Location:	Victoria Station ("Central" side) 2015 06 000 003	**Date:**	09 June 2015

Number & size / type of ATGs: There are seven arrays of ATGs, arranged as follows:

- Platforms 9 to 12:
  - (A) a main array of ten type E1 gates (nos. 70 - 79) plus a manual gate;
  - (B) a second array of three type E1 gates (nos. 80 - 82) plus a manual gate.
- Platforms 13 & 14:
  - (C) a main platform-level array of four standard and two wide-aisle E2 gates (nos. 50 - 55);
  - (D) a second platform-level array of two standard and one wide-aisle E2 gates (nos. 60 - 62);
  - (E) a main upper-level array of one standard and two wide-aisle E2 gates (nos. 70 - 72);
  - (F) a second upper-level array of one standard and one wide-aisle E2 gates (nos. 73 & 74);
- Platforms 15 to 19:
  - (G) one array of fourteen type E1 gates (nos.50 - 63), plus two manual gates.

Note that in normal operation, each of these three sections operates independently. This is because the Gatwick Express ATGs (platforms 13 & 14) accept a different range of tickets from the other arrays.

Flow direction: All gates can be set according to need, however the normal arrangement is for arrays (B) and (C) exit only, (D) and (F) entry only, with a mixed flow for arrays (A), (E), and (G).

Location & Age: The E1 gates date from 1998-9, the E2s from December 2011. All are located at entry points to the platform except arrays (E) and (F) which are at the upper (car park) level and connect with platforms 13 & 14 by means of stairs, escalators and a lift.

Visibility & Signage: All the arrays are clearly visible on approach, although large numbers of people can mask them temporarily. The directional indicators (green arrow / red cross) on the old E1 gates have been replaced and are better. For exit purposes, array (E) is only visible after arriving in the lobby area. Staff standing at array (A) do not have sight of array (B), and the positioning of staff should ensure that a prompt response to array (B) is provided.

Suitability: The manual gates need to be opened frequently to admit people with luggage etc., or with non-operational tickets. Re-platforming of services sometimes means that passengers must be allowed through ATGs which do not cater for the relevant ticket types. This can be a daily occurrence. Some ticket types (eg. advance purchase or group save) also require manual intervention by staff.

Overloading: Queuing at peak times is not unusual, and is often relieved by allowing a rapid flow through a manual gate with just cursory ticket inspection. With the E2 arrays which have no manual gate an operator can leave one gate open if necessary for visual checks. Array (C) is set to open for three trains in the morning peak where experience has shown that queuing would otherwise be excessive.

Passenger profile / growth: Arrays (A), (B), and (G) have a large commuter base in peaks, with a mix of other travellers during the day and at weekends. The remaining arrays have some commuter traffic but principally serve Gatwick Express trains, whose passengers include foreign nationals unfamiliar with ATG operation. Non-standard ticket types are also more common at these arrays. Barcode scanners are fitted to some of the aisles in arrays (C) to (F), for customers with tickets readable in this way.

CCTV / Security: All the arrays are covered by the station's CCTV cameras, controlled by Network Rail.

Lone Working protection: [redacted]

Excess Fare arrangements: Excess fare windows are provided for platforms 9-12 and 15-19. Revenue Protection staff are also on hand at busier times, and staff at arrays (C) and (E) are equipped with Avantix machines. At quieter times there may be no excess fare facilities and ticketless passengers must be allowed through the gateline.

Operating hours: Train services run during the night, and gateline hours reflect this. However, the ATGs for platforms 9 - 12 are normally unstaffed at night.

Staffing / Monitoring: The minimum safe level for operation is set out in the following table. This takes into account the amount of passenger assistance likely to be required, security of the gateline staff, and provision of cover for planned and unplanned breaks.

Array(s)		Peak times	off-peak times	night time
(A) & (B)	(plat. 9-12)	3	3	-
(G)	(plat 15-19)	3	3	2
(C)	(plat 13-14)	2	2	1
(D)	(plat 13-14)	1	1	1
(E) & (F)	(upper level)	2	2	-

Note that (F) is designed to be remotely monitored from (E). The current arrangement for array (E) is that if two staff are not available, the paddles on arrays (E) and (F) are left open.

Array (G) is busy at most times of the day, as the majority of trains are 12 coach formation. If fewer than 3 staff are available it may be necessary to leave a manual gate open so that the remaining staff can provide passenger assistance.

Staff covering platform 9 - 12 ATGs should ensure adequate monitoring of the smaller array (B). However, in off-peak times this could be taken out of service if notices and/or temporary barriers are used to advise customers.

Staff Competence: All staff are required to have a current licence for gateline competency. This includes agency staff when relevant.

Weather protection for operator: Most of the arrays are indoors, although staff will need warm clothing in cold weather. A heater is fitted near to the operator's position at array (E), which is close to an external doorway. Heaters for other arrays are still under review.

Emergency Procedure: Staff are trained in the emergency procedure for gatelines, and briefed on the local arrangements for Victoria.

EMO location & testing: EMO controls beside each array are tested on each shift.

SCU location: Each type E2 array has its SCU adjacent to the operator. Array (F) can also be remotely operated from a duplicate SCU at array (E). The E1 arrays each have a SCU located in a nearby office for the gateline supervisor.

Fire alarm link: Each array has an emergency open (EMO) facility linked to the station's fire alarm system, which is tested weekly.

