

 Roads, Vehicles & Equipment

# Operational Safety Instruction

## Driving in Airside Tunnels

9<sup>th</sup> Oct 2020

ASDRVE\_OSI\_080

V3.1

It is the responsibility of all employers to ensure that relevant OSIs are brought to the attention of their staff. However, individuals remain responsible for their own actions and those who are in any doubt should consult their Supervisor or Manager.

### 1. Introduction

- 1.1 The purpose of this OSI is to provide drivers with the rules and restrictions for using Airside Tunnels. This OSI covers driving behaviours, incident response, background and physical constraints.
- 1.2 Red bars left of a paragraph indicate new or updated information
- 1.3 The OSI is reissued to clarify diversion procedures when the cargo tunnel is periodically closed at night to allow maintenance works, and in the event of a 'Loss of Cargo Tunnel' event.
- 1.4 The following documents are hereby cancelled:
  - ASDRVE\_OSI\_005-Supplement-1 Regulations for Vehicles Transporting Bulk Fuels Using the Cargo Tunnel.
  - ASDRVE\_OSI\_005 Vehicles and Equipment Airside – Operation - APPENDIX A
  - ASDRVE\_OAN\_002 Driving between the CTA/T5 and T4/Cargo when the Cargo Tunnel is closed.
  - ASDRVE\_OSI\_080 V3.0 is hereby cancelled



## 2. Definitions

Abbreviation	Description
APOC	Airport Operations
CCTV	Closed Circuit Television
ERT	Emergency Roadside Telephone
FOD	Foreign Object Debris
MPH	Miles Per Hour
MOR	Minimum Operating Requirements
ADP	Airside Driving Permit
ART	Airside Road Tunnel
EAART	Eastern Apron Airside Road Tunnel
RTA	Road Traffic Accident
MCP	Manual Call Point

## 3. Background

- 3.1** The operation of the Airside Tunnels is monitored by APOC 24/7 via CCTV
- 3.2** The Cargo Tunnel contains a fire detection system running the entire length of the tunnel carriageway, which will activate an alarm in APOC in the event of a fire.
- 3.3** An automatic ventilation system is provided in each tunnel connected to pollution monitors which maintains a safe atmospheric environment at all times.
- 3.4** Emergency Points are provided in all Airside tunnels at between 20m and 50m intervals, all are equipped with Emergency Roadside Telephones (ERT) which autodial APOC and fire extinguishers.
- 3.5** Manual call points are installed in the Cargo Tunnel every 20m, at intervals along both sides of the carriageway. Activation of these call points will automatically alert APOC. In the event of a fire, a Manual Call Point (MCP) should be activated in preference to using a roadside telephone.
- 3.6** A public address system for communicating with drivers and evacuated persons is installed within the Cargo Tunnel.
- 3.7** The route to the closest Emergency Exit in each direction is marked by green “running man” signs on the walls with the indicated distance in metres to the exit.
- 3.8** All tunnel systems are checked during planned maintenance interventions, on a monthly or quarterly basis with all alarms monitored 24/7 in APOC.



- 3.9** Tunnels are governed by Minimum Operating Requirements (MOR) which define thresholds or acceptable or degraded systems operation that maintain a safe environment for users.

#### 4. Physical Constraints

- 4.1** The maximum permitted height of vehicles in Airside Tunnels is 4.5m.
- 4.2** The maximum permitted length of vehicles in Airside Tunnels is 18.75m.
- 4.3** The maximum permitted width of vehicles in Airside Tunnels is 2.55m as measured from the extremities of the bodywork, not including mirrors.

**Note:** An exemption exists for Winter Operations vehicles engaged in the snow clearance and treatment of the tunnel and its approaches.

- 4.4** The maximum permitted weight of vehicles in Airside Tunnels is 44 tonnes. Vehicles exceeding 44 tonnes require approval from Heathrow's Principal Engineer for Civils.
- 4.5** Vehicles exceeding any of the physical measurements above will need to be agreed with Airfield Operations and the Tunnel Manager and will normally require an additional risk assessment to be undertaken and approved.
- 4.6** No pedestrians or cyclists are allowed in the tunnel at any time.

