

Hazelwood Mine Fire Inquiry

Implementation of
recommendations
and affirmations

Annual Report 2017

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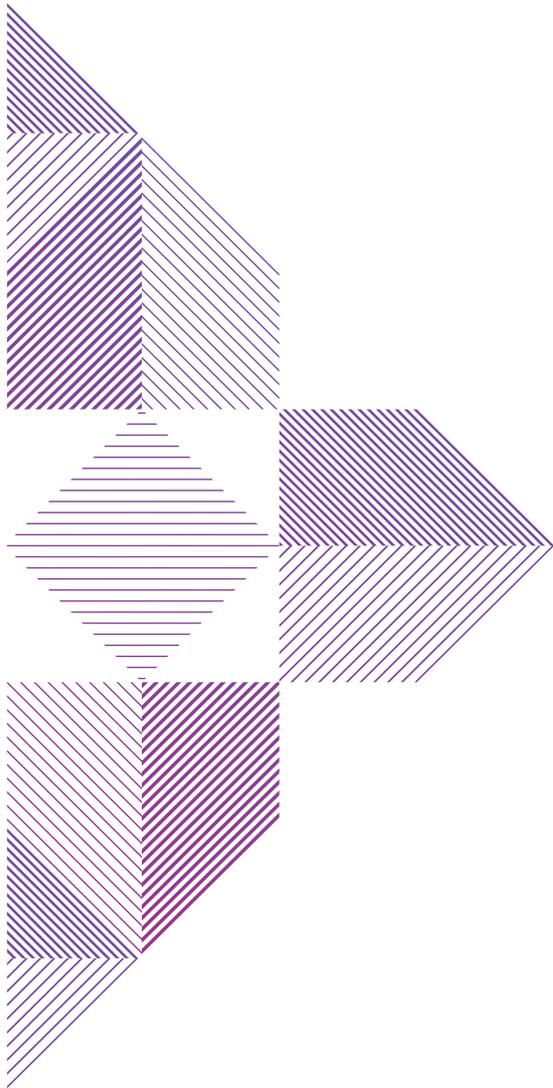
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Preface



This is the Inspector-General for Emergency Management's (IGEM) second annual report providing assurance to government and community on the implementation of reforms arising from the 2014 Hazelwood coal mine fire.

The independent inquiries following the Hazelwood mine fire triggered a sweeping program of reforms across state and local government, community and industry, including hundreds of individual actions across dozens of organisations.

This wide-ranging program of reforms is progressing well, particularly given the complexity of many of the actions taken in response to recommendations and affirmations from the inquiries. One hundred and eighty-seven of the 246 actions set out in the 2016 *Hazelwood Mine Fire Inquiry: Victorian Government Implementation Plan* are now complete.

The past year has seen significant progress made on improvements to emergency planning and coordination, health innovation, and coal mine regulation and rehabilitation. Reforms ranged in scale from small community initiatives like the Caring for Waterhole Creek project, to statewide reforms such as the State Smoke Framework.

Many actions involve extensive and ongoing community engagement, requiring time and flexibility to implement sustainably. The ongoing engagement from the Latrobe Valley community is a testament to their resilience and commitment to drive positive change. Key achievements in the past year with a positive impact in the community include the establishment of the Latrobe Health Assembly, further investment in health services, greater assurance on the future rehabilitation of mine sites and a report finding ash in Morwell roof cavities did not pose an ongoing health risk.

Other key achievements in the past year include the appointment of the Latrobe Valley Mine Rehabilitation Commissioner, new systems providing improved information for decision makers in emergencies and an expanded communications capability for emergency management, including improvements to community warnings.

In 2017, IGEM added a new element to its monitoring of the implementation of actions arising from the Hazelwood mine fire inquiries. Burning in a densely populated area of greater Melbourne, the July 2017 Coolaroo fire involved high-hazard materials which created significant smoke risks to the community. Based on the similarities of consequences to the Hazelwood mine fire, IGEM is reviewing the Coolaroo fire to determine whether improvements introduced following the 2014 Hazelwood coal mine fire were effective. IGEM will provide the review to government in late 2017.

IGEM appreciates the collaborative and constructive approach taken to assurance by government departments and agencies, statutory bodies, non-government health providers and coal-mine operators, and looks forward to continuing this relationship.

Tony Pearce
Inspector-General for Emergency Management

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Acronyms

AAQ	Ambient Air Quality	EMJPIC	Emergency Management Joint Public Information Committee
ABC	Australian Broadcasting Corporation	EMV	Emergency Management Victoria
ACCO	Aboriginal Community Controlled Organisation	EPA	Environment Protection Authority Victoria
AFAC	National Council for Fire and Emergency Services	EP Act	<i>Environment Protection Act 1970 (Vic)</i>
AIIMS	Australasian Inter-Service Incident Management System	ERR	Earth Resources Regulation (DEDJTR)
BAU	Business as usual	GP	General Practitioner
CAFS	Compressed Air Foam System	HAZMAT	Hazardous Materials
CBD	Central Business District	HPV	Human Papillomavirus
CBEM	Community-Based Emergency Management	IC	Incident Controller
CFA	Country Fire Authority	ICC	Incident Control Centre
CGEIG	Central Gippsland Essential Industries Group	ICT	Information and Communications Technology
CO	Carbon Monoxide	IDC	Victorian Government Inter-Departmental Committee
COAG	Council of Australian Governments	IGEM	Inspector-General for Emergency Management
CSIRO	Commonwealth Scientific and Industrial Research Organisation	IMRG	Integrated Mines Research Group
DEDJTR	Department of Economic Development, Jobs, Transport and Resources	IMT	Incident Management Team
DELWP	Department of Environment, Land, Water and Planning	JSOP	Joint Standard Operating Procedure
DHHS	Department of Health and Human Services	LGV	Local Government Victoria
DJR	Department of Justice and Regulation	LVRRS	Latrobe Valley Regional Rehabilitation Strategy
DPC	Department of Premier and Cabinet	MFB	Metropolitan Fire and Emergency Services Board
DTF	Department of Treasury and Finance	MOU	Memorandum of Understanding
EM-COP	Emergency Management Common Operating Picture	MPHW	Municipal Public Health and Wellbeing
		MR(SD) Act	<i>Mineral Resources (Sustainable Development) Act 1990 (Vic)</i>

NAIDOC National Aborigines and Islanders
Day Observance Committee

NEPC National Environment Protection Council

NEPM National Environment Protection Measure

OHP Optimal Health Program

OHS Occupational Health and Safety

PCB Project Control Board

PCG Procurement Control Group

PHAP Personal Hardship Assistance Program

PHN Primary Health Network

RAMP Risk Assessment and Management Plan

REMT Regional Emergency Management Team

RSL Returned and Services League of Australia

SCDT State Common Doctrine Team

SCRC State Crisis and Resilience Council

SEPP State Environment Protection Policy

SSCC State Strategic Communications Cell

TRB Technical Review Board

VICSES Victoria State Emergency Service

WorkSafe WorkSafe Victoria

Executive summary

This is IGEM's second annual report on the progress of implementation of recommendations and affirmations from the 2014 and 2015–16 Hazelwood mine fire inquiries.

Hazelwood mine fire inquiries

A fire burned in the Hazelwood coal mine for 45 days between February and March 2014. It became the largest and longest burning mine fire to occur in Victoria's Latrobe Valley.

In March 2014, an independent inquiry into the circumstances of the Hazelwood coal mine fire was established. *The Hazelwood Mine Fire Inquiry Report* was tabled in the Victorian Parliament on 2 September 2014. The report made 12 recommendations and 40 affirmations directed to the state, and six recommendations and 17 affirmations directed to the operator of the Hazelwood coal mine, GDF Suez (now ENGIE).

In May 2015, the Inquiry was re-opened by the government to investigate concerns about the health of the community following the 2014 fire and to consider rehabilitation at Latrobe Valley's coal mines. The 2015–16 Inquiry made a further 35 recommendations and 25 affirmations to government, health agencies and mine operators.

In June 2016 the Victorian Government released *the Hazelwood Mine Fire Inquiry: Victorian Government Implementation Plan* (Victorian Government Implementation Plan), which is the government's formal response to the Inquiry reports. It sets out 246 actions across eight themes to implement the recommendations and affirmations of the 2014 and 2015–16 Inquiry reports.

Role of the Inspector-General for Emergency Management

The Inspector-General for Emergency Management (IGEM) is responsible for monitoring and reporting on the progress of the implementation of all recommendations and affirmations from the 2014 and 2015–16 Inquiry reports.

Implementation monitoring provides assurance to the community members and the Victorian Government that the lessons identified from emergencies are acted on in a timely and sustainable manner to make a lasting difference for Victoria.

Progress summary

Overall, IGEM considers that significant progress has been achieved to improve emergency planning and coordination, health outcomes and mine rehabilitation in the Latrobe Valley following the Hazelwood mine fire.

One hundred and eighty-seven of the 246 actions set out in the Victorian Government Implementation Plan have now been completed. Figure 1 provides an overview of the total number of actions and completed actions under the eight themes and respective sub-themes set out in the plan.

IGEM notes the scope and breadth of the reforms achieved to date. The actions range from small projects with local community members to statewide reforms to legislation, regulatory frameworks and policy. Many actions have required extensive and ongoing community consultation or collaboration with stakeholders across government and industry.

These actions have taken place against the backdrop of significant changes in the Latrobe Valley, with the 2017 closure of coal mine operations and the power station at Hazelwood.

Given the complexity of the reforms and the changing landscape, IGEM considers that overall progress on the recommendations and affirmations from the Inquiry reports has been timely. Of the 203 actions due to be completed at the time of reporting, IGEM has found that 21 remained ongoing – five of these are progressing satisfactorily with only minor delays. Ten of these actions have revised time frames that have been formally approved by their lead agency, to address challenges or introduce additional outputs.

Below is a summary of the key progress against actions, recommendations and affirmations since the *Hazelwood Mine Fire Inquiry: Implementation of recommendations and affirmations Annual Report 2016* (2016 IGEM Hazelwood report).

Communications and community engagement

Significant progress has been made on communications and community engagement actions, with 35 of 40 actions complete.

Emergency Management Victoria (EMV) developed the *Emergency Management State Communications Strategic Framework* in May 2017, providing an integrated, whole-of-community approach to emergency communications in Victoria. EMV intends to deliver training on the framework as part of the 2017–18 summer pre-season briefings.

The systems used to share emergency management information and warnings have been improved. The new VicEmergency website¹, app and hotline, launched in November 2016 provides a central point of access for the community to receive timely information and warnings. EMV upgraded the Emergency Management Common Operating Picture (EM-COP) in November 2016 to integrate existing emergency management information systems. EM-COP shares information across all tiers of emergency management, enabling stakeholders to access the same information at the same time.

EMV has revised the time frames for delivering the Latrobe Valley Community Engagement and Planning Project, which is now anticipated to be finalised in July 2018. The project aims to assist the community to become more connected and build resilience before, during and after emergencies.

¹ emergency.vic.gov.au/respond/

Environment Protection Authority Victoria (EPA) continued to work with the Latrobe Valley community to increase understanding of EPA scientific information and provide opportunities for local community participation in environmental monitoring. A community co-design process has proposed new arrangements for the Latrobe Valley's air monitoring network, and the Citizen Science Program trained 13 volunteer citizen scientists to monitor water, as part of the Caring for the Waterhole Creek project.

To strengthen future public health investigations, the Department of Health and Human Services (DHHS) has improved the way it procures and manages contracts for independent expert advice.

Health in the Latrobe Valley

Overall, DHHS has made significant progress in establishing the foundations for improving health in the Latrobe Valley, with 53 of 68 actions complete. Immediate health concerns following the Hazelwood fire have been addressed while longer-term projects to expand access to health services and better reflect community priorities are established and underway.

The Minister for Health announced the establishment of the Latrobe Health Assembly (the Health Assembly) and appointment of Professor John Catford as its Chair in October 2016.

As of June 2017 the Health Assembly had 41 members, most of whom are local community representatives. The Health Assembly is in its formative stages and will play a critical role in the co-design of local health innovation initiatives. It will oversee an annual developmental evaluation of the impact of innovation within the Latrobe Health Innovation Zone.

Recruitment has commenced for the role of the independent Health Advocate, who will enable leadership at the local level and provide advice and advocacy on health-related matters for the Latrobe Valley community.

DHHS continues to support the implementation of priorities in Aboriginal health and wellbeing, identified in collaboration with the local Aboriginal community.

With DHHS support, a number of evidence-based prevention initiatives commenced in the Latrobe Valley in 2016 including cancer screening, opportunistic screening for cardiovascular disease, kidney disease and diabetes, and smoking cessation initiatives. Telehealth capacity and specialist health services were expanded, and strategies to improve mental health and chronic disease are underway.

Two significant studies by independent experts were released:

- In November 2016 Monash University released its second report on the long-term health study looking into the effects of particulate matter in smoke on people's health over time.

- An independent expert examined the health risks from exposure to ash residue in Morwell roof cavities and concluded that the presence of brown coal dust did not present an ongoing health risk.

Incident air quality and wellbeing

Incident air quality and wellbeing actions are well progressed, with 29 of 34 actions complete.

EPA has made substantial progress in providing the state with rapid air quality monitoring capacity. EPA and the Victoria State Emergency Service (VICSES) partnered to procure 10 mobile monitors, which have been deployed strategically across regional Victoria to provide smoke monitoring within four hours of a request to deploy. EPA activated this partnership with VICSES during the Coolaroo recycling plant fire in July 2017.

EPA has also made progress towards developing a fully functional integrated air quality monitoring and information system, with improvements made to data collection and display and communication. The system will include data from the Country Fire Authority (CFA) and Metropolitan Fire and Emergency Services Board (MFB) air-monitoring equipment and is expected to be in place for the 2017–18 summer season.

CFA is developing a smoke plume modelling tool for the prediction of toxic smoke and chemical releases from fires and hazardous material incidents. CFA revised the time frames for completion of the tool to address security concerns and add additional features.

The Department of Environment, Land, Water and Planning (DELWP) is nearing completion of a predictive services framework ICT platform. The platform is currently being trialled to inform decision-making around planned burns, with plans to further trial it during the 2017–18 summer season.

Latrobe Valley coal mine regulation

While 10 of the 15 Latrobe Valley coal mine regulation actions have been completed, some significant further reforms are still planned for 2017–18.

The Victorian Earth Resources Regulation (ERR) Forum was established in October 2016 to drive a coordinated, strategic approach to regulation in the earth resources sector. Building on this collaboration, regulators and mine operators contributed to an integrated research plan that has identified common research areas for the next 10 years.

Regulatory coordination of mine fire risk has been strengthened through workshops between the Department of Economic Development, Jobs, Transport and Resources (DEDJTR) and WorkSafe Victoria (WorkSafe) and a Memorandum of Understanding (MOU) between DEDJTR and CFA. In addition, WorkSafe engaged technical specialists to assist in the assessment of fire risk in the Latrobe Valley coal mines.

Almost all of the actions in DEDJTR's ERR 2015–16 Action Plan have been implemented, delivering significant reform across the governance, operations, capability, community engagement, client service and transparency of the regulatory frameworks for earth resources regulation.

To help reduce fire risk and ensure rehabilitation can be achieved within a time frame that is acceptable to the community, Latrobe Valley coal mine operators have incorporated progressive rehabilitation milestones in work plan variations submitted to DEDJTR that are awaiting approval.

Following the closure of coal mine operations and power station at Hazelwood, the Minister for Resources has approved a revised approach to the review of the regulatory framework for the Latrobe Valley coal mines. Work on the review has commenced and is anticipated to be completed by December 2017.

Latrobe Valley coal mine rehabilitation bonds

Significant progress has been achieved on Latrobe Valley coal mine rehabilitation bonds actions since the 2016 IGEM Hazelwood report. Ten of the 11 actions have been completed, nine of them in the past year.

Rehabilitation bonds are intended to ensure financial security if mine operators are not able to meet their rehabilitation obligations.

The amount of the rehabilitation bonds for Latrobe Valley coal mine operators has increased significantly since the Hazelwood mine fire.

DEDJTR increased bonds initially to 50 per cent then 100 per cent of the coal mine operators' self-assessed liability. Auditors appointed by mine operators to verify these self-assessments were required by DEDJTR to demonstrate a range of additional skills and expertise.

Following an independent assessment in 2017, DEDJTR identified the need for a third increase in the bond amount for each of the Latrobe Valley mines and advised the coal mine operators of the revised amounts. In October 2017, the Minister for Resources approved the further bond increases and published a statement of reasons for these on the DEDJTR website.

Latrobe Valley Regional Rehabilitation Strategy

The Latrobe Valley Regional Rehabilitation Strategy (LVRRS) is still in its early stages. Fifteen of the 31 actions are now complete. The majority of remaining actions are due to be completed in 2018 and 2020.

The LVRRS will set out how the three Latrobe Valley coal mines will transition to safe, stable and sustainable post-mining landforms. The LVRRS comprises a range of significant planning, research and engagement initiatives, planned over five stages, transitioning to business as usual (BAU) in 2020.

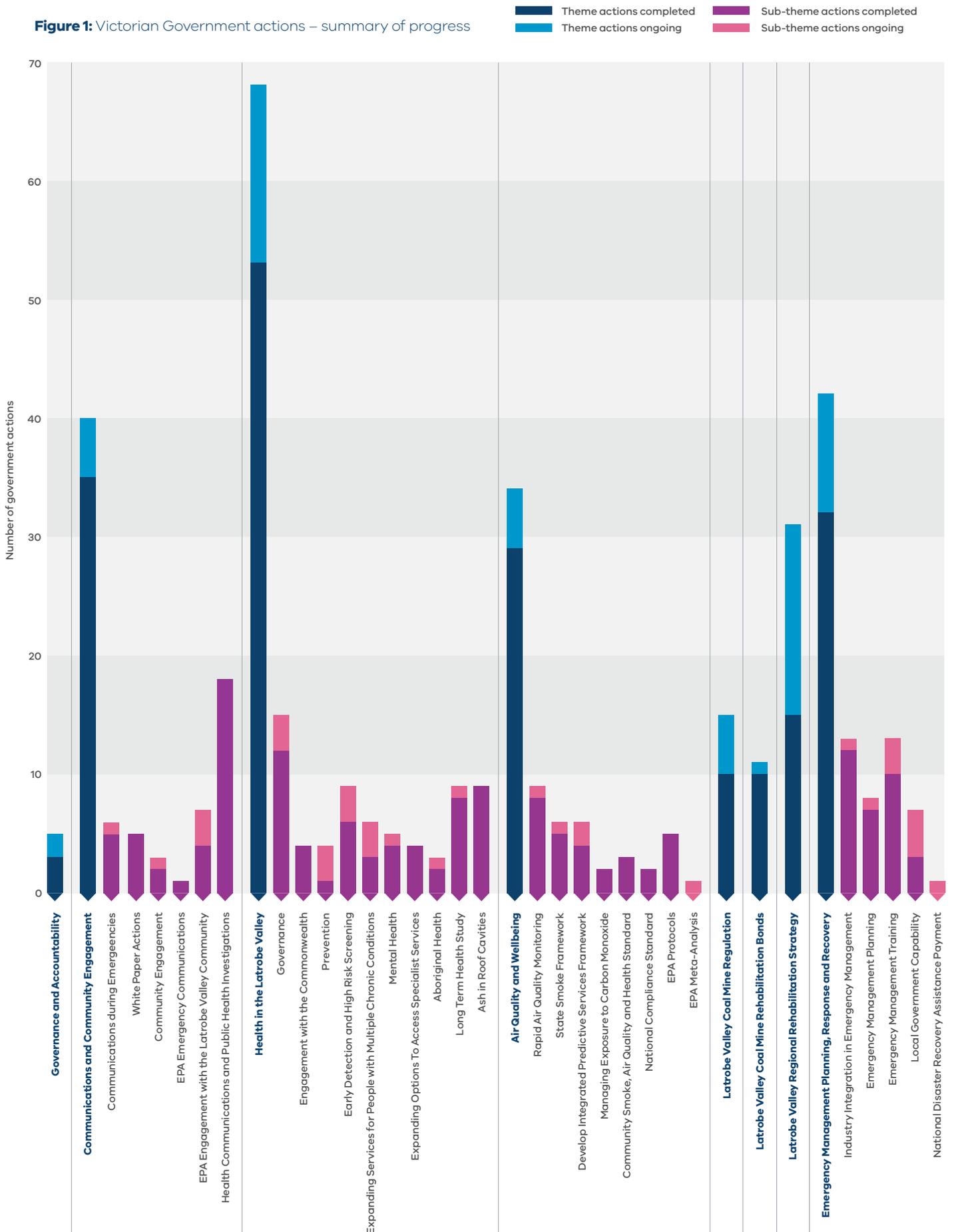
The LVRRS incorporates the Batter Stability project, launched in April 2016 and aimed at understanding the impact of engineering, geology and hydrogeological processes on brown coal mine stability. The scope and methodology of the project was developed through workshops in 2017 with DEDJTR, DELWP and mine operators. DEDJTR participated in the Technical Advisory Group for the project, administered by Federation University Australia.

DEDJTR has reported significant progress on the foundations and early stages of the LVRRS, setting up a number of mechanisms to ensure the strategy is well informed and delivers on the intent of government. DEDJTR prepared a stakeholder and communication strategy and engaged independent reviewers with expertise across 14 technical and scientific disciplines. The Latrobe Valley Mines Rehabilitation Advisory Committee was established to represent key stakeholders in relation to coal mine rehabilitation, including coal mine operators, councils, water authorities, government agencies and the Latrobe Valley community.

Research and planning that is critical to the success of the strategy has commenced. Water requirements for coal mine rehabilitation were reviewed by DEDJTR in consultation with DELWP and EPA, identifying some key information gaps to address through rehabilitation plans.

Professor Rae Mackay was appointed as the Latrobe Valley Mine Rehabilitation Commissioner on June 2017 for a three-year period. The Commissioner will monitor rehabilitation strategies, investigate and resolve significant issues, promote research and publish an annual report.

Figure 1: Victorian Government actions – summary of progress



Emergency management planning, response and recovery

Good progress has been made on emergency management planning, response and recovery actions with 32 of the original 42 actions completed.

The Coal Mines Emergency Management Taskforce published its final report in December 2016. The taskforce made a significant contribution towards the integration of coal mine operators into Victoria's emergency management arrangements to help prepare for, prevent and respond to coal mine fires.

One key achievement of the taskforce was the launch of CFA's District 27 in April 2015, to enable all brigades in Latrobe City to be coordinated through a single district structure. In August 2016 the taskforce also delivered the second of two exercises that brought together stakeholders from across government and industry to assess the preparedness for and response to a major incident in the Latrobe Valley.

In response to lessons learned as a result of the Hazelwood mine fire, CFA released a tender for two purpose-built specialist Compressed Air Foam System tankers, which are highly effective at fighting coal mine fires.

Following the pilot of the Brown Coal Mine Firefighting Training Package by CFA and MFB in September 2016 a training program for staff and volunteers is being developed and is expected to be completed by December 2018.

MFB has decided to delay the provision of personal monitoring equipment to their firefighters until current equipment is due for end-of-life cycle replacement in 2018–19, and has made interim arrangements for monitoring carbon monoxide exposure.

As part of a longer-term project to address capability and capacity gaps, Local Government Victoria (LGV) consulted with councils and emergency management organisations to review and define local government roles and responsibilities in emergency management.

DHHS continues to work on improvements to the Personal Hardship Assistance Program, for those affected by a significant incident in Victoria, and expects to finalise new technology to track payments by 30 November 2017.

Health improvement recommendations and affirmations

Overall, IGEM has found positive progress has been made among health organisations to advance health projects within the Latrobe Valley. Due to the ongoing nature of many of the affirmations, only one – affirmation 7 – has been reported as complete in 2017. The work to deliver these affirmations is highly collaborative in nature. This ranges from the establishment of the Health Assembly to participation in community working groups to support priorities for the Latrobe Health Innovation Zone, including cancer screening programs, the Early Detection and Screening including Tobacco Initiative, and the Chronic Disease Risk Self-Assessment Tool.

Coal mine operators

Mine operators are progressing satisfactorily on their recommendations and affirmations.

AGL Loy Yang and EnergyAustralia Yallourn, continue to strengthen collaboration between coal mine operators and regulators in relation to the Integrated Mines Research Group (IMRG), the Batter Stability project and LVRRS.

In December 2016 the *Integrated Mines Research Group Ten Year Research Plan* was finalised and endorsed by coal mine operators. The plan identifies research priorities, project scope and time lines for delivery of research projects. One of the core functions of the Latrobe Valley Mine Rehabilitation Commissioner, appointed in June 2017, is to coordinate and promote the IMRG research.

As outlined previously, the three mine operators have submitted work plan variations to DEDJTR which incorporate progressive rehabilitation milestones.

ENGIE – 2014 Inquiry

ENGIE is close to completing its activity to address recommendations and affirmations from the Hazelwood Mine Fire Inquiry.

Following the approval of the Fire Risk Implementation Plan in May 2016, ENGIE reported that it has implemented all 129 actions in the plan, completing recommendation 15.

ENGIE's most recent work plan variation outlines mine fire risk management and mitigation approaches in line with revised Mine Fire Service Policy and Code of Practice. ENGIE and DEDJTR are now finalising the approval of this current work plan variation.

ENGIE has revised the actions taken in 2015 to complete recommendation 14. The closure of coal mine operations at Hazelwood in March 2017 has triggered the need for alternative arrangements for back-up power supply for water reticulation systems.

Concluding remarks

IGEM acknowledges the high level of cooperation and support received from Victorian Government departments and agencies, the coal mine operators and non-government entities in preparing this report.

For a full summary of the status of all recommendations, affirmations and actions please refer to Appendix A of this report.

Effectiveness of Hazelwood reforms: 2017 Coolaroo recycling plant fire

On the morning of 13 July 2017 a fire began in the Coolaroo recycling plant, located approximately 20km north of the Melbourne CBD. The fire burned for 11 days, sent clouds of smoke across Melbourne suburbs, and required a large number of MFB and CFA resources to extinguish.

Burning in a densely populated area, the Coolaroo fire involved high-hazard materials which created significant smoke risks to the community. At the height of the blaze, hundreds of nearby residents were urged to evacuate due to concerns about air quality. In this respect, there are similarities surrounding the Coolaroo fire and the 2014 Hazelwood coal mine fire, during which communities in the Latrobe Valley endured significant impacts from smoke and ash.

Learning from the experiences of the Hazelwood mine fire, emergency services used health monitoring data to make decisions about how harmful smoke and ash would be for locals, and people in the area had online access to air quality readings on the EPA website.

IGEM initiated a review of the Coolaroo fire under section 64(4) of the *Emergency Management Act 2013*. The review was noted by the Minister for Emergency Services on 3 August 2017. This is an important opportunity for IGEM to determine whether improvements introduced following the 2014 Hazelwood coal mine fire were effective.

IGEM is working closely with relevant agencies to examine key aspects of the Coolaroo fire including the effectiveness of the State Smoke Framework, air quality monitoring, firefighter occupational health and safety, and the EPA's processes.

IGEM's review is intended to complement the operational review of the incident coordinated by EMV and inform the joint government taskforce audit of recycling facilities.²

IGEM will deliver the report to the Minister by the end of November 2017.



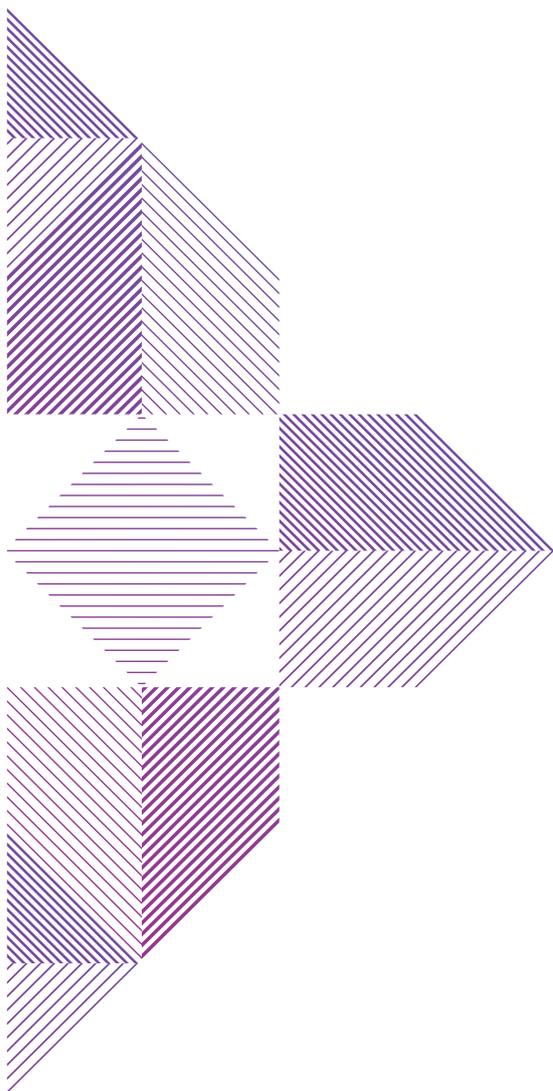
Hazelwood smoke (Credit: Newspix/Mike Keating)



Coolaroo smoke (Credit: Newspix/Nicole Garmston)

² emv.vic.gov.au/news/coolaroo-fire-a-new-approach-to-managing-emergencies

1. Introduction



In 2016 IGEM assumed sole responsibility for monitoring the implementation of all recommendations and affirmations from the 2014 and 2015–16 Hazelwood mine fire inquiries.

The 2017 *Hazelwood Mine Fire Inquiry – Implementation of recommendations and affirmations* is IGEM's second annual progress report as sole implementation monitor.

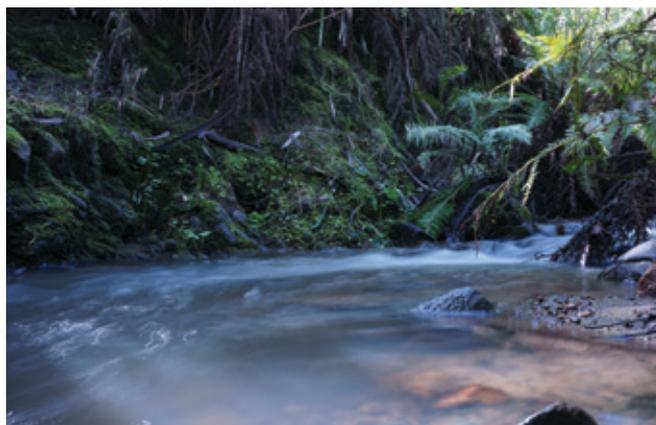
The 2016 IGEM Hazelwood report found that, overall, significant progress had been achieved to improve emergency planning and coordination, health outcomes and mine rehabilitation in the Latrobe Valley following the Hazelwood mine fire.

Of the 246 Victorian Government recommendations and affirmations, the 2016 IGEM Hazelwood report found that 99 had been completed and 147 were ongoing. Of the 39 recommendations and affirmations directed at non-government health agencies and coal mine operators, 24 had been completed and 15 were ongoing.

In 2017 IGEM monitored the progress of the remaining 147 Victorian Government recommendations and the 15 remaining recommendations and affirmations directed at non-government health agencies and coal mine operators. This report presents the findings of that monitoring.

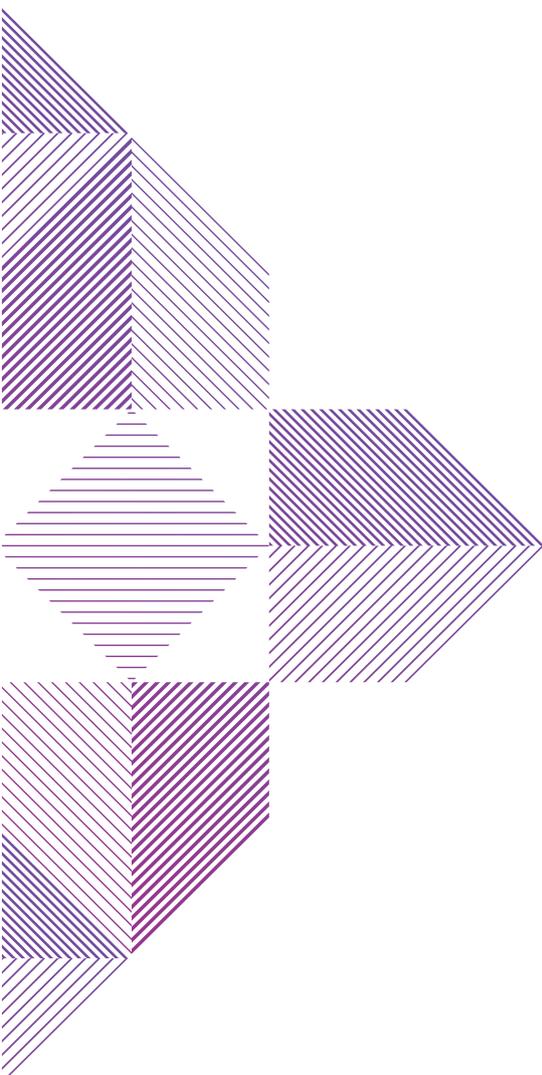
IGEM will continue monitoring the implementation of ongoing recommendations and affirmations and report to Parliament on progress annually until 2019.

The Minister for Emergency Services will make IGEM Hazelwood annual reports publicly available.



Waterhole Creek, Morwell

2. Background



2.1 Hazelwood mine fire

On 9 February 2014 a fire began in the Hazelwood coal mine as a result of embers spotting from nearby bushfires. The fire burned for 45 days and impacted on local communities within the Latrobe Valley, particularly in the town of Morwell.

Due to its severity and wide-reaching impacts, the Hazelwood mine fire constituted two emergencies – a major complex fire emergency and a serious public health emergency.

Coal mine fires have unique properties that differentiate them from bushfires – they typically burn slowly over an extended period of time (normally several weeks) due to the presence of deep-seated, compacted fuel, unlike bushfires which burn quickly and unpredictably. Firefighters are presented with unique challenges as coal can burn beneath the ground and toxic gases can be present in the pit below ground level.

The fire required significant resources to bring it under control. It became the largest and longest burning mine fire to occur in Victoria's Latrobe Valley.

2.2 Hazelwood mine fire inquiries (2014 and 2015–16)

Following the 2014 Hazelwood mine fire, the Victorian Government responded with the announcement of the Hazelwood Mine Fire Inquiry (the 2014 Inquiry) in March 2014. The Board of Inquiry was established to inquire into, report on and make recommendations in relation to the origin and circumstances of the fire, the adequacy and effectiveness of fire management measures, the relevant regulatory regime and the response to the fire and related matters.

In its 2014 report, the Board of Inquiry made a total of 18 recommendations – 12 directed to the Victorian Government and six to the mine operator, owner and licensee, GDF Suez (now ENGIE).

The Board of Inquiry also identified a number of commitments – or planned improvements to emergency management arrangements for similar future events – made by the state and GDF Suez in their inquiry submissions. These commitments were later declared by the Board of Inquiry as affirmations – 40 of which were directed to the government and 17 to GDF Suez.

The Victorian Government accepted the 2014 Inquiry recommendations directed to it, responding through its *Hazelwood Mine Fire Inquiry Report: Victorian Government Implementation and Monitoring Plan* (Implementation and Monitoring Plan 2014).

In 2015, the Victorian Government reopened the Hazelwood Mine Fire Inquiry to focus on human health impacts and mine rehabilitation. The reopened Board of Inquiry produced a report in four volumes, each addressing one of the expanded Terms of Reference:

- minimising fire risks at Anglesea coal mine for the 2015–16 summer season – Vol I – Anglesea Mine
- investigating whether there has been an increase in deaths following the 2014 Hazelwood mine fire – Vol II – Investigations into 2009–2014 Deaths (Death Investigation Inquiry report)
- measures to improve the health of the Latrobe Valley – Volume III – Health Improvement (Health Improvement Inquiry report)
- rehabilitation options for Latrobe Valley coal mines – Volume IV – Mine Rehabilitation (Mine Rehabilitation Inquiry report).

In June 2016 the Victorian Government released an updated implementation plan setting out the 246 actions that are being undertaken to fulfil its commitment to implement the recommendations and affirmations of the 2014 and 2015–16 Inquiry reports. The *2016 Hazelwood Mine Fire Inquiry: Victorian Government Implementation Plan* (Victorian Government Implementation Plan) sets out how the recommendations and affirmations are to be implemented and monitored, and is structured under the following themes:

- Governance and accountability
- Communications and community engagement
- Health in the Latrobe Valley
- Incident air quality and wellbeing
- Latrobe Valley coal mine regulation
- Latrobe Valley coal mine rehabilitation bonds
- Latrobe Valley Regional Rehabilitation Strategy (LVRRS)
- Emergency management planning, response and recovery.

Under each theme there are a number of government actions, a lead organisation with responsibility for implementation of each action, and a due date for completion. For a full list of lead organisations please refer to section 3.2.

2.3 Role of IGEM

The Inspector-General for Emergency Management (IGEM) is a dedicated assurance entity working in support of Victoria's emergency management sector. IGEM's responsibilities under the *Emergency Management Act 2013* (the Act) are to:

- provide assurance to government and the community about emergency management arrangements in Victoria
- foster continuous improvement of emergency management in Victoria.

IGEM's assurance activities are guided by the *Monitoring and Assurance Framework for Emergency Management*, which provides the foundation for a coordinated and collaborative approach to sector-wide assurance.

Implementation monitoring seeks to ensure that the lessons identified from emergencies, including recommendations and agreed actions, are implemented in a sustainable manner to make a lasting difference for Victorian communities.

Section 64(1)(ca) of the Act establishes that one of IGEM's functions is to, at the request of the Minister for Emergency Services, monitor and report to the minister on the implementation of recommendations arising from reports that relate to IGEM's functions or in relation to the emergency management sector in whole or in part.

3. Approach

IGEM monitors implementation of Victorian Government recommendations and affirmations by assessing progress against the implementation actions set out in the Victorian Government Implementation Plan (refer to Appendix A).

Each recommendation or affirmation may give rise to several actions. IGEM assesses the progress of each action. Once all actions are assessed as complete, IGEM considers the recommendation or affirmation to be complete.

3.1 Assurance principles

IGEM's assurance activities are guided by the *Monitoring and Assurance Framework for Emergency Management* (the Framework). The Framework provides the foundation for IGEM's coordinated and collaborative approach to sector-wide assurance.

The Framework defines assurance as an expression or statement designed to increase the confidence of government and the community in the ability of the emergency management system to plan for, respond to and recover from emergencies.

The Framework articulates four principles to guide assurance activities performed in relation to the emergency management system in Victoria.

Table 1 provides an overview of the four principles that IGEM applies when monitoring the implementation of the recommendations, affirmations and actions from the Victorian Government Implementation Plan.

