EMERGENCY MANAGEMENT WESTERN AUSTRALIA

TRAFFIC MANAGEMENT DURING EMERGENCIES GUIDE

Version: 2010

Government of Western Australia
Fire & Emergency Services Authority

FESA
Fire & Emergency Services Authority of Western Australia

TRAFFIC MANAGEMENT DURING EMERGENCIES GUIDE

A Guide to assist Traffic Management Planning during Emergencies

CONTENTS

GLOSSARY

Terminology used in this policy shall have the meaning as prescribed in section 3 of the Emergency Management Act 2005 (the Act) and the Western Australian Emergency Management Glossary. Key definitions to this guide are:

Controlling Agency – an agency nominated to control the response activites to a specified type of emergency.

Closed Road - a closed road blocked by an approved barrier and regulatory sign. Unauthorised entry is an offence punishable by infringement notice (penalty $200).

Detour – the designation of identified roads as the alternate to the primary route. Detours can be “all vehicles”, “light vehicles only” or “heavy vehicles”.

Full Road Closure - where a road is closed to access by all vehicle and pedestrian traffic with the exception of emergency responders undertaking response activities in support of the incident objectives approved by the Incident Controller.

Incident Controller (IC) - The person appointed by the Controlling Agency for the overall management of an incident within a designated incident area.

Incident Management Team (IMT) – A group of incident management personnel comprising the incident controller, and the personnel he or she appoints to be responsible for the functions of operations, planning and logistics. The team headed by the incident controller which is responsible for the overall control of the incident.

Incident Area – the area defined by the Incident Controller for which they have responsibility for the overall management and control of an incident.

Lane Control – a traffic management tactic whereby one lane is blocked and the other is used to move traffic in groups.

Operational Area (OA) –the area defined by the Operational Area Manager for which they have overall responsibility for the strategic management of an emergency. This area may include one or more Incident Areas.

Operational Area Manager (OAM) – the person designated by the relevant Controlling Agency, responsible for the overall management of an Operation within a defined Operational Area and the provision of strategic direction and operational coordination to agencies and Incident Controller(s) in accordance with the needs of the situation.

Partial Road Closure – a road closed to the general public, though which restricted passage is controlled. Partial Road Closures permit residents and other persons having a pecuniary interest to gain access to the incident area, or vehicles to transit, whilst denying access to the general public. Management of the Partial Road Closure is by Lane Control or a Pass System implemented by the Incident Controller e.g. wristbands.

Risk Assessment – the process used to determine risk management priorities by evaluating and comparing the level of risk against predetermined standards, target risk levels or other criteria.

Road Network – a generic name given to a system of public access roads.

Road Sign – a sign approved for use on all public roads specified by AS Standard 1742 Part 3 and approved under the Main roads Act 1930.

Side Track – a temporary short detour around an incident constructed as part of the incident response. Sidetracks generally do not have a sealed pavement.

Traffic Broadcast – a broadcast, delivered using a variety of mediums, to advise Road Users of issues or information affecting the road network.

Traffic Management – the functions of planning and controlling the movement of vehicles on a road network area to meet the objectives established by the Incident Controller.

Traffic Management Plan (TMP) – the documented arrangements to achieve the Incident Controller's traffic objectives, including details of closed roads, vehicle control points, evacuation and detour routes, electronic and static signage, traffic broadcasts, intelligent traffic systems and maps.

Traffic Management Plan Map – a geographical representation of the traffic management arrangements.

Variable Message Sign – an electronic panel (either trailer mounted or a fixed structure) on which brief traffic messages can be illuminated. The messages can be changed remotely.

Vehicle Control Point (VCP) – a full or partial road closure through which all vehicle access is controlled. All VCPs are permanently staffed. Vehicles or persons (or classes of vehicles or persons) explicitly authorised by the Incident Controller may proceed after validation by the Traffic Controller. Persons requesting access permission who are not specifically authorised by the IC are held at the VCP pending permission / exclusion to enter the incident area.

BACKGROUND

This Guide replaces the All Hazards Road Closure Operational Procedure (OP 20) following the review of this document in July 2010. State Emergency Management Policy (SEMP) 4.8 – Traffic Management during Emergencies, forms the authority for this Guide. This Guide provides a more detailed insight and is intended for use by the emergency services, combat and support agencies, local government and private contractors who may be tasked to provide traffic management services during an emergency.

Acknowledgment

Emergency Management Western Australia acknowledges the extensive work undertaken by Main Roads Western Australia and other agency representatives who provided expert advice and assistance in the development of this Guide.

References

The following documents are referenced in this Guide:

- Road Traffic Act 1974
- Road Traffic Code 2000
- Main Roads Act 1930
- Main Roads Code of Practice for Emergency Incidents.

