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OPERATIONAL REVIEW

Vegetation Incident F2844357 Flagstaff Walk Track North Taieri, Dunedin

Mā te mōhio ka anga whakamua Through knowledge we improve



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1. Executive Summary

At 12:48 hours on September 16th 2019, a call from Police alerted Fire and Emergency Southern Communication Centre (Comcen) to bushes on fire on the Pineapple Flagstaff Walking Track North Taieri, on the outskirts of Dunedin City.

Coordinated work by all teams that responded, resulted in a positive outcome for the property owners and livestock adjacent to this incident. It was clear to the review team that the skills and mutual respect between the rural and urban teams contributed to the successful outcome.

This incident lasted over 2 days, with up to 5 helicopters using monsoon buckets, working at the height of the fire, then extinguished by ground crews and heavy machinery.

Police and Fire and Emergency New Zealand personnel evacuated the track, nearby rural and residential homes, as well as assisting with the evacuation of livestock from the area involved.

There was considerable confusion over the establishing and role of the RCC, which at worst resulted in incorrect public information being disseminated.

2. Key Findings

- This incident provided a great example of urban and rural arms of Fire and Emergency New Zealand working together in a co-operative environment.
- There was considerable confusion over the establishing and role of the RCC, which at worst resulted in incorrect public information being disseminated.
- 3. Operational crews were at times working in inclement weather with sub-zero wind chill. There is a very real potential for fire fighters to experience hypothermia from exposure to such weather conditions. The current rural firefighting PPE doesn't provide warmth in these situations. Furthermore, the only escape from the weather for those at the assembly point and ICP, was at the Command Vehicle. This led to an overcrowding of the ICU and frustration for the ICU crew.

3. Other Findings

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- 1. The Otago Rural Fire plan was actively used at this incident this plan was positively commented on in the 2019 Area Audit.
- The geography of Dunedin creates numerous virtual communications "black-out" areas.
 This incident was in one such area, and the ICU would have been more appropriately placed at an alternative (perhaps higher) vantage point. Also, the use of satellite phones was not considered.
- 3. Regular briefings were given to the residents assembled at the evacuation centre, providing an understanding of the situation, to the evacuees.

- 4. Helicopter downdraft created a "dust storm" when refilling beside the ICU; a request was consequently made to Air Ops to have the helicopters land elsewhere.
- 5. Thermal imaging cameras(TIC) were not available for rural crews at the time of the fire. However, a cache of TIC's is held at the Clyde Rural Fire Depot and are available on request from a rural Senior Officer, this was unknown to the fire crews.

4. Operational Efficiency and Readiness

The purpose of Operational Efficiency and Readiness (OER) is to provide operational assurance advice to the Chief Executive and Executive Leadership Team to ensure they achieve their responsibilities for the operational efficiency and operational readiness of Fire and Emergency New Zealand (Fire and Emergency).

OER is independent, objective and provides quality operational assurance advice to support continuous improvement regarding the operational efficiency and readiness of Fire and Emergency New Zealand. OER is required to report quarterly to the Fire and Emergency Audit and Risk Committee and is a function of the Office of the Chief Executive.

5. Purpose of Review

An Operational Review examines how Fire and Emergency responded to large, significant and/or unusual incidents to provide continuous improvement. While it considers the application of policies, procedures and operational instructions (as they applied to the incident), its primary focus is to assist Officers and firefighters learning by sharing knowledge and experiences gained through real incidents.

A review focuses on the facts and does not provide conjecture or alternative opinions. The review identifies key findings to inform Senior Managers to develop corrective actions. It also identifies general findings related to equipment, tactics, and/or actions that worked well to support organisational learning.

Once completed, all reports are published in the Operational Efficiency webpage for all to read and share.

6. Methodology

The review team use the Incident Cause Analysis Method (ICAM) as a guide to conduct operational reviews. Some of the team members have attained the "Implementing a monitoring, evaluation and reporting program" qualification (AHCBUS607) through Technical and Further Education (TAFE), New South Wales, Australia. This process may have been adopted as a means of capturing information and data for this review.

