Safety and Airspace Regulation Group



8 December 2017

Policy Statement

POLICY FOR THE APPROVAL OF AERODROME REMOTE TOWERS

1 Scope

1.1 This policy statement sets out Civil Aviation Authority policy and guidance for the provision of air navigation services by means of an aerodrome remote tower facility. The policy will be informed and revised as necessary by changes to current EASA and ICAO policy as this evolves.

2 Introduction

- 2.1 Recent technological advancements now enable the replication by electronic means of 'out of the window' (OOW) views from aerodrome visual control rooms at remote sites.
- 2.2 The CAA is of the view that the development and deployment of aerodrome remote tower technology will enable the following types of operations:
 - a. Replication of current on-site aerodrome conventional tower 'single mode' visual control room including non-Air Traffic Service (ATS) surveillance-derived information. Examples of these include permanent or temporary mapping such as Work in Progress or surface markings. EASA guidance is at Reference A.
 - b. 'Replication Plus' enhancement of 'replicated' displays by means of overlays and integration of ATS surveillance derived information, e.g. Secondary Surveillance Radar (SSR) data.
 - c. Remote Tower Centre (RTC) multiple single mode applications.
 - d. RTC multi-site control at single work station.
- 2.3 This policy will be updated as necessary as technology, industry deployment and implementation requirements evolve.
- 2.4 The CAA expect to be involved in the development of remote tower implementation projects from an early stage, working collaboratively with the ANSP in order to determine how the approval process affects their particular proposal.

3 Definitions

3.1 Definitions of terms relating to aerodrome remote tower approvals are at Annex A.

Page 1 of 6

Policy for the Approval of Aerodrome Remote Tower Facilities

4 **Policy Requirements**

- 4.1 **General.** Each proposed aerodrome remote tower installation, regardless of operating mode is to satisfy the requirements for the introduction of a new ATS system or for a change to an existing ATS system as described in Part B of Reference B. Additional implementation considerations are at paragraph 6.
- 4.2 **Specific.** Specific policy requirements for each of the aerodrome remote tower modes are contained within Annexes B E. The initial requirement for replication mode operations applies equally to ATC and AFIS operations.
- 4.3 ATS Personnel Licensing. CAA policy for aerodrome remote towers does not require any changes to the existing licensing arrangements for ATCOs see Reference C E. For AFISO licensing requirements see Reference F.
- 4.4 **Camera Operating Systems.** Technical requirements for the camera operating systems which are used for aerodrome remote towers operations can be found at Reference G.
- 4.5 **Visual Presentation Equipment Interoperability.** Electro-optical equipment (cameras) and the associated visual presentation equipment (screens) are included within the scope of Reference H and are considered as systems and procedures for air traffic services.
- 4.6 **Change Management**. The CAA will provide advice and guidance to ANSPs seeking to introduce an aerodrome remote tower but, in principle, extant change management requirements apply and must be complied with. When planning the aerodrome remote tower, ANSPs should also consider the level of change and technology being introduced to the controlling environment and the relationship with the human operator. Advice and guidance on how this may be achieved can be found at Reference I.
- 4.7 **Safety Case.** Any related safety assurance documents must be completed and submitted in accordance with the guidelines laid down in Reference J and Reference K.
- 4.8 **Transition Plan.** The ATS provider should establish a transition plan which describes how the operation will migrate from the conventional tower to the remote site. Guidance material is at paragraph 2.11 of Reference A.
- 4.9 **Operational impact.** Any operational aspects should already conform to Reference L and these operational aspects should migrate to the aerodrome remote tower module without modification.

5 Remote Tower Modes

5.1 The specific requirements for the different modes of aerodrome remote tower operation can be found at Annexes B - E.

6 Considerations

6.1 When considering an aerodrome remote tower project, it is important for aerodrome operators and ATS providers to consider the impact and implications on people,

Page **2** of 6

Policy for the Approval of Aerodrome Remote Tower Facilities

equipment and procedures as a whole. From a Human Factors (HF) standpoint, this would include the whole organisation, how it interacts internally and externally and how those interactions would be affected by a change.

