

PART A – GENERAL INFORMATION		<input checked="" type="checkbox"/> GENERIC RISK ASSESSMENT	<input checked="" type="checkbox"/> SITE SPECIFIC RISK ASSESSMENT	<input checked="" type="checkbox"/> OTHER
Scope:	Infectious Disease Control on Buses		Risk Register Number: <i>(Check with Risk Register)</i>	0847
Location:	All State Transit sites		Date of origin:	30 April 2020
Depot / Business Unit at which assessment/review conducted:	Asset management Division		<i>Last Reviewed: changes are in italic (e.g. staff involved & added info)</i>	14 May 2020
Person(s) Leading:	Name:	Personal Information	Position:	Personal Information
Manager / Supervisor: <i>(Who is Responsible for Area?)</i>	Name:		Position:	
Other people involved / consulted:	Name:		Position:	
	Name:		Position:	
	Name:		Position:	
	Name:		Position:	
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	Name:		Position:	
	Name:		Position:	
References				
It is a requirement that legal and advisory documentation used for this risk assessment, such as Australian Standards, Codes of Practice, Regulations etc, where possible, are listed.				
<ul style="list-style-type: none"> • WHS Act 2011 • WHS Regulations 2017 • Road Rules 2014 • Passenger Transport Act 2010 • Passenger Transport (General) Regulations 2017 • WI 50.23.30 – Clean and remove body fluid (biohazard) spills • TBTK42 – Response to on-road incidents – COVID-19 • ERC14 – Clean and remove body fluid (biohazard) spills (practical assessment) 				

- ERKC14 Clean and remove body fluid (biohazard) spills (written assessment)
- SW2330 Safe Cleaning & Removal of Body Fluid Spills Procedural Observation Checklist
- WI 50.04.15 Managing the workplace environment and facilities
- WI 50.04.09 Personal Protective Equipment
- PROC 50.24 Incident Reporting
- AS/NZS 3816:1998 Management of Clinical and Related Waste
- AS/NZS 4011:1997 Single Use Examination Gloves – Specification
- AS/NZS 4381:2015 Single-Use Face Masks for Use in Health Care
- AS/NZS 1715: 2009 Selection, use and maintenance of Respiratory Protective Equipment
- AS 3745:2010 Planning for Emergencies in Facilities
- First aid in the workplace – Code of Practice, Jan 2020
- How to manage work health and safety risks – Code of Practice, May 2018
- Work health and safety consultation, cooperation and coordination – Code of Practice, May 2018
- National Code of Practice for the control of work-related exposure to hepatitis and HIV (blood-borne) viruses, Dec 2003
- Organisational WHS Policy Statement
- STA Enterprise Risk Register
- RA0772 Risk Assessment Bus Door Operation & related Uncontrolled Movement of a Bus.
- State Transit organisational incident database.
- ADR 58/00-Vehicle Standard (Australian Design Rule 58/00- Requirements for Omnibuses Design for Hire and Reward 2006)
- ADR 35/00 Group – Vehicle Standard (Australian Design Rule 35/00 – Commercial Vehicle Brake Systems) 2006,
- ADR 14/02 – Vehicle Standard (Australian Design Rule 14/02 – Rear Vision Mirrors) 2006,
- RTA (RMS) TS146, 1997 (and revisions TS155) – Bus Door Safety Systems,
- RTA (RMS) TS147, 2007 – Field of View of Passenger Entrance Doors of Bus
- ARRB Standing Bus Passengers report_21 Sept 2008 (to client).
- Xamax (supplier) Dust Mask Ratings P1, P2 & P3 - A guide to choosing the right face mask protection (attached)

Description

Full description of task, process or scope of the assessment and the context for the risk assessment. Also list any assumptions made and the source of any data used.

Scope

The scope of this Risk Assessment (RA) is to identify the risks associated with transmission of infectious diseases on State Transit buses while operated by Bus Operators, maintained by maintenance & support Workers. A Worker includes; contractors, other support providers and visitors working on State Transit sites/buses. The scope also contemplates exposures to State Transit passengers while on State Transit buses.

Context

The context of this RA is to address the current environment with COVID-19.