The content contained within this report is a true and accurate reflection of the information provided to the team through debriefs, interviews, and data collected by means of Fire and Emergency reporting systems.

7. Review Requested by

Operational Efficiency & Readiness, NHQ

8. Review Team

ANC Trevor Brown, National Manager OER	
SSO Collin Littlewood, Hawkes Bay	

9. Links

ICad Report	F2844357
Media Articles	Stuff Otago Daily Times NZ Herald

Note, a Fire and Emergency New Zealand login will be required to access some links within this document.

10. The Event

At 12:48 hours on September 16th 2019, the Comcen received a 111 call from Police, reporting bushes on fire on the Pineapple Flagstaff Walking Track North Taieri, Dunedin City.

A first alarm VEG response of Roslyn 241 (ROSL241) and Wakari 9611 (WAKA9611- tanker) was dispatched, and the Rural Fire Officer Otago1 (RFOOTAGO1) was notified and responded, with an adhoc request to also dispatch WAKA9671. Comcen was unsure of the exact location, and ROSL241 responded to Whare Flat Road, arriving at 13:02, with a K77 (nothing showing). A safe forward point (SFP) was given as The Bull Ring on Whare Flat Road.

The crew of ROSL241 were instructed to walk the first part of the track from Whare Flat Road, taking hand tools and instruction to advise any walkers to immediately evacuate and communicate any intel on the extent of the fire. The crew reported a fire the size of half a football field involving bushes, tussock and cured grass. The OIC recommended to Comcen that a helicopter would be needed for visual identification of any track users. The crew identified 2 self-sustaining water ponds, sufficient to supply, and be accessed by, multiple helicopters; the Dunedin City Council had commissioned these water ponds in 2000.

The Command Unit which isn't crewed at HQ station, was requested early to provide an IMT facility, as well as a place for the incoming IMT to operate from which was out of the deteriorating weather conditions.

The DPRFO responded to the SFP via Flagstaff Rd, reporting a large amount of black smoke (hence his upgrade to a K66) and confirming the fire to be between the Flagstaff look out and the Swampy Summit turnoff. Two helicopters had been requested prior to leaving the station (unknown to the I.C on the fireground); this request was not made through Comcen so was not captured in the Incident Report.

Safety was given prime consideration with standard fire ground safety systems implemented (LACES), and because of the wind intensity and extent of the fire front, the initial strategy was to use a helicopter attack to contain the fire (as the ground crews could not get close enough) and also, to ensure that the tracks were evacuated.

As resources arrived at the incident a formal structure was created, with the PRFO initially taking the Air Ops role subsequent to undertaking a reconnaissance flight to check the extent and direction of the fire. The PRFO took over control as IC following a briefing from the first arriving urban officer, who became Operations Manager. A Safety Officer was appointed early into the incident.

A request was made at 13.22 for the Duty Commander to respond. EASTOTAGO2 arrived at 14.03.

Police expressed concerns about their communications tower being in the proximity of the fire. As the wind was at that stage NNW, the tower was not in harm's way, but had the tower been compromised, the strategy was for any approaching fire to be managed by helicopter.

A SitRep at 13:27 described a vegetation fire half a football field in size, on Pineapple Track. Access by land is difficult so 5 helicopters being responded by the RFO.

Police were requested to manage the evacuation of the residents of Rudd Road (downwind of the fire) and to establish and maintain street cordons, because of the numbers of on-lookers assembling.

Comment was made at the debrief, that situational awareness was lacking. Communication problems were apparent (both LMR, IGC and cell phone coverage) which was added to by the ICU being operated in a virtual "black-out" area. The ICU would have been more appropriately placed at a higher vantage point. There are numerous known "black-out" areas around the Dunedin hills. Incident ground radios were inadequate because of the distances involved, despite the use of repeaters.

Willowbank 257 (WILL257) arrived at 14:50, being requested to park at the bottom of Rudd Road and to pass on any intel / updates to the ICU, as well as being a focus point for resident liaison.

