APPENDIX 1

Table of Contents

APPENDIX 1

Schedule 1

Stated conditions for *Sustainable Planning Act 2009* (SPA)[1] Approvals

1. Material change of use of premises if all or part of the land is on the Environmental Management Register or Contaminated Land Register

(a) An appropriately qualified person must undertake investigations in locations where earthworks may potentially encounter contaminated soils (i.e. land that is listed on the Environmental Management Register (EMR) or identified areas from a site history and observations analysis). The Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland 1998 must be adhered to in these investigations. Any land identified as having contaminated soil must be notified to the DERM.

(b) Contaminated soil can only be removed from land listed on the EMR or Contaminated Land Register (CLR) in accordance with a disposal permit under the *Environmental Protection Act 1994*.

(c) A Site Management Plan for contaminated land on the tunnel alignment must be prepared where that land is not being removed from the EMR or CLR prior to any disturbance of the soil on that land, in accordance with:

(i) National Environmental Protection (Assessment of Site Contamination) Measure 1999 (NEPM) /National Environment Protection Council (NEPC)

(ii) the *Environmental Protection Act 1994*.

(d) If spills occur during the transportation of contaminated soil, the area affected will be remediated and the relevant authorities advised.

2. Development on a state heritage place

(a) Condition surveys must be conducted of each place on the Queensland Heritage Register ('place of State significance'), to the extent the place is the subject of development, prior to any construction works commencing which may impact on the cultural heritage values of that place. The condition surveys must include detailed structural inspections prior to construction, including all timber framing, stonework, brickwork, and the integrity of sealing of all timber in the stone/brickwork.

(b) Prior to any construction works commencing which may impact on the cultural heritage values of a place of State significance, prepare specific Cultural Heritage Management Plans for each place, to the extent impacted, including:

(i) Mount Coot-tha Forest

(ii) Toowong Cemetery

(iii) Baroona, 90 Howard Street, Paddington

(iv) St Brigid's Church, Musgrave Road, Red Hill

(v) Ithaca Embankments, Nos 3 and 4, Musgrave Road, Red Hill

(vi) Gona Barracks

(vii) Victoria Park, Herston.

(c) The cultural heritage management plans (CHMP) required in (b) must include the following elements:

(i) vibration goals and their monitoring and recommended actions should those goals be exceeded

(ii) the effects of potential settlement and associated monitoring and management

(iii) archival recording of all elements of cultural heritage significance that will be removed, demolished, or exposed to a significant risk of damage

(iv) archival recording of cultural heritage values to be undertaken with the advice of an appropriately qualified heritage consultant

(v) monitoring of compliance with the measures outlined in the CHMP

(vi) immediate reporting of any damage caused as a result of the project to the chief executive administering the *Queensland Heritage Act 1992*, including details of the damage, how it occurred and proposed measures to reinstate, rectify or remediate the damage

(vii) consultation with the DERM in an effective and timely manner, particularly where the potential exists for the construction works to impact on a place of State significance.

(d) The draft CHMPs must be provided to DERM for review and comment, and the comments taken into account in finalising the plans, prior to any construction works on, under or over the place of State significance

3. Development on a local heritage place

(a) Condition surveys must be conducted of each place on the City Plan 2000 Heritage Register (''Local Heritage place'), to the extent the place is the subject of development, prior to any construction works commencing which may impact on the cultural heritage values of that place. The condition surveys must include detailed structural inspections prior to construction, including all timber framing, stonework, brickwork, and the integrity of sealing of all timber in the stone/brickwork.

(b) Prior to any works commencing which may impact on the cultural heritage values of a local heritage place, prepare specific Cultural Heritage Management Plans (CHMP) for each place, to the extent impacted, including Anzac Park.

(c) The CHMPs required in (a) must include the following elements:

(i) vibration goals and their monitoring and recommended actions should those goals be exceeded

(ii) the effects of potential settlement and associated monitoring and management

(iii) archival recording of all elements of cultural heritage significance that will be removed, demolished, or exposed to a significant risk of damage

(iv) archival recording of cultural heritage values to be undertaken with the advice of an appropriately qualified heritage consultant

(v) monitoring of compliance with the measures outlined in the CHMP

(vi) consultation with Brisbane City Council (BCC) in an effective and timely manner, particularly where the potential exists for the construction works to impact on a place of local significance.

4. Making a Material Change of Use for ERA 51 - road tunnel ventilation stack operation

(a) Prior to the commencement of operation of the environmentally relevant activity (ERA), prepare and implement an Operational Air Quality Environmental Management Plan to mitigate and manage the potential impacts on air quality arising from the operation of the tunnel ventilation system.

(b) The ventilation system must be designed so that it does not prevent the possible future installation of filtration equipment to remove small particles and possibly oxides of nitrogen from vitiated air before it is released to the ambient environment during tunnel operation.

(c) The western ventilation outlet for the project is to be situated adjacent to the Centenary Motorway at the location indicated in the EIS[1], and must be at least 20 metres in height above natural ground level in that location, or no less than RL 67metres, whichever is the higher.

(d) The eastern ventilation outlet for the project is to be situated adjacent to the Inner City Bypass (ICB) at the location indicated in the EIS[2]. The height of the ventilation outlet must be at least 15 metres above ground level in that location, or no less than RL 58metres, whichever is the higher.

(e) The ventilation system must be designed so that the system is capable of meeting PIARC criteria for in-tunnel air quality described in Table 1 and capable of meeting the goals for ambient air quality set out in Table 4.

Table 1: In-tunnel air quality criteria

Parameter	Criteria
Carbon monoxide (CO)	70 ppm generally 90 ppm in peak traffic congestion
Nitrogen dioxide (NO_2)	1 ppm (average)
Visibility coefficient (K)	0.005 m^{-1} for free flowing traffic (greater than 50km/hr) 0.007 m^{-1} otherwise
Notes: 1 Monitoring and measuring protocols for each criteria as set out in the PIARC guidelines, as current December 2009. 2 Peak traffic congestion occurs when traffic flows are less than 10 km/h 3 Visibility coefficient (K-value) may fluctuate with peak Conditions.	

(f) For in-tunnel air quality, the criteria set out in Table 1 must be achieved.

(g) To manage in-tunnel air quality effectively, a system must be implemented for the on-going, continuous monitoring linked to a system of traffic management to maintain appropriate traffic flows and consequent emission levels within nominated air quality standards in Table 1.

(h) Monitoring results for in-tunnel air quality must be reported as set out in Table 5. Monitoring must be undertaken in accordance with accredited procedures, and the results must be publicly available.

(i) In circumstances where the in-tunnel air quality criteria is exceeded, the reporting must also describe the corrective actions taken to avoid a recurrence and to minimise the impact on ambient air quality.

[1] Location of western ventilation outlet indicated in the EIS, Figure 4-12.

[2] Location of eastern ventilation outlet indicated in the EIS, Figure 4-13.

(j) To minimise and manage the risk of exceeding the goals for ambient air quality, on-going continuous monitoring of the air flow within each of the ventilation outlets must be conducted for the project. Monitoring must be undertaken in accordance with accredited procedures. The results of monitoring of the air flow within each of the ventilation outlets must be made publicly available in the event of exceeding in-tunnel air quality criteria or in the event of exceeding ambient air quality goals. The results must be available within 24 hours of such an exceedance.

(k) The ventilation system must be managed so that air quality within each ventilation stack does not exceed the criteria set out in Table 2.

- **Table 2: Criteria for air quality within each ventilation outlet**

Pollutant	Criteria	Unit	Measuring Period
Carbon monoxide (CO)	70	ppm	1 hour
Nitrogen dioxide (NO_2)	2.0	mg/m^3	1 hour
Particulate matter less than 10 μg (PM_{10})	1.0	mg/m^3	1 hour

(l) On-going monitoring of ambient air quality must be conducted at two monitoring stations for each ventilation outlet. The monitoring stations must be located generally within the vicinity of the sites described in Table 3..

- **Table 3: Monitoring sites – ambient air quality**

Ventilation Outlet	Monitoring Locations	Location Description
Western	Anzac Park	In the vicinity of Wool Street and Cross Street
	Mt Coot-tha Botanic Gardens	In the vicinity of the main car park situated to the south of the main entrance off Mount Coot-tha Road
Eastern	Spring Hill	In the vicinity of the secondary grammar schools
	Kelvin Grove	Within an area bounded by Kelvin Grove Road, Musk Avenue, Victoria Park Road and the ICB

(m) The parameters for ambient air quality must be monitored consistent with the air quality parameters set out in Table 4.

- **Table 4: Ambient air quality parameters**

Pollutant	Goal[3]	Unit	Measuring Period
Carbon monoxide (CO)	11	mg/m^3	8 hour maximum[1]
Nitrogen dioxide (NO_2)	62	$\mu g/m^3$	annual mean
	250	$\mu g/m^3$	1 hour maximum[1]
Particulate matter less than 10 μg (PM_{10})	50	$\mu g/m^3$	24 hour maximum[2]
Particulate matter less than 2.5 μm ($PM_{2.5}$)	25	$\mu g/m^3$	24 hour maximum
	8	$\mu g/m^3$	annual mean

Notes:
1 Maximum allowable exceedance – one day per year.
2 Maximum allowable exceedance - five days per year not including exceeding ambient goals due to external events (eg dust storms, fires, major construction works) as recorded at more than one monitoring station operated by DERM.

The goals are in accordance with the *Environmental Protection (Air) Policy 2008 - Schedule 1 – Air Quality Objectives.*

(n) Results from monitoring in accordance with accredited procedures, must be reported by the proponent to the Chief Executive of DERM in accordance with Table 5 and must be publicly available.

- **Table 5: Reporting of air quality monitoring**

Time Scale	Air Quality Parameter	Reporting Requirements
Real-time reporting	In-tunnel	• Unvalidated data updated on an hourly basis and available on-line via a project website.
Daily reporting	External ambient[1] air	• Unvalidated hourly data reported daily on-line via a project website.
Exceedance/Incident reporting	Air within each ventilation outlet	• Unvalidated hourly data corresponding with the period during which an exceedance of either the in-tunnel criteria or ambient air quality goals, or both of these incidents occurred must be made available on a project website within 24 hours of such an incident. • Validated hourly data corresponding with the period during which an exceedance of either the in-tunnel criteria or ambient air quality goals, or both of these incidents occurred must be reported to DERM and made available on a project website within seven days of such an incident.
Monthly reporting	In-tunnel, ambient and ventilation outlet	• Monthly summaries and trend information must be presented on the project website and provided to DERM within seven days of the end of each month.

Note: 1 – Recorded in the locations described in Table 3.

(o) In circumstances where monitoring identifies an exceedance of the ambient air quality goals, the reporting must also set out the performance of the tunnel ventilation system at the time and provide conclusions with regards to the level of contribution by the tunnel ventilation system, if any, to the exceedance of the ambient air quality goals.

(p) The location and reporting of monitoring of ambient air quality relating to tunnel operations should be reviewed by the proponent after five years of operations. Should a proposal be made to vary ambient air quality monitoring or reporting, a report assessing the issue and providing substantiated reasons for the proposal is to be provided to the Chief Executive, DERM for approval.

(q) Noise attributable to the ventilation system must comply with the noise limits in Table 6: Ventilation system noise limits.

- **Table 6: Ventilation system noise limits**

Time of day	LA $_{eq(adj)(15mins)}$ (measured at a sensitive place)[1]	Noise limit $LA_{10,(adj)\ (15mins)}$ (measured at a sensitive place)[1]
6.30 am – 6.30 pm	Background + 5dB(A)	Background + 5dB(A)
6.30 pm – 6.30 am	Background + 5dB(A)	Background + 3dB(A)

1. Measured in accordance with the most recent edition of the *Queensland Government's Noise Measurement Manual.*

Schedule 2

Recommended conditions for other approvals

1. Aboriginal cultural heritage

The proponent must develop and have approved under the Aboriginal Cultural Heritage Act 2003, a Cultural Heritage Management Plan (CHMP) prior to any excavation, construction or other activity that may cause harm to Aboriginal cultural heritage.

2. Connection to a state controlled road

Approval must be obtained from the chief executive of the Department of Transport and Main Roads (TMR) under the *Transport Infrastructure Act 1994* for carrying out works for connections to any state controlled road.

3. Interference with a railway or busway

(a) Approval must be obtained from the busway manager TMR or railway manager (Queensland Rail) prior to any interference with a busway or railway under the *Transport Infrastructure Act 1994*

(b) If any project works are likely to interfere with the operation of busway or railway services, consultation must be undertaken with the busway manager or railway manager to identify and implement actions which will minimise disruption to busway or railway operations.

4. Road closures

Any road closures required must follow the procedure set out in the relevant legislation.

5. Explosives

Any use, storage and transport of explosives required for the project must be approved in accordance with the *Explosives Act 1999*.

Schedule 3

Imposed Conditions

These conditions are **imposed** by the Coordinator-General on the project under section 54B of the *State Development and Public Works Organisation Act 1971.*

These conditions do not relieve the proponent of the obligation to obtain all other approvals and licences from all relevant authorities required under any other Act.

In accordance with section 54B(3) of the *State Development and Public Works Organisation Act 1971*, the Coordinator-General has **nominated** entities to have jurisdiction for a number of conditions in this schedule. Schedule 4 describes which entity has jurisdiction for the conditions and the entities that should be consulted by the proponent in regards to each condition ('Consultative Bodies').

In accordance with section 54D of the *State Development and Public Works Organisation Act 1971*, these conditions apply to anyone who undertakes the project, including, for example the proponent and an agent, contractor, subcontractor or licensee of the proponent and public utility providers undertaking public utility works.

To simplify presentation, this Schedule 3 is divided into three parts in accordance with the different phases of the project:

- **Part 1: General conditions** (which applies to both the design and construction phase and operation and maintenance phase (unless otherwise specified)
- **Part 2: Design and construction phase** (which applies to all activities from commencement of concept design, to construction and then to commissioning, including site preparation, demolition, material deliveries, construction activities and decommissioning and rehabilitation of worksites)
- **Part 3: Operation and maintenance phase** (which applies to the project from the time the tunnel is capable of accepting traffic).

Note however that some conditions in each part could also have some relevance to the other parts.

Part 1: General conditions

1. General conditions

(a) The project must be carried out generally in accordance with the Environmental Impact Statement (September 2008) (EIS) for the project, and the EIS Supplementary Report for the project (June 2009) (Supplementary Report).

(b) The proponent must notify the Coordinator-General and all nominated entities in writing of the commencement of the design and construction phase and the commencement of the operation and maintenance phase at least four weeks prior to the relevant commencement date.

(c) The proponent must notify the Coordinator-General and all nominated entities in writing of the commencement of the 'permanent construction works' at least one week prior to the relevant commencement date.

2. Offsetting greenhouse gas emissions

(a) The proponent must produce a greenhouse offset plan that, at a minimum, provides an offset for the greenhouse gas emissions generated from the construction and operation of the project. The plan must be submitted to the Coordinator-General for approval at least one month prior to commencement of permanent construction works. It must detail the:

(i) greenhouse gas emissions of the construction and operation of the project, supported by detailed greenhouse gas emission calculations. Emissions from vehicles using the project are not included in the operation emission calculations.

(ii) greenhouse gas emissions to be offset associated with the proportion of the project's operational electrical energy requirements not purchased from 'Green Power' sourced from a renewable energy source accredited by the National GreenPower Accreditation Program that meets the criteria of the Australian Government's Renewable Energy Target.

(iii) proposed off-sets, which may include contributions to Ecofund Queensland or another accredited offsets program acceptable to the Coordinator-General, and the methodologies for calculating the offsets.