These Statutes and Code provide for the construction, maintenance and operation of all public roads in WA. However, during emergency incidents a number of other Statutes make provision to “close roads” or restrict access in the interests of safety during emergencies. Principal Acts include:

- Emergency Management Act 2005
- FESA Act 1998
- Fire Brigades Act 1942
- Bush Fires Act 1954
- Health Act 1911
- Exotic Diseases of Animals Act 1930
- Dangerous Goods Safety Act 2004

The provisions of these Statutes should be utilised by Controlling Agencies when developing traffic management strategies within an incident area

AIM

This Guide is provided for use by emergency management agencies, Main Roads staff, Local Government staff and traffic management contractors. This Guide is provided to agencies having a traffic management role and should be used when developing agency specific internal procedures.

THE ROAD NETWORK

The road network is managed by a number of agencies, the major principals being:

- Main Roads Western Australia (MRWA)
- Local Government Authorities (LG)
- The Department of Environment and Conservation (DEC) for State Reserves and National Parks.
- Private roads owned and maintained by mining enterprises.

The National and State Highways and Main Roads networks are shown at Annex A, maps 1 -3.

OPERATIONAL MANAGEMENT

Operational management of emergency incidents is detailed in SEMP Policy 4.1.The responsibility for the operational management of hazards has been assigned to various agencies. During any emergency, the responsible agency will appoint an Incident Controller (IC). The IC has full operational control and powers under the Acts listed in the reference, including the power to close roads. All response actions, including traffic management, MUST be approved by the INCIDENT CONTROLLER.

Incident Management Team (IMT)

The concepts and principles of the Australasian Inter-service Incident Management System (AIIMS) have been adopted in Western Australia. The AIIMS structure provides interoperability for members of different agencies to form part of the Incident Management Team. Traffic management should be incorporated into this structure as a component of the planning function (Annex B). This ensures that the Traffic Management Plan (TMP) is approved by the IC and reviewed to meet the changing circumstances of the incident.

The Western Australian Police (WAPOL) either in the role of IC or as tasked by the IC, perform traffic management, at least in the initial stages. Where national or State highways are affected, traffic management plans should be developed in consultation with MRWA

Operational Area (OA)

Where the incident is more widespread, an Operational Area Manager may be appointed. One or more IMTs may be incorporated into this area structure. Traffic management will continue to be applied within Incident Areas as required by the Incident Controller and wider TMPs developed to strategically manage traffic across the Operational Area.

TRAFFIC MANAGEMENT CONSIDERATIONS

Traffic Management at emergency incidents is directed towards the achievement of the following objectives:

1. To ensure the SAFETY of Road Users and Responders by:
    a. Establishing and maintaining VEHICLE CONTROL POINTS
    b. Restricting access to the area by ROAD CLOSURES
    c. Establishing CONTROLLED TRANSIT OF THE INCIDENT SITE.
2. To provide unrestricted road egress for casualty or community evacuations.
3. To provide unrestricted road access for emergency responders.
4. To establish detours to by-pass the incident area.
5. To promote driver behaviour to avoid the incident area.

Objectives 1, 2 and 3 should be initiated immediately for safety and response requirements, based on the IC's risk assessment. Objectives 4 and 5 should be initiated as soon as practicable to avoid traffic congestion and the consequent public concerns. The following sub paragraphs address some considerations.

Risk Assessment

The IC should conduct an immediate risk assessment of the situation confronting the response. This should include assessment of the risk to and from road users. The type of incident, severity and impact area should govern the TMP put in place. The risk assessment should cover the entire incident area, including a "wider view" of road access affected. Incident risk assessment considerations for roads are at Annex C.

Evacuation Routes

Where the incident affects residential areas, the TMP should include designated evacuation routes. These can either lead to nominated refuge site or welfare centres. Where general evacuation is ordered or recommended, evacuation routes away from the incident should be designated to a point where the evacuees can then disperse under their own arrangements. These evacuation routes should be one way OUT unless used by emergency responders.

Local Roads

Where local roads are to be impacted, either through closure, route modification or traffic detour, the responsible LG must be consulted and be part of the development of the Traffic Management Plan. A detour, particularly from a State to a Local road, may require traffic to transit community locations which are not expecting traffic volumes of the frequency prevalent on the State Road Network. Every effort should be made to ensure that appropriate speed restrictions and community notifications are applied to such detours. Consultation with Main Roads and the LGA is essential.

National Land Transport Network

This network is show at Annex A1 delineated in BLACK. The traffic density on these highways is substantial and there are long distances between towns or roadhouses, which can provide adequate support services. These highways are also subject to hazards which can necessitate road closures for substantial periods, such as floods, bushfires and cyclones. Furthermore the opportunity to initiate effective detours on these routes is very limited.

The most practical traffic management tactic is to hold vehicles at major towns, possibly hundreds of kilometres from the actual Incident Site or Operational Area. Time is of the essence. In the case of cyclones and floods, forewarning enables this tactic to be implemented.

Impact incidents such as bushfires and road crashes, require immediate action to hold traffic at strategic locations or run the risk of causing extensive stranded traffic columns banked up on highways for long periods or even days. Incident Controllers should consider this issue and consider traffic management well beyond the bounds of the immediate incident.