- a. Proposals shall therefore take into account those services/activities (other than ATS provision to aircraft) affected by the physical removal of the ATS staff from the airfield (see 6.3 below).
- b. Thought shall be given as to how this will be done, with what assurance and mitigation.
- c. Of particular concern will be:
 - i. Provision and assurance of Meteorological (Met) services. Specific requirements for the provision of remote Met services are at Annex F;
 - ii. Physical security of the on-site equipment;
 - iii. Cyber security. Guidance and advice on cyber security related issues is available at www.caa.co.uk/cyberoversight.
- 6.2 Should any non-ATS services be retained on-site at the aerodrome, pre-existing procedures shall be reviewed to reflect any differences arising from operating the service (e.g. Met) onsite whilst the ATS service is provided remotely.
- 6.3 While the requirements of CAP 670 apply to the provision of remoted communications, surveillance systems and the status of CNS facilities, the safety rationale for aerodrome remote tower implementation shall address the following:
 - a. Voice and Data:
 - i. How is the fidelity of signals assured?
 - ii. How are signals protected from interference?
 - iii. What back-up facilities will be in place and what procedures will be established in the event of loss/corruption of signals?
 - b. Lights and pyrotechnic signal provision:
 - i. How will pyrotechnic and light signals be replicated in a remote environment?
 - ii. How will they be controlled by ATS and where on the airfield will this additional system be located?
 - iii. Will this provision require an AIP entry so that pilots are aware where to look for such signals?
 - c. Failure modes and mitigation of system failure(s)
 - d. Continuity of service:

Policy for the Approval of Aerodrome Remote Tower Facilities

- i. System design should consider service continuity and availability requirements as well as safety requirements
- ii. The continuity of Cyber Security is also of significant importance.
- e. Availability of contingency facilities and how ATS personnel might exercise control of traffic at the time of system failure. How do you control aircraft and vehicle movements when one or all of the systems fail and how do you transition from working system(s) to failed system(s)? What mitigations are required to continue or cease operations?
- f. Any physical restrictions on the quality or quantity of the images transmitted due to, for example, bandwidth; a lower bandwidth may not be capable of transmitting 'higher' video update rates. Irrespective of the video update rate the ANSP shall consider the associated human factors (HF) impacts and mitigate for them.
- g. Reproduction of the audio environment. Over the years the constructors of ATS towers have attempted to sanitise the control position and reduce noise as much as possible however, a level of aerodrome audio can assist in situational awareness. The ANSP shall therefore, consider what level of ambient sound to provide.
- h. The interdependence and reliability assurance requirements shall be considered and potential failures shall be highlighted and mitigation provided where appropriate. The latency of different systems shall be considered together.
- i. The Aerodrome Operator is to ensure that:
 - i. The remote status of ATS provision is annotated at AD-2-EGxx-2.23.
 - ii. That the location of the remote tower camera mast is clearly marked on the aerodrome chart at AD-2-EGxx-2-1 by means of the symbol 3.
- j. Provision of remote ancillary services will need to be carefully considered and appropriate training provided to staff undertaking these roles. Examples include:
 - i. Met services.
 - ii. Airfield driver training/validation
 - iii. Control of grass cutting/snow clearance/general aerodrome work in progress.
 - iv. Control of emergency services.
- k. ATS personnel ongoing familiarity with on-site services/personnel. Following any move of ATS staff to an aerodrome remote tower facility, it will be necessary to develop a means by which relationships can be developed and maintained with on-site aerodrome staff and services.
- I. Camera specifications are detailed at Reference G. The ANSP, together with the Aerodrome Operator also is to consider the following:

Policy for the Approval of Aerodrome Remote Tower Facilities

- i. The design shall address the camera tower strength/frangibility, stability and wind loading requirements associated with the aerodrome operation.
- ii. Camera tower security.
- iii. Camera tower safeguarding.
- iv. Camera tower intrusion into obstacle planes.
- v. Camera resilience weather; birds; age; replacement/maintenance (including cleaning) schedule(s).