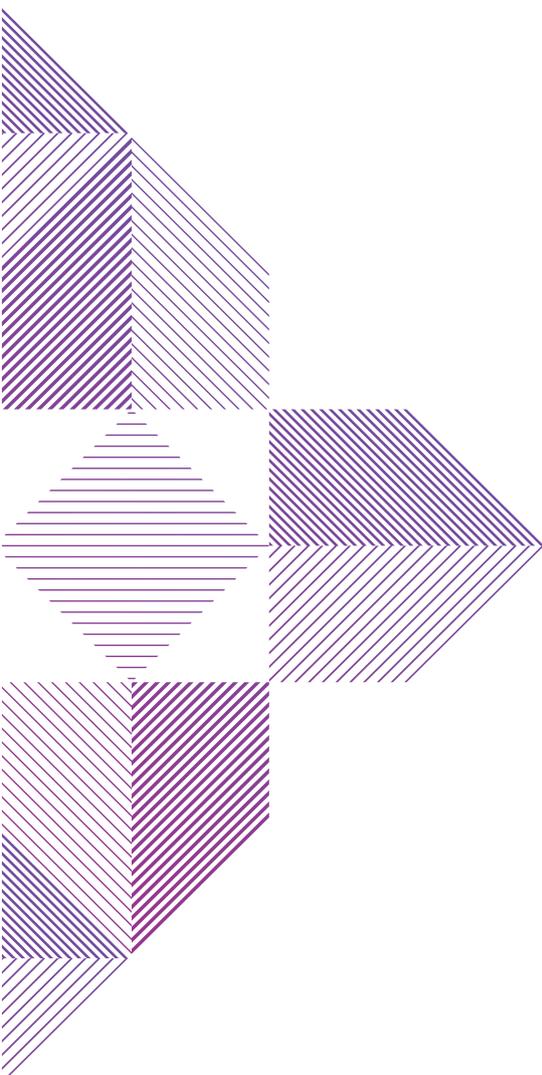


Table 1: Monitoring and Assurance Framework for Emergency Management principles

FRAMEWORK PRINCIPLE	IN THE CONTEXT OF HAZELWOOD IMPLEMENTATION MONITORING
Continuous improvement	The sector supports a culture of continuous improvement by: <ul style="list-style-type: none"> • sharing results of assurance activities and information on contemporary, better practice in emergency management • focusing on systems of work – and not individuals – to ensure that assurance is non-adversarial • understanding that the sector requires time, resources, and the opportunity to identify and implement sustainable solutions.
Collaboration and coordination	IGEM will work collaboratively with all Victorian Government departments, statutory bodies, non-government health providers and coal-mine operators (organisations) in conducting Hazelwood Mine Fire Inquiry monitoring.
Adding value	Assurance is proportionate and considers risk-based approaches. The results provide evidence-based, meaningful, and timely information for the sector, government and the community about the performance of the sector and opportunities for improvement.
Reducing burden	Through effective and early stakeholder engagement and reporting advice, IGEM aims to minimise the frequency of evidentiary requests and/or not create unnecessary burden for organisations.

3.2 Stakeholder engagement

Key stakeholders

Organisations with responsibility for implementing recommendations and affirmations are:

- Country Fire Authority (CFA)
- Department of Economic Development, Jobs, Transport and Resources (DEDJTR)
- Department of Environment, Land, Water and Planning (DELWP)
- Department of Health and Human Services (DHHS)
- Department of Justice and Regulation (DJR)
- Department of Premier and Cabinet (DPC)
- Emergency Management Victoria (EMV)
- Environment Protection Authority Victoria (EPA)
- Metropolitan Fire and Emergency Services Board (MFB)
- WorkSafe Victoria (WorkSafe)
- Four principal health agencies:
 - Gippsland Primary Health Network (Gippsland PHN)
 - Latrobe City Council (LCC)
 - Latrobe Community Health Service (LCHS)
 - Latrobe Regional Hospital (LRH)
- State-level non-government health agencies³
- Latrobe Valley mine operators:
 - AGL Loy Yang
 - EnergyAustralia Yallourn
 - ENGIE Hazelwood.

IGEM places a high priority on engagement with stakeholders. IGEM began engagement with reporting organisations early in the year, writing to those with lead implementation responsibility to outline time lines and confirm communication arrangements. IGEM offered to meet with nominated representatives to explain the implementation reporting process, provide guidance on evidence requirements and seek suggestions on improvements to our processes. Many organisations accepted this offer, meeting with IGEM across the first half of 2017 to test their reporting approach and share their progress and challenges.

³ As defined in the Hazelwood Mine Fire Inquiry Report, Volume III – Health Improvement, p. 10

Acknowledgements

IGEM acknowledges the high level of cooperation and support received from Victorian Government departments and agencies, the coal mine operators and non-government entities in preparing this report. Information was often provided to IGEM earlier than required, and several organisations engaged proactively with IGEM to seek advice on how to improve the quality of their reporting. This commitment to transparency and continuous improvement is commended.

3.3 Information collection

Progress updates by organisations

In July 2017 IGEM formally requested implementation updates supported by documentary evidence of progress, such as policies, procedures, contracts, manuals, reports, guides and meeting minutes.

More than 1150 documents were received from 20 organisations. All documents were stored securely and managed in accordance with IGEM's statutory confidentiality requirements in accordance with section 72 of the Act.

Where required, IGEM contacted or met with nominated representatives of departments and agencies to clarify information or request additional documentation.

IGEM seeks to reflect progress by departments and agencies to the fullest extent possible based on evidence provided to IGEM or publically available. At times, if evidence is unavailable, IGEM may be limited in our capacity to report on the progress of actions.

Desktop research

Where possible, IGEM reviewed publicly available information such as reports, research papers, ministerial statements, and websites, in order to corroborate evidence provided by lead organisations and reduce organisations' reporting requirements.

3.4 Analysis

When assessing the progress of actions, IGEM considers:

- time frames for the action, including revised time frames, delays and progress on key milestones
- the contribution of the reported activity to the action, recommendation or affirmation it supports
- evidence available to support the reported activity.

For each action, IGEM assigns a 'status' and a 'finding'.

Table 2 describes the status that IGEM assigns for each action.

Table 2: Implementation status

STATUS	DESCRIPTION
Complete	Action has been completed satisfactorily or implemented as planned.
Ongoing	Action is in progress and is to be revisited in the 2018 Annual Report.

Findings provide further information on the progress of actions. Table 3 provides a summary of common findings used in this report. IGEM assigns a finding to each action based on a number of factors including achievement against timeframes and evidence of recent progress. This year, IGEM has adapted the findings assigned to each action to include consideration of revised timeframes. As outlined in the Framework, IGEM understands that the sector requires time, resources, and the opportunity to identify and implement sustainable solutions.

Table 3: Summary of findings

FINDING
IGEM considers this action has been implemented as planned.
This action is contingent on Action/s X/Y and IGEM will revisit in the next Annual Report.
IGEM considers this action is progressing satisfactorily and will revisit in the next Annual Report.
IGEM will revisit this action in the next Annual Report. ⁴
IGEM notes the revised time frames for this action and will revisit in the next Annual Report. ⁵
This action is overdue and IGEM will revisit in the next Annual Report.

3.5 Reporting

This report encompasses the 2016–17 period (12 August 2016 to 4 August 2017).

IGEM provided stakeholders who supplied progress updates with a confidential draft of this report for comment prior to finalisation.

IGEM provided a final copy of the report to the Minister for Emergency Services on 31 October 2017.

The Minister for Emergency Services will make the 2017 IGEM Hazelwood annual report publicly available.

⁴ Although this action may be experiencing delays or challenges, IGEM has found that progress has been made since the 2016 IGEM Hazelwood report and does not yet consider it overdue.

⁵ IGEM has assessed the evidence provided to support the reason for a revised timeframe and considers the revision is reasonable and has been approved at a senior level in the lead agency.

4. Progress update – Victorian Government actions

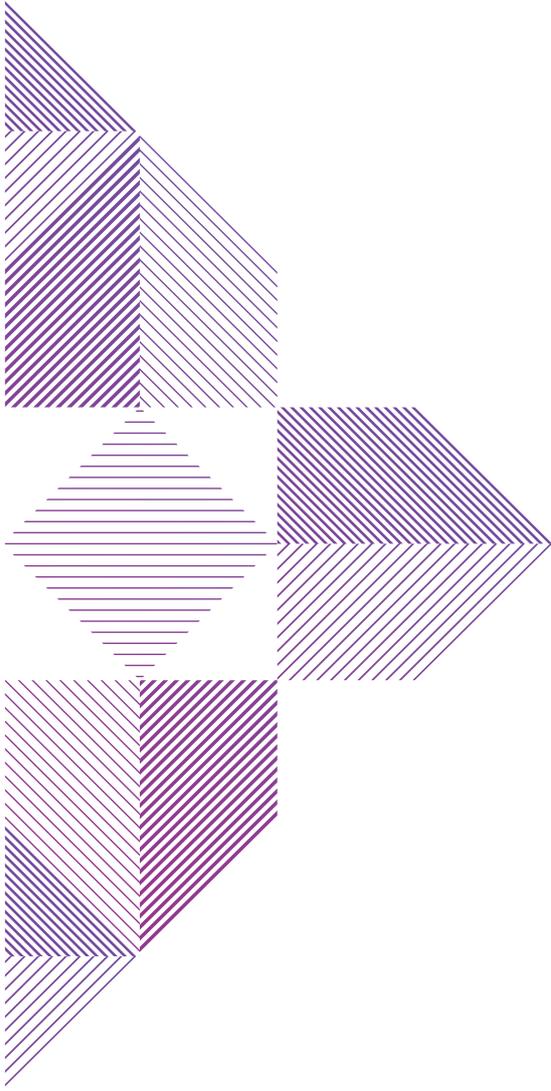
The 2016 Victorian Government Implementation Plan sets out the 246 actions that are being taken by the government to fulfil its commitment to implement the recommendations and affirmations of the Inquiry reports.

The actions are grouped numerically under the following themes:

- Governance and accountability
- Communications and community engagement
- Health in the Latrobe Valley
- Incident air quality and wellbeing
- Latrobe Valley coal mine regulation
- Latrobe Valley coal mine rehabilitation bonds
- Latrobe Valley Regional Rehabilitation Strategy
- Emergency management planning, response and recovery.

In the following sections, 4.1–4.8, IGEM reports progress of the implementation of each of the government actions in accordance with these themes.

Implementation progress by non-government health agencies and coal mine operators is reported in sections 5, 6 and 7.



4.1 Governance and accountability

This section reports on the government’s governance structure to coordinate and oversee the implementation of the Inquiry reports’ recommendations and affirmations and the processes in place to monitor and publicly report on progress.

Table 4: Status of governance and accountability actions

NO.	ACTION	RELATED RECOMMENDATION/ AFFIRMATION	DUE DATE	STATUS	LEAD AGENCY
GOVERNANCE AND ACCOUNTABILITY					
1	Convene meetings of the IDC on a quarterly basis, and more often if required, until December 2019	N/A	Quarterly until December 2019	Ongoing	DPC
5	Publicly released the IGEM’s annual reports in the Victorian Parliament within a reasonable time of receipt by the Minister for Emergency Services	2014 Inquiry report: recommendation 1	Annually until 2019	Ongoing	DJR

1. Convene meetings of the IDC on a quarterly basis, and more often if required, until December 2019

The Inter-Departmental Committee (IDC) oversees and coordinates actions to implement the recommendations and affirmations in the Inquiry reports as outlined in the Victorian Government Implementation Plan.

The IDC is chaired by DPC and membership consists of senior representatives from government departments and agencies including CFA, DEDJTR, DELWP, DHHS, DTF, EMV, EPA, MFB and WorkSafe.

The IDC has three working groups, the Health and Wellbeing Working Group, the Rehabilitation Working Group and the State Smoke Working Group which meet as required to address cross departmental and agency actions to implement the Victorian Government Implementation Plan. The IDC reports to the State Crisis and Resilience Council (SCRC) and a designated committee of Cabinet. The IDC liaises with IGEM on matters related to the implementation of the Inquiry reports’ recommendations and affirmations.

Since the last reporting period, DPC has convened 10 IDC meetings from July 2016 to June 2017. IGEM representatives have attended these meetings as observers on two occasions and noted the progress of the IDC in coordinating the implementation of recommendations and affirmations from the inquiries.

This action is ongoing until December 2019.

FINDING

IGEM considers this action is progressing satisfactorily and will revisit in the next Annual Report.

5. Publicly released the IGEM’s annual reports in the Victorian Parliament within a reasonable time of receipt by the Minister for Emergency Services

IGEM delivered the 2016 IGEM Hazelwood report to the minister on 28 October 2016 and it was tabled in Parliament on 24 November 2016. Thereafter, IGEM has made the report available on its website.⁶

DPC also publicly released the report on 15 February 2017 through the department’s website.⁷

The minister has requested that IGEM deliver the 2017 IGEM Hazelwood annual report by 31 October 2017.

FINDING

IGEM considers this action is progressing satisfactorily and will revisit in the next Annual Report.

⁶ igem.vic.gov.au

⁷ dpc.vic.gov.au

4.2 Communications and community engagement

Effective communications and community engagement are key elements of emergency management.

The 2014 and the 2015–16 Inquiry reports made a number of recommendations and affirmations to enhance the way the Victorian community receives timely, tailored and relevant public information and warnings on emergency events so they can make informed decisions about their safety.

This theme covers the government's response to recommendations and affirmations in the Inquiry reports that relate specifically to communication and community engagement. These are:

- recommendation 11 and affirmations 6 and 14 of the 2014 Inquiry report, which relate to whole-of-government communication during and after emergencies
- recommendation 12 of the 2014 Inquiry report, which relates to community engagement across the state
- affirmation 20 of the 2014 Inquiry report, which relates to communications by EPA at state level and community engagement specific to the Latrobe Valley
- recommendations 3 and 4 of the Death Investigation Inquiry report, and affirmations 26 and 33 of the 2014 Inquiry report, which relate to communications and community engagement by DHHS.

The following sub-themes, with associated actions, are listed under the communications and community engagement theme in the Victorian Government Implementation Plan:

- Communications during emergencies
- White Paper actions
- Community engagement
- EPA emergency communications
- EPA engagement with the Latrobe Valley community
- Health communications and public health investigations.

All actions under the sub-theme of EPA emergency communications were reported as complete in the 2016 IGEM Hazelwood report.

Below is a summary of progress on actions under the remaining sub-themes.

Progress summary

The Victorian Government Implementation Plan lists 40 actions under the communications and community engagement theme, of which 35 have now been completed.

Overall, the lead agencies – DHHS, EPA and EMV – have reported significant progress.

EMV developed the *Emergency Management State Communications Strategic Framework* in May 2017, which provides for an integrated, whole-of-community approach to emergency communications in Victoria, encompassing government, agencies, business, industry, not for profits and the community. EMV is in the process of developing training programs for key managers at incident, regional and state levels to be delivered as part of the 2017–18 summer pre-season briefings.

The new VicEmergency website⁸, app and hotline were launched in November 2016 in preparedness for the 2016–17 summer period. These services provide a central point of access for the community to receive timely information and warnings from agencies including CFA, DEDJTR, DELWP, DHHS, Life Saving Victoria, MFB, and VICSES.

The Emergency Management Common Operating Picture (EM-COP) was upgraded in November 2016 to incorporate a number of existing emergency management systems. EM-COP was first launched in November 2015 and shares information across all tiers of emergency management, enabling stakeholders to access the same information at the same time.

Progress has been made towards delivering the Latrobe Valley Community Engagement and Planning Project, which aims to assist the community to become more connected and build resilience before, during and after emergencies. A Senior Engagement Officer – Community Based Emergency Management has been appointed to coordinate delivery of the project. The engagement officer will continue to work with the Latrobe Valley community to build a safer and more resilient community over the next 12 months.

EPA continued to work with the Latrobe Valley community to increase understanding of EPA scientific information and provide opportunities for local community participation in environmental monitoring. A co-design process involving EPA and members of the local community will result in improvements to the air monitoring network in the Latrobe Valley. EPA is currently implementing the enhanced air monitoring network with the procurement of new air monitoring equipment and the establishment of new air monitoring sites underway. The community has been actively engaged in the Citizen Science Program and a standard framework for the design and evaluation of citizen science programs has been developed to ensure their continued value.

DHHS approved the findings and recommendations of the independent review of its procurement and contract management policies and procedures. A number of improvements have been made to strengthen the department's policies, procedures, staff approaches and understanding in relation to the procurement of independent expert advice and the management of those contracts.

⁸ emergency.vic.gov.au/respond/

4.2.1 Communications during emergencies

Table 5: Status of communications during emergencies actions

NO.	ACTION	RELATED RECOMMENDATION/ AFFIRMATION	DUE DATE	STATUS	LEAD AGENCY
COMMUNICATIONS DURING EMERGENCIES					
6	Circulate a draft state communications strategy to EMJPIC members for consultation	2014 Inquiry report: recommendation 11	July 2016	Complete	EMV
7	Test the draft state communications strategy at the Latrobe Valley Coal Mine Taskforce August 2016 exercise	2014 Inquiry report: recommendation 11	August 2016	Complete	EMV
8	Incorporate private operators of essential infrastructure in the state communications strategy	2014 Inquiry report: recommendation 11	September 2016	Complete	EMV
9	Submit the state communications strategy to SCRC for consideration and approval	2014 Inquiry report: recommendation 11	September 2016	Complete	EMV
10	Develop operational guidelines/procedure to support the state communications strategy	2014 Inquiry report: recommendation 11	October 2016	Complete	EMV
11	Provide training to key managers at incident, regional and state level (including EMJPIC members, Level 3 Controllers, regional and state control positions) on the state communications strategy and supporting operational guideline/procedure	2014 Inquiry report: recommendation 11	November 2016 (Revised: November 2017)	Ongoing	EMV

6. Circulate a draft state communications strategy to EMJPIC members for consultation

The Emergency Management Joint Public Information Committee (EMJPIC) is chaired by EMV and comprises representatives from all emergency response agencies. The 2014 Inquiry report recommended that development of the state communications strategy be facilitated by the EMJPIC Executive, as the strategic executive body for crisis communications.

In August 2016 EMV circulated a draft *Emergency Management Communications Roadmap* and Latrobe Valley Coal Mine Taskforce Exercise document to the EMJPIC executive and members. The roadmap provided the opportunity for members to understand and comment on the strategic direction of emergency management communications.

On 28 October 2016 EMV facilitated a briefing for EMJPIC members on the requirements and considerations for a comprehensive whole-of-community emergency communications approach to support the development of the state communications strategy.

In January 2017, with the input of EMJPIC members, EMV developed an interim strategy. The interim strategy was tested across a range of potential and actual emergency scenarios, including during the Bourke Street and Norwegian Star Cruise Ship incidents. These events, along with feedback and input from EMJPIC members, further informed the final communications strategy.

Consultation, feedback and input from EMJPIC members continued in the lead up to submission of the final draft of the *Emergency Management State Communications Strategic Framework* to the SCRC in May 2017.

FINDING

IGEM considers this action has been implemented as planned.

7. Test the draft state communications strategy at the Latrobe Valley Coal Mine Taskforce August 2016 Exercise

The Latrobe Valley Coal Mine Taskforce Exercise was held from 25–26 August 2016. Approximately 80 people representing over 30 organisations were brought together by the Coal Mine Emergency Management 'Taskforce' to exercise emergency management arrangements in the Latrobe Valley.

The exercise included discussions and activity related to the preparation and provision of public information, with a view to testing the approach proposed by the draft state communications strategy.

Five key areas were identified for testing, evaluation and assessment during the exercise:

- coordination, collaboration and integration across the emergency management sector and Victorian Government
- coordination and information flow to/from the local incident management team and the state-level
- coordination and information flow to/from private sector organisations
- timeliness, consistency and usefulness of information provided to the public from all levels
- ability to innovate to overcome challenges to communication.

As part of the exercise the Emergency Management Commissioner provided participants with an understanding of the role of the state in leading strategic communications in addition to the function of EMJPIC.

An evaluation report of the exercise was prepared by an independent consultant on behalf of EMV in September 2016. The report focused on opportunities for improvement in public information in order to inform development of the final state communications strategy.

FINDING

IGEM considers this action has been implemented as planned.

8. Incorporate private operators of essential infrastructure in the state communications strategy

EMV, through the process of consultation, testing and development of the communications strategy, identified that broader incorporation of the private sector and business operators, beyond just private operators of essential infrastructure, was critical to ensure a whole-of-community approach to emergency communications.

The final *Emergency Management State Communications Strategic Framework* and accompanying *Emergency Management State Strategic Communications Guide* highlight the need for an integrated approach to communications, encompassing private operators of essential infrastructure, business, industry, not for profits and community to better enable community-focused outcomes in relation to emergency events.

FINDING

IGEM considers this action has been implemented as planned.

9. Submit the state communications strategy to SCRC for consideration and approval

In September 2016 the Emergency Management Commissioner briefed the SCRC on the progress of the development of the state communications strategy. The Commissioner advised the council that a broader approach and overarching framework for emergency communications, over and above the Hazelwood mine fire considerations, was required.

Following consultation, testing and development, EMV submitted the final *Emergency Management State Communications Strategic Framework* to the SCRC for consideration and approval. The framework was endorsed by the SCRC at its meeting on 25 May 2017.

The purpose of the framework is to provide an integrated, whole-of-community approach that provides clear and effective coordination and management of media and communications in the event of an emergency in Victoria.

The framework provides new mechanisms aimed at improving strategic communications across the emergency management and private sectors for a wide range of complex, multi-agency emergencies. These new mechanisms include:

- a State Strategic Communications Cell (SSCC) function linking to the Control, Consequence Management and Community Connection approaches – the SSCC function leads the planning for a state strategic and whole-of-community approach to emergency communication

- a standardised strategic communications plan template and guide to be used by communications personnel activated in the SSCC
- standardised strategic communications processes and procedures accompanied by a range of tools developed for departments and agencies.

The framework will be reviewed and updated annually or following a major emergency.

FINDING

IGEM considers this action has been implemented as planned.

10. Develop operational guidelines/procedure to support the state communications strategy

EMV, in collaboration with partner agencies and departments developed a range of tools and supporting documentation to accompany the *Emergency Management State Communications Strategic Framework*. These include:

- the *Emergency Management State Strategic Communications Guide* which provides clear direction for Victorian emergency management communications personnel to complete the state communications plan, including checklists for the first 24 and 72 hours
- the State Strategic Communications Plan Template which enables the development of a plan for each relevant emergency and the setting out of arrangements for planning, coordinating and managing strategic communications
- three role descriptions for SSCC positions within the State Control Centre, including a manager, officer, and member.

EMV has advised IGEM that further development of information and tools to support the *Emergency Management State Strategic Communications Framework* will continue as the tools are applied and improvements are identified.

FINDING

IGEM considers this action has been implemented as planned.

11. Provide training to key managers at incident, regional and state Level (including EMJPIC members, Level 3 Controllers, regional and state control positions) on the state communications strategy and supporting operational guideline/procedure

This action was contingent upon endorsement of the final *Emergency Management State Communications Strategic Framework* by the SCRC as per action 9.

Following endorsement of the framework by the SCRC, EMV prepared an implementation plan for the development and provision of training and information to key managers at incident, regional and state level, including EMJPIC members, Level 3 Incident Controllers, and regional and state control positions.

EMV is developing a draft SSCC learning specification which describes the skills and knowledge required for communications personnel to perform strategic communications roles within the State Control Centre. EMV has advised IGEM that this is in the process of being finalised.

EMV has advised IGEM that relevant training packages and documentation are now planned for completion by September 2017, with training to begin by November 2017. Training will be provided in line with 2017–18 summer pre-season briefing activities. Videos and supplementary information will also be circulated and made available online.

IGEM notes that this action was originally due in November 2016.

FINDING

IGEM notes the revised time frames for this action and will revisit in the next Annual Report.

4.2.2 White paper actions

This section addresses affirmation 6 of the 2014 Inquiry report, which relates to implementation of actions proposed in the *Victorian Emergency Management Reform White Paper*, to improve community awareness and education, and make information more readily available during emergencies.



VicEmergency App

Table 6: Status of white paper actions

NO.	ACTION	RELATED RECOMMENDATION/ AFFIRMATION	DUE DATE	STATUS	LEAD AGENCY
WHITE PAPER ACTIONS					
14	Launch the VicEmergency app	2014 Inquiry report: affirmation 6	October 2016	Complete	EMV
15	Roll all existing emergency management information systems into EM-COP, to be available for use by all emergency management personnel	2014 Inquiry report: affirmation 6	October 2016	Complete	EMV
16	Align call centre arrangements for all government departments and agencies for emergency management messaging	2014 Inquiry report: affirmation 6	December 2017	Complete	EMV

14. Launch the VicEmergency app

In November 2016 in preparedness for the 2016–17 summer season, EMV launched the new VicEmergency app. The VicEmergency app aligns with the recently upgraded VicEmergency website to provide a central location for community access to timely information and warnings for fires, hazardous materials incidents, storms, floods, heat health warnings, earthquakes, tsunamis, power outages, coastal warnings incidents, traffic hazards and shark sightings.

The VicEmergency app replaces the Fire Ready app and provides an improved user-experience with a range of new features, capabilities and design improvements. These include:

- incident and warning notifications for all emergencies
- user profile that enables simultaneous access to watch zones and emergency notifications across multiple devices
- creation of up to 20 watch zones tailored to individual locations and needs
- ability to edit watch zones and turn notifications on and off
- screen view rotation to view the incident map horizontally
- responsive design for iPads and tablet devices.

Users can now create a profile so they can access watch zones across multiple devices including mobile phones, tablets and the VicEmergency website. For the first time, users can also register to receive warnings and notifications via email.

The VicEmergency app can send 12 million notifications per minute and has undergone extensive performance testing to ensure it can manage peak periods and critical incidents. It is monitored 24-hours a day, seven days a week, and has disaster recovery capability set up within Australia and overseas.

FINDING

IGEM considers this action has been implemented as planned.

15. Roll all existing emergency management information systems into EM-COP, to be available for use by all emergency management personnel

The EM-COP platform was developed by the Victorian Government through EMV and launched in November 2015. The platform is a web-based information gathering, planning, dissemination and collaboration tool used to assist emergency management organisations and provide the community with public information and warnings.

EM-COP shares information across all tiers of emergency management, enabling stakeholders to access the same information at the same time.

The new platform takes the operational information available in EM-COP and uses it to provide the community with emergency information and warnings through the new VicEmergency app, upgraded VicEmergency website, VicEmergency Facebook and Twitter, Victoria's emergency broadcasters such as ABC radio and the telephone-based emergency alert system.

From November 2016 EM-COP now incorporates a number of other key emergency management information systems, including:

- Emergency Management Knowledge library – the sector's knowledge library containing doctrine, work instructions, standard operating procedures and key information for the emergency management sector
- Emergency Management Portal – a central repository of links to applications, websites, sources of information pertaining to current operations, contact lists, rosters and similar material for emergency management personnel
- Incident Management Toolbox – a collection of guidance material for Incident Management Team (IMT) personnel to assist them in undertaking their functional roles in the management of an incident
- eMap State Overview – one component of the statewide mapping system, designed to show current incident activity in Victoria
- One Source One Message warnings platform – the current system used by emergency management organisations and IMTs to activate community sirens and issue public messaging including, but not limited to emergency warnings and community updates.

FINDING

IGEM considers this action has been implemented as planned.



Emergency Management – Common Operating Picture (EM-COP)
(Courtesy: EMV)

16. Align call centre arrangements for all government departments and agencies for emergency management messaging

In November 2016 a new VicEmergency Hotline – 1800 226 226 – was established to make it easier for the community to access emergency information through one telephone number. It brings together all emergency numbers including the Victorian Bushfire Information Line, the Victorian Emergency Relief Information Line and the VICSES Flood and Storm Information Line.

The VicEmergency Hotline was used as an information source for the community following the Bourke Street incident in January 2017 and continues to be promoted to members of the community seeking information in relation to emergencies.

Together, the VicEmergency website, app and hotline provide a unified approach for Victorians to access timely information for a number of emergencies across multiple channels.

FINDING

IGEM considers this action has been implemented as planned.

4.2.3 Community engagement

The Latrobe Valley Community Engagement and Planning Project aims to assist the community to become more connected and build resilience before, during and after emergencies.

The project is based on the Community-Based Emergency Management (CBEM) model developed by EMV, in collaboration with the Harrietville community, to support building of resilience following the 2013 bushfires.

CBEM is a collaborative planning and engagement approach, designed to support communities and organisations to work together to develop a safer, more resilient and sustainable future.

The *Community-Based Emergency Management Overview*, available on the EMV website⁹ provides key information on the CBEM approach and acts as a guide for the community to build on combined strengths, by working together to identify local priorities and develop

mutual goals and solutions. This includes building relationships and using locally tailored processes for communities, emergency management organisations, government, business, industries and non-government organisations to participate in decision-making processes.

Table 7: Status of community engagement actions

NO.	ACTION	RELATED RECOMMENDATION/ AFFIRMATION	DUE DATE	STATUS	LEAD AGENCY
COMMUNITY ENGAGEMENT					
17	Engage a dedicated EMV community engagement officer based in the Latrobe Valley	2014 Inquiry report: recommendation 12	August 2016	Complete	EMV
18	Develop a plan for the Latrobe Valley Community Engagement and Planning Project	2014 Inquiry report: recommendation 12	February 2017	Complete	EMV
19	Deliver the Latrobe Valley Community Engagement and Planning Project	2014 Inquiry report: recommendation 12	June 2017 (Revised: July 2018)	Ongoing	EMV

17. Engage a dedicated EMV community engagement officer based in the Latrobe Valley

EMV has employed a Senior Engagement Officer – Community Based Emergency Management who commenced in October 2016.

The position is based in Morwell, working directly with the Morwell community and more broadly across the Latrobe Valley. The key function of the position is to work with stakeholders, community networks and support organisations to adopt and use the CBEM approach.

FINDING

IGEM considers this action has been implemented as planned.

18. Develop a plan for the Latrobe Valley Community Engagement and Planning Project

The Latrobe Valley Community Engagement and Planning Project aims to support the community and local organisations to better connect and work together before, during and after emergencies through a number of measures.

The *Building a safer and more resilient community in Morwell and the Latrobe Valley Project Plan* was endorsed by EMV in March 2017.

The project plan has been guided by the CBEM approach, which focuses on working locally with key stakeholders to identify, respect and appropriately support people to address their local community needs.

EMV presented the plan to the IDC at its March meeting for endorsement. Member agencies provided minor feedback for consideration. A revised plan was completed in April 2017 further enhancing the CBEM-based work being undertaken locally.

FINDING

IGEM considers this action has been implemented as planned.

⁹ emv.vic.gov.au/publications/community-based-emergency-management-overview

19. Deliver the Latrobe Valley Community Engagement and Planning Project

The *Building a safer and more resilient community in Morwell and the Latrobe Valley Project Plan* sets out a staged implementation plan for key milestones, including:

- delivery of a CBEM plan for Morwell by 30 June 2017
- delivery of a revised plan for Morwell and other engaged communities by 30 June 2018
- a final report by 31 July 2018.

EMV has been working with the local community to produce the draft *Community Based Emergency Management in Morwell: A framework for working together before, during and after*. The purpose of the framework is to enable the people of Morwell to participate in building a safer and more resilient community, by better connecting and working together before, during and after emergencies.

This approach is expected to produce:

- a collaboratively developed community profile
- an agreed process and effective pathways for communication between community and agency networks
- locally developed emergency scenarios to support collaborative planning
- documented short, medium and long-term goals
- key information to support other local planning processes, projects and activities.

IGEM notes that this action was originally due in June 2017. EMV has advised IGEM that the framework is expected to be approved in August 2017 and will guide the implementation across Morwell and the broader Latrobe Valley over the next 12 months.

FINDING

IGEM notes the revised time frames for this action and will revisit in the next Annual Report.

4.2.4 EPA engagement with the Latrobe Valley community

EPA's *Reconnecting with the Latrobe Valley Plan* aimed to increase the accessibility of EPA's scientific information and provide opportunities for local community involvement in EPA activities. The overall objective was to rebuild community confidence and trust in EPA and their work in the local environment.

The 2016 IGEM Hazelwood report noted that independent social research found that the Morwell and wider Latrobe Valley community considers EPA a trusted source of information. Over a 12-month period, there was a significant increase in satisfaction among residents with EPA's efforts to improve the local environment following the mine fire.¹⁰

Table 8: Status of EPA engagement with the Latrobe Valley community actions

NO.	ACTION	RELATED RECOMMENDATION/ AFFIRMATION	DUE DATE	STATUS	LEAD AGENCY
EPA ENGAGEMENT WITH THE LATROBE VALLEY COMMUNITY					
24	Complete a community co-design process for a new air monitoring network (including smoke sensor sub-network)	N/A	December 2016	Complete	EPA
25	Evaluate existing activities of the Citizen Science Program and adapt them as necessary to remain relevant to the local community	2014 Inquiry report: affirmation 20	September 2017	Ongoing	EPA
26	Complete the reconfiguration of the current ambient air monitoring network (including the smoke sensor sub-network)	N/A	June 2018	Ongoing	EPA
27	Deliver new participation opportunities as part of the Citizen Science Program for the Latrobe Valley community	2014 Inquiry report: affirmation 20	June 2018	Ongoing	EPA

¹⁰ 2016 IGEM Hazelwood report, p. 63

24. Complete a community co-design process for a new air monitoring network (including smoke sensor sub-network)

Public submissions to the 2015–16 Inquiry showed public uncertainty about the appropriate level of air monitoring in the Latrobe Valley and highlighted the need for increased air monitoring to meet community concerns.

In response, EPA engaged a co-design consultant in May 2016 to conduct a co-design process with members of the local community, enabling them to determine their own needs with expert support and facilitation. The co-design process sought to expand air monitoring capabilities and public reporting for the Latrobe Valley.

An initial 'drop-in' style information session was held by EPA in August 2016 to engage interested community members.

Following this initial session, the Latrobe Valley Air Quality Monitoring Co-Design Panel – made up of 36 representatives of the local community, supported by EPA technical experts – met three times between September and October 2016 to:

- share information about air quality
- define and rank issues and concerns
- explore different solutions and air monitoring options
- evaluate proposed solutions.

The process resulted in a map of a new preferred community-designed air monitoring network that was widely supported by the panel. The map was subsequently provided to the broader community on the co-design website¹¹ and EPA has advised that panel members were keen to continue to be involved in the roll-out and operation of the air monitoring network over the next few years.

The co-design consultant also prepared a report on the outcomes and learnings from the co-design process.

FINDING

IGEM considers this action has been implemented as planned.

25. Evaluate existing activities of the Citizen Science Program and adapt them as necessary to remain relevant to the local community

A key element of EPA's community engagement approach was the introduction of a pilot citizen science program. Citizen science involves the participation of community volunteers working with EPA to build their skills and understanding of environmental monitoring methods, scientific data and the state of the local environment.

The existing activities of the Citizen Science Program are:

- Caring for Waterhole Creek
- Smoke Spotters.

EPA launched the Caring for Waterhole Creek project in February 2017. The project involves 13 trained volunteer citizen scientists monitoring water quality in Waterhole Creek, Morwell. Feedback to date from volunteers demonstrates positive community engagement with the program, as well as indicating an increased likelihood to report pollution to EPA as a result of their involvement. The project continues to evolve through collaboration with volunteers to ensure the approach remains relevant and engaging. For example, during a recent session in June 2017 the group identified an area with elevated ammonia levels. As a result, an investigation has been initiated by the EPA Gippsland office.

The Smoke Spotters project involved the low-tech approach of using visual air quality observations to assess air quality, particularly in relation to smoke. While the trial and evaluation of the Smoke Spotters project resulted in a positive review, it was decided not to continue with the project as it does not reflect the new community co-designed approach to Latrobe Valley air monitoring that plans to use higher quality small sensor technology.

EPA is developing a citizen science validation and evaluation framework, to inform the design and evaluation of citizen science activities to ensure their continued value to the Latrobe Valley community and EPA. The framework is due to be finalised in September 2017.

FINDING

IGEM considers this action is progressing satisfactorily and will revisit in the next Annual Report.

26. Complete the reconfiguration of the current ambient air monitoring network (including the smoke sensor sub-network)

EPA is currently implementing the enhanced air monitoring network that was co-designed with the community (refer to action 24). A deployment plan for the project was developed in May 2017, with the procurement of new air monitoring equipment and the establishment of new air monitoring site locations underway.

The procurement documentation for the supply and delivery of services for air monitoring devices was prepared and issued as an expression of interest on the Victorian Government Tenders website on 3 July 2017 and closed on 31 July 2017.

¹¹ epa.vic.gov.au/our-work/programs/latrobe-valley-air-monitoring/latrobe-valley-air-monitoring-codesign

Concurrent to the procurement process, EPA collaborated with Latrobe City Council to identify potential air monitoring sites at the locations chosen by the co-design panel. Fifteen of the 20 new monitoring sites located within the Latrobe City Council boundaries are awaiting planning permission. EPA is currently working with DELWP regarding the siting of six locations on Crown land.

In May 2017 EPA engaged with representatives of the industry Latrobe Valley Air Monitoring Network – Hazelwood Power Station, Loy Yang A and B Power Stations, Yallourn Power Station and the Australian Paper Mill – to explore the possibility of co-locating equipment in Rosedale and Jeeralang Hill, and to include their industry air monitoring network data on AirWatch. These discussions are continuing.

While the co-design of and subsequent transition to the new network is underway, EPA continues to monitor ambient air quality at the current stations in the Latrobe Valley – Traralgon, south of Morwell, east of Morwell, Moe and Churchill. Data collected by the monitoring stations is displayed in near real time on the EPA's AirWatch website.¹²

Over the next six months, EPA will focus on completing the procurement of the new air monitoring equipment, and site preparation for equipment deployment once the relevant planning permits have been granted.

EPA is also planning to implement a new technology platform to collect, store and share environment data, including any objective measure of the quality of air, water, soil, noise and waste by June 2018. This will include the new and existing sensors of the enhanced air monitoring network, and other data sources from citizen science initiatives.

FINDING

IGEM considers this action is progressing satisfactorily and will revisit in the next Annual Report.

27. Deliver new participation opportunities as part of the Citizen Science Program for the Latrobe Valley community

EPA launched the Caring for Waterhole Creek project in February 2017 as a new opportunity for Latrobe Valley community members to participate in citizen science. EPA has implemented a collaborative approach with the community through a model involving co-design, co-monitoring and co-interpretation.

Thirteen citizen scientist volunteers went through a training process and are currently collecting data on a fortnightly basis. Water monitoring will be completed in October–November 2017 at which point EPA and the volunteers will conduct final data analysis and project evaluation. The evaluation will inform future plans for water quality monitoring in the Latrobe Valley.

As a result of the community co-design process for the enhanced Latrobe Valley air quality monitoring network, the co-design panel established the need for the introduction of low cost air quality monitoring sensors. Following the procurement process for this equipment, EPA will have a more informed understanding of how these sensors can be used in future citizen science air monitoring projects in the Latrobe Valley.

Over the next six months, the EPA citizen science team will continue to work with the community to deliver water and air quality monitoring projects.

EPA has developed a citizen science validation and evaluation framework to inform the design of citizen science activities (refer to action 25). Future activities will also be guided by the *Latrobe Valley Citizen Science: Future Prospects and Possibilities* plan to deliver successful citizen science programs for the Latrobe Valley community.

FINDING

IGEM considers this action is progressing satisfactorily and will revisit in the next Annual Report.



EPA engagement with the Latrobe Valley community

4.2.5 Health communications and public health investigations

The DHHS approach to engaging independent experts and the management of those contracts came under the scrutiny of the 2015–16 Inquiry. In its report, the Board of Inquiry criticised the department's contract management in relation to four commissioned studies.

The Death Investigation Inquiry report recommended mandating a rigorous process for investigation of matters of public health concern to avoid real or perceived conflicts of interest, including requiring independent experts to declare whether the state has suggested any substantive changes to their advice and whether any changes have been adopted.

¹² epa.vic.gov.au/our-work/monitoring-the-environment/epa-airwatch/hourly-air-quality-data-table

Table 9: Status of health communications and public health investigations actions

NO.	ACTION	RELATED RECOMMENDATION/ AFFIRMATION	DUE DATE	STATUS	LEAD AGENCY
HEALTH COMMUNICATIONS AND PUBLIC HEALTH INVESTIGATIONS					
31	Develop a plan to implement the findings and recommendations of the independent expert report on DHHS procurement and contract management policies and procedures	Death Investigation Inquiry report: recommendation 4	August 2016	Complete	DHHS
32	Deliver the plan to implement the findings and recommendations of the independent expert report on DHHS procurement and contract management policies and procedures	Death Investigation Inquiry report: recommendation 4	December 2016	Complete	DHHS

31. Develop a plan to implement the findings and recommendations of the independent expert report on DHHS procurement and contract management policies and procedures

In January 2016 DHHS appointed an independent consultant to undertake a review of the department's policy, procedures, staff approaches, understanding, and training in relation to the procurement of independent expert advice and the management of those contracts.

