Trial Evaluation – Summary - Table of Contents

Introduction

The two short-listed proponents were invited to conduct a trial during the period 01/04/2023 to 28/04/2023, with a setup/configuration period being provided for the two weeks prior to commencement of the trial.

Proponents were requested to undertake the following preparations:

1. Set up and configure the Camera Site equipment at the trial VMS site located at South Road, Thebarton.

2. Set up their back office trial environment and provide access to authorised SAPOL staff.

3. Provide appropriate training, documentation and guidance to members of the evaluation team.

A communication to proponents outlined the evaluation activities that would be within the scope of the trial. This list of activities was based on the Trial Evaluation points outlined in 7(1)(c)

In preparation for the trial, SAPOL provided a defined set of business rules (scenario rules) that the vendor was requested to use to setup or train the AI component of their solution.

Daily Incidents – Vehicle Observations

The RFP identified the requirement that all vehicles passing below the VMS should be captured, regardless of whether any offence was detected.

Both proponents stated that they were able to comply with this requirement.

During the period of the trial the following vehicle observations (detections of vehicles passing under the VMS) were recorded:

Date	Observed Vehicles 7(1)(c)	Observed Vehicles	
20/03/2023	13,897	16,159	
21/03/2023	13,319	13,472	
22/03/2023	15,350	15,500	
23/03/2023	15,647	15,710	
24/03/2023	15,853	16,658	
25/03/2023	15,323	15,465	
26/03/2023	12,748	12,652	
27/03/2023	14,631	15,270	
28/03/2023	15,351	16,011	
29/03/2023	15,740	16,480	
30/03/2023	15,496	16,333	
31/03/2023	15,927	16,707	
01/04/2023	14,839	14,929	
02/04/2023	3,790	13,142	
03/04/2023	21,954	15,907	
04/04/2023	11,376	16,502	
05/04/2023	19,845	12,922	
06/04/2023	15,951	16,707	
07/04/2023	12,434	12,287	
08/04/2023	13,286	13,192	
09/04/2023	11,907	11,648	
10/04/2023	10,966	11,047	
11/04/2023	14,635	15,333	
12/04/2023	15,332	16,123	
13/04/2023	15,720	16,475	
14/04/2023	15,855	16,575	
15/04/2023	14,646	14,650	
16/04/2023	13,038	13,001	
17/04/2023	15,119	15,886	
18/04/2023	15,421	16,114	
19/04/2023	15,752	16,445	
20/04/2023	15,941	16,782	
21/04/2023	15,826	16,547	
22/04/2023	14,901	14,898	
23/04/2023	13,305	13,151	
24/04/2023	14,833	15,408	
25/04/2023	11,550	11,518	
26/04/2023	15,449	15,858	
27/04/2023	15,367	16,149	
28/04/2023	16,013	16,609	

These observations were captured during the following evaluation phases:

Period	Evaluation Phase	Notes
20/03/2023 to 31/03/2023	Installation, Setup & Configuration	
01/04/2023 to 14/04/2023	Evaluation monitoring with vendor adjustments and fine tuning allowed	06/04/2023 detailed analysis of all observations through audit files 06/04/2023 7(1)(c)
15/04/2023 to 28/04/2023	Evaluation monitoring with only approved adjustments	

Both proponents provided daily totals for vehicle observations and both proponents provided log files to support these observations. Neither of the proponents provided log files with the required level of detail.

Using the information provided, a detailed analysis of reported observations was performed by the evaluation team.

Conclusion – Vehicle Observations

1. Both proponents were capable of detecting nearly all vehicles passing below the VMS.

2. Both proponents were able to accurately identify vehicle number plates through the use of ANPR technology.

3. Both proponents missed a small number of vehicles in scenarios where the vehicle was hidden from view by large vehicles.

4. Vehicle counts differed slightly between proponents due to differing approaches to counting observations in unusual situations such as:
   - Multi-component trucks
   - Vehicle under tow
   - Caravans
   - Vehicles where windscreen masked or hidden (certain trucks, cranes etc)

5. Neither proponent provided sufficiently detailed log files or supporting images with metadata to allow full reconciliation of vehicle detection statistics.

Daily Incidents – Back Office Viewing

On a daily basis, incidents which had been assessed as Mobile Phone Usage Incidents by the proposed solution on the previous day (midnight to midnight) were made available for review and evaluation through the proponent's respective back office application.

