, environmental safeguards and other related requirements of the service provider. The cost of any such arrangements is to be borne by the Proponent, unless otherwise agreed by the service provider.

The Proponent must ensure that all land impacted as a result of utility adjustments or relocations is restored in consultation with Council and to a standard necessary to facilitate safe pedestrian, cyclist and vehicle usage.

- B21 Relocation of utilities, services and other infrastructure must not compromise the delivery of transport infrastructure, including cycle ways.

#### URBAN DESIGN AND LANDSCAPE

- B22 The Proponent, in consultation with the Council, must where feasible and reasonable, implement the urban design objectives and principles, giving consideration to the design strategies and mitigation measures identified in *Northern Beaches Hospital Connectivity and Network Enhancements: Stage 2 Urban Design Report and Landscape Character and Visual Impact Assessment, Spackman Mossop and Michaels, July 2015*. Where an urban design principle or objective is not considered feasible or reasonable, this will be clearly demonstrated to the Secretary in conjunction with the submission of the **Urban Design and Landscape Plan** required by condition B24.
- B23 The use of visible shotcrete for retaining walls and other structures is not permitted, unless approved by the Secretary through the **Urban Design and Landscape Plan** required by condition B24.
- B24 Prior to the commencement of permanent built works and/ or landscaping, or as otherwise agreed by the Secretary, an **Urban Design and Landscape Plan** must be prepared and implemented (following approval) for the SSI. The Plan must be prepared by suitably qualified and experienced person(s), in consultation with the Council, Health Infrastructure, educational facilities and the community, for the approval of the Secretary. The Plan must present an integrated urban and landscape design for the SSI, and must include, but not necessarily be limited to:
- (a) identification of design objectives, principles and standards based on:
    - i) local environmental values;
    - ii) urban design context;
    - iii) sustainable design and maintenance;
    - iv) community safety, amenity and privacy, including 'safer by design' and crime prevention through environment design principles where relevant;
    - v) relevant design standards and guidelines (including consideration of Council standards and guidelines where feasible and reasonable); and
    - vi) the requirements of condition B22;
  - (a) the location of existing vegetation, a description of disturbed areas (including compounds) and details of the strategies to progressively revegetate these areas;
  - (b) proposed landscaping (including use of endemic and advanced tree species where practicable). Details of species to be replanted/ revegetated must be provided, including their appropriateness to the area and habitat for threatened species (including rehabilitation of riparian and Duffy's Forest ecological community vegetation);
  - (c) the provision of a **Seed Collection and Revegetation Strategy**, to ensure seed from flora within Duffy's Forest ecological community, where feasible and reasonable, are collected and species identified and used to progressively rehabilitate, regenerate and/ or revegetate these areas with the assistance and involvement of key community and land or bush care groups in the area, where practicable;
  - (d) design features, built elements, transport infrastructure, signage, lighting and building materials (including retaining walls) including, but not limited to, colour schemes and finishes of built features;
  - (e) an assessment of the visual screening effects of existing vegetation and the proposed landscaping and built elements. Where receivers have been identified as likely to experience high residual visual impact as a result of the SSI, the Proponent must, in consultation with affected receivers, identify opportunities for providing at-receiver landscaping to further screen views of the SSI. Where agreed to with the landowner, these measures must be implemented during the construction of the SSI;
  - (f) graphics such as sections, perspective views and sketches for key elements of the SSI, including, but not limited to built elements of the SSI;
  - (g) monitoring and maintenance procedures for the 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
  - (h) evidence of consultation with stakeholders on the proposed urban design and landscape measures prior to its finalisation.

*Note: The Plan may be submitted in stages to suit a staged construction program of the SSI.*

**PROPERTY AND LAND USE**

- B25 Any damage caused to property as a result of the SSI must be rectified or the landowner compensated, within a reasonable timeframe, with the costs borne by the Proponent. This condition is not intended to limit any claims that the landowner may have against the Proponent.
- B26 The Proponent must construct and operate the SSI with the objective of minimising light spillage to residential properties and be generally consistent with the requirements of *Australian Standard 4282-1997 Control of the obtrusive effects of outdoor lighting*.
- B27 The Proponent must design and construct the noise barriers for the SSI in consultation with the owners of potentially affected residences, to minimise the shadowing effects of the structures during Winter on the potentially affected residences and to an extent that is no greater than existing shadows from adjacent vegetation, where reasonable and feasible.