Heavy Vehicle Networks

The State's road network is a vital asset for the heavy haulage transport industry. There are strict regulations governing the size and weights of heavy vehicles and the roads on which they can operate. There are 10 (ten) Heavy Vehicle Networks established, which specify the length, weight, number of axles etc. Network 10 carries ALL classes and sizes of vehicles, whilst Networks 1 – 9 carry lesser heavy vehicles. These are in place for safety and asset protection. Heavy vehicles accessing higher networks are not allowed to traverse lesser networks without a special permit issued by Main Roads. During emergency situations it may be necessary to establish a heavy vehicle route to cater for this issue and consultation with Main Roads Heavy Vehicles Operations (HVO) and the responsible LG is essential. Routing Heavy Vehicles onto non approved HVO Network Routes can lead to structural collapse or road pavement damage. Failure to consult could lead to an accident or significant litigation. Heavy Vehicle Networks can be sourced from the Main Roads website.

Bridges & Floodways

There are numerous bridge and floodway assets on the road network. Bridges span waterways, railways and roads and are constructed to various standards and of various materials. Floodways are constructed in locations subject to water flow over the road where a bridge structure is impractical. It is essential to consider the load capacity or vehicle restrictions traversing these structures. HVO Officers should be consulted.

Road Conditions

Road conditions are a major consideration in traffic management planning. Where road works are in progress or the surface is unsealed, these routes should be avoided. Latest Road Condition Reports can be obtained from the Main Roads website http://www.mainroads.wa.gov.au/Pages/Welcome.aspx "Road & Traffic Info" at the top of the page.

VEHICLE CONTROL POINTS (VCP)

A Vehicle Control Point (VCP) is established following a risk assessment for all or some of the following reasons:

1. To prevent road access to the Incident Area for the prime purpose of SAFETY. (see TMP Objective 1)
2. To provide controlled access/egress for emergency responders, casualties or evacuees. (see TMP Objectives 2 & 3)
3. To provide controlled transit of a road past an incident (see Lane Control).
4. To monitor Restricted Access Passes (see Restricted Access Passes)

VCPs are the "last line" of incident site control. Entry past a VCP constitutes a potentially hazardous situation. Therefore all VCPs must be permanently staffed at all times.

All VCPs must have clear voice communication with the Incident Controller (or IMT Operations Officer). The IC must ensure that this network is established and maintained, if necessary by temporary issue of service radios to the VCP Traffic Controller(s). A general VCP configuration is shown at Annex D.

VCP Activation

The IC has responsibility for deciding and managing the location and status of a VCP. The IC should also carry out a full risk assessment to determine if the road remains open or closed. The IC should ensure any risk assessment undertaken to determine the full extent of these risks is documented. WAPOL may be requested to establish a VCP in the immediate response phase to an emergency. The IC should consider the use of MRWA or LGA to assist in the operation of road closures where time and resources permit. For closures on main roads, particularly National Transport Routes, MRWA should be notified immediately for assistance. Any agency may establish a VCP where this is considered necessary for safety of the public and emergency services personnel until the arrival of the controlling agency or agency authorised by the IC..

The essential information pertaining to Road Closures and VCPs which MUST be communicated to responsible agency includes:

1. The Controlling agency for the incident.
2. IC's, name and contact number(s)
3. Road(s) affected, by name.
4. Incident location (by reference to road distance to nearest town / locality / roadhouse.
5. Location of Operations Point.
6. Roads (Full or Partial closure).
7. Location of VCP(s).
8. Estimated duration of road closures.

VCP Operation

Once a VCP is established it will remain in place until directed by the IC that it is no longer required. This decision must be made following consultation with the authorised agency operating that specific VCP. VCP personnel will ensure:

1. Two-way communications are maintained in accordance with the established communications plan.
2. VCP personnel will provide SITREPS to the IC via the agency Commander in accordance with established communication protocols.
3. If there is an issue at the VCP then this must be advised to the IC via the agency Commander immediately.
4. If the VCP needs to be moved this must be authorised by the IC unless it is an urgent situation such as the VCP coming under immediate threat.
5. Where the VCP is moved without prior authorisation due to an immediate threat, the IC must be advised ASAP.

VCP personnel will maintain a documented record of the establishment of the VCP, any matters relating to the operation of the VCP and where possible the details of persons/vehicles entering or leaving the area *(responding emergency services not included*). This information is to be provided to the IC at each shift change.

VCP Handover / Handback

Following consultation with the IC, control of a VCP may be handed to another authorised agency. Where handover of the VCP is authorised, the agency Commander will ensure:

1. A full briefing is conducted with the relieving agency as to the status of the VCP.
2. A written record is completed of the information provided.
3. A reliable contact point is provided to the relieving agency.
4. VCP – IC communication is operational after the handover is completed.
5. The IC is advised that the handed over of VCP to the designated agency has been completed and the above details have been provided.

Where management of a VCP is handed over to another authorised agency all existing protocols remain in place. Any changes after handover must be authorised by the IC. Where the Incident Controller, directs control of a VCP be changed to another agency they will ensure an effective handover occurs between those agencies. The handover should include:

1. A full briefing conducted with the outgoing agency as to the status and operation of the VCP
2. Complete a written record of the information provided.