Maintenance arrangements: A contract for routine and reactive maintenance is in place with Cubic.

Reliability: Occasionally one of the E1 gates will fail, although there are enough of them that this does not cause significant problems. The newer E2 type are more reliable.

Accident history: Since the last review (September 2014) two minor injury accidents and six staff assaults (mostly verbal or hot causing injury) have been reported. It is known that other verbal abuse incidents occur daily, and are not reported. In consideration of the high volume of passengers and the 24-hour operation of the station, these figures do not indicate that the ATGs present a significant hazard.

Alternative routes to avoid gates: Apart from fire exits at the country end of each platform, the only routes are along the track. There are no obvious exit points from the track.

Interface issues: Any of the gateline arrays need to allow passage for persons other than passengers, with the most frequent users being: Southern traincrew going to & from the traincrew accommodation, Network Rail staff, cleaners, and people employed in, or delivering to, one of the retail concessions. Plans for 2017 include relocating these tenancies and extending the gatelines to cope with larger passenger volumes.

Last Gateline Review: September 2014

Assessment of specific risks:

Hazard: Injury from being trapped in gateline paddles

Persons who may be harmed: Passengers, staff

Existing controls:

- Safe design, installation and maintenance of gateline equipment
- Daily testing of emergency open facility
- Sufficient staff rostered to monitor the different array sections and assist passengers
- Staff trained and licensed, with regular reassessment
- Staff identify passengers who need to use the manual / wide aisle gates, and advise them
- Procedure to label and barrier off any aisle which becomes defective
- Ability to amend flow directions and use manual gates to cope with high passenger volumes

Risk Ranking with existing controls:	**Severity**	3	**Likelihood**	3	**Risk**	9

Additional controls: There is some evidence to suggest that passengers flows can be adversely affected by people approaching the wrong gateline aisles, due to the poor visibility of the directional arrows. Consideration could be given to applying stickers over the electronic indications for those gates which habitually operate in one direction only. This would not, however, affect the overall risk ranking.

Hazard: Injury from falling to track due to overcrowding on platforms

Persons who may be harmed: Passengers, staff

Existing controls:

- Platform edges marked with white lines to aid visibility
- Conductor rails located non-platform side and not in the vicinity of buffer stops
- Staff monitoring of crowd volumes to identify when passengers may be at risk
- Local instructions identify clear 'trigger point' for queuing
- Local instructions specify use of EMO when trigger point reached

Risk Ranking with existing controls:	**Severity**	4	**Likelihood**	2	**Risk**	8

Additional controls: None required

Hazard: Emergency evacuation of station impaired by presence of ATGs

Persons who may be harmed: Passengers, staff, other persons

Existing controls:

- Daily testing of emergency open facility
- Automatic opening of gates linked to second stage of fire alarm
- Automatic opening of gates in the event of a power failure
- Arrays left in open position if there are no staff present
- Additional exit points (vehicle gates, platform fire escapes) to increase passenger flows

Risk Ranking with existing controls:	**Severity**	4	**Likelihood**	2	**Risk**	8

Additional controls: None required

Hazard: Assault of staff by passengers without valid tickets

Persons who may be harmed: Gateline & platform staff

Existing controls:

- Sufficient staff rostered to minimise lone working
- Obvious CCTV surveillance as a deterrent
- Staff issued with radios to request assistance
- 24-hour availability of Network Rail staff and British Transport Police

Risk Ranking with existing controls:	**Severity**	3	**Likelihood**	3	**Risk**	9

Additional controls: Some problems are experienced with late night revellers attempting to join early morning trains with expired tickets. Although the staff use their discretion, additional support at this time from RNOs or the BTP would improve the safety of staff. The risk ranking is not sufficiently affected.

Hazard: Muscular strain / ill health through standing for long periods of gateline duty

Persons who may be harmed: Gateline staff

Existing controls:

- Suitable clothing issued for inclement weather
- Sufficient breaks allowed within and between shifts
- Some variation of duties incorporated where possible

Risk Ranking with existing controls:	**Severity**	3	**Likelihood**	3	**Risk**	9

Additional controls: Provision of anti-fatigue mats was recommended in 2012, but was not adopted.

Summary of risk ranking values:

Severity: **1** = No injury, **2** = Minor injury requiring no more than first aid, **3** = Minor injury requiring attendance at hospital or doctor's surgery, **4** = Major injury, **5** = Fatal.

Likelihood: **1** = Nearly impossible, **2** = Possible under unfortunate circumstances, **3** = Possible under normal circumstances, **4** = Probable, **5** = Inevitable.

Ranking (Severity x Likelihood): **1 - 8** = Low, **9 - 15** = Medium, **16 - 25** = High.

Summary of Assessment:

Victoria remains one of the busiest stations on the railway network, and the automatic ticket gates are an effective way of protecting Southern's ticket revenue. If the arrays are operated in accordance with the company's standards and the provisions of this risk assessment then they do not present any significant risk to passengers, staff or others.

There are no new recommendations.

Assessor: [redacted], Safety Risk Manager, Southern

Assessor's Signature: [redacted] **Date:** 09 June 2015

Persons assisting: [redacted] (SM). [redacted] (Safety Representative), [redacted] (Team Ldr.)

Local Manager's acceptance: **Date:**

Local Manager's comments:
Date for review: June 2016, unless circumstances require an earlier review.