(iv) proposed actions and associated timeframes to achieve the offsets. The plan must also include an ongoing reporting regime relating to progress against subsequently approved timeframes, which must include acquiring the construction emissions offsets within three months of the project's opening to traffic and the operation emissions offset within three months of a calendar year for the previous year's emissions, and

(v) a review process for the plan that is triggered upon the implementation of any other legally binding carbon emission reduction requirements that applies to the project. The purpose of the review process would be to ensure that 'double counting' of greenhouse gas emissions and off-sets under the plan and any legally binding carbon emission reduction requirements does not occur.

(b) The proponent must implement the measures within the greenhouse offset plan following the Coordinator-General's approval of the plan.

3. Reporting of releases or events

(a) The proponent must notify the Coordinator-General and the relevant nominated entity as soon as practicable after becoming aware of any release or event that occurs otherwise than in accordance with these conditions, or any event where environmental harm (as defined by the *Environmental Protection Act 1994*) is caused or threatened.

(b) Within 14 days following any notification in accordance with Condition 3(a), written advice detailing the following information must be provided to the Coordinator-General and relevant nominated entity:

(i) name of the operator of the activity and the persons responsible for the activity

(ii) name and telephone number of a designated contact person

(iii) location of the release/event

(iv) date and time of the release/event

(v) time the operator became aware of the release/event

(vi) suspected cause of the release/event

(vii) a description of the resulting effects of the release/event

(viii) results of any sampling or monitoring performed in relation to the release/event

(ix) actions taken to mitigate any environmental harm (including environmental nuisance) caused by the release/event

(x) proposed actions to prevent a recurrence of the release/event, responsibility and timing for implementation.

4. Monthly environmental monitoring reports - construction only

(a) The proponent is to prepare an environmental report on a monthly basis for the design and construction phase. The report is to include, but is not limited to:

(i) monitoring data undertaken for the period and an interpretation of the results in respect of conditions in Schedule 3 and the EMP and EMP sub-plan requirements

(ii) satisfaction of environmental objectives and performance criteria and other EMP requirements

(iii) any incidents of non-compliance, including details of the incident, resulting effects, corrective actions, revised construction practices to prevent a recurrence, responsibility and timing

(iv) reporting of complaints, including number of complaints, description of issue, responses and corrective actions.

(b) The monthly environmental report is to be made available on the project website within two weeks of the end of the month to which the report relates.

5. Half yearly audit reports

(a) The proponent must procure the following:

(i) Audits to be undertaken on a six monthly basis during the audit period by an independent and suitably qualified expert (auditor), engaged by and at the expense of the proponent, to determine whether the proponent has complied with each of the conditions in Appendix 1, Schedule 3 of the Coordinator-General's Report for the project in all construction areas.

(ii) Submission by the proponent to the Coordinator-General of the auditor(s)' written report of the audit (Audit Report) together with an audit certification statement (Audit Certification Statement), not later than 42 days after the end of the relevant six month period.

(b) The audit period will:

(i) commence on the commencement of construction of the project

(ii) end once all Schedule 3 Part 2 conditions have been complied with to the satisfaction of the Coordinator–General and a final audit report together with an audit certification statement has been submitted by the proponent confirming that all conditions in this schedule have been satisfactorily complied with for a period two years after commencement of the operation phase of the project.

(c) The auditor must be a suitably qualified person with not less than five years experience in environmental auditing or who is otherwise acceptable to the Coordinator-General in consideration of the principles in AS 19011.

(d) The proponent must promptly provide the auditor(s) with all such information and site access as may be reasonably required to enable the auditor(s) to undertake the audit and prepare the audit report.

(e) The audit report must include:

(i) details of the project, including the name and location of the project, members of the audit team (including brief details of each member's qualifications and years of experience), and employees of the proponent interviewed for the audit

(ii) a summary of what conditions were activated during the reporting period

(iii) a summary of any non-compliances identified during the current audit period with conditions at the front end of the report, with reference to where further information can be found in the body of the report

(iv) a summary of any non-compliances that were identified during the previous audit period, with details of site remediation activities, corrective actions taken or to be taken and revised practices implemented or to be implemented (as relevant)

(v) a compliance evaluation table detailing the relevant condition in Schedule 3 of the report, whether compliance with this condition was achieved and how compliance was evaluated (for example the lists of documents, site inspection or employee interview relied upon by the auditor to evaluate the condition)

(vi) a site plan showing the project activities (for example work areas, road infrastructure and any significant features such as waterways etc)

(vii) a list of the evidence used to support the findings of the audit. The list should detail the title, date and holder of any documents reviewed, the date and locations of any site inspections conducted and the name and position details of any person interviewed for the purpose of conducting an audit (the Coordinator-General may request copies of documents used as evidence at a later date)

(viii) any further attachments which the auditor(s) consider are relevant to the audit report.

(f) The audit report must otherwise be in such form as may be required by the Coordinator-General and notified to the proponent.

(g) A suggested format for the audit report can be found at the Department of Infrastructure and Planning's website www.dip.qld.gov.au, but this is not a prescribed form.

(h) The audit report must be accompanied by an audit certification statement which is to be completed and signed by the auditor(s). The audit certification statement must be attached to the audit report and include:

(i) name of project, proponent and details of Coordinator-General's report(s) or approval to which the audit relates

(ii) date, place, methods and evidence used to assess compliance

(iii) summary of any non-compliances identified

(iv) auditor's name, position, company and contact details, auditor's qualifications and/or experience; and declaration whereby the auditor:

A certifies the conditions contained in Schedule 3 of Appendix 1 of this Coordinator-General's report have been satisfactorily complied with, subject to any qualifications which the auditor has outlined in the audit certification statement

B certifies that to the best of the auditor's knowledge, all information provided in the audit report is true, correct and complete

C certifies that the auditor, and to the best of the auditor's knowledge, all members of the audit team are independent from the proponent to the extent that the outcome of the audit will not be influenced by any relationship with the proponent or potential benefits to the auditor or members of the audit team

D acknowledges that it is an offence under section 157(O) of the SDPWO Act, to give the Coordinator-General a document containing information that the auditor knows is false or misleading in any material particular.

(i) A suggested format for the audit certification statement is available online from www.dip.qld.gov.au, but this is not a prescribed form.

(j) The proponent must promptly provide (and must ensure that the auditor(s) also promptly provide at the cost of the proponent) the Coordinator-General with such further information and/or site access as may be required by the Coordinator-General in respect of any audit report or concerning compliance with the conditions in Appendix 1, Schedule 3 of this Coordinator-General's report.

Part 2: Design and construction phase

6. Communication and consultation

(a) Prior to the commencement of construction works, and then at three-monthly intervals, the proponent shall advertise in relevant local newspapers, the nature of construction works proposed for the forthcoming three months, the areas in which these works are proposed to occur, the hours of operation and a contact telephone number.

(b) The proponent shall undertake early and on-going engagement with owners and occupants of sensitive places adjacent to or predicted to be impacted by the proposed construction works (including spoil haulage), and works associated with impact mitigation measures. The consultation shall include the provisions of clear information about the scale, timing, duration, location, intensity and potential effects of construction works and, where required by these conditions, the mitigation measures available to the owner or occupant.

(c) The proponent shall ensure that the local community, businesses and public transport operators are kept informed (by appropriate means such as: local newsletters, leaflets, newspaper advertisements, community notice boards and the project internet site, to be established in accordance with condition 6(d), of the progress of the project, including any traffic disruptions and controls, construction of temporary detours and work required outside the 'Standard Construction Hours', including noisy works, not less than 48 hours prior to such works being undertaken.

(d) The proponent shall establish a project internet site at least three months prior to the commencement of construction works and maintain the internet site until at least 12 months after commencement of operation of the project or as long as required for updating operational air quality and traffic monitoring results. The internet site shall, as a minimum, contain monthly work progress and consultation activities updates, including but not limited to:

(i) a description of relevant approval authorities and their areas of responsibility

(ii) a list of environmental management reports that are publicly available and the executive summaries of those reports

(iii) minutes from Community Liaison Group (CLG) meetings (refer Condition 7)

(iv) bi-monthly newsletters consistent with Condition 6(c)

(v) 24 hour toll-free complaints contact telephone number, established in accordance with Condition 8(a)(iii)

(vi) reporting of complaint management details, including nature of complaints and how the complaint was addressed, and analysis of complaints over time

(vii) a means of lodging complaints over the internet, including the method for elevating the complaint if the complainant is unsatisfied with the initial response

(viii) a means of asking questions or providing feedback.

(e) Work progress, construction activities and planned work schedule must be provided and updated more frequently in accordance with this condition, where significant changes in noise impacts are expected.

7. Community Liaison Group

(a) The proponent shall establish appropriate representative CLGs to the satisfaction of the Coordinator-General and in accordance with the community communication strategy required under Condition 8.

(b) The proponent shall:

(i) ensure a CLG is established for each locality in which surface construction works are to be undertaken (i.e. a CLG for the construction area at the Centenary Motorway at Toowong and a CLG for the construction area at the ICB at Herston)

(ii) appoint as the Chair of each CLG the relevant independent community liaison representative (ICLR) defined by Schedule 3 Condition 9(a) of this Coordinator-General's report

(iii) ensure that each CLG comprise at least two representatives of the proponent (including the Environmental Management Representative), at least one representative of the lead construction contractor, at least four community representatives (including the Chair) and one local business representative

(iv) ensure that the first meeting of each CLG is held prior to commencement of construction in the relevant area and that this first meeting consider the interrelationship of this CLG with any existing community liaison or consultative groups of adjoining or interrelated developments

(v) provide to the CLG regular information on the progress of work on the project and monitoring results

(vi) promptly provide to the CLG such other information as the Chair may reasonably request concerning the environmental performance of the project

(vii) allow the CLGs to make comment/s about the:

A construction progress and implementation

B environmental management plan and sub plans

C compliance with the conditions of this Coordinator-General's report, and

D other matters relevant to the construction and operation of the project.

(viii) ensure the CLGs have access to reasonable and sufficient information for such purposes

(ix) invite representatives from relevant government agencies or other individuals to attend meetings as reasonably required by the Chair

(x) provide access for site inspections by the CLG at times that are mutually acceptable to the proponent and the CLG members

(xi) consider the recommendations and comments of the CLGs and provide a response to the CLGs

(xii) take minutes for each meeting and seek the agreement of the CLG members to those minutes within 14 days of that meeting

(xiii) make CLG minutes available for public inspection on the project website and at the project display centre within seven days of their endorsement by the Chair

(xiv) provide meeting facilities and bear all costs associated with the establishment and ongoing function of the CLGs

(xv) when circumstances require, meet all reasonable costs to engage independent consultants to interpret relevant technical information and tasks of a similar nature as agreed by the relevant CLG

(xvi) at least six months prior to the commencement of operation of the project, expand the CLG to include a representative of the NLRT operator

(xvii) decommission each CLG 12 months after the project's opening to traffic.

(c) In the circumstance of any unresolved disagreement between CLG members about the operation of a CLG or the responsibilities of its members, including the proponent, the Coordinator-General's decision shall be final.

8. Community communication strategy

(a) The proponent shall prepare a community communication strategy for the construction period, to be initiated prior to the commencement of construction. The strategy shall set out the community consultation procedures for the project, which shall comply with the obligations under these conditions, other approvals, licences and permits. It will also include:

(i) identification of stakeholders likely to be affected by the project, including identification of sensitive places, businesses and other sensitive land uses

(ii) procedures for the establishment and functioning of the CLGs for each locality in which surface works are to be undertaken (e.g. construction areas near the Centenary Motorway at Toowong and the ICB at Kelvin Grove / Herston) in accordance with Condition 7

(iii) establishment of procedures and mechanisms through which the community stakeholders can discuss or provide feedback to the proponent or environmental management representative in relation to the environmental management and construction and operation of the project, including a 24 hour—7 day serviced toll-free hotline and email service

(iv) procedures and mechanisms through which the proponent can respond to any enquiries or feedback from the community stakeholders in relation to the environment management and construction of the project

(v) procedures and mechanisms to be implemented to respond to any matters not resolved by the proponent response under Condition 8(a)(iv) on the matters relating to environmental management and the project construction

(vi) procedures for informing the local community of planned investigation and construction activities including regular newsletters, scheduled information sessions or open days

(vii) a complaints process as specified in Condition 15(f)(ix)

(viii) where required, special procedures to respond to complaints, issues or incidents, such as face-to-face meetings and on-going communications with affected parties and a documented process for issues resolution

(ix) procedures for informing affected road network users of planned traffic arrangements including temporary traffic switches

(x) the provision of training for all employees and sub-contractors on the requirements of the community communication strategy.

(b) The proponent must prepare and implement a detailed community notification strategy to provide information to road users, including motorists, pedestrians and cyclists, on the timing of the implementation of project elements.

9. Independent community liaison representative (ICLR)

(a) The proponent shall nominate a person(s) experienced in mediating disputes, to be approved by the Coordinator-General, to serve as the ICLR(s). The role of the ICLR(s) shall include but not be limited to:

(i) chair CLG meetings (refer to Condition 7)

(ii) communicate with the proponent with regard to community consultation strategies

(iii) contact the Environmental Management Representative immediately if, in the opinion of the ICLR, an unacceptable noise or other impact is being generated with reference to these conditions

(iv) being available for direct contact by the community during the hours of 9.00 am to 4.00 pm Monday to Friday and by arrangement during periods of high noise impact activities as outlined in the Construction Noise and Vibration Management Sub Plan (Condition 21)

(v) to the greatest extent practicable, resolve community complaints not resolved by the proponent's complaints process.

(b) the proponent shall bear the cost of employment of the ICLR.

10. Display Centres

(a) At least one display centre shall be established and maintained at least until opening of the project to traffic. The ICLR shall be based at a display centres at agreed times outlined in the community communication strategy. The display centre(s) shall be open between 10.00 am and 6.00 pm on week days when surface construction work is undertaken and between 10.00 am and 1.00 pm on Saturdays when surface construction work is undertaken. Up-to-date photographs, diagrams, engineering drawings, technical reports, samples and other suitable material shall be provided at each display centre, covering at least:

(i) noise and retaining wall locations, details and finishes

(ii) landscape concept, cross section treatments, perspective views and details

(iii) buildings

(iv) bridges

(v) tunnels

(vi) overall architectural and landscape design theme(s)

(vii) ventilation technology and ventilation stack design

(viii) temporary works affecting businesses, residences, pedestrians and public transport users.

(b) A dedicated PC internet access point to the project internet site shall be provided at each display centre. A phone line shall be provided from one display centre to the centre where the ICLR(s) are based if more than one display centre is established.

(c) At least one display centre shall be staffed, unless alternative public display activities outlined in the community involvement plan are programmed and publicised. Any proposals to not staff the display centre(s) must be agreed by the ICLR(s).

11. Building works

(a) Toll road control buildings associated with the project must be designed sympathetically to the surrounding environment. Temporary buildings associated with the project must be designed and sited to reduce impacts on adjoining properties where practicable.

(b) Project buildings must be designed and constructed so that shadowing and light spill onto adjacent premises is minimised and consistent with the relevant Australian Standards.

12. Pedestrian / cycle connectivity

(a) The existing connectivity and functionality of the Centenary Motorway Bikeway and Centenary Motorway Cycle and Pedestrian Bridge at Toowong will be maintained during the construction period. Where occasional closure to the Centenary Motorway Cycle and Pedestrian Bridge is required for modification of the structure to span the new road works or other safety issues, an alternative route must be provided and such closures will not exceed 50 days in total for the duration of the construction works of the project and the proponent is to schedule the works to minimise disruption to cyclists where possible. No single closure is to be greater than 30 calendar days.

(b) A pedestrian/cycle path consistent with the existing pedestrian/cycle infrastructure must be constructed from the Centenary Motorway pedestrian/cycle overpass adjacent to the Mount Coot-tha roundabout to the main entrance of the Mount Coot-tha Botanic Gardens prior to commencement of operations.

