



Australian Government

Department of Defence

Defence Aviation and Air Force Safety

Minute

DDAAFS/2016/AB26419161

COMDT ADFA (AIRCDRE Clements)

DDAAFS DESKTOP REVIEW OF ADFA BUS ACCIDENT PRE-EXERCISE TRANSPORT PLANNING AND EMERGENCY RESPONSE

References:

- A. Meeting with COMDT ADFA and DDAAFS of 14 Dec 15
- B. ADFA ADMININST 263/15 – *ADFA Undergraduate Leadership Challenge II for 12 – 29 Nov 15* of 14 Sep 15
- C. DRTM – *Defence Road Transport Manual AL1* of July 2014
- D. Leadership Challenge Two 2015 Staff Guide

Introduction

1. On 21 Nov 15 at approximately 0955, a contracted Defence Coach was involved in a serious ‘single vehicle’ accident whilst returning from HMAS *Creswell* during the Australian Defence Force Academy (ADFA) Leadership Challenge II (LC II). The coach was in convoy with three other coaches and was the lead vehicle in the convoy at the time of the accident and was carrying 50 trainees. The accident resulted in a number of Priority 1, 2 and 3 casualties.
2. Following the accident, Director DDAAFS offered support to the Commandant of the Australian Defence Force Academy (COMDT ADFA) to undertake a safety investigation. At Ref A, DDAAFS was requested to undertake a desktop review of the planning undertaken by ADFA until the cadets boarded the bus for transportation. Furthermore, the review should include the ADFA on scene accident response and identify any further areas for consideration.
3. DDAAFS notes that a number of other agencies are conducting concurrent but separate investigations into this accident; DDAAFS has only reviewed the initial planning and post accident responses at the accident site. This Minute documents the DDAAFS review.

Sequence of events

4. The LC II is a combination of tri-service and historical leadership orientated activities conducted in conjunction with a five day Character and Leadership Continuum activity in a field exercise that is designed to be stressful, complex and expose the participants to a challenging environment. The first rotation deployed on 15 Nov 15 and redeployed to ADFA on 21 Nov 15 – the day of the accident.
5. **Timeline** Below is a timeline of events leading up to LCII:
 - a. Air Transport Request (AMR Ref J3287553) submitted to Air Mobility Control Centre (AMCC) – 3 Jul 15
 - b. Amendment to AMR J3287553 (change destination airfield) submitted – 6 Aug 15

- c. Coach and Driver support request submitted to Spotless – 27 Aug 15
- d. Administration Instruction for the exercise released – 14 Sep 15
- e. Advice received from AMCC that task J3287553 cannot be supported – 22 Oct 15.
- f. First rotation deploys from ADFA to exercise area – 15 Nov 15.
- g. Redeployment from exercise area to ADFA – 21 Nov15.

Planning Phase Review Findings

- 6. The DDAAFS investigation reviewed Refs B, C and D and the following findings were made:
 - a. The initial planning for the field phase of LCII was very detailed and thorough; covering all activities the officer cadets and midshipmen were to complete.
 - b. The sequence of events and key timings was found to be detailed and thorough.
 - c. All participating ADFA staff and cadets were required to have completed basic first aid training prior to the activity.
 - d. The dress and equipment list was detailed, thorough and covered all contingencies. Although optional, a personal medical kit/blister pack was included on the list for 'Patrol Order' equipment.
 - e. The transport plan was detailed and covered contingency for any lack of air transport.
 - f. The MEDIVAC/CASEVAC plan was extremely detailed, robust and thorough. However, it was focussed solely on the LCII activities in the Jervis Bay and surrounding exercise areas.
 - g. There was no MEDIVAC/CASEVAC plan for incidents that may occur outside the exercise areas including during the movement to and from Jervis Bay.
 - h. The ADMININST included a comprehensive risk assessment and these were annotated in the Risk Appreciation and Risk Tolerance Summaries (Annex G to Ref B).
 - i. Risk Reference 1.1 identifies inadequate communications during the activity "as likely to cause a delay or inability to respond to an emergency".
 - j. The Existing Likelihood Controls (ELC) contained within the Risk Appreciation Summary (RAS) to mitigate for inadequate communications were identified as a radio network having communications over 100% of the exercise area.
 - k. There was no communications plan for any incidents occurring outside of the exercise areas.