TYPES OF VEHICLE CONTROL POINTS

Full Road Closures

Where a full road closure is established under the provisions of the Emergency Management Act 2005 *[Emergency Situation / State of Emergency]* a Hazard Management Officer / Authorised Officer or Police Officer may do all things reasonably necessary to ensure compliance with the road closure direction [s 76(2) Act]..

Access to an area where a Full Road Closure is in place can only be authorised by the IC and may include:

1. An Emergency Vehicle responding to the emergency
    a. Controlling Agency.
    b. A combat agency
    c. A support organisation, including utility providers.
2. Persons meeting criteria authorised by the IC.

Note: Any person or vehicle not specified above is NOT permitted to transit a Road Closure.

Partial Road Closure

A Partial Road Closure may be implemented to allow movement through a road closed to general traffic, under the following circumstances approved by the IC:

1. When lane control is initiated.
2. When Restricted Access Passes are provided.

Lane control and Restricted Access Passes are described below.

Lane Control

Lane control may be used as an effective traffic management tactic to maintain traffic flows. The decision to employ this tactic is solely dependent on the risk assessment and the approval of the IC. A Vehicle Control Point must be established at both ends of a lane controlled transit. A diagram is shown at Annex E.

Restricted Access Passes

The IC needs to exercise extreme caution when down grading a Full Road Closure to a Partial Road Closure[1]. However, there will be occasions where persons may wish to enter the Incident Site for reasons such as:

- Residents returning to their homes to check for damage
- Residents returning to their homes to salvage personal possessions.
- People delivering relief and aid to residents and / or animals.
- Essential service crews.

The Statutes referred to in this guide provide for the common right of entry to be denied provided the powers cited in these Acts have been evoked, e.g. *an emergency situation has been declared.*

Where the risk to safety has passed but the incident scene needs to be preserved for the purposes of coronial or evidentiary investigation, a system of Restricted Access may be established by the IC in consultation with WAPOL. Persons failing to meet authorised access requirements established by the IC should be denied access as with a Full Road Closure. The Restricted Access system is designed to ensure the security and integrity of the incident scene.

TRAFFIC MANAGEMENT PLANNING (TMP)

The use of vehicle control points as detailed above provides the IC the ability to ensure the control of access to an incident area where this is essential for public safety.

Where it is impractical / unsafe to establish a VCP [cyclones, floods etc] the IC may close a road.

Closed Road

Under the powers provided in the various Statutes at Reference, roads may be closed for a variety of reasons, such as road works, special events or emergency incidents. The Commissioner of Main Roads provides delegated authority to close roads for these purposes under the following conditions:

[1] *"The findings of two coronial inquests, one in Victoria and one in Western Australia, highlight the potentially fatal consequences of permitting access to areas in which bushfires are burning and the need to restrict road travel in order to protect life and maintain public safety"* (extract from the Submission of Counsel Assisting the 2009 Victorian Royal Commission)

- A “Road Closed” sign, as specified in the Codes of Practice, is to be erected. The closed road may or may not be staffed. Any road user breaching the closure is subject to an infringement notice.

- Accredited Traffic Controllers in attendance at a road closure do not have the power to prevent access, but may take details of the registration plate number of any road user who breaches the closure for subsequent infringement notice. In an emergency situation, Traffic Controllers confronted by road users intent on breaching the closure should warn the driver that:

    - Passing the road closure could lead to danger
    - Breaching the road closure is an offence
    - Their Vehicle Registration and Driver description is being noted. Details of the breach should be reported to the IC or Police Commander immediately.

- A Police Officer attending a road closure has the power both to issue infringement notices and prevent access to the closed road, using appropriate force if necessary *[s 272 Road Traffic Code].*

A range of other strategies may be utilised in Traffic Management Planning to control the flow of traffic. These include:

1. Detours.
2. Side Track Diversion.
3. Variable Message Signs (VMS)
4. Traffic Signals.
5. Road Signage.
6. Traffic Maps

Detours

Detours are the most effective tactic to avoid access to the incident site and maintain traffic flows. There are three classifications of detour, an All Vehicle Route, a Light Vehicle Route and a Heavy Vehicle Route. All Vehicle Routes bypass all vehicles around the incident site whereas different routes can identified for Light and Heavy vehicles. Detours will entail additional road distances to be traversed, but pose less risk and lost time in the longer term. Heavy vehicles routes in particular may involve considerable additional kilometers point to point travel.

Side Track Diversion

Where an incident blocks a major road over a short distance (+- 200 metres) and the duration of the road block may be extensive, Main Roads may create a Side Track Diversion. This tactic may also be employed where the road asset pavement or structure is damaged. This exercise involves considerable expenditure and also involves permission from the resident, lessee or traditional land owner. The decision by the IC to implement this option should be made in consultation with MRWA.

Variable Message Signs

These may be fixed or trailer mounted portable assets. They can display a variety of messages for road users, which can be amended remotely to reflect changing circumstances of the road situation. Their deployment, at tactical and strategic locations should be a prime action to support traffic management.