The review focused on the procurement and contract management practices of the DHHS Health Protection Branch and the Office of the Chief Health Officer, with a view to strengthening these practices and developing a best practice culture for managing conflict of interest issues.

The DHHS Executive Board approved the findings and recommendations of the report, *Department of Health and Human Services Approach to Procurement: Responding to the Hazelwood Inquiry* in June 2016 and delegated responsibility for implementation of the recommendations.

DHHS established a Procurement Control Group (PCG) to provide oversight to the implementation of the 10 recommendations of the report, which related to guidance, training, process, culture and evaluation of results after a 12-month period.

The PCG developed a management plan detailing the responses and actions required to implement the recommendations, the various stakeholders involved, and the due dates for actions.

FINDING

IGEM considers this action has been implemented as planned.

32. Deliver the plan to implement the findings and recommendations of the independent expert report on DHHS procurement and contract management policies and procedures

Delivery of the management plan required the PCG to work with a range of stakeholders, including the DHHS Emergency Management Branch, Health Protection Branch and the Office of the Chief Health Officer, and the Procurement and Contract Management Team.

The plan outlined a significant number of actions required to address the 10 recommendations of the expert report including, developing a suite of policies, checklists and other tools to provide guidance on the procurement of independent expert advice.

A procurement hub on the DHHS intranet provides staff with ready access and links to a range of policies, guidelines, resources and training opportunities.

DHHS provided the PCG with a project conclusion report on 27 June 2017.

FINDING

IGEM considers this action has been implemented as planned.

Establishing the Latrobe Health Assembly

DHHS provided the following narrative to reflect on the process of establishing the Latrobe Health Assembly.

Following the conclusion of the 2015–16 Hazelwood mine fire inquiries, the geographic area of Latrobe was designated a Health Innovation Zone, the first of its kind in Australia. Key features of the zone include:

- the commitment to working in a co-design partnership with local communities to identify priorities and solutions for improving health and wellbeing
- establishing the Latrobe Health Assembly
- appointing a Health Advocate to provide a local trusted voice.

In order to get started on this work a Health Taskforce was established. The Taskforce first met in July 2016 and included community members, health services and government representatives. The priorities of the Taskforce were to:

- establish the Latrobe Health Assembly
- recruit a backbone staff to support the Health Assembly
- commence design on the roles and responsibilities of a Health Advocate.

The Taskforce considered a range of model structures for the Health Assembly and recommended an incorporated association be established with a majority community membership to drive priority-setting. The Minister for Health subsequently announced the creation of the Health Assembly in October 2016 and appointment of an independent Chair. In addition to the Chair, foundation members included three key health agencies – Gippsland Primary Health Network, Latrobe Community Health Service and Latrobe Regional Hospital, Latrobe City Council and the Department of Health and Human Services. A public expression of interest was undertaken to recruit a broad general membership.

Work on the organisation's constitution was commenced by the Taskforce, completed and endorsed by the Health Assembly and Minister for Health, prior to

incorporation. There are currently 41 members (with capacity for 50) including a 10 member board. A majority of the membership are community representatives.

The Health Assembly has an office based in Morwell and a staff of four has been recruited to support its activities.

Health Assembly members are working with the community to find gaps in which to innovate and not duplicate existing services and initiatives. Working groups have been formed to address some identified priority areas:

- Wellbeing (social determinants of health) – education and employment with a focus on pride of place – current focus is volunteering
- Healthy living – physical activity, nutrition, sport and recreation – renamed Make the Move, its focus is on increasing physical activity.
- Early childhood, young people and families – focus on an environmental scan and proposal for a PhD study.
- Living better with chronic physical /mental health illnesses – focus on obtaining information about the current service system.

An additional working group is mapping health data, current services and approaches to further support the work of the Health Assembly.

The Health Assembly executive board meets monthly, the general Health Assembly meets quarterly and working groups are meeting in between.

The Taskforce and subsequently the Health Assembly has advised on the criteria for a Health Advocate which is now in recruitment and anticipated to be in place before the end of the year.

This is an exciting time for the community as the Health Assembly consolidates and brings together a mix of people to work in new and different ways to drive health and wellbeing improvements in the Latrobe Health Innovation Zone.

4.3 Health in the Latrobe Valley

In the 2014 Inquiry, the Board of Inquiry found that there was a need to substantially improve the health of the Latrobe Valley community.

The Health Improvement Inquiry report focused on examining the factors surrounding health improvement in the Latrobe Valley, making 12 recommendations and affirming 12 of both the government and non-government entities' actions.

The Board of Inquiry made findings in relation to:

- chronic disease management
- mental health
- early detection and high-risk screening
- health behaviours
- healthy workplaces

- healthy environments
- the health of children and young people
- the effect of social disadvantage on health
- Aboriginal health in the Latrobe Valley.

The Victorian Government Implementation Plan sets out actions to address the findings of the 2014 Inquiry as well as recommendations and affirmations from the Health Improvement Inquiry report.

IGEM is also monitoring and reporting on progress of the recommendations and affirmations in the Health Improvement Inquiry report that are being implemented by non-government health agencies (refer to section 5).

The following themes, with associated actions, are listed under the 'Health in the Latrobe Valley' theme in the Victorian Government Implementation Plan:

- Governance
- Engagement with the Commonwealth
- Prevention
- Early detection and high risk screening
- Expanding services for people with multiple chronic conditions
- Mental health
- Expanding options to access specialist services
- Aboriginal health
- Long term health study
- Ash in roof cavities.

Progress summary

The Victorian Government Implementation Plan lists 68 actions under the 'Health in the Latrobe Valley' theme, of which 53 have now been completed.

Overall, significant progress has been reported by DHHS, the agency responsible for the delivery of actions under the 'Health in the Latrobe Valley' theme. DHHS has partnered with local and statewide health providers, agencies and the community to complete a significant proportion of the actions. A number of the ongoing actions are long-term projects, with evidence of substantial work underway.

The Latrobe Health Assembly (the Health Assembly) was established in October 2016 after extensive community consultation. The Minister for Health announced the appointment of Professor John Catford as its Chair in October 2016. As of June 2017 the Health Assembly had 41 members, including six foundation members and 35 ordinary members, most of whom are local community representatives. The Health Assembly is in its formative stages and priorities for health innovation initiatives will be identified and co-designed in partnership with the

local community and industry. The Health Assembly will oversee an annual developmental evaluation, undertaken to monitor the impact of innovation within the Latrobe Health Innovation Zone.

Recruitment has commenced for the role of the independent Health Advocate, who will enable leadership at the local level and provide advice and advocacy on health-related matters for the Latrobe Valley community.

DHHS engaged with the Commonwealth in proposing an integrated chronic disease trial in Gippsland. Although the request was unsuccessful, progress has been made in other areas relating to chronic disease.

A number of evidence-based prevention initiatives commenced in the Latrobe Valley in 2016 including cancer screening, opportunistic screening for cardiovascular disease, kidney disease and diabetes, and smoking cessation initiatives. Telehealth capacity and specialist health services, including respiratory nursing and allied health services, have been expanded to improve access to specialist care. Strategies to improve mental health and chronic disease are under development.

DHHS is supporting the implementation of priorities in Aboriginal health and wellbeing, identified in collaboration with the local Aboriginal community. An Aboriginal Gathering Place opened in March 2017 and provides a social and safe space for Aboriginal people to meet, connect and run community activities. Discussions are in progress regarding the potential establishment of an Aboriginal Community Controlled Organisation (ACCO) to assume responsibility for local Aboriginal health and wellbeing services.

In November 2016 Monash University released the second report on the long-term health study looking into the effects of particulate matter in smoke on people's health over time.

In response to community concerns, an independent expert examined the health risks from exposure to ash residue in Morwell roof cavities, concluding that the presence of brown coal dust did not present an ongoing health risk. The report recommended that people nonetheless exercise caution as dust in roof cavities anywhere in Australia can contain hazardous materials.

4.3.1 Governance

Table 10: Status of governance actions

NO.	ACTION	RELATED RECOMMENDATION/ AFFIRMATION	DUE DATE	STATUS	LEAD AGENCY
GOVERNANCE					
51	Assist the Latrobe Valley Health Taskforce to recruit an initial local team to support the work of the taskforce and Latrobe Valley Health Assembly	Health Improvement Inquiry report: recommendations 3 and 10	August 2016	Complete	DHHS
52	Develop an engagement strategy to help the Latrobe Valley Health Taskforce to identify and attract broad community and business and industry representatives to consider membership of the Latrobe Valley Health Assembly	Health Improvement Inquiry report: recommendation 3	August 2016	Complete	DHHS
53	Begin an expression of interest process to establish the membership of the Latrobe Valley Health Assembly	Health Improvement Inquiry report: recommendation 3	August 2016	Complete	DHHS
54	Support the Latrobe Valley Health Taskforce to develop and finalise terms of reference and associated operating model in active partnership with the Latrobe community and incorporating development of: <ul style="list-style-type: none"> the governance structure of the Latrobe Valley Health Assembly, including forums and groups reporting to the Assembly a constitution, partnering agreement or MOU (as appropriate) for the Latrobe Valley Health Assembly preparation of information to assist the Latrobe Valley Health Assembly to identify outcomes and processes for monitoring and reporting 	Health Improvement Inquiry report: recommendation 3	October 2016	Complete	DHHS
55	Facilitate the appointment of the Latrobe Valley Health Assembly, and an independent Chair of the Latrobe Valley Health Assembly	Health Improvement Inquiry report: recommendation 3	October 2016	Complete	DHHS
56	Facilitate consideration by the Latrobe Valley Health Assembly of all draft documents prepared by the Latrobe Valley Health Taskforce for amendment and adoption	Health Improvement Inquiry report: recommendation 3	November 2016	Complete	DHHS
57	Develop the roles and responsibilities of the Health Advocate, in consultation with the Latrobe Valley Health Assembly	Health Improvement Inquiry report: recommendation 5	December 2016	Complete	DHHS
58	Work with the Latrobe Valley Health Assembly to develop a measurement and reporting plan, utilising an outcomes framework, so that the impact of health innovation in the Latrobe Valley Health Innovation Zone can be monitored	Health Improvement Inquiry report: recommendation 3	December 2016	Ongoing	DHHS

NO.	ACTION	RELATED RECOMMENDATION/ AFFIRMATION	DUE DATE	STATUS	LEAD AGENCY
GOVERNANCE					
59	Participate as a member of the Latrobe Valley Health Assembly to identify priorities	Health Improvement Inquiry report: recommendation 3	Ongoing (transition to business as usual (BAU) by December 2017)	Ongoing	DHHS
60	Work with the Latrobe Valley Health Assembly to conduct annual monitoring of the impact of innovation	Health Improvement Inquiry report: recommendations 3 and 5	Annually in December (transition to BAU by December 2018)	Ongoing	DHHS

51. Assist the Latrobe Valley Health Taskforce to recruit an initial local team to support the work of the taskforce and Latrobe Valley Health Assembly

DHHS provided the Latrobe Health Taskforce (the Health Taskforce) with draft position descriptions for an Executive Officer, Senior Project Officer, Community Engagement Officer and Administration Officer.

A recruitment process was undertaken and an initial local team comprising an Executive Officer, Communications Manager and Administration Officer was appointed in September 2016. DHHS advised IGEM that due to the preliminary nature and administrative focus of work associated with the establishment of the Health Assembly, DHHS and the Health Taskforce decided not to proceed with the appointment of a Senior Project Officer at this time.

The Latrobe Regional Hospital agreed to be the auspice organisation leading the recruitment and appointment process. DHHS has a funding and service agreement with the Latrobe Regional Hospital to support this arrangement.

The local team has been working together with DHHS in supporting the work of the Health Taskforce.

FINDING

IGEM considers this action has been implemented as planned.

52. Develop an engagement strategy to help the Latrobe Valley Health Taskforce to identify and attract broad community and business and industry representatives to consider membership of the Latrobe Valley Health Assembly

Participation by community members and local industry and business in the Health Assembly ensures health improvement strategies are informed by a strong community engagement process.

DHHS developed an engagement strategy to help the Health Taskforce identify and attract a diverse range of local representatives to consider membership of the Health Assembly. The strategy was presented at a Health Taskforce meeting in August 2016 and included:

- a membership matrix presenting the desired diversity of membership
- community bulletins
- media releases
- an email address for community members to provide feedback and/or ask questions
- a public expression of interest process.

FINDING

IGEM considers this action has been implemented as planned.

53. Begin an expression of interest process to establish the membership of the Latrobe Valley Health Assembly

Delivery of this action was guided by the engagement strategy outlined in action 52.

The Health Taskforce, together with DHHS, commenced the expression of interest process to establish the Health Assembly in August 2016.

The Health Taskforce working group refined the process by developing a membership matrix that identified regional groups active in health and wellbeing promotion as well as the desired level of diversity of community members, for example, age, geographical location, and ethnicity.

In October 2016 a regional news service, the Latrobe Valley Express was used to inform the community about the roles and responsibilities of the Health Assembly, and how community members could register their interest and apply for membership. Promotional material was also distributed to provide information and raise awareness of the expression of interest process and encourage community members to contact the Health Taskforce for assistance with the application process.

The getonboard.vic.gov.au platform was used for community members to download information packs and apply for a membership position. Applicants were asked to answer three questions to demonstrate their suitability for membership of the Health Assembly:

- Why are you interested in being a member of the Latrobe Health Assembly?
- What can you contribute to the Latrobe Health Assembly?
- What are your hopes and aspirations for the future of the Latrobe Valley?

The closing date for expressions of interest was 4 November 2016.

FINDING

IGEM considers this action has been implemented as planned.

54. Support the Latrobe Valley Health Taskforce to develop and finalise terms of reference and associated operating model in active partnership with the Latrobe community and incorporating development of:

- the governance structure of the Latrobe Valley Health Assembly, including forums and groups reporting to the Assembly
- a constitution, partnering agreement or MOU (as appropriate) for the Latrobe Valley Health Assembly
- preparation of information to assist the Latrobe Valley Health Assembly to identify outcomes and processes for monitoring and reporting.

As a member of the Health Taskforce and the Health Assembly, DHHS has actively assisted with the development and establishment of the operating model and structures for the Health Assembly. The nature of the approach in establishing the Health Assembly and its role in the Latrobe Health Innovation Zone is deliberately developmental with a focus on community co-design.

DHHS assisted with the development of a draft terms of reference for the Health Assembly that was endorsed at a Health Taskforce meeting on 15 August 2016.

DHHS also provided the Health Taskforce with three options for the Health Assembly's operating model – formal partnership, incorporated association and company limited by guarantee. Following consultation with DPC, the Health Taskforce decided that the Health Assembly should be an incorporated association at the meeting held on 15 August 2016.

Consumer Affairs Victoria issued a Certificate of Incorporation for the Latrobe Health Assembly Inc. on 26 June 2017.

An independent consultant was engaged to produce a constitution for the Health Assembly, including details of governance structures. The constitution was subsequently updated and approved on 2 May 2017.

According to the constitution, the Health Assembly must have at least five members and a maximum of 50 members. The constitution also includes details about terms of membership, member rights and obligations, and cessation of membership.

The Health Assembly has two classes of membership – foundation members and ordinary members. Foundation members include:

- the Chairperson
- Latrobe City Council
- Latrobe Community Health Service
- Latrobe Regional Hospital
- Gippsland PHN
- DHHS.

Ordinary members include:

- members of the Latrobe Valley community (in their capacity as an individual or representing an organisation)
- representatives of a statewide agency, for example VicHealth.

As of 30 June 2017 the Health Assembly membership totalled 41, comprising six foundation members and 35 ordinary members.

DHHS provided the Health Taskforce with a concept paper and a report, *Latrobe Health Innovation Zone: Identifying outcomes and processes for monitoring and reporting* in October 2016 to guide thinking about outcomes and processes for monitoring and reporting. The Health Assembly has since determined obligations for annual review of its performance which is outlined in its constitution.

FINDING

IGEM considers this action has been implemented as planned.

55. Facilitate the appointment of the Latrobe Valley Health Assembly, and an independent Chair of the Latrobe Valley Health Assembly

DHHS worked with the Health Taskforce to facilitate the appointment of the Health Assembly membership and its independent Chair.

The Minister for Health announced the creation of the Health Assembly and the appointment of Professor John Catford as its Chair in October 2016.

Nominees for the general Health Assembly membership were identified through a public expression of interest process that was facilitated by DHHS and the Health Taskforce (refer to actions 52 and 53).

Community members who successfully applied for Health Assembly membership were notified by mail on 24 November 2016. Membership of the Health Assembly includes people from a wide range of age groups, cultural backgrounds, community groups, businesses and interests. Community members form the majority of the membership.

The first general meeting of the Health Assembly occurred on 19 December 2016.

FINDING

IGEM considers this action has been implemented as planned.

56. Facilitate consideration by the Latrobe Valley Health Assembly of all draft documents prepared by the Latrobe Valley Health Taskforce for amendment and adoption

DHHS facilitated the preparation and consideration of all draft documents as foundation members of both the Health Taskforce and the Health Assembly. This included the development of a constitution and model structures referred to in action 54. The majority of Health Taskforce members, including the Chair, are members of the Health Assembly, which has enabled continuity of the work.

FINDING

IGEM considers this action has been implemented as planned.

57. Develop the roles and responsibilities of the Health Advocate, in consultation with the Latrobe Valley Health Assembly

The 2014 Inquiry report proposed that:

the Latrobe Valley needs a local health voice that can win the trust of the community and be a sound source of advice, mediation and advocacy on health-related matters¹³

The Health Advocate will work with the Health Assembly and its Board to ensure the community is engaged with the development of the Latrobe Health Innovation Zone.

On 24 November 2016 DHHS produced a background paper to assist the Health Taskforce to identify the roles and responsibilities of the Health Advocate. The paper framed questions around the Health Advocate's roles and responsibilities for the Health Taskforce to consider, as well as presenting three potential operating models for the Health Advocate's role.

The Health Taskforce agreed that the Health Advocate should be independent of the Health Assembly, and should attend Health Assembly meetings as a non-voting member. DHHS worked with the Health Taskforce to contribute a Health Advocate agenda paper for the Health Assembly meeting on 7 February 2017. The paper identified five key roles and responsibilities that are closely related to the desired Health Advocate functions proposed by the Health Improvement Inquiry report:

- provide leadership in the Latrobe Valley by enabling, mediating and advocating for health improvements
- participate in policy, planning and program development and ensure that the community is engaged in the design and implementation of health improvement measures
- monitor and report regularly on the health of the Latrobe Valley and any improvements made with a focus on outcomes

- work closely with the community, Health Assembly and Board, as well as relevant organisations in the region
- focus on the wellbeing of the community and maintain an appropriate level of independence.

A media release dated 16 August 2017 announced that the search for an appropriate person to fill the role of Health Advocate had begun, seeking someone with a strong and respected connection to the Latrobe Valley to take on the role for an initial appointment of up to three-years. The Advocate will report to the Minister for Health. The role is expected to be filled by December 2017.

FINDING

IGEM considers this action has been implemented as planned.

58. Work with the Latrobe Valley Health Assembly to develop a measurement and reporting plan, utilising an outcomes framework, so that the impact of health innovation in the Latrobe Valley Health Innovation Zone can be monitored

This action is linked to Action 60.

DHHS has adopted a collaborative, co-design approach with the Latrobe Valley community and other stakeholders in developing a measurement and reporting plan and outcomes framework.

In October 2016 DHHS in consultation with the Health Taskforce developed initial measurement and reporting planning documents to assist the Health Assembly to identify outcomes and processes for measurement and reporting on the impact of health innovation in the Latrobe Health Innovation Zone. These initial measurement and reporting planning documents were developed as a first phase of this work – the Health Taskforce noted that this work would require further engagement with the Health Assembly.

Since then, DHHS has engaged an independent consultant to work closely with the Health Assembly, DHHS and the Latrobe Valley community to co-design an evaluation framework that considers an outcomes and measurement approach. This evaluation framework will inform a longitudinal evaluation of the impact of innovation within the zone. The consultant's project plan anticipates that a finalised evaluation framework will be available to DHHS in October 2017.

DHHS advised IGEM that a Latrobe Health Innovation Zone Charter and Evaluation Advisory Group is being established. The group will contribute to the development of a charter and evaluation framework through conducting a series of workshops.

VicHealth is also working closely with members of the Health Assembly to map existing health data in order to establish baseline rates and set targets for evaluation.

This action was due in December 2016 however IGEM recognises the developmental nature of this activity and the additional time required for consultation following establishment of the Health Assembly.

FINDING

IGEM considers this action is progressing satisfactorily and will revisit in the next Annual Report.

59. Participate as a member of the Latrobe Valley Health Assembly to identify priorities

DHHS holds two membership places on the Health Assembly, one as a foundation member and one as a general member. DHHS has attended both board meetings and general meetings of the Health Assembly as well as informing priorities through the provision of specific papers and expert advice.

IGEM attended a Health Assembly meeting on 7 June 2017 as an observer and notes the contribution of DHHS to discussions around identifying priorities. IGEM recognises that the Health Assembly is in its formative stages and that the identification of priorities for health innovation initiatives requires a considered co-design process including engagement with the local community and industry.

This action is scheduled to transition to BAU by December 2017.

FINDING

IGEM considers this action is progressing satisfactorily and will revisit in the next Annual Report.

60. Work with the Latrobe Valley Health Assembly to conduct annual monitoring of the impact of innovation

This action will build on the measurement and reporting plan and outcomes framework being developed as part of Action 58.

As outlined under Action 58, DHHS has appointed an independent consultant to conduct a developmental evaluation to monitor the impact of innovation within the Latrobe Health Innovation Zone. The evaluation will also provide an avenue for ongoing community feedback to ensure the health needs of Latrobe Valley residents are met.

DHHS has advised IGEM that the evaluation will adapt over time based on stakeholder feedback to ensure it best meets the community's needs.

Annual monitoring by DHHS is due in December of each year, with a transition to BAU by December 2017.

FINDING

IGEM considers this action is progressing satisfactorily and will revisit in the next Annual Report.

4.3.2 Engagement with the Commonwealth

Table 11: Status of Engagement with the Commonwealth actions

NO.	ACTION	RELATED RECOMMENDATION/ AFFIRMATION	DUE DATE	STATUS	LEAD AGENCY
ENGAGEMENT WITH THE COMMONWEALTH					
64	Progress a bilateral agreement with joint Commonwealth and State investment for a chronic disease integration trial in Gippsland if selected by the Commonwealth as trial site	Health Improvement Inquiry report: recommendation 8	December 2016	Complete	DHHS

64. Progress a bilateral agreement with joint Commonwealth and State investment for a chronic disease integration trial in Gippsland if selected by the Commonwealth as trial site

The Health Improvement Inquiry report recommended DHHS engage with the Commonwealth Government to pool funding with the state to provide integrated services for the management of chronic disease and mental health conditions in the Latrobe Valley.¹⁴

DHHS developed a proposal for a Commonwealth Healthcare Home and Council of Australian Governments' chronic disease integration trial with Gippsland as the preferred priority location. The proposal was presented to Commonwealth officials in March 2016.

The proposed chronic disease integration trial was contingent on the Commonwealth selecting Gippsland as a trial site.

The decision was made by the Commonwealth in December 2016 and Gippsland was not selected as one of the trial sites.

FINDING

IGEM considers this action has been implemented as planned.

¹⁴ Hazelwood Mine Fire Inquiry Report, Volume III – Health Improvement, p. 126

4.3.3 Prevention

Table 12: Status of prevention actions

NO.	ACTION	RELATED RECOMMENDATION/ AFFIRMATION	DUE DATE	STATUS	LEAD AGENCY
PREVENTION					
65	Provide information and evidence regarding previous place-based prevention interventions to inform the Latrobe Valley Health Taskforce and the Latrobe Valley Health Assembly's work	Health Improvement Inquiry report: recommendation 5	July 2016	Complete	DHHS
66	Support the Latrobe Valley Health Taskforce and the Latrobe Valley Health Assembly to partner with Latrobe City Council in the development of the Latrobe MPHW Plan 2017–21	Health Improvement Inquiry report: recommendation 5	Ongoing from July 2016	Ongoing	DHHS
67	Facilitate active and ongoing partnerships with both local and statewide organisations to drive an integrated, place-based approach to preventive health in the Latrobe Valley	Health Improvement Inquiry report: recommendation 5	Ongoing from July 2016	Ongoing	DHHS
68	Allocate funding to support locally determined actions to improve health and wellbeing in agreed priority areas and settings	Health Improvement Inquiry report: recommendation 5	Annually in July until 2019	Ongoing	DHHS

65. Provide information and evidence regarding previous place-based prevention interventions to inform the Latrobe Valley Health Taskforce and the Latrobe Valley Health Assembly's work

In July 2016 DHHS engaged a consultant to conduct a literature review on place-based prevention initiatives and report on the key infrastructure and implementation requirements for place-based prevention.

The literature review provided both general and specific guidance for a place-based approach focused on preventive health. The review offered guidance on governance, leadership, partnership and evaluation as well as the infrastructure and resources required to support interventions.

The review found:

- Place-based approaches are often initiated by governments in response to social inequities, systemic disadvantage, reduced opportunities for participation and disaster recovery.
- Investment in place-based opportunities is often cut short and as a result they do not achieve their intended impacts.

- Long-term evaluations of place-based initiatives focused on preventive health are rare. As a result, place-based initiatives are sometimes attributed with making a start on significant societal issues, yet they are rarely seen to achieve their goals.
- Engagement and participation of communities throughout place-based initiatives is a key to success. This can take various forms including participation in governance; leadership and capacity development programs; media and advocacy roles; data collection for evaluations; and leading or co-delivering relevant initiatives.
- Implementation of place-based prevention initiatives requires many actors to work in concert across multiple sectors and at various levels.

The review also found that key infrastructure for establishing a place-based approach to preventive health should include:

- a clear mandate for action accepted and preferably desired by the community and agencies
- clear governance mechanisms established by the commissioning agency which includes the voices of those adversely impacted
- commitment by partners verbally, in action, and if appropriate fiscally

- early, shared agreement on an overarching evaluation framework, with baseline data collected prior to implementation, and program evaluations commissioned and aligned with the overarching evaluation framework
- local level data collection and sharing of information among partners and across the community
- a skilled, dedicated workforce in place to augment local staffing, with implementers undertaking shared professional development and having access to technical assistance.

The report was tabled at the Health Taskforce meeting on 10 August 2016 and informs the Health Assembly's implementation of the place-based prevention approach in the Latrobe Health Innovation Zone.

FINDING

IGEM considers this action has been implemented as planned.

66. Support the Latrobe Valley Health Taskforce and the Latrobe Valley Health Assembly to partner with Latrobe City Council in the development of the Latrobe MPH Plan 2017–21

DHHS is supporting the Health Assembly to work in partnership with Latrobe City Council in the development of the *Latrobe Municipal Public Health and Wellbeing Plan 2017–21* (MPHW Plan).

The aim of the MPH Plan is to achieve maximum levels of health and wellbeing through identifying and assessing the actual and potential public health issues in the community and outlining strategies and actions to prevent or minimise them.

Latrobe City Council is undertaking community consultation to inform development of the MPH Plan and has identified key themes through the consultation process that closely align with the work of the Health Assembly. The council invited members of the Health Assembly to participate in various engagement activities, including themed municipal workshops around public health and wellbeing focus areas, held in July 2017.

The council also has an established Latrobe City MPH Plan Reference Group with membership including DHHS and the Health Assembly.

FINDING

IGEM considers this action is progressing satisfactorily and will revisit in the next Annual Report.

67. Facilitate active and ongoing partnerships with both local and statewide organisations to drive an integrated, place-based approach to preventive health in the Latrobe Valley

To ensure activities are informed, developed and led at a local level, DHHS has been facilitating partnerships with local and statewide organisations to drive an integrated, place-based approach to preventive health in the Latrobe Valley. DHHS has:

- conducted a briefing session in July 2016 to look at current activity, next steps and partnerships
- hosted workshops with local and statewide agencies in February and April 2017 regarding piloting a chronic disease risk self-assessment tool in the Latrobe Valley
- established a Prevention Design Working Group with representatives from the Health Assembly and local and statewide agencies to co-design and implement arrangements for improved public health and wellbeing
- worked with the Gippsland PHN to establish an Early Detection and High Risk Screening Project Control Group with participation from Latrobe Community Health Service, Latrobe Regional Hospital, Quit Victoria, Cancer Council Victoria, BreastScreen Victoria and the Victorian Chronic Disease Prevention Alliance
- continued to engage with Quit Victoria, VicHealth and the Cancer Council regarding their contributions toward health and wellbeing strategies in the Latrobe Valley
- worked with Latrobe City Council and Latrobe Community Health Service to reflect on the prevention investment known as the Healthy Together Latrobe initiative to ensure learnings are considered in future approaches.

FINDING

IGEM considers this action is progressing satisfactorily and will revisit in the next Annual Report.

68. Allocate funding to support locally determined actions to improve health and wellbeing in agreed priority areas and settings

In April 2016 the Victorian Government announced \$50 million in the 2016–17 Victorian Budget to implement all recommendations from the 2015–16 Inquiry reports. Of this funding, \$27.3 million is allocated over five years to improve the health of the Latrobe Valley community.

The Latrobe Health Innovation Zone Budget Outcome 2016–17 to 2019–20 identifies budget allocations to address local priorities that were identified during the Hazelwood mine fire inquiries.

The funding supports activities and priorities as they are progressively developed with the community. In 2016 the funding was expended to deliver:

- preventive health initiatives to promote physical activity and improved access to drinking water in public places
- initiatives to increase smoking cessation support

- an initiative to improve cancer screening participation rates and improve opportunistic screening for cardiovascular disease and diabetes
- additional hours of respiratory nursing and allied health services
- the establishment of an Aboriginal Gathering Place in partnership with the local Aboriginal community
- the development of strategies to increase awareness and community understanding of mental health
- the expansion of telehealth access and specialist services.

FINDING

IGEM considers this action is progressing satisfactorily and will revisit in the next Annual Report.

4.3.4 Early detection and high risk screening

Table 13: Status of early detection and high risk screening actions

NO.	ACTION	RELATED RECOMMENDATION/ AFFIRMATION	DUE DATE	STATUS	LEAD AGENCY
EARLY DETECTION AND HIGH RISK SCREENING					
69	Review current population and opportunistic screening rates, practices and services in the Latrobe Valley	Health Improvement Inquiry report: recommendation 5	December 2016	Complete	DHHS
70	In consultation with the community and other relevant stakeholders, develop a plan for implementing a system-wide approach to encourage health professionals to ask patients about their smoking and offer support to quit	Health Improvement Inquiry report: recommendation 5	December 2016	Complete	DHHS
71	Implement the smoking cessation initiative, in partnership with the Latrobe Valley Health Assembly, the community and other stakeholders.	Health Improvement Inquiry report: recommendation 5	July 2017	Complete	DHHS
72	Based on the outcomes of the review of population screening rates, practices and services, develop a strategy and implementation plan to improve access to screening services for vulnerable and high-risk groups	Health Improvement Inquiry report: recommendation 5	July 2017	Complete	DHHS

NO.	ACTION	RELATED RECOMMENDATION/ AFFIRMATION	DUE DATE	STATUS	LEAD AGENCY
EARLY DETECTION AND HIGH RISK SCREENING					
73	Based on the outcomes of the review of opportunistic screening rates, practices and services, support the Latrobe Valley Health Assembly to develop a strategy and implementation plan to improve access to opportunistic screening and early intervention services for identified priority areas	Health Improvement Inquiry report: recommendation 5	July 2017	Complete	DHHS
74	Support the Latrobe Valley Health Assembly to commence a trial of integrated screening and assessment approaches for chronic disease	Health Improvement Inquiry report: recommendation 5	July 2017	Complete	DHHS
75	Promote, and increase the use of, existing primary care systems to assist healthcare providers to identify clients for screening	Health Improvement Inquiry report: recommendation 5	December 2017	Ongoing	DHHS
76	Partner with providers across the Latrobe Valley's health system to develop and implement recruitment and health promotion strategies to encourage community participation in available health screening opportunities	Health Improvement Inquiry report: recommendation 5	December 2017	Ongoing	DHHS
77	Embed the smoking cessation initiative, in partnership with key service providers	Health Improvement Inquiry report: recommendation 5	July 2018	Ongoing	DHHS

69. Review current population and opportunistic screening rates, practices and services in the Latrobe Valley

Screening refers to a variety of processes and tools aimed at identifying early signs and precursors of disease to prevent further disease progression through early intervention services. Population-based screening involves a test being offered to all individuals in a defined target group as part of an organised program. Opportunistic screening is where a test is offered to an individual with or without symptoms of the disease when they present to a health care practitioner.

In December 2016 DHHS completed a review of current population and opportunistic screening rates in the Latrobe Valley, analysing the burden of disease, best practice in testing and screening for key chronic diseases, an analysis of screening data and a high level scan of services that deliver screening and testing.

The review focused on three population-based cancer screening programs for breast, bowel and cervical cancer, noting that limited data is available on screening and testing rates for most disease streams. Other priority chronic diseases identified by the review include cardiovascular disease, type 2 diabetes, kidney disease, chronic respiratory disease, lung cancer, hepatitis B and C, chlamydia and mental health.

In addition to the DHHS review, Gippsland PHN prepared a report, *Cancer Screening in Latrobe City – Summary of available data to inform Latrobe Health Innovation Zone actions*. The report looks at cancer incidence and mortality in Gippsland, as well as screening participation rates and outcomes for bowel, breast and cervical cancer.

FINDING

IGEM considers this action has been implemented as planned.

70. In consultation with the community and other relevant stakeholders, develop a plan for implementing a system-wide approach to encourage health professionals to ask patients about their smoking and offer support to quit

The Health Improvement Inquiry noted that the Latrobe Valley has one of the highest rates of smoking in Victoria. Smoking cessation programs were considered to be an area for priority action in delivering health initiatives in the Latrobe Valley.¹⁵

In December 2016 DHHS hosted ‘Smoke Cessation Dialogues’ which provided attendees with an opportunity to discuss smoking cessation with health care workers, experts in tobacco control and community representatives, and explore best practice options and solutions to support the Latrobe Valley community to go smoke free.¹⁶

This process of community and stakeholder consultation informed the development of the *Embedding Smoking Cessation Interventions and Practices* implementation plan by Gippsland PHN, finalised in December 2016. The plan focuses on smoking cessation interventions and practices around an approach where health professionals ask patients about their smoking and offer support to quit.

An important component of the smoking cessation initiative is to encourage and socialise the Latrobe Valley community to be receptive to being tobacco free. This will be achieved by engaging community experts and champions to develop and implement a localised communication and engagement strategy.

FINDING

IGEM considers this action has been implemented as planned.

71. Implement the smoking cessation initiative, in partnership with the Latrobe Valley Health Assembly, the community and other stakeholders

Implementation of the smoking cessation initiative has been undertaken in partnership with the Health Assembly, the community and key stakeholders through:

- the roll out of training for primary care health professionals, general practitioners, practice nurses, pharmacists and dentists
- changes to general practice systems that include secure electronic referrals to specialist smoking cessation services
- public education and marketing initiatives delivered through local media, including newspaper, radio, television and social media

- community stalls being hosted by Quit Victoria, Gippsland PHN and the Gippsland Tackling Indigenous Smoking Team (Lakes Entrance) throughout the Latrobe Valley to provide practical assistance and referral for people seeking to quit smoking.

FINDING

IGEM considers this action has been implemented as planned.

72. Based on the outcomes of the review of population screening rates, practices and services, develop a strategy and implementation plan to improve access to screening services for vulnerable and high-risk groups

Based on the outcomes of the review of population screening rates, practices and services (refer to action 69), the *Improving access to screening services for vulnerable and high-risk groups* implementation plan was prepared by Gippsland PHN in July 2017.

The purpose of the plan is to improve access to screening services for breast, bowel and cervical cancer for vulnerable and high-risk groups.

Vulnerable and high-risk groups identified for screening include Aboriginal and Torres Strait Islander communities, culturally and linguistically diverse communities, communities affected by socio-economic disadvantage, people living in rural areas, people with low health literacy, people with disabilities, and the Lesbian Gay Bisexual Transgender and Intersex community.

The plan aims to demonstrate improved population health and health system outcomes by 2020.

FINDING

IGEM considers this action has been implemented as planned.

73. Based on the outcomes of the review of opportunistic screening rates, practices and services, support the Latrobe Valley Health Assembly to develop a strategy and implementation plan to improve access to opportunistic screening and early intervention services for identified priority areas

In July 2017 Gippsland PHN developed the *Improving access to opportunistic screening and early intervention services for identified priority areas* implementation plan.

¹⁵ Hazelwood Mine Fire Inquiry Report, Volume III – Health Improvement, pp. 60, 78.

¹⁶ www2.health.vic.gov.au/public-health/tobacco-reform/resources-and-fact-sheets-tobacco-reform/smoking-cessation-forum

The implementation plan focuses on four diseases – cardiovascular (heart and stroke), diabetes and kidney disease – as identified in the DHHS Review (refer to action 69). Respiratory diseases, blood borne viruses, sexual health and mental health have been excluded from the plan on the basis that they are being addressed in other projects and initiatives.

Gippsland PHN will work with the Health Assembly and other key stakeholders on the progression and implementation of the plan, which aims to demonstrate improved population health and health system outcomes by 2020.

FINDING

IGEM considers this action has been implemented as planned.

74. Support the Latrobe Valley Health Assembly to commence a trial of integrated screening and assessment approaches for chronic disease

In February 2017 DHHS hosted a workshop with key stakeholders to progress the development of a chronic disease self-assessment tool to be trialled in the Latrobe Valley. A working group was then established to inform the content of the self-assessment tool.

Informed by this preliminary work, DHHS partnered with the National Vascular Disease Prevention Alliance and Victorian Chronic Disease Prevention Alliance to develop the Chronic Disease Self-Assessment Tool, which was finalised in July 2017.

The purpose of the tool is to provide a user-friendly way for consumers to self-assess their potential risk level for cardiovascular disease, type 2 diabetes and chronic kidney disease. Where appropriate, the tool will direct people to primary care for further testing or encourage the user to make changes toward a healthier lifestyle.

In August 2017 Gippsland PHN conducted testing of the paper-based health check under the guidance of DHHS, the National Vascular Disease Prevention Alliance, the Victorian Chronic Disease Prevention Alliance and associated working groups to inform the validation and uptake of the tool. An online version of the tool is to be hosted by the Better Health Channel.

DHHS has advised IGEM that the implementation and promotion phase, which aims to achieve widespread community uptake and use of the self-assessment tool, is due to commence in September 2017.

FINDING

IGEM considers this action has been implemented as planned.

75. Promote, and increase the use of, existing primary care systems to assist healthcare providers to identify clients for screening

DHHS continues to partner with providers across the Latrobe health system to develop and implement health promotion strategies to encourage community participation in available health screening opportunities.

Gippsland PHN was identified by DHHS as an appropriate agency to assist in the implementation of this action. To guide their actions, Gippsland PHN has developed strategic plans for two screening streams:

- cancer screening
- risk assessment and opportunistic screening.

DHHS has advised IGEM that the cancer screening and opportunistic screening strategic plans were finalised in July 2017.

The project will support health professionals to provide primary screening tests and to target people defined by gender, age, location of residence and those with specific social, cultural and economic profiles. The projects will also support opportunistic screening and early intervention services.

Gippsland PHN has conducted an analysis of current population and opportunistic screening rates, practices and services in the Latrobe Valley to further inform the strategic plans. A public education plan and an evaluation and monitoring framework is due by December 2017 and data collection and reporting will occur periodically up to December 2019.

This action is due to be completed in December 2017.

FINDING

IGEM will revisit this action in the next Annual Report.

76. Partner with providers across the Latrobe Valley's health system to develop and implement recruitment and health promotion strategies to encourage community participation in available health screening opportunities

A screening recruitment and health promotion plan, aimed at encouraging the Latrobe Valley community to uptake local screening and intervention opportunities, will be developed by Gippsland PHN by December 2017.