- l. Both the Risk Appreciation and Risk Tolerance Summary listed vehicle accident with a residual risk identified as low with ELC identified as Activity Safety Brief, Convoy Orders and the Defence Road Transport Manual (DRTM). However, the risk assessment was primarily focussed within the exercise area.
- m. The only reference to activities outside the exercise area (Risk Reference 15.1) identified a vehicle accident with military and/or civilian vehicle (car, truck, motorcycle, heavy machinery) prior to, during and after the activity that caused injury. The ELC and additional controls to mitigate this risk were Activity Safety Brief, Convoy Orders and the Defence Road Transport Manual (DRTM).
- n. There was no risk reference for a single vehicle accident for any incidents that may occur outside of the exercise areas.
- o. The LCII 2015 Staff Guide Safety Brief contained in Ref D para 7a includes a statement to “operate vehicles IAW convoy orders”.
- p. There is no evidence of Convoy Orders being issued, IAW Chapter 14 of Ref D.
- q. No-one was appointed to ‘command’ the convoy back to ADFA.

Immediate Post Accident on Site Activities

7. The DDAAFS investigation reviewed email statements, and interviews from key individuals (RAN Lieutenant and RAAF Warrant Officer) involved immediately after the accident. The activities that occurred at the site immediately after the accident are detailed in Annex A.

Post Accident Phase Review Findings

8. The following findings were made:
 - a. The buses transporting the ADFA staff and cadets to and from the exercise area were operating in convoy as defined in annex 1A-5 to the DRTM, Ref D.
 - b. No ADFA staff members were on the accident bus.
 - c. All ADFA staff members except two, were on the last bus in the redeployment convoy.
 - d. ADFA staff members were not on all buses in the convoy to act as the Senior Occupant during the convoy movements.
 - e. There was no passenger nominal roll or manifest to indicate who was on each transport vehicle to and from ADFA and the exercise area.
 - f. Initial Emergency Services contact was made to 000 through a local property owner (RAAF Warrant Officer) who had just arrived at his property.
 - g. There was extremely limited mobile telephone communication network availability at the accident site.

- h. The limited communication to Emergency Services and ADFA was only available from a hill 650 metres from the accident site. (on the RAAF WOFF's property).
- i. The satellite radios used during the exercise were not carried on the buses.
- j. There were no First Aid kits on the buses used for the redeployment. However, IAW Ref C, the buses are classed as 'Commercial Line Vehicles' and thus IAW paragraph 5.73, sub-paragraph 'a', the buses 'are not required to carry first aid kits unless a risk assessment has determined this is a requirement'.
- k. No Convoy Commander was appointed, IAW Chapter 14 of Ref C..
- l. The 'optional' personal medical kits included by some cadets in their patrol order kits, and used at the accident were invaluable due to the lack of any First Aid kits on the coach transport.
- m. A local SES/CFR member who happened to be driving through the accident site was able to provide a larger First Aid kit he had in his vehicle, for use on the injured.
- n. There was no water carried on the buses available to the passengers.
- o. The only shade available to the passengers was provided by holding 'ground sheets over the injured by the remaining uninjured members at the scene.

ADFA Post Accident Activities

- 9. The following incident management activities at ADFA HQ occurred:
 - a. Notification to the Chain of Command (CoC).
 - b. Notification to the next of kin.
 - c. Activating support organisations.
 - d. Organising ADFA staff placements at the hospitals being used.
 - e. ADFA conducted a briefing to all personnel involved including the Warrant Officer witness.
 - f. ADFA CoC provided Psychologist interview to the Warrant Officer post exposure to the incident.

Additional Information

- 10. Had the property owner (RAAF WOFF) not arrived at his property immediately prior to the accident and immediately contacted the Emergency Services, there would have been a significant delay to the arrival of these services.
- 11. The property owner had food, ice and water with him for the weekend at the property and made these available to the ADFA staff and uninjured cadets; no other supplies were available.

12. Water and food was not provided to injured members following 000 advice.

Analysis and Recommendations

13. **Command and Control.** There was a lack of a Command and Control structure during the transport phase of the activity and no evidence that Convoy Orders had been issued for the transport phase of LC II. Had these been issued a number of additional defences are highly likely to been active. Convoy Orders require the appointment of a 'Convoy Commander', coupled with a senior member appointed to each bus in the convoy to act as the Senior Occupant.