For the 7(1)(c) Solution, mobile phone usage incidents were made available for review through the 7(1)(c) back office solution. This configuration provided equivalent review and adjudication capabilities to those which will be provided by the new ENB EMS System.

For the 7(1)(c) solution, mobile phone usage incidents were made available for review through the hosting of 7(1)(c) back office components on a laptop computer. This configuration provided the equivalent review and adjudication capabilities to those which will be provided by the new ENB EMS System.

Back Office Viewing – Conclusion

Both proponents provided the capability to load and review incidents utilising basic incident reviewing tools.

Back Office Functionality

Both proponents provided access to their respective back office functions.

Access to ^{7(1)(c)} functions was provided through a web based interface which provided access to Observation and Incident details. The ^{7(1)(c)} application was very intuitive and provided menu driven access to the available functions.

Access to ^{7(1)(c)} functions was provided through access to ^{7(1)(c)}. Access to functions required the user to follow detailed instructions which required navigation through a complex set of menus to access the available functions. Users were required to navigate to different areas of the ^{7(1)(c)} which required referral to detailed instructions.

Based on the trial configurations and documentation provided, the following back office functions were available:

Back Office Function	7(1)(c)	7(1)(c)	
Review device distraction incidents	Performed through Events & Alerts Review	Performed through Incident Viewer	
Reject a device distraction incident	Performed through Events & Alerts Review		
Review "Test Mode" incidents		Viewed through Incident Viewer	
AI "learning" from adjudication processes	Built in from Business Rules as AI configuration	Applied from Business Rules by QA Review	
Review AI "learning" capability	As described in RFP Response	As described in RFP Response	
Validate incident packages against camera site log files	Performed but limited by amount of detail in log files	Performed but limited by amount of detail in log files	
Distribution of decryption keys	As described in RFP Response	As described in RFP Response	
View status and details of Camera Sites through a dashboard monitoring	Basic Hourly Statistics available through Events and Alerts Dashboard	Extensive statistics available through ^{7(1)(c)} dashboard	
View KPI indicators and statistics through dashboard monitoring	Basic Hourly Statistics available through Events and Alerts Dashboard	Extensive statistics available through ^{7(1)(c)} dashboard	
Request Prosecution Evidence Package	Demonstrated Data block and supporting attributes can be configured	Demonstrated Data block and supporting attributes can be configured	
Review Prosecution Evidence Package	Demonstrated Data block and supporting attributes can be configured and sent to EMS.	Demonstrated Data block and supporting attributes can be configured and sent to EMS. Certification details included as part of metadata	

Back Office Functionality - Conclusion

The two proponents have taken very different approaches to providing back office functionality.

7(1)(c) provide an easy to use, web-based back office application which provides intuitive access to available functions. The application provides comprehensive functions for incident review and enquiry and includes menu-driven access to the Dashboard, Reports and User Management. The application does not currently, however, provide direct access to log files, alerts or certification functions.

7(1)(c) provide back office functionality through a number of discrete components which must either be downloaded as separate executables or accessed through various 7(1)(c) . The use of 7(1)(c) a powerful set of functions which are best-suited to advanced technical users. Using these functions, users are able to view the details of incident packages that have been created, and view a range of statistics on detections and alerts. There is no direct back office access to log files and reports. It is expected that technical ENB staff would have the capability to utilise these tools if provided with appropriate training and technical documentation.

Camera Site Certification Process

Both proponents provided a presentation overview of their Site Certification process.

7(1)(c) 7(1)(c)

7(1)(c) provided an overview of the proposed certification process. The demonstration provided details of the certificate creation process, however, the relationship between the site certificate and the associated incidents will need to be incorporated into the overall solution. It was unclear from the presentation who was expected to be undertaking this activity.

Note: During the trial it was noted that some components of 7(1)(c) support for the certification demonstration were being provided from 7(1)(c) support staff located outside of Australia. It is a SAPOL requirement that all collected data is stored in Australia and that all collected data can only accessed by vendor personnel who are located in Australia and are specifically authorised by SAPOL.

7(1)(c)

7(1)(c) provided a detailed demonstration of the proposed certification process. The demonstration was performed on the "live" SA System and included the actual certification process, performance of all site validation activities as well as production and digital signature of the certification certificate. Using back office functions the approved certificate was loaded back to the camera site and reflected in subsequent mobile phone offence incidents. The certification process is intended to be performed by 7(1)(c) staff as part of the contracted solution.