#### 5. Vehicle Requirements

- 5.1** Vehicles which are licenced temporarily, permanently or dispensed to operate Airside and are in a roadworthy condition as outlined in ASDRIVE\_OSI\_008 Vehicle & Equipment Airside - Requirements may use an Airside Tunnel.
- 5.2** Any Vehicle or equipment that doesn't meet the standards set out in ASDRVE\_OSI\_008 Vehicles and Equipment Airside - Requirements, or is deemed unroadworthy by appropriate competent person, must not attempt to enter any Airside Tunnel.
- 5.3** Trailers:
- 5.3.1** Vehicles may only tow a single trailer
- 5.3.2** All trailer loads must be covered to prevent FOD and dust.
- 5.3.3** Only trailers fitted with rear lights are permitted, and they must be serviceable and be switched on.
- 5.4** Vehicles prohibited from using the Airside Tunnels are:
- 5.4.1** Vehicles that are too wide, too high, too heavy or unable to safely maintain a minimum speed of 15 mph (See section 7).
- 5.4.2** Aircraft tugs, baggage tugs, baggage dollies.

**Note:** an exemption exists to permit two baggage dollies to be towed behind an EBT in the EAART if the uncontrolled crossings are not available



- 5.4.3** Vehicles carrying dangerous goods, especially those which pose an increased risk of fire (See section 10).
- 5.4.4** Vehicles carrying bulk petroleum products. (See section 10)
- 5.4.5** Vehicles carrying quantities of non-containerised or non-palletised loads exceeding amounts which would be contained within 1 ½ PMCs, unless agreed with Airfield Operations or the Tunnel Manager.
- 5.5** All coaches transporting passengers in the Cargo Tunnel, regardless of number, must comply with the following additional safety requirements:
- 5.5.1** The coach must be fitted with a minimum of two emergency evacuation chairs for the purposes of assisting in the evacuation of an undeclared Passenger with Reduced Mobility (PRM)
- Note:** All declared PRM passengers should be transferred together with any necessary assistive equipment and their host.
- 5.5.2** The coach must carry at least one member of staff (in addition to the driver), the 'Host', who in the event of an incident in the tunnel; are trained and competent to support the evacuation of an undeclared PRM and assist in escorting of passengers.
- 5.5.3** The coach operator must have procedures and training in place for the rapid evacuation of coach in the event of an incident.
- 5.6** All companies using the Airside Tunnels must have arrangements in place for the immediate recovery of broken down vehicles that covers all vehicle types used in their fleet.
- 5.7** Non-compliant vehicles may in exceptional circumstances be granted a dispensation to use the tunnel. These requests should normally be accompanied with a suitable assessment of risk and where appropriate will be issued by the Heathrow Tunnel Manager, the Tunnel Manager's representative or the Airfield Duty Manager in emergencies.
- 6. Driver Requirements**
- 6.1** Only drivers licenced or exempted under the Airside Driving Permit (ADP) scheme are permitted to use the Airside Tunnels.
- 6.2** Companies must ensure their drivers are aware of, and fully understand, the required behaviour and responsibilities when driving under normal conditions and what to do during emergency situations, (i.e. vehicle breakdown, accident, spillage or vehicle fire) and evacuations.
- 6.3** The appropriate ADP Training material is available from the Heathrow Airside Standards Team tel: 0208 757 3075/6