13. Requirement for equitable access statement

At least two months prior to the commencement of permanent construction, the proponent must submit an Equitable Access Statement (EAS) to the Department of Communities (Disability Services Queensland) for comment. The purpose of the EAS is to ensure that the needs of people with a disability or who may experience access problems are taken into account during the design of the project, including in respect to signage, tactile ground surface indicators, doors and doorways and egress lighting systems. The Department of Communities comments must be taken into account in finalising the EAS. The proponent must finalise the EAS within six months of commencement of construction and must implement the finalised EAS.

Note: The Department of Communities shall provide a response to the EAS within 30 days of receipt of all reasonable and relevant information from the proponent assuming receipt of adequate and sufficient information. If comments are not provided by the Department of Communities within the one month period the Department is deemed to have no comments.

14. Environmental management

(a) The proponent shall appoint construction and/or operation head contractors that have an environmental management system prepared in accordance with the AS/NZS ISO 14000 series or BS7750-1994 and/or have a proven environmental management performance record.

(b) At least two months prior to commencement of construction the proponent shall nominate for the approval of the Coordinator-General a suitably qualified and experienced Environmental Management Representative(s) independent of the project design and construction personnel. The proponent shall employ the environmental management representative(s) for the duration of construction, or as otherwise agreed by the Coordinator-General. The representative(s) shall:

(i) be the principal point of advice in relation to all questions and complaints concerning the environmental performance of the project

(ii) certify that the Design and Construction EMP (D&C EMP) and the Operation and Maintenance EMP (O&M EMP) and associated EMP sub-plans meet the requirements of these conditions

(iii) manage the implementation of all EMPs, EMP sub-plans and monitoring programs and advise the proponent with respect to the achievement of all project environmental outcomes

(iv) reviewing and approving the project induction and training program related to environmental matters for all persons involved in construction activities and monitoring implementation

(v) periodically monitoring the proponent's environmental activities to evaluate the implementation, effectiveness and level of compliance of construction activities with the Design and Construction EMP (D&C EMP), and associated plans and procedures, including carrying out site inspections at least fortnightly at all active sites

(vi) have responsibility for considering and advising the proponent on matters specified in these conditions and all other licences and approval related to the environmental performance and impacts of the project

(vii) notwithstanding the preference that the proponent implement the actions outlined in the D&C EMP to prevent environmental impacts, be given the authority and independence to advise reasonable steps be taken to avoid or minimise unintended or adverse environmental impacts, and in the event of non-compliance with any condition of Schedule 3, to advise the proponent and DERM that relevant actions be taken or ceased to achieve compliance with the condition

(viii) shall be available for contact during all time construction activities are occurring at the worksites and be present on site during any 'high noise impact' construction activities as defined in the relevant EMP Sub-Plan.

15. Environmental management plan (EMP)

(a) A D&C EMP, including EMP sub-plans, must be prepared and implemented to properly and effectively manage the environmental impacts arising from the project. The D&C EMP must include but is not limited to:

(i) being developed generally in accordance with the draft EMP in Appendix D of the Supplementary Report

(ii) incorporating all of the conditions for design and construction in Schedule 3 of this Coordinator-General's report

(iii) identifying elements of the D&C EMP requiring ongoing action in the operational phase of the project

(iv) demonstrating how the elements in (i) to (iii) above have been included in the D&C EMP.

(b) The D&C EMP and EMP sub-plans must be developed and implemented in stages to address each relevant component of design and construction. It must provide for progressive assessment of predicted impacts and design of mitigation measures prior to the relevant stages of construction works.

(c) The D&C EMP, including EMP sub-plans, must be made publicly available.

(d) At least five business days prior to the commencement of construction works, the D&C EMP and EMP sub-plans shall be provided to the Coordinator-General, following consultation with the relevant nominated entities with jurisdiction and consultative bodies (identified in Schedule 4) and their comments taken into account in finalising the plans. The D&C EMP and EMP sub-plans shall be certified by the Environmental Management Representative as being in accordance with these conditions and all undertakings made in the EIS and supplementary report prior to seeking comments from the relevant nominated entities and consultative bodies.

Note: The relevant nominated entities and consultative bodies shall provide an integrated and coordinated response through the nominated entity with jurisdiction to the D&C EMP within one month of the certified D&C EMP and EMP sub-plans being provided to the nominated entity and consultative bodies. If comments are not provided by the nominated entities and through them, the consultative bodies, within the one month period, the entity/body is deemed to have no comments.

(e) The D&C EMP and EMP sub-plans must be based on predictive studies and assessments of construction impacts which have regard to the scale, intensity, location and duration of

construction works and infrastructure. Properties which would be adversely affected must be identified.

(f) The D&C EMP must accord generally with the following framework:

(i) **environmental objectives and performance criteria**—the D&C EMP and EMP sub-plans must adopt and incorporate the environmental objectives and performance criteria set out in Draft D&C EMP in Appendix D of the Supplementary Report to the EIS updated where necessary to incorporate these conditions.

(ii) **EMP Sub-Plans**—the D&C EMP is to incorporate the following sub-plans as required by these conditions to address in detail specific environmental impacts of the construction works:

A construction traffic

B construction traffic vehicles

C geology and soils

D hydrogeology and groundwater quality

E surface water quality

F air quality

G noise and vibration

H flora and fauna

I cultural heritage

J social environment

K hazard and risk

L waste management

M urban design and landscape.

(iii) EMP sub-plans must include measures designed to comply with relevant industry standards for environmental management, including those set out in schedule 7 to these conditions.

(iv) **Design of mitigation measures**—mitigation measures must be designed in response to the predicted impacts, with detailed design measures to address localised impacts where necessary.

(v) Mitigation measures must be directed to achieving the environmental objectives and performance criteria set out in the Draft D&C EMP in Appendix D of the supplementary report to the EIS, the statutory requirements, and must be consistent with these conditions. They may include the mitigation measures contained in the draft D&C EMP in Appendix D of the supplementary report to the EIS or may include other measures, provided those other measures achieve the environmental objectives and performance criteria, the statutory requirements and these conditions.

(vi) **Monitoring**—the D&C EMP must contain a program and procedures for on-going monitoring to identify the effectiveness of the mitigation measures, having regard for the environmental requirements established in the D&C EMP. Monitoring must include a range of activities such as but not limited to scientifically-conducted measurements of specified parameters, visual inspections, recordings of events, and communications

with affected property owners and occupants. Monitoring results must be reported in the form required by the D&C EMP.

(vii) **Consultation**—consultation procedures must include the community engagement measures described in Conditions 6-10 of Schedule 3 of this Coordinator-General's report as a minimum, and meet the following requirements:

A consultation with owners and occupants of properties in the corridor of construction influence identified through predictive modelling, as well as the wider community, must be conducted for the duration of the construction period

B consultation must commence well in advance of the commencement of works, and in some circumstances, should commence with the design of mitigation measures

C consultation with owners and occupants of affected properties must be conducted with confidentiality where requested by the owners or occupiers of premises and at a level of detail sufficient to address specific construction impacts and mitigation requirements.

(viii) **Review, response and modify**—there must be a regular review of the D&C EMP and EMP sub-plans. A process for review of mitigation measures must be outlined in the D&C EMP. The review process must provide for further or alternate mitigation measures to be implemented as soon as practical in response to monitoring results where non-compliance is identified and the outcomes of community consultation.

(ix) **Complaints**—as an extension of the consultation process, there must be a formal process for receiving and dealing quickly and effectively with complaints about construction issues. This process must be established before the commencement of construction works and should adopt a consultative and negotiated basis rather than an adversarial basis. The complaints procedure must be easy to use, with information about its implementation provided on the project website and through the visitors' information service. As a minimum, the complaints process must include the following elements:

A a protocol establishing the responsibility for receiving and addressing complaints, and the means of notifying the community of this protocol (e.g. publication of a complaints telephone service, website advice, and address for notices and other correspondence) prior to commencement of construction

B establishment of a 24 hour—7 day a week serviced toll-free telephone line. The aim of the hotline is to enable any member of the general public to reach a person who can arrange appropriate response/corrective action to complaints within two hours during all times construction works occur

C identification of the complainant, the identity of the person who received the complaint, the manner in which the complaint was made, the time and date on which the complaint was made, and the matter to which the complaint relates

D a process wherein, upon receipt of a complaint, an investigation commences forthwith into the cause of the complaint and any actions reasonably required to address the complaint. At least a verbal response on the action(s) to be taken is provided to the complainant within two hours during all times construction works occur (unless the complainant agrees otherwise) and a detailed written response within seven calendar days of the receipt of the complaint. Information on all complaints received and response times shall be made available to the environmental management representative daily and on request to the Coordinator-General and relevant nominated entities

E a database for tracking complaints, issues, the subject of complaints, responses and corrective actions taken. A means of reporting each complaint, such as a complaints register, must include identification of the entity responsible for addressing the complaint, the time and date on which the complaint was addressed and closed out, a brief summary of any action taken to address the complaint, and a notation as to the satisfaction or dissatisfaction of the complainant with the outcome

F monthly reporting of complaints as part of an overall performance and compliance report posted on the project website.

(x) **Non-conformance**—a process for dealing with circumstances where goals or limits are exceeded during construction activities must be established prior to the commencement of construction works. This process must establish a mechanism for reporting, taking corrective action where required, and indicating responsibilities and timing for such action

(xi) **Reporting**—a mechanism for reporting on compliance must be established in the D&C EMP consistent with the reporting requirements of Conditions 3, 4 and 5.

16. Traffic management

(a) Construct the project in accordance with the D&C EMP, the Construction Traffic EMP Sub-Plan and the Construction Traffic Vehicle EMP Sub-Plan.

(b) Prior to commencement of any site works or construction, a Construction Traffic EMP Sub-Plan must be prepared to implement measures that avoid, where practicable, or minimise and mitigate, the noise, dust, traffic congestion or other traffic problems or any road safety impact arising from construction traffic during the construction phase. Such measures must achieve the environmental objectives and performance criteria set out in table D-9 of the Draft D&C EMP, section D.6 of the supplementary report and must address the city-wide and local implications of surface construction works for traffic flows, public transport, pedestrian and cyclist safety, property access and parking. Construction traffic management measures may include the mitigation measures for traffic and transport described in table D-9 of the Draft D&C EMP, section D.6 of the supplementary report or other measures in accordance with these conditions.

(c) In the preparation of the Construction Traffic EMP Sub-Plan, the proponent is to consult with the BCC, TMR and any other relevant local government authority where its roads may be affected by construction traffic (e.g. Ipswich Regional Council for contaminated materials haulage to Swanbank) in order to confirm and effectively manage the impacts of construction traffic

(d) The Construction Traffic EMP Sub-Plan is to be submitted for approval by BCC, TMR and any other relevant local government authority to the extent where its roads may be affected

(e) No site works that impacts on the road network shall commence until approval of the Construction Traffic EMP Sub-Plan is provided by BCC and TMR

(f) Prior to submission the Construction Traffic EMP Sub-Plan shall be certified by a person registered by the Board of Professional Engineers of Queensland

(g) The Construction Traffic EMP Sub-Plan must detail, but not be limited to:

(i) the number and class of construction traffic vehicles by day, hour, road name and carriageway direction

(ii) changes in levels of service, including safety, security and efficiency, for all traffic, including buses, cyclists, pedestrians and motorised vehicles

(iii) measures to maintain safe and functional access to community facilities, and to ensure pedestrian and cyclist safety and movements on routes adjacent to construction worksites

(iv) measures to be taken to minimise lane closures, detours and other changes to levels of service. Specifically, the Construction Traffic EMP Sub-Plan is to detail how any interruption to access or closures of the Centenary Bikeway and the Toowong cycle/pedestrian bridge over the motorway are to be minimised

(v) staff workplace travel plan to encourage the use of car pooling, public transport and active transport

(vi) measures to prevent the parking of construction traffic on streets near to work sites

(vii) traffic signage, including variable message signs (VMS), to be used

(viii) communication mechanisms for advising of changes in travel time, including detours, changes in lane widths or locations and posted speed limit changes

(ix) measures, including additional controls required, for avoiding disruption during peak traffic flow periods and public holidays

(x) measures, including additional controls required, for avoiding disruption of scheduled events, and to coordinate with scheduled construction and maintenance works on other projects

(xi) measures for co-ordinating the works with typical operations on State-controlled roads such as road improvements, road resurfacing, installing linemarking and street lighting maintenance

(xii) entry and exit locations to worksites, including a road safety audit for each and all worksite entry and exit locations utilising the Austroads guidelines laid out in Guide to Road Safety, Part 6: Road Safety Audit

(xiii) the management of incidents (traffic, construction or other) on and around the project works

(xiv) the monitoring and action process for ensuring that traffic congestion and traffic queue lengths are not substantially worse than those conditions prevailing in the two months prior to the commencement of works (where that period is not affected by more than two weeks of school holidays).

(h) The Construction Traffic EMP Sub-Plan and the Construction Traffic Vehicle EMP Sub-Plan must be subject to periodic review, update and continuous improvement to address construction program requirements, construction sequencing or identified shortcoming with any pre-existing Construction Traffic EMP Sub-Plan.

(i) Where changes to the methodologies or mechanisms described in the Construction Traffic EMP Sub-Plan are proposed, a revised Construction Traffic EMP Sub-Plan shall be submitted for approval by BCC and TMR and any other relevant local government prior to these changes being implemented.

(j) The Construction Traffic EMP Sub-Plan is to identify routes to be used by construction traffic vehicles for haulage of construction materials and any construction spoil produced as part of the project, including:

(i) the nominated haulage routes should as far as is reasonable and practicable, rely upon arterial roads and minimise the use of minor roads

(ii) a construction traffic vehicle includes any vehicle carrying materials to and from the Brisbane City Council Mount Coot-tha Quarry where those materials have arisen from the Northern Link worksite or are intended for delivery to the Northern Link worksite

(iii) notwithstanding any other restrictions already in place through other legislation and in addition to other requirements included in table D-9 of the Draft D&C EMP, section D.6 of the EIS supplementary report (June 2009), the nominated haulage routes included in the Construction Traffic EMP Sub-Plan are to generally restrict construction traffic vehicle movements with an objective of:

A no construction traffic vehicles equal to or greater than Austroads Class 3 (two-axle truck) on Frederick Street at any time

B no construction traffic vehicles equal to or greater than Austroads Class 3 between 8pm and 6am the next morning, or equal to or greater than Austroads Class 5 (four-axle truck) at any time, on Moggill Road (west of Centenary Motorway)

C no more than six trips (past any one point in one direction) per hour of construction traffic vehicles equal to or greater than Austroads Class 4 (three-axle truck) permitted between 8pm and 6am the next morning on Mt Coot-tha Road and Centenary Motorway

D no construction traffic vehicles equal to or greater than Austroads Class 3 permitted between 8pm and 6am the next morning on all other State-controlled roads which are not motorways.

(iv) the requirements included at 16(j)(iii) may be reviewed by TMR if a submission is made to TMR for approval, and construction traffic vehicles can be shown to be modified or designed to be operating as very low noise vehicles (tyres, motor, trailers and stack). Supporting noise test information would be required as part of such a submission.

(k) Prior to commencement of any site works or construction, a Construction Traffic Vehicle EMP Sub-Plan must be prepared to implement measures that manage the operation of the construction fleet. Such measures must achieve the environmental objectives and performance criteria set out in table D-9 of the Draft D&C EMP, section D.6 of the EIS Supplementary Report (June 2009) Construction traffic vehicle management measures may include the mitigation measures for traffic and transport described in table D-9 of the Draft D&C EMP, section D.6 of the EIS supplementary report (June 2009) or other measures in accordance with these conditions.

(i) Construction traffic vehicle includes any registered vehicle capable of conveying a load greater than two tonnes, or having a total or combined length greater than six metres that is delivering plant, materials or equipment to or from any Northern Link worksite. This classification includes mobile plant and machinery capable of moving under its own power, but does not include construction workforce vehicles.