<p>Has this task been assessed previously? (Check Risk Registers)</p> <p>Has this task resulted in any injuries / illnesses or serious near miss events?</p>	<p><input type="checkbox"/> Yes ✓ No</p> <p><input type="checkbox"/> Yes ✓ No</p>
<p>If yes, describe? See context above.</p>	

PART B – RISK ASSESSMENT							
Step 1 Hazard Identification				Step 2 Risk Assessment		Step 3 Risk Control	
Item No	Item/Task	Hazards (What can cause harm?)	Associated Risks (What harm can happen?)	Existing Risk Controls (What are the existing controls?)	Risk Rating w/ Existing controls (Use Risk Matrix – See Table 1)	Additional Risk Controls Required (If elimination not possible, apply the hierarchy of risk controls – See Table 2)	Risk Rating w/ Additional Controls (Use Risk Matrix – See Table 1)
1.	Worker pre-departure check, bus preparation & operation without passengers (Bus Operators and maintenance Workers preparing or moving vehicles)	<ul style="list-style-type: none"> Worker comes into contact with contaminated hard surfaces or controls in drivers cabin. Worker comes into contact with contaminated hard surfaces in passenger areas. Worker ingests or breathes contaminated air in bus. Worker ingests or breathes contaminated air from air conditioning. 	<ul style="list-style-type: none"> Illness from infectious disease. 	Elimination & Design Safeguards <ul style="list-style-type: none"> Increased sanitisation of buses. High risk workers placed on leave, WFH or alternate duties. Administrative Controls <ul style="list-style-type: none"> Government restrictions and media campaigns. Competent, trained & aware Workers. Hand hygiene and sanitising procedures. PPE (gloves, eye wear). 	Unlikely Moderate D3 Medium 17	Elimination & Design Safeguards <ul style="list-style-type: none"> Investigate feasibility of Far-UVC lighting in bus passenger areas or air conditioning systems to treat/sanitised air. 	Unlikely Moderate D3 Medium 17
2.	Worker exposure operating buses in service with passengers or other persons	Workers <ul style="list-style-type: none"> As per item 1 above. Worker comes into contact or close proximity with passengers or other contaminated persons. Workers are unintentionally breathes on or coughed. Worker comes into contact with body fluids in bus from persons or hazardous waste. 	<ul style="list-style-type: none"> Illness from infectious disease. 	<ul style="list-style-type: none"> As per item 1 above Elimination & Design Safeguards <ul style="list-style-type: none"> Closure of forward seating in bus. Closure of Bus Validator 1 adjacent to driver. Forward no standing zones. Compliance with Government restrictions, & associated law and penalties. Current low patronage levels arising from Government restrictions. Administrative Controls <ul style="list-style-type: none"> PPE – voluntary self supply and use of type P1(surgical) face mask. 	Likely Moderate B3 High 9	<ul style="list-style-type: none"> As per item 1 above. Elimination & Design Safeguards <ul style="list-style-type: none"> Possible minimised use of front doors & rear door only loading/exiting (see GRA 0844). Possible additional <u>barrier screening</u> in driver's cabin. Possible restricted passenger capacities. Possible reduced or no standees in buses. Administrative Controls <ul style="list-style-type: none"> PPE – possible compulsory use of type P1 face mask (subject to supply & NSW Health advice). PPE – possible driver use of 	Possible Moderate C3 Medium 13

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				<ul style="list-style-type: none"> Hazard & incident reporting procedures (NCC). First aid & medical response procedures. Hazardous waste procedures. Bus signage and passenger awareness. 		<ul style="list-style-type: none"> full face shields (subject to supply & NSW Health advice). Passenger education program via; PA pre-recorded announcements on bus to passengers warning of hazards and protocols, and appropriate passenger signage. Passenger information and education media campaigns by TfNSW. Ongoing Government restrictions and media campaigns. 	
3.	Worker assaults or contact by anti-social passengers	<ul style="list-style-type: none"> Workers are deliberately coughed on or spat on. Workers are physically contacted or assaulted. Body fluid is exchanged by unwanted contact. 	<ul style="list-style-type: none"> Illness from infectious disease. Physical assault injuries. 	<ul style="list-style-type: none"> As per item 2 above <p>Elimination & Design Safeguards</p> <ul style="list-style-type: none"> Driver security screens (1/2 & 3/4 size). <p>Administrative Controls</p> <ul style="list-style-type: none"> CCTV systems. Enforcement & reporting. 	Likely Moderate B3 High 9	<ul style="list-style-type: none"> As per item 2 above. <p>Elimination & Design Safeguards</p> <ul style="list-style-type: none"> Investigate feasibility of improved <u>security barrier screening</u> in driver's cabin. <p>Note: Constrained by ADRs and possible higher level risks.</p>	Likely Moderate B3 High 9