Traffic Signals

These are managed using a software application called SCATS. Throughout WA all traffic signals are configured and changed through the Metropolitan Traffic Operations Centre (TOC). This centre can, at the request of the IC change particular signals to “flash yellow” or provide “through, left or right turn” preferences or adjust signal times. This is a valuable asset for incident traffic management in the Metropolitan Area.

Road Signage

All road signage in WA is covered by the Main Roads Act 1930. The signs are designed to permit maximum visibility and interpretation by road users. Australian Standard AS 1742.3 – 2009 specifies the size, colour and shape of all signs.Temporary signs are required to be displayed during certain circumstances such as Road Works, Special Events or Emergency Incidents. Details of the signs for these applications are contained in the Main Roads Codes of Practice for WORKS, EVENTS or EMERGENCY INCIDENTS.

Copies of these Codes are available from the Main Roads website. The applicable signs for EMERGENCY INCIDENTS, used in conjunction with WORKS signage, are at Annex F.

TMP Mapping

Where possible, Traffic Management Plans (TMP) should include one or more maps. These provide a visual representation of the TMP and provide clear guidance to all responding emergency management agencies. They can also be posted on websites for public information. Main Roads maintains the latest road GIS datasets and can provide this service to the IMT upon request A sample TMP Map is at Annex G.

PUBLIC INFORMATION

The IC is responsible for the provision of Public information with respect to traffic management strategies during an emergency. This advice may be distributed by through a range of mediums and should be documented in the Incident Action Plan approved by the IC.

This advice will be provided via the following mediums:

- ABC radio in accordance with the State Emergency Management Committee MOU with that organisation.
- Local radio, in accordance with existing protocols with that organisation.
- MRWA website - http://www.mainroads.wa.gov.au
- The FESA Website - http://www.fesa.wa.gov.au/internet/Alerts/default.aspx#
- Other HMA Websites.

Public information advices should include the following information:

1. The location of the road closures *(road names)*;
2. Map references or other location aides;
3. Anticipated duration of disruption;
4. Alternative route details (including heavy vehicles);
5. Road conditions, advice and warning relating to the use of alternative routes.

Traffic Broadcasts & Notifications

These not only provide excellence in road user service, but must also be considered a primary tactic in support of the Traffic Management Plan. Communication with road users makes use of radio, television and internet mediums to inform the public and encourage users to avoid areas of congestion or incidents. Increasingly, use is being made of other electronic systems such as mobile phone applications, twitter and in-vehicle devices.

REOPENING THE ROAD NETWORK

The Incident Controller has final authority regarding the re-opening of roads. The principles and process for re-opening roads, closed during the incident response, are addressed below:

1. Principles - ***If in doubt keep them out:***

    a. A risk assessment must precede any decision to re-open a road.
    b. Roads may be re-opened progressively.
    c. Generally, roads should NOT be re-opened during hours of darkness.
    d. The practice of alternately closing then opening roads should be avoided.
    e. The IC should return the road to the network operator (Main Roads, LGA, DEC or private owner) for re-opening, NOT re-opened by the CONTROLLING AGENCY.

2. Process

    a. IC determines that the road can be safely re-opened.
    b. IC formally returns road to the network operator.
    c. The network operator formally accepts control from the IC.
    d. Network operator conducts a full safety survey of the road, if necessary in company with Controlling Agency response vehicle.
    e. Network operator assesses damage to road pavement, structures, lines and signs.
    f. Based on the damage assessment, the network operator:
        i. Re-opens the road without restriction at a time specified and removes detours.
        ii. Maintains the road closure due to critical damage to infrastructure and maintains the established detours.
        iii. Re-opens the road with specified vehicles class restrictions.
        iv. Re-opens the road with speed restrictions.
        v. Provides public notification of the road status and condition.

The process above is particularly relevant to road networks affected by cyclones and flooding.

ROAD USER WELFARE

Road closures are normally set up at locations which afford the road user personal support services such as fuel, food, water, accommodation, amenities and communications. This is a particular consideration where the road network provides limited scope for effective detours.

However, there are circumstances where large numbers of road users can be "trapped" at road closures for long periods in extreme temperatures. In these cases, the personal welfare of road users becomes an issue. The following should be considered by the IC as part of the Traffic Management Plan.

1. Where possible, establish VCPs at a roadhouse or a town location and "hold" ALL vehicles at this location.
2. Where road users have passed the nearest source of support services and have been "trapped" at a road closure:

    a. If possible locate the VCP at a rest point or turn-around point.
    b. Direct road users to return to the nearest town or roadhouse if the closure is to exceed 8 hours.
    c. Where necessary arrange assistance to maneuver vehicle turn-around (off road if necessary / possible).

3. Where this is not possible:
    a. Include road users in the catering logistics of the On Scene Response, particularly Water, Food, Amenities and Blankets.

4. Arrange to regularily provide information, check health issues and assess support requirements.

The Department for Child Protection (DCP) is responsible for coordinating the provision of welfare support services (Westplan Welfare) to people affected by an emergency or disaster where required within an ALL HAZARDS approach structure.