St Kilda (STKl221) was requested to go to the top of Rudd Road to assist Police with evacuations, arriving at 16:03.

The second arriving Commander (REGION5B) at 16:39, requested Civil Defence to establish an assembly area for evacuated residents, suggesting the Flagstaff Hall. The Commander held a briefing at the hall for the evacuees. A further residents' briefing was programmed for 1900, with the next planned for 0800 the following morning. All commitments given to the public with regards to information sharing / briefings, were strictly adhered to.

A SitRep at 14:46 from the DPRFO, indicated a 12-hectare tussock and scrub fire with 4 helicopters operating on fire attack. The helicopter base was initially beside the ICU. This was totally inappropriate

because of the dust and noise creating mayhem for the ICU operators. The air ops were subsequently relocated to Tairei airfield, 14 km away.

A SitRep at 16:20 stated that unfavourable weather conditions were making the aerial attack marginal. Heavy machinery and a ground crew attack were in operation. Changing wind direction has necessitated the further evacuation of residents of Strode Road.

A Media Briefing was scheduled and held at 1700, from the ICU, with Police and Fire and Emergency Urban and Rural in attendance.

There was confusion as to the set up and operation of the RCC, which was not requested from the fireground. The Area Commander had been advised that RCC was in monitoring mode only but was not made aware that it had been activated until early evening. What the IC had requested was for the RCC offices and technology (in Area HQ) be utilised by the growing IMT key roles, specifically Planning and Intelligence, a fire behaviour expert, and Public Information roles, as there was limited space at the incident ground in the command unit (where the IMT and others sought shelter from the inclement weather). Unfortunately, the IC's intent was misinterpreted as a request to set up the RCC, from where incorrect public information was at times disseminated. There is a need to make sure that all the public information is coming from the incident ground, with the IC verifying and signing off any media release before it is released.

Air Ops ceased for the night at 18:30, as per a SitRep, which also included that the fire was contained, subject to the weather; no sign of fire on the 10 metre perimeter from the fire flanks with hot spots still showing in the burned out area. Ground crews would be working through the night. Security was put in place to monitor all resources parked up overnight. Also, The RCC was stood down at 18:51.

Further evacuee briefings were provided at 18:33 with an undertaking to provide the next briefing at 0800 the following morning, for those unable to return to their homes.

The ICU was shut down at 20:30, and left on site unmanned overnight.

Operations were recommenced at 0800 with a public briefing. A Sitrep at 09:24 indicated that ground crews were mopping up on 2 flanks, with a helicopter undertaking ground mapping. No fire activity was being detected, although a helicopter attack was made at 13:31 when hot spots were fanned by the increasing wind. This was assisted by heavy machinery making fire breaks.

At 15:46 on day 2, ground crews were withdrawn due to adverse weather conditions bringing snow and a wind-chill of -6 degrees C.

A Stop message was received at 19:18 on 17th September.

11. Environment Description

Location, topography, community, and terrain

Flagstaff Lookout is located at the north western rural perimeter of the Dunedin suburb of Roslyn.

The Flagstaff track is a popular walking track for Dunedin residents

The terrain is wind swept rising to a height of 220 metres to the West and consisting of low-lying bush and grass.

12. Review

This section outlines the findings from the operational review investigation based on the investigation's terms of reference and expectations. Generally, the findings are grouped chronologically under the "4Rs" headings Reduction, Readiness, Response and Recovery.

The Operational Review team will measure compliance against Fire and Emergency Operational Instructions and Policy.

12.1 Reduction

Inter-agency and Stakeholder Relationships

Our expectations

That effective stakeholder relationships with other interested parties had been established prior to this incident occurring and those relationships contributed to the successful outcome of this event.

Our findings

It was pleasing for the review team to find that the principles of integration encountered at the June 2019 East Otago Area Audit, were also apparent at this incident.