Not relevant to driver screens

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Not relevant to driver screens

6.	Worker exposure from boarding passengers	<ul style="list-style-type: none"> As per 1 & 2 above. Workers close proximity to passengers boarding at front door. Passenger congestion at bus doors. 	<ul style="list-style-type: none"> Illness from infectious disease. 	<ul style="list-style-type: none"> As per item 2 above Elimination & Design Safeguards <ul style="list-style-type: none"> Closure of Bus Validator 1 adjacent to driver. 	Likely Moderate B3 High 9	<ul style="list-style-type: none"> As per item 2 above. 	Possible Moderate C3 Medium 13
7.	Worker exposure from alighting passengers	<ul style="list-style-type: none"> As per 1 & 2 above. Workers close proximity to passengers boarding at front door. Passenger congestion at bus doors. Possible additional passenger conflicts at single leaf rear doors. 	<ul style="list-style-type: none"> Illness from infectious disease. 	<ul style="list-style-type: none"> As per item 2 above 	Likely Moderate B3 High 9	<ul style="list-style-type: none"> As per item 2 above. 	Possible Moderate C3 Medium 13
8.	Worker exposure from passenger enquiries with driver	<ul style="list-style-type: none"> As per 1 & 2 above. Workers close proximity to passengers at drivers cabin. 	<ul style="list-style-type: none"> Illness from infectious disease. 	<ul style="list-style-type: none"> As per item 1 to 3 above 	Likely Moderate B3 High 9	<ul style="list-style-type: none"> As per item 2 above. 	Possible Moderate C3 Medium 13
9.	Workers assisting impaired or injured passengers on/of bus - Injured	<ul style="list-style-type: none"> As per 1 & 2 above. Workers close proximity or contact with passengers with special or particular needs. 	<ul style="list-style-type: none"> Illness from infectious disease. 	Elimination & Design Safeguards <ul style="list-style-type: none"> DDA and ADR bus design requirements. Administrative Controls	Possible Moderate C3 Medium 13	Administrative Controls <ul style="list-style-type: none"> As per administrative controls in item 2 above. Revised and improved impaired passenger education media campaigns (TfNSW) 	Possible Moderate C3 Medium 13

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	<ul style="list-style-type: none"> - Mobility - Visual - Hearing - Prams - Drug or alcohol affected (see item 3) 			<ul style="list-style-type: none"> • Impaired passenger education campaigns (TfNSW) and bus signage. • Bus Operator training and competency. 		<ul style="list-style-type: none"> and bus signage. • Revised and improved driver awareness training. 	

Not relevant to driver screens

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Not relevant to driver screens

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Not relevant to driver screens

20.	<p>Extend driver protection barrier screening in driver's cabin</p> <p>See item 2 Step 3 Additional Controls</p>	<ul style="list-style-type: none"> Vision outside the vehicle is temporarily impaired by the possible blind spots to the left of the driver by: <ul style="list-style-type: none"> Reflections arising from screen dimensions, size or design. Screen material deterioration, lots of transparency or scratching. Driver perceived time pressures leads to risk behaviours in driving technique. Driver is not able to effectively adjust driving 	<ul style="list-style-type: none"> Possible serious injuries or fatalities owing vehicle or pedestrian collisions at: <ul style="list-style-type: none"> Traffic intersections or roundabouts. Pedestrian crossings all traffic lights. Mobility impaired passenger full injuries. 	<p>Elimination and design safeguards.</p> <ul style="list-style-type: none"> Compliance with: <ul style="list-style-type: none"> Australian design rule (ADR) 58/00 (compliance emergency access/egress). ADR 14/02 rear vision mirrors. TfNSW (RMS) TA 146/155 (bus door safety systems) TfNSW (RMS) TA 147 (field of vision). Screen design features; <ul style="list-style-type: none"> Curvature, angle and length of screen is 	<p>Possible Catastrophic C5 Very High 4</p>	<ul style="list-style-type: none"> Undertake separate Risk Assessment and Worker Consultation on extended driver screens. Possible addition of scratch resistant film to screen both sides. <p>Note: application of film has limited potential and may not be feasible. Replacement of film normally applied to hardened safety glass may not be economical when applied to polycarbonate (plastic) screen materials. Removal and replacement of film may result in</p>	<p>Possible Catastrophic C5 Very High 4</p>
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		<p>techniques if temporarily blind spots occur.</p> <ul style="list-style-type: none"> • Vision inside the vehicle is temporarily impaired by possible blindspots to the rear of the driver. • Driver comfort, fatigue, concentration or ventilation is compromised by screen design or driver's cabin environment. 		<p>optimised to minimize blindspots.</p> <ul style="list-style-type: none"> ○ Emergency access and egress provision. ○ Driver ventilation is optimised and maintained. ○ Driver in past communications optimised. ○ Vehicle interior review mirror vision is optimised. <p>Administrative controls.</p> <ul style="list-style-type: none"> • As per item 1. • Maintenance procedures for screen condition monitoring and replacement. 		<p>damage to screen material during glue / adhesive removal / cleaning resulting in the need to replace the screen material.</p>	