## 7. Driving Behaviour

- 7.1** Failure to observe any of the required driving behaviours, restrictions or limitations displayed below may result in drivers being awarded penalty points or having their airside driving licence withdrawn.
- 7.2** Drivers must obey the speed restriction in the Airside Tunnels
- 7.2.1** The maximum speed limit is 20 mph for the Cargo and EAART Tunnels;
  - 7.2.2** The maximum speed limit is 30 mph for the ART;
  - 7.2.3** Additional speed restrictions may be imposed during tunnel works or at other times
- 7.3** Drivers must:
- 7.3.1** Obey the dynamic signage at the tunnel portals. Failure to observe these signs places the driver, any passengers and others at risk.
  - 7.3.2** Obey the safe distance markings between vehicles in the Cargo Tunnel;
    - 7.3.2.1** 3 'dots' or 36m between own vehicle and any vehicle in front whilst in motion
    - 7.3.2.2** 2 'reflective strips' (9 'dots') or 108m between a coach and any vehicle in front **including when stationary**
  - 7.3.3** Keep a safe distance from a vehicle ahead in all other airside tunnels.
  - 7.3.4** Obey the instructions / restrictions conveyed by any sign or marking (permanent or temporary).
  - 7.3.5** Switch on the vehicle dipped headlights before entering the tunnel.
  - 7.3.6** Remove sunglasses before entering the tunnel.
  - 7.3.7** Switch off obstruction lights when entering the tunnel
- 7.4** Drivers must not:
- 7.4.1** Overtake in Airside Tunnels except in an emergency.
  - 7.4.2** Attempt to turn or reverse in the tunnel or on its approaches, unless instructed to do so by a member of Airfield Operations or the Emergency Services
  - 7.4.3** Stop in the tunnel or on its approaches unless the way ahead is blocked by other vehicles or it appears unsafe to proceed.
- 7.5** Vehicles should be driven within the defined carriageway, unless passing a stopped vehicle. When passing a stopped vehicle, drivers should slow down and exercise extreme caution.

## 8. Actions in the Event of Breakdown

- 8.1** If a driver detects a problem with their vehicle once in the tunnel, they should attempt to drive the vehicle out of the tunnel if it is safe to do so.
- 8.2** In the event of a breakdown, minor RTA or other non-fire incident:
- 8.2.1** The driver should ideally pull over and stop to allow space for other vehicles to pass safely.



**Note:** In all tunnels vehicles should pull over to the left-hand side except in the ART where vehicles should pull over to the right-hand side to access the safe cross passages.

**8.2.2** The driver must:

**8.2.2.1** Stop the vehicle and switch off the engine

**8.2.2.2** Switch on hazard warning lights

**8.2.2.3** Report the situation to APOC using the nearest Emergency Roadside Telephone, or via mobile on 0208 759 1212.

**8.2.2.4** Remain with the vehicle, together with any passengers, until assistance arrives or;

**8.2.2.5** Leave the vehicle if instructed to do so via the Public Address systems

**8.3** On being advised of an incident or if it is observed on CCTV; APOC will dispatch assistance and close the tunnel using the illuminated red crosses on the portal lane control signs at the entrance as necessary

**Note:** In the Cargo Tunnel, a breakdown of a vehicle will be treated as if it has the potential to escalate into a smoke and fire situation until such time as it is downgraded, this is likely to result in a tunnel closure and possible evacuation.

**8.4** Any spillages must be reported to APOC using an ERT or mobile phone.

## 9. Actions in the Event of Fire or Smoke

**9.1** If driving in the tunnel and your vehicle starts to smoke or catches fire immediately:

**9.1.1** Attempt to drive the vehicle out of the tunnel if it is safe to do so with consideration to travel distance and severity of the incident, or;

**9.1.2** Stop the vehicle and turn off the engine

**9.1.3** Leave the vehicle together with any passengers - ignition keys to be left in the ignition switch to aid vehicle recovery

**9.1.4** Only attempt to extinguish the fire if the fire is small and you have been trained to do so – On no account put yourself at risk

**9.1.5** Exit the tunnel on foot via following the green “running man signs” to the entry portal or nearest emergency exit in the direction away from the fire

**Note:** Do not wait, hesitate or attempt to take personal possession with you – Exit immediately

**9.1.6** As you make your way to the nearest exit:

➤ Advise any other drivers / people you encounter to also leave.

➤ In the Cargo Tunnel activate one of the manual call points (MCPs) as you pass. Do not stop to use an ERT until you reach the portal.

**Note:** Do not get into discussions with other users but continue to the exit

**9.1.7** Report the incident to APOC using an ERT or via mobile on 0208 759 1212. Advise of any hazardous material or other goods being carried in the vehicle

**9.1.8** Observe any Public Address system messages.

**9.1.9** In the Cargo Tunnel, wind deflectors will deploy from the ceiling at both tunnel portals after 120 seconds to a height of 2m above the roadway. Pedestrians can walk underneath a deployed or moving wind deflector.