"It was clear to the audit team that the Area Manager and Principal Rural Fire Officer work closely together and are following the principles of integration." Also: "The relationships between urban and rural teams, as well as between paid and volunteer personnel, is one of the best observed by OER, and is a credit to the managers and their teams."

The other agencies attending the OER debrief demonstrated a cordial and engaged working relationship with Fire and Emergency managers including Civil Defence and the City Council.

Fire Cause and Determination

Our expectations

That a qualified investigator was assigned to investigate the cause of the fire. Furthermore, a timely and accurate fire investigation report was published within the expected timeframes.

Our findings

This incident was attended by a FENZ Fire investigator who established the fire ignition to be suspicious and to have been there deliberately lit.

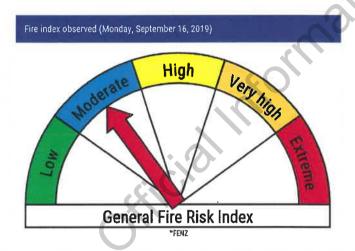
Fire Season Promotion

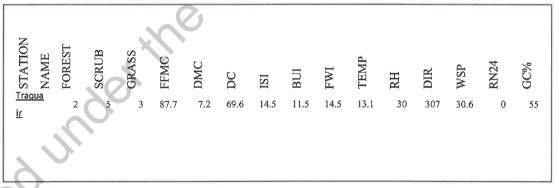
Our expectations

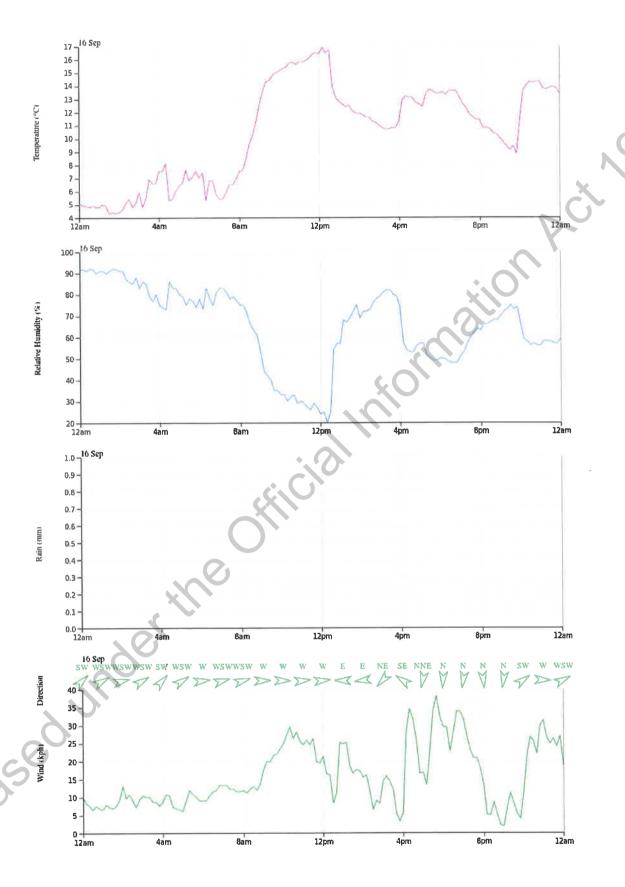
That public signs were maintained and kept current during the fire season informing the community and members of the public passing through aware of the fire danger. Also, the Fire and Emergency website "Check It's Alright" provided current information about the fire season conditions and permitting information. (Refer to www.checkitsalright.nz).

Our findings

The following information was extracted from the FENZ "checkitsalright" website for the 16th September 2019.