## PART C

## COMMUNITY INFORMATION AND REPORTING

## COMMUNITY INFORMATION, CONSULTATION AND INVOLVEMENT

- C1 Prior to the commencement of construction of the SSI, or as otherwise agreed by the Secretary, the Proponent must prepare, to the satisfaction of the Secretary, and implement a **Community Communication Strategy** in accordance with requirements of condition C1 of the Concept Proposal. The Strategy must provide mechanisms to facilitate communication between the Proponent (and its contractor(s)), the Environmental Representative, the Council, education and community stakeholders (particularly adjoining landowners) on the environmental management of this approval. The Strategy must include, but not be limited to:
- (a) identification of stakeholders to be consulted as part of the Strategy, including affected and adjoining landowners, key community and business groups, education (including the Forest High School Working Group), community and social service organisations;
  - (b) procedures and mechanisms for the regular distribution of accessible information to community stakeholders on construction progress and matters associated with environmental management including provision of information in appropriate community languages;
  - (c) the formation of community-based forums that focus on key environmental management issues. The Strategy must provide detail on the structure, scope, objectives and frequency of the community-based forums;
  - (d) procedures and mechanisms through which the community stakeholders can discuss or provide feedback to the Proponent and/or Environmental Representative in relation to the environmental management and delivery of this approval;
  - (e) procedures and mechanisms through which the Proponent can respond to enquiries or feedback from the community stakeholders in relation to the environmental management and delivery of this approval; and
  - (f) 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 this approval. This will include a mediation system to assist in considering complaints that are unable to be resolved through initial contact, and which may include the use of a suitably qualified and experienced independent mediator.

The Proponent must maintain and implement the Strategy throughout construction of this approval.

**Complaints and Enquiries Procedure**

- C2 Prior to the commencement of construction of the SSI, or as otherwise agreed by the Secretary, the Proponent must ensure that the following are available for community enquiries and complaints for the duration of construction:
- (a) a 24 hour telephone number(s) on which complaints and enquiries about the SSI may be registered;
  - (b) a postal address to which written complaints and enquires 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 must be published in newspaper(s) circulating in the local area prior to the commencement of construction and prior to the commencement of operation. This information must also be provided on the website (or dedicated pages) required by this approval.

- C3 Prior to the commencement of construction of the SSI, or as otherwise agreed by the Secretary, the Proponent must prepare and implement a **Construction Complaints Management System** consistent with AS 4269: *Complaints Handling* and maintain the System for the duration of construction and up to 12 months following completion of construction of this SSI stage.

Information on all complaints received, including the means by which they were addressed and whether resolution was reached, with or without mediation, must be maintained in a complaints register and included in the construction compliance reports required by this approval. The information contained within the System must be made available to the Secretary on request.

**Provision of Electronic Information**

- C4 Prior to the commencement of construction of this SSI stage, or as otherwise agreed by the Secretary, the Proponent must establish and maintain a new website, or dedicated pages within an existing website, for the provision of electronic information associated with the SSI, for the duration of construction and for 12 months following completion of construction of the SSI. The Proponent must, 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 SSI;
- (b) a copy of the documents referred to under condition A1 of this approval, and any documentation supporting modifications to this approval that may be granted from time to time;
- (c) a copy of this approval and any future modification to this approval;
- (d) a copy of each relevant environmental approval, licence or permit required and obtained in relation to the SSI;
- (e) a copy of each current strategy, plan, program or other document required under this approval;
- (f) the outcomes of compliance tracking in accordance with condition A11; and
- (g) details of contact point(s) to which community complaints and inquiries may be directed, including a telephone number, a postal address and an email address.

**PART D****CONSTRUCTION ENVIRONMENTAL MANAGEMENT****ENVIRONMENTAL REPRESENTATIVE**

- D1 Prior to the commencement of construction of the SSI, or as otherwise agreed by the Secretary, the Proponent must appoint a suitably qualified and experienced Environmental Representative(s) that is independent of the design and construction personnel, and that has been approved by the Secretary. The Proponent must employ an Environmental Representative(s) for the duration of construction, or as otherwise agreed by the Secretary. The Environmental Representative(s) must:
- (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 approval and advise the Proponent upon the achievement of these plans/programs;
  - (c) have responsibility for considering, and advising the Proponent on, matters specified in the conditions of this approval, 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 Proponent's Environmental Management System(s);
  - (e) be given the authority to approve/reject minor amendments to the Construction Environment Management Plan. What constitutes a "minor" amendment must be clearly explained in the Construction Environment Management Plan;
  - (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 available to be consulted in responding to the community concerning the environmental performance of the SSI where the resolution of points of conflict between the Proponent and the community is required.
- D2 The Environmental Representative must prepare and submit to the Secretary a monthly report on the Environmental Representative's actions and decision on matters specified in condition D1 for the preceding month. The reports must be submitted within seven (7) days for the end of each month for the duration of construction of the SSI, or as otherwise agreed by the Secretary. Notwithstanding, the Environmental Representative must be given the independence to report to the Secretary at any time and/or at the request of the Secretary.