DHHS advise that it is continuing to partner with agencies across the local health system in the Latrobe Valley to develop and implement health promotion strategies to encourage community participation in health screening opportunities. This includes partnering with BreastScreen Victoria regarding a mobile screening service visit and local health promotion. Future preventive health campaigns, such as the smoking cessation and the Live Lighter campaigns, are being re-examined to take account of the Health Assembly and the government's overriding strategy to instil pride of place in the Latrobe Valley and focus on positive messaging.

This action is due to be completed in December 2017.

FINDING

IGEM will revisit this action in the next Annual Report.

77. Embed the smoking cessation initiative, in partnership with key service providers

Gippsland PHN is continuing to work with the Health Assembly to develop and implement further strategies to embed the smoking cessation initiative across the Latrobe Valley health system.

This action is due to be completed in July 2018.

FINDING

IGEM considers this action is progressing satisfactorily and will revisit in the next Annual Report.

4.3.5 Expanding services for people with multiple chronic conditions

Table 14: Status of expanding services for people with multiple chronic conditions actions

NO.	ACTION	RELATED RECOMMENDATION/ AFFIRMATION	DUE DATE	STATUS	LEAD AGENCY
EXPANDING SERVICES FOR PEOPLE WITH MULTIPLE CHRONIC CONDITIONS					
78	Facilitate the establishment of a Chronic Disease Forum, involving both local and statewide providers and experts, to work with the Latrobe Valley Health Assembly to design and develop care pathways to improve coordination for people with chronic disease	Health Improvement Inquiry report: recommendation 5	December 2016	Ongoing	DHHS
79	Invite primary health partner agencies to investigate options for co-location of respiratory nurses within general practices in the Latrobe Valley	Health Improvement Inquiry report: recommendation 5	July 2017	Complete	DHHS
80	Provide an additional 1,000 hours of respiratory nursing service at Latrobe Community Health Service (compared to 2015-16 base level)	Health Improvement Inquiry report: recommendation 5	September 2017	Complete	DHHS
81	Expand the early intervention in chronic disease program, delivered by Latrobe Community Health Service, to provide an additional 2,500 hours of allied health and care coordination services (compared to 2015-16 base level)	Health Improvement Inquiry report: recommendation 5	September 2017	Complete	DHHS

NO.	ACTION	RELATED RECOMMENDATION/ AFFIRMATION	DUE DATE	STATUS	LEAD AGENCY
EXPANDING SERVICES FOR PEOPLE WITH MULTIPLE CHRONIC CONDITIONS					
82	Provide an additional 1,500 hours of respiratory nursing service (compared to 2015–16 base level)	Health Improvement Inquiry report: recommendation 5	September 2018 and September 2019	Ongoing	DHHS
83	Provide an additional 3,400 hours of allied health and care coordination services (compared to 2015–16 base level)	Health Improvement Inquiry report: recommendation 5	September 2018 and September 2019	Ongoing	DHHS

78. Facilitate the establishment of a Chronic Disease Forum, involving both local and statewide providers and experts, to work with the Latrobe Valley Health Assembly to design and develop care pathways to improve coordination for people with chronic disease

Progress towards development of a Chronic Disease Forum has been undertaken in conjunction with the proposed formation of the Latrobe Valley Community Mental Health Forum (refer to action 84) in recognition of the correlation between chronic disease and mental health. This action was due in December 2016 however longer time frames have been necessary to work collaboratively and inclusively with the community and Health Assembly, which met for the first time in December 2016.

DHHS established a Forum Development Group in October 2016 to work towards the establishment of the two forums. The group comprises representatives from local and statewide service providers, Gippsland PHN and the Health Assembly. DHHS appointed community engagement specialists to develop and implement a stakeholder and community engagement framework to gain a deeper understanding of the community's issues and views in these areas.

Based on a proposal from these specialists, the Forum Development Group decided to trial a model known as 'community-up' or 'neighbourhood-up' to establish the proposed Chronic Disease Forum and Mental Health Forum. Under this model, the Chronic Disease and Mental Health forums would be made up of a series of neighbourhood-based forums, recruited actively by the community engagement specialists on behalf of DHHS and the Forum Development Group. The 'community-up' forums aim to provide grass roots insights, ideas and innovations towards the improvement of health and wellbeing in the Latrobe Valley.

The model proposed by DHHS also establishes a Practitioners and Stakeholders Group (PSG) comprising locally based healthcare providers, to provide input and guidance to the forums as requested. The PSG will provide the link to the Health Assembly and ensure the forums lead to the development of appropriate care pathways, as required by this action.

The first 'community-up' forums were held in December 2016 in Traralgon East and Churchill. Follow-up forums were conducted in Traralgon East and Churchill in February 2017. Feedback from community members that attended was positive with most indicating they wished to attend any future forums.

Going forward, DHHS reports that the shape and model of the forums will evolve further over time based on feedback provided by community members and as the Latrobe Health Innovation Zone and Health Assembly continue to develop.

FINDING

IGEM will revisit this action in the next Annual Report.

79. Invite primary health partner agencies to investigate options for co-location of respiratory nurses within general practices in the Latrobe Valley

Latrobe Community Health Service and Gippsland PHN investigated options for co-location of respiratory nurses within medical clinics in the Latrobe Valley to provide assessment and individualised treatment and support for people with breathing difficulties, including asthma and chronic obstructive pulmonary disease.

Co-location pilots commenced in General Practitioner (GP) clinics in Moe and Morwell in July 2017.

A Respiratory Package has been developed to be marketed to clinics, and pilots will continue to be rolled out across the Latrobe Valley as the service expands.

FINDING

IGEM considers this action has been implemented as planned.

80. Provide an additional 1,000 hours of respiratory nursing service at Latrobe Community Health Service (compared to 2015–16 base level)

Latrobe Community Health Service has been recurrently funded to provide additional hours of respiratory nursing to expand the scope and reach of the respiratory program as follows:

- 2016–17 – funding for 1000 hours
- 2017–18 – and out years funding for 1500 hours.

Additional staff, including a Respiratory Care Coordinator and a Respiratory Care Educator and Care Coordinator have been employed to deliver the additional hours of service.

FINDING

IGEM considers this action has been implemented as planned.

81. Expand the early intervention in chronic disease program, delivered by Latrobe Community Health Service, to provide an additional 2,500 hours of allied health and care coordination services (compared to 2015–16 base level)

DHHS has recurrently funded the Latrobe Community Health Service to provide additional hours of allied health and care coordination services to improve care coordination, multidisciplinary care and holistic care planning as follows:

- 2016–17 – funding for 2500 hours
- 2017–18 and out years – funding for 3400 hours.

Four additional staff have been employed to deliver the additional hours of service for allied health and care coordination services for chronic disease.

FINDING

IGEM considers this action has been implemented as planned.

82. Provide an additional 1,500 hours of respiratory nursing service (compared to 2015–16 base level)

Refer to action 80.

FINDING

IGEM considers this action is progressing satisfactorily and will revisit in the next Annual Report.

83. Provide an additional 3,400 hours of allied health and care coordination services (compared to 2015–16 base level)

Refer to action 81.

FINDING

IGEM considers this action is progressing satisfactorily and will revisit in the next Annual Report.

4.3.6 Mental health

Table 15: Status of mental health actions

NO.	ACTION	RELATED RECOMMENDATION/ AFFIRMATION	DUE DATE	STATUS	LEAD AGENCY
MENTAL HEALTH					
84	Facilitate the establishment of a Latrobe Community Mental Health Forum, comprising both local and statewide providers, experts and the community, to focus on strategies and opportunities to work with the Latrobe Valley Health Assembly to enhance the mental health of the Latrobe Valley community	Health Improvement Inquiry report: recommendation 5	December 2016	Ongoing	DHHS

NO.	ACTION	RELATED RECOMMENDATION/ AFFIRMATION	DUE DATE	STATUS	LEAD AGENCY
MENTAL HEALTH					
85	Work with health and community sector partners to develop an approach to the delivery of workforce skills in primary mental health service delivery, which will involve mentoring, supervision and training (where required) in managing mental health issues associated with chronic disease	Health Improvement Inquiry report: recommendation 5	December 2016	Complete	DHHS
86	Provide funding for the development of strategies to increase awareness and community understanding of mental health issues, and how and where to get help	Health Improvement Inquiry report: recommendation 5	January 2017	Complete	DHHS
87	Expand local mental health support in line with agreed community priorities	Health Improvement Inquiry report: recommendation 5	July 2017	Complete	DHHS
88	Provide funding for the development and delivery of programs to increase awareness of mental health issues	Health Improvement Inquiry report: recommendation 5	July 2017	Complete	DHHS

84. Facilitate the establishment of a Latrobe Community Mental Health Forum, comprising both local and statewide providers, experts and the community, to focus on strategies and opportunities to work with the Latrobe Valley Health Assembly to enhance the mental health of the Latrobe Valley community

Refer to action 78.

FINDING

IGEM will revisit this action in the next Annual Report.

Latrobe Regional Hospital Mental Health Service has completed a pilot and rolled out OHP training to clinicians in an effort to improve consumer outcomes. In May 2017 DHHS allocated additional funding to the hospital to recruit a project manager to oversee implementation of the OHP and establish a collaborative practice model between mental health clinicians at Latrobe Regional Hospital Mental Health Service and primary health clinicians at Latrobe Community Health Service.

St Vincent's Mental Health Unit, Melbourne University has been engaged to provide an advisory role, training and evaluation given its significant experience in this area.

FINDING

IGEM considers this action has been implemented as planned.

85. Work with health and community sector partners to develop an approach to the delivery of workforce skills in primary mental health service delivery, which will involve mentoring, supervision and training (where required) in managing mental health issues associated with chronic disease

DHHS worked with Latrobe Community Health Service and Latrobe Regional Hospital to identify an approach to improving the workforce capacity of primary health service delivery in managing the mental health issues associated with chronic disease.

The approach identified is based on a collaborative model of care developed by Melbourne University, known as the Optimal Health Program (OHP). OHP is a self-management program that focuses on improving health and wellbeing outcomes for people who experience mental health problems and/or chronic diseases and their carers.

86. Provide funding for the development of strategies to increase awareness and community understanding of mental health issues, and how and where to get help

In March 2017 DHHS funded Lifeline Gippsland to develop and deliver education sessions to increase awareness and understanding of mental health issues in the Latrobe Valley.

Lifeline Gippsland has indicated that it will develop further innovative strategies for consideration by DHHS.

DHHS acknowledges that further work is required to ensure the Latrobe Valley community is appropriately engaged in developing strategies to increase awareness and understanding of mental health issues, and how and where to get help.

To that end, DHHS proposes to establish a 'think tank' to work with the community in the development of awareness raising and education programs. Members of the Health Assembly and others in the community will be approached to contribute their knowledge and experience.

FINDING

IGEM considers this action has been implemented as planned.

87. Expand local mental health support in line with agreed community priorities

DHHS advise that local mental health support is being expanded in line with a number of community priorities that were identified as part of the 'community-up' forums described in action 78. The priorities included isolation (both psychological and physical), a focus on the wellbeing of children and improved access to services.

The approach adopted by DHHS involves providing additional funding as well as engaging in capacity building to deliver better services in line with issues that have the potential to impact mental health. Some examples of current expansion areas include:

- expansion of the Healthy Mothers, Healthy Babies program that targets vulnerable women who may be isolated, not accessing services or require additional support
- implementation of a place-based pilot at Morwell Park Primary School that is addressing the health and wellbeing needs of children and their families
- in May 2017 DHHS provided funding to the Latrobe Regional Hospital to implement trauma informed care in health services and Aboriginal Community Controlled Health Organisations across Gippsland.

Additionally, expansion of mental health services has been provided through:

- the Victorian Government mental health support package for Victorian dairy farmers affected by the fall in global milk prices
- joint funding of the Place Based Suicide Prevention Program to work with the community and service providers to contribute to the reduction of suicide rates within the Latrobe Valley
- improving outcomes for people with chronic disease who have a mental illness through better service coordination.

FINDING

IGEM considers this action has been implemented as planned.

88. Provide funding for the development and delivery of programs to increase awareness of mental health issues

DHHS has provided funding for the development and delivery of programs to increase awareness of mental health issues. Examples include:

- Lifeline Gippsland was funded to deliver mental health education programs to the Latrobe Valley community until 30 June 2017 (refer to action 86)
- The Central West Primary Care Partnership was funded to develop and deliver mental health first aid programs to the Latrobe Valley community
- Gippsland PHN was funded to trial a four year suicide prevention place-based trial to coordinate relevant agencies and service providers working together to deliver a suite of interventions to prevent suicide in the Latrobe Valley.

FINDING

IGEM considers this action has been implemented as planned.

4.3.7 Expanding options to access specialist services

Table 16: Status of expanding options to access specialist services actions

NO.	ACTION	RELATED RECOMMENDATION/ AFFIRMATION	DUE DATE	STATUS	LEAD AGENCY
EXPANDING OPTIONS TO ACCESS SPECIALIST SERVICES					
89	Develop and implement a marketing campaign to promote telehealth as an option for accessing health services	Health Improvement Inquiry report: recommendation 5	December 2016	Complete	DHHS
90	Enable telehealth capacity at more points of primary and acute healthcare	Health Improvement Inquiry report: recommendation 5	June 2017	Complete	DHHS
91	Facilitate the development of telehealth education and training packages targeted to health service providers	Health Improvement Inquiry report: recommendation 5	June 2017	Complete	DHHS
92	Facilitate the delivery of telehealth education and training packages to health service providers in the Latrobe Valley	Health Improvement Inquiry report: recommendation 5	June 2017	Complete	DHHS

89. Develop and implement a marketing campaign to promote telehealth as an option for accessing health services

Telehealth refers to the provision of health services using technology, such as telephone and videoconferencing, so that the patient and the health service professional do not need to be in the same room. For regional areas of Victoria, where access to specialist medical care may be limited, telehealth is an innovative health service delivery strategy.

Benefits of telehealth include:

- reduced burden and cost of travel to attend specialist outpatient clinics for both consumers and their carers
- opportunities for improved collaboration between GPs and hospital specialists to enable enhanced partnerships and coordination of care
- improved focus on, and delivery of, patient-centred care

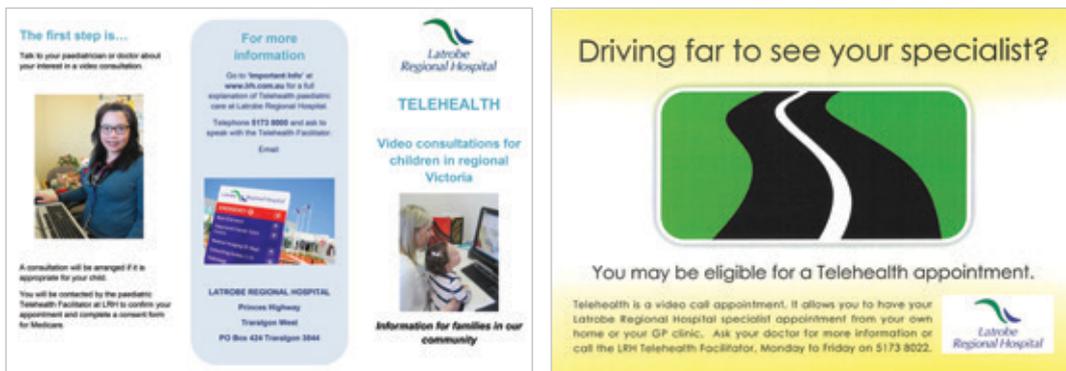
- improved efficiency of specialist outpatient clinics through the reduction of the number of appointments which rural and remote patients fail to attend.

In December 2016 Latrobe Regional Hospital developed a communication and community engagement strategy to promote telehealth to the Latrobe Valley community as an option for accessing health services.

Implementation of the strategy began in January 2017 with a campaign of public awareness activities, including media releases, promotional materials and the publication of information on the Latrobe Regional Hospital website.¹⁷

FINDING

IGEM considers this action has been implemented as planned.



Telehealth marketing material

¹⁷ lrh.com.au/important-info/patient-information/specialist-outpatient-telehealth

90. Enable telehealth capacity at more points of primary and acute healthcare

Telehealth capacity has been enabled at more points of primary and acute healthcare in the Latrobe Valley to improve access to specialist health services and decrease patient travel time. DHHS advises that this will continue to increase as telehealth expands.

Latrobe Regional Hospital has expanded telehealth capacity to the following speciality areas:

- paediatrics
- endocrinology
- general medicine – chronic health failure.

Internal discussions have commenced to determine if psychiatry will be suitable as the next speciality area to introduce telehealth consultations.

DHHS advises that 42 telehealth sessions were held from Latrobe Regional Hospital for patients across Gippsland from December 2016 to June 2017. Eight general practices were engaged and an additional seven practices expressed interest in the program.

FINDING

IGEM considers this action has been implemented as planned.

91. Facilitate the development of telehealth education and training packages targeted to health service providers

Latrobe Regional Hospital, in consultation with Gippsland PHN and GPs, developed a toolkit to educate health service providers on the telehealth services available to eligible outpatients.

The toolkit, Latrobe Regional Hospital Telehealth Project – Information for general practice, specialist outpatient clinics, Aboriginal community controlled health services and Aboriginal medical services (the telehealth toolkit), provides information about:

- the scope of the telehealth project, including eligibility criteria for patients and practitioners
- the incentives for physicians and practitioners to be involved, including Medicare benefits
- approaches to scheduling a telehealth consultation
- technical requirements, emphasising that clinicians can be confident that the software solution offered by the telehealth project meets the applicable laws for security and privacy
- FAQs and useful links.

Latrobe Regional Hospital will be developing a statewide telehealth toolkit, in consultation with GPs and in collaboration with Gippsland PHN, Barwon South West Telehealth and Western Victoria PHN. The initial telehealth toolkit and other telehealth resources for clinicians are available on the Latrobe Regional Hospital website and Gippsland PHN website.¹⁸

FINDING

IGEM considers this action has been implemented as planned.

92. Facilitate the delivery of telehealth education and training packages to health service providers in the Latrobe Valley

Telehealth education and training services have been delivered to health service providers in the Latrobe Valley as follows:

- Latrobe Regional Hospital has a Telehealth Facilitator available five days per week to assist with set up, information and resources
- medical practices were provided with the telehealth toolkit and information about using the software platform
- practices are kept up to date via the Telehealth News quarterly newsletter
- training is provided by the Telehealth Facilitator with service providers on an as needs basis.

FINDING

IGEM considers this action has been implemented as planned.

¹⁸ gphn.org.au/programs/telehealth/

4.3.8 Aboriginal health

The Health Improvement Inquiry report identified the need for specific innovation and support for the Latrobe Aboriginal community. The report recommended that priorities for investment in health and community programs be identified in collaboration with the local Aboriginal community to ensure services are culturally appropriate and community-driven.¹⁹

Table 17: Status of Aboriginal health actions

NO.	ACTION	RELATED RECOMMENDATION/ AFFIRMATION	DUE DATE	STATUS	LEAD AGENCY
ABORIGINAL HEALTH					
93	Work with the local Latrobe Aboriginal community to identify priorities for investment	Health Improvement Inquiry report: recommendation 7	March 2017	Complete	DHHS
94	Work with the Latrobe Local Aboriginal Community Partnership to scope the potential for a gathering place	Health Improvement Inquiry report: recommendation 7	March 2017	Complete	DHHS
95	Support implementation of initiatives to address priorities identified with the local Latrobe Aboriginal community	Health Improvement Inquiry report: recommendation 7	June 2017	Ongoing	DHHS

93. Work with the local Latrobe Aboriginal community to identify priorities for investment

DHHS has been working closely with the local Aboriginal community to identify priorities for investment in a number of ways.

The Latrobe Local Aboriginal Community Partnership Project

DHHS sponsors the Latrobe Local Aboriginal Community Partnership Project which brings together representatives from the Latrobe Aboriginal communities, government agencies, sporting organisations and service providers.

The partnership project aims to strengthen families and communities with a focus on improving maternal health, early childhood health, employment, education outcomes and economic development as identified by the local Aboriginal community. Priorities identified by the partnership project include:

- support for the concept of a local meeting place (refer to action 94)
- increased support for family activities during NAIDOC celebrations.

Koolin Balit: Aboriginal Health Strategy

Koolin Balit is the Victorian Government's strategic direction for Aboriginal health over a 10-year period and was launched by the Minister for Health at the Aboriginal Health Conference in May 2012. Koolin Balit sets out what DHHS, together with Aboriginal communities, other parts of government and service providers, will do to achieve the government's commitment to improve Aboriginal health. A summary of 2015–17 priority areas identified in Gippsland include:

- oral health
- sport and health social marketing
- men's health
- early years health
- mental health.

Community Co-Design Project

DHHS engaged a team of Aboriginal consultants to support local Aboriginal communities to identify health and wellbeing needs and aspirations and to co-design solutions, including models for delivery of services. The consultants delivered a final report to DHHS on 1 August 2017.

¹⁹ Hazelwood Mine Fire Inquiry Report, Volume III – Health Improvement, pp. 88- 93

The report recommended that:

- a locally-controlled ACCO be established to assume responsibility for local Aboriginal health and wellbeing services
- all relevant stakeholders (including DHHS, local Aboriginal community, current service providers and primary funding bodies) commit to supporting its establishment by 1 July 2020
- DHHS assume responsibility for funding and conducting immediate actions required to establish the ACCO.

Other recommendations included:

- a funding and service mapping exercise be undertaken to determine the Aboriginal-specific health and wellbeing services that are currently funded in the Latrobe Valley
- existing service providers take immediate action to improve local community control, including access to membership and a designated Board position for an Aboriginal person from the Latrobe Valley
- DHHS provide a user-friendly and comprehensive statistical baseline of the health and wellbeing outcomes of the local Aboriginal community across the DHHS portfolio of responsibilities, and comparison data for the non-Indigenous community and statewide Aboriginal community.

DHHS has committed to support these priorities.

FINDING

IGEM considers this action has been implemented as planned.

94. Work with the Latrobe Local Aboriginal Community Partnership to scope the potential for a gathering place

The Health Improvement Inquiry report identified the positive impact of gathering places in helping to enhance Aboriginal peoples' health and social wellbeing.²⁰

DHHS partnered with the Local Aboriginal Network and worked with members of the Latrobe Local Aboriginal Community Partnership to fund the establishment of an Aboriginal community space in Morwell.

'The Gathering Place' opened on 15 March 2017. The Gathering Place is a hub where local Aboriginal people meet, connect and run community activities such as:

- education and information sessions around access to housing and health and wellbeing services

- art groups
- women's groups
- a youth group, including teaching of life skills.

Community volunteers at the Gathering Place run reception, help organise activities and connect the community to the centre.

FINDING

IGEM considers this action has been implemented as planned.



The Gathering Place, Morwell

95. Support implementation of initiatives to address priorities identified with the local Latrobe Aboriginal community

DHHS has committed to supporting the recommendations made by the Community Co-design Group, as set out in the report provided by the Aboriginal consultants (refer to action 93). The report outlines a series of recommendations guiding the establishment of an ACCO to assume responsibility for local Aboriginal health and wellbeing services.

Other priorities for investment that are being supported by DHHS and driven across government and community include:

- Koolin Balit 2015–17 priority areas for action in Gippsland (refer to action 93)
- changes to the care and case management of Aboriginal children, with the intention of gradually transitioning Aboriginal children from government and non-Aboriginal organisations to ACCOs. This initiative is based on evidence that shows that Aboriginal children and young people receiving services from ACCOs have better outcomes, including greater health, wellbeing and engagement.²¹ This work means empowering Aboriginal communities to make decisions and provide services that meet the best interest of Aboriginal children, now and into the future. The transition is expected to begin in the second half of 2017.

²⁰ Hazelwood Mine Fire Inquiry Report, Volume III – Health Improvement, p. 90

²¹ 'Always was, always will be Koori children', Systemic Inquiry into services provided to Aboriginal children and young people in out-of-home care in Victoria, October 2016, pp. 55- 57

This action was due in June 2017. As the ACCO is still in the process of being established IGEM will revisit this action in the next annual report.

FINDING

IGEM considers this action is progressing satisfactorily and will revisit in the next Annual Report.

4.3.9 Long term health study

The Long Term Health Study aims to identify potential health outcomes for people who may have been exposed to smoke from the Hazelwood mine fire. The study also intends to analyse the effects on vulnerable groups such as infants and children, young people, and older people.

Table 18: Status of long term health study actions

NO.	ACTION	RELATED RECOMMENDATION/ AFFIRMATION	DUE DATE	STATUS	LEAD AGENCY
LONG TERM HEALTH STUDY					
98	Publicly release the second annual Monash University Report on the Long Term Health Study	2014 Inquiry report: recommendation 10 and affirmations 15 and 28	November 2016	Complete	DHHS
99	Publicly release the third annual Monash University Report on the Long Term Health Study	2014 Inquiry report: recommendation 10 and affirmations 15 and 28	November 2017	Ongoing	DHHS
104	Response to report on the review of the scope and structure of the Long Term Health Study released	Health Improvement Inquiry report: recommendation 6	September 2016	Complete	DHHS

98. Publicly release the second annual Monash University Report on the Long Term Health Study

As part of the Long Term Health Study, the government committed to publicly releasing three annual reports. The first annual report was published in November 2015.

The second annual Monash University report on the Long Term Health Study was published on 15 November 2016 and is publically available on the Hazelwood Health Study website.²²

The report drew attention to milestones such as:

- progress on the Early Life Follow-up study stream, the Schools Study component of the Psychological Impacts stream, Adult Survey stream and Impact on Older People stream
- the interim report for the Ageing Population Policy review in August 2016
- a revision of the Long Term Health Study governance structure to better depict the relationship between the Advisory and Reference Committees and Groups and the Project Steering Committee.

²² hazelwoodhealthstudy.org.au/study-findings/study-reports/

The air quality team from the Commonwealth Scientific and Industrial Research Organisation (CSIRO) and Atmospheres has also provided two air quality reports, which are also available on the Hazelwood Health Study website.²³

FINDING

IGEM considers this action has been implemented as planned.

99. Publicly release the third annual Monash University Report on the Long Term Health Study

This action is due to be completed in November 2017 and as such, progress will be reported in the 2018 annual report.

FINDING

IGEM will revisit this action in the next Annual Report.

104. Response to report on the review of the scope and structure of the Long Term Health Study released

Since the commencement of the Long Term Health Study in November 2014, concerns have emerged within the community over its implementation, including the functioning of governance arrangements, plans for engaging with the community and reporting of health information. As a result, the reopened Hazelwood Mine Fire Inquiry in 2015–16 recommended a review of the Long Term Health Study to address these questions and concerns.²⁴

DHHS engaged an independent consultant to review the scope, structure, governance and reporting arrangements of the Long Term Health Study. The review was completed in July 2016 and found that the study:

- was appropriately designed to answer the identified research questions and, specifically, to determine the effect of the fire on the incidence of cancer, cardiovascular disease, respiratory and psychological illness in the community
- uses methods that are appropriate and align with best practice for an epidemiological study of this size and scope
- lacked an explicit framework or process for using data collected to inform delivery of health services and early intervention.

In October 2016 the Victorian Government released the response to the review of the Hazelwood Long Term Health Study. The government confirmed that:

- the study will not expand to include emergency responders as it was not designed for that purpose and will not improve the health of any cohort
- the study will not include those who worked in Morwell while living elsewhere, as it would not provide additional insight into health concerns
- the potential health effects of CO, other criterion pollutants and Polycyclic Aromatic Hydrocarbons are to be analysed
- an independent Hazelwood Health Study Ministerial Advisory Committee responsible for oversight of the study as well as enhancing community engagement will be established
- the Latrobe Valley has been designated as a Health Innovation Zone with a focus on developing new ways to plan, develop and deliver health programs and services
- the Latrobe Health Innovation Zone will be supported by the newly established Health Assembly which will be an independent body and an incorporated association.

FINDING

IGEM considers this action has been implemented as planned.

4.3.10 Ash in roof cavities

The Health Improvement Inquiry report recommended that the government collect and test any ash that may have settled in the roof cavities of houses in Morwell, publish the results of that analysis to the community, and provide advice about any potential known or unknown health effects.²⁵

The 'Ash in Roof Cavities' project allows government agencies to better understand the community's concerns about ash in roof cavities.

DHHS is leading the project, working closely with the community, Latrobe City Council and EPA.

DHHS engaged an independent expert to test and analyse any ash that may have settled in roof cavities of houses in Morwell and compare it to the results of testing from a control site (Rosedale). This included an assessment of any potential health risks that may be caused by the ash.

²³ hazelwoodhealthstudy.org.au/study-findings/fact-sheets-and-summaries/

²⁴ Hazelwood Mine Fire Inquiry Report, Volume III – Health Improvement, p. 32

²⁵ Hazelwood Mine Fire Inquiry Report, Volume III – Health Improvement, p. 135

Table 19: Status of ash in roof cavities actions

NO.	ACTION	RELATED RECOMMENDATION/ AFFIRMATION	DUE DATE	STATUS	LEAD AGENCY
ASH IN ROOF CAVITIES					
110	Hold a community forum to engage with community stakeholders on: <ul style="list-style-type: none"> • final project plan and planned activities in Morwell • finalised sampling plan • communication tools 	Health Improvement Inquiry report: recommendation 9	September 2016	Complete	DHHS
111	Commence project with sampling activities (recruitment of houses, testing and analysis). The independent expert will engage an occupational hygienist to conduct the testing and analysis	Health Improvement Inquiry report: recommendation 9	March 2017	Complete	DHHS
112	Publicly release independent expert report	Health Improvement Inquiry report: recommendation 9	June 2017	Complete	DHHS
113	Engage stakeholders through open house to communicate and discuss the report's assessment of the health risk from exposure to ash in roof cavities as a result of the coal mine fire in 2014	Health Improvement Inquiry report: recommendation 9	June 2017	Complete	DHHS

110. Hold a community forum to engage with community stakeholders on:

- final project plan and planned activities in Morwell
- finalised sampling plan
- communication tools

DHHS held forums to engage with community stakeholders on 16 and 21 September 2016. The forums were promoted via local media and the dedicated ash residue in Morwell roof cavities project web page, and were conducted by DHHS staff and a representative of the independent expert.

The forums engaged with the community on the project and sampling plans, planned activities in Morwell and the proposed communication tools to keep the community informed about the report findings.

FINDING

IGEM considers this action has been implemented as planned.

111. Commence project with sampling activities (recruitment of houses, testing and analysis). The independent expert will engage an occupational hygienist to conduct the testing and analysis

DHHS engaged an independent expert in August 2016 to test and analyse any ash that may have settled in the roof cavities of houses in Morwell.

Rosedale (which lies approximately 40km to the East of Morwell) was chosen as the control site. The testing of a control site enables an understanding of whether the ash residue and/ or other dust within roof cavities in Morwell is different from that found in similar houses which were not impacted by the Hazelwood mine fire. Rosedale was chosen as:

- it is still within the Latrobe Valley
- the houses are likely to be of a similar age and building materials to those in Morwell
- based on satellite photos from the Hazelwood mine fire, was not likely to have been affected by the smoke plume.

To commence ash cavity sampling activities, community members were asked to volunteer their houses for testing.

Houses to be sampled in Morwell were selected based on three criteria, designed to provide a range of different house types and locations:

- distance from the fire
- age of house
- building materials.

The independent expert collected samples from 50 houses in Morwell, and 10 houses in Rosedale in late 2016.

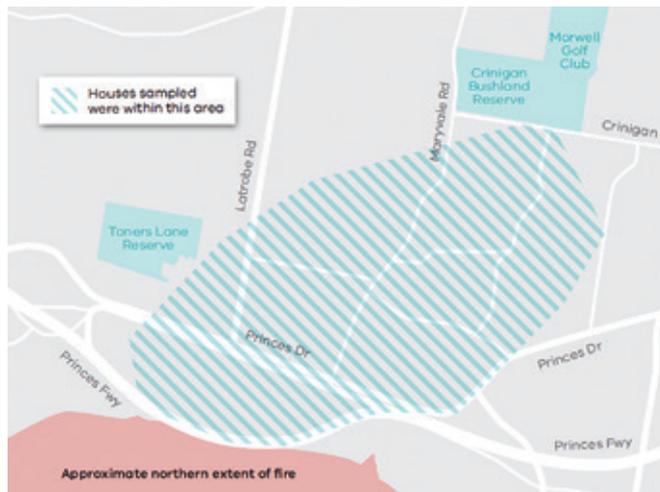
Samples were collected to understand the composition of ash and dust, and to determine whether any materials or chemicals found were at levels that could affect human health.

The process involved the independent expert communicating with residents and managing the collection process while an experienced and certified occupational hygienist completed the sampling.

FINDING

IGEM considers this action has been implemented as planned.

Figure 2: Sample area for roof cavity ash testing



112. Publicly release independent expert report

Based on feedback provided during community forums (refer to action 110), DHHS publicly released three versions of the independent expert’s final report on the dedicated project web page²⁶ on 15 June 2017:

- a full version of the report
- an executive summary only version
- a simplified version of the report, the community report, to help ensure the community understands the project and its findings.

Hard copies of these documents were distributed throughout the Latrobe Valley, through local community groups and hubs such as the library, RSL and local council offices, and were also mailed out to people who registered on the website to be provided with a copy of all documents.

Overall, the report concluded that the presence of brown coal dust in the roof cavities of Morwell residents’ homes did not present an ongoing health risk. The report recommended that the removal of ash and/or coal dust from roof cavities was not warranted.

The report observed that there was more ash present in houses closer to the fire. There were, however, relatively low levels of coal dust across the sampled houses.

To assess whether chemicals in brown coal ash and/or roof dust may pose a risk to human health, the chemical testing results were compared to ‘screening levels’ considered safe if present in soil and/or dust on residential properties, as determined by the National Environment Protection Council (NEPC).

A small number of houses were found to exceed these levels, however the inferred causes were considered to be unrelated to the Hazelwood mine fire.

The report did, however, explain that dust within any roof cavity may contain a range of hazardous materials and/or contaminants, and recommended that people across Australia should limit their exposure and take precautions when entering a roof cavity.

FINDING

IGEM considers this action has been implemented as planned.

113. Engage stakeholders through open house to communicate and discuss the report’s assessment of the health risk from exposure to ash in roof cavities as a result of the coal mine fire in 2014

DHHS held four community forums in Morwell on 23 and 24 January 2017 to engage with stakeholders and discuss the results of the independent expert report. Residents were advised that the testing did not show that brown coal ash residue from the Hazelwood mine fire was likely to pose a risk to human health if present in roof cavities.

The independent expert also provided individual reports to people whose houses were tested and met with them to discuss the results.

The community was kept informed about the project and its progress through monthly newsletters emailed and/or posted to those registered. Updates were also made available on the DHHS dedicated project web page.²⁷

FINDING

IGEM considers this action has been implemented as planned.

²⁶ www2.health.vic.gov.au/emergencies/hazelwood/ash-project

²⁷ www2.health.vic.gov.au/emergencies/hazelwood/ash-project

4.4 Air quality and wellbeing

The 2014 Inquiry found that the request for air quality monitoring for the Hazelwood mine fire came too late and that limited equipment and resources delayed EPA's ability to provide data in a timely way.

This theme covers the government's response to recommendations and affirmations in the 2014 Inquiry report that relate specifically to establishing smoke triggers for monitoring and to equip agencies to undertake rapid air monitoring to protect the health of the community. These are:

- recommendation 5 and affirmation 17, which relate to the capacity to provide rapid air quality monitoring in any location in Victoria
- recommendation 9 and affirmations 24 and 25, which relate to the management of public health impacts from large scale, extended smoke events, including planned burns
- affirmation 18, which relates to creating a body of knowledge on the impacts of extended broad coal fire events from the Hazelwood mine fire meta-analysis.

The State Smoke Working Group oversees the implementation of recommendations and affirmations from the Inquiry reports relating to the management of smoke events, including incident air quality monitoring, standards for decision-making and communication.

The State Smoke Working Group is co-chaired by DHHS and EMV, and includes representatives from EPA, Ambulance Victoria, CFA, DELWP, MFB, Victoria Police and WorkSafe. The working group reports to the IDC, which oversees and coordinates the government's actions towards implementation of recommendations and affirmations.

The following themes, with associated actions, are listed under the air quality and wellbeing theme in the Victorian Government Implementation Plan:

- Rapid air quality monitoring
- State smoke framework
- Develop integrated predictive services framework
- Managing exposure to CO
- Community smoke, air quality and health standard
- National compliance standard
- EPA protocols
- EPA meta-analysis.

All actions under the following sub-themes were reported as complete in the 2016 IGEM Hazelwood report:

- Managing exposure to CO

- Community smoke, air quality and health standard
- National compliance standard
- EPA protocols.

Below is a summary of progress on actions under the remaining sub-themes.

Progress summary

The Victorian Government Implementation Plan lists 34 actions under the air quality and wellbeing theme, of which 29 have now been completed.

Most actions completed or progressed since August 2016 relate to Victoria's capacity to conduct rapid air quality monitoring and projects to improve the modelling, prediction and impact of smoke following an incident.

EPA has made significant progress in providing the state with rapid air quality monitoring capacity.

EPA partnered with VICSES to procure 10 mobile DustTrak PM2.5 monitors, train VICSES staff in their use, and strategically deploy these monitors to VICSES units across regional Victoria to provide incident smoke monitoring within four hours of the request to deploy.

EPA has continued work on developing an integrated air quality monitoring and information system. The system incorporates air quality data from a variety of instruments and can measure smoke particulates (PM2.5) as well as analytes, ozone and CO. This data is provided to emergency management agencies during an incident through agreed processes, and to the community on EPA's AirWatch website. EPA is working with CFA and MFB to incorporate data from their air-monitoring equipment into EPA systems. A fully functional and integrated information management system for incident air monitoring data is expected to be in place for the 2017–18 summer and following seasons.

CFA is developing a smoke plume modelling tool for the prediction of toxic smoke and chemical releases from fires and hazardous material incidents. The project takes advantage of the ARGOS model, which provides enhancements over the old ALOHA model. The project end-date has been revised to July 2018 by an internal approval process. This will allow CFA to address security concerns and to make further improvements to the tool. The smoke plume modelling tool is currently available to emergency managers in the State Control Centre.

DELWP has made progress in building a predictive services information and communications technology (ICT) platform. The platform involves core prediction engines such as bushfire spread, gridded weather and a smoke tracer, being hosted on the cloud-based Amazon Web Services. The platform is currently being trialled to inform decision-making around planned burns, with plans to further trial the platform during the 2017–18 summer season.

4.4.1 Rapid air quality monitoring

Table 20: Status of rapid air quality monitoring actions

NO.	ACTION	RELATED RECOMMENDATION/ AFFIRMATION	DUE DATE	STATUS	LEAD AGENCY
RAPID AIR QUALITY MONITORING					
117	Refine the response model, decision support tools and deployment procedures for 2016–17 summer fire season by incorporating lessons learned	2014 Inquiry report: recommendation 5 and affirmation 17	October 2016	Complete	EPA
118	Two mobile stations built and operational for deployment to complex events of extended duration and significant community impact	2014 Inquiry report: recommendation 5 and affirmation 17	December 2016	Complete	EPA
119	Train relevant staff in EPA regional offices in air quality equipment deployment during emergency events	2014 Inquiry report: recommendation 5 and affirmation 17	December 2016	Complete	EPA
120	Pre-deploy smoke monitors to identified high-risk sites across regional Victoria	2014 Inquiry report: recommendation 5 and affirmation 17	April 2017	Complete	EPA
121	Establish EPA and VICSES partnership and train VICSES staff in deployment of smoke monitors	2014 Inquiry report: recommendation 5 and affirmation 17	April 2017	Complete	EPA
122	Deliver a fully functional integrated air quality monitoring and information systems	2014 Inquiry report: recommendation 5 and affirmation 17	June 2017	Ongoing	EPA

117. Refine the response model, decision support tools and deployment procedures for 2016–17 summer fire season by incorporating lessons learned

In September 2016 EPA, together with other emergency management agencies, captured the learnings from the 2015–16 fire season by reviewing and updating the response model, decision support tools and deployment procedures for incident air monitoring.