**9.1.10** Do not re-enter the tunnel until advised it is safe to do so



- 9.2** If driving in the tunnel and there is smoke or fire ahead, immediately:
- 9.2.1** Stop the vehicle and turn off the engine
  - 9.2.2** Switch on hazard warning lights
  - 9.2.3** Leave the vehicle together with any passengers - ignition keys to be left in the ignition switch to aid vehicle recovery
  - 9.2.4** Exit the tunnel on foot via following the green “running man signs” to the entry portal or nearest emergency exit in the direction away from the fire
    - Note:** Do not wait, hesitate or attempt to take personal possession with you – Exit immediately
  - 9.2.5** As you make your way to the nearest exit:
    - Advise any other drivers / people you encounter to also leave.
    - In the Cargo Tunnel activate one of the manual call points as you pass. Do not stop to use an ERT until you reach the portal.
    - Note:** Do not get into discussions with other users but continue to the exit
  - 9.2.6** Report the incident to APOC using an ERT or via mobile on 0208 759 1212
  - 9.2.7** Observe any Public Address system messages.
  - 9.2.8** In the Cargo Tunnel, wind deflectors will deploy from the ceiling at both tunnel portals after 120 seconds to a height of 2m above the roadway. Pedestrians can walk underneath a deployed or moving wind deflector.
  - 9.2.9** Do not re-enter the tunnel until advised it is safe to do so
- 9.3** If driving on the approaches and there is smoke or fire ahead:
- 9.3.1** Do not enter the tunnel
  - 9.3.2** Stop outside the tunnel,
  - 9.3.3** Report the incident to APOC via mobile on 0208 759 1212
  - 9.3.4** Attempt to stop others entering if safe to do so
    - Note:** Never enter a tunnel if any of the Red X's are displayed
- 9.4** If driving within a tunnel and there is smoke or fire behind your vehicle:
- 9.4.1** Continue and drive out of the tunnel
  - 9.4.2** Report the incident to APOC via by mobile on 0208 759 1212 once it is safe for you to do so.
    - Note:** In the event of a fire activation in the Cargo Tunnel, wind deflectors will deploy from the ceiling at both tunnel portals after 120 seconds to a height of 2m above the roadway. Vehicles may drive underneath a deployed wind deflector if their vehicle is <2.0m's in height in order to vacate the tunnel quickly.
- 9.5** In the Cargo Tunnel the raised walkway is not an available safe walking route and drivers should exercise due care when walking to an ERT



## 10. Fuel and Dangerous Goods

- 10.1** No bulk fuel or petroleum products may be transported through Airside Tunnels.
- 10.2** Bulk fuel means fuel carried on the vehicle as cargo (payload) and not as fuel for the operation of that vehicle.
- 10.3** No fuel tankers or bowsers may be transported through Airside Tunnels. This means any vehicle or trailer designed for the transportation of bulk fuel (flammable liquids or gases) including empty tankers or bowsers which have contained such flammable products.
- 10.4** This does not apply to Hydrant Fuelling Vehicles which are deemed to be out of scope due to the relatively small amount of fuel contained within the dispensing system.
- 10.5** In the case of an absolute need to transport bulk fuel from the south side to the north side of the aerodrome or vice versa, a request must be made to the Airside Operations Team on 020 8745 0802 who will review the options and determine the suitability for use of an alternate route, including the provision of Airside Leader escorts.
- 10.6** Vehicles carrying dangerous goods, especially those which pose unacceptable risk in the event of fire, are prohibited from using the Airside Road Tunnel (ART).
- 10.7** All vehicles which are transporting dangerous goods, as defined by 'The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009' or 'IATA Dangerous Good Regulations DGR' must ensure that the operator of the vehicle is in possession of either a Cargo Manifest or Freight Forwarding Notification that they are able to provide without delay to the Fire Incident Commander in the event of their vehicle/contents being involved in an incident within the tunnel.