(ii) On request, all construction traffic vehicle licence plate numbers must be supplied to TMR.

(iii) All construction traffic vehicles shall comply with, and be tested and maintained in accordance with, *Vehicle Standard (Australian Design Rule 28/01 - External Noise of Motor Vehicles) 2006*.

(l) The Construction Traffic Vehicle EMP Sub-Plan should include as a minimum the following:

(i) the proposed method of haulage vehicle fleet management to:

A avoid, or minimise and mitigate, disruption to local traffic movements generally and particularly during peak traffic periods including school drop-off and pick-up times

B avoid haulage vehicles queuing in proximity to residential premises, schools or health care facilities

C avoid generation of dust in the worksites and beyond the worksites from the deposition of material on roads from vehicle wheels

D minimise and mitigate potential impacts from vehicle emissions upon adjoining premises and sensitive places situated nearby construction worksites

E avoid excessive noise from haulage vehicle operations within and at the immediate entries and exits of the worksites

F any other measures necessary to minimise and mitigate the adverse environmental and community impacts of construction traffic vehicle operations.

(ii) Specific measures for the construction traffic vehicle fleet to:

A only include spoil haulage vehicles and equipment, with consistent payloads and bin sizes

B minimise the emissions of both noise and exhaust emissions, complying with ADR28/01

C avoid haulage during peak traffic periods where reasonable and practicable, including peak traffic periods associated with major events, including at RNA Showgrounds, Mt Coot-tha Botanic Gardens or Suncorp Stadium.

(iii) In addition to any measures included in table D-9 of the Draft D&C EMP, section D.6 of the EIS supplementary report (June 2009) specific measures to be fitted to construction traffic vehicles to facilitate:

A real time management of trucks and traffic conditions to avoid traffic congestion, particularly in peak times, and real time scheduling to avoid queuing and the use of local roads

B investigation of complaints and to assist with management of spoil haulage fleet performance.

(iv) Construction traffic vehicle fleet systems shall address:

A safety, including accident & incident reporting and a Hazard Register, Risk Analysis and Safe Operating Procedures

B routine and preventative vehicle maintenance

C OH&S Tri Safe Audit (Qld Government self insurance audit) to assess the suitability of operators.

17. Spoil handling and placement

(a) Construction spoil from construction must be for:

(i) surface works and cut-and-cover works, handled and removed in a manner to mitigate noise and dust impacts on nearby properties, consistent with the objectives and limits established in Schedule 3 of these conditions

(ii) tunnel construction works, handled and removed from within an acoustically-lined and ventilated workshed, to mitigate noise, air quality, night lighting and over-shadowing impacts on nearby properties, consistent with the environmental objectives and performance criteria established in the Draft D&C EMP in Appendix D of the supplementary report to the EIS and these conditions.

(b) Spoil handling facilities, including the external conveyor system, and stockpiling and storage facilities, must be designed, constructed and operated to comply with the Schedule 3 Conditions and satisfy the following requirements:

(i) the facilities must be safe and secure, such that unauthorised access to any part of it is not available, directional night lighting is provided to all access points and hazard areas, and facility operations are capable of remote surveillance by worksite staff

(ii) the facilities, if situated within the Mt Coot-tha Botanic Gardens, must not impede existing access to public areas within the Botanic Gardens. Conveyor facilities established elsewhere must not impede existing access to public facilities, recreation areas and open space, or if access would be constrained as a consequence of the facilities, only with the prior agreement of the BCC

(iii) access to any conveyor system for maintenance purposes must be provided within the conveyor corridor and as close as practicable to the conveyor system

(iv) the facilities must be situated, designed and constructed to present the minimum visual and landscape impact as far as practicable, having regard to topography, vegetation, scale, character of construction and construction materials, location relative to sensitive land uses, and the likely duration of its use

(v) construction of spoil handling facilities including the external conveyor system must avoid where practicable, or minimise and mitigate the potential invasion or colonisation of areas disturbed by construction activities by introduced plant and animal pests such as, but not limited to, fire ants, birds and weeds.

(c) Upon completion of the spoil handling and transport task, the spoil handling facilities, including the external conveyor system, must be decommissioned as soon as practicable and rehabilitated to a condition suitable for use for the preferred purposes under the area's designation in Brisbane City Plan 2000 (City Plan). Such rehabilitation must include:

(i) remediation of any land contaminated by either the construction or use of the facilities

(ii) rehabilitating the worksite including the conveyor corridor to an approximation of the pre-existing ground form, providing such rehabilitation works would not cause negative changes in surface drainage patterns or flood levels

(iii) landscaping works generally consistent with a landscape master plan to be prepared and provided to the Coordinator-General in consultation with the BCC at least 30 days prior to decommissioning works commencing

(iv) reinstatement of any impacted pedestrian and cycle paths to their former location.

(d) All placement of spoil at spoil placement areas must comply with the performance criteria of the filling and excavation code in City Plan 2000 or any similar applicable local authority plan.

(e) Spoil placement areas must be rehabilitated as quickly as reasonable and practicable to manage and mitigate the potential adverse environmental impacts of dust, soil erosion and sedimentation.

(f) Spoil placement must be managed to minimise adverse environmental impacts on waterways, and sensitive places.

18. General construction

(a) The project must be constructed in accordance with the D&C EMP including EMP sub-plans.

(b) Surface construction works shall be restricted to the hours of 6.30 am to 6.30 pm (Monday to Saturday) ('Standard Construction Hours')and at no time on Sundays and public holidays.

(c) Notwithstanding Condition 18(b), above, the following construction works are permitted to be undertaken outside of standard construction hours, subject to conditions:

(i) the delivery of oversized plant or structures that police or other authorities determine require transport along public roads to be outside of the standard construction hours and for which there is no feasible alternative

(ii) operation of the conveyor to transport spoil from the tunnel boring machine to the Mt Coot-tha quarry, provided the relevant noise limits in Condition 21 can be met

(iii) emergency work to avoid the loss of lives or property, or to prevent environmental harm

(iv) construction works for which relevant authorities (for example road management authorities) require that particular works at particular locations can only be undertaken outside of the standard construction hours and for which there is no feasible alternative

(v) loading and haulage of spoil may be undertaken at any time between 6.30am Mondays to 6:30pm Saturdays provided the relevant noise limits in Condition 22 can be met in relation to loading and haulage in construction areas. There must be no haulage of construction spoil on Sundays or public holidays

(vi) any other construction works approved by the Coordinator General.

(d) Details of any works to be conducted in accordance with Condition 18(c), other than 18(c)(iii) including copies of any associated approvals, must be submitted to the Coordinator-General and nominated entity for the noise and vibration condition at least five business days prior to the relevant construction works being undertaken.

(e) Construction areas must be designed and constructed to achieve compliance with these conditions and the environmental objectives and performance criteria for the management and mitigation of construction impacts set out in the draft D&C EMP in Appendix D of the supplementary report to the EIS.

(f) Specific measures which must be taken to manage and mitigate construction impacts include:

(i) night lighting, including security lighting, must be designed, installed and positioned to minimise light spill onto residential premises or other sensitive receptors and comply with the relevant Australian Standard

(ii) access points for pedestrian and vehicular traffic must be situated according to the Transport, Access, Parking and Servicing Planning Scheme Policy in City Plan 2000

(iii) achieving compliance with the requirements of the Hazard and Risk Assessment Planning Scheme Policy in City Plan 2000

(iv) the tracking of sediment by construction vehicles from construction areas to public roads and the receiving environment must be avoided by the installation of measures within the worksite (e.g. shakedown pads, 'rumblegrids', wheel washes or other similar methods).

(g) Any water supply or other infrastructure services required to support construction works must be designed and constructed to achieve the environmental objectives and performance criteria set out in the Draft D&C EMP in Appendix D of the supplementary report to the EIS, and including but not limited to flood management.

(h) Construction works must be managed to minimise adverse environmental impacts on waterways and sensitive places.

(i) Where it is identified that property damage has occurred to premises as a consequence of the construction works, such damage must be repaired as soon as practicable at no cost to the property owners. Such repairs must be undertaken in consultation with the property owners and occupants and must return the premises at least to the condition existing prior to commencement of construction works

(j) Construction areas must be rehabilitated as quickly as reasonable and practicable to manage and mitigate potential impacts such as dust, diminished water quality, soil erosion and sedimentation.

(k) The construction workforce must not park in local streets. A dedicated and adequate construction workforce off-street parking area must be provided. All construction workforce vehicles must be directed to project construction workforce car parks. To avoid construction workforce car parking in local streets, shuttle transport between construction workforce car parks distant from a construction area must be provided for the duration of the period the construction area is in use.

(l) Construction workforce car parks must be rehabilitated as quickly as is reasonable and practicable to a standard suitable for future use of a purpose preferred in this location under the area designation in City Plan 2000.

(m) The visual amenity of the construction areas must be maintained. Measures to be undertaken include, but are not limited to:

(i) incorporating acoustic screening and landscaping around the construction areas using mature trees and shrubs where possible

(ii) daily inspections of the acoustic barrier and other visible surfaces for graffiti which is to be removed within 24 hours

(iii) consultation with the CLGs to discuss additional solutions to mitigating the visual impact of the construction areas

(iv) design and siting of construction buildings and facilities to minimise overshadowing of private properties between 9.00 am and 3.00 pm on 21 June.

(n) The proponent shall ensure that access to all properties is maintained during construction and following opening of the project to traffic, unless a solution acceptable to the property owner/occupant is reached and documented in the form of a signed agreement. The proponent shall ensure that any access affected by the project is reinstated to an equivalent standard or that adequate compensation is negotiated with the relevant landowner(s).

(o) Following completion of permanent construction works the construction areas must be rehabilitated as quickly as reasonable and practicable. The plan for rehabilitation must be developed in consultation with the relevant CLG. Planting and landscaping shall give priority to the use of native species endemic to the Brisbane area and the *City Plan 2000: Planting Species Planning Scheme Policy* and shall include the use of mature trees, where appropriate. There must be provision for ongoing maintenance (including any necessary remedial action) to ensure the survival of vegetation planted at the site for a period of at least 12 months from the date of practical completion of each area.

19. Flora and fauna

(a) The project must be constructed in accordance with the D&C EMP (Design and Construction), including the Flora and Fauna EMP Sub-Plan.

(a) Clearing shall only occur to the extent that is necessary for the construction phase and operational phase of the project.

(b) Any clearing or activities associated with clearing within the subject properties must not adversely impact on vegetation outside the project site.

(c) Procedures to minimise the potential for impacting flora and fauna must be included in the Flora and Fauna EMP Sub-Plan and be implemented on the site. Procedures are to include, but are not limited to:

(i) engagement of an experienced fauna catcher/spotter to undertake checks for fauna prior to native vegetation removal

(ii) checking site works such as trenches and culverts each morning and after periods of inactivity for any fauna trapped or likely to be harmed by construction works

(iii) identifying and marking vegetation to be retained to minimise loss of habitat

(iv) identifying fauna, including habitat areas and avoidance, management, and mitigation requirements

(v) undertaking a health assessment of significant trees in the vicinity of the project prior to commencement of construction and adopt a program to ensure minimum impacts of the project and rapid recovery

(vi) measures to ensure there is no damage to vegetation that occurs during the construction of the project (beyond site clearing) e.g. during the transport of oversize materials to the site.

20. Air quality

(a) All construction works occurring at the construction areas must be carried out in a manner that will prevent and/or minimise the emission of dust and particulate matter to the atmosphere from these sites.

(b) Emissions of dust and particulate matter from construction works must not cause dust deposition of 120 milligrams per square metre per day, averaged over one month, when monitored in accordance with the most recent version of *Australian Standard AS3580.10.1 Methods for sampling and analysis of ambient air – Determination of particulate matter – Deposited matter – Gravimetric method*.

(c) Emissions of dust and particulate matter from construction works must not cause ambient air quality to exceed any of the following limits at a sensitive place:

(i) a concentration of particulate matter with an aerodynamic diameter of less than 10 micrometres (PM_{10}) suspended in the atmosphere of 50µg/m^3 (micrograms per cubic metre) over a 24 hour averaging time, when monitored in accordance with the most recent version of *Australian Standard AS3580.9.6 Determination of suspended particulate matter – PM_{10} high volume sampler with size-selective inlet – Gravimetric method*

(ii) a 24 hour average concentration of total suspended particulate matter of 80 µg/m^3 when monitored in accordance with the most recent version of AS/NZS 3580.9.3:2003 *Determination of suspended particulate matter - Total suspended particulate matter (TSP) - High volume sampler gravimetric method*.

(d) The results of the continuous monitoring data must be made available to the nominated entity administering this condition and the Coordinator-General on request.

(e) The release of noxious or offensive odours, or any other noxious or offensive airborne contaminants resulting from the activities to which these Conditions relate, must not cause a nuisance at any sensitive receptor.

(f) Prior to commencement of construction works an Air Quality EMP Sub-Plan, acceptable to the nominated entity administering this condition, must be developed and implemented and include, but not limited to the following:

(i) a background dust and particulate matter air quality monitoring program to determine air quality levels at sensitive places likely to be impacted by the project

(ii) identification of potential sources of dust and particulate matter emissions from works associated with the project

(iii) an assessment of the potential impact that these dust emissions will have on sensitive places, including predicted dust deposition rates, total suspended particulate and PM_{10} concentrations

(iv) reasonable and practicable measures which will be implemented to avoid, mitigate and manage the generation of dust and particulate matter at construction areas to ensure compliance with these conditions

(v) an air quality monitoring program, including a real time component using a tapered element oscillating microbalance analyser (TEOM) air quality monitoring device or similar, to manage dust issues and assess compliance with these conditions. The program should include establishing trigger levels with regard to the limits in these conditions and procedures to be implemented when trigger levels are exceeded (for example, by developing procedures to be implemented in response to a TSP trigger of 180 ug/m^3 one hour average). Monitoring equipment must be placed in locations representative of the most likely adversely affected sensitive place taking into account the nature and location of construction works and wind directions.

(vi) a program to train staff involved in carrying out dust generating activities, in dust management practices.

(g) Reasonable and practicable dust mitigation measures that may be incorporated into the Air Quality EMP Sub-Plan are provided below:

(i) stockpiles:

A orienting stockpiles of sand, gravel or other materials in a direction that reduces exposed surfaces to prevailing winds where possible

B watering product stockpiles to maintain a moisture content that minimises dust generation where possible

C use of dust-suppressants

D storage of materials in bunkers

E establishing a cover crop/grasses on topsoil stockpiles.

(ii) haul roads and transport of aggregates and sand:

A watering unsealed haul roads regularly

B use of shakedown pads and road sweeping of sealed haul roads

C use of dust suppressants

D ensuring that trucks transporting fine materials are covered or that the load is wet down prior to transport

E clearing spillages from side rails, tail gates and draw bars of vehicles prior to and after movement of materials.

(iii) crushing, screening and concrete batching plant and equipment:

A employing water sprays as required to ensure that the moisture content of the material being processed is suitable to minimise dust during crushing and material handling

B assessing wind direction prior to undertaking work that is likely to generate large quantities of dust and postponing works if wind is blowing towards a sensitive place

C locating stationary dust generating activities (including concrete batching/rock crushing) as far as practical from sensitive places

D ensuring that any dust collection systems including filters fitted to plant and equipment are maintained and cleaned as required to ensure their effective operation

E use of windshields or barriers.

(iv) trafficable areas:

A keeping surfaces clean

B sealing with bitumen or other suitable material

C using water sprays

D installing an effective truck body and wheel wash facility

E using dust suppressants and wind breaks.

(v) blasting and rock drilling:

A dust collectors must be used as necessary to minimise the release of wind blown dust to the atmosphere while rock drilling is carried out

B dust deposits must not smother or damage vegetation

C blasting must be restricted when strong winds are blowing in the direction of sensitive places

D dry and fine material within the blasted area should be wetted down to suppress dust evolution.