**SOIL, WATER QUALITY AND HYDROLOGY****Construction Soil and Water Management**

- D3 Soil and water management measures consistent with *Managing Urban Stormwater - Soils and Construction Vols 1 and 2, 4th Edition* (Landcom, 2004) must 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.
- D4 Where available and practicable, and of appropriate chemical and biological quality, stormwater, recycled water or other water sources must be used in preference to potable water for construction activities, including dust control.

**NOISE AND VIBRATION****Construction Hours**

- D5 Except as permitted by an EPL, construction activities associated with the SSI must be undertaken during the following standard construction hours:
- (a) 7:00am to 6:00pm Mondays to Fridays, inclusive;
  - (b) 8:00am to 1:00pm Saturdays; and
  - (c) at no time on Sundays or public holidays.
- D6 Except as permitted by an EPL, high noise impact works and activities (including, but not limited to rock breaking, rock hammering) must only be undertaken:
- (a) between the hours of 8:00 am to 6:00 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.



- D7 Notwithstanding conditions D5 and D6 construction works outside of the standard construction hours may be undertaken in the following circumstances:
- (a) construction works that generate:
    - (i)  $L_{Aeq(15 \text{ minute})}$  noise levels 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)  $L_{Aeq(15 \text{ minute})}$  noise levels 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; and
    - (iii) continuous or impulsive vibration values, measured at the most affected residence, that are no more than those for human exposure to vibration, specified for residences in Table 2.2 of *Assessing Vibration: a technical guideline*; and
    - (iv) intermittent vibration values, measured at the most affected residence, that are no more than those for human exposure to vibration, specified for residences in Table 2.4 of *Assessing Vibration: a technical guideline*; or
  - (b) where a negotiated agreement has been reached with affected receivers, where the prescribed noise and vibration levels cannot be achieved; or
  - (c) for the delivery of materials required outside these hours by the NSW Police Force or other authorities for safety reasons; or
  - (d) where it is required in an emergency to avoid injury or the loss of life, property and/or to prevent environmental harm; or
  - (e) works approved through an EPL, including for works identified in an **Out of Hours Work Protocol** prepared in accordance with condition D28(b).

#### Construction Noise and Vibration

- D8 The SSI must be constructed with the aim of achieving the construction noise management levels detailed in the *Interim Construction Noise Guideline* (DECC, 2009). All feasible and reasonable noise mitigation measures must be implemented and any activities that could exceed the construction noise management levels must be identified and managed in accordance with the Construction Noise and Vibration Management Plan required under condition D28(b).

#### 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.*

- D9 The SSI must be constructed with the aim of achieving the following construction vibration goals:
- (a) for structural damage to heritage structures, the vibration limits set out in the German Standard *DIN 4150-3: Structural Vibration – Part 3 Effects of vibration on structures*;
  - (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* (as referenced in Australian Standard AS 2187.2-2006 *Explosives – Storage and use – Use of Explosives*); and
  - (c) for human exposure, the acceptable vibration values set out in the *Assessing Vibration: A Technical Guideline* (Department of Environment and Conservation, 2006).
- D10 Where feasible and reasonable, operation noise mitigation measures must be implemented at the start of construction (or at other times during construction) to minimise construction noise impacts.
- D11 During construction, affected educational institutions (including The Forest High School) must be consulted and feasible 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.
- D12 No blasting is permitted on site unless reviewed and approved by the Secretary in consultation with the EPA.

#### AIR QUALITY

- D13 The SSI must be constructed in a manner that minimises dust emissions from the site, including wind-blown and traffic-generated dust and tracking of material onto public roads. All activities on the site must be undertaken with the objective of preventing visible emissions of dust from the site. Should such visible dust emissions occur at any time, the Proponent must identify and implement all feasible and reasonable dust mitigation measures, including cessation of relevant works, as appropriate, such that emissions of visible dust cease.

