

Notice

**ENVIRONMENT PROTECTION ACT 1970
SECTION 22(1)
NOTICE TO SUPPLY FURTHER INFORMATION**

TO: North East Link Project, a division of the Major Transport Infrastructure Authority, an administrative office in relation to the Department of Transport (ABN 69981 208 782)

WHEREAS an application by you for a works approval in respect of North East Link Tunnel Ventilation System in Victoria was received by the Environment Protection Authority ("the Authority") on 7 March 2019.

AND WHEREAS we consider the information specified herein is necessary and relevant to the consideration of the application

NOW TAKE NOTICE that pursuant to section 22(1)(a) of the Environment Protection Act ("the Act") **North East Link Project** is **HEREBY REQUIRED** to supply to the Authority by 5.00pm on the 5th day of September 2019 the information specified in Attachment A of this notice.

DATED: 6 August 2019



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QUENTIN COOKE
DELEGATE OF THE
ENVIRONMENT PROTECTION AUTHORITY

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ATTACHMENT A

Ventilation stack heights

1. Explain how the heights of the southern and northern stacks were optimised.

Ventilation system concept design

2. Explain how the proposed ventilation system was determined (versus alternatives), as well as fresh air intake points (if any other than tunnel portals) and distribution/regulation system.
3. Provide the following information:
 - a) ventilation velocities, number of jet fans and axial fans in use, dilution of air requirements and tunnel air flow rates with calculations to justify the proposed maximum ventilation velocities of 1,290 m³/s.
 - b) the control for meeting in-tunnel air performance criteria for CO, NO₂, visibility and the tunnel air flow velocity, as specified in section 5.1 of the works approval application. This must include logic diagrams with:
 - i. plots showing air flow velocities, air quality for CO, NO₂, visibility and jet fan requirements throughout the tunnel; and
 - ii. locations of air monitoring and instruments.
 - c) the information for a) to b) i must include the following situations:
 - i. normal free flowing traffic in range 0, 10, 20 to 80 kph for the forecast maximum number of vehicles per hour;
 - ii. congested traffic 3 lanes at 20 kph;
 - iii. congested traffic 3 lanes stop/start at approximately 10 kph; and
 - iv. fire incident.
 - d) control of smoke 'back layering' in the event of fire up to 50MW.
4. Provide analysis of the worst-case situation with supporting modelling analysis results, including, but not be limited to, congested traffic 3 lanes stop/start at 20 and 10 kph for the forecast maximum number of vehicles per hour during peak hours (i.e. 6~9am or 6~8pm).

Abnormal operation/ emergency management

5. Provide the basis and criteria for the detailed design of the emergency ventilation stacks.

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6. Provide an explanation of how the tunnel ventilation system will be operated to protect the health of people using the tunnel in the event of abnormal operating conditions. The abnormal operating conditions should include consideration of:
 - a) fire;
 - b) major equipment failures (i.e. the jet fans and/or ventilation fans, etc.);
 - c) congested traffic at or below 20 kph for the forecast maximum number of vehicles;
 - d) other incidents that potentially adversely affect the operation of the ventilation system (i.e. extreme heat, flooding and spills); and
 - e) the information for a) to d) must include the following:
 - i. the frequency of occurrence; and
 - ii. confirmation of in-tunnel air quality standards for CO, NO₂ and visibility would be maintained. If these standards can't be achieved, what could the in-tunnel air qualities be for those parameters?

Air emission modelling

7. Provide the following air modelling files to allow EPA to check:
 - f) NO₂_WO_BKGRND.ADI;
 - g) the hourly input emission file(s) for the various stack sources;
 - h) the hourly NO₂ background file;
 - i) the receptor/terrain file; and
 - j) the meteorological files – surface and upper air.
8. Clarify what traffic speeds were used for the air emission modelling.

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9. Confirm which legal entity is proposed to hold any works approval, if issued.
10. Confirm that Mr. Duncan Elliott is authorised to act on behalf of the above-mentioned legal entity.
11. Provide evidence which demonstrates that the above mentioned legal entity is (or will be) in occupation or control of the premises upon which the northern and southern ventilation structures are proposed to be constructed.