## 11. Diversions / Tunnel Closures

- 11.1** In order to maintain the tunnel safety systems, the Airside Tunnels are periodically closed at night to allow maintenance work to be carried out.
- 11.2** In the event of an Airside Tunnel being closed for maintenance or other reason, drivers of vehicles that are legally able to so, must use the landside road system. Those vehicles unable to use the Landside roads must use an alternative airside route via the uncontrolled crossing network, or in the case of the Cargo Tunnel, will be diverted to an appropriate point and escorted across the manoeuvring area (see Appendix A).
- 11.3** In the event of a prolonged 'Loss of ART' event, vehicles must use an alternative airside route via the uncontrolled crossing network.
- 11.4** In the event of a prolonged 'Loss of Cargo Tunnel' event, the Airfield Duty Manager will implement a contingency diversion of vehicle traffic via one of the nominated vehicle routes in Appendix B.

## 12. Enquiries

- 12.1** Any questions concerning this Instruction should be addressed to the Airfield Duty Manager at [airfield\\_duty\\_manager@heathrow.com](mailto:airfield_duty_manager@heathrow.com) or HAL Tunnel Manager at [john.wheeler@heathrow.com](mailto:john.wheeler@heathrow.com)

## 13. References

ASDRVE\_OSI\_008 Vehicles and Equipment Airside – Requirements

ASWorks\_OAN\_019 Change to Cargo Tunnel Road Markings



## APPENDIX A: Cargo Tunnel Diversion Route

### 14. Vehicles permitted to be taken (under Leader Escort) across the manoeuvring area

14.1 ASD will lead **only** the following vehicles across the manoeuvring area;

- Emergency service and control authority vehicles
- Campus Security Vehicles without an 'M' License
- Passenger transfer coaches (with passengers on-board)
- Vehicles carrying bonded goods
- Bulk fuel vehicles
- Crew buses (loaded) destined for the Customs office adjacent CP8
- Vehicles, by size, weight or manoeuvrability, are unable to use the airside road system
- Aircraft maintenance providers undertaking scheduled or reactive aircraft maintenance
- Heathrow Engineering vehicles responding to an urgent and essential infrastructure failure, on the direction of the ACE or ASEM

14.2 Drivers of vehicles in these categories should present themselves at the appropriate muster point, which will usually be adjacent to Stand 251 or 432, and await an escort vehicle to take them across the manoeuvring area. Dependent upon the airfield situation on the night, the muster points may be subject to change. Road diversion signage will be provided each night and drivers should follow this to the muster points.

14.3 The route taken by the convoy will be dependent upon the airfield situation on the night – however, drivers should expect to be taken around the Eastern Tug Road and NOT across the Southern Runway. Standard diversion routes are shown in Figure A below.

14.4 Particularly large vehicles or vehicles lacking sufficient manoeuvrability to use the Eastern Tug Road may be taken across the Southern Runway at the discretion of the leader vehicle.

14.5 Under no circumstances should vehicles cross the double white lines at the rear of stand unless directed to do so by an ASD Leader vehicle.