Note: The certification demonstration was performed by an 7(1)(c) staff member located in 7(1)(c)

Camera Site Certification Process – Conclusion

Based on the demonstrations, it was clear that 7(1)(c) has extensive experience with the certification of mobile phone detection cameras and has incorporated the certification processes as an integral part of their solution.

7(1)(c) demonstrated that their system has the capability to create and store certification records; however, they would need to work closely with SAPOL to determine the respective responsibilities for the certification activities and the relationship between detected incidents and the associated certification certificate.

Note: It is a SAPOL requirement that all collected data is stored in Australia and that all collected data can only accessed by vendor personnel who are located in Australia and are specifically authorised by SAPOL. The final negotiated contract must reflect this requirement.
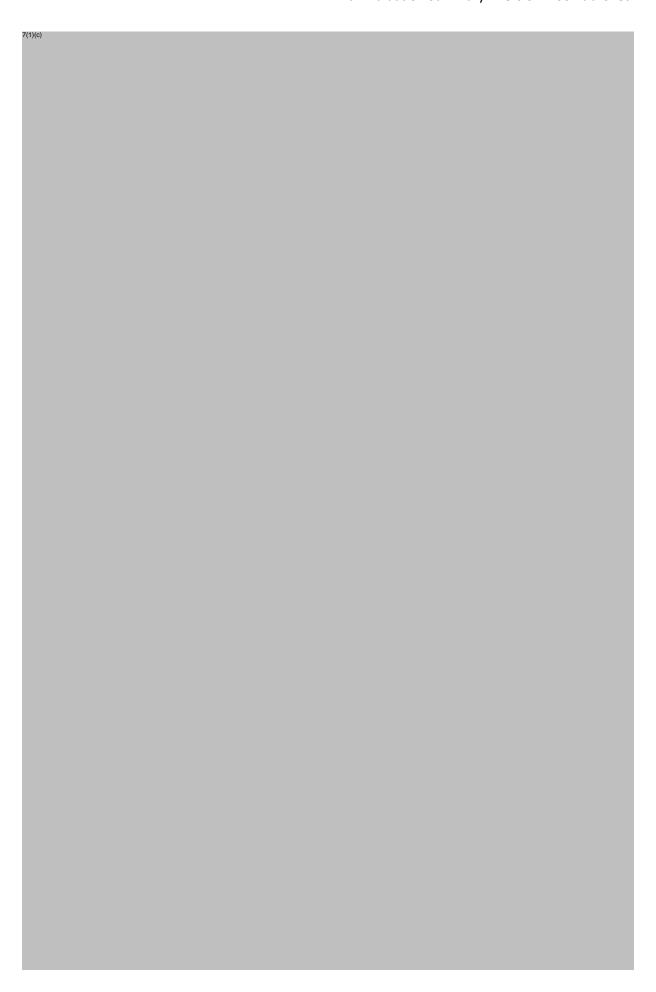
Integration with EMS

Both proponents have provided details of their approach to integration with EMS in their RFP Response.

Both proponents have advised that they are able to provide incident packages in a format which is compliant with the EMS specified Vitronic incident package format, (as provided as part of the Part B Requirements specification), and have expressed a willingness to work with the EMS vendor.

Integration with EMS - Conclusion

Both proponents have shown that they have the capability to provide incident packages in compliance with the requirements of the EMS Vendor. Either proponent would require more detailed specifications regarding the required incident file format and content.

7(1)(c)

7(1)(c)

Observation Audit and Vehicle Detections

Neither proponent was able to adequately demonstrate the capability of the proposed solution to comply with the requirements related to Vehicle Detection (as outlined in the ITS Part B Section 2.4.6.17), although both proponents have indicated that they would be capable of complying.

[7(1)(c)] were able to provide details and images for all observations, however, the log files provided did not provide sufficient details to verify the completeness of the data provided.

[7(1)(c)] were only able to provide log files which included dates and times of detections but did not include ANPR details. [7(1)(c)] were unable to make any further details or images available for detections which did not result in an incident being detected.

Analysis of the combined data provided by both proponents suggested that both solutions were at times missing vehicle detections. Analysis of the data also found that on at least one occasion, both proponents had provided incidents which contained inconsistencies (incorrect vehicle) between images within the incident.