**TRANSPORT AND ACCESS**

- D14 The SSI must be constructed, where feasible and reasonable, to avoid the use of local roads outside of the SSI footprint (through residential streets) by heavy vehicles to gain access to ancillary facilities.
- D15 Access to construction compounds via local roads must be limited to standard construction hours, where practicable, unless otherwise detailed within the Construction Traffic and Access Management Plan required by condition D28(c).
- D16 Safe pedestrian and cyclist access through or around worksites must be maintained during construction. In circumstances where pedestrian and cyclist access is restricted due to construction activities, a satisfactory alternate route must be provided and signposted.
- D17 Construction vehicles (including staff vehicles) associated with the SSI must be managed to:
- (a) minimise parking or queuing on public roads;
  - (b) minimise idling and queuing in local residential streets where practicable; and
  - (c) adhere to the nominated haulage routes identified in the Construction Traffic Management Plan required under condition D28(c).
- D18 Upon determining the haulage route(s) for construction vehicles associated with the SSI, and prior to construction, a suitably qualified and experienced independent expert must prepare a **Road Dilapidation Report** for all local roads utilised. The Report must assess the current condition of the road and describe mechanisms to restore any damage that may result due to its use by traffic and transport related to the construction of the SSI. The Report must be submitted to the Council for review prior to the commencement of haulage.

Following completion of construction, a subsequent Report must be prepared to assess any damage to the road that may have resulted from the construction of the SSI.

The Reports must be compatible with Council's existing pavement management system and collect data on roughness, rutting, cracking and patching before and after works.

Measures undertaken to restore or reinstate roads affected by the SSI must be undertaken in a timely manner, in accordance with the reasonable requirements of the Council, and at the full expense of the Proponent.

*Note:*

*Nothing in this condition restricts the Proponent commencing adjustments and minor upgrades to the existing road network to cater for construction traffic and installation of temporary project signage prior to the commencement of construction.*

**BIODIVERSITY**

- D19 The clearing of native vegetation must be minimised with the objective of reducing impacts to any threatened species or Endangered Ecological Communities to the greatest extent practicable. Impacted vegetation must be rehabilitated with endemic species to the greatest extent practicable.
- D20 Prior to the commencement of vegetation clearing activities, the Proponent must undertake pre clearing surveys and inspections for endangered and threatened species to confirm the on-site location of those species. The surveys and inspections, and any subsequent relocation of species and associated management/offset measures, must be undertaken under the guidance of a suitably qualified and experienced ecologist. Methodologies are to be incorporated into the Construction Flora and Fauna Management Plan required under condition D28(f) and/or the Biodiversity Offset Package required under condition B15.

**HAZARDS AND RISK**

- D21 Dangerous goods, as defined by the Australian Dangerous Goods Code, must 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 prevail to the extent of the inconsistency.

**PROPERTY AND LANDUSE**

- D22 The Proponent must provide boundary screening at all construction compounds that adjoin or are adjacent to residential, educational and/or commercial properties, with the objective of being consistent with the surrounding context.

**ANCILLARY FACILITIES**

- D23 The location of the ancillary facilities must be identified in the Construction Environment Management Plan required under condition D27.
- D24 Unless approved by the Secretary, the location of Ancillary Facilities not identified in the documents listed in condition A1 must comply with the following locational criteria:
- (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;
  - (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 impact on heritage items (including areas of archaeological sensitivity) beyond those already impacted by the SSI;
  - (i) not unreasonably affect the land use of adjacent properties;
  - (j) be above the 20 ARI flood level unless a contingency plan to manage flooding is prepared and implemented; and
  - (k) 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.
- D25 All ancillary facilities and access points must be rehabilitated to at least their pre-construction condition or better, unless otherwise agreed by the landowner where relevant.
- D26 The Secretary's approval is not required for minor Ancillary Facilities (e.g. lunch sheds, office sheds, and portable toilet facilities) that comply with the criteria set out in condition D24 and:
- (a) are located within an active construction zone within the approved SSI footprint;
  - (b) have been assessed by the Environmental Representative to be -
    - (i) of low amenity risk 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
    - (ii) of low environmental risk in respect to waste management and impacts on flora and fauna, soil and water, and heritage;
  - (c) have environmental and amenity impacts that can be managed through the implementation of environmental measures detailed in the Construction Environmental Management Plan for the project.

**CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN**

- D27 Prior to the commencement of construction, or as otherwise agreed by the Secretary, the Proponent must prepare and implement (following approval) a **Construction Environmental Management Plan (CEMP)** for the SSI. The CEMP is to be prepared in consultation with Council, for the approval of the Secretary. The CEMP must outline the environmental management practices and procedures that are to be followed during construction. The CEMP is to be prepared in accordance with the *Guideline for the Preparation of Environmental Management Plans* (Department of Infrastructure, Planning and Natural Resources, 2004). The CEMP must include, but not necessarily be limited to:
- (a) a description of activities to be undertaken during construction of the SSI (including staging and scheduling);
  - (b) statutory and other obligations that the Proponent is required to fulfil during construction, including approvals, consultations and agreements required from authorities and other stakeholders under key legislation and policies;
  - (c) a description of the roles and responsibilities for relevant employees involved in the construction of the SSI, 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 approval;
  - (d) an environmental risk analysis to identify the key environmental performance issues associated with the construction phase; and
  - (e) details of how environmental performance would be managed and monitored to meet acceptable outcomes, including what actions will be taken to address identified potential adverse environmental impacts (including any impacts arising from the staging of the construction of the SSI). These should include consideration of cumulative impacts in relation to staging of other major

potential construction activities in the project area (including the NBH project and Stage 1 Project). In particular, the following environmental performance issues must be addressed in the CEMP:

- (i) measures for reducing, managing and monitoring air quality impacts;
- (ii) measures for the handling, treatment and management of hazardous and contaminated materials (including asbestos);
- (iii) 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;
- (iv) measures for reducing demand on water resources (including potential for reuse of treated water from sediment control basins);
- (v) measures to monitor and manage hazard and risks; and
- (vi) the issues identified in Condition D28.

The CEMP must include procedures for its periodic review and update (including the sub-plans required under Condition D28), as necessary (including where minor changes can be approved by the Environmental Representative).

The CEMP must be submitted for the approval of the Secretary no later than one month prior to the commencement of construction, or as otherwise agreed by the Secretary. The CEMP may be prepared in stages; however, construction works must not commence until written approval of the relevant stage has been received from the Secretary.

*Note:*

*The approval of a CEMP does not relieve the Proponent of any requirement associated with this SSI approval. If there is an inconsistency with an approved Construction Environmental Management Plan and the conditions of this SSI approval, the requirements of this SSI approval prevails.*

#### **CEMP — Sub plans**

D28 As part of the CEMP for the SSI, the Proponent must prepare and implement (following approval):

- (a) a **Construction Compound and Ancillary Facilities Management Plan** to detail the management of site compounds associated with the SSI. The Plan must be developed in consultation with Council and include but not be limited to:
  - (i) a description of the facility, its components and the surrounding environment;
  - (ii) details of the activities to be carried out at each facility, including the hours of use and the storage of dangerous and hazardous goods;
  - (iii) an assessment of the facility against the criteria provided in condition D24. Where proposed facilities do not meet those criteria, the assessment must justify and (where relevant) quantify potential impacts of the facility;
  - (iv) details of the mitigation and management procedures specific to the facility that would be implemented to minimise environmental and amenity impacts and an assessment of the adequacy of the mitigation or offsetting measures;
  - (v) identification of the timing for the completion of activities at the facility and how the site will be decommissioned (including any necessary rehabilitation); and
  - (vi) appropriate monitoring, review and amendment mechanisms.
- (b) a **Construction Noise and Vibration Management Plan** to detail how construction noise and vibration impacts will be minimised and managed. The Plan must be consistent with the guidelines contained in the *Interim Construction Noise Guidelines* (DECC, 2009) and be prepared in consultation with The Forest High School Working Group. The Plan must include, but not be limited to:
  - (i) identification of sensitive receivers and relevant construction noise and vibration goals applicable to the SSI stipulated in this approval;
  - (ii) details of the construction activities and an indicative schedule for construction works; including the identification of key noise and/or vibration generating construction activities (based on representative construction scenarios, including ancillary facilities) that have the potential to generate noise and/or vibration impacts on surrounding sensitive receivers, particularly residential areas;
  - (iii) identification of construction noise and vibration levels at sensitive receivers; including consideration of cumulative impacts associated with adjoining development sites;
  - (iv) identification of feasible and reasonable measures proposed to be implemented to minimise and manage construction noise and vibration impacts (including construction traffic noise impacts);