Key updated documents include the Joint Standard Operating Procedures (JSOP) for *Incident Air Monitoring for Community Health* (JSOP 03.18), *Managing Significant Community Exposures to Fine Particles from Smoke* (JSOP 03.19), and *Managing Significant Community Exposure to Carbon Monoxide from Smoke* (JSOP 03.20), as well as procedures for deployment and operation of incident air monitoring equipment.

EPA used the revised products during the 2016–17 summer season when providing air quality advice for a number of fire events, with one deployment of incident air monitoring equipment. In response to the Crooked River fire, EPA monitored air quality near Sale and Bairnsdale for two weeks to assess smoke impacts on communities.

EPA has advised IGEM that all current documentation relevant to incident air monitoring protocols and procedures is available on EPA's Emergency Management and Incident Response System.

FINDING

IGEM considers this action has been implemented as planned.

118. Two mobile stations built and operational for deployment to complex events of extended duration and significant community impact

EPA has made two operational mobile air monitoring stations available for deployment to complex incidents of extended duration in accordance with JSOP 03:18.

One station measures CO, ozone, PM2.5, visibility and meteorological parameters and is located at EPA's Centre for Applied Sciences in Macleod. A relocation trial for this station was conducted in September 2016 and showed that a mobile station could be deployed and transmit data to EPA's systems within the agreed three-day response window. This station was available for operational deployment on 1 October 2016.

The second station is also located in Macleod and is able to monitor a range of gaseous, particulate and meteorological parameters, and was available to deploy by 1 December 2016.

In the event that the second air monitoring station needs to be deployed, air monitoring equipment will be sourced from spares kept in operational order, or drawn from the current ambient air monitoring network if necessary. The locations of the equipment and order of removal from the network is documented in an equipment strategy plan.

In addition, a smaller, more portable station that can be moved with instruments in place has been designed and is being custom built by an external supplier. It will replace the second station, and delivery is expected well before the 2017–18 summer season.

During the 2016–17 fire season there were no complex incidents of extended duration that required the deployment of mobile air monitoring stations.

FINDING

IGEM considers this action has been implemented as planned.

119. Train relevant staff in EPA regional offices in air quality equipment deployment during emergency events

EPA provided staff training in the three roles needed to ensure that incident air monitoring can be effectively undertaken when called upon during an incident, as follows:

- 59 staff were trained and assessed as competent to fulfil the deployment team lead role
- 16 staff were trained in the equipment team lead role
- 12 staff were trained in the systems administration officer role.

EPA advises that training will be regularly conducted throughout the year to maintain capability for EPA's emergency management and incident response functions.

FINDING

IGEM considers this action has been implemented as planned.

120. Pre-deploy smoke monitors to identified high-risk sites across regional Victoria

The 2014 Inquiry report recommended that the state equip itself to undertake rapid air quality monitoring in any location in Victoria to ensure that the data is used to inform decision-making within 24 hours of an incident occurring.

The pre-deployment of smoke monitors to identified high-risk sites increases the state's ability to provide rapid response.

In partnership with VICSES, EPA undertook a comprehensive process of refining air monitoring equipment specifications, which resulted in the procurement of 10 DustTrak units. The equipment was subsequently tested for connection to the EPA's information technology platform to ensure data could be received instantly.

To ensure the smoke particulate monitors would provide statewide coverage, EPA investigated strategic locations around Victoria. The sites were chosen to:

- cover high fire risk locations
- reduce overlap with the existing EPA monitoring network
- provide coverage for previous fire hot spots.

The 10 smoke monitors were sent to VICSES units in the selected locations across regional Victoria ready for deployment on 1 May 2017. The locations chosen were:

- Bairnsdale
- Ballarat
- Bendigo
- Benalla
- Bright
- Hamilton
- Melbourne
- Mildura
- Stawell
- Swan Hill.

FINDING

IGEM considers this action has been implemented as planned.

121. Establish EPA and VICSES partnership and train VICSES staff in deployment of smoke monitors

Following initial conversations in July 2016 EPA has worked closely with VICSES to produce:

- a co-designed MOU for smoke monitoring (endorsed 24 May 2017)
- standard operating procedures and work instructions for the deployment of air monitoring equipment (endorsed in May 2017)
- training for VICSES staff in the use of incident air monitoring equipment.

VICSES was engaged throughout the procurement of the smoke monitoring equipment which gave both parties confidence that the equipment was fit for purpose and met the required occupational health and safety (OHS) standards. For example, VICSES was given a preview of the equipment and the proposed standard operating procedures in April 2017 at a service delivery and capability meeting held in Melbourne. This provided an opportunity to gain buy-in from regions and to update them on the progress of the newly developed partnership.

Training in the use of the incident air monitoring equipment was co-developed and delivered online and in person. Training consisted of both technical set up and operation as well as safety in manual handling of equipment.

EPA activated the VICSES partnership during the recent Coolaroo recycling plant fire. DustTrak units were deployed from Bendigo, Broadmeadows and Ballarat to monitor PM2.5 emissions from the fire. The partnership allowed the commencement of monitoring approximately three hours after the incident onset. Data from these smoke monitors was available on EPA's AirWatch website to inform the community about the impacts of smoke from the incident and was provided to other agencies for decision-making.

EPA advised IGEM that with this partnership in place, the state's capacity to respond rapidly to smoke events has significantly increased, with response times predicted to be less than four hours after an incident controller requests deployment.

As part of ongoing day-to-day delivery of the partnership, EPA will continue to provide online training for volunteers. EPA will also continue to work with the VICSES volunteers and operations staff to ensure the equipment is functioning as specified and the service is available as required.

FINDING

IGEM considers this action has been implemented as planned.

122. Deliver a fully functional integrated air quality monitoring and information systems

The Victorian Government Implementation Plan included a commitment to:

- increase incident air quality monitoring capability²⁸ to respond to smoke events
- strengthen the decision-making framework used before, during and after smoke events to manage potential health impacts
- improve government engagement and communication with communities in respect of smoke events.

In response to these commitments, EPA has made significant progress towards the development of a fully functional integrated air quality monitoring and information system, with improvements made to data collection, display and communication.

EPA systems now collect an expanded range of data on air quality. In particular:

- EPA systems can now incorporate data from portable AreaRAE (CO, nitrogen dioxide, sulfur dioxide, volatile organic compounds, hydrogen sulfide, hydrogen cyanide, ammonia, chlorine) ozone monitors, and mobile station equipment.
- VICSES Dustrak systems can now transmit data to EPA systems, providing EPA with the ability to monitor PM2.5 levels within four hours of the request to deploy to an incident.

To support more effective management before, during and after smoke events, EPA has made the following improvements to air quality data display and communication for key decision-makers including DHHS, emergency management agencies and the community:

- EPA prepares reports for incident controllers and DHHS on community air quality in accordance with updated JSOP 03.19. These reports have been provided to DHHS to inform decision-making about community health advice in recent events such as the Crooked River fire and the Coolaroo recycling plant fire.
- EPA is now capable of sending raw monitoring data from EPA databases to EM-COP using web services to share with emergency management organisations. The system has been tested, but is yet to be migrated to production. EPA and EMV will work on an agreement prior to the 2017–18 summer season that details what form EPA data will take to provide appropriate detail to decision-makers.
- EPA has implemented changes to the AirWatch website to display PM2.5, CO and ozone levels during an emergency incident. EPA provided community members with information about these levels during the recent Crooked River fire and Coolaroo recycling plant fire.

Although substantial progress has been made on this action, EPA has advised IGEM that in order for this system to be considered fully functional, integration with air monitoring data from CFA and MFB is required.

²⁸ Incident air quality monitoring refers to the monitoring of air quality in response to an incident which produces air borne emissions.

This data has been used by CFA and MFB to monitor firefighter safety, but is also useful for EPA to understand emission rates from fires. Delays have occurred due to the procurement of new CFA and MFB equipment and subsequent decisions on how to best integrate data from these systems into EPA's data store.

To progress this integration work EPA, in partnership with CFA and MFB, has developed a draft roadmap detailing a solution to be implemented by both CFA and MFB prior to the start of the 2017–18 summer season. This roadmap details time lines for delivery and the accountability for delivery for each agency.

EPA advises that the delivery of the commitments of the agencies in the draft roadmap will provide a fully functional and integrated information management system for incident air monitoring data for the 2017–18 summer and following seasons.

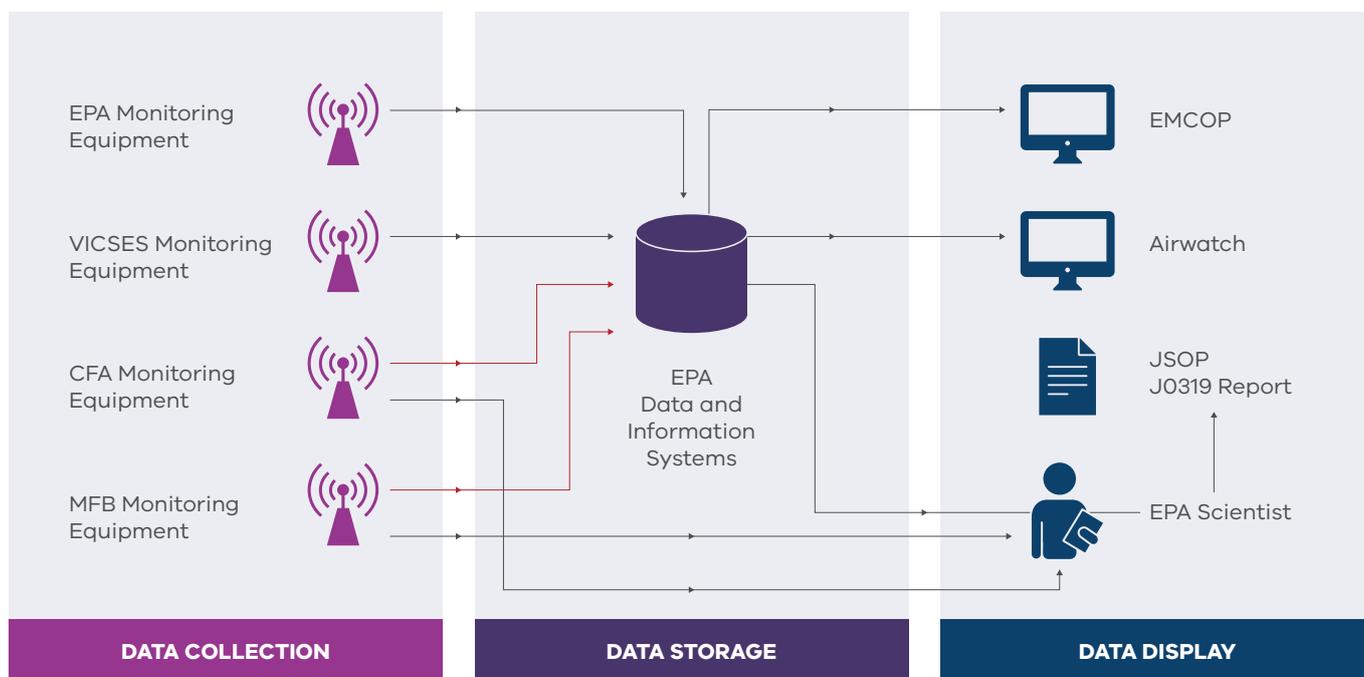
EPA estimates this action will be complete by the end of September 2017.

IGEM notes the delays and will revisit this action in next year's annual report.

FINDING

IGEM considers this action is progressing satisfactorily and will revisit in the next Annual Report.

Figure 3: Integrated air quality monitoring and information system – data management



4.4.2 State smoke framework

Recommendations 7 to 9 and associated affirmations of the 2014 Inquiry relate to the framework and protocols in place to guide decision-makers in protecting the health of the community and first responders during a smoke event.

The State Smoke Framework version 3.0 identifies the types of events, tools and processes that facilitate coordinated planning, decision-making and emergency response management in Victoria.

The 2016 IGEM Hazelwood report found that all actions under the State smoke framework sub-theme were completed with the exception of the plume modelling project, led by the CFA.

Plume modelling can be used to predict and model the downwind hazard to responders and communities from an incident such as a chemical spill or structure fire. It is used in critical decision-making for issues such as response priorities, evacuations and community warnings.

Table 21: Status of state smoke framework actions

NO.	ACTION	RELATED RECOMMENDATION/ AFFIRMATION	DUE DATE	STATUS	LEAD AGENCY
STATE SMOKE FRAMEWORK					
128	Undertake a plume modelling project to develop an enhanced capability for the prediction of toxic smoke and chemical releases from fires and hazardous material incidents	2014 Inquiry report: recommendation 9 and affirmations 24 and 25	June 2017 (Revised: July 2018)	Ongoing	CFA

128. Undertake a plume modelling project to develop an enhanced capability for the prediction of toxic smoke and chemical releases from fires and hazardous material incidents

CFA commenced a predictive services and plume modelling project towards the end of 2015. The key output of the project is the development of a plume modelling tool to assist responders to identify downwind hazards and provide increased situational awareness.

CFA has provided IGEM with a project plan outlining the following project objectives:

- develop a comprehensive multi-agency plume modelling tool for toxic atmospheric releases from hazardous materials (HAZMAT) incidents and structure/urban type fires
- provide auto-forecasting and real-time modelling capability
- improve modelling operator capacity.

To date the project has delivered the following key objectives:

- deployment of the ARGOS Decision Support System providing access to the new capabilities including enhanced puff models, high resolution numerical weather prediction gridded forecasts, long range and long duration models and additional outputs such as time of arrival
- a new plume modelling server platform providing database, processing and web hosting functions, with additional server capacity and the ability to calculate multiple concurrent models at one time
- an evaluation of the ARGOS model against event case studies
- training of additional operators in CFA and MFB scientific teams and the development of user guides.

CFA has also advised IGEM that the new tool delivers improved web-based functionality such as:

- additional control of model parameters
- enhanced outputs for consumption by other systems such as EM-COP

- improved auto-forecast capability
- improved real-time modelling.

Access to the plume modelling tool has been available to emergency management decision-makers on EM-COP since June 2016, however the tool is not yet complete.

Although the project is well progressed, CFA determined to extend project time frames in order to enable the following additional functionality to be introduced:

- provision of models for particulate matter (PM2.5, PM10)
- additional security measures, enabling the model to be used for anhydrous hydrogen fluoride high consequence transport events
- increased model evaluation and validation following actual HAZMAT or fire events.

CFA now estimate completion of the project by July 2018. IGEM notes that this action was originally due in June 2017.

FINDING

IGEM notes the revised time frames for this action and will revisit in the next Annual Report.

4.4.3 Develop integrated predictive services framework

Predictive services are a system of information and data, analytical tools and technical experts that provides valuable intelligence to support the decisions made by emergency managers, IMTs and community members. They allow risks to be identified prior to impact, enabling proactive plans to be developed and implemented to minimise damage and enhance public safety.

The Predictive Services Framework is an inter-agency project that aims to improve predictive services in Victoria. It is governed by a project control board (PCB), with senior representatives from DELWP, CFA, MFB and EMV.

Table 22: Status of develop integrated predictive services framework actions

NO.	ACTION	RELATED RECOMMENDATION/ AFFIRMATION	DUE DATE	STATUS	LEAD AGENCY
DEVELOP INTEGRATED PREDICTIVE SERVICES FRAMEWORK					
130	Undertake a user and decision making needs assessment of community, industry and emergency management sector to inform development of predictive services systems, tools and products before, during and after hazard events	2014 Inquiry report: recommendation 9 and affirmations 24 and 25	December 2016	Complete	DELWP
131	Design an ICT system architecture (design) for the Predictive Services ICT Platform	2014 Inquiry report: recommendation 9 and affirmations 24 and 25	September 2016	Complete	DELWP
132	Build an ICT platform for hazard prediction (including smoke) models	2014 Inquiry report: recommendation 9 and affirmations 24 and 25	June 2017	Ongoing	DELWP
133	Design data management requirements for the Predictive Services Framework	2014 Inquiry report: recommendation 9 and affirmations 24 and 25	March 2017	Complete	DELWP
134	Incorporate Predictive Services smoke intelligence module, to incorporate social media, field sensors and satellite image data to calibrate and validate smoke predictions	2014 Inquiry report: recommendation 9 and affirmations 24 and 25	June 2018	Ongoing	DELWP

130. Undertake a user and decision making needs assessment of community, industry and emergency management sector to inform development of predictive services systems, tools and products before, during and after hazard events

DELWP engaged a research centre to develop an understanding of how predictive services can improve hazard management discussions and decision-making among community, industry and emergency management stakeholders.

The methodology for this assessment included:

- 14 workshops with emergency management stakeholders including emergency managers and hazard analysts
- seven workshops with community members
- a survey of CFA and VICSES volunteers (64 responses)
- 11 interviews with senior emergency management stakeholders
- an implementation workshop with the Predictive Services PCB.

The research centre sought input from emergency management and public sector stakeholders on the likely needs of industry.

A report was provided to DELWP in April 2017 on the results of the information and decision-making needs assessment to inform the design of predictive services systems.

The report provides an overview of stakeholder feedback relating to predictive services needs for bushfire, bushfire smoke, toxic plumes, flood and storm. These information needs have assisted in validating the conceptualisation of predictive services used in Victoria, and identifying requirements for additional components.

FINDING

IGEM considers this action has been implemented as planned.

131. Design an ICT system architecture (design) for the Predictive Services ICT Platform

DELWP completed the ICT system architecture following an options analysis of system design requirements. The Predictive Services PCB endorsed the system architecture at a meeting on 26 August 2016.

The ICT system architecture involves the core prediction engines of the predictive services system, including Phoenix and ARGOS, being hosted on the cloud-based Amazon Web Services.

The new design provides advantages such as scalability in computing power as well as providing access to multiple users simultaneously. Further, the cloud system provides support for vast computing capacity when required. This capacity allows for the timely provision of information to emergency management personnel across multiple hazards

FINDING

IGEM considers this action has been implemented as planned.

132. Build an ICT platform for hazard prediction (including smoke) models

An ICT platform has been built and is now available to support predictive services for some operations, with further trial and additional functionality planned across 2017–18.

DELWP engaged a contractor in November 2016 to assist with building the platform and provide support until October 2017.

DELWP has advised IGEM that the new platform provides the capacity to simulate thousands of hazard scenarios simultaneously to provide more accurate and cost-effective predictions. IGEM staff attended a working demonstration of the ICT platform on 21 August 2017, during which the bushfire and smoke models were demonstrated.

DELWP has advised IGEM that the ICT platform is being used operationally in the State Control Centre by planned burn coordinators in conjunction with fire behaviour analysts and meteorologists. This allows a more comprehensive consideration of potential smoke effects in the delivery of planned burning programs, as well as informing the deployment of EPA air quality monitoring equipment.

This action was due in June 2017 and IGEM notes the significant progress made in the development of the platform to support operational decision-making and community wellbeing.

Despite this progress, some final elements are still being considered for integration into the platform, including:

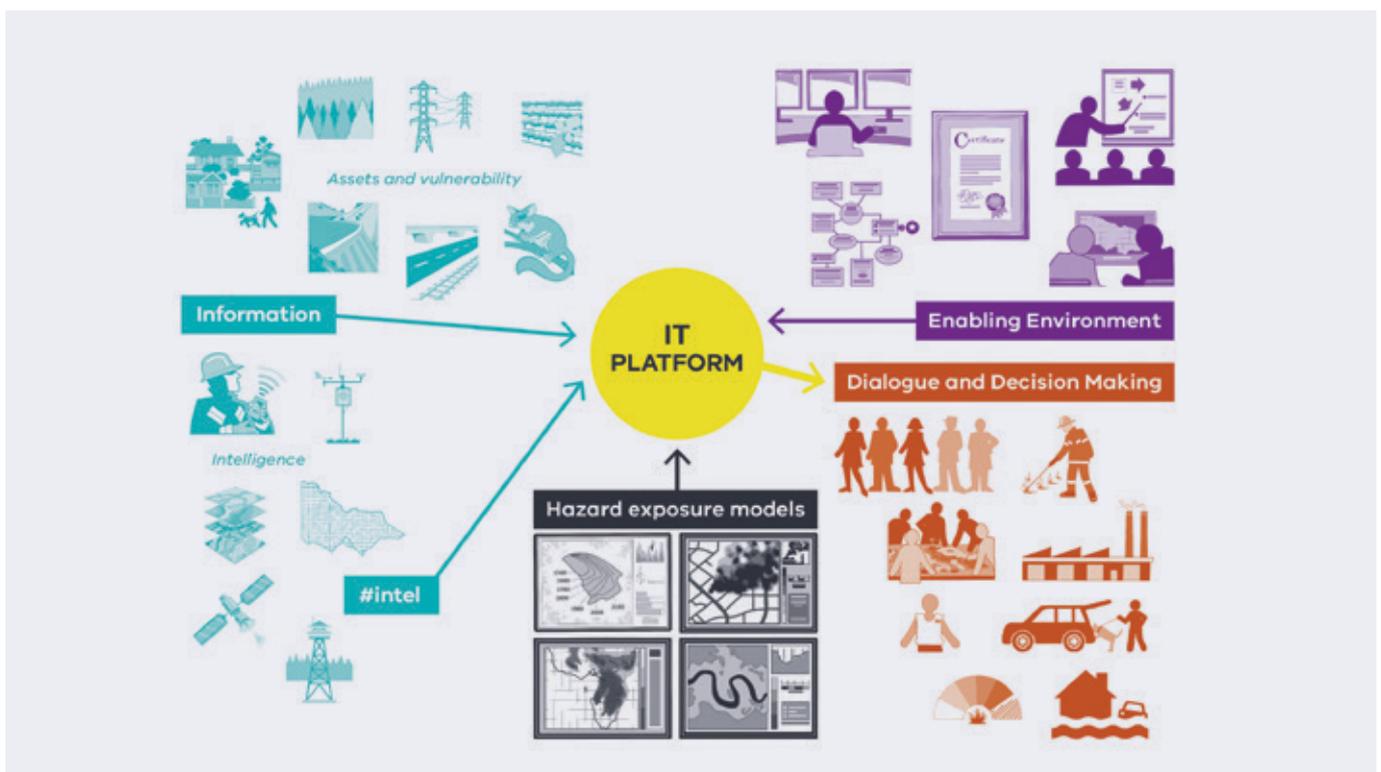
- the forecasting of rolling 24 hour averages of PM2.5 concentrations, in line with protocols outlined in the *Community Smoke, Air Quality and Health Standard, 2015*
- the best way to model and present uncertainty data to users
- modifications arising from a trial of the platform during the 2017–18 summer season
- potential integration of FloodZoom, a flood decision support tool developed by DELWP that falls under the umbrella of the Predictive Services Framework.

DELWP's Predictive Services project plan estimates that further progress will be made by the end of 2017, with the PCB requesting continued improvements be scoped until 2019.

FINDING

IGEM considers this action is progressing satisfactorily and will revisit in the next Annual Report.

Figure 4: Predictive Services Framework



133. Design data management requirements for the Predictive Services Framework

Predictive services depend on various data inputs, sourced from a range of government and research organisations, for example, gridded weather data from the Bureau of Meteorology, fuel history layers from DELWP and curing data from CFA.

A report on the smoke data management system was completed on 26 April 2017. The report is to be presented to the Predictive Services PCB for feedback. The report outlines the location and source of data that is being used in predictions of smoke spread, dissipation and its impacts. It also provides recommendations for smoke-related data management and investment moving forward.

Validation of the smoke and chemical transport model is currently underway to assess the model's accuracy. Other projects (refer to action 134) will provide further validation of the system and demonstrate how the model is performing compared to actual incidents.

FINDING

IGEM considers this action has been implemented as planned.

134. Incorporate Predictive Services smoke intelligence module, to incorporate social media, field sensors and satellite image data to calibrate and validate smoke predictions

The smoke prediction module requires technologies and data that can be used to calibrate and validate the predictions of smoke spread, dissipation and constituents. This calibration can be used for making long-term improvements to models, as well as providing intelligence for real-time predictions of the distribution and density of smoke and its impacts on communities and industry.

DELWP engaged the Bushfire and Natural Hazards Cooperative Research Centre to seek expressions of interest to develop a dynamic smoke intelligence system, comprising both a research project and physical system.

The expected research project outputs include:

- a smoke intelligence system comprising remote sensing and field sensor, integrated with Victoria's existing smoke modelling prediction system
- the physical components of a smoke intelligence system
- user documentation and training materials
- training for managing the smoke intelligence system.

The project will also review opportunities to integrate social media and health monitoring intelligence.

Expressions of interest are due in November 2017.

FINDING

IGEM considers this action is progressing satisfactorily and will revisit in the next Annual Report.

4.4.4 EPA meta-analysis

As an outcome of the 2014 Inquiry report, EPA committed to create a body of knowledge of the impacts of extended brown coal fire events. EPA partnered with emergency response agencies to conduct a meta-analysis of air monitoring and environmental data, including smoke plume modelling.

Table 23: Status of EPA meta-analysis action

NO.	ACTION	RELATED RECOMMENDATION/ AFFIRMATION	DUE DATE	STATUS	LEAD AGENCY
EPA META-ANALYSIS					
147	Release a report on information and knowledge generated from the Hazelwood Mine Fire meta-analysis	2014 Inquiry report: affirmation 18	December 2016	Ongoing	EPA

147. Release a report on information and knowledge generated from the Hazelwood Mine Fire meta-analysis

A report on the complete body of information and knowledge generated from the Hazelwood mine fire meta-analysis was due to be released by the end of 2016. EPA completed the final meta-analysis report in March 2017 and shared it with agencies to inform emergency response to future brown coal events.

There are four documents that make up the final meta-analysis report. They are:

- *Hazelwood Coal Mine Fire: Lessons learnt from responding to a large scale brown coal open-cut mine fire* – which provides an overall commentary on the meta-analysis learnings
- *Hazelwood analysis final report* – which covers the data set collated from the fire, and details the products developed, including information products such as the combustion conditions and rates of emission of substances such as PM2.5 and CO
- *Analysis of air quality during the Hazelwood mine fire* – which analyses the results of measurements made during the Hazelwood mine fire by various organisations including EPA, CFA and CSIRO
- *Hazelwood analysis database* – which provides the full compilation of data that was collected during and after the Hazelwood mine fire, including sampling of air, water, soil and ash.

However, EPA has advised IGEM that the public release of this report will be indefinitely delayed, pending the completion of current legal proceedings relating to the Hazelwood mine fire.

FINDING

IGEM will revisit this action in the next Annual Report.

4.5 Latrobe Valley coal mine regulation

The 2014 Inquiry and the Mine Rehabilitation Inquiry reports identified the need to improve coal mine regulation in the Latrobe Valley.

DEDJTR, WorkSafe and EPA are responsible for regulating Latrobe Valley coal mines. The Board of Inquiry made a range of recommendations that sought to improve regulation of specific risks as well as strengthen the overall regulatory framework for coal mines in the Latrobe Valley.

The Board of Inquiry found that, due to evolving coal mine regulatory responsibilities of the mining regulators, there were gaps in the regulation of fire risk by DEDJTR and WorkSafe, stating that:

the Hazelwood mine fire was a foreseeable risk that slipped through the cracks between regulatory agencies.²⁹

The Inquiry also identified gaps and areas for improvement in the regulation of rehabilitation of mine sites in the Latrobe Valley.

This section details the government's response to recommendations and affirmations in the 2014 and reopened Inquiry reports that relate specifically to Latrobe Valley coal mine regulation.

Progress summary

The Victorian Government Implementation Plan lists 15 actions under the Latrobe Valley coal mine regulation theme, of which 10 have now been completed.

The closure of the Hazelwood mine has led to delays in some actions, as new operational arrangements and risks are considered.

IGEM considers that the responsible agencies have made significant improvements in relation to the regulation of Latrobe Valley coal mines.

The Victorian Earth Resources Regulation (ERR) Forum was established at a meeting on 3 October 2016. The forum will drive a coordinated, strategic approach to regulation in the earth resources sector, with a focus on robust and effective decision-making.

Building on this collaboration, regulators and mine operators contributed to the preparation of an integrated research plan, which identifies common research areas between the operators of the Latrobe Valley coal mines for the next 10 years.

Regulatory coordination of mine fire risk has been strengthened through workshops between DEDJTR and WorkSafe and an MOU between DEDJTR and CFA. In addition, WorkSafe engaged technical specialists to assist in the assessment of fire risk in the Latrobe Valley coal mines.

Almost all actions in DEDJTR's ERR 2015–16 Action Plan have been implemented. The ERR plan delivered significant reform across the governance, operations, capability, community engagement, client service and transparency of the regulatory frameworks for earth resources regulation.

The Mine Rehabilitation Inquiry report outcomes identified that progressive rehabilitation for coal mines is important to reduce fire risk and ensure that final rehabilitation is achievable within an acceptable time frame. Latrobe Valley coal mine operators have now incorporated progressive rehabilitation milestones in work plan variations submitted to DEDJTR and are awaiting approval.

The Minister for Resources has approved a revised approach to the overarching review of the regulatory framework for the Latrobe Valley coal mines, following the closure of the Hazelwood mine. Work on the review has commenced and is anticipated to be completed by December 2017.

Table 24: Status of Latrobe Valley coal mine regulation actions

NO.	ACTION	RELATED RECOMMENDATION/ AFFIRMATION	DUE DATE	STATUS	LEAD AGENCY
LATROBE VALLEY COAL MINE REGULATION					
152	Establish a Victorian Earth Resources Regulator Forum, with membership including WorkSafe and EPA	2014 Inquiry report: affirmation 39 Mine Rehabilitation Inquiry report: affirmation 2	July 2016	Complete	DEDJTR
153	Undertake twice yearly workshops on the MOU between DEDJTR and WorkSafe	2014 Inquiry : recommendation 4	Twice yearly (transition to BAU July 2017)	Complete	DEDJTR and WorkSafe
154	Engage technical specialists to assist WorkSafe in the assessment of coal mine fire risk	2014 Inquiry report: recommendation 4	August 2016	Complete	WorkSafe
155	Deliver DEDJTR ERR 2015–16 Action Plan	Mine Rehabilitation Inquiry report: affirmation 2	September 2016	Ongoing (overdue)	DEDJTR
156	Employ or engage suitable expertise in mine closure and rehabilitation liability assessments	Mine Rehabilitation Inquiry report: recommendation 2	December 2016	Complete	DEDJTR
157	Sign an MOU (DEDJTR and CFA) that describes roles and responsibilities around fires and fire risk at earth resource sites	2014 Inquiry report: recommendation 4	December 2016	Complete	DEDJTR and CFA
158	Develop progressive rehabilitation milestones, with support from the TRB or other experts	Mine Rehabilitation Inquiry report: recommendation 4	December 2016	Ongoing (overdue)	DEDJTR
159	Contribute to the preparation of an integrated research plan, which identifies common research areas between the operators of the Latrobe Valley coal mines for the next 10 years	Mine Rehabilitation Inquiry report: recommendation 18	December 2016	Complete	DEDJTR
160	Review the regulatory framework for the Latrobe Valley coal mines and develop options for policy, administrative and legislative reform	Mine Rehabilitation Inquiry report: recommendation 17	June 2017 (Revised: December 2017)	Ongoing	DEDJTR
161	Consult with the Latrobe Valley Mine Rehabilitation Commissioner about the options for policy, administrative and legislative reform for the Latrobe Valley coal mines' regulatory framework	Mine Rehabilitation Inquiry report: recommendation 14	December 2017	Ongoing	DEDJTR
162	Implement policy, administrative and legislative reforms for the Latrobe Valley coal mines' regulatory framework	Mine Rehabilitation Inquiry report: recommendation 17	June 2018	Ongoing	DEDJTR

152. Establish a Victorian Earth Resources Regulator Forum, with membership including WorkSafe and EPA

DEDJTR established the Victorian ERR Forum at a meeting on 3 October 2016 where the terms of reference and operating procedures were tabled and adopted. An independent chair was appointed by DEDJTR and membership includes representatives from each of the key regulators:

- CFA
- DEDJTR – ERR branch
- DELWP
- EPA
- WorkSafe.

The forum will drive a coordinated, strategic approach to regulation in the earth resources sector, with a focus on robust and effective decision-making, timeliness and risk based regulation. The forum met again on 12 December 2016 and is to meet at least three times per calendar year.

FINDING

IGEM considers this action has been implemented as planned.

153. Undertake twice yearly workshops on the MOU between DEDJTR and WorkSafe

The Secretary of DEDJTR and the Chief Executive of WorkSafe approved a revised MOU between ERR Branch and WorkSafe in May 2015. The MOU includes details in relation to mine fire risks and is supported by the Joint Activity Protocols for the ERR branch and WorkSafe's action plan.

WorkSafe and DEDJTR were required to hold two workshops annually to review the MOU's supporting action plan. These workshops have transitioned to a BAU activity as per the Victorian Government Implementation Plan and the next workshop will occur in October 2017.

Metropolitan and regional staff from each agency attended the workshops to facilitate relationship building, information sharing, continuous improvement and collaboration for joint activities.

The workshops included topics such as:

- communication and information sharing – WorkSafe investigation process, German brown coal mine benchmarking tour
- emerging issues – 2016–17 brown coal mine fire season, flooding and emergency activities

- joint activities – workshop addressing working together
- communicating and discussing risk profiles
- implementing regional meetings
- communication and information sharing – updates from regional teams
- prioritising regulatory approaches
- stability considerations for open pit inspections.

IGEM considers that this action is complete as per the Victorian Government Implementation Plan.

FINDING

IGEM considers this action has been implemented as planned.

154. Engage technical specialists to assist WorkSafe in the assessment of coal mine fire risk

WorkSafe has adopted a systems-based approach to regulatory oversight and now regularly engages technical specialists to assist in the assessment of fire risk in the Latrobe Valley coal mines.

WorkSafe engaged a technical specialist in June 2017 to continue the review of the current fire services policies and practices at the Latrobe Valley coal mines. The review focused on:

- changes to the documentation (compared with original policies and codes) and whether the amendments are appropriate
- the adequacy of the documentation given the state of knowledge and best practice within the broader industry
- the actions WorkSafe should take and the areas WorkSafe should focus on to ensure appropriate regulatory oversight.

WorkSafe advised IGEM that the process of acquiring technical specialist advice is now a regular practice.

FINDING

IGEM considers this action has been implemented as planned.

155. Deliver DEDJTR ERR 2015–16 Action Plan

The DEDJTR *Earth Resources Regulation 2015–16 Action Plan* was released in November 2015.³⁰

The plan was developed in response to the *Statement of Expectation for the Regulation of the Earth Resources Sector* issued by the then Minister for Energy and Resources on 18 September 2015.

The action plan committed to significantly improve regulatory governance and performance, and included a number of policy and legislative reform priorities to complement the strengthening of the regulator.

The Victorian Government Implementation Plan set the due date for this action as September 2016.

Progress has been made towards implementing improvements across the eight key areas outlined in the plan:

- role clarity
- building capability and culture
- risk-based strategies
- clear and consistent regulatory activities
- stakeholder consultation and engagement
- timeliness
- communication and transparency
- continuous improvement.

DEDJTR reported on its website in February 2017 that the majority of the improvements outlined in the plan had been implemented.³¹ These included enacting a new ERR leadership structure and improvements in governance and operational arrangements, as well as clarifying the role of ERR in the earth resources sector.

Other improvements aimed at increasing stakeholder and community confidence in ERR included the development of a client service standard to introducing risk-based regulatory requirements and a stakeholder feedback mechanism.

DEDJTR advised IGEM that the remaining elements of the following actions of the action plan will be finalised during 2017–18:

- Risk-based strategies – Following identification of the state's highest risk sites, DEDJTR plans to ask operators of high risk sites to move to risk-based work plans, and to publish a final risk-based work plan guideline. In line with the *Statement of Expectation for the Regulation of the Earth Resources Sector*, DEDJTR adopted a phased

approach to this action, focusing on the Latrobe Valley in 2016–17. DEDJTR advises this transition will continue throughout the mining and extractives industries during 2017–18.

- Communications and transparency – The action plan committed to publishing public sustainability reports by mine and quarry operators of high risk sites. ERR has instructed 27 sites to submit public sustainability reports for publication on the DEDJTR website. DEDJTR advises that the reports are being reviewed and will be published in the coming months.

FINDING

This action is overdue and IGEM will revisit in the next Annual Report.

156. Employ or engage suitable expertise in mine closure and rehabilitation liability assessments

DEDJTR committed to carrying out detailed rehabilitation liability assessments for each of the Latrobe Valley coal mines by March 2017 (refer to action 171).

To support these assessments, DEDJTR engaged 29 independent experts to a panel of Technical Experts and Independent Peer Reviewers (the Expert Panel) on 8 February 2017.

The Expert Panel includes individuals and firms qualified to provide expertise in calculating rehabilitation liability assessments for mine closure. Appointing experts to an ongoing panel will allow DEDJTR to access expertise quickly when required in the future.

The Expert Panel also completes action 181, which required government to appoint independent peer reviews as part of the LVRRS.

FINDING

IGEM considers this action has been implemented as planned.

³⁰ earthresources.vic.gov.au/earth-resources-regulation/about-us/ministerial-statement-of-expectations/soe-2015-16/earth-resources-regulation-2015-16-action-plan

³¹ earthresources.vic.gov.au/___data/assets/pdf_file/0006/1476690/ERR-Statement-of-Expectations-Achievement-Report-2015-16.pdf

157. Sign an MOU (DEDJTR and CFA) that describes roles and responsibilities around fires and fire risk at earth resource sites

An MOU between DEDJTR and CFA was finalised on 1 February 2017.

The purpose of the MOU is to:

- ensure that CFA and DEDJTR work collaboratively in assessing fire risk and identify appropriate measures for the management of fire risk
- establish the rights and obligations governing the roles and responsibilities of CFA and DEDJTR in the carrying out of joint training and exercise activities of fire prevention in or around open cut coal mines
- ensure the privacy of individuals and data confidentiality is maintained as a result of the sharing of information between the parties.

The MOU establishes principles and guidance for each agency on how they will work to eliminate or minimise the risk of fire in open cut coal mines.

FINDING

IGEM considers this action has been implemented as planned.

158. Develop progressive rehabilitation milestones, with support from the TRB or other experts

In the Mine Rehabilitation Inquiry report, the Board of Inquiry stated that it recognises the importance of progressive rehabilitation to both reducing fire risk and ensuring that final rehabilitation is achievable within an acceptable time frame. It expressed the view that progressive rehabilitation should include a focus on short, medium and long-term risk reduction, as well as research, trials, and building community and regulatory confidence.³²

Since the 2016 IGEM Hazelwood report, all three mine operators have submitted work plan variations to DEDJTR which incorporate progressive rehabilitation milestones. DEDJTR has advised IGEM that there have been delays to the approval of work plan variations due to the closure of Hazelwood and the introduction of risk-based work plans.

DEDJTR, in collaboration with the Technical Review Board (TRB) and referral agencies, has undertaken an assessment of the work plan variations and is continuing to work with the mine operators to ensure the work plan variations are finalised.

IGEM notes this action was due in December 2016.

FINDING

This action is overdue and IGEM will revisit in the next Annual Report.

159. Contribute to the preparation of an integrated research plan, which identifies common research areas between the operators of the Latrobe Valley coal mines for the next 10 years

The *Integrated Mines Research Group Ten Year Research Plan* was published in December 2016. In developing the research plan, DEDJTR worked closely with the Integrated Mines Research Group (IMRG) consisting of representatives from the Latrobe Valley mine operators.

The research plan demonstrates that the IMRG has begun the process of satisfying the requirements of recommendation 18 of the Mine Rehabilitation Inquiry report.