PART C – ACTION PLAN

Enter identified Recommendations into action plan and CAR/BIN system. Identify timeframe for resolution using the Recommended Guideline for completing corrective actions table below

Very High	Corrective actions recommended to be completed within 1 month .
High Risk	Corrective actions recommended to be completed within 3 months .
Medium Risk	Corrective actions recommended to be completed within 6 months .
Low Risk	If actions are required, then corrective action recommended to be completed within 12 months .

Additional Risk Controls Required <small>(transfer information from Part B, Step 3)</small>	Action Proposed to be Taken	Responsible Officer(s)	Timeframe for Resolution <small>(see above)</small>	Action Reference
Risk Assessment on extended driver screens.	<ul style="list-style-type: none"> Undertake separate Risk Assessment & Worker consultation on extended driver screens. 	Personal information	1 Month	In progress
Minimised front door use (rear door loading)	<ul style="list-style-type: none"> Initial review of need for minimised use of front doors & rear door only loading/exiting (see GRA 0844). Ongoing review of need. 		3 months	Completed & Ongoing
Passenger capacity	<ul style="list-style-type: none"> Initial review of need to restrict passenger capacities. Initial review of need to restrict standees in buses. Ongoing review of need. 		3 months	Completed & Ongoing
Drivers cabin barrier	<ul style="list-style-type: none"> Possible additional barrier screening in driver's cabin (coughing & air borne saliva). Investigate feasibility of additional security barrier screening in driver's cabin. 		3 months	In progress
PPE	<ul style="list-style-type: none"> Review possible use of full face shields by drivers 		3 months	Outstanding

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Enter identified Recommendations into action plan and CAR/BIN system. Identify timeframe for resolution using the Recommended Guideline for completing corrective actions table below

Very High	Corrective actions recommended to be completed within 1 month .
High Risk	Corrective actions recommended to be completed within 3 months .
Medium Risk	Corrective actions recommended to be completed within 6 months .
Low Risk	If actions are required, then corrective action recommended to be completed within 12 months .

Additional Risk Controls Required (transfer information from Part B, Step 3)	Action Proposed to be Taken	Responsible Officer(s)	Timeframe for Resolution (see above)	Action Reference
Passenger education	<ul style="list-style-type: none"> Passenger information and education media campaigns by TfNSW. Communicate ongoing Government restrictions and media campaigns. Revised and improved impaired passenger education media campaigns (TfNSW) and bus signage. 	Personal information	3 months	Outstanding
Passenger education	<ul style="list-style-type: none"> Passenger education program via; PA pre-recorded announcements on bus to passengers warning of hazards and protocols, and appropriate passenger signage. 		3 months	Outstanding
Driver training	<ul style="list-style-type: none"> Revised and improved driver awareness training for impaired passengers. 		6 months	Outstanding
Far UVC lighting	<ul style="list-style-type: none"> Investigate feasibility of Far-UVC lighting in bus passenger areas or air conditioning systems to treat/sanitise air. 		6 Months	In progress
PPE	<ul style="list-style-type: none"> Review use of respirators for driving, bus washing, pre-wash, steam cleaning (subject to supply & NSW Health advice). 		12 months	Ongoing

PART D – MONITOR AND REVIEW

It is important to monitor risk controls and review risk assessments regularly. The timeframe for Risk Assessment review is dependent on the highest risk rating priority (RR) as identified in Part B, Step 2 of the Risk Assessment.