The camera specification detailed in Reference G is for the provision of an ATS service. If cameras are to be used for remote Met observing, additional consideration must be given to the suitability the cameras for that purpose– see Annex F.

- m. Engineering. Most aerodromes will have some form of on-site ATS engineering capability. With an aerodrome remote tower, they may be required to:
 - i. Remain on site or;
 - ii. They may become a remotely shared resource. If remotely based, a system must be established providing a Service Level Agreement (SLA) for maintenance of facilities and for response to failures. Priorities for each facility will need to be produced and robust contingency measures established.
- n. Recording. The recording of the Visual Presentation Screens and aerodrome ambient audio is recommended. Where the overlay and/or integration of surveillance data is used (in Replication Plus mode) the recording of the screens shall comply with the requirements for At-The-Glass (ATG) Surveillance data contained in CAP 670 SUR10.

7 Operational Approval

- 7.1 CAA aerodrome remote tower approvals will follow extant practices contained within Reference B.
- 7.2 ANSPs wishing to provide remote ancillary services other than ATS may require additional approvals. For example, remote Met provision must comply with the requirements in References M and N and those in Annex F and will require additional approval from the CAA to provide aerodrome observations from a remote location.

8. Enquiries

8.1 Enquiries concerning CAA aerodrome remote tower approvals policy issues should be submitted to the CAA at **ats.enquiries@caa.co.uk**.

References

- A. ED Decision 2015/014/R of 3 July 2015 Guidance Material on the implementation of the remote tower concept for single mode of operation.
- B. CAP 670 ATS Safety Requirements.

Policy for the Approval of Aerodrome Remote Tower Facilities

- C. Regulation (EU) 2015/340 (ATCO Licensing regulation) of 6 March 2015.
- D. ED Decision 2015/010/R of 13 Mar 2015 AMC/GM
- E. Part ATCO.OR Requirements on Air Traffic Controller licensing regarding remote tower operations
- F. CAP 1032 Aerodrome Flight Information Service Officer Licensing
- G. EUROCAE ED 240 Minimum Aviation System Performance Specification for Remote Tower Optical Systems (MASPS)
- H. Regulation (EC) 552/2004 of 10 April 2014 (The Interoperability Regulation).
- I. CAP 1377 ATM Automation: Guidance on human technology integration
- J. CAP 670 ATS Safety Requirements; Appendix B to SW01
- K. Regulation (EU) 1035/2011 Air Navigation Services (ANS) of 17 October 2011
- L. CAP 493 Manual of Air Traffic Services Part 1.
- M. CAP 746 Requirements for Meteorological Observations at Aerodromes.
- N. ICAO Annex 3, Meteorological Service for International Air Navigation.

Annexes:

- A. **Definitions**.
- B. Specific Requirements for the Replication of current on-site 'single mode' remote Aerodrome ATS facilities.
- C. Specific Requirements for 'Replication Plus' use of air traffic surveillance data in an aerodrome remote tower environment.
- D. Specific Requirements for the establishment of an RTC multiple single mode applications
- E. Specific Requirements for the establishment of an RTC multi-site control at single work station
- F. Ancillary Services