The research plan has outlined the following areas for further discussion and research:

- cover on coal – stability, water quality, fire and vegetation
- full lake benefits and interconnectivity with three lakes – water and stability
- lake fill rates (rebound/recharge) – water and stability
- horizontal drains – stability, water quality and fire
- long-term pit lake water quality – water
- research existing rehabilitation experiences – stability, water quality, fire and vegetation
- social and economic closure effects – social and economic
- spontaneous combustion – fire, stability
- stability – stability, water quality, fire and vegetation
- time lines for maintenance and monitoring – water quality, stability
- wave action, beaching and shoreline treatment including vegetation – stability, water quality, fire and vegetation.

Due to the closure of coal mine operations at Hazelwood in April 2017 some project time lines were pushed forward due to the need for immediate rehabilitation. As such, it may be possible to obtain practical rehabilitation learnings for AGL Loy Yang and EnergyAustralia Yallourn earlier than planned.

FINDING

IGEM considers this action has been implemented as planned.

³² Hazelwood Mine Fire Inquiry Report, Volume IV – Mine Rehabilitation, p. 110

160. Review the regulatory framework for the Latrobe Valley coal mines and develop options for policy, administrative and legislative reform

Since the 2016 IGEM Hazelwood report, DEDJTR has progressed this action by completing a scoping paper in December 2016 and a draft directions paper.

The Victorian Government Implementation Plan set the due date for this action as June 2017.

However, DEDJTR has advised IGEM that the closure of Hazelwood has changed the context for developing and implementing options to improve the rehabilitation regulatory framework.

As a result, in July 2017 the Minister for Resources approved a revised approach and time line to implement action 160. Under the agreed approach, DEDJTR advised that action 160 will now be delivered by December 2017.

The regulatory review work program will involve:

- clarifying the roles of the operators of the Latrobe Valley coal mines and the state in ongoing post-closure monitoring, maintenance and liability
- financial assurance to the state
- implementation of the LVRRS
- risk-based approaches to mine regulation, rehabilitation, closure and post-closure being integrated in risk-based work plans and fire risk management plans
- a framework of sanctions to deter and address noncompliance commensurate with the risks
- obligations on referral authorities and the mining regulator during work plan variation approvals
- the role for community involvement in rehabilitation planning
- progressive rehabilitation and rehabilitation trials to address knowledge gaps.

FINDING

IGEM notes the revised time frames for this action and will revisit in the next Annual Report.

161. Consult with the Latrobe Valley Mine Rehabilitation Commissioner about the options for policy, administrative and legislative reform for the Latrobe Valley coal mines' regulatory framework

DEDJTR will consult with the Latrobe Valley Mine Rehabilitation Commissioner once options for policy, administrative and legislative reform have been developed for the Latrobe Valley coal mines regulatory framework (refer to action 160).

FINDING

IGEM will revisit this action in the next Annual Report.

162. Implement policy, administrative and legislative reforms for the Latrobe Valley coal mines' regulatory framework

DEDJTR has advised IGEM that once the Latrobe Valley Mine Rehabilitation Commissioner has been consulted (refer to action 161), policy, administrative and legislative reform options (including the establishment of the Latrobe Valley Mine Rehabilitation Authority) will be refined and presented for consideration of the Minister for Resources by April 2018. Implementation of non-legislative reform options could then commence from April 2018.

This action is due for completion in June 2018, however DEDJTR advises that reforms will not be fully completed until late 2018.

FINDING

IGEM will revisit this action in the next Annual Report.

4.6 Latrobe Valley coal mine rehabilitation bonds

Under the *Mineral Resources (Sustainable Development) Act 1990 (the MR(SD) Act)* and associated regulations, mine operators are obliged to:

- rehabilitate land that has been mined in accordance with an approved rehabilitation plan
- enter into a rehabilitation bond with the form and amount to be determined by the Minister for Resources.

The purpose of the rehabilitation bond is to ensure financial security should the licensee be unable to meet their rehabilitation obligations.

The *Establishment and Management of Rehabilitation Bonds for the Mining and Extractive Industries policy* (the bond policy) required that the mine operator bonds reflect 100 per cent of the self-assessed rehabilitation liability for a site.

In the 2015–16 Inquiry, the Board of Inquiry found that the rehabilitation bonds for each Latrobe Valley coal mine were insufficient to cover the costs of rehabilitation, and that the self-assessed liabilities failed to consider a number of elements.³³

This section details the government’s response to recommendations 5 to 12 of the Mine Rehabilitation Inquiry report.

Progress summary

The Victorian Government Implementation Plan lists 11 actions under the Latrobe Valley coal mine rehabilitation bonds theme, of which ten are complete.

The amount of the rehabilitation bonds for Latrobe Valley coal mine operators has increased significantly since the Hazelwood mine fire.

After considering the sufficiency of existing rehabilitation bonds, the then Minister for Energy and Resources (the minister) determined that they were insufficient. The minister wrote to each of the Latrobe Valley mine licensees and the Latrobe City Council to consult on a proposal to implement further rehabilitation bonds through a staged approach.

The first two stages, based on coal mine operators’ self-assessments of rehabilitation costs, set bond amounts at 50 per cent and then 100 per cent of the self-assessed liability. To support robust self-assessments of liability by mine operators, DEDJTR and EPA collaborated in 2016 to identify the additional skills and expertise required for audits of these assessments.

Following the first two stages of bond increases, DEDJTR revised the bond policy, which was approved by the Minister for Resources on 14 June 2017. The revised bond policy places an emphasis on independent assessments to provide greater assurance that estimates of rehabilitation costs are accurate.

Following an independent assessment, DEDJTR identified the need for a further increase in the bond amount for each of the Latrobe Valley mines. The Minister for Resources and DEDJTR finalised these third-stage bond increases and published a statement of reasons on the DEDJTR website on 6 October 2017.³⁴

Table 25: Status of Latrobe Valley coal mine rehabilitation bonds actions

NO.	ACTION	RELATED RECOMMENDATION/ AFFIRMATION	DUE DATE	STATUS	LEAD AGENCY
LATROBE VALLEY COAL MINE REHABILITATION BONDS					
164	Consult under section 80 of the MR(SD) Act with each of the Latrobe Valley Coal Mines’ licensees and the Latrobe City Council on the proposal to implement further rehabilitation bonds at 100 per cent of the Latrobe Valley coal Mines self-assessed liabilities	N/A	December 2016	Complete	DEDJTR
165	Publish a statement of reasons for any decision to implement further rehabilitation bonds on the DEDJTR website	N/A	December 2016	Complete	DEDJTR

³³ Hazelwood Mine Fire Inquiry Report, Volume IV – Mine Rehabilitation, p. 105

³⁴ earthresources.vic.gov.au/earth-resources-regulation/information-for-community-and-landholders/mining-and-extractives/latrobe-valley-coal-mines/latrobe-valley-coal-mines-bonds/third-statement-of-reasons

Table 25 continued:

NO.	ACTION	RELATED RECOMMENDATION/ AFFIRMATION	DUE DATE	STATUS	LEAD AGENCY
LATROBE VALLEY COAL MINE REHABILITATION BONDS					
166	Complete bond policy review	Mine Rehabilitation Inquiry report: recommendation 11	December 2016	Complete	DEDJTR
167	Specify the manner and form for rehabilitation liability assessments for the Latrobe Valley coal mines	Mine Rehabilitation Inquiry report: recommendation 5	December 2016	Complete	DEDJTR
168	Identify skills and expertise for the conduct of rehabilitation liability assessment audits	Mine Rehabilitation Inquiry report: recommendation 6	August 2016	Complete	DEDJTR
169	Amend the accreditation criteria as necessary for auditors appointed under section 53S of the EP Act	Mine Rehabilitation Inquiry report: recommendation 6	December 2016	Complete	EPA
170	Assess current pool of appointed auditors for the appropriate skills and expertise	Mine Rehabilitation Inquiry report: recommendation 6	December 2016	Complete	DEDJTR and EPA
171	Finalise rehabilitation liability assessments	Mine Rehabilitation Inquiry report: recommendations 7 and 8	March 2017	Complete	DEDJTR
172	Implement further Rehabilitation Bonds if required based on final rehabilitation liability assessments, bond policy review and Inquiry findings, and publish statement of reasons for decision on the DEDJTR website	Mine Rehabilitation Inquiry report: recommendation 10	June 2017	Complete	DEDJTR
173	Determine an effective mechanism to manage: <ul style="list-style-type: none"> the costs of ongoing monitoring, maintenance and management of the earth resources industry sites risks of closure on the community's social and economic welfare 	Mine Rehabilitation Inquiry report: recommendation 12	June 2017 (Revised : December 2017)	Ongoing	DEDJTR

164. Consult under section 80 of the MR(SD) Act with each of the Latrobe Valley Coal Mines' licensees and the Latrobe City Council on the proposal to implement further rehabilitation bonds at 100 per cent of the Latrobe Valley coal mines self-assessed liabilities

Following consultation with the three Latrobe Valley coal mine operators, further rehabilitation bonds set at 50 per cent of self-assessed liabilities were provided to government in July 2016 in line with the amounts recommended by the Inquiry. This completed stage 1 of the three-stage approach to implement further rehabilitation bonds in response to the Inquiry report.

In September 2016 DEDJTR consulted with the Latrobe Valley coal mine operators and the Latrobe City Council on the stage 2 proposals to bring the total of the rehabilitation bonds to 100 per cent of the self-assessed rehabilitation liability. In October 2016 DEDJTR received formal replies from the Latrobe Valley mine operators and the Latrobe City Council.

The position of the coal mine operators and Latrobe City Council were considered as well as other factors such as the estimated rehabilitation costs provided to DEDJTR by a consultant.

In November 2016 the three coal mine operators were informed that a further rehabilitation bond at 100 per cent of the self-assessed liabilities would be required by 28 December 2016.

FINDING

IGEM considers this action has been implemented as planned.

165. Publish a statement of reasons for any decision to implement further rehabilitation bonds on the DEDJTR website

This action is linked to action 172.

The DEDJTR website contains statements by the Minister for Resources of the reasons for decisions to require further rehabilitation bonds.

In July 2014 the Minister for Resources published a statement of reasons to require an initial increase in rehabilitation bonds to an amount set at 50 per cent of the self-assessed liability (stage 1).

In January 2017 the minister published a second statement on the DEDJTR website, providing reasons for the decision to further increase the rehabilitation bonds required from the coal mine operators to 100 per cent of the self-assessed rehabilitation liability (stage 2).³⁵

In the stage 2 statement, the minister described the factors that were taken into consideration to determine the further increases to the rehabilitation bonds for the Latrobe Valley coal mines. These included:

- current amounts of the bonds of the Latrobe Valley coal mines
- rehabilitation liabilities reported for the 2014–15 period and the 2015–16 period by each of the Latrobe Valley coal mines
- findings of the Mine Rehabilitation Inquiry report
- rehabilitation liabilities estimated
- comments from the Latrobe Valley coal mines regarding the stage 2 proposed further rehabilitation bonds.

On 6 October 2017 the minister published a third statement on the DEDJTR website setting out further increases. In addition to factors considered for the stage 2 increases, the minister considered the independent assessments and the revised bond policy (refer to action 166). The statement sets out that it is a community and government expectation that the State is fully assured against the full costs of rehabilitating the Latrobe Valley mines.

FINDING

IGEM considers this action has been implemented as planned.

166. Complete bond policy review

The bond policy is established under the MR(SD) Act and outlines DEDJTR’s policies for the establishment and management of rehabilitation bonds and the methods to be used in assessing rehabilitation liability for mining and extractive operations.

The bond policy required that mine operator bonds reflect 100 per cent of the assessed rehabilitation liability for a site. However, the Board of Inquiry found that this requirement has not been fully implemented, with the current administrative practice requiring bonds to be in the form of a bank guarantee.³⁶

DEDJTR reviewed the bond policy to:

- provide financial assurance to the state in the event that a mine operator defaults on rehabilitation liability
- encourage progressive mine rehabilitation
- encourage improved mine planning.

The review included an examination of resources policy literature, analysis of externally provided research and consultation with key external stakeholders.

The revised bond policy includes the following key principles:

- rehabilitation bonds will be based on the independently applied liability assessment framework
- liabilities will be independently assessed no less than every five years
- rehabilitation bonds will reflect the full value of the liability assessment, with provisions for discounts based on progressive milestones set out in an approved work plan
- rehabilitation bonds must be provided in the form of a bank guarantee that meets conditions approved by the Minister for Resources
- the Minister for Resources may consider rehabilitation bonds in a hybrid form, where a bank guarantee is complemented by a parent company guarantee.

The Minister for Resources approved the revised bond policy on 14 June 2017.

The updated bond policy has informed the Minister for Resources’ consideration of a third stage bond increase for the three Latrobe Valley coal mines.

FINDING

IGEM considers this action has been implemented as planned.

³⁵ earthresources.vic.gov.au/earth-resources-regulation/information-for-community-and-landholders/mining-and-extractives/latrobe-valley-coal-mines/latrobe-valley-coal-mines-bonds/second-statement-of-reasons

³⁶ Hazelwood Mine Fire Inquiry Report, Volume IV – Mine Rehabilitation, p. 134

167. Specify the manner and form for rehabilitation liability assessments for the Latrobe Valley Coal Mines

The Latrobe Valley mine operators provide self-assessments of their rehabilitation liabilities to the Minister for Resources to inform his decisions on rehabilitation bonds.

The Mine Rehabilitation Inquiry report found that while self-assessed rehabilitation estimates by the mine operators were based on detailed models with costs for activities such as earthworks and rehabilitation costs, they were not consistently based on third-party rates for the activities and omitted potential costs that are likely to be incurred, such as the cost of acquiring the water to fill the pit voids.

The Board of Inquiry recommended that government should specify the manner and form of rehabilitation liability assessments for use by the Latrobe Valley mine operators in their rehabilitation liability self-assessments.³⁷

Under section 79A of the *MR(SD) Act*, the Minister for Resources has the power to specify the manner and form in which it requires the self-assessed rehabilitation liabilities to be made for the purposes of determining the amount of a rehabilitation bond.

In order to address this action, DEDJTR:

- developed the Framework for Assessing Rehabilitation Liabilities, Latrobe Valley Coal Mines (the framework)
- engaged an independent contractor to develop a calculator for assessing rehabilitation liabilities.

The framework specifies the manner and form to assess the rehabilitation liabilities of the Latrobe Valley coal mines. It provides a basis for the minister's decision of an appropriate rehabilitation bond by focusing the assessment on the following aspects:

- the liability for rehabilitating the currently disturbed footprint
- evaluating the liability assuming the use of third-party contractors and equipment
- accounting for rehabilitation uncertainties and risks.

The calculator is an electronic tool that estimates:

- rehabilitation base costs
- risk costs (based on probabilistic modelling)
- total liability cost.

DEDJTR provided the framework and calculator to the Latrobe Valley coal mine operators in December 2016.

FINDING

IGEM considers this action has been implemented as planned.

168. Identify skills and expertise for the conduct of rehabilitation liability assessment audits

Under section 79A(3) of the *MR(SD) Act*, mine operators can be required to engage an auditor to conduct an audit of their rehabilitation liability self-assessments.

EPA appoints environmental auditors pursuant to section 53S of the *Environment Protection Act 1970* (Vic). These auditors may be engaged by mine operators to provide audits of rehabilitation liability self-assessments.

DEDJTR and EPA collaborated in 2016 to identify the skills and expertise required of auditors to conduct rehabilitation liability assessment audits.

Drawing on analysis of current rehabilitation plans and rehabilitation liability estimates, in August 2016 DEDJTR provided EPA with a list of proposed skills and expertise required by auditors, comprising:

- financial modelling including skills in costing earthworks and other rehabilitation activities
- probabilistic modelling
- geotechnical engineering
- environmental engineering
- hydrogeology
- hydrology
- water chemistry
- mine rehabilitation, including bulk earthworks, dewatering and drainage (including erosion control) and revegetation
- familiarity with mine closure and post-closure issues
- quantity surveying
- emergency response.

FINDING

IGEM considers this action has been implemented as planned.

³⁷ Hazelwood Mine Fire Inquiry Report, Volume IV – Mine Rehabilitation, recommendation 5, p. 198

169. Amend the accreditation criteria as necessary for auditors appointed under section 53S of the EP Act

Following advice from DEDJTR (refer to action 168), EPA amended the accreditation criteria for auditors and published revised *Environmental Auditor Guidelines for Appointment and Conduct* in December 2016 incorporating the skills and expertise required to conduct audits of rehabilitation liability self-assessments.³⁸

These guidelines provide detail on the expertise, experience and qualifications necessary to provide assurance that the auditors will offer the appropriate skills, and require accredited auditors to hold current approval from both DEDJTR and EPA.

FINDING

IGEM considers this action has been implemented as planned.

170. Assess current pool of appointed auditors for the appropriate skills and expertise

On 2 November 2016 all EPA-appointed auditors were invited to submit expressions of interest to undertake rehabilitation liability assessment audits under the MR(SD) Act. As part of the process, auditors were required to include information demonstrating how they will meet the skills and competencies identified as part of actions 168 and 169.

EPA assessed the auditor submissions against the requirements outlined in the *Environmental Auditor Guidelines for Appointment and Conduct* (refer to action 169). DEDJTR also conducted a separate examination of the skills and competencies of the auditors responding to the expression of interest.

EPA and DEDJTR independently determined that all auditors responding to the expression of interest had the appropriate skills and expertise to fulfil their audit duties as required by the MR(SD) Act.

EPA also identified the need to establish a process to ensure that auditors' currency of knowledge and practice is maintained given that it can be several years before an auditor is called upon for their services. An Implementation Plan for the period 1 January 2017 to 1 January 2021 has been prepared to support this new process. Implementation will be supported under the existing MOU between EPA and DEDJTR to ensure ongoing clear communications.

FINDING

IGEM considers this action has been implemented as planned.

171. Finalise rehabilitation liability assessments

As part of stage 3 of the process to implement further rehabilitation bonds, DEDJTR engaged an independent consultant in December 2016 to prepare rehabilitation liability assessments for each of the Latrobe Valley coal mines.

The aim of the assessments was to provide a basis for the Minister for Resources consideration of an appropriate rehabilitation bond. The assessments were based on detailed examinations of the mines and were done in consultation with the mine operators.

The rehabilitation liability assessments, including reports and calculations, have been finalised and the rehabilitation liability estimates and revised bond policy form the basis of implementing further rehabilitation bonds, as per action 172.

FINDING

IGEM considers this action has been implemented as planned.

172. Implement further Rehabilitation Bonds if required based on final rehabilitation liability assessments, bond policy review and Inquiry findings, and publish statement of reasons for decision on the DEDJTR website

Based on independent assessments (refer to action 171) and the revised bond policy (refer to action 166), the Minister for Resources consulted with the Latrobe Valley coal mine operators and the Latrobe City Council on proposed further rehabilitation bonds, in accordance with section 80(2) of the MR(SD) Act. The minister advised the council and mine operators that the current rehabilitation bonds were insufficient and further increases were required.

Following consultation with mine operators, the bond increases were finalised and a statement of reasons for the further increases was published on the DEDJTR website on 6 October 2017. The revised bonds represent a significant increase in financial assurance since the Hazelwood mine fire.

FINDING

IGEM considers this action has been implemented as planned.

³⁸ epa.vic.gov.au/our-work/publications/publication/2016/december/865-12

173. Determine an effective mechanism to manage:

- **the costs of ongoing monitoring, maintenance and management of the earth resources industry sites**
- **risks of closure on the community's social and economic welfare**

In July 2017 the Minister for Resources approved the revised approach and time line to implement actions 160, 161, 162 and 173. Under the agreed approach, actions 160 and 173 will now be delivered in December 2017. DEDJTR will continue to report to IGEM on actions 160, 161, 162 and 173 collectively to reflect the revised implementation approach.

FINDING

IGEM notes the revised time frames for this action and will revisit in the next Annual Report.

4.7 Latrobe Valley Regional Rehabilitation Strategy

The LVRRS is being led by DEDJTR, with support from DELWP, and in consultation with the mine operators, the community, key stakeholders and technical experts.

This section details the government's response to recommendations and affirmations in the reopened Inquiry reports that relate specifically to the LVRRS.

Two major projects will help to guide future rehabilitation of the coal mines in the Latrobe Valley:

- the Batter Stability project
- the LVRRS.

The Batter Stability project was launched in April 2016 and is based on field work research at the Yallourn coal mine to improve the understanding of the impact of engineering, geology and hydrogeological processes on brown coal mine stability.

The purpose of the LVRRS is to set out how the three Latrobe Valley coal mines – Hazelwood, Loy Yang and Yallourn – and surrounding areas will transition to safe, stable and sustainable post-mining landforms. The LVRRS aims to recognise the rights and obligations of the mine operators and water users.

The LVRRS comprises a range of significant planning, research and engagement initiatives. This large scale and complex project will take place across five stages, transitioning to BAU in 2020. The work program for the LVRRS includes:

- investigations to address knowledge gaps relating to mine rehabilitation, such as geotechnical, hydrogeological and water availability at both a regional and mine-specific level
- working with the community and the Latrobe Valley mine operators to understand the findings of these investigations
- developing an LVRRS to guide regional-level planning for mining operations, rehabilitation, closure and post closure, taking into account the interconnectivity between the three mine voids.

DEDJTR plans to use the LVRRS to inform the design and delivery of other government regional plans and programs for economic transition in the Latrobe Valley.

Progress summary

The Victorian Government Implementation Plan lists 31 actions under the Latrobe Valley Regional Rehabilitation Strategy theme, of which 15 have now been completed.

DEDJTR engaged EnergyAustralia and Federation University Australia to progress the Batter Stability project. The project is to be completed over several stages, and the results will inform the LVRRS. The scope and methodology of the project was developed during workshops that involved DEDJTR, DELWP and the mine operators. The project plan was finalised in November 2016. DEDJTR participated in the Technical Advisory Group for the project, administered by Federation University Australia.

DEDJTR has reported significant progress on the foundations and early stages of the LVRRS, setting up a number of mechanisms to ensure the strategy is well informed and delivers on the intent of government. DEDJTR has prepared a stakeholder and communication strategy, to ensure the community is included in discussions on the regional strategy. DEDJTR also engaged independent reviewers with expertise across 14 technical and scientific disciplines to provide advice on the project plan and key stages of the project.

The Latrobe Valley Mines Rehabilitation Advisory Committee was established to represent key stakeholders and stakeholder group interests in relation to coal mine rehabilitation and will contribute to the LVRRS. The committee members include coal mine operators, councils, water authorities, government agencies and the Latrobe Valley community.

Research and planning that is critical to the success of the strategy has commenced. Water requirements for coal mine rehabilitation were reviewed by DEDJTR in consultation with DELWP and EPA.

Following a recruitment process by DEDJTR, Governor in Council appointed Professor Rae Mackay as the Latrobe Valley Mine Rehabilitation Commissioner (the Commissioner) on June 2017 for a three-year period. The Commissioner will advise the Minister for Resources, monitor rehabilitation strategies, investigate and resolve significant issues, promote research and publish an annual report.

4.7.1 Batter Stability project

Mine batters are the sloping pit walls between the top of the mine and the pit floor. If these slopes become unstable, this can present a risk to the safety of workers, the community, public infrastructure, and the environment.

In April 2016 the then Minister for Energy and Resources announced the Batter Stability project, which involves research to improve the understanding of the impact of engineering, geology and hydrogeological processes on brown coal mine stability.

The Batter Stability project is based on field work at the Yallourn mine and will provide an independent, scientific knowledge base and updated geotechnical and hydrogeological models to assist in the design of safe and stable batters in the long term.

Researchers from Federation University Australia will carry out the five-year project at the Yallourn mine site with technical support from the Victorian mining regulator, DEDJTR. The findings will be used at all of Victoria's open pit coal mines to help prevent major accidents, such as wall collapses, and ensure mine rehabilitation is safe and stable into the future.

The project will be undertaken over two stages:

- stage 1 – creating the foundation for the research component of the project by the collation of background data from the Latrobe Valley mines
- stage 2 – undertaking a gap analysis of available data and developing the information requirements to understand how to maintain stability of batters in the Latrobe Valley mines.

This will be followed by the installation of monitoring equipment on a batter in the Yallourn mine to generate real-time data on the stability of the batter, which has similar characteristics and properties to the batter that failed in 2007. This stage was scheduled for completion in June 2016.

The latter stages of the project will involve more comprehensive research and analysis, monitoring and modelling of the data obtained from the Yallourn mine. This component is expected to be completed by June 2020.

The results of the Batter Stability project will be incorporated into the current geotechnical and hydrogeological models and will inform individual mine rehabilitation plans and the LVRRS.

Table 26: Status of Batter Stability project actions

NO.	ACTION	RELATED RECOMMENDATION/ AFFIRMATION	DUE DATE	STATUS	LEAD AGENCY
BATTER STABILITY PROJECT					
177	Participate in the Technical Advisory Group administered by Federation University as required	Mine Rehabilitation Inquiry report: Affirmation 3	Ongoing	Ongoing	DEDJTR
178	Provide funding upon completion of milestones as per schedules to the contracts with EnergyAustralia and Federation University	Mine Rehabilitation Inquiry report: Affirmation 3	As per contract milestones	Ongoing	DEDJTR

177. Participate in the Technical Advisory Group administered by Federation University as required

A Technical Advisory Group is administered by Federation University Australia to provide technical expert advice to the Batter Stability project team. The group includes representatives from DEDJTR, Latrobe Valley mine operators and Federation University Australia.

The primary functions of the Technical Advisory Group are to advise on:

- technical matters related to the scoping, conduct and outputs
- design and implementation of the field, laboratory and analysis programs
- any conflict that may arise in priorities or technical constraints.

The group also has an ongoing role to monitor the technical and organisational factors critical to the success of the project and review the technical conduct and outcomes against the approved project scope.

DEDJTR is an active and key participant in the Technical Advisory Group. Representatives of DEDJTR have attended all group meetings since they first met in September 2016. The significance of DEDJTR's role is reflected in the terms of reference approved on 8 May 2017, which state that group meetings cannot progress formally without the attendance of a DEDJTR representative. Further, DEDJTR must approve any changes to the terms of reference and membership.

FINDING

IGEM considers this action is progressing satisfactorily and will revisit in the next Annual Report.

178. Provide funding upon completion of milestones as per schedules to the contracts with EnergyAustralia and Federation University

The contracts with EnergyAustralia and Federation University Australia include clauses that specify the requirement for DEDJTR to provide funding or reimbursement to the two agencies when deliverables or services are received.

Since the 2016 IGEM Hazelwood report, DEDJTR has provided funding to EnergyAustralia and Federation University Australia in line with contractual agreements for the following milestones:

- a broad range of geotechnical and hydrogeological research and innovation services from Federation University Australia from March 2016 to June 2017
- resources from EnergyAustralia within the Yallourn mine site to investigate and test the research findings from December 2015 to June 2017.

The service agreement with EnergyAustralia has now been completed. All milestones within the agreement have been met and all invoices have been paid.

DEDJTR will provide further funding to Federation University Australia until 30 June 2020 as per contract milestones.

FINDING

IGEM considers this action is progressing satisfactorily and will revisit in the next Annual Report.

4.7.2 Latrobe Valley Regional Rehabilitation Strategy project initiation (stage 1)

Stage 1 of the LVRRS will establish the foundations of the project and includes:

- preparing an overarching engagement strategy
- appointing independent peer reviewers
- conducting workshops to establish project scope, methodology and integration with operators' research programs
- establishing the Latrobe Valley Mine Rehabilitation Advisory Committee
- reviewing stage 1 outputs and confirming a work plan for stage 2, including a technical peer review.

Table 27: Status of Latrobe Valley Regional Rehabilitation Strategy project initiation (stage 1) actions

NO.	ACTION	RELATED RECOMMENDATION/ AFFIRMATION	DUE DATE	STATUS	LEAD AGENCY
LATROBE VALLEY REGIONAL REHABILITATION STRATEGY PROJECT INITIATION (STAGE 1)					
180	Prepare an overarching stakeholder engagement strategy for the project (and refine in response to experience)	Mine Rehabilitation Inquiry report: recommendations 14, 15, 17 and 18	October 2016	Complete	DEDJTR
181	Appoint independent peer reviewers	Mine Rehabilitation Inquiry report: recommendations 14, 15, 17 and 18	November 2016	Complete	DEDJTR
182	Conduct workshop(s) to develop project scope, methodology, including consultation with the operators of the Latrobe Valley Coal Mines to ensure integration with research program to be undertaken by the operators	Mine Rehabilitation Inquiry report: recommendations 14, 15, 17 and 18	November 2016	Complete	DEDJTR
183	Establish Latrobe Valley Mine Rehabilitation Advisory Committee	Mine Rehabilitation Inquiry report: recommendations 14, 15, 17 and 18	December 2016	Complete	DEDJTR
184	Review stage 1 Project outputs and confirm stage 2 work plan, including technical peer review	Mine Rehabilitation Inquiry report: recommendations 14, 15, 17 and 18	December 2016	Complete	DEDJTR

180. Prepare an overarching stakeholder engagement strategy for the project (and refine in response to experience)

To support the implementation of the LVRRS, DEDJTR engaged a consultant to prepare a stakeholder and community engagement strategy to guide the project team's approach to engaging stakeholders, including the community.

The Rehabilitation Planning Working Group approved the engagement strategy and associated implementation plan presented by DEDJTR on 21 October 2016.

The implementation plan outlines a four-stage evaluation process to assess the effectiveness of the strategy, due to be completed in 2020.

The community engagement outcomes will be reported on in an annual progress review, which will ensure that the strategy is reviewed and revised regularly.

FINDING

IGEM considers this action has been implemented as planned.

181. Appoint independent peer reviewers

To ensure the LVRRS delivers on the intent of government as outlined in the Victorian Government Implementation Plan, DEDJTR engaged independent peer reviewers to provide expert review at key stages of the project.

In November 2016 DEDJTR engaged four independent peer reviewers to provide advice on the project plan to deliver the LVRRS (stage 1). The changes suggested by the reviewers were presented to the Rehabilitation Planning Working Group in January 2017.

The LVRRS project plan outlines the requirements for further independent peer review across key stages of the LVRRS.

To facilitate this, in February 2017 DEDJTR engaged 29 independent experts to a panel of Technical Experts and Independent Peer Reviewers (the Expert Panel).

The Expert Panel sought independent peer reviewers across following disciplines:

- mine rehabilitation and closure planning
- geology and engineering geology
- geotechnical engineering
- civil engineering
- hydrogeology
- hydrology
- fluvial geomorphology
- surface water chemistry

- groundwater chemistry and geochemistry
- aquatic ecology
- impact assessment
- risk assessment and management
- regional planning
- groundwater and geotechnical modelling.

This Expert Panel also delivers on action 156, which required government to engage suitable expertise in mine closure and rehabilitation liability assessments.

FINDING

IGEM considers this action has been implemented as planned.

182. Conduct workshop(s) to develop project scope, methodology, including consultation with the operators of the Latrobe Valley Coal Mines to ensure integration with research program to be undertaken by the operators

DEDJTR issued a request for tender in July 2016 to appoint a service provider to develop a project plan to deliver the LVRRS. The service provider was to facilitate project scoping which would include workshops with technical specialists and consultants.

DEDJTR along with DELWP and the mine operators, held workshops in November 2016 to inform the preparation of the LVRRS project plan, including project scope and methodology. The project plan was finalised in April 2017. Two of the workshops were attended by Integrated Mine Research Program stakeholders.

FINDING

IGEM considers this action has been implemented as planned.

183. Establish Latrobe Valley Mine Rehabilitation Advisory Committee

The Board of Inquiry found that given the range of areas that require greater coordination, their potential regional impacts, and the diversity and competing priorities of the organisations that are involved, there is a need for a new coordinating body for mine rehabilitation in the Latrobe Valley.

DEDJTR established the Latrobe Valley Mine Rehabilitation Advisory Committee and sought ministerial approval for the appointment of 10 members in December 2016.

The committee represents key stakeholders and stakeholder group interests in relation to mine rehabilitation in the Latrobe Valley and acts as a conduit to broader stakeholder engagement during the life of the LVRRS project.

The committee members are drawn from coal mine operators, councils, water authorities, government agencies and the Latrobe Valley community. Members have been appointed until 2020.

The key role of the committee is to provide the Minister for Resources with expert and strategic advice regarding the development of a Regional Rehabilitation Strategy for the Latrobe Valley's three brown coal mine voids.

The committee is required to:

- contribute to the development of the LVRRS through the provision of expertise and advice
- facilitate interaction and partnerships between industry, the community and other relevant government agencies and departments
- provide advice on policy and legislation development when requested by DEDJTR or the minister
- represent key stakeholders and stakeholder group interests in relation to mine rehabilitation in the Latrobe Valley
- act as a conduit to broader stakeholder engagement in the Latrobe Valley.

FINDING

IGEM considers this action has been implemented as planned.

184. Review stage 1 project outputs and confirm stage 2 work plan, including technical peer review

The key output of stage 1 of the LVRRS is to deliver a comprehensive project plan to guide the development and implementation of the strategy. The plan includes detailed information on the tasks to be undertaken across the four stages of the strategy, including an outline of work planned for stage 2.

Before finalisation, the project plan was provided to independent peer reviewers (refer to action 182). The reviewers were asked to comment on the rigour, deliverability and adaptability of the biophysical aspects of the plan. They were also asked to comment on the extent to which the work specified was a reasonable approach to meeting government's commitment outlined in the Victorian Government Implementation Plan.

The review process identified a number of issues that triggered changes to the draft plan. DEDJTR advised that these changes improved the robustness of the project plan. The draft plan, incorporating changes suggested by the reviewers, was presented to the Rehabilitation Planning Working Group in January 2017.

The *Latrobe Valley Regional Rehabilitation Strategy – Project Plan for a Regional Rehabilitation Strategy* was finalised in April 2017.

FINDING

IGEM considers this action has been implemented as planned.

4.7.3 Latrobe Valley Regional Rehabilitation Strategy – existing conditions review (stage 2)

Stage 2 of the LVRRS includes:

- a review of current mine rehabilitation strategies
- the establishment of the Commissioner
- a review of existing Latrobe Valley coal mine and power station entitlements and water licensing
- a report on baseline data (such as existing water use, water availability, aquatic ecosystems and water quality)
- a brief to the Commissioner
- conducting and producing an annual progress review report
- assessing possible impacts on water availability due to climate change and climate variability
- reviewing stage 2 project outputs and confirming the stage 3 work plan.

Table 28: Status of Latrobe Valley Regional Rehabilitation Strategy – existing conditions review (stage 2) actions

NO.	ACTION	RELATED RECOMMENDATION/ AFFIRMATION	DUE DATE	STATUS	LEAD AGENCY
LATROBE VALLEY REGIONAL REHABILITATION STRATEGY – EXISTING CONDITIONS REVIEW (STAGE 2)					
185	Review current mine rehabilitation strategies, in consultation with DELWP and EPA, to identify water requirements for mine closure and restoration strategies.	Mine Rehabilitation Inquiry report: recommendation 13	December 2016	Complete	DEDJTR
186	Establish the Latrobe Valley Mine Rehabilitation Commissioner as a statutory appointment under the MR(SD) Act	Mine Rehabilitation Inquiry report: recommendation 14	June 2017	Complete	DEDJTR
187	Review of existing Latrobe Valley coal mine and power station water entitlements and water licensing (groundwater and surface waters)	Mine Rehabilitation Inquiry report: recommendations 14, 15 and 17	June 2017	Complete	DELWP
188	Report on existing water use, water availability, aquatic ecosystems and water quality to provide baseline data and inform the works program	Mine Rehabilitation Inquiry report: recommendations 14, 15 and 17	June 2017	Complete	DELWP
189	Brief the Latrobe Valley Mine Rehabilitation Commissioner, upon commencement, on the work program delivered to date, the forecast work program and the engagement approach	Mine Rehabilitation Inquiry report: recommendations 14, 15 and 17	July 2017	Complete	DEDJTR
190	Conduct annual progress review and produce a report	Mine Rehabilitation Inquiry report: recommendations 14, 15, 17 and 18	July 2017	Complete	DEDJTR
191	Assess possible impacts on water availability due to climate change and climate variability (not including possible additional water demand for mine closures) to be used in the modelling on water availability and potential impacts	Mine Rehabilitation Inquiry report: recommendations 14, 15 and 17	December 2017	Ongoing	DELWP
192	Review stage 2 Project outputs and confirm stage 3 work plan, including technical peer review	Mine Rehabilitation Inquiry report: recommendations 14, 15 and 17	December 2017	Ongoing	DEDJTR

185. Review current mine rehabilitation strategies, in consultation with DELWP and EPA, to identify water requirements for mine closure and restoration strategies.

The reopened Hazelwood Inquiry reported that the 2011 Gippsland Region Sustainable Water Strategy (the Sustainable Water Strategy) found that current rehabilitation plans to flood open-cut mines to create artificial ‘pit lakes’ may not be a viable option due to insufficient water availability.

Given the implications for mine rehabilitation, the Mine Rehabilitation Inquiry report recommended a review of the mines’ rehabilitation strategies and consideration

of impacts on groundwater and surface water resources in line with action 6.8 of the Sustainable Water Strategy.

In consultation with DELWP and EPA, DEDJTR reviewed current work plans for each Latrobe Valley mine, to identify water requirements for mine closure and restoration. In February 2017 DEDJTR finalised the report on the review, *The Latrobe Valley Coal Mines – A Review of Rehabilitation Plans and Associated Water Requirements*.

The review found that, consistent with findings from the re-opened Hazelwood Inquiry, all three Latrobe Valley mine operators continue to envisage the development of a pit lake and use of water to manage the risks to mine stability that arise when mining stops.

Each of the work plans assume that existing water entitlements will be available as water sources for some portion of the future pit lakes.

The review identified a range of likely water requirements for the pit lakes, based on information in the work plans and using the existing water entitlements and local catchment flows.

However, the review found that the information in the work plans was limited and therefore DEDJTR was not able to fully identify all likely water requirements for proposed mine rehabilitation concepts.

Information gaps in work plans related to:

- timing of proposed water requirements
- use of surface water to fill and maintain final pit lake levels and water quality
- impact of pit lakes on groundwater
- details of assumed or alternative water sources.

For example, as the Hazelwood and Yallourn mine work plans do not forecast the time needed to fill the pit lakes, the DEDJTR review found it was not possible to determine whether the water requirements for the three mines may overlap, increasing their impact on water resources.

DEDJTR has undertaken to address these information gaps and consider the impact on water resources through individual mine rehabilitation planning required under legislation, and the further development of the LVRRS.

FINDING

IGEM considers this action has been implemented as planned.

186. Establish the Latrobe Valley Mine Rehabilitation Commissioner as a statutory appointment under the MR(SD) Act

DEDJTR undertook the recruitment process to appoint the Latrobe Valley Mine Rehabilitation Commissioner, which included the following outputs:

- policy advice to the Minister for Resources on the role and functions of the Commissioner
- Cabinet and Governor in Council materials for the Amendment Bill and appointment
- recruitment of a preferred candidate for appointment
- passage of the Amendment Bill through Parliament and Royal Assent to the Amendment Act.

The Governor in Council under section 84AF of the MR(SD) Act appointed Professor Rae Mackay as the Commissioner on 20 June 2017. The appointment period is three years from 30 June 2017 to 30 June 2020.

The Commissioner will advise the Minister for Resources, monitor rehabilitation strategies, investigate and resolve significant issues, promote research and publish an annual report.

FINDING

IGEM considers this action has been implemented as planned.

187. Review of existing Latrobe Valley coal mine and power station water entitlements and water licensing (groundwater and surface waters)

This action forms part of the response by government to the concerns raised during the Hazelwood Inquiry regarding future water needs for rehabilitation of the Latrobe Valley mine pits. All three operators have expressed their intention to rehabilitate the mine pits by filling them with water.

DELWP reviewed the existing water entitlements held by the coal mine operators and power generators with respect to their capacity to take and use water under their existing entitlements for the purpose of mine rehabilitation.