Observation Audit and Vehicle Detections – Conclusion

Regardless of which proponent is eventually chosen as the preferred supplier, it is imperative that the selected vendor is able to make available to SAPOL a complete and transparent audit trail when required.

The occurrence of incidents which contain image artefacts from different vehicles is a cause for concern and if encountered in the production environment would likely cast doubt on the overall integrity and operation of the system as well as casting doubts on the preservation of the chain of evidence.

Security Considerations

Some aspects of Security were considered during the trial, however, there is still a requirement that SAPOL IS&T be provided the opportunity to review the proposed security components. This will provide the opportunity to review/confirm/clarify security aspects including:

- Preservation of Evidence (Chain of Evidence)
- Encryption/decryption processes
- Integration with EMS
- Proponent's Supplier Cyber Security Framework Questionnaire (CSF)
- Proponent's Cyber Security Plan
- Secure SAPOL access to Proponent Back Office functions

Security Considerations – Conclusion

There is still a requirement for SAPOL IS&T to be afforded the opportunity to review any areas of security requiring clarification based on Tender responses and the findings from the Evaluation Trial.

Evaluation Trial – Summary of Overall Findings

Based on the evaluation trial it was found that both proponents had the potential capability to provide a solution which would support the ongoing detection of mobile phone offences in metropolitan Adelaide and the secure delivery of mobile offence packages to the SAPOL Expiation Management System (EMS).

In conducting the trial, the following observations were made:

1. Both proponents were able to install and configure their respective equipment on the South Road VMS Site and were able to comply with DIT technical and operational requirements.
2. Both proponents were able to detect suspected mobile phone offences and package the related images and attributes as incident packages throughout the trial period.
3. Both proponents demonstrated the willingness to monitor the ongoing operation of their solution and both proponents made adjustments to their configurations based on their monitoring of these operations.
4. Both proponents provided back office functionality to support the ongoing operations of the MPDC solution.
   a. 7(1)(c)   provided this functionality through a 7(1)(c)
   b. 7(1)(c)   provided this functionality through a 7(1)(c)
5. The 7(1)(c)   solution provided a higher average level of image quality.
6. The 7(1)(c)   solution provided a higher number of incidents that contained sufficient quality of evidence to support prosecution of the mobile phone offence.
7. The 7(1)(c)   solution demonstrated a more comprehensive process for certification of camera sites and validation of incidents against camera certification details.
8. Data inconsistencies were noted on at least one occasion for both of the proponent's solutions. These inconsistencies are believed to be related to accurately detecting vehicle speed for slow moving and accelerating/decelerating vehicles. This clearly indicates that extensive testing/verification will need to be performed prior to going live, regardless of which solution is selected.
9. Neither proponent was able to provide detailed log files related to vehicle detections. The lack of vehicle detection details and the lack of detailed log files make it virtually impossible to determine the frequency of missing vehicle detections or false negative incidents.

Based on the observations from the trial, adjustments have been made to the original RFP scoring where necessary.

Additional Information Required

Prior to selection and confirmation of either shortlisted proponent, the following areas would need to be addressed by the respective proponents:

7(1)(c)

1. Confirmation of capability to meet Vehicle of Interest requirements (2.4.4.15)
2. Confirmation of capability to package Vehicle of Interest observation (2.4.6.1)
3. Confirmation of capability to demonstrate compliance with False Negative KPI (2.4.6.8)
4. Confirmation of capability to meet Vehicle Detection requirement (2.4.6.17)
5. Confirmation of capability to perform audit of vehicle detections (2.4.7.3)
6. Confirmation of capability to perform detailed log records (2.4.7.9)
7. Confirmation of Log File Access (2.4.7.10)
8. Confirmation of compliance with IS&T Security requirements
    a. Cyber Security (2.4.2.5)
    b. User Access (2.4.4.4)
    c. Security (2.4.4.10)
    d. Chain of Evidence (2.4.6.11)
    e. Encryption and Signing (2.4.6.12)

7(1)(c)