Policy for the Approval of Aerodrome Remote Tower Facilities

Annex A

Definitions

- A. 'Aerodrome conventional tower' means a facility located at an aerodrome from which Air Traffic Services (ATS) can be provided to aerodrome traffic mainly through direct visual observation of the area of responsibility of the ATS unit.
- B. 'Aerodrome remote tower' means a facility from which ATS can be provided to aerodrome traffic through real-time visual presentation of the elements contained in its area of responsibility (manoeuvring area and vicinity of the aerodrome) together with other elements that support the operation.
- C. 'ATS Surveillance Derived Information' means surveillance information derived conventionally (e.g. Data from SSR or Multilateration systems) or from visual and infrared camera systems. This can include both aircraft and vehicles.
- D. 'Direct visual observation' means observation through direct eyesight of objects situated within the line of sight of the observer, possibly enhanced by external elements (e.g. binoculars).
- E. 'Electro-optical equipment' means components, devices and systems which form the camera operating systems.
- F. 'Latency' means the amount of time it takes to deliver data from one interface point to another interface point, corresponding to the processing and communication durations.
- G. 'Movement' means the operation of an aircraft for take-off or landing
- H. 'Out-the-window view' means a view of the areas of responsibility of the ATS unit from a conventional tower.
- 'Remote tower module' means the workstation from which an Air Traffic Control Officer (ATCO) provides an aerodrome control service or where a Flight Information Service Officer (FISO) provides an aerodrome flight information service. It includes ATCO or FISO Working Positions (CWPs) (including the necessary ATS systems) and the visual presentation system screens.
- J. 'Single mode of operation' means the provision of ATS from one Remote Tower Module (RTM) for one aerodrome at a time.
- K. 'Visual presentation' means:
 - i. a view equivalent, in terms of visual coverage, to the one available at the corresponding conventional tower; or in the absence of a conventional tower; or
 - ii. when other locations are deemed more beneficial, it means an unobstructed view of all the areas of responsibility of the ATS unit.

Policy for the Approval of Aerodrome Remote Tower Facilities

Intentionally blank

Page A2 of 2

Policy for the Approval of Aerodrome Remote Tower Facilities

Annex B

Specific Requirements for the Replication of current on-site 'single mode' remote Aerodrome ATS facilities.

- 1. The following requirements are in addition to the General Requirements in the policy statement and are specific to the replication of on-site single mode aerodrome remote tower facilities.
- 2. Additional overlays non-surveillance. Annex to ED Decision 2015/014/R basic equipage refers to the "minimum equipage of technical enablers which are necessary for the operation of the aerodrome remote tower at a single aerodrome" and further refers to Enhanced equipage such as overlays. For the purposes of single mode and enhanced mode operations CAA further splits additional overlaid information into 2 categories; Surveillance and non surveillance overlays. In terms of the 'basic' single mode operation CAA views that non surveillance based visual overlays on the visual presentation are, subject to their specific approval, acceptable for use in that mode. These overlays can be permanent or temporary and could come in the form of:
 - a. Aerodrome maps;
 - b. Information markers e.g. surface markings, hazardous areas or WIP;
 - c. Status information e.g. Rescue and Fire Fighting Service (RFFS) Category.
- 3. Surveillance overlays. This Annex deals with the 'basic', single mode system which, while it may have non surveillance overlays, it will not have the use of ATS surveillance derived information. The addition of ATS surveillance-derived information and overlays is addressed at Annex C.

Policy for the Approval of Aerodrome Remote Tower Facilities

Intentionally blank

Page B2 of 2

Policy for the Approval of Aerodrome Remote Tower Facilities

Annex C

Specific Requirements for 'Replication Plus' – use of air traffic surveillance data in an aerodrome remote tower environment.

1. Equipage and overlays

1.1 Annex to ED Decision 2015/014/R refers to basic and advanced equipage, but makes no distinction between the types of available overlays (as described in Annex B). For the purposes of aerodrome remote towers, overlaid information is split into 2 categories - surveillance and non-surveillance overlays. Whilst Annex B refers to the 'basic' system in a single mode of operation with non surveillance-derived overlays, this Annex explains how air traffic surveillance derived data could be used in an aerodrome remote tower environment.