The mines and power generators use groundwater and surface water:

- Each mine has a 30-year licence issued by the Minister for Water and administered by Southern Rural Water (SRW) that sets the volume of groundwater that can be extracted and the purposes for which the water can be used.
- The four power generators associated with the mines each hold various water entitlements, licenses and agreements for the supply of surface water for power generation operations. Yallourn and Loy Yang A power generators hold bulk entitlements issued by the Minister for Water. Loy Yang B holds a take and use license under section 51 of the *Water Act 1989* for surface water which is administered by SRW. Hazelwood, Loy Yang and Yallourn are also supplied water under a commercial arrangement with Gippsland Water. Sources of surface water include the Latrobe River.

The results of the DELWP review have not been released publicly but were used to inform advice provided by SRW to ENGIE Hazelwood on the purpose for which they could use their groundwater license, following the cessation of coal mining operations at the Hazelwood mine on 31 March 2017.

The DELWP review will inform the further development of the LVRRS.

FINDING

IGEM considers this action has been implemented as planned.

188. Report on existing water use, water availability, aquatic ecosystems and water quality to provide baseline data and inform the works program

DELWP Water and Catchments Group is leading the Regional Water Study component of the LVRRS. The Regional Water Study will inform assessment of the viability of the proposed mine closure options and in particular, will address questions about the availability of water for mine site rehabilitation.

DELWP engaged an independent consultant to assess and report on the baseline data available for existing water use, water availability, aquatic ecosystems and water quality in the Latrobe River surface water basin and Gippsland ground water basin.

The consultant's report identifies a range of datasets that will be used for the LVRRS work program. It also identifies potential data gaps that require further investigation.

The report provided datasets on:

- existing water use, including water use for consumption and water associated with the Environmental Water Reserve
- availability of water from natural water sources, non-natural water sources and dewatering outfalls that is discharged from mining operations
- aquatic ecosystems including rivers, wetland, lakes and groundwater dependant ecosystems
- water quality.

The final report *Review of baseline data on water resources in the Latrobe Valley* was approved by DELWP in June 2017.

FINDING

IGEM considers this action has been implemented as planned.

189. Brief the Latrobe Valley Mine Rehabilitation Commissioner, upon commencement, on the work program delivered to date, the forecast work program and the engagement approach

Following the appointment of the Commissioner, DEDJTR delivered a presentation on 4 July 2017 to provide a briefing on the LVRRS. The Commissioner was also provided with the LVRRS project plan, including the work program, achievements to date and the future work program, as well as the LVRRS stakeholder engagement strategy.

FINDING

IGEM considers this action has been implemented as planned.

190. Conduct annual progress review and produce a report

DEDJTR has completed their first annual report, *Latrobe Valley Regional Rehabilitation Strategy Annual Progress Report July 2016 – June 2017*.³⁹

The report includes:

- an update on the development of a regional rehabilitation strategy for the Latrobe Valley's three brown coal mine voids
- project planning
- technical studies completed in 2016–17
- community and stakeholder engagement
- future activities planned for 2017–18.

FINDING

IGEM considers this action has been implemented as planned.

³⁹ earthresources.vic.gov.au/search-results?q=Latrobe+Valley+Regional+Rehabilitation+Strategy+Annual+Progress+Report+July+2016+%E2%80%93+June+2017

191. Assess possible impacts on water availability due to climate change and climate variability (not including possible additional water demand for mine closures) to be used in the modelling on water availability and potential impacts

Following the release of the *Guidelines for Assessing the Impact of Climate Change on Water Supplies in Victoria* in December 2016 DELWP has prepared a project specification and request for quotation to commission a contractor to develop suitable long-term climate change projections. This will subsequently be used to model and assess the impact of climate change on water availability in the Latrobe Valley for mine rehabilitation.

The scope of this study is:

- produce climate change scenarios and associated projections for the surface water basins that feed the Gippsland Lakes, based on the best available science, to inform predictions around likely future water availability in the Gippsland region, in a form suitable for use in subsequent studies undertaken to prepare the LVRRS
- provide advice on the most appropriate climate baseline to use as being representative of current climate.

DELWP advised that the findings will be used in conjunction with modelling mapped out in the LVRRS project plan, to understand the potential impacts of climate change on water availability as part of the LVRRS studies.

This action is due to be completed in December 2017.

FINDING

IGEM considers this action is progressing satisfactorily and will revisit in the next Annual Report.

192. Review stage 2 project outputs and confirm stage 3 work plan, including technical peer review

This action is due to be completed in December 2017. DEDJTR has advised IGEM that this action has not yet commenced.

FINDING

IGEM will revisit this action in the next Annual Report.

4.7.4 Valley Regional Rehabilitation Strategy – modelling and analysis (stage 3)

Stage 3 of the LVRRS will deliver two major regional studies – a regional geotechnical study and a regional water study – to inform plans for the use of pit lakes for the rehabilitation of mine sites.

During stage 3, a range of important outputs from other regional rehabilitation planning activities will also be progressively integrated with the LVRRS. These include:

- the Batter Stability project being undertaken by the Geotechnical and Hydrogeological Engineering Research Group (refer to actions 177 and 178)
- Latrobe Valley Coal Mine Regulatory Review being undertaken by DEDJTR
- review of land planning policy being undertaken by DELWP.

The majority of actions to deliver stage 3 are not yet commenced. One action (action 195) has been scoped and some preliminary work has been commissioned.



Pasture grass striking on northern batters (Courtesy: ENGIE)

Table 29: Status of Latrobe Valley Regional Rehabilitation Strategy – modelling and analysis (stage 3) actions

NO.	ACTION	RELATED RECOMMENDATION/ AFFIRMATION	DUE DATE	STATUS	LEAD AGENCY
REGIONAL LATROBE VALLEY REHABILITATION STRATEGY – MODELLING AND ANALYSIS (STAGE 3)					
193	Integrate findings and outcomes from parallel studies related to mine rehabilitation including the Batter Stability Project, MR(SD) Act review and local and state land planning policy review.	Mine Rehabilitation Inquiry report: recommendations 14, 15 and 17	January 2019	Ongoing	DEDJTR
194	Deliver a regional geotechnical study including: <ul style="list-style-type: none"> • investigation of potential water demands for pit lake fill scenarios • investigation of regional ground stability and associated potential impacts on land use, communities and infrastructure • monitoring – outline likely requirements for long-term regional geotechnical monitoring 	Mine Rehabilitation Inquiry report: recommendations 14, 15 and 17	January 2019	Ongoing	DEDJTR
195	Deliver a regional water study on the viability of pit lake filling options and impacts, including: <ul style="list-style-type: none"> • potential water availability and use of regional water resources • analysis of potential alternative sources of water to those currently available to the Latrobe Valley Coal Mines, including a high-level technical and financial assessment • potential water quality impacts in pit lakes, groundwater and off-site surface waters • potential impacts on aquatic ecosystems and downstream users • the scope of likely requirements for long-term regional groundwater monitoring 	Mine Rehabilitation Inquiry report: recommendations 14, 15 and 17	March 2019	Ongoing	DELWP
196	Review stage 3 Project outputs and confirm stage 4 work plan, including technical peer review	Mine Rehabilitation Inquiry report: recommendations 14, 15 and 17	March 2019	Ongoing	DEDJTR
197	Conduct annual progress review and produce a report	Mine Rehabilitation Inquiry report: recommendations 14, 15 and 17	July 2019	Ongoing	DEDJTR

193. Integrate findings and outcomes from parallel studies related to mine rehabilitation including the Batter Stability Project, MR(SD) Act review and local and state land planning policy review.

194. Deliver a regional geotechnical study including:

- investigation of potential water demands for pit lake fill scenarios
- investigation of regional ground stability and associated potential impacts on land use, communities and infrastructure
- monitoring – outline likely requirements for long-term regional geotechnical monitoring

These actions are due to be completed in January 2019. DEDJTR has advised IGEM that these actions have not yet commenced.

FINDING

IGEM will revisit these actions in the next Annual Report.

195. Deliver a regional water study on the viability of pit lake filling options and impacts, including:

- potential water availability and use of regional water resources
- analysis of potential alternative sources of water to those currently available to the Latrobe Valley Coal Mines, including a high-level technical and financial assessment
- potential water quality impacts in pit lakes, groundwater and off-site surface waters
- potential impacts on aquatic ecosystems and downstream users
- the scope of likely requirements for long-term regional groundwater monitoring

DELWP is leading the Latrobe Valley Regional Water Study on the viability, options and impact of filling the mine voids with water (pit lakes).

The 2016 IGEM Hazelwood report outlined that DELWP and DEDJTR agreed to set the scope of this study to consider the following factors when analysing the feasibility of pit lake options:

- if it is possible
- if it is safe
- if it is non-polluting
- if it is a stable land form
- if it sustains agreed land use

- if it sustains agreed water use
- if it can be done in perpetuity.

An initial set of tasks to support the Regional Water Study will be commissioned by January 2018. These initial tasks are to:

- identify valued regional receptors
- establish metrics for groundwater and surface water related valued regional receptors.

DELWP will formally commence this action after the scope of LVRRS stage 3 is confirmed as per action 192.

FINDING

IGEM considers this action is progressing satisfactorily and will revisit in the next Annual Report.

196. Review stage 3 Project outputs and confirm stage 4 work plan, including technical peer review

197. Conduct annual progress review and produce a report

These actions are due to be completed in 2019. DEDJTR has advised IGEM that these actions have not yet commenced.

FINDING

IGEM will revisit these actions in the next Annual Report.

4.7.5 Latrobe Valley Regional Rehabilitation Strategy – integrate findings (stage 4)

Table 30: Status of Latrobe Valley Regional Rehabilitation Strategy – integrate findings (stage 4) actions

NO.	ACTION	RELATED RECOMMENDATION/ AFFIRMATION	DUE DATE	STATUS	LEAD AGENCY
LATROBE VALLEY REGIONAL REHABILITATION STRATEGY – INTEGRATE FINDINGS (STAGE 4)					
198	Review and identify policy, administrative or legislative mechanisms necessary to implement the Latrobe Valley Regional Rehabilitation Strategy and require the Latrobe Valley Coal Mine licence holders to comply	Mine Rehabilitation Inquiry report: recommendation 17	June 2019	Ongoing	DEDJTR
199	Review of the Latrobe Valley Coal Mine and power generator water entitlements and licences that may be required to implement and comply with the Latrobe Valley Regional Rehabilitation Strategy	Mine Rehabilitation Inquiry report: recommendations 14 and 15	June 2019	Ongoing	DELWP
200	Release draft assessment of potential impacts at a regional scale for consultation	Mine Rehabilitation Inquiry report: recommendations 14 and 15	December 2019	Ongoing	DEDJTR (with DELWP support)
201	Release draft integrated regional scale mine rehabilitation Strategy for consultation	Mine Rehabilitation Inquiry report: recommendations 14 and 15	December 2019	Ongoing	DEDJTR
202	Assess potential impacts at a regional scale	Mine Rehabilitation Inquiry report: recommendations 14 and 15	June 2020	Ongoing	DEDJTR (with DELWP support)
203	Deliver Integrated regional scale mine rehabilitation strategy	Mine Rehabilitation Inquiry report: recommendations 14 and 15	June 2020	Ongoing	DEDJTR

Actions 198 to 203 are due to be completed from June 2019 to June 2020 and are contingent on the completion of LVRRS stage 3. DEDJTR and DELWP have advised IGEM that these actions have not yet commenced.

FINDING

IGEM will revisit these actions in the next Annual Report.

4.7.6 Stage 5 – Ongoing review and adaptation (subsequent work)

Table 31: Status of stage 5 – ongoing review and adaptation (subsequent work) action

NO.	ACTION	RELATED RECOMMENDATION/ AFFIRMATION	DUE DATE	STATUS	LEAD AGENCY
STAGE 5 – ONGOING REVIEW AND ADAPTATION (SUBSEQUENT WORK)					
204	Ongoing monitoring and adaptation of the Latrobe Valley Regional Rehabilitation strategy as new information becomes available, including research and in-mine trials by the operators of the Latrobe Valley Coal Mines and progressive rehabilitation	Mine Rehabilitation Inquiry report: recommendations 4 and 18	BAU by June 2020	Ongoing	DEDJTR

204. Ongoing monitoring and adaptation of the Latrobe Valley Regional Rehabilitation Strategy as new information becomes available, including research and in-mine trials by the operators of the Latrobe Valley Coal Mines and progressive rehabilitation

Action 204 is due to be completed in June 2020 and is contingent on the completion of LVRRS stage 4. DEDJTR has advised IGEM that this action has not yet commenced.

FINDING

IGEM will revisit this action in the next Annual Report.

4.8 Emergency management planning, response and recovery

The 2014 Inquiry report includes a number of recommendations and affirmations about the integration of industry into emergency management arrangements, as well as the way the state can build capacity to respond to coal mine fires and other incidents across the Latrobe Valley.

The following sub-themes, with associated actions, are listed under emergency management planning, response and recovery theme in the Victorian Government Implementation Plan:

- Industry integration in emergency management
- Emergency management planning
- Emergency management training
- Local government capability
- Natural disaster recovery assistance payment.

Following is a summary of progress on the actions under these sub-themes that were reported as ongoing in the 2016 IGEM Hazelwood report.

Progress summary

The Victorian Government Implementation Plan lists 42 actions under the emergency management planning, response and recovery theme, of which 32 have now been completed.

Overall, the responsible agencies and departments have made significant progress with implementing the diverse range of actions under this theme.

The Coal Mines Emergency Management Taskforce published its final report in December 2016. The report marked the formal closure of the taskforce, which was established to implement actions to help prevent, prepare for and respond to, the threat of fire in and around coal mines in Victoria. The taskforce made a significant contribution towards the integration of the coal mine operators into Victoria's emergency management arrangements.

Among the key achievements of the taskforce was the launch of CFA's District 27 in April 2015, to enable all brigades in Latrobe City to be coordinated through a single district structure. The taskforce also delivered the 'Latrobe 15' (October 2015) and 'Latrobe 16' (August 2016) exercises, which brought together stakeholders from across government and industry to assess the preparedness for and response to a major incident in the Latrobe Valley. EMV advise that annual exercises of this nature are likely to continue post taskforce involvement.

In 2016 EMV, CFA, MFB, Parks Victoria and VICSES were involved in the National Council for Fire and Emergency Services (AFAC) revision of the Australian Inter-Service Incident Management System (AIIMS) doctrine, to formally include industry within the AIIMS structure. AIIMS is an integral part of emergency management doctrine in Australia and enables agencies to come together to resolve incidents through an integrated and effective response.

Steps have been taken to improve emergency response by incorporating lessons learned as a result of the Hazelwood mine fire. CFA has released a tender for two purpose-built specialist Compressed Air Foam System (CAFS) tankers, which have shown to be highly effective at fighting coal mine fires.

Following the pilot of the Brown Coal Mine Firefighting Training Package by CFA and MFB in September 2016 a blended learning training program incorporating videos and face-to-face sessions is being developed for use by staff and volunteers. The training program is expected to be completed by December 2018.

MFB has made a decision to delay the provision of personal monitoring equipment to MFB firefighters until current equipment is due for end-of-life cycle replacement in 2018–19, instead making interim arrangements for monitoring CO exposure for their firefighters.

Local Government Victoria (LGV) has commenced the first phase of a three-phase project to build capability and capacity of local government to meet their emergency management responsibilities. Phase one involved consultation with councils and emergency management organisations about the roles and responsibilities of local government in emergency management. A *Councils and Emergencies Position Paper* will be developed by LGV for release in September 2017. The position paper will assist LGV to understand and assess the individual emergency management capacity and capability of local councils and enable better visibility of councils' emergency management responsibilities. This information will inform stages two and three of the project.

As part of reforms to the National Disaster Relief and Recovery Arrangements, DHHS has made substantial progress on a new payment system for the Personal Hardship Assistance Program (PHAP), to provide assistance to those who have been affected by a significant incident in Victoria. DHHS expects to finalise the new system by 30 November 2017.

4.8.1 Industry integration in emergency management

The 2014 Inquiry report included a recommendation and affirmation aimed at improved integration of industry in the response to an emergency.

Table 32: Status of industry integration in emergency management actions

NO.	ACTION	RELATED RECOMMENDATION/ AFFIRMATION	DUE DATE	STATUS	LEAD AGENCY
INDUSTRY INTEGRATION IN EMERGENCY MANAGEMENT					
212	Hold Coal Mine Taskforce Exercise to further implement and test the pilot integrated management structure, fully integrating industry into the REMT and IMTs.	2014 Inquiry report: recommendation 2 and affirmation 10	August 2016	Complete	EMV
213	District 27 District Command Centre is operational	2014 Inquiry report: recommendation 2	December 2016	Complete	CFA
214	Deliver the Final Report of the Latrobe Valley Coal Mine Taskforce	2014 Inquiry report: recommendation 2 and affirmation 10	December 2016	Complete	EMV
215	Attend bi-monthly CGEIG Standardisation Committee meetings	2014 Inquiry report: recommendation 2 and affirmation 10	Transition to BAU by December 2016	Complete	EMV and CFA
216	Update EMV Joint Standing Operating Procedure for Incident Management Team Operations to incorporate industry integration into IMT operations	2014 Inquiry report: recommendation 2 and affirmation 10	March 2017	Ongoing	EMV
217	Assist in the re-write of the AIIMS doctrine to accommodate the full integration of industry into the AIIMS structure and process	2014 Inquiry report: recommendation 2 and affirmation 10	March 2017	Complete	EMV

212. Hold Coal Mine Taskforce Exercise to further implement and test the pilot integrated management structure, fully integrating industry into the REMT and IMTs.

On 8 and 9 October 2015, EMV held exercise 'Latrobe 15' to test and validate the integration of industry and emergency management organisations in emergency planning and preparedness. Members of the Coal Mines Emergency Management Taskforce, Latrobe Valley Coal Mine operators and the Australian Paper and Hancocks Plantations participated in this exercise.

As a follow up activity, EMV conducted exercise 'Latrobe 16' on 25 and 26 August 2016 to assess the preparation for and response to a major incident in the Latrobe Valley in accordance with local plans and arrangements. IGEM attended this exercise as an observer.

The exercise focused on planning and response arrangements at the local, regional and state level. The exercise was attended by key stakeholders who also attended 'Latrobe 15'. In addition, VicRoads, Pinegro and community groups such as Voices of the Valley and Morwell Neighbourhood House attended 'Latrobe 16' to gain an understanding of emergency management arrangements and the complexity involved with major incidents.

FINDING

IGEM considers this action has been implemented as planned.

213. District 27 District Command Centre is operational

District Command Centres are used by the CFA as part of its response to fires and other incidents within a particular district. Following the creation of District 27 in April 2015, CFA has completed the new District Headquarters and District Command Centre, which are operational and used for:

- monitoring incidents occurring within the district
- coordinating, prioritising and maintaining strategic resourcing in support of incidents, prior to the transfer of control to an Incident Control Centre
- providing a support facility for the remainder of the district that is not directly involved in an incident.

The District Command Centre was made operational in December 2016.

FINDING

IGEM considers this action has been implemented as planned.

214. Deliver the Final Report of the Latrobe Valley Coal Mine Taskforce

In December 2016 EMV published the *Coal Mines Emergency Management Taskforce Final Report & Achievements Analysis* on its website.⁴⁰

The report covers the life of the taskforce since it commenced on 16 September 2014 and ceased on 30 September 2016 after the Minister for Emergency Services approved an extension of its tenure. The taskforce was formally called the Coal Mines Emergency Management Taskforce, merging the Latrobe Valley Coal Mine Taskforce and the Surf Coast Taskforce.⁴¹

The taskforce was led by the Emergency Management Commissioner. ENGIE, AGL, EnergyAustralia, Alcoa, the Latrobe City (Shire) Council, Surf Coast Shire, CFA, Worksafe, DEDJTR, EPA and DHHS have participated in the taskforce since its inception. Victoria Police, DELWP and DPC participated in the taskforce after it was established.

This final report marks the formal closure of the taskforce, which ceased operating following its 26th and final official meeting on 27 September 2016.

Achievements of the taskforce include, but are not limited to:

- the launch of CFA's District 27, for all brigades in Latrobe City to be coordinated through a single district structure encompassing the Latrobe City boundaries
- the establishment and implementation of DEDJTR's Mine Fire and Emergency Unit as part of ERR branch that looked specifically at the sources of ignition that exist both within and external to the mine, and the actions taken to eliminate or mitigate impacts of those ignitions
- delivery of the 'Latrobe 15' and 'Latrobe 16' exercises to assess preparedness for a major incident, integrating industry with emergency services to provide community warnings and messaging within an incident management structure.

FINDING

IGEM considers this action has been implemented as planned.

215. Attend bi-monthly CGEIG Standardisation Committee meetings

Established in the 1990s, the Central Gippsland Essential Industries Group (CGEIG) is a regional group consisting of major industry within central Gippsland and government bodies including emergency management organisations. The group supports its members to provide assistance to each other and to share information during emergencies.

⁴⁰ emv.vic.gov.au/publications/coal-mines-emergency-management-taskforce-final-report-achievements-analysis

⁴¹ The Coal Mines Emergency Management Taskforce Final Report & Achievements Analysis December 2016, p. 4

Representatives include:

- mining, power generation, water, oil and gas bodies
- electricity transmission and distribution
- Australian Energy Market Operator
- Ambulance Victoria
- CFA
- VICSES
- Victoria Police
- local, state and federal government.

The CGEIG Standardisation Committee has existed as a sub-set of the broader group, working to implement common standards across member organisations and agencies. The 2015 CGEIG annual report outlines a number of work areas in which the sub-committee and its members have been involved, including:

- auto radio bridging systems
- major mine incident lessons learned
- pre-set notification call buttons for critical infrastructure sites to the Emergency Services Telecommunications Authority state emergency communications centres
- community engagement programs
- participation in cross-sector smoke monitoring and CO monitoring procedures and practices, including regulators, industry and agencies.

EMV representation at the CGEIG Standardisation Committee meetings was previously undertaken by the Director, Coal Mines Taskforce. With the conclusion of the Coal Mines Emergency Management Taskforce (refer to action 214) and the role of its Director at the end of September 2016 EMV's attendance at CGEIG Standardisation Committee meetings has also concluded.

EMV considers the representation by CFA and other agencies in the CGEIG Standardisation Committee to now be part of local BAU activities as per the Victorian Government Implementation Plan.

FINDING

IGEM considers this action has been implemented as planned.

216. Update EMV Joint Standing Operating Procedure for Incident Management Team Operations to incorporate industry integration into IMT operations

The *Incident Management Team Operations Readiness Arrangements for Bushfire* (JSOP 02.03) provides Regional Controllers with guidance on pre-positioning IMTs to manage major bushfires, or those with the potential to become major bushfires, taking account of the state and regional risk profile and the need for sustainable deployment of available resources.

JSOP 02.03 applies to:

- responder agencies (CFA, DELWP, MFB and VICSES)
- IMT readiness arrangements
- readiness for major bushfires.

This action was due to be completed in March 2017, however JSOP 02.03 is scheduled for review in August 2017 through the State Common Doctrine Team (SCDT) annual review process.

The SCDT is the overarching leadership group that provides guidance and coordination of common doctrine across responder agencies for multiple hazards. SCDT representation includes EMV, CFA, DELWP, MFB, VICSES and other agencies and departments as required.

The SCDT will consider whether the role and needs of industry are best articulated in a JSOP for IMTs or whether this guidance may be better placed in another policy or procedure.

FINDING

IGEM considers this action is progressing satisfactorily and will revisit in the next Annual Report.

217. Assist in the re-write of the AIIMS doctrine to accommodate the full integration of industry into the AIIMS structure and process

AIIMS is an incident management system commonly used across Australia by emergency management organisations when responding to and managing any incident regardless of size or complexity, including but not limited to bushfires, house fires or floods.

In 2016 EMV together with CFA, MFB, Parks Victoria and VICSES were involved in the AFAC revision of the AIIMS doctrine to formally include industry within the AIIMS structure.

In February 2017 AFAC released the exposure draft of AIIMS 2017 for comment. The exposure draft included in 'Part 2 Functions of Incident Management' a section entitled 'Involving Business Owners, Operators and Industry Representation in Planning' and included the following paragraph:

It may be appropriate to seek businesses to nominate an 'Industry Liaison Officer' to be embedded into the Plans Unit for this purpose. This person would have input into the setting of objectives and incident strategies, as well as being a source of industry information, maps and technical expertise. Industry liaison officers will be crucial in contributing to an accurate Common Operating Picture.

The Victorian emergency management sector, through EMV, provided its feedback on the exposure draft in March 2017.

Following endorsement by AFAC, AIIMS 2017 was publicly released on 5 July 2017.

FINDING

IGEM considers this action has been implemented as planned.

4.8.2 Emergency management planning

Table 33: Status of emergency management planning actions

NO.	ACTION	RELATED RECOMMENDATION/ AFFIRMATION	DUE DATE	STATUS	LEAD AGENCY
EMERGENCY MANAGEMENT PLANNING					
225	Full implementation of the Emergency Management Legislative Amendment (Planning) Bill 2016	2014 Inquiry report: recommendation 3 and affirmations 8 and 37	December 2018	Ongoing	EMV

225. Full implementation of the Emergency Management Legislative Amendment (Planning) Bill 2016

IGEM notes that the Emergency Management Legislation Amendment (Planning) Bill 2016 is under consideration by government.

FINDING

IGEM will revisit this action in the next Annual Report.

4.8.3 Emergency management training

This section addresses affirmations from the 2014 Inquiry report with respect to improved training for career and volunteer firefighters and improved OHS through lessons highlighted by the Hazelwood mine fire.

Table 34: Status of emergency management training actions

NO.	ACTION	RELATED RECOMMENDATION/ AFFIRMATION	DUE DATE	STATUS	LEAD AGENCY
EMERGENCY MANAGEMENT TRAINING					
233	Provide personal monitoring equipment to MFB firefighters	2014 Inquiry report: affirmation 12	June 2016 (Revised: December 2019)	Ongoing	MFB
234	Release tender for two purpose-built specialist CAFS trucks	2014 Inquiry report: affirmation 11	September 2016	Complete	CFA
235	Convert pilot Brown Coal Mine Firefighting Training Package into a blended learning program (e-learning and face to face)	2014 Inquiry report: affirmation 11	October 2016 (Revised: December 2018)	Ongoing	CFA
236	Develop and deliver training to IMTs with a focus on Incident Controllers	2014 Inquiry report: affirmation 11	October 2016	Complete	CFA and MFB
238	Deliver Brown Coal Mine Firefighting Training Package	2014 Inquiry report: affirmation 11	November 2016 (Revised: December 2018)	Ongoing	CFA and MFB

233. Provide personal monitoring equipment to MFB firefighters

MFB has revised time frames for this action and now anticipates completion in 2019, an extension of three years from the original due date of June 2016 in the Victorian Government Implementation Plan.

MFB flammability detectors currently worn by firefighters are due for end-of-life cycle replacement in 2018–19. Therefore, in keeping with this time frame, MFB advised IGEM that procurement of new monitors is now due to begin in mid-2018 with the rollout of new equipment expected to be completed by late 2019.

To progress this action, MFB prepared a discussion paper, *Firefighter gas detection capability*, which was endorsed at a Regional Operations Committee meeting held in August 2015. The paper recommended that future personal monitors should be able to detect CO and hydrogen cyanide and should be worn by all firefighters attending an incident. The recommendations were strongly supported.

MFB formed a project to prepare business and financial documentation to initiate the replacement of detectors, with the aim to equip all firefighters with CO, hydrogen cyanide, hydrogen sulphide, flammability and oxygen detection. A project plan was developed and subsequently endorsed on 18 January 2017 and a business case drafted on 31 July 2017.

The project plan and business case propose that detectors will be worn during all investigations and work at non-structural fires, such as mine and landfill fires.

In the interim, MFB advised IGEM they have a small cache of personal CO detectors and the ability to monitor readings from a remote location. If further detection equipment is required, MFB will request CFA equipment under existing mutual aid arrangements.

FINDING

IGEM notes delays encountered by this action and that time frames have been revised. IGEM will revisit in the next Annual Report.

234. Release tender for two purpose-built specialist CAFS trucks

CAFS tankers have shown to be very effective at fighting coal mine fires and were used during the firefighting response to the Hazelwood mine fire.

CFA released a tender for the supply and delivery of CAFS tankers to the market on 9 November 2015. The orders for the CAFS tankers will be placed following confirmation of final build scoping and staffing levels.

FINDING

IGEM considers this action has been implemented as planned.



Compressed Air Foam System tankers (Courtesy: CFA)

235. Convert pilot Brown Coal Mine Firefighting Training Package into a blended learning program (e-learning and face to face)

CFA and MFB have worked together to develop the Brown Coal Mine Firefighting Training Package, which is designed to ensure that CFA has the capability and capacity to respond to fires within coal mines.

In September 2016 CFA conducted a pilot to evaluate the draft training package. The pilot involved a face-to-face training session with CFA District 27 personnel, MFB representatives, CFA Training Department and brown coal mine operators.

Based on the outcome of the pilot, CFA decided to develop a video-based Brown Coal Mine Firefighting Training Program for use by staff and volunteers. This is a blended learning program, with a requirement for face-to-face sessions to enable skills development.

In April 2017 CFA engaged a production company to develop the script and story boards for the video-based training program. The learning sequence and video-storyboard are currently under review by industry and fire services.

The completion date for this action has been extended from October 2016 to December 2018 to align with the Minister for Emergency Services' Statement of Expectation in January 2017.

FINDING

IGEM notes the revised time frames for this action and will revisit in the next Annual Report.

236. Develop and deliver training to IMTs with a focus on Incident Controllers

Although not specified in the wording of action 236, the Victorian Government Implementation Plan refers to training for IMTs, with a focus on incident controllers (ICs), as part of the Brown Coal Mine Firefighting Training Package (refer to action 235).

Brown coal fires are a specific class of fire covered by the *State Smoke Framework* that require ICs to undertake awareness training. Depending on the scale, complexity and anticipated duration, a brown coal fire may require the IC to implement the Standard for Significant Carbon Monoxide Emissions to manage responder health and safety. This includes fire-ground responder health surveillance and atmospheric monitoring procedures.

The IC also needs to be aware that if a brown coal fire is producing smoke impacts on neighbouring communities, other agencies, such as DHHS, EPA and VICSES, need to be engaged in accordance with *Rapid Deployment of Air Monitoring for Community Health Procedure* and *Community Smoke Air Quality & Health Standard*. The related JSOPs are J03.18 – *Incident Air Monitoring for Community Health*, J03.19 – *Managing significant community exposures to fine particles from smoke* and J03.20 – *Managing significant community exposures to carbon monoxide from smoke*.

The 2016 IGEM Hazelwood report noted that CFA and MFB had developed a training package for ICs and IMTs on the State Smoke Guide, Carbon Monoxide Response Protocol and PM 2.5 Protocol in accordance with the *Smoke Air Quality and Health Standard*. The training delivery commenced for the 2015–16 summer pre-season briefings and was incorporated as part of 2016–17 summer pre-season briefings and for future summer pre-season briefings.

The training package has been incorporated into the current IMT training curriculum. Two JSOPs have also been developed and socialised in support of the training package. This is now a BAU activity.

FINDING

IGEM considers this action has been implemented as planned.

238. Deliver Brown Coal Mine Firefighting Training Package

This action is contingent on the completion of the blended learning offering of the Brown Coal Mine Firefighting Training Package, which is still in development (refer to action 235).

As with action 235, the time frame for this action has been extended due to the minister’s Statement of Expectation in January 2017.

FINDING

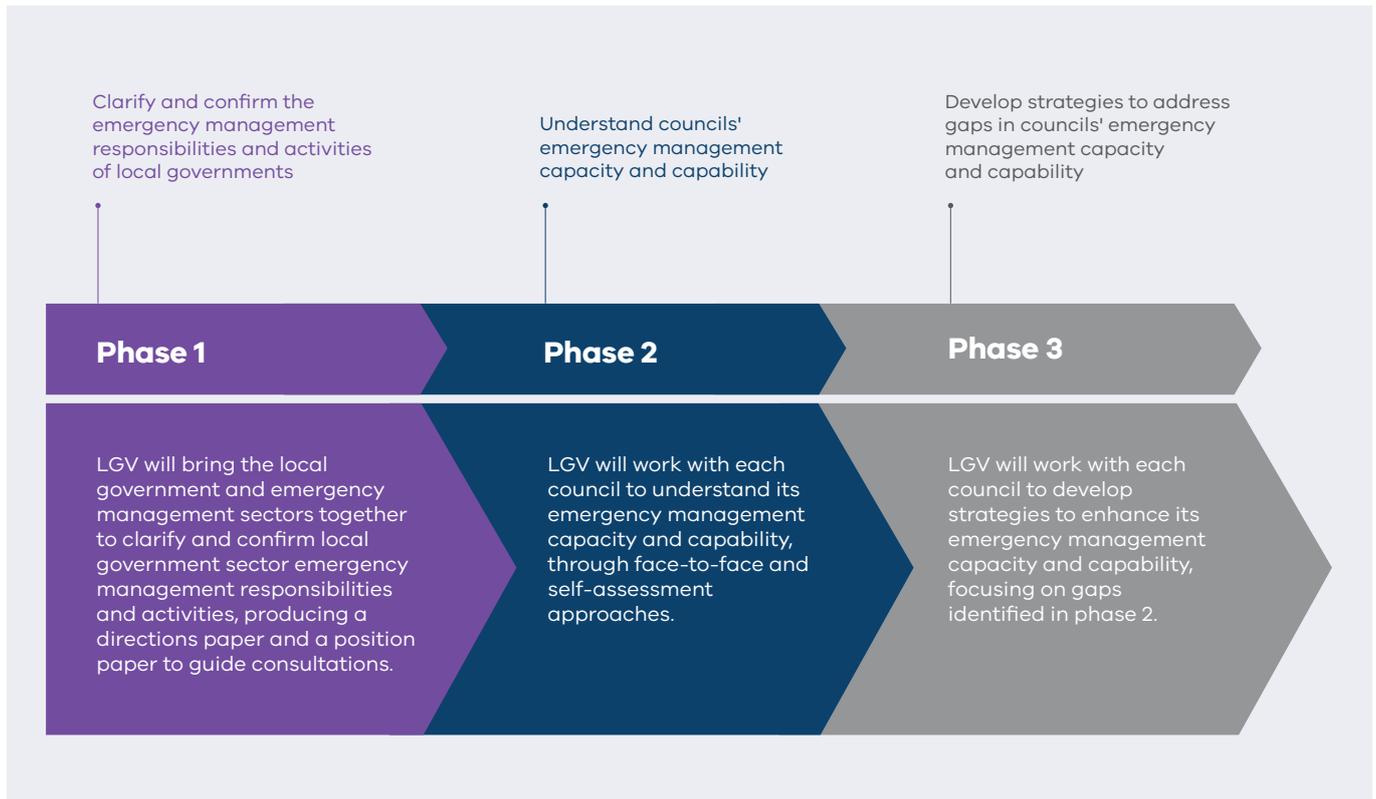
This action is contingent on action 235 and IGEM will revisit in the next Annual Report.

4.8.4 Local government capability

Actions 242 to 245 will be addressed through the project *Enhancing the Capability and Capacity of Local Government*⁴² led by DELWP, through LGV. The project will assess the capability and capacity across LGV to determine if councils have the required skills and expertise to meet their emergency management obligations. The project has three distinct phases, as shown below.

Due to the breadth and complex nature of this work project time lines were amended and approved by the Emergency Management Capability and Capacity Steering Committee on 16 February 2017. This committee provides project governance and advice on the project.

Figure 5: Enhancing the Capability and Capacity of Local Government Project



⁴² The project also delivers progress towards 'Priority B: Enhance the capability and capacity of local governments to meet their obligations in the management of emergencies' of the rolling three-year Victorian Emergency Management Strategic Action Plan (SAP).

Table 35: Status of local government capability actions

NO.	ACTION	RELATED RECOMMENDATION/ AFFIRMATION	DUE DATE	STATUS	LEAD AGENCY
LOCAL GOVERNMENT CAPABILITY					
242	Define the roles and responsibilities of local government in emergency management	2014 Inquiry report: affirmation 31	September 2016 (Revised: September 2017)	Ongoing	DELWP
243	Review the current roles and responsibilities of local government in emergency management for alignment with the defined roles and responsibilities	2014 Inquiry report: affirmation 31	September 2016 (Revised: September 2017)	Ongoing	DELWP
244	Review the capability and capacity required for local government to fulfil their emergency management roles and responsibilities	2014 Inquiry report: affirmation 31	December 2017 (Revised: December 2018)	Ongoing	DELWP
245	Develop an action plan to address any local government emergency management capability and capacity gaps	2014 Inquiry report: affirmation 31	December 2018 (Revised: December 2019)	Ongoing	DELWP

242. Define the roles and responsibilities of local government in emergency management

243. Review the current roles and responsibilities of local government in emergency management for alignment with the defined roles and responsibilities

Actions 242 and 243 relate to phase one of the three-phase project *Enhancing the Capability and Capacity of Local Government*.

In 2016 DELWP, through LGV, commenced the first phase of the project to define the roles and responsibilities of local government in emergency management. Following a series of workshops, LGV provided a report to councils and agencies specifying 16 emergency management roles for councils. These roles align with the core capabilities identified in the *Victorian Preparedness Goal* as critical components required to manage emergencies.

On 10 January 2017 LGV released the *Councils and Emergencies Directions Paper* with a four-month consultation period which closed on 8 May 2017. The paper describes councils' current emergency management responsibilities and actions, based on their legislative requirements. LGV received 72 submissions from councils and emergency management organisations on the directions paper.

LGV is currently analysing the submissions to inform the development of a final position paper on the current emergency management responsibilities of local government. The position paper has two main aims:

- to provide the policy basis through which phase two of the project can commence – understanding and assessing all 79 Victorian councils' individual emergency management capacity and capability
- to enable the local government and emergency management sectors to have better visibility of councils' responsibilities, including standardising language to describe councils' emergency management responsibilities.

Due to the breadth and complex nature of this work project time lines were amended and approved by the Emergency Management Capability and Capacity Steering Committee on 16 February 2017. This committee provides project governance and advice on the project.

IGEM anticipates that actions 242 and 243 will now be completed when phase one of the project is finalised with the release of the Councils and Emergencies Position Paper.

FINDING

IGEM notes the revised time frames for these actions and will revisit in the next Annual Report.

244. Review the capability and capacity required for local government to fulfil their emergency management roles and responsibilities

Phase two of the three-phase project, *Enhancing the Capability and Capacity of Local Government*, will address action 244.

This action is now scheduled to be completed by December 2018.

FINDING

This action is contingent on actions 242 and 243, and IGEM will revisit in the next Annual Report.

245. Develop an action plan to address any local government emergency management capability and capacity gaps

Phase three of the three-phase project, *Enhancing the Capability and Capacity of Local Government*, will address action 245.

This action is now scheduled to be completed by December 2019.

FINDING

This action is contingent on action 244 and IGEM will revisit in the next Annual Report.

4.8.5 National disaster recovery assistance payment

Table 36: Status of national disaster recovery assistance payment action

NO.	ACTION	RELATED RECOMMENDATION/ AFFIRMATION	DUE DATE	STATUS	LEAD AGENCY
NATIONAL DISASTER RECOVERY ASSISTANCE PAYMENT					
246	Introduce new technology to track payments	2014 Inquiry report: affirmation 30	November 2015 (Revised: November 2017)	Ongoing	DHHS

246. Introduce new technology to track payments

In 2016 DHHS commenced a project to deliver a software solution which manages the PHAP. The program provides assistance to those who have been affected by a significant incident in Victoria, such as floods and fires.

This new technology is part of a wider program of enhancements being implemented within DHHS to support its response to emergencies. The new technology is expected to incorporate:

- an assessment form which captures relevant applicant details and calculates grant amounts
- the capacity for credit card payments and the ability to capture payment details offered to applicants in the form of cards, cheques or direct deposits
- an automated interface between the DHHS financial solution and PHAP software
- the ability to import different types of flat files with information such as bank transactions, card details and export data in CSV and XML files, and a schedule
- the ability to generate reports based on the system data.