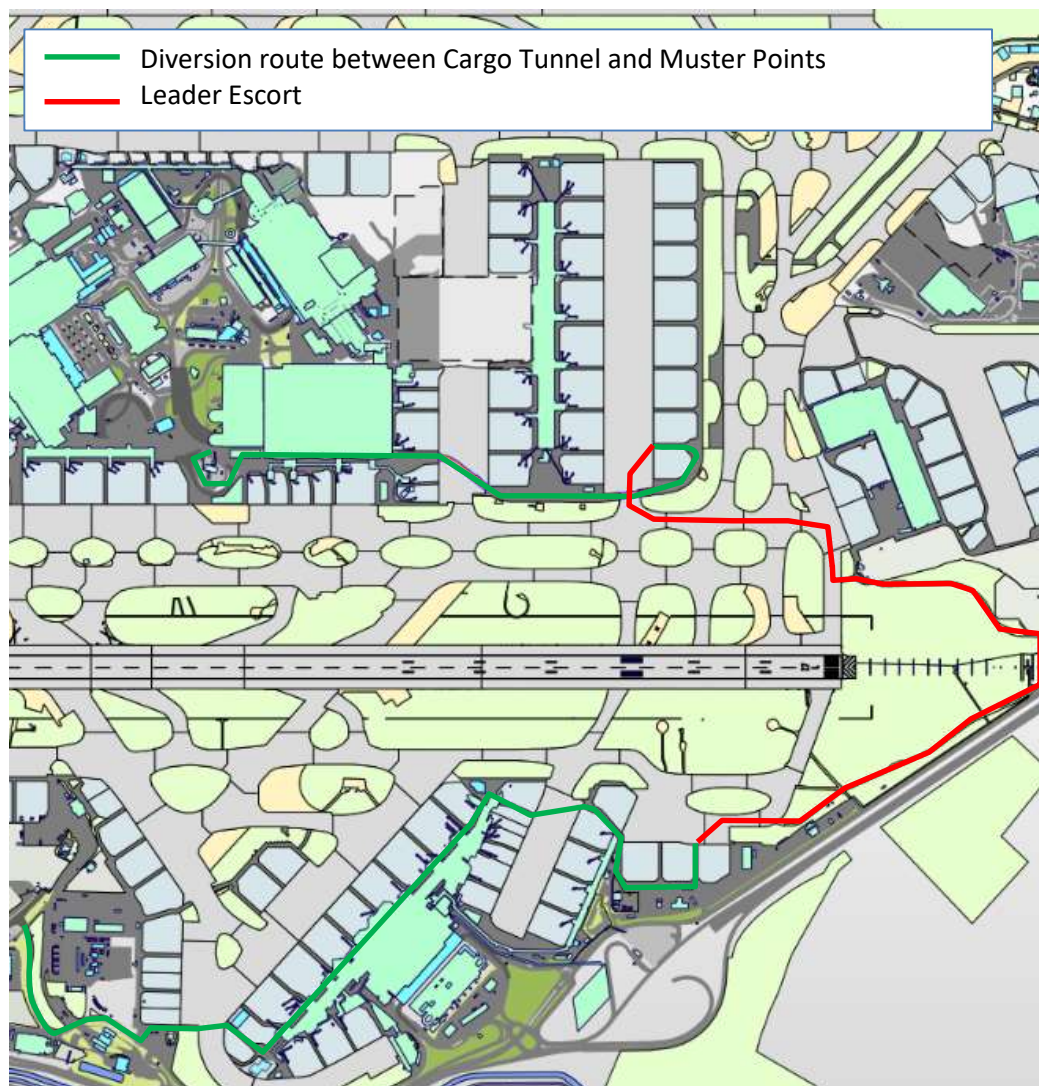


Figure A - Cargo Tunnel Diversion Route

## 15. Safety Requirements

15.1 Drivers using the diversion route via the Eastern Tug Road must;

15.1.1 Ensure that all vehicle loads are **secure** before setting off.

15.1.2 Ensure that vehicle obstruction lights are fitted and **switched on**.

15.1.3 **Follow all signs and markings** along the diversion route – including those along the tug road itself. A large hatched area is painted on the tug road that demarcates an area in which vehicles **must not** stop.



**15.1.4** **Not** enter the manoeuvring area without a leader escort or without an instruction from a Heathrow representative.

**15.1.4.1** Heathrow leader vehicles will provide an escort across the manoeuvring area from the muster point indicated by the diversion route. Drivers **must** await instructions from the leader vehicle and **do not** enter the manoeuvring area if unsure.

**15.1.5** Have all windows **closed** whilst travelling across the manoeuvring area under leader escort.

**15.1.6** Follow the leader vehicle during the transit across the Taxiway system, maintaining a **safe distance** behind the vehicle in front.

**15.1.7** Immediately **stop the vehicle and hold position** in the event of becoming detached from the convoy, or disorientated. Drivers must not attempt to self-manoeuvre back to the convoy or vehicle holding point.

## 16. Alternative routes

Drivers of vehicles not listed in Section 13.1 should seek an alternative route between the CTA and T4. Several options are listed below.

**16.1** Landside road network – Vehicles able to leave and re-enter Airside may do so and transit via the Landside road network to a control post in the destination terminal. Operators should be aware that not all control posts operate 24hrs – Information on which control posts are available may be obtained from Campus Security Control on 0208 745 6026.