1. Confirmation of ability to provide access to Certification processes 7(1)(c) (2.4.4.3)
2. Confirmation of ability to provide access to Certification processes 7(1)(c) (2.4.4.5)
3. Confirmation of capability to relate Certificates to Incidents (2.4.4.7)
4. Confirmation of capability to perform Self-Check (2.4.4.9)
5. Confirmation of capability to meet Vehicle of Interest requirements (2.4.4.15)
6. Confirmation of capability to package Vehicle of Interest observation (2.4.6.1)
7. Confirmation of capability to demonstrate compliance with False Negative KPI (2.4.6.8)
8. Confirmation of capability to perform audit of vehicle detections (2.4.7.3)
9. Confirmation of capability to perform detailed log records (2.4.7.9)
10. Confirmation of Log File Access (2.4.7.10)
11. Confirmation of Certification & Testing Process (2.4.8.1)
12. Confirmation of Certification & Testing Process (2.4.8.6)
13. Confirmation of Service Model (2.4.9.1)
14. Confirmation of compliance with IS&T Security requirements
    a. Cyber Security (2.4.2.5)
    b. User Access (2.4.4.4)
    c. Security (2.4.4.10)
    d. Chain of Evidence (2.4.6.11)
    e. Encryption and Signing (2.4.6.12)

Observed Non-Compliance Rates

1. Average daily observations = 14,650
2. Incidents referred for Adjudication = 142

	Number on 15/04/2023	Non-compliance Rate on 15/04/2023	Number for period 01/04/2023 to 28/04/2023	Non-compliance Rate
Mobile Phone Usage Incidents Detected* [Based on observations during the trial}	142	0.97%	4,955	1.19%
Incidents accepted as sufficient for expiation (including phone on lap) [Based on observations for 15/04/2023]	113	0.77%		
Incidents accepted as sufficient for expiation (excluding phone on lap) [Based on observations for 15/04/2023]	101	0.69%		

*The mobile phone usage non-compliance rate (1.19%) is comparable to the rate reported for the MPDC trial in NSW in 2019 where a non-compliance rate of 1.2% was reported (Source: CASR Report Page 5).

It should be noted that during the grace period of the NSW implementation the mobile phone usage non-compliance rate fell to 0.3% (effectively a 75% reduction) (Source: CASR Report Page 5).

It should also be noted that following the grace period of the NSW implementation the mobile phone usage non-compliance rate has fallen to 0.2% (effectively a 83% reduction) (Source: CASR Report Page 5).

In preparing any future estimates for incidents to be adjudicated by ENB, or for estimating anticipated expiation revenues, the above figures would be used as a starting basis.
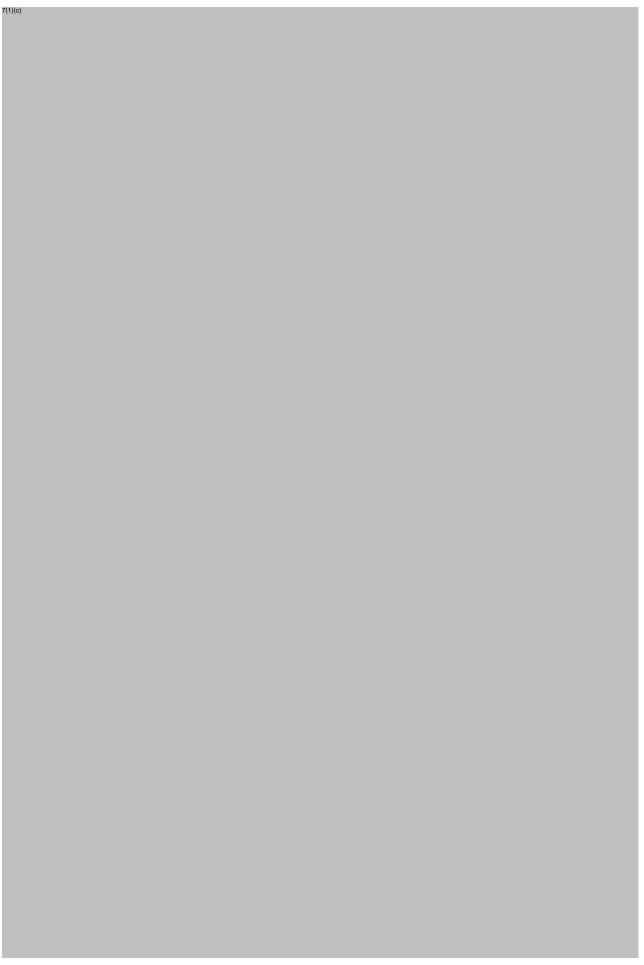
Attachment 1: Trial Period Incident Statistics