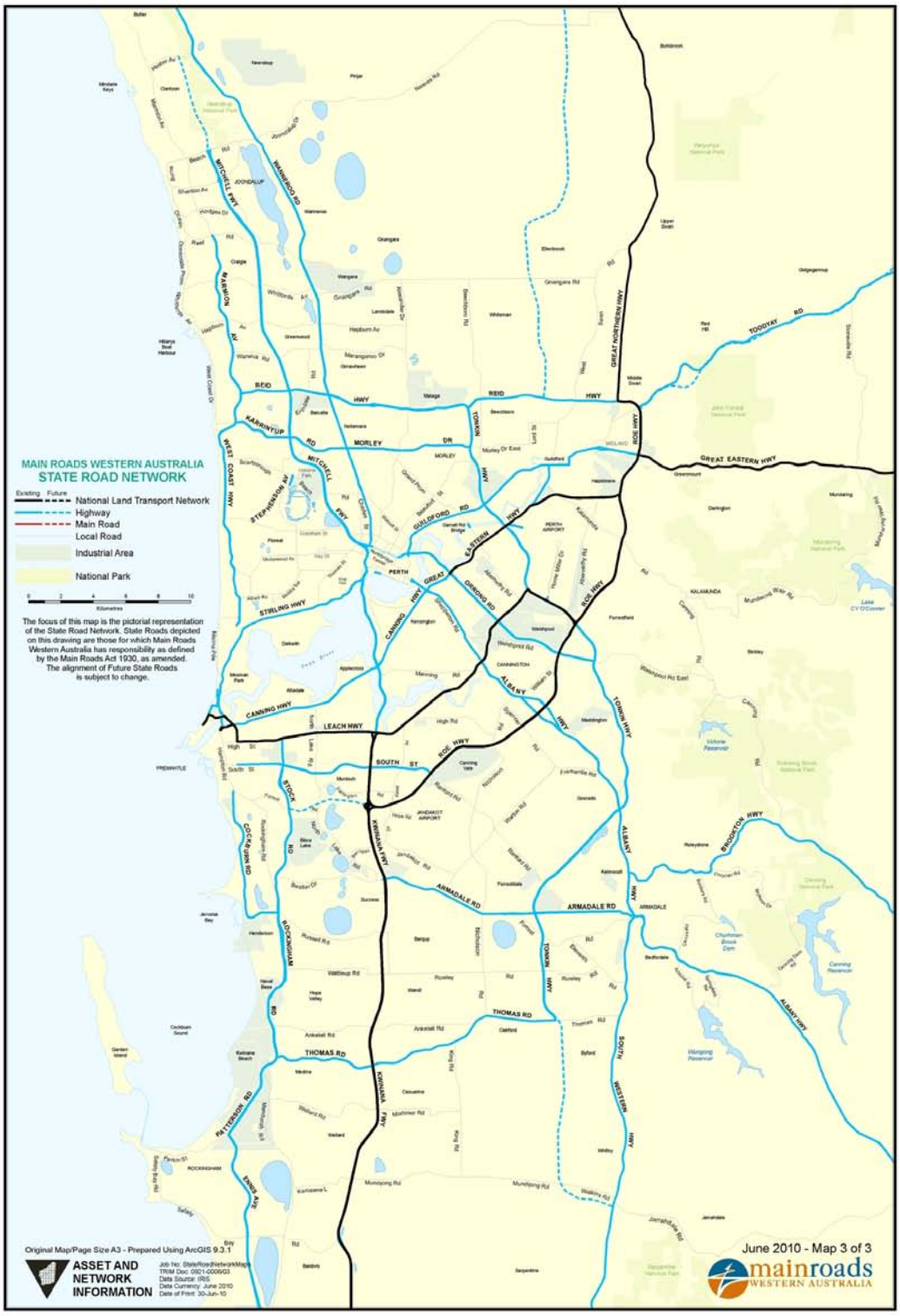
A Welfare Centre may be established for the purpose of providing welfare support services to affected persons and can include emergency catering and accommodation. Welfare centres should be established in accordance with the relevant local governments “Local Emergency Management Arrangements”.

The activation of Westplan Welfare will be at the request of the controlling agency or by the State Welfare Coordinator. The level of response will be determined by the State Welfare Coordinator on the basis of information supplied by the controlling agency.