Note: Additional reviews are required when there is a change in the process, relevant legal changes or where a concern has arisen. If the risk assessment has changed substantially a new risk assessment is warranted.

Risk Rating Priority	Risk Assessment Review Timeframe
Very High Risk (1-4)	No later than 1 year post risk assessment completion
High Risk (5-11)	No later than 3 years post risk assessment completion
Medium Risk (12-18)	No later than 5 years post risk assessment completion
Low Risk (19-25)	No later than 5 years post risk assessment completion

What was the highest risk rating (RR) identified in Part B, Step 2?	Highest Risk Rating:	Very High 1
Based on the highest risk rating and the timeframes above, set the date for review of the risk assessment:	Review Date:	1 Year, 01/04/2021

Risk Assessment Matrix
Use matrix to determine risk score & risk rating priority

	CONSEQUENCE What is the severity of any potential harm?				
	Insignificant (1) • No injuries, • No illness or disease • low financial cost (<\$6,000)	Minor (2) • First aid treatment, no time lost • minor illness or disease (able to continue work) • Medium financial loss (\$6,000 - \$36,000)	Moderate (3) • Medical / hospital treatment or lost time injury • Illness or disease requiring time off work (at least 1 day) • High financial loss (\$36,000 – 3.5 million)	Major (4) • Permanent disability / extensive Injuries (amputations, quadriplegia) • Chronic illness or disease • External notification required • Major financial loss (\$3.5 million - \$35 million)	Catastrophic (5) • Fatality / death • Illness/disease leading to death • Extreme financial loss (over \$35 million)
Very Likely (A) Close to a 100% probability Many times a year	15 Medium	10 High	6 High	3 Very High	1 Very High
Likely (B) Above 50% probability More than once a year	19 Low	14 Medium	9 High	5 High	2 Very High
Possible (C) About 50% probability About once a year	22 Low	18 Medium	13 Medium	8 High	4 Very High
Unlikely (D) Less than 50% probability About once in 5 years	24 Low	21 Low	17 Medium	12 Medium	7 High
Rare (E) Close to zero probability Once in 10 years	25 Low	23 Low	20 Low	16 Medium	11 High
Risk Rating Key	Low = 19 - 25	Medium = 12 - 18	High = 5 - 11	Very High = 1 - 4	

Table 2: Risk Control				
The most effective strategy for risk control is:				
<u>Elimination of risk</u>				
This means to completely remove the risk so no control/s need to be implemented.				
When elimination of risk is not reasonably practicable, the hierarchy of controls should be consulted to implement the next most effective strategy reasonably practicable. A combination of the following controls may be required to be taken to minimise the risk to the lowest level reasonably practicable if no single control is sufficient for that purpose.				
Level 1	Elimination	This means to completely remove the risk so no control/s need to be implemented <i>When elimination is not reasonably practicable, the hierarchy of controls should be consulted to implement the next effective strategy. A combination of the following may be required to be taken to minimise the risk.</i>	Highest	Most
Level 2	Substitution	Replacing a hazardous substance or process with a less hazardous one, e.g. substituting a solvent based chemical with a water based one	Level of health and safety protection	Reliability of controls
	Isolation	Isolating the hazard from the person at risk, e.g. isolating the power before working on electrical circuitry, enclosures for noisy machinery		
	Engineering	Redesign a process or piece of equipment to make it less hazardous, e.g. installing an exhaust ventilation system to extract dangerous fumes or dust		
Level 3	Administration	Minimising the risk by administrative or procedural means e.g. by adopting safe work practices or providing appropriate training, instruction or information	Lowest	Least
	PPE	Have people wear personal protective equipment and clothing while near a hazard, e.g. gloves, glasses. Earmuffs, aprons, safety footwear, dust masks		

Issue	Release Date	Summary of Changes
13	December 2019	Reviewed as per review schedule.
12	December 2016	Reviewed as per review schedule.
11	January 2015	Modified Review dates, Risk Assessment Types, Action reference.
10	January 2013	Form reviewed as per review schedule. Hierarchy of controls table updated in line with PROC 50.04 – Safety Risk Management.