Fire weather index and fire behaviour

The following is the account of the weather and fire behaviours observed at this incident:

STATION NAME	FOREST	SCREB	GRASS	FFMC	DMC	DC	Si		PRI	TEMP	RH	DIR	WSP	R#124	e
Otemetata	M:	£	M	86	22.5	262.4	3.8	37.1	8.9	16.5	34	307	9	0	65
Hawea Flat	M	Ē	н	86	11.4	30.6	9,1	11.8	10.1	14,9	31	295	26.3	0	64
Camaru North	4	н	M	72.1	5	73.9	1	8.6	0.5	15.1	59	54	7.6	0	6
Naseby Forest	4.	E	н	83.6	4.6	14.2	7.7	5.1	6	13.3	35	303	29.5	0	68
Windsor	w	E	M	85.4	15.8	301.9	3.8	27.9	7.5	17.6	26	297	7.9	0	57
Queenstown Aero	14.	E	M:	83.1	9,1	15.7	3.7	9	3.7	12.6	34	240	16.2	0	50
Gronwell	M-	E	н	84.9	16.6	281	6.3	28.9	11.8	15.1	38	40	22	0	78
Densey Pass	1	E	34	81.8	6.6	90	- 2.6	11.2	3.1	14.4	27	284	14	0	7!
Lauder	1	E	M	79.8	9.6	182.9	3	16.9	4.4	14.7	27	319	19,6	0	65
Renfuty	4	V	M	79.1	9.8	292.3	1.9	18.1	2.6	14.6	29	287	11.5	0	70
Clyde	<u>u</u>	E	н	86.9	18.4	300.7	5.2	31.9	10.7	16.3	27	342	12.6	0	K
Herbert	1	- y	M	78.9	4.2	4.2	1.5	3.8	0.6	13.3	31	248	7.6	0	55
Butchers Dare	W	E	Н	87.1	13.9	39.8	9.3	14.8	11.4	14.3	30	337	23.4	0	70
Rock And Piller	4.	E	M	82.6	8.9	198.3	2.9	16.1	4.1	14.9	33	185	12.6	0	60
Macrae's	W	E	н	85.4	7,8	135.8	9.8	13.6	11.6	12.4	34	294	29.5	0	6.
Bucklande		E	н	89 1	13.2	118.1	11.1	20.7	15,4	16.4	24	264	21.2	0	60
Millers Flat	M.	F	н	86.1	10.5	144	6.2	17.8	8,9	16.1	36	345	18.4	۵	70
Glendhu	L.	Ē	M	83.7	3	4.7	5.9	2.8	3.5	12.6	29	303	23.8	0	K
Traquair	-	E	н	87.7	7.2	69.6	14.5	11.5	14.5	13.1	30	307	30.6	D	55
Dunedia	M	Ĕ	М	87.6	12.7	246.5	4.5	22.5	7.7	16.5	31	223	7.9	0	65
Tapenui		V	М	80.4	5.4	22.1	1.7	6.7	8.0	14.1	30	339	7.2	0	55
Waipahi	1	É	M	82.4	5.7	18.2	3	6.4	2.3	14.6	45	234	14	G	55
Toko Mouth	1	Ė	M	83.1	3.2	5.6	5.2	3	3.2	14.6	38	270	23	đ	55
Slopedown	4	E	M	83.7	4.1	6.3	4.7	3.9	3.1	13.4	43	319	19.4	0.4	35

Fire behaviour observed was a surface fire moving slowly through grass and low scrub. Factors affecting fire spread was likely to be the slope immediately adjacent to the track near the point of ignition, driven by an increasing wind.

12.2 Readiness

Operational Skills Maintenance (OSM) compliance

Our expectations

That all personnel complied with the requirements of the Operational Skills Maintenance procedures and/or had the appropriate qualifications for the role they performed. (Refer to OS5 TRP Operational Skills Maintenance).

Our findings

The OSM report showed all first responders to have current OSM status

Pre-incident Planning and Intelligence

Our expectations

That the Operational Planning process has been followed to identify sites where significant fire or other risks may indicate the need for a Site Report and/or Tactical Plan. Furthermore, the Fire plan is current (Refer to RD2 PRC Operational Planning).

Our findings

The Otago Rural Fire plan is available in the PRFO and DPRFO's response vehicles. A rural fire response plan is available on rural and urban appliances. Aerial and other resources were requested to attend on an adhoc basis.