2. Surveillance-Derived Data

- 2.1 Such surveillance-derived data includes (but is not necessarily limited to:
 - a. Use of infrared cameras.
 - b. Dedicated means to facilitate the detection, recognition, identification (e.g. based on surveillance data or on flight plan correlation) and tracking (e.g. labels directly in the visual presentation) of aircraft.
 - c. Dedicated means to facilitate the detection and tracking (e.g. labels directly in the visual presentation) of vehicles on the manoeuvring area.
 - d. Dedicated means to facilitate the detection and tracking of obstructions/objects on the manoeuvring area (e.g. personnel or animals).
 - e. Functionalities to assist the judging of the aircraft's position or altitude (depth of vision for the ATCO/FISO).
 - f. Safety Net functions based on surveillance data.

3 Surveillance Functionalities

3.1 There are various surveillance functionalities that could be integrated in to a remote tower environment. The CAA will assess the various surveillance features on a case by case basis in the remote tower approval process.

4. Data Sources and Applicable Performance Requirements

- 4.1 Sources of the surveillance data displayed on the remote tower OOW displays or any form of surveillance display such as an Air Traffic Monitor (ATM), Surface Movement Radar (SMR) display, Advanced Surface Movement Guidance and Control Systems (A-SMGCS) type display in the remote tower could take one of these forms. Data may be fed to from one or more of these sources.
 - a. Data obtained from video camera sensors/infrared (e.g. Laser Range Finder technology) cameras in the remote tower itself or sensors mounted at strategic locations

Policy for the Approval of Aerodrome Remote Tower Facilities

- b. Surveillance data integrated comes from conventional surveillance feeds such as SSR, Wide area Multilateration (WAM), Automatic dependent surveillance broadcast (ADS–B) sensors etc and not from video camera sensors installed
- 4.2 Where the surveillance data are derived (identification and position) from the video camera sensors (visual or infrared), the camera sensors shall be considered as an ATS surveillance sensor.
- 4.3 Where visual or infrared camera sensors are used for deriving and displaying surveillance data (on surface or airborne), equivalent performance requirements expected of a conventional technology such as SMR/Multilateration (MLAT) for surface applications shall apply.
- 4.4 The performance requirements that apply to surveillance sensors used for surface surveillance can be found in SUR 09.
- 4.5 Minimum Aviation System Performance Specification for A-SMGCS levels 1 and 2 are stated in EUROCAE ED-87
- 4.6 Minimum Operational Performance Specification for Mode S Multilateration Systems for use in A-SMGCS can be found in EUROCAE ED-117.

5 Data Transmission

- 5.1 CAP 670 SUR03 requirements shall apply to the data transmission links used to send data from the surveillance sensors to the surveillance equipment in the remote tower.
- 5.2 The latency of the transmitted surveillance data from the airfield based sensors or from any onward routed surveillance data feed shall be measured and verified.
- 5.3 The position accuracy at the time of applicability of the received surveillance data shall be verified by comparison with the position data displayed on the remote tower and by verifying with the actual position of a target.

6 ATM

- 6.1 Any form of surveillance data represented on the OOW displays shall not replace the ATM surveillance display equipment used in an aerodrome ATC environment.
- 6.2 In the event of the loss of the ATM display, it may be possible to utilise the limited surveillance data represented on the OOW displays to help effectively manage the traffic situation in a contingency period.
- 6.3 CAP 670 SUR 08 requirements shall apply to any ATM used in a remote tower environment.

7 SMR/SMGCS or A-SMGCS

7.1 Where an airport has an A-SMGCS or an SMR based surface surveillance display, the integration of surveillance data on to the OOW displays of the Remote Tower shall not replace the A-SMGCS or the surface surveillance display based on SMR or other type of surveillance technology.

Page C2 of 4

Policy for the Approval of Aerodrome Remote Tower Facilities

7.2 In the event of failure of A-SMGCS or any type of surface surveillance display used, the surveillance derived data displayed on the OOW displays in the remote tower, shall not be used as a substitute for the surface surveillance displays. However it may be possible to utilise the limited surveillance data represented on the OOW displays to help effectively manage the traffic situation in a contingency period.