- (v) procedures and mitigation measures to ensure relevant vibration criteria are achieved, including applicable buffer distances for vibration sensitive works, use of low-vibration generating equipment/ vibration dampeners or alternative construction methodology, and pre- and post- construction dilapidation surveys of receivers where vibration is likely to result in damage to buildings and structures (including surveys being undertaken immediately following a monitored exceedance of the criteria);
  - (vi) a program for construction noise and vibration monitoring (including the monitoring of the effectiveness of noise and vibration mitigation measures) during construction, clearly indicating the monitoring frequency, monitoring locations, how the monitoring results would be recorded and reported, and, if any exceedance is detected, how any non-compliance would be rectified;
  - (vii) an **Out-of-Hours Work Protocol** for the assessment, management and approval of works outside of the hours specified in condition D5, for the Secretary's approval. The Out-of-Hours Work Protocol must include:
    - (A) a description of the nature and timing of activities to be carried out during out of hours works;
    - (B) detailed mitigation measures for any residual impacts (that is, additional to general mitigation measures), including extent of at-receiver treatments; and
    - (C) proposed notification arrangements;
  - (viii) procedures for notifying sensitive receivers of construction activities that are likely to affect their noise and vibration amenity, as well as procedures for managing and responding to noise complaints; and
  - (ix) mechanisms for the monitoring, review and amendment of this plan.
- (c) a **Construction Traffic and Access Management Plan** to ensure traffic and access controls are implemented to avoid or minimise impacts on traffic, pedestrian and cyclist access, and the amenity of the surrounding environment. The Plan must be developed in consultation with the Transport Management Centre, Council, emergency services, road user groups, Health Infrastructure, The Forest High School Working Group, and include, but not necessarily be limited to:
- (i) identification of construction traffic routes and construction traffic volumes (including heavy vehicle/spoil haulage) on these routes;
  - (ii) details of vehicle movements between construction sites and site compounds including parking, dedicated vehicle turning areas, and ingress and egress points;
  - (iii) discussion of construction impacts that could result in disruption of traffic, public transport, pedestrian and cycle access, access to public land, property access, rat runs, including details of oversize load movements, and the nature and duration of those impacts;
  - (iv) details of management measures to minimise traffic impacts and maintain road capacity during morning and afternoon peaks, including the proposed schedule of works, temporary road work traffic control measures, onsite vehicle queuing and parking areas and management measures to minimise peak time congestion and measures to ensure safe pedestrian and cycle access;
  - (v) details of measures to maintain or provide alternative safe and accessible routes for pedestrians throughout the duration of construction, including provision of replacement kiss and ride, bus stops, pedestrian and cyclist access and paths where necessary;
  - (vi) details of measures to maintain connectivity for cyclists, with particular emphasis on providing adequate access between key existing cycle routes;
  - (vii) details of measures to manage traffic movements, rat runs, parking, loading and unloading at ancillary facilities during out-of-hours work;
  - (viii) details of methods to be used to communicate proposed future traffic changes to affected road users, pedestrians and cyclists, consistent with the Community Communication Strategy required under condition C1;
  - (ix) an adaptive response plan which sets out a process for response to any traffic, construction or other incident; and
  - (x) mechanisms for the monitoring, review and amendment of this plan.
- (d) A **Construction Soil and Water Management Plan** to manage surface and groundwater impacts during construction of the SSI. The plan must be developed in consultation with DPI Water and Council and include, but not necessarily be limited to:
- (i) details of construction activities and their locations, which have the potential to impact on water courses, storage facilities, stormwater flows, and groundwater, including identification of all pollutants that may be introduced into the water cycle;
  - (ii) soil erosion and sediment control measures that comply with the practices and principles as required under condition D3;
  - (iii) details of the staging of construction activities to minimise and manage potential sediment loads discharging to receiving drainage lines as a result of soil loss from disturbed areas;

- (iv) impacts on watercourse bank stability and the development of appropriate mitigation measures as required by condition B5;
- (v) relevant management, monitoring and response measures described in the Water Management Plan prepared in accordance with condition B5;
- (vi) a contingency plan to be implemented in the case of unanticipated discovery of contaminated material during construction;
- (vii) an **Asbestos Management Plan**, to be developed in accordance with the *National Environment Protection (Assessment of Site Contamination) Measure 1999*, and to include measures for the safe removal and disposal of known and undiscovered asbestos within the SSI footprint and related construction ancillary facilities, stockpile sites and site access;
- (viii) a description of how the effectiveness of these actions and measures would be monitored and maintained during the proposed works, clearly indicating how often this monitoring and maintenance would be undertaken, the locations where monitoring would take place, how the results of the monitoring would be recorded and reported, and, if any exceedance of the criteria is detected how any non-compliance can be rectified; and
- (ix) mechanisms for the monitoring, review and amendment of this plan.

The Construction Soil and Water Management Plan must be prepared to generally reflect, where feasible and reasonable, the recommendations made in the "Construction Phase Surface Water Management Strategy" as outlined in Section 7 of the EIS Appendix L.