(h) Dust and particulate matter management measures should focus on 'source control' e.g. by stockpile management, wheel washes in addition to 'end of pipe' solutions such as house cleaning.

(i) Monitoring undertaken for the purposes of meeting the requirements of these conditions must be undertaken in accordance with the methods prescribed in the latest edition of the *Air Quality Sampling Manual* (Queensland Government 1997).

(j) Underground works must be ventilated, and ventilated air must be treated for the removal of dust prior to its release to the ambient environment.

(k) Dust filters for the tunnel construction ventilation system must be installed, operated and maintained to achieve the air quality objective for the environmental values for health and well-being set out in the *Environmental Protection (Air) Policy 2008*.

21. Groundwater and surface water

(a) The project must be designed and constructed in accordance with the D&C EMP including the Groundwater and Surface Water EMP sub-plans. These sub-plans must be implemented prior to the release of any water off-site.

(b) Predictive modelling, based on background monitoring, must be carried out for areas where construction works are likely to intercept groundwater or cause the movement of groundwater.

(c) Where predictive modelling predicts that construction works are likely to intercept groundwater or cause the movement of groundwater, or where construction works intercept groundwater, specific mitigation and management measures must be designed and implemented to achieve the environmental objectives and performance criteria in the D&C EMP.

(d) Where there is an identified potential risk of groundwater movement (including drawdown) as a result of the project impacting on any property all reasonable and practicable measures must be taken to avoid, or mitigate and manage the impacts. These measures must be developed in consultation with owners and occupants of potentially-affected property prior to the commencement of construction works that have the potential to impact on the property.

(e) Where it is identified that property damage has occurred to premises as a consequence of the construction works affecting groundwater levels, such damage must be repaired as soon as practicable at no cost to the property owners. Such repairs must be undertaken in consultation with the property owners and occupants and must return the premises at least to the condition existing prior to commencement of construction works.

(f) A specific, targeted monitoring program must be adopted to monitor groundwater flows during construction works, and for a period of five years after commencing operations, including, in locations where predictive modelling suggests there is a potential for groundwater draw-down. The predictive modelling must specifically consider the potential for inflow to occur from the Brisbane River.

(g) Stormwater must not be released from the construction areas to receiving waters in exceedance of the stormwater quality values in Table 7 as measured at the release point.

Table 7: Stormwater quality release measures

Water Quality Parameter	Value
pH	6.5-8.5
Turbidity	<20 NTUs
Oils and Grease	no visual films or odour
Debris	no visible debris
Suspended Solids (combined wet and dry flows)	50 mg/L
Suspended Solids (wet weather flow)	90%ile < 100mg/L

(h) Groundwater must not be released from construction areas to receiving waters in exceedance of the groundwater quality values in Table 8 as measured at the release point.

Table 8: Groundwater quality release measures

Water Quality Parameter	Value
Physico-Chemical	
pH	6.5-8.5
Dissolved Oxygen	80-100% saturation
Total phosphorus	0.06 mg/L
Total nitrogen	0.45 mg/L
Chlorophyll-a	0.01 mg/L
Turbidity	<20 NTL
Suspended Solids (combined wet and dry flows)	50 mg/L
Suspended Solids (wet weather flow)	90%ile < 100mg/L
Toxicants	
Total dissolved iron	0.0005 if Secchi >1m NR < 1 m
Total arsenic	0.05 mg/L
Total cadmium	0.002 mg/L
Total chromium	0.05 mg/L
Total copper	0.005 mg/L
Total nickel	0.015 mg/L
Total lead	0.005 mg/L
Total zinc	0.05 mg/L
Oils and Grease	no visual films or odour
Polycyclic aromatic hydrocarbon (PAH)	0.003 mg/L
Total chlorine	0.02 mg/L

(i) A construction water quality monitoring program must be established utilising the following guidelines:

(i) *Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2000*

(ii) *Queensland Water Quality Guidelines 2009*

(iii) *Monitoring and Sampling Manual 2009 Environmental Protection (Water) Policy 2009* (Queensland Government)..

(j) Water quality objectives for the receiving waters must be established to protect environmental values in the vicinity of off-site discharges of stormwater and construction waste water in accordance with the *Environmental Protection Regulation 2008* and the *Environmental Protection (Water) Policy 2009*

(k) Construction water quality (stormwater and groundwater) must be monitored at the release point at least weekly in the event of a release to determine whether the water quality release measures specified in Tables 7 and 8 are being achieved.

(l) All determinations of the quality of contaminants released must be:

(i) made in accordance with the methods prescribed in the *Monitoring and Sampling Manual 2009 Environmental Protection (Water) Policy 2009* (Queensland Government)

(ii) carried out on samples that are representative of the discharge.

(m) Where water quality monitoring indicates an exceedance of the water quality release limits:

(i) corrective actions and mitigation measures, including ceasing the release, must be implemented immediately to avoid further exceedances of the limits

(ii) an incident report must be prepared within two days of the receipt of determinations that indicate the exceedance, together with a statement describing the corrective actions and mitigations measures implemented to ensure no further exceedance occurs. Such an incident report must be posted on the project website as soon as the report is prepared

(iii) the exceedance must be reported in the next Monthly Environmental Monitoring Report required by Condition 4, Schedule 3 of these conditions, together with a statement describing the effectiveness of the corrective actions and mitigation measures implemented.

(n) Groundwater and surface water quality monitoring must be reported within the monthly environmental monitoring report. Reporting of an event that results in an uncontrolled release of contaminants to the environment must be reported immediately, in accordance with Schedule 3, Condition 3 of these conditions. Reporting on water quality monitoring of any releases from construction areas will include immediately following a rainfall event exceeding a two-year Average Recurrence Interval (ARI).

(o) An Erosion and Sediment Control Plan (ESCP) which has been certified by a Certified Professional in Sediment and Erosion Control (or similar qualification) as complying with these conditions and best practice, must be developed as part of the Surface Water EMP Sub-Plan and implemented for construction works on construction areas. The ESCP must:

(i) focus on source control options such as minimising site disturbance and optimising site layout to minimise the generation of sediment

(ii) set clear performance criteria for sediment basin design, construction, operation and maintenance

(iii) detail the timing of installation of all measures to ensure that they are installed and commissioned prior to the commencement of activities which may cause sediment to leave construction areas

(iv) where sediment ponds are not able to be utilised, demonstrate that the mix of measures proposed at any one time will achieve performance commensurate with that of sediment basins

(v) include a monitoring plan to demonstrate compliance with performance criteria and compliance with these conditions.

(p) Erosion control and sediment control structures must be maintained at all times, including during site clearing, construction and rehabilitation works, and be repaired or replaced as required after each rainfall event.

(q) All sedimentation ponds must be designed by a suitably qualified and experienced engineer to achieve the objectives of the ESCP.

(r) The Surface Water EMP Sub-Plan must include, but is not limited to the following:

(i) prevention of stormwater and stormwater runoff from contacting contaminants and disturbed areas

(ii) measures to minimise runoff from disturbed areas

(iii) measures to ensure separation of clean and contaminated storm waters (including the diversion of clear and uncontaminated stormwater away from any sedimentation ponds)

(iv) treatment measures used to treat sediment laden stormwater, including performance indicators to achieve compliance with release limits specified in these conditions

(v) a management process which prioritises options for re-use over releases to the environment. Where available and of appropriate chemical and biological quality for its proposed purpose, the proponent should use stormwater, groundwater, recycled water or other water sources in preference to potable water for construction including concrete mixing and dust control

(vi) assessment of the receiving water quality and environmental values. Where it is proposed to discharge to the stormwater system, this assessment relates to the discharge point of the stormwater system

(vii) assessment of the impacts of the volume and the quality of the discharge on the receiving water

(viii) measures to mitigate the impacts of the discharge and protect the environmental values of the receiving environment

(ix) proposed receiving environment and discharge quality monitoring program, including set monitoring points that must be identified for each release point

(x) measures for corrective action and continuous improvement

(xi) measures for periodic reporting and implementation of corrective action and continuous improvement measures.

(s) The Groundwater EMP Sub-Plan must include, but is not limited to the following:

(i) quality of groundwater being intercepted

(ii) options to reduce the volume of groundwater to be treated and released

(iii) volume of groundwater to be treated and released

(iv) groundwater treatment process

(v) treatment measures used to treat groundwater, including performance indicators to achieve compliance with release limits specified in theses conditions

(vi) a management process which prioritises options for re-use over releases to the environment

(vii) assessment of the receiving water quality and environmental values. Where it is proposed to discharge to the stormwater system, this assessment relates to the discharge point of the stormwater system

(viii) assessment of the impacts of the volume and the quality of the discharge on the receiving water

(ix) measures to mitigate the impacts of the discharge and protect the environmental values of the receiving environment

(x) proposed receiving environment and discharge quality monitoring program, including set monitoring points that must be identified for each release point

(xi) measures for corrective action and continuous improvement

(xii) measures for periodic reporting and implementation of continuous improvement measures.

(t) The proponent must implement and comply with provisions of the ESCP, and the Surface Water and Groundwater EMP Sub-Plans.

(u) Notwithstanding limits specified in Conditions 20(h) and (i), any release to waters must not contain any contaminants in sufficient concentration to result in environmental harm.

(v) Any spillage of wastes, contaminants or other materials must be cleaned up as quickly as practicable. Such spillage must not be cleaned up by hosing, sweeping or otherwise releasing such wastes, contaminants or material to any external storm water drainage system, roadside gutter or waters.

(w) All un-washed empty chemical, oil and fuel drums must be stored on a concrete hardstand area and so as to not contaminate stormwater.

(x) Washing, degreasing, servicing, cleaning or other maintenance of vehicles, plant, or other equipment must not occur in any area where resulting contaminants will or may be released to any storm water drain, land or waters.

(y) Regulated wastes, chemicals (including paints and solvents), fuels (and other hydrocarbons), cement and concrete must be stored and handled so as to prevent the release or likelihood of release of contaminants, particularly to stormwater drains and pits.

22. Noise and vibration

(a) The proponent must develop and submit a Noise and Vibration EMP Sub-Plan acceptable to the nominated entity at least one month prior to the commencement of any construction activities which:

(i) contains clear criteria for the assessment of compliance with the conditions of this approval

(ii) is based on the necessary noise modelling for decision making in respect of achieving compliance with these conditions. As construction proceeds, results from such predictive modelling must be compared with noise monitoring results on a weekly basis and where the actual measured noise levels vary by more than 2dB(A) from the predicted noise levels, the model must be re-calibrated to ensure the model accurately predicts the impacts

(iii) identifies works which will generate a 'high noise impact'[3] at sensitive places

(iv) identifies all reasonable and practical measures which will be implemented to minimise the effects of high noise impacts works

(v) identifies all plant and equipment to be used on site and details noise abatement measures which will be implemented to reduce the noise generated by the operation of each item of plant and equipment

(vi) identifies all reasonable and practical measures which will be implemented to achieve the noise objectives listed in Table 9: Acoustic quality objectives

(vii) identifies all reasonable and practical measures which will be implemented to minimise the noise generated by activities undertaken in accordance with Schedule 3, Condition18(c)

(viii) implements a hierarchy of mitigation focusing on source control (e.g. selection of quieter plant and equipment, implementation of quieter construction techniques), appropriate planning (e.g. site layout/location of noisy equipment, staging of construction works, delivery times), site mitigation (e.g. temporary screening) before considering residence based mitigation measures

[3] 'High Noise Impact' for the purpose of this condition is defined in the Glossary

(ix) identifies management measures which will be implemented when the night time regenerated noise objectives listed in Table 11 are exceeded

(x) clearly indicates the timing of implementation of mitigation measures

(xi) includes a monitoring component which details verification, ongoing routine and reactive monitoring requirements and use of specific equipment to conduct attended and unattended measurements as necessary to identify and measure the source in question

(xii) identifies the sensitive places including those who for various reasons will be affected by daytime works (e.g. elderly, housebound, shift workers) and makes clear provision for the protection of these people's amenity whilst construction activities continue

(xiii) includes clear impact-based triggers for offering of residence based mitigation and/or temporary relocation

(xiv) where noise modelling predicts that noise objectives will be exceeded, requires negotiations with affected residents to commence prior to commencement of works

(xv) sets timeframes within which negotiations must be completed and any agreed actions undertaken.

(b) The Noise and Vibration EMP Sub-Plan must be assessed by an independent acoustic specialist as meeting the requirements of Condition 22(a). Written proof of this assessment must be forwarded to the nominated entity and Coordinator-General with a copy of the EMP Sub-Plan.

(c) The proponent must implement the Noise and Vibration EMP Sub-Plan.

(d) All reasonable and practical mitigation measures, as detailed in the Noise and Vibration EMP Sub-Plan, must be in place to minimise the impacts of construction works undertaken outside of the standard construction hours in accordance with Condition 18(c) prior to the commencement of those works.

(e) All reasonable and practical measures, as detailed in the Noise and Vibration EMP Sub-Plan, must be implemented in an endeavour to meet the objectives identified in Table 9: Acoustic Quality Objectives for all construction works undertaken during standard construction hours. These measures must be in place prior to the commencement of construction works.

Table 9: Acoustic quality objectives

Sensitive Place	Time of day	Acoustic quality objectives (measured at the receptor) dB(A)[2]		
		LAeq,adj,1hr	LA10,adj,1hr	LA1,adj,1hr
Dwelling (for outdoors)	Standard Construction Hours[1]	50	55	65
Dwelling (for indoors)	Standard Construction Hours	35	40	45
Library and educational institution (including a school, college and university) (for indoors)	When open for business or when classes are being offered	35		
Childcare centre or kindergarten (for indoors)	When open for business, other than when the children usually sleep	35		
Childcare centre or kindergarten (for indoors)	When the children usually sleep	30		
School or playground (for outdoors)	When the children usually play outside	55		
Hospital, surgery or other medical institution (for indoors)	Visiting hours	35		
Hospital, surgery or other medical institution (for indoors)	Anytime, other than visiting hours	30		
Commercial and retail activity (for indoors)	When the activity is open for business	45		
Park or garden that is open to the public (whether or not on payment of an amount) for use other than for sport or organised entertainment	Anytime	The level of noise that preserves the amenity of the existing park or garden		

Notes:

1) Standard construction hours for the purposes of these conditions, are defined in condition 18(b), as 6.30 am to 6.30 pm Monday to Saturday, and at no time on Sundays or public holidays

2) All measurements are to be undertaken in accordance with the most recent edition of the *Noise Measurement Manual* (Queensland Government).

(f) Any surface work generating high noise impact, as detailed in the Noise and Vibration EMP Sub-Plan, may only be undertaken in continuous blocks within the same noise catchment for periods not exceeding three hours with a minimum respite from those works of not less than one hour between each block.

Note: 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.

(g) All mobile plant and equipment must be fitted with either less tonal 'broadband', 'quacker' or similar type reversing alarms or other warning devices (such as flashing lights) except where other measures such as spotters are engaged to effectively warn people who may be at risk of injury from movement of reversing mobile plant

(h) Long term night time noise sources, including the conveyor and temporary ventilation shafts, must be designed, constructed and managed in such a way as to comply with limits in Table 10.

Table 10: Long term night time noise limit

Noise type	Time of day	$LA_{10,(adj)\ (10mins)}$ (measured at a sensitive place)[1]	$LA_{1(adj)(10mins)}$ (measured at a sensitive place)[1]
Steady construction noise	6.30 pm - 6.30 am	Background + 3dB(A)	Background + 5dB(A)

1. Measured in accordance with the most recent edition of the *Queensland Government's Noise Measurement Manual.*

(i) Where modelling predicts or monitoring demonstrates that underground works exceed the objectives identified in Table 11 in the most affected habitable rooms of a sensitive place, then the management measures identified in the Noise and Vibration EMP Sub-Plan must be implemented.