The plan was positively commented on in the 2019 Area Audit.

Water Supplies

Our expectations

That crews had knowledge of, or access to electronic data and/or water maps documenting the location of water supplies either reticulated or static for the use of firefighting or decontamination as prescribed in the Schedule of Operational Readiness Standards. (Refer to RD3 SC Schedule Operational Readiness Standards).

Our findings

Crews attending used the fire plan to identify appropriate static water supplies that would be useful for the aerial attack.

12.3 Response

Initial Mobilisation and Assistance Requests

Our expectations

That the Fire and Emergency Communication Centre and responding appliances meet the performance expectations as stated in the Service Delivery Guidelines. Furthermore, all message requests were processed in a timely manner and transmitted in accordance with Land Mobile

Radio Communications procedures. (Refer to <u>N7a Service Delivery Guidelines</u> and <u>M3-2 SOP</u> <u>Land Mobile Radio Communications</u>).

Our findings

Comcen processed the call and responded appliances in a timely manner as and when requested.

All notifications were actioned appropriately.

Response Driving and appliance positioning

Our expectations

That Officers and drivers adhere to the principles of Driving policy when responding to the incident. Furthermore, when positioning the appliance firefighter safety is taken into consideration by ensuring they are parked away from exposure to fire, building collapse, or other hazards.

Further evaluation of the vehicles locations was given as the incident progressed. (Refer to <u>FL1</u> <u>POP Driving Policy</u>)

Our findings

There were no recorded incidents relating to driving to and from the incident. The response times for the initial appliances met the timely performance expectations, from the station, and the arrival at the incident. The exception was that of the Dunedin ICU, which being unmanned on HQ station, could not be responded until standby crews were available.

Initial Size-up

Our expectations

That the first arriving Officer undertake an initial size-up and risk assessment of the incident site in line with the principles outlined in the Command and Control Technical Manual. It is expected the size-up would result in comprehensive situational awareness including hazard identification and the potential for escalation. (Refer to M1 TM Command and Control Technical Manual).

Our findings

The first arriving officer carried out an initial size-up as best he could, with the size and layout of the fire ground at that stage being the size of half a football field with vegetation burning through tussock and grass. The Roslyn crew were tasked with walking up the Pineapple track which is a 20- minute walk to assess the fire, and importantly, to evacuate walkers along the track.

Prior to any conversation between the first arriving OIC and the DPRFO, the OIC was advised that 3 helicopters were responding

A request was made at 13:22 through Comcen for the Duty Senior Officer to respond, when it was realised that structures were possibly in the path of the fire. The Command Unit was requested at 13:19.

When the PRFO arrived he conducted his own comprehensive size up and received a briefing from the IC before taking command.

Respiratory Protection (BA & APR)

Our expectations

That personnel complied with all aspects of BA and APR, namely but not limited to the Respiratory Protection Equipment policy, Respiratory Protection Equipment reference guide and the Air Purifying Respirator guide. (Refer to E3-2 Respiratory Protection).

Our findings

Through his initial risk assessment, the I.C deemed BA equipment to not be necessary. Dust masks were utilised in the dust "storm" created when helicopters refilled beside the ICU; a request was consequently made to Air Ops to have the helicopters land elsewhere.

Operational Competence

Our expectations

That a high level of operational competence was demonstrated across all areas of operations. Furthermore, all Officers and firefighters performed to their level of training, experience, qualifications and role they hold within the organisation.

Our findings

A high level of operational competence was demonstrated across the firefighting operations and Incident Control functions.

This incident employed a mix of ground firefighting tactics and helicopters using monsoon buckets.

Incident Management Team Structure (IMT)

Our expectations

That an incident management team is established for an incident of this magnitude as prescribed in the Command and Control policy and Technical Manual. It is also expected the structure implemented would provide clear lines of communication and would be a major contributor to the successful conclusion of the event. (Refer to M1 POP Command and Control Policy and M1.TM Command and Control Technical Manual).