14. Appointment of a Convoy Commander would also ensure that the passengers were given adequate safety briefings IAW Ref C, by both the Convoy Commander, and the bus driver. The Senior Occupant would also compile a manifest of passengers to account for all members

Recommendation 1 – Convoy Orders to be issued IAW Ref C that includes appointing a Convoy Commander and a safety briefing regarding the use of seat belts, emergency exits and any safety aids.

Recommendation 2 – Convoy Commanders to appoint staff members to act as the 'senior occupant' with each vehicle IAW Ref C to ensure a command structure is in place.

Recommendation 3 – To assist in accounting for personnel, manifests to be collated for each vehicle with copies held by the Convoy Commander and advised to ADFA HQ.

15. **Communications.** There was no satellite phone on the buses used between ADFA and the LC II training area. Whilst most staff members had mobile phones the transport route went through an area of very limited phone signal and thus communication was almost impossible. If not for the local knowledge of the RAAF WOFF who was at his property, the ability to contact the emergency services would have been severely hampered. Analysis revealed that no mobile phone signal was available for over 20 km in either direction from the accident site. Without the assistance of the WOFF, the convoy would have had to rely on a passing vehicle being able to alert the emergency services or one of the remaining buses would have been required to search for a location where a mobile phone signal was available. Satellite phones were available and used in the LC II training area, and could have been carried on the bus transport.

Recommendation 4 – Satellite phone to be carried on each vehicle for emergency use.

16. **Care of injured Personnel.** During the field phase of LC II the cadets utilised field packs that included canteens and were encouraged (through the Safety Briefs) to ensure that they maintained adequate hydration at all times. However, after the activity, most of the canteens were either emptied or not accessible.

17. The scene of the accident afforded very little shade for the staff and cadets. During the recovery phase of the injured passengers, and approximately 2 ½ hours after the accident a Fire and Rescue vehicle was positioned to provide shade for the remaining casualties whilst awaiting transport.

Recommendation 5 – Bottled water and some form of shade system to be carried with each

vehicle for use in the event of an accident and/or breakdown in remote areas.

18. **First Aid Kits.** Whilst an optional ‘personal first aid kit was recommended at the LC II initial brief and included in the ADMININST not all members had one. Those that were available, combined with the local SES/CFR first aid kit, ensured that the most seriously injured were able to be treated more quickly. This almost certainly limited the severity of some injuries and, potentially, saved lives.

Recommendation 6 – Emergency mass casualty full sized first aid kits should be carried on all bus transportation of military members to and from exercise areas.

19. **Transport Routes.** Whilst the selected transport route was not covered by the DDAAFS investigation, it was noted that the Ref C recommends that any routes utilised should be surveyed prior to use.

Recommendation 7 – Road transport routes should be carefully considered and be surveyed during the planning of proposed road movements, IAW Ref C.

20. The following areas were analysed during the investigation:

- a. **Local conditions** – this review/investigation did not explore the local conditions as this is currently under investigation by the NSW Police.
- b. **Individual/team actions** – this review only utilised email statements and interviews from key individuals that were directly or indirectly involved in the ‘post accident’ actions. The ADFA staff members who attended the most seriously injured had all previously had battlefield first aid type training, that proved to be of enormous benefit at the accident site
- c. **Inadequate/absent defences** – associated risk controls/defences that were not fully effective in preventing this occurrence included Orders, Instructions and Publications (OIP).

Safety Recommendations

21. The safety recommendations have been tabled in annex B.

Conclusion

22. The desktop review of the planning for LCII activities was found to be extremely well conducted. The briefs for the activities were very detailed and covered communication and CASEVAC/MEDIVAC requirements in detail. There was a contingency plan in place if the air transport did not occur that was enacted.

23. Whilst the planning was extremely well covered for the actual exercise activities there was a shortfall in the planning and execution for the road transport deployment and redeployment for the exercise. The Risk Management Plan identified a number of the risks and identified controls to mitigate those risks; however, a number of these controls were not implemented.

24. The lack of Convoy Orders contributed to the scale of the incident. Having all staff,

bar two, on one bus meant half the convoy had little command oversight.

25. The early call made to the emergency services, by the property, coupled with the immediate reaction and response by all the ADFA cadets and staff involved in this incident, limited the severity and consequences to those members that suffered injuries. Their actions bought credit to ADFA and the Defence Force.