7 OOW Replicated Remote Tower Displays

- 7.1 In the event where the OOW replicated view through the remote tower video sensors is lost, the surveillance data derived through any sensor type shall not be used alone in substitute of the functions for which an ATM, A-SMGCS or SMR display is used. The data may however be used in a contingency situation as a supporting aid to enhance safety and awareness.
- 7.2 Where surveillance derived data is used on the OOW displays of the remote tower, the functions and the purposes for which they are intended to be used must be clearly identified.

8 Detection and Tracking of Moving Targets

- 8.1 Any surveillance sensors used for detection and tracking of objects should have algorithms to successfully separate targets and other moving objects such as flocks of birds.
- 8.2 It is recommended that moving objects that are not aircraft or vehicles not be normally displayed unless visible via camera sensors on the remote tower OOW displays.
- 8.3 The history trail dots shall not be displayed on OOW displays.
- 8.4 Display of and access to additional surveillance data is optional when selected by the controller as required.

9 Safety Nets and Alerting Functions

- 9.1 In remote towers where SMR/A-SMGCS is used for surface traffic monitoring, the safety nets on the OOW displays shall be disabled.
- 9.2 The sensors used for position calculation shall have equivalent performance required of surveillance sensors used for surface surveillance applications.
- 9.3 In the absence of an SMR/SMGCS or an A-SMGCS the use of safety nets alerts may be allowed provided that the accuracy, precision of the data and the rate of nuisance alert levels in the integrated remote tower system, is acceptable. Each integrated system and its associated safety nets functionalities will be considered by the CAA on a case by case basis depending on the system capability.

10 Display of Surveillance Data on the remote tower OOW Displays

- 10.1 The ANSP should suitably limit the surveillance data to be displayed in the labels on the remote tower displays.
- 10.2 Detailed provisions as regards display aspects are to be developed.

Page C3 of 4

Policy for the Approval of Aerodrome Remote Tower Facilities

Intentionally blank

Page C4 of 4

Policy for the Approval of Aerodrome Remote Tower Facilities

Annex D

Specific Requirements for the establishment of an RTC – multiple single mode applications

1. Where a module is utilised as part of a RTC and could be selected for a variety of aerodromes, once a specific aerodrome location is selected, it should be locked in that location so that it cannot accidentally be switched to another location during operations.

2. Where one location at an RTC has received approval to use specific enhancements and another location does not have the same approvals, these additional enhancements must be capable of being locked out during the period of operation for the other location.

Further text to be developed

Page D1 of 2

Policy for the Approval of Aerodrome Remote Tower Facilities

Intentionally blank

Page D2 of 2

Policy for the Approval of Aerodrome Remote Tower Facilities

Annex E

Specific Requirements for the establishment of an RTC – multi-site control at single work station