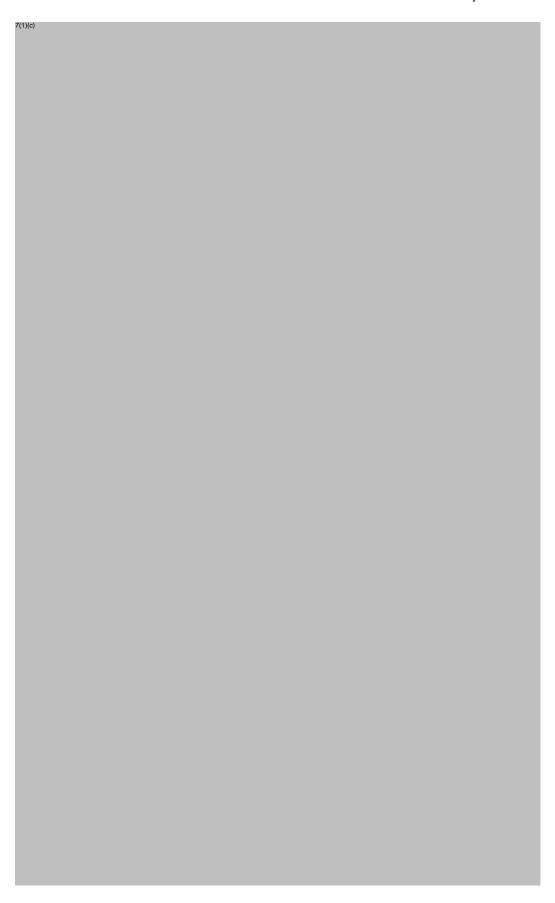## Trial Period Statistics – 7(1)(c)

Date	Site	Detections	Phone AI Referrals	Phone AI Referral Rate	Phone Offences	Phone Offence Rate
01/04/2023	RN06203/RN06203-SouthRoad-L1	14929	771	5.16%	156	1.04%
02/04/2023	RN06203/RN06203-SouthRoad-L1	13142	673	5.12%	148	1.13%
03/04/2023	RN06203/RN06203-SouthRoad-L1	15907	725	4.56%	185	1.16%
04/04/2023	RN06203/RN06203-SouthRoad-L1	16502	926	5.61%	217	1.31%
05/04/2023	RN06203/RN06203-SouthRoad-L1	12922	538	4.16%	163	1.26%
06/04/2023	RN06203/RN06203-SouthRoad-L1	16707	879	5.26%	296	1.77%
07/04/2023	RN06203/RN06203-SouthRoad-L1	12287	737	6.00%	146	1.19%
08/04/2023	RN06203/RN06203-SouthRoad-L1	13192	685	5.19%	129	0.98%
09/04/2023	RN06203/RN06203-SouthRoad-L1	11648	576	4.95%	91	0.78%
10/04/2023	RN06203/RN06203-SouthRoad-L1	11047	579	5.24%	117	1.06%
11/04/2023	RN06203/RN06203-SouthRoad-L1	15333	856	5.58%	176	1.15%
12/04/2023	RN06203/RN06203-SouthRoad-L1	16123	951	5.90%	214	1.33%
13/04/2023	RN06203/RN06203-SouthRoad-L1	16475	969	5.88%	224	1.36%
14/04/2023	RN06203/RN06203-SouthRoad-L1	16575	962	5.80%	186	1.12%
15/04/2023	RN06203/RN06203-SouthRoad-L1	14650	814	5.56%	142	0.97%
16/04/2023	RN06203/RN06203-SouthRoad-L1	13001	722	5.55%	148	1.14%
17/04/2023	RN06203/RN06203-SouthRoad-L1	15886	899	5.66%	201	1.27%
18/04/2023	RN06203/RN06203-SouthRoad-L1	16114	872	5.41%	186	1.15%
19/04/2023	RN06203/RN06203-SouthRoad-L1	16445	1009	6.14%	222	1.35%
20/04/2023	RN06203/RN06203-SouthRoad-L1	16782	1042	6.21%	208	1.24%
21/04/2023	RN06203/RN06203-SouthRoad-L1	16547	964	5.83%	181	1.09%
22/04/2023	RN06203/RN06203-SouthRoad-L1	14898	810	5.44%	173	1.16%
23/04/2023	RN06203/RN06203-SouthRoad-L1	13151	689	5.24%	124	0.94%
24/04/2023	RN06203/RN06203-SouthRoad-L1	15408	930	6.04%	217	1.41%
25/04/2023	RN06203/RN06203-SouthRoad-L1	11518	640	5.56%	122	1.06%
26/04/2023	RN06203/RN06203-SouthRoad-L1	15858	927	5.85%	193	1.22%
27/04/2023	RN06203/RN06203-SouthRoad-L1	16149	1004	6.22%	189	1.17%
28/04/2023	RN06203/RN06203-SouthRoad-L1	16609	1032	6.21%	201	1.21%
	Totals for Period 01/04/2023 to 28/04/2023	**415,805**	**23,181**		**4,955**	**1.19%**
	Average for formal trial period	**14,850**	**828**		**177**	**1.19%**