ANNEX A1 – State Road Network

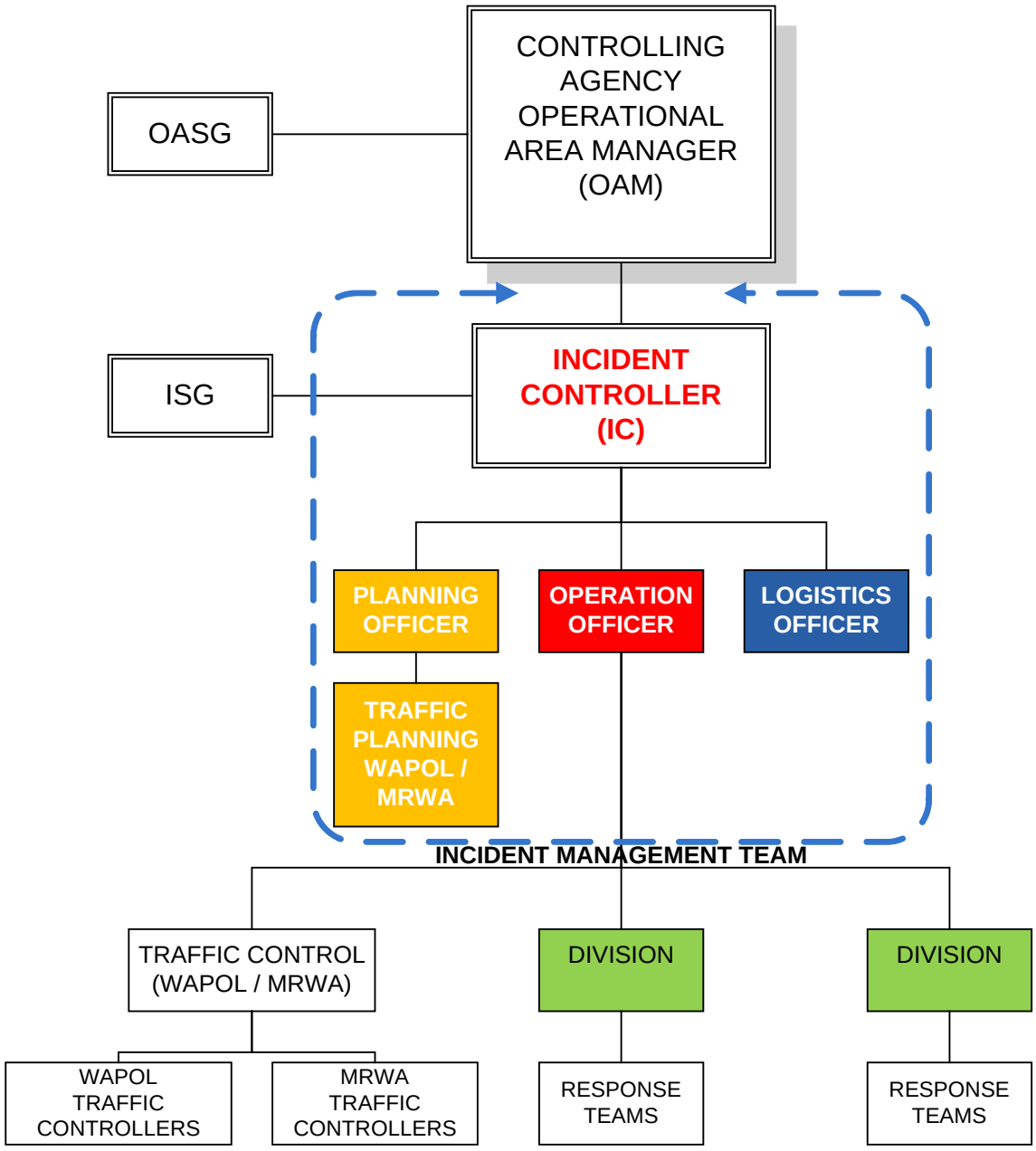
ANNEX A2 – South West

ANNEX A3 - Metropolitan



ANNEX B – IMT Structure

IMT structure showing Traffic Management Planning as a component of the planning function and traffic control as a component of operations.



ANNEX C – Risk Assessment Considerations

Road Risk Factors to be considered

Risk of direct impact from fire

- Fire may run from open or contained edge onto road
- Fire may run from new ignition source onto road

Risk of indirect (consequential) impact from fire

- Trees or branches may fall across road (see FOG 65)
- Rocks, logs or other debris may roll across road
- Poles, power lines, phone lines may fall, gas or water pipelines may burst
- Road surface or shoulder damaged and unsafe for traffic
- Residual fire hazard (peat, roots etc.) may damage road
- Bridges unsafe for vehicles to cross
- Roaming animals may pose a threat to road users

Risk of impact from smoke

- Smoke from running fire may affect road
- Smoke from smoldering fire may affect road
- Downhill drainage of smoke may affect road