Table 11: Night time regenerated noise objectives

Time	Objectives – $LA_{eq\ (adj)\ (15\ min)}$[1]
6.30 pm to 10.00 pm	40 dB(A)
10.00 pm to 6.30 am	35 dB(A)

1. Measured in accordance with the most recent edition of the *Queensland Government's Noise Measurement Manual.*

(j) Predictive modelling for vibration from construction works must be undertaken progressively and prior to the commencement of construction works along the corridor of construction influence. As construction proceeds, results from such predictive modelling must be compared with vibration monitoring results to determine the potential for construction works to impact on human comfort, to cause cosmetic damage to buildings, or to impact on the functioning of the vibration-sensitive contents of buildings and the model recalibrated. Where there is a significant difference between the actual measured vibration levels and the predicted vibration levels the model must be re-calibrated to ensure the model accurately predicts the impacts.

(k) Where the predictive modelling predicts that vibration goals for human comfort set out in Table 12, the contents of sensitive buildings set out in Table 13 and cosmetic damage to buildings set out in Table 14 are likely to be exceeded by construction works, then specific mitigation and management measures must be designed and implemented, prior to the commencement of construction works that are predicted to exceed the guide values, to achieve the environmental objectives and performance criteria in the D&C EMP in consultation with owners and occupants of potentially affected premises. Mitigation and management measures may include temporary relocation of occupants or sensitive building contents and/or measures carried out at the premises to minimise the risk of damage.

Table 12: Guide for satisfactory vibration levels - human comfort

Area	Vibration Levels
Within sleeping areas during continuous night-time tunnelling[4] works	0.5mm/sec peak particle velocity based on a 'low probability of reaction' (ref AS2670.2:1990)

Table 13: Guide for satisfactory vibration levels - sensitive building contents

Sensitive Building Contents	Vibration Levels
Precision balances	0.5—2.0mm/s
Some optical microscopes	0.5mm/s
Large computer disk drives and sensitive electronic instrumentation	1.0—5.0mm/s

[4] Continuous tunnelling works include operations of tunnel boring machines and roadheaders.

Table 14: Guide to vibration levels for minimal risk of cosmetic damage

Vibration Type	Peak Particle Velocity (mm/s)		
	Heritage Listed	Residential	Sensitive Commercial
Transient Vibration[1] (e.g. blasting)	2	10	10
Continuous Vibration[2] (e.g. TBM, roadheading)	2	5	5

1) Measured in the ground directly adjacent the building of concern.

2) Measured on the building foundations.

(l) On-going, continuous vibration monitoring must be conducted in the corridor of construction influence. Monitoring must be undertaken in accordance with accredited procedures and must be readily and publicly available. In circumstances where the guide values are not met, the reporting must describe the corrective actions taken to mitigate and manage the impacts. Monitoring results must be reported in accordance with the monthly reporting requirements of Condition 4 of Schedule 3 of this Coordinator-General's report.

(m) Building condition surveys must be conducted, progressively, of properties identified in the predictive modelling as potentially being affected by cosmetic damage as a result of construction works.

(n) Where a building condition survey indicates that cosmetic damage or more severe damage has occurred to premises as a consequence of the construction works, such damage must be repaired as soon as practicable at no cost to the property owners. Such repairs must be undertaken in consultation with the property owners and occupants and must return the premises at least to the condition existing prior to commencement of the relevant construction works.

(o) Transient airblast overpressure must not exceed 130 dB (lin) at a sensitive receptor. Notwithstanding this requirement, all reasonable and practicable measures to prevent or minimise the impacts of blasting must be taken, including, but not limited to:

(i) coverage of the blast pattern with appropriate overburden material and/or matting to minimise the generation of overpressure

(ii) designing the blast to minimise impacts, including maximising the stemming length and minimising the amount of explosive used to the extent practicable and considering weather conditions.

(p) Blasting may only occur during the hours of 7.30 am to 4.30 pm Monday to Saturday, and not on Sundays or Public Holidays.

(q) Prior to each blasting event, at least 24 hours notice must be provided to persons that may be adversely affected.

23. Waste

(a) The project must be constructed in accordance with the D&C EMP, including the Construction Waste EMP Sub-Plan.

(b) In circumstances where waste material is released to the environment, the incident must be reported immediately to the relevant authorities and such corrective or remedial action as required to render the area safe and to avoid environmental harm must be taken forthwith.

(c) All regulated waste must be transported by a licensed operator under the *Environmental Protection Act 1994* and disposed of at a facility licensed to accept such waste.

24. Urban design and landscape

(a) The project must be constructed in accordance with the D&C EMP, including the Urban Design and Landscape EMP Sub-Plan.

(b) The Urban Design and Landscape EMP Sub-Plan generally must achieve the environmental objectives and performance criteria, and generally must be consistent with the Draft Outline EMP (D&C) presented in the EIS. The sub-plan must ensure the project is constructed in a manner that minimises the visual impact of infrastructure and hard landscaping elements, including portals, overhead structures, fencing, signage, new bus shelters, etc.

(c) The project detailed design must incorporate measures established in *Crime Prevention Through Environmental Design (CPTED) Guidelines for Queensland Part A: Essential features for safer places. 2007*.

(d) The project detailed design must provide safe, legible and convenient connections for pedestrians, cyclists and public transport users to and from all residential areas adjacent to the project.

(e) The City West Strategy, and particularly the potential for a future land bridge across the ICB and railway lines in the vicinity of Victoria Park Road, must be actively considered by the proponent during design of the project to ensure the opportunity to construct this bridge in the future is not compromised by the project.

(f) Project lighting shall be designed constructed and operated to comply with *AS 4282-1997: Control of the Obtrusive Effects of Outdoor Lighting*.

25. Hazard and risk

(a) The project must be constructed in accordance with the Construction EMP, the Construction Hazard and Risk (CHR) EMP Sub-Plan and:

(i) Australian Standard AS4360:2004 Risk Management

(ii) *Workplace and Safety Act 1995—Tunnelling Code of Practice 2007*

(iii) *Fire and Rescue Act 1990.*

(b) The CHR EMP Sub-Plan must be prepared and implemented with regard to the potential risks associated with tunnel construction including risk minimisation and incident management, inundation, flood inundation via the portals, tunnel collapse, fire and chemical hazard, and traffic hazards associated with construction traffic.

(c) The CHR EMP Sub-Plan must be prepared in consultation with the relevant emergency services organisations and must ensure site accessibility for emergency services vehicles to the road network and construction areas, maintenance of essential urban services (water, power), transport and the use and storage of dangerous goods in construction areas, and communications during incidents.

(d) It may also include the measures for managing construction hazard and risk set out in the Draft D&C EMP in Appendix D of the supplementary report.

(e) At least two months prior to the commencement of permanent construction works, the CHR EMP Sub-Plan shall be submitted to the Department of Community Safety (DCS) for consultation on elements related to emergency services access to project construction sites and associated procedures and subsequent advice to the Coordinator-General for the Coordinator-General's approval of the sub-plan.

(f) Every month, the proponent and lead construction contractor must conduct routine onsite safety inspections and CHR EMP Sub-Plan updates with DCS personnel.

(g) The proponent and lead construction contractor must conduct a simulated emergency response exercise on at least one occasion within 12 months of the commencement of construction works in conjunction with the DCS.

26. Connection of the project to the Centenary Motorway

(a) The connection and 'tie in' of the project to the Centenary Motorway is to be designed, constructed and operated to ensure that the operation of the project does not limit the ability for possible widening of the Centenary Motorway.

(i) A minimum future construction zone width of 36.5 metres is required between the Northern Link troughs for possible future widening of the Centenary Motorway to six 'through lanes' at section A-A as depicted on Drawing Number ANX1-6-01 Rev B (Schedule 8). The future construction zone extends from the location of A-A to the Mt Coot-tha Road intersection.

(ii) This future construction zone shall exclude structures, drainage pipes, drainage materials (aggregate), lighting columns, conduits, cabling, pits, manholes, etc. Reasonable provision shall be made for transition lanes between the location of A-A and the Mt Coot-tha Road intersection (Schedule 8).

(iii) All elements of the design of the connection and 'tie in' of the project to the Centenary Motorway are to be compliant with TMR's *Road Planning and Design Manual* for a 90km/h design speed. This includes requirement for the provision of adequate shoulder widths to provide adequate sight distance for trucks and buses.

(b) Future planning for Brisbane has identified a new 'Inner Orbital' tunnel between the Centenary Motorway and Stafford Road at Everton Park as a transport network improvement option. The connection and 'tie in' of the project to the Centenary Motorway is to be designed and constructed to ensure that:

(i) operation of the project shall not compromise the ability for a future connection of Centenary Motorway with an 'Inner Orbital' tunnel

(ii) operation of the project should not compromise the ability for future operation of the 'Inner Orbital' tunnel and the Centenary Motorway as a continuous motorway route (that is, maintaining the speed environment) with traffic flow priority on Centenary Motorway directed to the continuous route

(iii) the Northern Link connection excavation works are not to be below the existing motorway surface levels west of a line drawn between the two points (E46987.038, N157425.253) and (E47071.605, N157283.886)

(iv) the western Northern Link portals, troughs and associated tie-in with the Centenary Motorway shall favour the outer lanes of the motorway carriageway without affecting the existing median width or narrowing motorway lane widths.

27. Impact on the Moggill Road Interchange of the Centenary Motorway

(a) The construction and operation of the project must be conducted in accordance with the Traffic Impact Management EMP Sub-Plan

(b) The purpose of the Traffic Impact Management EMP Sub-Plan is to mitigate and manage the traffic impacts from project operations on the surrounding road network identified in this section and section 26 and the immediate pedestrian impacts at the connections of the project to State Controlled roads.

(c) The Traffic Impact Management EMP Sub-Plan is to be submitted to TMR for approval within 180 days of commencement of construction of the project.

Note: If TMR approval or comment on the Traffic Impact Management EMP Sub-Plan is not provided to the proponent within a one month period of its submission, assuming receipt of adequate and sufficient information, then that EMP Sub-Plan is deemed to be approved.

(d) The Moggill Road Interchange of the Centenary Motorway is to be designed and upgraded to mitigate traffic and pedestrian impacts resulting from operation of the project. The proponent is to bear all reasonable costs of the upgrading directly associated with mitigating the traffic and pedestrian impacts resulting from the operation of the project. The forecast traffic scenario used in the design, as well as the design details associated with capital works required for the mitigation, shall be to the satisfaction of TMR and shall be developed collaboratively between BCC and TMR through an Interface Agreement that defines the process for finalising the proponent's obligations. The mitigations are to be designed to ensure the following:

(i) The level of service for the Moggill Road interchange intersections for the year of opening shall be no lower than level of service forcast by TMR for the following traffic movements at the time of the Project opening:

A eastbound and westbound through traffic on Moggill Road

B southbound off-ramp traffic movements onto Moggill Road from the Centenary Motorway

C right turn traffic from Moggill Road onto the Centenary Motorway northbound on-ramp.

(ii) To address the prospect of off-ramp traffic queuing beside the motorway traffic, the stand-up lanes on the southbound off-ramp shall accommodate the forecast traffic scenario for year of opening traffic queues, such that the 95% queue length will not extend onto motorway lanes immediately adjacent to the through lanes of the motorway.

(iii) Traffic queuing from any turning slots on Moggill Road for the year of opening under the forecast traffic scenario shall not extend to interfere with the through lanes of Moggill Road.

(iv) In mitigating the impacts, all motorway ramp elements are to be compliant with TMR's Road Planning and Design Manual for a 100km/h motorway design speed.

(v) Any widening or extension of the northbound on-ramp merge necessary to comply with TMR's Road Planning and Design Manual shall be to the west of the existing motorway without affecting the existing median width or narrowing motorway lane or shoulder widths.

Part 3: Operation phase

28. Community engagement

(a) There must be a mechanism for receiving and dealing with community concerns and complaints about the operational aspects of the project, including achievement of the environmental objectives for the project. This mechanism should:

(i) be similar to that established for the construction phase

(ii) provide a mechanism to resolve operational impacts where the environmental performance criteria have not been met

(iii) provide for prompt responses to complaints made, with information, corrective action where required, and reporting back to the complainant and proponent

(iv) be incorporated within the wider environmental reporting framework for the project.

29. Environmental management

(a) A comprehensive Operation and Maintenance (O&M) EMP must be prepared and implemented. The project must be operated in accordance with the O&M EMP, including O&M EMP sub-plans. The O&M EMP must:

(i) be developed generally in accordance with the Draft Operation EMP in Appendix D of the supplementary report

(ii) incorporate all of the conditions for operation contained in Appendix 1 and any other approvals that are relevant to the environmental management of the operation of the project

(iii) incorporate the elements of the D&C EMP that have ongoing requirements for the operation phase of the project

(iv) demonstrate how the elements in (i) to (iii) above have been included in the O&M EMP.

(b) The O&M EMP must be provided to the Coordinator-General at least ten business days prior to commencement of operation of the project[5] following consultation with the relevant nominated entities and consultative bodies and their comments taken into account in finalising the plans. The O&M EMP and EMP sub-plans shall be certified by the Environmental Management Representative as being in accordance with these conditions and all undertakings made in the EIS and supplementary report prior to seeking comments from the relevant nominated entities and consultative bodies.

(c) At least 60 business days prior to the commencement of operation, the certified O&M EMP and EMP sub-plans shall be provided to the relevant nominated entities.

Note: The relevant nominated entities and consultative bodies shall provide an integrated and coordinated response through the nominated entity with jurisdiction to the O&M EMP and EMP sub-plans within one month of the certified O&M EMP and EMP sub-plans being provided to the nominated entity and consultative bodies. If comments are not provided by the nominated entities and consultative bodies within the one month period the entity/body is deemed to have no comments.

(d) The O&M EMP must accord generally with the following framework:

(i) **environmental objectives and performance criteria—**must be incorporated as set out in the Draft Operation EMP in Appendix D of the supplementary report

[5] Operations commence with the opening of the tolled road to traffic.

(ii) **EMP sub-plans —**must identify, address and resolve specific environmental impacts predicted or occurring during the operational aspects of the project. EMP sub-plans must include measures designed to comply with the relevant industry standards for environmental management, including those set out in section 19.6.4 of the EIS and Schedule 6 of these conditions

(iii) **design of mitigation measures—**mitigation measures must be designed in response to the predicted impacts. Mitigation measures may include a wide range of measures such as, but not limited to, changes in operation procedures and practices, and design interventions to buffer places from predicted or actual operation impacts. Such measures must be effective and must achieve the environmental objectives and performance criteria set out in the Draft Operation EMP in Appendix D of the supplementary report, the statutory requirements and must be consistent with these conditions. They may include the mitigation measures contained in the Draft Operation EMP in Appendix D of the supplementary report, or may include other measures, provided those other measures achieve the environmental objectives and performance criteria, any relevant statutory requirements and these conditions

(iv) **monitoring—**on-going monitoring for operational impacts must be undertaken for some aspects of the project, including air quality (in-tunnel, in-stack and ambient air), noise from ventilation plant and other plant and equipment, road traffic noise (limited period), surface water quality, and such other operational aspects as necessary to assess performance relative to the environmental objectives set out in the Draft Operation EMP in Appendix D of the supplementary report or these conditions. The form of monitoring must be appropriate to the impact and must adopt the parameters established in the O&M EMP

(v) **review, response and modifications—**there must be a regular review of the O&M EMP. A process for review of mitigation measures must be outlined in the O&M EMP and must occur at a minimum of annually for the first five years of operation, starting within three months of opening, and at least biennially thereafter, unless on-going impacts occur warranting a more frequent review process

(vi) the review process must provide for further or alternate mitigation measures to be implemented as soon as practical in response to monitoring results where non-compliance with these conditions is identified. The review process must also address recurring concerns raised during community consultation or raised through the complaints mechanism

(vii) **complaints—**there must be a formal process for receiving and dealing with concerns about the operation of the project in relation to the environmental objectives. This process must be substantially the same as that established during the construction phase, except for such enhancements as required to address operational impacts and community concerns.