Our findings

The incident structure comprised of:

- Incident Control
- Operations
- Safety Officer
- o Air Attack Supervisor and Support
- o Planning and Intel

An Incident Management Team (IMT) was established in the early stages of this incident once additional resources arrived at the scene of the fire. This comprised an IC; operations, safety, and resources. But it was quickly recognised by managers that this incident, due to its location, would be difficult to manage and most firefighting would need to be done by air attack.

The Command Unit was requested to provide an IMT facility. But the IC realised that he would need other key roles in his IMT, specifically Planning and Intelligence, a fire behaviour expert, and Public Information roles. As there would be limited space at the incident in the command unit he requested that region provide these extra facilities through RCC facilities. Unfortunately, this was interpreted at a request to set up the RCC which was not the IC's intent.

Incident Ground Facilities and Cordons

Our expectations

That appropriate incident ground facilities and/or cordons were in place to suit the size and complexity of the event as prescribed in the Command and Control Technical Manual. (Refer to M1 TM Command and Control Technical Manual).

Our findings

The Police were requested to assist with the evacuation and cordons of the residential and rural areas involved.

Regular briefings were given to the residents assembled at the evacuation centre.

FF's were at times working in inclement weather with sub-zero wind chill, and the only escape from the weather for those at the assembly point and ICP, was at the Command Vehicle. The latter led to an overcrowding of the ICU and frustration for the ICU crew. A secondary means of sanctuary from weather conditions is identified.

Incident Ground Communications

Our expectations

That an effective communications plan was implemented as prescribed in the Command and Control Technical Manual. The plan reflects the reporting lines of the IMT and contributed to the overall safety and effective management of the incident. (Refer to M1 TM Command and Control Technical Manual).

Our findings

Communication problems were apparent (LMR, IGC and cell phone coverage) added to by the ICU being operated in a virtual "black-out" area. The ICU would have been more appropriately placed at a higher vantage point. There are numerous known "black-out" areas around the Dunedin hills. Incident ground radios were inadequate because of the distances involved, despite the use of repeaters. No consideration was given to the use of satellite phones, which are available in the Region.

Senior Officer Notification and Response

Our expectations

That notifications of an escalating incident to the on call Senior Officer and subsequent senior Officers reflected in the Regions Notifications and Response Policy. Furthermore, upon arrival the Senior Officer gained situational awareness prior to taking control mentoring the IC. The IAP is assessed against current strategy and tactics, priorities are reviewed and managed appropriately.

Our findings

Appropriate notifications were made to the on-call Senior officers and their response was timely.

There was considerable confusion over the role of the RCC. The RCC centre manager was under the impression that they were in a supporting role only, as a request was made by the PRFO to monitor the event. However, other region personnel deemed the RCC to be activated. The AC, in the role of Resource Coordinator was notified that the RCC was in a monitoring mode but was not made aware until 4pm they had activated. The AC stated that the IMT on the fireground was running the event and RCC was in support not the other way around.

Contractor Management

Our expectations

That all contractors used at the incident were identified in the Fire Plan, given a thorough safety briefing and arrived with or were provided with the appropriate PPE. Furthermore, they were trained for the tasks expected of them.

Our findings

The main contractors used at this incident were helicopter operators using monsoon buckets who were compliant to Fire and Emergency standards to support fire operations.

A DPRFO qualified to manage the five helicopters deployed, was appointed as the Air Attack Supervisor.

Incident Ground Safety

Our expectations

That all Fire and Emergency personnel comply with the Health and Safety at Work Act 2015. Furthermore, a Safety Officer be appointed in compliance with Operational Safety policy. All hazards and control measures will be recorded on the Incident Ground Hazard Assessment form and transferred to a Hazard Assessment Board to manage if available. (Refer to IS1 Operational Safety).

Our findings

A Safety Officer was appointed in compliance with the requirements contained within IS1.

The Safety Officer used the safety officer pack, identified hazards and populated the hazard board. The hazards were risk assessed and control measures were signed off as being adequate.