Risk to fire control activities from road users

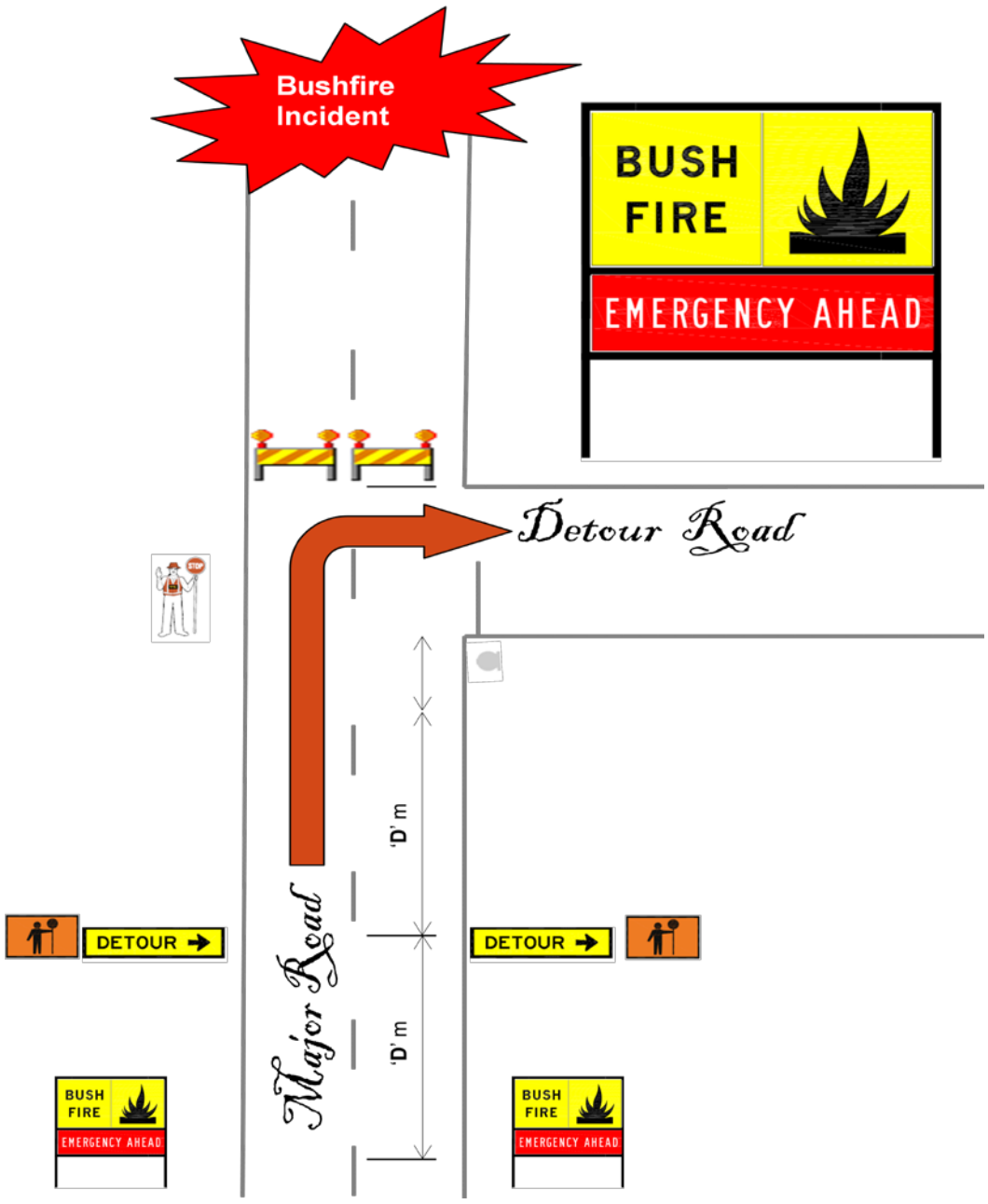
- Traffic will interrupt fire control and emergency service activities
- Traffic will endanger personnel conducting fire control and emergency service activities

Traffic Management Impacts to be Considered

- Road Hierarchy
    - Local, risk impact LOW
    - Arterial, risk impact MEDIUM
    - State, risk impact HIGH
    - National, risk impact **VERY HIGH**
- Time of Closure (estimated)
    - <4 hours LOW
    - 4 – 8 hours MEDIUM
    - 8 – 24 HIGH
    - >24 hours VERY HIGH
- Location (built up area or sparsely populated)
    - Sparsely populated area, risk impact LOW
    - Single road access, risk impact MEDIUM
    - Isolated Town, risk impact HIGH
    - Densely populated suburb, risk impact **VERY HIGH**

ANNEX D – Vehicle Control Point Diagram

In this example, a FULL ROAD CLOSURE has been implemented and a detour has been established to manage traffic flow. The first set of signs for approaching road users “Warns of the Emergency Ahead”. The second set of signs provides the traffic management instruction. The road which is closed is blocked and the VCP is shown staffed. A Police Officer would normally staff this position, particularly in the initial stages of the incident.



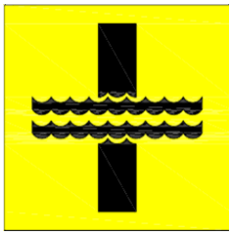
ANNEX E – Lane Control

Lane control permits traffic movement, particularly on main roads, where the incident can be **SAFELY** managed blocking lanes as required, but leaving one lane for alternate movement of traffic in each direction.

Note: A Communication link between the between both Traffic Controllers and between Traffic Controllers and the IMT is essential.

ANNEX F – Emergency Incident Road Signs

The new Code of Practice will introduce a series of Multi-Message Signs (MMS) for use at emergency incidents. The signs will consist of a WORD descriptor and a SYMBOL. Combinations of these signs may be used appropriate to the incident circumstances. Examples are shown below. The Code of Practice for EMERGENCIES can be found on the Main Roads WA website, under Traffic Management.



ANNEX G – Sample TMP Map