(viii) **non-conformance—**a process for dealing with circumstances where thresholds are exceeded during operation must be established prior to the commencement of operations. This process must establish a mechanism for reporting, taking corrective action where required and indicating responsibilities and timing for such action

(ix) **reporting—**a mechanism for reporting on compliance must be established in the Construction EMP consistent with the reporting requirements of conditions 3, 4 and 5.

30. Traffic management

(a) The operations of the project must be conducted in accordance with the O&M EMP and the O&M Traffic EMP Sub-Plan.

(b) At least one year prior to the expected opening of the NLRT to general traffic, the proponent must prepare and submit to BCC and TMR for review and approval, an O&M Traffic EMP Sub-Plan. For clarity, the required date of submission will not be determined by the expected

tunnel opening at the time of works commencement, but by any revised works programs (which may either bring forward or delay expected opening) as the project progresses.

(i) In the preparation of the O&M Traffic EMP Sub-Plan, BCC, and TMR are to be consulted in order to confirm and effectively manage the traffic impacts of operation of the Project.

(ii) The O&M Traffic EMP Sub-Plan is to be submitted for approval by BCC, and TMR prior to its implementation.

Note: BCC and TMR shall provide a response to the O&M Traffic EMP Sub-Plan within one month of receipt of all relevant information from the proponent, assuming receipt of adequate and sufficient information. If no response is provided by BCC and TMR within the one month period the O&M Traffic EMP Sub-Plan is deemed to be approved.

(c) The O&M Traffic EMP Sub-Plan should include, but not be limited to:

(i) detailed traffic management layout diagrams and supporting text for operations expected to involve lane or road closures on the NLRT Project or involve lane or road closures on Frederick Street, Mount Coot-tha Road, the Centenary Motorway or the ICB

(ii) measures to manage in-tunnel air quality where an incident in the tunnel system or adjacent road network requires traffic to cease flowing or slow below design speeds for the ventilation system

(iii) measures to manage traffic flows into and out of the tunnel system, having regard for conditions in tunnel and on the surface road network

(iv) measures to enable emergency services and other relevant entities to attend to incidents in the tunnel system

(v) measures to execute evacuations if necessary

(vi) measures to undertake maintenance requirements and other tunnel operational activities

(vii) measures to assist with safe and efficient transport network operations, through consultation with key stakeholders.

31. Noise

(a) The operation of the project must be conducted in accordance with the O&M EMP and the Operation Noise EMP Sub-Plan.

(b) Prior to the commencement of operations, an Operation Noise EMP Sub-Plan must be prepared and implemented to mitigate and manage the potential for noise from project operations. The Operation Noise EMP Sub-Plan should detail, but not be limited to, measures to mitigate and manage road traffic noise in specified locations identified in predictive modelling and including the following:

A Mount Coot-tha Road/ Centenary Motorway intersection

B Centenary Motorway at the NLRT merge and diverge locations

C ICB at the NLRT merge and diverge locations.

(c) The project must be designed and built to achieve the following airborne traffic noise criteria at the commencement of operations:

(i) State controlled roads—the project is required to comply with the TMR *Road Traffic Noise Management: Code of Practice*, which mandates a traffic noise criterion of 68

dBA $L_{A10(18hour)}$ where there are noise-sensitive places. Airborne traffic noise attenuation measures adjacent to State-controlled roads are only applicable to sections of road where new permanent works are occurring, for example, the tunnel merge and diverge lanes on the Centenary Motorway.

(ii) For all other public roads—63 dBA $L_{A10(18hour)}$ except where this level is already exceeded at sensitive places. In that case, the "status quo" noise levels should be maintained (i.e. in Y2026 without the project) or specific measures to address localised impacts be implemented in consultation with potentially affected property owners and occupants.

(d) The Operation Noise EMP Sub-Plan should include the following measures to ensure monitoring and reporting is conducted to manage operational noise effectively be:

(i) in compliance with the TMR Road Traffic Noise Management: Code of Practice in respect to State-controlled roads

(ii) monitored in accordance with accredited procedures and must be publicly available

(iii) in circumstances where operation noise goals are not met, the reporting must also describe the corrective actions to avoid a recurrence and to minimise the impacts of traffic noise.

32. Ground water and surface water

(a) Ground water and surface water must not be released from the project to receiving waters in exceedance of the water quality measures in Table 16 as measured at the release point.

Table 16: Operational water quality release measures

Water Quality Parameter	Value
Physico-Chemical	
pH	6.5-8.5
Dissolved Oxygen	80-100% saturation
Total phosphorus	0.06 mg/L
Total nitrogen	0.45 mg/L
Chlorophyll-a	0.01 mg/L
Turbidity	<20 NTL
Suspended Solids (combined wet and dry flows)	50 mg/L
Suspended Solids (wet weather flow)	90%ile < 100mg/L
Toxicants	
Total dissolved iron	0.0005 if Secchi >1m NR < 1 m
Total arsenic	0.05 mg/L
Total cadmium	0.002 mg/L
Total chromium	0.05 mg/L
Total copper	0.005 mg/L
Total nickel	0.015 mg/L
Total lead	0.005 mg/L
Total zinc	0.05 mg/L
Oils and Grease	no visual films or odour
Polycyclic aromatic hydrocarbon (PAH)	0.003 mg/L
Total chlorine	0.02 mg/L

(a) All determinations of the quality of ground water and surface water released must be:

(i) made in accordance with the methods prescribed in the latest edition of *Monitoring and Sampling Manual 2009 Environmental Protection (Water) Policy 2009* (Queensland Government)

(ii) carried out on samples that are representative of the discharge.

(b) Where water quality monitoring indicates an exceedance of the water quality release measures:

(iii) corrective actions and mitigation measures must be implemented immediately to avoid further exceedances

(iv) an incident report must be prepared within two days of the exceedance, together with a statement describing the corrective actions and mitigations measures implemented to ensure no further exceedance occurs. Such incident report must be provided to the nominated entity and posted on the project website as soon as the report is prepared.

(c) Measures must be initiated in the instance of an emergency or hazardous situation, to collect wastewater for subsequent removal and disposal to an authorised release point.

(d) Where there is an identified potential risk of groundwater movement (including drawdown) as a result of the project impacting on any property all reasonable and practicable measures must be taken to avoid, or mitigate and manage the impacts. These measures must be developed in consultation with owners and occupants of potentially-affected property prior to the commencement of works that have the potential to impact on the property.

(e) Where it is identified that property damage has occurred to premises as a consequence of the project, such damage must be repaired as soon as practicable at no cost to the property owners. Such repairs must be undertaken in consultation with the property owners and occupants and must return the premises at least to the condition existing prior to commencement of construction works.

(f) A specific, targeted monitoring program must be adopted to monitor groundwater flows during the first twenty years of the operation of the project including, but not limited to, in locations where predictive modelling suggests there is a potential for groundwater draw-down.

(g) Reporting of the results of groundwater monitoring must be made available on the project's website and be updated not less frequently than monthly.

33. Hazard and risk

(a) At least six months prior to the opening of the project, the proponent shall prepare an Emergency Response Plan, in consultation with the Department of Community Safety (DCS) and the Queensland Police Service and submit it to the Coordinator-General. The plan shall include, but not necessarily be limited to:

(i) protocols and procedures to be followed during emergency situations associated with the operation of the project including vehicle collisions, fires and explosions including taking into account the needs of people with a disability or who may experience access problems in emergency situations

(ii) details of traffic management measures to be implemented during emergencies, where appropriate, to minimise the potential for escalation of the emergency

(iii) management and infrastructure measures to address the potential environmental impacts of an emergency situation, including measures for containment of contaminated fire fighting water, fuel spills and gaseous combustion products

(iv) a training and testing program to ensure that all operational staff are familiar with the plan and coordination with the DCS and the Queensland Police Service is regularly exercised

(v) a simulated emergency response exercise in accordance with the approved Emergency Response Plan, including the proponent, DCS, and the Queensland Police Service (QPS) shall be undertaken on at least one occasion at least one month prior to the opening of the project to traffic.

Note: DCS and the Queensland Police Service shall participate in the emergency response exercise at a time agreed with the proponent after being provided with at least one month notification of the exercise. If no participants are provided by DCS and/or QPS for the simulated emergency response exercise after receiving the specified advice, the condition is deemed to have been satisfied

(b) The proponent shall undertake an annual Hazard Review of the project and hazardous incidents that have occurred during the preceding twelve-month period for the first five years of operation.

(i) The first review shall be undertaken no later than three months after the opening of the project to traffic. A report outlining the results of the hazard review, and any proposed additional safety measures to be implemented in response to the findings of the review, shall be submitted to the DCS within one month of completion of the review.

(ii) The proponent shall meet the DCS's requirements in relation to the findings of the review, within such time as may be agreed by the DCS. The DCS may direct the proponent to undertake further hazard review following any major incident in the tunnel.

(c) The proponent shall develop a Fire and Smoke Management Plan to address fire and life safety in the tunnel. The plan shall outline fire protection systems and other tunnel equipment, systems, and operational protocols required for fire and smoke management. In developing the plan, the proponent shall undertake a detailed fire engineering study in accordance with the *Australian Building Codes Board, Fire Safety Engineering Guidelines*, the Project Deed and in consultation with the DCS.

(i) Detailed design of the tunnel shall incorporate the design and operational measures developed in the fire engineering study and in accordance with the Project Deed to minimise the potential for and affect of fire in the tunnel.

(ii) The plan shall be developed in consultation with the Coordinator-General and the DCS. The final design of the tunnel in relation to the fire and life safety features shall be verified against the fire engineering study and Project Deed in consultation with the DCS by a suitably qualified independent person/organisation.

(d) Prior to the opening of the project to traffic, a full audit of the fire and life safety system as defined by the fire engineering study developed in Condition 33 (c) shall be undertaken by an independent person(s)/organisation. The objective of the audit shall be to ensure that all design and operational measures outlined in the fire engineering study and Project Deed have been installed and are operational and achieves the required design criteria. The results of the safety audit shall be submitted to the DCS and the Coordinator-General prior to opening of the project to traffic. The proponent shall comply with any requirements resulting from the DCS's review of the audit.

(e) Fire simulation and hot smoke testing shall be undertaken as part of the simulated emergency response exercise to be staged prior to opening of the project to traffic as required in Condition 33 (a)(v).

(f) A detailed maintenance-testing program outlining the methods of testing the fire and life safety systems and schedule for implementation shall be developed to the satisfaction of the Queensland Fire and Rescue Service prior to opening of the project to traffic.

(g) Maintenance testing of fire and life safety systems must be undertaken at least annually or any other interval as required by the design engineer and the Queensland Fire and Rescue Service. Results of maintenance testing shall be made available to the Queensland Fire and Rescue Service for review and the proponent shall comply with any additional requirements to ensure the reliability of the fire and life safety systems.

34. Waste

(a) The project must be conducted in accordance with the O&M EMP and the Operation Waste EMP Sub-Plan.

(b) Prior to the commencement of operations, an Operation Waste EMP Sub-Plan must be prepared and implemented. This Sub-Plan must:

(i) reflect the principles of 'reduce, re-use, recycle'

(ii) identify the type, source and estimated quantities of waste

(iii) identify the procedures and responsibilities for dealing with an incident in which waste material with the potential for causing environmental harm, is released to the environment.

(c) In circumstances that such waste material is released to the environment causing an environmental incident, the incident must immediately be reported to the relevant authorities. Corrective or remedial action to render the area safe and to avoid environmental harm must be taken forthwith.

(d) All regulated waste must be transported by a licensed operator and disposed of at a facility licensed to accept such waste.

Schedule 4

Jurisdiction for Conditions

Condition number	Condition short title	Entity with Jurisdiction	Consultative Bodies
Schedule 1: Stated Conditions for *Integrated Planning Act 1997* Approvals			
Condition 1	Material change of use of premises if all or part of the land is on the Environmental Management Register or Contaminated Land Register	Department of Environment and Resource Management (DERM)	N/A
Condition 2	Development on a State heritage place	DERM	N/A
Condition 3	Development on a local heritage place	Brisbane City Council (BCC)	N/A
Condition 4	ERA 51-Road Tunnel Ventilation	DERM	N/A
Schedule 2: Recommended Conditions for Other Approvals			
Condition 1	Aboriginal Cultural Heritage	DERM	N/A
Condition 2	Connection to a State controlled road	Department of Transport and Main Roads (TMR)	BCC
Condition 3	Interference with a railway or busway	TMR	BCC (for busways)
Condition 4	Road Closures	TMR (for state controlled roads) BCC (for local roads)	
Condition 5	Explosives	Explosives Inspectorate unit the Department of Employment Economic Development and Innovation	BCC
Schedule 3: Imposed Conditions - Part 1: General Conditions			
Condition 1	General Conditions	Coordinator-General	BCC, DERM, TMR
Condition 2	Offsetting Greenhouse Gas Emissions	Coordinator-General	DERM

Condition 3	Incident Reporting	Coordinator-General	DERM, TMR, DCS, BCC
Condition 4	Monthly Environmental Monitoring Reports (Construction only)	Coordinator-General	DERM, TMR, DCS, BCC
Condition 5	Half Yearly Audit Reports	Coordinator-General	DERM, TMR, DCS, BCC
Schedule 3: Imposed Conditions - Part 2: Design and Construction Phase			
Condition 6	Communication and Consultation	Coordinator-General	DERM, CLGs, BCC
Condition 7	Community Liaison Groups (CLGs)	Coordinator-General	DERM, CLGs, BCC
Condition 8	Community Communication Strategy	Coordinator-General	DERM, CLGs, BCC
Condition 9	Independent Community Liaison Representatives	Coordinator-General	DERM, CLGs, BCC
Condition 10	Display Centres	Coordinator-General	BCC
Condition 11	Building works	BCC	
Condition 12	Pedestrian / Cycle Connectivity	TMR	BCC
Condition 13	Requirements for Equitable Access Statement	Department of Communities (DSQ)	DCS, Queensland Police Service.
Condition 14	Environmental Management	Coordinator-General	DERM, DCS, TMR, Department of Health, BCC
Condition 15	Environmental management plan (EMP)	Coordinator-General	DERM, DCS, TMR, Department of Health, BCC
Condition 16	Traffic Management	TMR (for State-controlled roads) BCC (for Local Roads)	DCS
Condition 17	Spoil Handling and Placement	Coordinator-General	BCC (where a development permit under City Plan 2000 is required), Other local authorities where a development approval is required from the local authority DERM
Condition 18	General Construction	Coordinator-General	DERM, TMR, BCC, Energex
Condition 19	Flora and Fauna	DERM	BCC
Condition 20	Air Quality	DERM	Department of Health

Condition 21	Groundwater and Surface Water	DERM	
Condition 22	Noise and Vibration	DERM	
Condition 23	Waste	DERM	BCC
Condition 24	Urban Design and Landscape	Department of Infrastructure and Planning	BCC
Condition 25	Hazard and Risk	DCS	DERM, BCC, TMR
Condition 26	Centenary Motorway Connection	TMR	BCC
Condition 27	Moggill Rd Interchange	TMR	BCC
Schedule 3: Imposed Conditions - Part 3: Operation Phase			
Condition 28	Community Engagement	Coordinator-General	DERM, CLGs, BCC
Condition 29	Environmental Management	Coordinator-General	DERM, TMR, DCS, Department of Health, BCC
Condition 30	Traffic Management	TMR (for State Controlled Roads) BCC (for Local Roads)	DCS
Condition 31	Noise	TMR	
Condition 32	Groundwater and Surface Water	DERM	
Condition 33	Hazard and Risk	DCS	Department of Communities, Queensland Police Service, DERM, BCC
Condition 34	Waste	DERM	BCC

Schedule 5

Coordinator-General's other Recommendations

1. **Requirement to use renewable energy sources**

   I recommend that from commencement of the project's opening to traffic until 31 December 2019 the proponent should purchase at least 10% of all the project's operational electrical energy requirements from accredited renewable energy ('Green Power') sources. From 1 January 2020, the proponent should purchase at least 20% of all the project's operational electrical energy requirements from accredited renewable energy ('Green Power') sources.