Prepared by:

norman.stringfellow

Digitally signed by norman.stringfellow
DN: c=AU, o=GOV, ou=DoD, ou=PKI,
ou=Personnel, cn=norman.stringfellow
Date: 2016.03.03 16:12:29 +11'00'

NJ Stringfellow
WOFF
Safety Investigator
DDAAFS

F4-1-067
(02) 612 87448

3 Mar 16

Released by:

John.Grime1

Digitally signed by
John.Grime1
DN: c=AU, o=GOV, ou=DoD,
ou=PKI, ou=Personnel,
cn=John.Grime1
Date: 2016.03.03 16:18:25
+11'00'

J Grime
WGCDR
DDSI
DDAAFS

F4-1-065
(02) 612 87447

3 Mar 16

Annex:

- A. Immediate Post Accident on Site Activities
- B. Safety Recommendations

Prepared by:

s22

Digitally signed by
brendon.blank@defence.gov.au
DN:
cn=brendon.blank@defence.gov.au
Date: 2016.03.03 16:15:33 +11'00'

BG Blank
WO
Safety Investigator
DDAAFS

F4-1-061
(02) 612 87413

3 Mar 16

Approved by:

paul.long@defence.gov.au

Digitally signed by
paul.long@defence.gov.au
DN:
cn=paul.long@defence.gov.au
Date: 2016.03.03 16:34:40 +11'00'

P Long
GPCAPT
Director
DDAAFS

F4-1-114
(02) 612 87284

3 Mar 16

Immediate Post Accident on Site Activities

Time	Activities
~0956	Immediate evacuation began initially with the on-board officer cadets and midshipmen, then assisted by ADFA staff from bus four.
	Immediate actions at the scene were: evacuate the bus; make the bus safe; immediate first aid administered; 000 call; contact ADFA.
	No formally appointed Convoy Commander had been appointed; therefore a Navy Lieutenant (on bus four) took control of the accident scene and coordinated all activities.
1000	Witness (RAAF Warrant Officer) contacted 000 immediately to notify Emergency Services (ES) of the accident.
	The Warrant Officer identified himself to the Lieutenant and advised that ES have been advised, and estimate of how long before arrival.
	The Warrant Officer also advised the Lieutenant that communications were limited, but coverage was possible from his property – 650 metres away.
1005	The Lieutenant enters the bus to turn engine ignition off. Other bus drivers isolate the battery.
	Immediate first aid was administered to all members requiring assistance. Given by the un-injured after evacuation from the bus.
	Immediate first aid given to the trapped member by an officer cadet and then taken over by ADFA staff members in attendance.
1011	Lieutenant contacts ES to update details of casualties and details of the accident.
~1015	Army Captain setup and maintained ‘Comms’ position on top of property shed until the last members were loaded onto buses for return to ADFA.
1017	All available ‘personal’ first aid kits collected to use on patients as required.
1025	Registered nurse driving through arrives and assists with injured, using her own first aid kit.
1040	Local SES/CFR member driving through arrives with a larger first aid kit.
1050	First fire and ambulance service vehicles arrive and begin to treat trapped member and other seriously injured members.
	Concurrently a list of all injured members is compiled, to assist in triage.
1112	ADFA Executive Duty Officer contacted and advised of the accident. Requested to have Psychologist and Chaplain on standby.
1115	Site under the control of the NSW Ambulance Incident Site Commander.
1116	Police rescue with Fire and Ambulance begin to free trapped member.
1210	One bus of uninjured cadets plus two ADFA staff (49 manifested) departs for ADFA.
	A number of injured cadets are transported to various hospital facilities.
1220	Second bus of uninjured cadets plus two ADFA staff (33 manifested) departs for ADFA.
	Comms member returns to accident site for travel back to ADFA.
1225	Trapped member freed and airlifted to Liverpool Hospital.
1227	One of the Fire and Rescue vehicles moved to provide shade for remaining casualties.
	Replacement bus arrives from ADFA.
1236–	A further number of injured cadets are transported to various hospital facilities.

Time	Activities
1258	
1320	Third bus of uninjured cadets plus two ADFA staff and one paramedic (49 manifested) departs for ADFA via Queanbeyan Hospital.
	One ADFA SNCO driving the ambulance in place of paramedic on the bus.
1330	Last bus (replacement) departs with two injured members and two staff for DHC.