**16.2** Western Tug Road & CP20 (controlled zone) – Vehicles may route via Control Post 20 and the Western Tug Road to transit between T4/Cargo and the T5 campus, and then onwards to the CTA via the Airside Road Tunnel. Whilst the Cargo Tunnel is closed, the restriction on the use of CP20 and the Western Tug Road by British Airways / BA World Cargo is **suspended**.

**16.3** Eastern Tug Road (Airside - Leader Escort) – Operators unable to use the alternative routes detailed above may request an ASD Leader vehicle to escort them across the manoeuvring area via the Eastern Tug Road. A Leader may be requested by calling 0208 745 6024 and choosing Option 2. Operators should be aware that this service is **chargeable** at published rates.



## 17. Screened and Sealed Vehicles

- 17.1** Vehicles carrying out deliveries to CTAT/5, which have had their contents screened and sealed at the Rapid Goods Screening Centre – and subsequently come Airside (hence breaking the security seal) may not easily be able to return to a Landside / Controlled Zone and then back Airside without having their contents re-screened.
- 17.2** When the Cargo Tunnel is closed, drivers of vehicles which have been previously screened and sealed, requiring to travel between T4 and the CTAT/5 via Landside / Controlled Zone should, when ready to leave the CPSRA, make their way to one of two holding points and call Alpha Base on 0208 745 6026 to dispatch a Security Manager to reseal the vehicle, in order to prevent the contents having to be re-screened.
- 17.3** The holding points are:
- Control Post 19 laybys immediately before the out gate, or
  - Control Post 8 - bus stop layby after lane 2 - directly behind the control post.
- 17.4** The driver should inform the Security Manager of their destination Control Post (e.g. Control Post 24A).
- 17.5** At the destination control post, the receiving Security Officer will confirm the security seal is intact and that the number is correct. The vehicle will then be able to continue into the destination terminal area. The occupants of the vehicle will need to undergo security screening as per normal process.
- 17.6** This process will **only** be available when the Cargo Tunnel is closed.



## APPENDIX B: 'Loss of Cargo Tunnel' Contingency Route

**17.7** Diversion signage will be in place to show alternative routes for affected vehicles. Traffic marshals will be in place at appropriate points along the route. There will be 2 routes available;

**17.7.1** Via the **Eastern Tug Road**. Vehicles will be diverted from the Southern Entrance to the Cargo Tunnel to Stand 432 and then around the Eastern Tug Road. At the Northern side of the tug road, a leader vehicle will escort convoys of vehicles across the taxiway system to the road abeam Stand 254, where drivers may re-join the road system. This route is also available in a North to South direction (Road holding area abeam Stand 254 to Stand 432).

**17.7.1.1** The height limit for vehicles taking this route is 4.0m

**17.7.1.2** There is no weight limit for this route

**17.7.1.3** A map of this route is shown below in Figure B.

**17.7.2** Via the **Western Tug Road** – available for Heathrow passenger coaches ONLY if approved by Campus Security. This route starts from T5 at Control Post 20. Vehicles will then transit the Western Tug Road, past the cargo stands and into T4 via Control Post 17b and the Royal Suite Apron. This route is only available for vehicles travelling from North to South (CTA/T5 to T4)

**17.8** Drivers using the diversion route via the Eastern Tug Road must;

**17.8.1** Ensure that all vehicle loads are **secure** before setting off.

**17.8.2** Ensure that vehicle obstruction lights are fitted and **switched on**.

**17.8.3** **Follow all signs and markings** along the diversion route – including those along the tug road itself. A large hatched area is painted on the tug road that demarcates an area in which vehicles **must not stop**.

**17.8.4** **Not** enter the manoeuvring area without a leader escort or without an instruction from a Heathrow representative.

**17.8.4.1** At the vehicle holding areas on Stand 254, and at the Northern end of the Eastern Tug Road, Heathrow leader vehicles will provide an escort across the manoeuvring area. Drivers **must** await instructions from the leader vehicle and **do not** enter the manoeuvring area if unsure.