Trial Period Statistics – 7(1)(c)

Date	Site	Detections	Phone Offences	Phone Offence Rate
01/04/2023	92 South Road, Torrensville SA 5031	14839	205	1.04%
02/04/2023	92 South Road, Torrensville SA 5031	3790	206	1.13%
03/04/2023	92 South Road, Torrensville SA 5031	21954	185	1.16%
04/04/2023	92 South Road, Torrensville SA 5031	11376	35	1.31%
05/04/2023	92 South Road, Torrensville SA 5031	19845	249	1.26%
06/04/2023	92 South Road, Torrensville SA 5031	15951	282	1.77%
07/04/2023	92 South Road, Torrensville SA 5031	12434	213	1.19%
08/04/2023	92 South Road, Torrensville SA 5031	13286	227	0.98%
09/04/2023	92 South Road, Torrensville SA 5031	11907	146	0.78%
10/04/2023	92 South Road, Torrensville SA 5031	10966	173	1.06%
11/04/2023	92 South Road, Torrensville SA 5031	14635	270	1.15%
12/04/2023	92 South Road, Torrensville SA 5031	15332	285	1.33%
13/04/2023	92 South Road, Torrensville SA 5031	15720	282	1.36%
14/04/2023	92 South Road, Torrensville SA 5031	15855	299	1.12%
15/04/2023	92 South Road, Torrensville SA 5031	14646	201	0.97%
16/04/2023	92 South Road, Torrensville SA 5031	13038	176	1.14%
17/04/2023	92 South Road, Torrensville SA 5031	15119	270	1.27%
18/04/2023	92 South Road, Torrensville SA 5031	15421	267	1.15%
19/04/2023	92 South Road, Torrensville SA 5031	15752	302	1.35%
20/04/2023	92 South Road, Torrensville SA 5031	15941	306	1.24%
21/04/2023	92 South Road, Torrensville SA 5031	15826	311	1.09%
22/04/2023	92 South Road, Torrensville SA 5031	14901	248	1.16%
23/04/2023	92 South Road, Torrensville SA 5031	13305	198	0.94%
24/04/2023	92 South Road, Torrensville SA 5031	14833	292	1.41%
25/04/2023	92 South Road, Torrensville SA 5031	11550	175	1.06%
26/04/2023	92 South Road, Torrensville SA 5031	15449	285	1.22%
27/04/2023	92 South Road, Torrensville SA 5031	15367	261	1.17%
28/04/2023	92 South Road, Torrensville SA 5031	16013	306	1.21%
	Totals for Period 01/04/2023 to 28/04/2023	**405,051**	**6,655**	**1.64%**
	Average for formal trial period	**14,466**	**238**	**1.64%**

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Attachment 3: Sample Images from the Trial

Image qualities observed on 15/04/2023 ranged from 8 (very high quality) down to 2 (very poor quality). On the scale of 0 to 10, a score of 9 or 10 would have indicated a near perfect image. The highest quality image captured during the trial was scored as 8. Some sample images are shown below:

Examples: Image Quality 7

Image Quality 7: 7(1)(c)

Image Quality 7: 7(1)(c)

Attachment 3: Sample Images from the Trial

Examples: Image Quality 6

Image Quality 6: 7(1)(c)

Image Quality 6: 7(1)(c)

Examples: Image Quality 5

Image Quality 5: 7(1)(c)

Image Quality 5: 7(1)(c)

Examples: Image Quality 4

Image Quality 4: 7(1)(c)

Image Quality 4: 7(1)(c)

Examples: Image Quality 3

Image Quality 3: 7(1)(c)

Image Quality 3: 7(1)(c)