Text to be developed

Policy for the Approval of Aerodrome Remote Tower Facilities

Intentionally blank

Page E2 of 2

Policy for the Approval of Aerodrome Remote Tower Facilities

Annex F

Ancillary Services

- 1 **Remote Aerodrome Meteorological Observing Service** Specific Requirements for the establishment of a Remote Aerodrome Meteorological Observing Service (RAMOS).
- 1.1 In order to gain approval for the provision of a RAMOS, ANSPs must provide assurance that accurate, timely and complete aerodrome meteorological observations can be provided from the remote location.
- 1.2 The ANSP should review the unit's quality management system to ensure that it includes an appropriate level of detail of the system that assures users that the quality of meteorological information supplied by the RAMOS complies with regulatory requirements.
- 1.3 Consideration must be given to any potential differences in the processes, procedures or techniques for observing, reporting, recording and disseminating observations both 'within' and beyond the aerodrome when operating a RAMOS. Particular consideration should be given to the following areas:
 - a. When observing at an aerodrome it is often difficult for an observer to determine certain weather conditions (e.g. precipitation type and intensity) without observing from outside the building. How will observers assess those elements which would normally be assessed from an outside position when observing at a remote location?
 - b. A review of Met training for ATS personnel and/or accredited observers (and other personnel if necessary) will be needed to ensure that training syllabi and competency checks are updated where necessary to reflect any differences in the provision of a RAMOS.
- 1.4 There are some differences in the requirements for the 'out of the window' view required for ATS provision and that required for Met provision. The camera(s) specification detailed in Reference G is for the provision of an ATS service. If camera(s) are to be used for remote Met observing additional consideration must be given to the suitability, number, and location of cameras to be used for Met Observing. Particular consideration should be given to the following areas:
 - a. During the hours of darkness cameras may not be able to distinguish the amount and type of cloud present, or the type and intensity of precipitation. Evidence will be required to ensure cloud observations during the hours of darkness can be made using remote technology. For example some States use Infra-Red cameras specifically for Met observing at night.
 - b. Cameras must be in a position, and at a height, that enables them to supply observers with views which are representative of the aerodrome and its vicinity, and which provide a good view of the celestial dome. Additional cameras may be required to obtain the necessary view(s), for example in low visibility.
- 1.5 Automated sensors used to measure certain meteorological elements (typically visibility, present weather and cloud) shall be considered to be an aid to an observer

Policy for the Approval of Aerodrome Remote Tower Facilities

rather than a direct source of information. Such sensors can measure each of these elements, but are limited by the spatial coverage of the sensor and the capability to resolve certain weather phenomena. Subject to the outcome of the assessment of the suitability of cameras for remote observing ANSPs shall consider whether additional sensors will be required to provide mitigation for any limitations in the camera view and/or the limited spatial coverage of certain Met sensors.

- 1.7 Contingency arrangements for all parts of the remote Met service shall be reviewed and, if necessary, altered as required.
- 1.8 RAMOS will require a period of testing to ensure parity with the service currently provided at the aerodrome. The test period should include the widest possible range of conditions, specifically the more hazardous weather conditions (e.g. fog, snow, thunderstorms etc.). The duration of the test and the weather phenomena that need to be witnessed will need to be discussed but ANSPs should plan to conduct testing over a period of 6 months (to include winter).
- 1.9 At the time of publication of this document there is no RAMOS in operation in the UK although it is known RAMOS are provided in other States, it is recommended that ANSPs consider industry best practices in the area of RAMOS, for example, reviewing RAMOS experiences in other States and investigating any equipment that has specifically been designed to support remote observing operations.

2. Management of Aerodrome Driving

2.1 At aerodromes where ATC has responsibility for airside driver training, examination and ongoing competence, arrangements will need to be in place for these functions to be conducted by other suitably qualified on-site aerodrome staff.

3. Aerodrome Wildlife Management

3.1 At aerodromes where wildlife management is a function of ATC, careful consideration will be necessary to determine which elements, if any, can be managed from the remote ATC facility and which will need to be delegated to suitably qualified on-site aerodrome staff.

4. Aerodrome Surface Inspections

4.1 At aerodromes where ATC has responsibility for conducting and/or overseeing surface inspections, arrangements will need to be in place for suitably qualified on-site aerodrome staff to assume the elements of this task which will need to remain on-site.

5. Collection of Fees

5.1 At aerodromes where ATC has responsibility for the collection of aircraft fees, arrangements will need to be in place for this function to be conducted by remaining on-site aerodrome staff.

6 Airfield Briefings

6.1 At aerodromes where airside safety briefings and/or training is conducted by ATC, suitably qualified on-site aerodrome staff will be required to assume the elements of this training which will need to remain on-site.

Page F2 of 4

Policy for the Approval of Aerodrome Remote Tower Facilities

6.2 Theses briefing could include, but not be limited too; daily operational briefing, work in progress, and contractor airside awareness briefings.

Further text to be developed

Policy for the Approval of Aerodrome Remote Tower Facilities

Intentionally blank

Page F4 of 4