**17.8.5** Have all windows **closed** whilst travelling across the manoeuvring area under leader escort.

**17.8.6** Follow the leader vehicle during the transit across the Taxiway system, maintaining a **safe distance** behind the vehicle in front.



**17.8.7** Immediately **stop the vehicle and hold position** in the event of becoming detached from the convoy, or disorientated. Drivers must not attempt to self-manoeuvre back to the convoy or vehicle holding point.

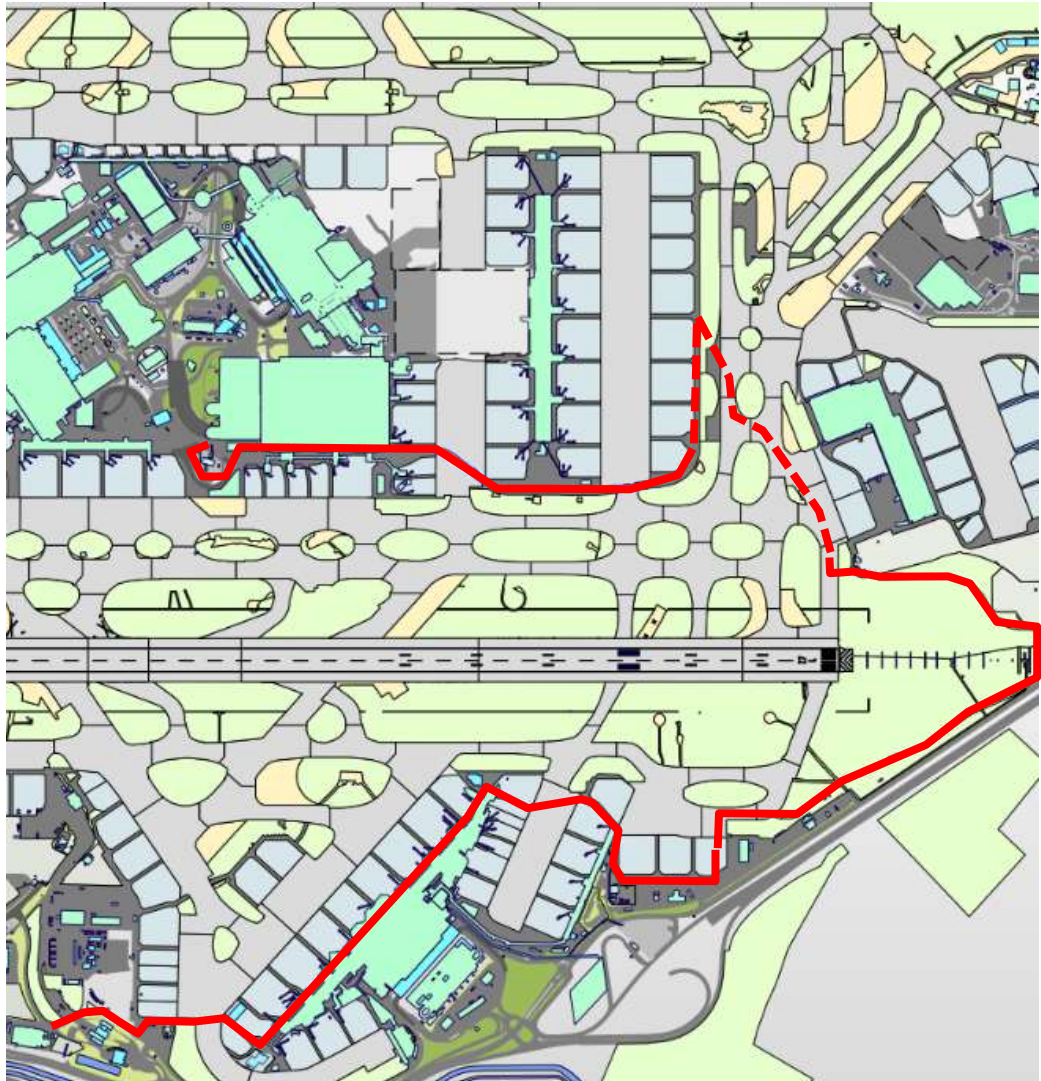


Figure B – ‘Loss of Cargo Tunnel’ Contingency Route