- (e) a **Construction Heritage Management Plan** to ensure construction impacts on Aboriginal and non-Aboriginal heritage will be appropriately avoided, minimised and managed. The Plan must be developed in consultation with the Council and Aboriginal stakeholders (for Aboriginal heritage), and include, but not necessarily be limited to:
  - (i) in relation to Aboriginal Heritage:
    - (A) procedures for dealing with previously unidentified 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 Department of Planning and Environment, OEH and Aboriginal stakeholders, and assessment of the consistency of any Aboriginal heritage impacts against the approved impacts of the SSI;
    - (B) procedures for dealing with human remains, including cessation of works in the vicinity, notification of Department of Planning and Environment, NSW Police Force, OEH and Aboriginal stakeholders, and commitment to cease recommencing any works in the area unless authorised by the OEH and/or the NSW Police Force;
    - (C) heritage training and induction processes for construction personnel (including procedures for keeping records of inductions) and obligations under the conditions of this approval including site identification, protection and conservation of Aboriginal cultural heritage; and
    - (D) procedures for ongoing Aboriginal consultation and involvement for the duration of the SSI, in the event that previously unidentified Aboriginal objects are discovered; and
  - (ii) in relation to non-Aboriginal Heritage:
    - (A) listing of heritage Items directly and indirectly affected by the SSI;
    - (B) details of management measures to be implemented to prevent and minimise impacts on heritage items (including the measures to protect unaffected sites from vibration and other impacts during construction works in the vicinity);
    - (C) details of monitoring and reporting requirements for impacts on heritage items;
    - (D) procedures for dealing with previously unidentified heritage objects, (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 OEH and the Department, and assessment of the consistency of any heritage impacts against the approved impacts of the SSI; and
    - (E) heritage training and induction processes for construction personnel (including procedures for keeping records of inductions and obligations under this approval including site identification, protection and conservation of non-Aboriginal cultural heritage; and
  - (iii) mechanisms for the monitoring, review and amendment of this plan.
- (f) a **Construction Flora and Fauna Management Plan** to detail how construction impacts on ecology will be minimised and managed. The Plan must be endorsed by an appropriately qualified and experienced ecologist and in consultation with OEH and Council, and must include, but not necessarily be limited to:

- (i) plans for impacted and adjoining areas showing vegetation communities, including riparian areas; important flora and fauna habitat areas; locations where threatened species, populations or ecological communities have been recorded; including procedures for pre-clearing surveys;
- (ii) the identification of areas to be cleared and details of management measures to avoid residual habitat damage or loss and to minimise or eliminate time lags between the removal and subsequent replacement of habitat such as:
  - (A) clearing minimisation procedures (including fencing),
  - (B) pre-clearing and clearing procedures,
  - (C) removal and relocation of fauna during clearing,
  - (D) habitat tree and hollow bearing tree management, and
  - (E) construction worker education;
- (iii) rehabilitation details, including identification of flora species and sources, and measures for the management and maintenance of rehabilitated areas;
- (iv) a **Pathogen and Weed Management Strategy**, incorporating weed management measures focusing on early identification of invasive weeds and pathogens (including but not limited to *Batrachochytrium dendrobatidis*, *Phytophthora cinnamomi* and *myrtle rust*) and effective management controls;
- (v) a description of how the effectiveness of these management measures would be monitored;
- (vi) 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 updating of ecological monitoring and/or biodiversity offset requirements and
- (vii) mechanism for the monitoring, review and amendment of this plan.

## PART E

## OPERATIONAL ENVIRONMENTAL MANAGEMENT AND REPORTING

## NOISE

## Operational noise

- E1. The SSI must be designed and operated with the objective of meeting the requirements of the *NSW Road Noise Policy* (DECCW, 2011).

## Operational Noise Review

- E2. Unless otherwise agreed by the Secretary, at least six months prior to completing construction, the Proponent must, in consultation with the EPA, submit for the approval of the Secretary, an **Operational Noise Review** to review the operational noise mitigation measures proposed to be implemented for the SSI. The Review must be undertaken by a suitably qualified and experienced acoustic specialist and must:
- (a) confirm the operational noise predictions of the SSI based on detailed design, utilising 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 A1 to achieve the criteria outlined in the *NSW Road Noise Policy* (DECCW, 2011), based on the operational noise performance of the SSI predicted under condition E1; and
  - (c) where necessary, investigate and identify additional feasible and reasonable noise mitigation measures to achieve the criteria outlined in the *NSW Road Noise Policy* (DECCW, 2011);
  - (d) identify the management of tactile noise from traffic signals; and
  - (e) identify all sensitive receiver locations eligible for architectural treatments.

Notwithstanding the above, the Proponent is responsible for the cumulative operational noise impacts of the SSI and the NBH development. That is, the Review must incorporate a baseline time period that does not include traffic generated by the NBH development (SSI 5982).

## Architectural Treatment at Sensitive Receivers

- E3. Within four weeks of the Secretary's approval of the report required by condition E2, the Proponent must write to each landowner whose property is identified as eligible for architectural treatment. If eligible, the proponent will offer to provide and fund feasible and reasonable architectural noise mitigation treatments to reduce the impact of operational traffic noise at the affected premises. The Proponent's offer must remain open for acceptance by the affected landowner for at least six months from the date of the notification required under this condition.
- E4. Architectural treatments agreed between the parties must be implemented, where practicable, within six months of reaching such an agreement.