Personnel Welfare and Safety

Our expectations

That processes were in place to monitor operational crews for fatigue. This would be managed by introducing a crew rotation system to share workload.

Our findings

The incident was well managed with good integration of rural and urban skilled fire fighters on the fire ground, who worked well together.

Crews were at times working in inclement weather with sub-zero wind chill. There is a very real potential for fire fighters to experience hypothermia from exposure to such weather conditions, lin the present recommended / available PPE.

Personal Protective Equipment (PPE)

Our expectations

That all personnel would be dressed in the appropriate level of PPE for the tasks being performed, as prescribed in the Uniform and PPE policy. Furthermore, the PPE performed to the level expected and if not, was impounded and reported accordingly. (Refer to N2 POP Uniform and PPE Policy).

Our findings

Rural firefighting PPE was reported as inadequate for working in inclement weather with sub-zero wind chill. There is a very real potential for fire fighters to experience hypothermia from exposure to such weather conditions, in the present PPE – predominantly wildfire/rescue PPE (level 1) overalls.

TIC's were not available for rural crews at the time of the fire. However, a cache of TIC's is held at the Clyde Rural Fire Depot and are available on request from the DPRFO.

12.4 Recovery

Decontamination Procedures

Our expectations

That any decontamination to Fire and Emergency personnel, other agency personnel and members of the public be carried out as detailed in the Decontamination policy and procedures. (Refer to G7 POP Decontamination, G7 SOP Decontamination and G7-1 SOP Post-Fire Decontamination).

Our findings

Decontamination was not required for this incident.

Injuries to Fire and Emergency Personnel

Our expectations

That all work related injuries, near miss, hazardous substance exposure or psychological harm events to Fire and Emergency Personnel were entered into the Safe@Work site followed by the appropriate investigations or actions. (Refer to <u>Safe@Work</u>).

Our findings

No injuries were reported for this incident.

Incident Debrief

Our expectations

That a debriefing of the incident was planned and held in a timely manner. Furthermore, the debrief was structured enabling all those in key roles at the incident to provide input.

Our findings

Two debriefs were held for this incident and attended by the operational Review Team:

- 1. Command Debrief held Dunedin Area HQ on 2nd October 2019
- 2. Debrief for the initial rural and urban crews attending, on 3rd October 2019

13. Summary

This fire that occurred on a popular public Dunedin walking track in September 2019 posed several challenges for the initial arriving crews and the IC. The fire was primarily in tussock land, and adjacent to the Flagstaff walking track. There were members of the public in the area. Furthermore, because of the changing wind patterns, the fire spread was towards rural residential areas necessitating the evacuation of the track and residences.

Sound risk assessment prioritised firefighter safety, deferring principally to an aerial attack with multiple helicopters.

The cooperation between Rural and Urban, as well as with the agencies and personnel involved contributed to a good outcome that mitigated any property loss and kept those evacuated in the information loop.

Two key issues were identified during the review, with the review team noting that there was considerable confusion over the role of the RCC, and that there is a very real chance of rural fire fighters succumbing to hypothermia in the present rural fire fighter PPE.

This incident demonstrated the qualities of an integrated rural and urban organisation.

There were also several other findings that the management team should consider for future incidents, including establishing an alternative means of communicating when operating in areas with a geographic communications black out, and establishing a means of sanctuary from inclement weather conditions other than the ICU.

14. Review Authorisation

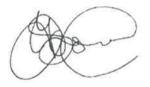
This report has been authorised by Operational Efficiency and Readiness:

Everything in this statement is true to the best of my knowledge and belief, and I made the statement knowing that it might be admitted as evidence for the purposes of the standard committal icialinionation or at a committal hearing and that I could be prosecuted for perjury if the statement is known by me to be false and is intended by me to mislead.

Name: Trevor Brown

Rank: Assistant National Commander

Role: National Operational Efficiency Manager



Approved for Publishing

Darryl

Digitally signed by Darryl Papesch

Papesch Date: 2019.12.06 10:59:46 +13'00'

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