Safety Recommendations

Recommendation	Activities
1	Convoy Orders to be issued IAW the DRTM that includes appointing a Convoy Commander and a safety briefing regarding the use of seat belts, emergency exits and any safety aids.
2	Convoy Commanders to appoint staff members to act as the 'senior occupant' with each vehicle IAW the DRTM in case of any situation that requires a command structure.
3	Nominal Rolls (or manifest) to be collated for each vehicle with the Convoy Commander to hold a copy of all nominal rolls and also advised (by fax or email) ADFA. This would assist in accounting for personnel. This should be administered along with the Convoy Orders.
4	Satellite phone to be carried on each vehicle for emergency use in poor communication areas. Mobile phones are unreliable in many areas.
5	Bottled water and some form of shade system to be carried with each vehicle to be used in the event of an accident and/or breakdown in remote areas.
6	Emergency mass casualty full sized first aid kits should be carried on all bus transportation of military members to and from exercise areas.
7	Road transport routes should be carefully considered and be surveyed during the planning of proposed road movements, IAW the DRTM.

TRANSPORT PLAN

Serial	Pick Up Date	Pick Up Time	Qty x Vehicle Type	Return Date	Seats	Location	Remarks
1.	11 Nov 15	0900 (Self drive)	6 x Hi-Ace 4x4	30 Nov 15	12	ADFA	Hire vehicles remaining at ADFA post LCI
2.		0900 (Self drive)	1 x GS 110 Land Rover	30 Nov 15	2	DTC	Fitted For Stretcher (FFS) - safety vehicle . Depart ADFA with equipment and stores - 12 Nov 15
3.		0900 (Self drive)	1 x ADFA Hino	30 Nov 15	2	ADFA	Depart ADFA with equipment and stores - 12 Nov 15
4.		0900 (Self drive)	1 x Scania (TCV)	30 Nov 15	2	DTC	Luggage/Excess stores truck if required
5.		0900 (Self drive)	1 x Dual Cab Utility (LMSS) + BBQ Trailer	30 Nov 15	4	LMSS	Depart ADFA with equipment and stores - 12 Nov 15
6.		0900 (Self drive)	1 x Dual Cab Utility (PR&T) + Trailer	30 Nov 15	4	PTI	Depart ADFA with equipment and stores - 12 Nov 15
7.		0900 (Self drive)	1 x Land Cruiser (ADFA Boat Shed) + RHIB	30 Nov 15	4	Boatshed	Depart ADFA with equipment and stores - 12 Nov 15
8.		0900 (Self drive)	1 x Land Cruiser (E) + Trailer	30 Nov 15	4	DTC	Depart ADFA with equipment and stores - 12 Nov 15

9.		1100 (Self drive)	1 x Land Cruiser (E) + Trailer	30 Nov 15	4	DTC	Depart ADFA with UATL equipment and stores 12 Nov 15
10.		1100 (Self drive)	1 x Land Cruiser (E)	30 Nov 15	4	DTC	Depart ADFA with equipment and stores - 12 Nov 15
11.	15 Nov 15	TBC	COA 1- Service Air COA 2 - 4 x Coach	As per rotation plan	200	DTC	COA 1 - UG/DS - pick-up ADFA - drop off RAAF Fairburn - pick up Albatross – drop off – JBAF. COA 2 – UG/DS – pick up ADFA – drop off JBAF.
12.	21 Nov 15	TBC	COA 1- Service Air COA 2 - 4 x Coach	As per rotation plan	200	DTC	COA 1 - UG/DS - pick-up JBAF - drop off Albatross - pick up RAAF Fairburn – drop off – ADFA. COA 2 – UG/DS – pick up JBAF – drop off ADFA.
13.	22 Nov 15	TBC	COA 1- Service Air COA 2 - 4 x Coach	As per rotation plan	200	DTC	COA 1 - UG/DS - pick-up ADFA - drop off RAAF Fairburn - pick up Albatross – drop off – JBAF. COA 2 – UG/DS – pick up ADFA – drop off JBAF.

14.	28 Nov 15	TBC	COA 1- Service Air COA 2 - 4 x Coach	As per rotation plan	200	DTC	COA 1 - UG/DS - pick-up JBAF - drop off Albatross - pick up RAAF Fairburn – drop off – ADFA. COA 2 – UG/DS – pick up JBAF – drop off ADFA.
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