2. **TMR/BCC assessing road closure permits**

   I recommend to TMR and BCC, as the road authorities responsible for assessing and issuing road closure permits, that in assessing requests for night time road closures for the project that the authorities give due consideration to the likely impact of such works on nearby residents with respect to the frequency, intensity, duration and impact of the works in considering the issue of the permits and any conditions that may be attached.

3. **Bus priority planning**

   I recommend that BCC work with TMR in developing and implementing a public transport plan that is consistent with WBTNI planning outcomes and includes interim and longer term bus priority treatments for the Moggill Road, Milton Road (western end) and Coronation Drive corridor.

4. **Future cycle use of the Centenary Motorway east of the Moggill Road Interchange**

   I recommend that, should the proponent commit to a contract for the construction of the NLRT project, then TMR should immediately undertake a reassessment of the on-going use of the Centenary Motorway by sports and group cyclists to be completed at least two months prior to the commencement of construction of the project. Should that assessment identify significant safety concerns, then TMR should promptly advise Bicycle Queensland and the general public that bicycle access to the Centenary Motorway east of the Moggill Road interchange will be prohibited.

5. **Provision of contractor incentives to encourage fulfilment of objectives of conditions**

   I recommend that the proponent provide support and incentives to its design, construction, operation and maintenance contractor(s) to encourage them to perform all of their obligations in a way that is consistent with the objective of the conditions in this report to minimise the potential environmental effects of the project.

6. **Mitigation of project impacts on the Moggill Road Interchange of the Centenary Motorway**

   I recommend to TMR and BCC that, if the Interface Agreement in Condition 27(d) of Schedule 3 is not finalised within 120 days of commencement of construction, then mediation of that Agreement should be promptly sought.

Schedule 6

Glossary of Terms

"background" for noise levels means background noise level measured in accordance with the Queensland Government's *Noise Measurement Manual.*

"BCC" means the Brisbane City Council, the Proponent of the Project.

"CHMP" means cultural heritage management plan.

"CHR EMP sub-plan" means Construction Hazard and Risk EMP sub-plan.

"City Plan" means Brisbane City Plan 2000.

"CLG" means the Community Liaison Group as defined by Schedule 3, Condition 7 of this Coordinator-General's Report.

"CLR" means Contaminated Land Register as defied by the *Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland 1998.*

"CO_2-e" is the abbreviation of 'carbon dioxide equivalent' and is the internationally recognised measure that allows for the comparison of different greenhouse gases in terms of their global warming potential.

"Construction Areas" means the construction worksites, construction car parks, and any areas licensed for construction or on which Construction Works are carried out, including without limitation, the tunnel worksites and any spoil conveyor.

"Construction Works" means all works necessary for the construction of the Project, including demolition of existing buildings and structures, site preparation, Public Utility Works, tunnelling works and associated road works.

"CPTED" means Crime Prevention through Environmental Design.

"D&C EMP" means an environmental management plan or plans, including any sub-plans, for the design and construction phase of the Project.

"DCS" means Department of Community Safety.

"DERM" means the Department of Environment and Resource Management.

"DIP" means the Department of Infrastructure and Planning.

"DOC" means Department of Communities.

"DSQ" means Disability Services Queensland in DOC.

"TMR" means the Department of Transport and Main Roads.

"EAS" means Equitable Access Statement which aims to ensure that the needs of people with a disability or who may experience access problems are taken into account during the design of the project.

"EIS" means the *Environmental Impact Statement for the Northern Link Project (September 2008)*.

"EMP" means an environmental management plan.

"EMR" means Environmental Management Register as defied by the *Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland 1998.*

"EPP (Air)" means the *Queensland's Environmental Protection (Air) Policy 2008*.

"ERA" means environmentally relevant activity under the *Environmental Protection Act 1994*.

"**ESCP**" means Erosion and Sediment Control Plan.

"GHG" means greenhouse gas.

"Green Power" means electricity sourced from a renewable energy source accredited by National GreenPower Accreditation Program that meets the criteria of the Australian Government's Renewable Energy Target.

"High Noise Impact" for this report means works which generate noise greater than the background noise level without the Project plus 20dB(A) (adjusted), at a Sensitive Place when measured in accordance with the most recent edition of the *Noise Measurement Manual* (Queensland Government).

"ICB" means Inner City Bypass. The ICB at Kelvin Grove is the location for the connection of the tunnel to the surface road network at the eastern end of the project.

"ICLR" means Independent Community Liaison Representative defined by Schedule 3, Condition 9(a) of this Coordinator General's Report.

"LoS" is 'level of service'. LoS is an index of the operational performance of traffic on a given traffic lane, carriageway or road when accommodating various traffic volumes under different combinations of operating conditions. The meaning provided (for Urban and Suburban Arterials) in Figure 5.12 of the *Road Planning and Design Manual (Queensland Department of Main Roads, 2004)* applies in this report, and may be summarised as:

LoS A – average travel speed ≥ 90% of free flow speed

LoS B – average travel speed approximately 70% of free flow speed

LoS C – average travel speed approximately 50% of free flow speed

LoS D – average travel speed approximately 40% of free flow speed

LoS E – average travel speed approximately 33% of free flow speed

LoS F – average travel speed ≤ 25% of free flow speed

"NEPC" means National Environmental Protection Council.

"NEPM" means National Environment Protection Measures made under the *National Environment Protection Council Act 1994* (Cth).

"NIAPSP" means the Noise Impact Assessment Planning Scheme Policy under Brisbane City Plan 2000.

"NLRT" means the Northern Link Road Tunnel Project between the Centenary Motorway at Toowong and the Inner City Bypass at Herston, which is the subject of this Coordinator-General's Report (see also "Project").

"NO_2" means nitrogen dioxide.

"NO_x" means oxides of nitrogen, which includes NO_2.

"O&M EMP" means an environmental management plan or plans, including any sub-plans, for the operation and maintenance phase of the Project.

"permanent construction works" means all 'construction works' (see definition above) other than, for the main Toowong worksite defined in the supplementary report, pre-construction surveying, establishment of worksite security arrangements (including signs, fences, safety barriers and temporary security personnel facilities), vegetation clearing, demolition and removal of structures and required public utility works up to the boundary of the main Toowong worksite..

"PIARC" means Permanent International Association of Road Congress (also known as the World Road Association).

"$PM_{2.5}$" means particulate matter with equivalent aerodynamic diameter less than 2.5μm.

"PM_{10}" means particulate matter with equivalent aerodynamic diameter less than 10μm.

"project" means the Northern Link Road Tunnel (NLRT) project, as described in the *Environmental Impact Statement (September 2008)* for the project and the *Environmental Impact Statement Supplementary Report for the Project (June 2009)*.

"proponent" means the entity responsible for the procurement of the Project, the BCC, which has indicated its intention to seek a contractor to design, construct, maintain and operate the NLRT Project.

"Public Utility Works" means

(a) the replacement, modification or relocation of public utilities required as a consequence of the Project; and

(b) the construction of new utility infrastructure required for the Project.

"SDPWO Act" means the *State Development and Public Works Organisation Act 1971*.

"Sensitive Place" means any of the following places:

(a) a dwelling;

(b) a library, child-care centre, kindergarten, school, college, university or other educational institution;

(c) a hospital, surgery or other medical institution; or

(d) a commercial premises relying on calibrated equipment or computers sensitive to vibration greater than the guide values set out in Table 13 of Schedule 3 of these Conditions.

"SEQIPP" means Southeast Queensland Infrastructure Plan and Program 2009 and its successors, published by DIP.

"SIDRA" is the computer software intersection model that is used throughout Australia and New Zealand to quantify the efficiency of an isolated intersection. The acronym stands for Signalised Intersection Design and Research Aid.

"SPA" means *Sustainable Planning Act 2009*, which replaced the *Integrated Planning Act 1997* (IPA) as the principal statutory instrument in the Queensland Integrated Development and Assessment System (IDAS) on 18 December 2009.

"Spoil" means any earth or other like material removed from the Project works.

“Spoil Placement Areas” means areas for the long-term placement of spoil. For clarification, the term does not include the Mt Coot-tha Quarry.

“Standard Construction Hours” means 6:30 am to 6:30 pm Monday to Saturday and at no time on Sundays and public holidays.

“Status-quo noise levels” means noise levels anticipated in the design year, Y2026, without the Project.

“Surface Works” means all Construction Works at or exposed to the surface, but does not include underground works.

“supplementary report” means the *Northern Link Environmental Impact Statement Supplementary Report (June 2009)* prepared by the proponent.

“Underground Works” means all Construction Works that occur beneath the natural surface of the earth and within an enclosed space.

“TEOM” means tapered element oscillating microbalance analyser.

“TBM” means Tunnel Boring Machine.

“TSP” means Total Suspended Particles.

"waters" includes river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, bed and bank of any waters, dams, non-tidal or tidal waters (including the sea), any underground water and any part-thereof.

“WBTNI” means Western Brisbane Transport Network Investigation conducted by TMR.

Schedule 7

Standards and guidelines for environmental management

Unless described or specified otherwise in these conditions, the standards and guidelines for environmental management set out in the table below, must be adopted and implemented in the construction and operation of the project.

Air Quality	AS 3580: 2003 Methods of Sampling and Analysis of Ambient Air
	Air Quality Sampling Manual (Queensland Government 1997).
	AS/NZS 3580.9.3:2003 *Determination of suspended particulate matter - Total suspended particulate matter (TSP) - High volume sampler gravimetric method*
	AS3580.9.6 *Determination of suspended particulate matter – PM_{10} high volume sampler with size-selective inlet – Gravimetric method*
	Methods and Guidance for the Modelling and Assessment of Air Pollutants in NSW - DRAFT February 2005 (NSW EPA)
	Approved Methods and Guidance for the Modelling and Assessment of Air Pollutants in NSW - August 2001 (NSW EPA)
	Queensland *Environmental Protection (Air) Policy 2008*
	Queensland *Environmental Protection Regulation 2008*
Lighting	AS 4282-1997: Control of the obtrusive effects of outdoor lighting.
Blasting & Use of Explosives	*Australian Dangerous Goods Code, 7th Edition*, which is to be used as a code of practice.
	Explosives Regulation 2003
	Australian Explosives Code 3
	AS2187 – Explosive storage, transport and Use 1998
Dangerous Goods	AS 1216 : 1995 Classification, labels for Dangerous Goods
	AS 1678 : 2003 Emergency Procedure Guides – Transport
	AS 1940 : 2004 Storage and Handling of Flammable and Combustible Liquids
	AS 2508.2.007 : 2001 Safe Storage and Handling Information Cards for liquefied Petroleum Gas
	AS 2809 : 1999 Road Tank Vehicles for Dangerous Goods
	AS 3780 – 1994 The Storage and Handling of Corrosive Substances

	AS 2931 : 1999 Selection and Use of Emergency Procedure Guides for Transport of Dangerous Goods.
Flora & Fauna	DPI&F Fish Habitat Guideline FHG 002 - "Restoration of Fish Habitats, Guidelines for Marine Areas (1998)"
	AS 4970: Protection of Trees on Development Sites
Noise & Vibration	Noise measurement manual : for use in testing for compliance with the Environmental Protection Act 1994, Third edition, 2000
	AS 1055.1 : 1997 Acoustics – Description and Management of Environmental Noise : General procedures
	AS 1055.2 : 1997 Acoustics – Description and Management of Environmental Noise : application of specific situations
	AS 1259.2 - 1990 Acoustics - Measurement of airborne noise emitted by earth-moving machinery and agricultural tractors - Stationary test Condition Part 1: determination of compliance with limits for exterior noise
	AS/NZS 2107:2000 Acoustics - Recommended design sound levels and reverberation times for building interiors
	AS 2187 : 1993 Explosives – Storage Transport and Use : use of explosives
	AS 2107 Acoustics - Recommended noise levels and reverberation times for building interiors
	AS 2436 : 1981 Guide to Noise Control on Construction, Maintenance and Demolition Sites
	AS 2659.1 Guide to the Use of Sound Measuring Equipment
	AS 2659 Sound Level Meters
	AS 2670.1:2001 Evaluation of human exposure to whole-body vibration Part 1: General Requirements
	AS 2670.2:1990 Evaluation of human exposure to whole-body vibration Part 2: Continuous and shock-induced vibration in buildings (1 to 80 Hz)
	AS 2702 : 1984 Acoustics – Methods for Measurement of Road Traffic Noise.
	Australian Design Rule 28/01
	National Road Transport Commission - Stationary Exhaust Noise Test Procedures for In-Service Motor Vehicles
	British Standard 7385: Part 1 - 1990 Evaluation and Measurement for Vibration in Buildings - Guide for measurement of vibrations and evaluation of their effects on buildings
	Environmental Protection (Noise) Policy 2008
	Environmental Protection Regulation 2008
	Queensland Main Roads - Road Traffic Noise Management: Code of Practice 2000
	Queensland Main Roads Standard Specification MRS11.15 Noise Barriers, December 1999
	Queensland Main Roads Standard Specification 11.51 Environmental Management, December 1999

	BCC - Noise Impact Assessment Planning Scheme Policy
	Calculation of Road Traffic Noise (CORTN88) United Kingdom Department of Transport
	Interim Guidelines and Technical Notes for Road Traffic Noise Amelioration (DMR 1992)
	Environmental Guideline "Noise from Construction, Maintenance & Demolition Sites" (EPA 1989)
Risk	AS 4360 : 2004 Risk Management
Soils & Erosion Management	National Environmental Protection (Assessment of Site Contamination) Measure 1999 (NEPM) NHMRC/NEPC
	Queensland Government Chemical Laboratory – Guidelines for Soil Sampling
	Queensland Acid Sulfate Soils Investigation Team (QASSIT) "Sampling and Analysis Procedure for Lowland Acid Sulfate Soils (ASS) in Queensland" dated 1 October 1997.
	State Planning Policy 2/02: Planning and managing development involving Acid Sulfate Soils
	State Planning Policy 2/02 Guideline: Acid Sulfate Soils
	"Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland" (Department of Environment 1998)
	Soil Erosion and Sediment Control, Engineers Guidelines for Queensland Construction Sites, 1996
Waste Management	AS 1216 Classification, Hazard identification and Information Systems for Dangerous Goods
	AS 1678 Emergency Procedure Guides - Transport
	AS 1940 Storage, and Handling of Flammable and Combustible Liquids
	AS 3780 The Storage and Handling of Corrosive Substances
	AS 2809 Road Tank Vehicles for Dangerous Goods
	AS 2931 Selection and Use of Emergency Procedure Guides for Transport of Dangerous Goods
	AS 2187 Explosives - Storage, Transport and Use
Water Quality Management	Monitoring and Sampling Manual 2009 *Environmental Protection (Water) Policy 2009* (Queensland Government)
	Standard Methods of the Examination of Water and Wastewater – American Public Health Association (APHA)/Australian Waste Water Association (AWWA)
	AS 2031 : 2001 Selection of Containers and Preservation of Water Samples for Microbiological Analysis
	Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2000 (ANZECC 2000)
	Queensland Water Quality Guidelines 2009, and associated Updates, Queensland Government

Schedule 8

Centenary Motorway Tie-In - Schedule 3 condition 26(a)(ii)

Refer to following attachment.

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