## Operational Noise Assessment

- E5. Within 12 months of the commencement of operation of the SSI, or as otherwise agreed by the Secretary, the Proponent must undertake operational noise monitoring to compare actual noise performance of the SSI against noise performance predicted in the review of noise mitigation measures required by condition E3, and prepare an **Operational Noise Assessment Report** to document this monitoring. The Report must 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 condition E2 and documents specified under condition A1 of this approval;
  - (b) a review of the operational noise levels in terms of criteria established in the *NSW Road Policy* (DECCW, 2011);
  - (c) methodology, location and frequency of noise monitoring undertaken, including monitoring sites at which SSI noise levels are ascertained, with specific reference to locations indicative of impacts on sensitive receivers;
  - (d) details on average daily traffic volumes across the SSI area during the daytime and night-time periods based on recorded observations, including but not limited to traffic volumes along Warringah Road and the intersections with Wakehurst Parkway, Hilmer Street and Forest Way;
  - (e) details of any complaints and enquiries received in relation to operational noise generated by the SSI between the date of commencement of operation and the date the report was prepared;
  - (f) any required recalibrations of the noise model taking into consideration factors such as actual traffic numbers and proportions;



- (g) an assessment of the performance and effectiveness of applied noise mitigation measures together with a review and if necessary, reassessment of feasible and reasonable mitigation measures; and
- (h) identification of additional feasible and reasonable measures to those identified in the review of noise mitigation measures required by condition E3, if required, that would be implemented with the objective of meeting the criteria outlined in the *NSW Road Policy* (DECCW, 2011), when these measures would be implemented and how their effectiveness would be measured and reported to the Secretary and the EPA.

The Proponent must provide the Secretary and the EPA with a copy of the Operational Noise Compliance Report within 60 days of completing the operational noise monitoring referred to in (a) above or as otherwise agreed by the Secretary.

## TRANSPORT AND ACCESS

- E6. The Proponent must prepare an **Operational Traffic Performance Review** to address the traffic performance of the SSI. The Review must be undertaken within six months following operation of the SSI (and is to be inclusive of both Stage 1 and Stage 2) and six months following operation of the NBH development, or as otherwise agreed by the Secretary.

The Review must be undertaken in consultation with the Transport Management Centre, Transport for NSW, Council, and Health Infrastructure and include, but not necessarily be limited to:

- (a) traffic and road network performance of the SSI against expected performance, including consideration of NBH traffic generation;
- (b) local street and property access (such as ingress and egress from local roads onto Warringah Road and property during morning and afternoon peak periods);
- (c) broader downstream impacts;
- (d) any parking impacts, including on-street parking to the south of Warringah Road in the vicinity of the proposed new shared pedestrian/bicycle overbridge;
- (e) 'rat running' in streets that are likely to exhibit increases in traffic as a result of the SSI, including pre construction baseline data;
- (f) bus priority measures implemented to mitigate detrimental impacts on bus performance;
- (g) the performance (for road users and pedestrians) of any alternative parking arrangements;
- (h) pedestrian and cycle facilities and use, including connectivity at the project area fringes with other proposed non-project facilities; and
- (i) details of any complaints received relating to traffic, transport and access impacts, and how they have been addressed in the Review.

The Review must be submitted to the Secretary and to the Council within 60 days of its completion and made publicly available. If the Review indicates traffic, transport and access impacts attributable to the SSI and the NBH development if operational at the time of review, via traffic volumes, level of service, queue lengths, road safety, and other relevant parameters of performance, the Proponent must implement further feasible and reasonable measures to mitigate these impacts. The timing for the implementation of these measures must be clearly articulated in the Review.

### Note:

*Identified mitigation measures that are not consistent with the environmental impacts described in the documents listed in condition A1, will need to be further assessed under the Environmental Planning and Assessment Act, 1979. Works will need to meet relevant design standards and be subject to independent road safety audits.*

## MAINTENANCE

- E7. The ongoing maintenance of urban design and landscaping items and works implemented as part of this SSI approval remains the Proponent's responsibility unless satisfactory arrangements have been put in place for the transfer of ownership of the item or work to another authority.

The Proponent will maintain items and works to the standards established in the Urban Design and Landscape Plan required under condition B24, unless and until landscaping items have been transferred.

## OPERATION ENVIRONMENTAL MANAGEMENT

- E8. Prior to the commencement of operation, the Proponent must incorporate the infrastructure activity into existing environmental management systems administered by the Proponent and prepared in accordance with the AS/NZS ISO 14000 Environmental Management System series.