Technical and development issues have delayed the introduction of the new system.

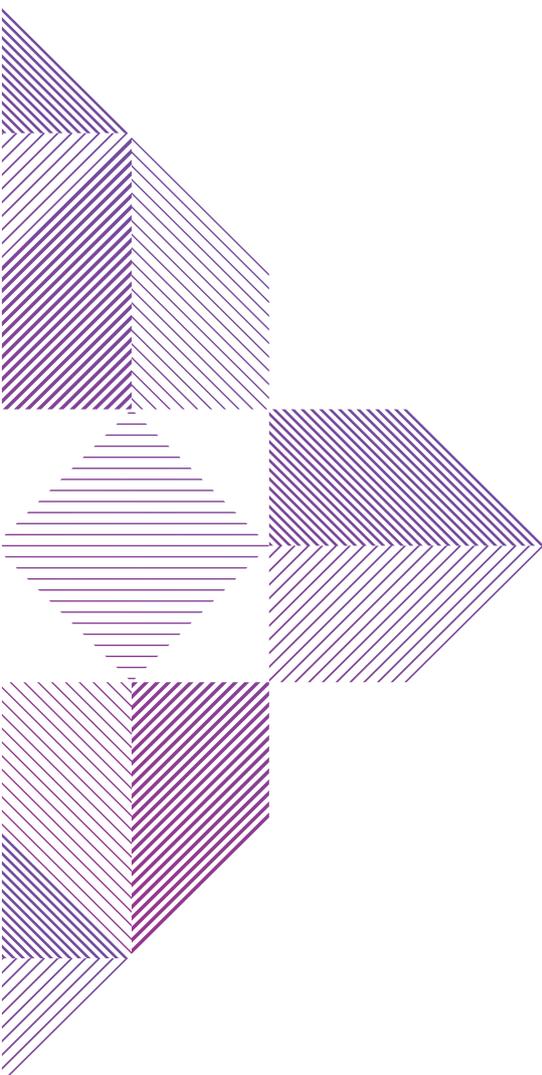
As an interim solution, DHHS implemented a web based system in November 2015 which is still in place. This system shares information on public calls, appointments and payments across multiple sites and includes a real-time search function to minimise duplicate or fraudulent payments.

DHHS has made substantial progress during 2017 on the new system and now expects to finalise this action by 30 November 2017.

FINDING

IGEM notes the revised time frames for this action and will revisit in the next Annual Report.

5. Progress update – 2015–16 Hazelwood Mine Fire Inquiry Volume III (Health Improvement) recommendations and affirmations



In the Health Improvement Inquiry report, recommendations 11 and 12 were directed to the four principal health agencies in the Latrobe Valley, statutory authorities and state-level, non-government health agencies.

The Board of Inquiry also affirmed commitments made by statutory authorities, state-level non-government health agencies, the key principal stakeholder agencies and individual members of expert panels to numerous actions relevant to improving health in the Latrobe Valley in the short, medium and long term.

The Health Improvement Inquiry report defines the four principal health agencies as Latrobe Regional Hospital, Latrobe Community Health Service, Latrobe City Council and the Gippsland Primary Health Network (PHN). These are the key organisations responsible for health and wellbeing in the Latrobe Valley. 'Statutory authorities' refers to public entities such as the EPA, VicHealth and WorkSafe.

'State-level non-government health agencies' refers to non-government agencies that have a specific focus on promoting health and/or preventing or addressing ill health across Victoria, such as beyondblue, Cancer Council Victoria, Diabetes Victoria, Heart Foundation Victoria, the Victorian Branch of the Public Health Association Australia, Quit Victoria and the Victorian Healthcare Association .

Overall, IGEM finds that significant progress has been made among health agencies to advance health projects within the Latrobe Valley. Of note is the collaborative nature of this work, ranging from the establishment of the Latrobe Health Assembly (Health Assembly), to multi-agency participation in established working groups with the community to support priorities for the Latrobe Health Innovation Zone, such as cancer screening programs, the Early Detection and Screening including Tobacco Initiative, and the Chronic Disease Risk Self-Assessment Tool.

The sections that follow provide a summary of progress being made to implement recommendations 11 and 12 and affirmations 1, 2, 4, 6, 7, 8, 9 and 12 which fall outside the scope of the Victorian Government Implementation Plan.

Table 37: Status of Health Improvement Inquiry report non-government health agency recommendations and affirmations

NO.	RECOMMENDATION/AFFIRMATION	STATUS
Rec 11	Commit to, support and promote the Latrobe Valley Health Innovation Zone. In particular they should support health innovations and service integration, including the pooling of resources.	Ongoing
Rec 12	Commit to, support and promote the Latrobe Valley Health Innovation Zone. These bodies should prioritise the Latrobe Valley Health Innovation Zone for investments in program delivery and health innovation projects, recognising that the lessons learned will have broader application.	Ongoing
Aff 1	The commitment of the principal stakeholder organisations for health in the Latrobe Valley to making improvements in the way that they engage with the Latrobe Valley community.	Ongoing
Aff 2	The commitment of Latrobe Regional Hospital to continue to develop as a regional hospital for the people of the Latrobe Valley and the wider Gippsland area. The Board considers that the State should give serious consideration to ensuring that future investment in this facility is at least equitable with other regional areas in Victoria.	Ongoing
Aff 4	The intention of Dr Alistair Wright, general physician from Latrobe Regional Hospital and Dr Daniel Steinfort, respiratory physician from the Royal Melbourne Hospital, to work together to understand the risk profile of the Latrobe Valley relevant to lung cancer, and the implications of this for a possible lung cancer screening program.	Ongoing
Aff 6	The intention of Monash Health and the Latrobe Regional Hospital to consider the development of an advanced physician training program for general physicians in the short term.	Ongoing
Aff 7	The commitment of the Gippsland Primary Health Network to develop 'care pathways' to assist general practitioners in the management of complex conditions	Complete
Aff 8	The commitment of state-level statutory and non-government health agencies to assist Latrobe Valley organisations and the broader community to improve health through policies, plans, funding, infrastructure, programs, campaigns, training, research and evaluation, recognising that for action to be effective it needs to be community-led as much as possible.	Ongoing
Aff 9	The commitment by the Children and Youth Area Partnership to include an early intervention focus to protect vulnerable children and support access to education for children in out-of-home care, having regard to the fact that children in the Latrobe Valley often start school developmentally behind their peers when measured according to the Australian Early Development Index.	Ongoing
Aff 12	The Board affirms work being undertaken by the Community Wellbeing Study (part of the Hazelwood Mine Fire Health Study) to enhance agencies' ability to effectively engage with the Latrobe Valley community.	Ongoing

5.1 Health Improvement Inquiry report: recommendation 11

The Board of Inquiry recommended that each of the principal health agencies in the Latrobe Valley commit to, support and promote the Latrobe Valley Health Innovation Zone. In particular, they should support health innovations and service integration, including the pooling of resources.

As part of the work of the Latrobe Health Innovation Zone, the following commitments have been made:⁴³

- the Health Assembly will put the community front and centre in identifying health priorities and innovating health services

- the Latrobe Health Advocate will strengthen the Latrobe Valley community's voice on health
- \$27.3 million Victorian Government investment in health in the Latrobe Valley.

The Health Assembly has been established to promote, support and oversee the development and operation of the Latrobe Health Innovation Zone with a focus on innovation, integration and community engagement to improve health and wellbeing. The Health Assembly constitution was approved by Latrobe City Council on 8 May 2017. The Health Assembly consists of foundation members – Chairperson, Latrobe City Council, Latrobe Community Health Service, Latrobe Regional Hospital, Gippsland PHN, DHHS – and ordinary members.

⁴³ www2.health.vic.gov.au/about/health-strategies/health-in-latrobe-valley

Examples of work committed to, supported and promoted in the Latrobe Health Innovation Zone by the four principal health agencies include:

- continued work between the Latrobe Community Health Service with Gippsland PHN to look at options for co-location with general practitioner practices across the Latrobe Valley – a general practitioner clinic in Moe and in Morwell have been approached and are receptive to this initiative
- work between the Latrobe Community Health Service and Latrobe Regional Hospital to deliver a combined clinic for clients with chronic disease (respiratory and/or diabetes) and mental health issues – St Vincent’s Hospital has been engaged to assist the rollout of the Optimal Health Program for this cohort of consumers
- the Latrobe Health Innovation Zone and related activities have been incorporated as standing agenda items into Gippsland PHN advisory groups and committees
- Latrobe City Council has developed the draft Municipal Public Health and Wellbeing Plan which aims to create a healthy, safe, vibrant and connected community in Latrobe. The plan is aligned to the key priority areas of the Health Assembly
- multi-agency participation in established working groups with the community to support priorities for the Latrobe Health Innovation Zone, such as cancer screening programs, the Early Detection and Screening including Tobacco Initiative, and the Chronic Disease Risk Self-Assessment Tool.

FINDING

IGEM considers this recommendation is progressing satisfactorily and will revisit in the next Annual Report.

5.2 Health Improvement Inquiry report: recommendation 12

The Board recommends that the statutory and state-level non-government health agencies:

Commit to, support and promote the Latrobe Valley Health Innovation Zone. These bodies should prioritise the Latrobe Valley Health Innovation Zone for investments in program delivery and health innovation projects, recognising that the lessons learned will have broader application.

Statutory and state-level non-government health agencies demonstrate their commitment to support and promote the Latrobe Health Innovation Zone through their membership on the Health Assembly. These include:

- EPA
- VicHealth

- Victorian Chronic Disease Prevention Alliance
- WorkSafe.

The Victorian Chronic Disease Prevention Alliance is an active member of the Health Assembly and is comprised of the Heart Foundation (Victoria), Cancer Council Victoria, Diabetes Victoria, Kidney Health Australia, and the Stroke Foundation. In particular, the Chronic Disease and Wellness and Make a Move – Sport, Recreation and Nutrition working groups of the Health Assembly have strong alignment with the activities of the Victorian Chronic Disease Prevention Alliance.

Examples of work committed to, supported and promoted in the Latrobe Health Innovation Zone by the statutory and state-level non-government health agencies are detailed below.

Latrobe Health Innovation Zone Early Detection and Screening including Tobacco Initiative Project Control Group

The Latrobe Health Innovation Zone Early Detection and Screening, including Tobacco Initiative Project Control Group is another example of health agencies working together to progress health innovation projects. Chaired by Gippsland PHN, participants also include representatives from DHHS, Latrobe Regional Hospital, Latrobe Community Health Service, Cancer Council Victoria, Quit Victoria, BreastScreen Victoria, and the Victorian Chronic Disease Prevention Alliance.

Smoking cessation initiatives

Quit Victoria has partnered with Gippsland PHN to co-design and implement a project that is intended to embed smoking cessation in primary care. Gippsland PHN has engaged local experts and organisations to provide feedback and critical expertise in primary care practice, and provided local project management and venues for training.

Quit Victoria commissioned Alfred Health’s Smoking Cessation Pharmacy Specialist to provide pharmacology expertise in content development and to co-deliver education. These activities have been demonstrated to build capacity and capability to embed practice change. Quit Victoria advises that this course is the first of its kind in Australia for smoking cessation, and could be rolled out across Australia as a product of the Latrobe Health Innovation Zone.

In May and June 2017 Quit Victoria and Alfred Health delivered 10 Brief Intervention Smoking Cessation Training sessions in the Latrobe City Council area to a total of 108 health professionals. This included general practitioners, practice nurses, oral health practitioners, pharmacists and other allied health practitioners. All attendees completed an evaluation of their course, which showed the training sessions achieved the stated learning objectives and attending health professionals intended to translate their learnings into routine delivery of smoking cessation brief interventions. Quit Victoria advises that it will now transform the ‘Brief Intervention Smoking Cessation Training’ variations into online learning modules to enable health practitioners across Victoria to access the education developed as a result of the work in the Latrobe Health Innovation Zone.

Further work to embed smoking cessation into routine care includes providing general practitioners and practice nurses with readily available tools and information. Using feedback from the training sessions and consultations with local health professionals, Quit Victoria and Gippsland PHN are in the process of producing consumer health information and health professional information that will provide concise, readily available information on providing brief interventions, use of pharmacotherapies, health risks, clinical protocols, smoke-free policies (for clinics), and waiting room information.

Cancer screening

Cancer Council Victoria launched a statewide social marketing campaign on 26 July 2017 to increase participation in bowel cancer screening. This is expected to expand to the Latrobe Valley region through mass media advertising – television, radio, digital – and direct engagement with general practitioners.

Cancer Council Victoria advises that it is awaiting Health Assembly and Gippsland PHN planning finalisation before undertaking additional specific local interventions to increase cancer screening in the region.

FINDING

IGEM considers this recommendation is progressing satisfactorily and will revisit in the next Annual Report.

5.3 Health Improvement Inquiry report: affirmations

1. The commitment of the principal stakeholder organisations for health in the Latrobe Valley to making improvements in the way that they engage with the Latrobe Valley community.

Latrobe Regional Hospital, Latrobe Community Health Service, Latrobe City Council and Gippsland PHN have facilitated a number of initiatives to make improvements in the way that they engage with the Latrobe Valley community. Examples over the past 12 months include:

- Community Health Screening Day at Mid Valley Shopping Centre in Morwell (November 2016) – organised by Latrobe Regional Hospital, with involvement from Latrobe Valley Community Health Service and Gippsland PHN, the event provided lung function testing and blood pressure and general health information from Latrobe Regional Hospital's respiratory scientist, medical staff and nursing team.
- Kidney Health Screening Day at Traralgon Centre Plaza Shopping Centre (March 2017) – organised by Latrobe Regional Hospital and held as part of Kidney Week, nurses offered free blood pressure checks and talked to community members about risk factors for kidney disease.
- Bunnings Warehouse community events – Latrobe Regional Hospital staff regularly attend Bunnings Warehouse community events in Morwell and Traralgon to carry out basic health checks and provide advice. Events included Men's Health Night in September 2016, Bunnings Community Day in October 2016 and Women's Health Night in May 2017.
- The community-led approach to development of the Latrobe City Council's *Municipal Public Health and Wellbeing Plan*, which focuses on the strengths of the Latrobe Valley community in identifying opportunities for health and wellbeing improvement.
- Community group presentations about the Latrobe Regional Hospital Redevelopment – over the last 12 months 12 presentations have been provided to groups in Moe, Morwell, Traralgon and Churchill to inform the community about progress and to publicise new services such as the cardiac catheterisation laboratory.

FINDING

IGEM considers this affirmation is progressing satisfactorily and will revisit in the next Annual Report.

2. The commitment of Latrobe Regional Hospital to continue to develop as a regional hospital for the people of the Latrobe Valley and the wider Gippsland area. The Board considers that the State should give serious consideration to ensuring that future investment in this facility is at least equitable with other regional areas in Victoria.

The \$73 million Latrobe Regional Hospital Redevelopment building works were due to be completed by August 2017 and commissioned and opened by November 2017.

Following the completion of an investment logic map in July 2017 IGEM has been advised that planning has continued as a priority with DHHS on stage 3 of the master plan. Latrobe Regional Hospital advises that the business case for consideration by the Department of Treasury and Finance is due for submission in November 2017.

FINDING

IGEM considers this affirmation is progressing satisfactorily and will revisit in the next Annual Report.

4. The intention of Dr Alistair Wright, general physician from Latrobe Regional Hospital and Dr Daniel Steinfert, respiratory physician from the Royal Melbourne Hospital, to work together to understand the risk profile of the Latrobe Valley relevant to lung cancer, and the implications of this for a possible lung cancer screening program.

Latrobe Regional Hospital reports that Associate Alistair Wright has contacted Professor Phil Bardin, Director Monash Lung and Sleep, Monash University and Hospital, to consider a number of potential research projects. These include the effect of wood fire smoke (seasonal burning off) on asthmatics and non-asthmatics in the Gippsland region and data available from Gippsland Regional Integrated Cancer Services regarding the last five years of cancer patients from the Gippsland region.

FINDING

IGEM considers this affirmation is progressing satisfactorily and will revisit in the next Annual Report.

6. The intention of Monash Health and the Latrobe Regional Hospital to consider the development of an advanced physician training program for general physicians in the short term.

Latrobe Regional Hospital has advised that recruitment of an advanced trainee in a combined general medicine and palliative role has been unsuccessful. Negotiations are currently underway with Monash Health to investigate combined training with other disciplines such as respiratory medicine, gastroenterology or endocrinology.

FINDING

IGEM will revisit this affirmation in the next Annual Report.

7. The commitment of the Gippsland Primary Health Network to develop 'care pathways' to assist general practitioners in the management of complex conditions.

Gippsland PHN was established on 1 July 2015 as part of a Commonwealth Government initiative to achieve an organised primary healthcare system. As part of its objectives, Gippsland PHN works with health professionals to create efficiency and connectedness in the health system.

The Gippsland HealthPathways program is an established mechanism for Gippsland PHN to assist general practitioners in the management of complex conditions. Gippsland HealthPathways is a collaborative and structured approach to coordinating patient care across the acute and primary care interface. It brings together general practitioners, specialists, nurses and allied health professionals to discuss optimal assessment and management of common medical conditions, including when and where to refer patients.

The result is a single, web-based portal for relevant and evidence-based information that is designed to be accessed by general practice at the point of care. The Gippsland HealthPathways portal became available on 1 February 2017⁴⁴ and presents a synopsis of current evidence and clinical guidelines, along with information about local referral options for a range of specific conditions in the one place.

As at 1 June 2017 there are 58 completed pathways for the Gippsland region, with more work continuing to develop new pathways.

Gippsland PHN reports that Gippsland HealthPathways is now an ongoing business function and that each pathway is scheduled for review between 12 and 24 months to ensure that information remains evidence-based, in addition to updates made in response to user feedback.

FINDING

IGEM considers this affirmation has been implemented as planned.

⁴⁴ gippsland.healthpathways.org.au

8. The commitment of state-level statutory and non-government health agencies to assist Latrobe Valley organisations and the broader community to improve health through policies, plans, funding, infrastructure, programs, campaigns, training, research and evaluation, recognising that for action to be effective it needs to be community-led as much as possible.

State-level statutory and non-government health agencies have demonstrated their commitment to assist Latrobe Valley organisations and the broader community to improve health through a number of initiatives.

Chronic Disease Self-Assessment Tool

The development of the Chronic Disease Self-Assessment Tool is a project being run by a DHHS steering group that brings together different health agencies. The aim of the project was to develop a simple 'self check' that would be used to engage the community to better understand the risk factors for chronic disease and to encourage them to take the first step in better understanding their risk. The self-assessment tool is undergoing testing to ensure it is suitable to implement as part of a pilot in the Latrobe Valley.

Cancer screening

During 2017 Cancer Council Victoria has actively engaged with the Gippsland PHN as part of the project control group to develop plans for delivering and improving cancer screening in the region. This work has led to a draft report that details plans to improve access to screening services for vulnerable and high-risk groups.

Human papillomavirus vaccine

Cancer Council Victoria has been funded by DHHS to increase the human papillomavirus (HPV) vaccine uptake among vulnerable adolescents and populations in Victoria. This includes a pilot project in Gippsland, specifically working with East Gippsland Shire Council, Latrobe City Council and Gippsland PHN.

The Gippsland pilot aims to increase awareness and uptake of HPV immunisation among Aboriginal adolescents in the Gippsland region through the development and implementation of a culturally safe, community-centred immunisation approach, engaging immunisation providers within the region. There is a focus on in-school and community settings, supporting the ongoing school-based immunisation program as well as strengthening access and coordination of community immunisation services.

Smoking cessation initiatives

To engage the local community, Quit Victoria partnered with the Latrobe Valley Express, Gippsland PHN and the Latrobe Community Health Service to develop and publish a series of articles that provide practical strategies and tips on quitting smoking. Quit Victoria built local capacity by working with local experts to author the stories.

The series, which ran over five weeks from 4 May to 1 June 2017, constituted a weekly newspaper article on topics which were shared on social media, including the Voices of the Valley Facebook page and the Latrobe Valley Express Facebook page, and attracted positive feedback.

At the suggestion of community members, Quit Victoria also organised community stalls where staff from the Quitline, Gippsland PHN and the Gippsland Tackling Indigenous Smoking Team (Lakes Entrance) could engage with passers-by. The stalls were held in Traralgon, Morwell, Moe and Churchill from 5 to 7 June 2017 and were well received. As a result, a total of 23 Quitline referrals were obtained (three for Aboriginal Quitline) over the three days.

Quit Victoria advises that it will await feedback from the Health Assembly on its initial progress in engaging the community before undertaking further public education and engagement.

FINDING

IGEM considers this affirmation is progressing satisfactorily and will revisit in the next Annual Report.

9. The commitment by the Children and Youth Area Partnership to include an early intervention focus to protect vulnerable children and support access to education for children in out-of-home care, having regard to the fact that children in the Latrobe Valley often start school developmentally behind their peers when measured according to the Australian Early Development Index.

Children and Youth Area Partnerships were established in response to the 2012 Cummins Inquiry, *Protecting Victoria's Vulnerable Children*. Its purpose is to establish new ways of working at the local level to more effectively join-up social services in Victoria at a system level to support better outcomes for vulnerable children, young people and their families.⁴⁵

Eight Area Partnership launch sites have been established across Victoria including:

- Central Highlands
- Inner Gippsland
- Loddon
- Mallee
- Outer Eastern Melbourne
- Ovens Murray
- Southern Melbourne
- Western Melbourne.

⁴⁵ More information at www.dhs.vic.gov.au/about-the-department/plans,-programs-and-projects/projects-and-initiatives/children,-youth-and-family-services/children-and-youth-area-partnerships

Co-chaired by the Department of Education and Training and DHHS, Inner Gippsland Children and Youth Area Partnerships was formed in November 2014, and is led by a steering group comprised of Victorian Government, local government, community sector organisations, Aboriginal community and other area partners.

The June 2017 *Inner Gippsland Children and Youth Area Partnerships Board Report*, noted that the educational outcomes for children in out-of-home care are significantly poorer than their peers.

To better understand the challenges, Inner Gippsland Children and Youth Area Partnerships engaged further with carers, schools, young people, and child protection and service agencies.

The Educational Residential Panel has been established to prioritise direct support to young people in residential care that are not engaged or enrolled in education. The panel brings agencies, departments and schools together in a collaborative approach to support this goal.

FINDING

IGEM considers this affirmation is progressing satisfactorily and will revisit in the next Annual Report.

12. The Board affirms work being undertaken by the Community Wellbeing Study (part of the Hazelwood Mine Fire Health Study) to enhance agencies' ability to effectively engage with the Latrobe Valley community.

The Hazelwood Health Study commenced in 2015 and aims to identify potential health outcomes for people who may have been exposed to smoke from the Hazelwood mine fire.

The key aims of the Community Wellbeing Stream component of the Hazelwood Health Study are to investigate community perceptions of:

- the impact of the smoke event on community wellbeing
- the effectiveness of community rebuilding activities
- the elements that are important for effective communication during and after the smoke event.

The study is using a community-engagement component – focus group discussions and individual interviews – as well as a media analysis component – analysis of local and state newspapers, online news media, social media postings, interviews with local media professionals and social media practitioners – to inform the analysis.

To date, focus groups and interviews conducted indicate that there is a community perception that little has occurred in terms of recovery and that generally their concerns and issues have not been adequately addressed. There is also the perception that there has been a lack of community engagement and that the recovery process has not been a community-engaged or community-led process.

The Community Wellbeing Stream plans to conduct an exhibition focusing on wellbeing and recovery in November 2017, developed in conjunction with community groups. Up to 30 members of various community groups will participate in the exhibition, which will feature photographs of local community members holding an object that symbolises their hopes for the future of Morwell. These photographs and an accompanying caption, written by each participating group, will form the exhibition.

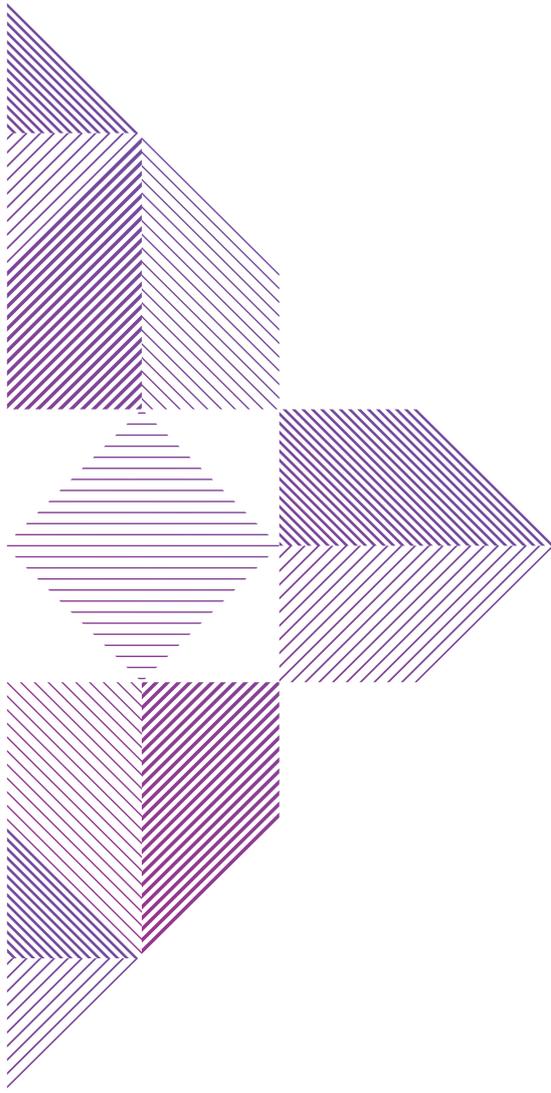
Initial findings on the uses of social media during the Hazelwood mine fire indicated that there are significant issues around identifying trusted sources of information, and how authority is recognised by community-initiated social media. Both disaster communications literature and interviews revealed the importance of multiple communication mediums and channels to communicate accurate and timely information during a crisis.

Data from the initial interviews with media and social media practitioners regarding the effectiveness of communication during and after the smoke event is being supplemented by further consultation with interviewees and local media professionals.

FINDING

IGEM considers this affirmation is progressing satisfactorily and will revisit in the next Annual Report.

6. Progress update – coal mine operators



During the 2015–16 Inquiry, the Board of Inquiry was unable to make a definitive assessment on the viable rehabilitation option for each of the three mines due to many areas of uncertainty that were not addressed by relevant agencies and the mine operators. These issues included mine stability, sourcing water, water quality and fire risk.

The Board of Inquiry concluded that a significant amount of research must be conducted into these issues to provide certainty about the rehabilitation options, which must be done in the short to medium-term and in a coordinated manner.

In the Mine Rehabilitation Inquiry report, the Board of Inquiry made 17 recommendations to be implemented by the state. The associated actions are included in the Victorian Government Implementation Plan and reported on in section 4.

The Board of Inquiry made two recommendations, and one affirmation, for implementation by the Latrobe Valley mine operators.

Table 38: Status of Mine Rehabilitation Inquiry report coal mine operator recommendations and affirmation

NO.	RECOMMENDATION/AFFIRMATION	STATUS
Rec 18	By 31 December 2016, develop an integrated research plan that identifies common research areas and priorities for the next 10 years, to be reviewed every three years. The plan should be developed in consultation with the Mining Regulator and relevant agencies, research bodies and experts. The list of research topics identified in Part 6.11 [of the Victorian Government Implementation Plan] can be used as a starting point for discussion. The Commissioner and statutory authority should promote and coordinate this research (see recommendations 14 and 15).	Ongoing
Rec 19	Increase the rate of progressive rehabilitation by achieving milestones within the mines' progressive rehabilitation plans, as set by the Mining Regulator under recommendation 4.	Ongoing
Aff 1	The commitments of EnergyAustralia, GDF Suez and AGL Loy Yang to increase coordination and collaboration between themselves and the regulatory authorities.	Complete

6.1 Mine Rehabilitation Inquiry report: recommendation 18

By 31 December 2016, develop an integrated research plan that identifies common research areas and priorities for the next 10 years, to be reviewed every three years. The plan should be developed in consultation with the Mining Regulator and relevant agencies, research bodies and experts.

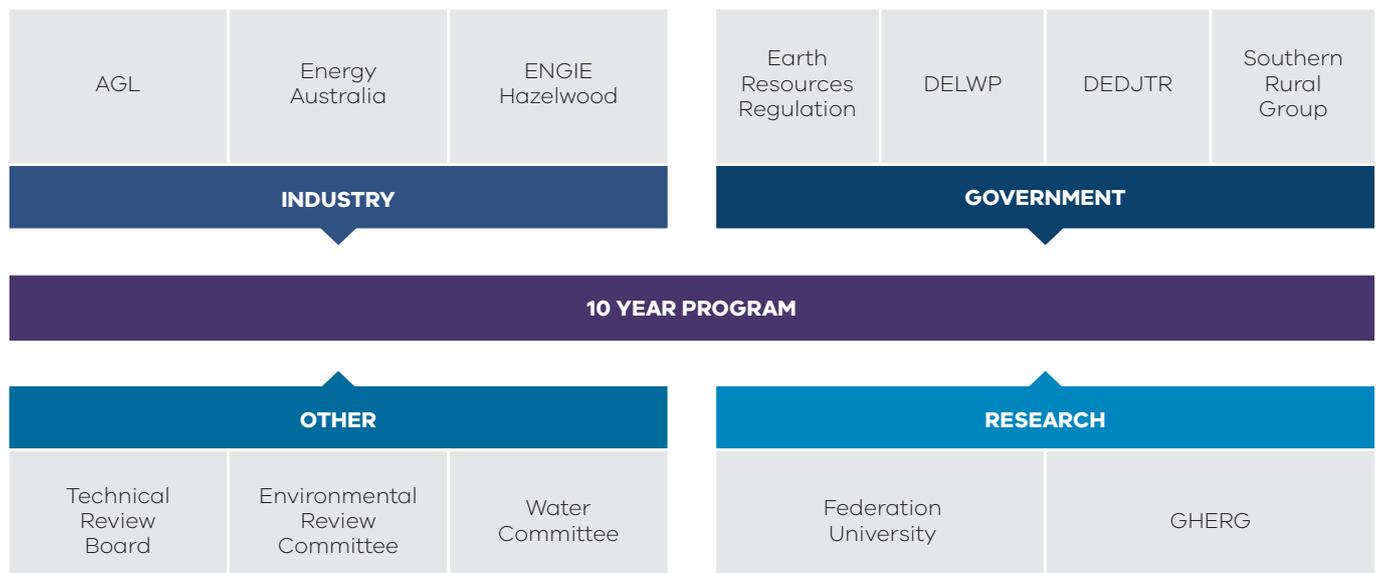
The list of research topics identified in part 6.11 can be used as a starting point for discussion. The Commissioner and Statutory Authority should promote and coordinate this research (see recommendations 14 and 15).

In July 2016 the Latrobe Valley coal mine operators established the Integrated Mines Research Group (IMRG), comprising representatives from the three Latrobe Valley mine operators – ENGIE, EnergyAustralia and AGL.

The IMRG met regularly to develop an integrated research plan that identifies common research areas and priorities for the next 10 years. This included a meeting in July 2016 where DEDJTR presented on the progress and plan for the Latrobe Valley Regional Rehabilitation Strategy.

The following chart identifies the key stakeholders.

Figure 6: Integrated Mines Research Group key stakeholders



In December 2016 the *Integrated Mines Research Group Ten Year Research Plan* was finalised and endorsed by the three Latrobe Valley coal mine operators. The plan, through consultation with key stakeholders, regulators and research bodies, identifies agreed research topic areas. These include:

- cover on coal – stability, water quality, fire and vegetation
- full lake benefits and interconnectivity with three lakes – water and stability
- lake fill rates (rebound/recharge) – water and stability
- horizontal drains – stability, water quality and fire
- long-term pit lake water quality – water
- research existing rehabilitation experiences – stability, water quality, fire and vegetation
- social and economic closure effects – social and economic
- spontaneous combustion – fire, stability
- stability – stability, water quality, fire and vegetation
- time lines for maintenance and monitoring – water quality, stability
- wave action, beaching and shoreline treatment including vegetation – stability, water quality, fire and vegetation.

The plan aims to establish research prioritisation, project scope and time lines for delivery of the research projects.

IGEM notes that action 159 of the Victorian Government Implementation Plan, led by DEDJTR, relates to recommendation 18:

Contribute to the preparation of an integrated research plan, which identifies common research areas between the operators of the Latrobe Valley Coal Mines for the next 10 years (due date: December 2016).

Bi-monthly meetings between the three coal mine operators have been rescheduled for 2017 to continue tracking the various research projects. The research outcomes from the IMRG projects will be shared between the three mine operators and have common ownership.

This recommendation requires the research plan to be promoted by the Latrobe Valley Mine Rehabilitation Commissioner and the Latrobe Valley Mine Rehabilitation Authority. Neither had been established in time to undertake any promotion at the time of this report.

DEDJTR has advised that the Latrobe Valley Mine Rehabilitation Authority is to be established by 2026 and legislation to establish the authority is currently anticipated to be introduced to Parliament in 2018.

The role of the Latrobe Valley Mine Rehabilitation Commissioner has now been established (refer to action 186) to lead and coordinate planning and improvements to mine rehabilitation in the Latrobe Valley. The Commissioner was appointed in June 2017. One of the core functions of the role, as outlined during recruitment and appointment, is to promote this research.

FINDING

IGEM considers this recommendation is progressing satisfactorily and will revisit in the next Annual Report.



Hazelwood mine earthworks (Courtesy: ENGIE)

6.2 Mine Rehabilitation Inquiry report: recommendation 19

Increase the rate of progressive rehabilitation by achieving milestones within the mines' progressive rehabilitation plans, as set by the Mining Regulator under recommendation 4.

Further to the Mine Rehabilitation Inquiry findings on knowledge gaps or research areas that will be addressed by the mine operators (refer to recommendation 18), the Board of Inquiry also identified the need to increase the rate of progressive rehabilitation, to be overseen by DEDJTR.

The Mine Rehabilitation Inquiry report recommended development of milestones within the mines' progressive rehabilitation plans in consultation with the mine operators and the Technical Review Board, and requires the successful achievement of the milestones.

The milestones will provide clarity of expectations for each mine operator in their rehabilitation works.

IGEM notes that action 158 of the Victorian Government Implementation Plan, led by DEDJTR, relates to recommendation 19:

Develop progressive rehabilitation milestones, with support from the Technical Review Board or other experts (due date: December 2016)

In the 2016 IGEM Hazelwood report, it was reported that DEDJTR would develop progressive rehabilitation milestones that require each Latrobe Valley coal mine operator to carry out specific rehabilitation works within set time frames to ensure that final rehabilitation is achieved within the time frame detailed in the work plan for each coal mine.

It was reported that DEDJTR would consult with the Technical Review Board on the suitability of the proposed progressive rehabilitation milestones found in the work plan variation application for the Yallourn coal mine in response to licence condition 1A.6 and those that will be proposed by ENGIE and AGL.

Since then, all three mine operators have submitted work plan variations to DEDJTR which incorporate progressive rehabilitation milestones. DEDJTR has advised that there have been delays to the approval of work plan variations due to the closure of Hazelwood and the introduction of risk-based work plans. DEDJTR is continuing to work with the mine operators to ensure the work plan variations are finalised.

ENGIE Hazelwood

Following the announcement in November 2016 of the closure of coal mine operations and the power station at Hazelwood, ENGIE sought an extension from DEDJTR to the original 31 December 2016 deadline for the submission of a revised work plan variation incorporating the approved Risk Assessment and Management Plan (RAMP) for the Hazelwood mine. The extension was sought to allow sufficient time to undertake a substantial revision to both the work plan and the RAMP.

In December 2016 the Minister for Resources advised that the deadline for submission of a work plan variation had been extended to 28 February 2017. The draft work plan variation was submitted on 28 February 2017, after which comments were received on 30 March 2017.

Submitted to DEDJTR for approval, the July 2017 work plan variation contains an extensive program for progressive mine rehabilitation and provides details of the proposed rehabilitation works ENGIE intends to undertake over the immediate post-station closure and closure planning period.

ENGIE expects the proposed immediate post-station closure and closure planning period works to be completed within approximately five years, subject to the completion criteria.

ENGIE's progressive rehabilitation approach includes the following areas:

- mine batters
- mine floor
- ash storage facilities
- internal overburden dumps
- infrastructure.

The final rehabilitation works, in accordance with the approved Rehabilitation and Closure Plan, are presently expected to take an additional 10 to 15 years, with that period to be confirmed in the detailed Rehabilitation and Closure Plan.

During the 2016–17 period, ENGIE completed 15 hectares of rehabilitation, totalling 693 hectares progressively rehabilitated to date.

AGL Loy Yang

AGL Loy Yang submitted a risk-based work plan variation to DEDJTR in late December 2016, which includes a progressive rehabilitation approach in the following areas:

- external and internal overburden dumps
- open cut batters
- lake filling and cessation of aquifer depressurisation
- infrastructure.

DEDJTR provided an assessment of the work plan variation in May 2017, concluding that it requires changes and resubmission in order to meet the requirements of the MR(SD) Act and the Mineral Resources (Sustainable Development) (Mineral Industries) Regulations 2013.

In terms of progressive rehabilitation, DEDJTR suggested that AGL Loy Yang provide a clear statement in the work plan variation that the final engineered design or stability of a landform can only be certified by an independent consultant, and not self-certified.

AGL Loy Yang responded to DEDJTR's assessment in June 2017, stating that it has an approvals pathway, which requires lengthy self-assessment, community and regulatory representatives and community approvals prior to submission to the regulator. For this reason, AGL Loy Yang do not believe additional consultancy is required in this instance.

AGL Loy Yang and DEDJTR are currently working together to have the work plan variation approved.

During the 2016–17 period, AGL Loy Yang completed 46 hectares of rehabilitation.

EnergyAustralia Yallourn

EnergyAustralia Yallourn has made commitments to increased progressive rehabilitation in its RAMP implementation plan.

EnergyAustralia Yallourn submitted a work plan variation to DEDJTR on 15 June 2016 which contained proposed milestones. However, as the document did not fully address requirements of schedule 15 of the Mineral Resources (Sustainable Development) (Mineral Industries) Regulations 2013, EnergyAustralia Yallourn do not currently have progressive rehabilitation milestones in place in an approved work plan variation.

However, IGEM notes that EnergyAustralia Yallourn has undertaken progressive rehabilitation towards the planned final landform of a pit lake interconnected with regional waterways.

As of July 2017 the following progressive rehabilitation activities had been completed at Yallourn mine:

- rehabilitate an area of the mine greater than or equal to the area disturbed during the year – on target with 30 hectares completed
- coal covering of Maryvale Field mine floor (6 hectares) – 7.7 hectares completed to July 2017
- coal covering of East Field Extension batters (5 hectares) – 5.5 hectares completed to July 2017
- East Field coal floor covering with overburden material (4.5 million cubic metres) – 2.7 million cubic metres covering approximately 15 hectares to July 2017.

FINDING

IGEM considers this recommendation is progressing satisfactorily and will revisit in the next Annual Report.

6.3 Mine Rehabilitation Inquiry report: affirmation 1

The commitments of EnergyAustralia, GDF Suez and AGL Loy Yang to increase coordination and collaboration between themselves and the regulatory authorities.

AGL Loy Yang, EnergyAustralia and ENGIE are working closely together and with DEDJTR as evidenced by work underway in relation to the IMRG, the Batter Stability project and LVRRS project.

Mine operators continue to participate in workshops and meetings and share information on mine rehabilitation with the purpose of further developing collaboration between mine operators and regulators. Examples include participation in:

- the 7th Annual Mine Rehabilitation Conference held in March 2017
- Latrobe Valley Mine Rehabilitation Advisory Committee
- Latrobe 16 exercise scenario workshop
- Central Gippsland Essential Industry Group meetings.

FINDING

IGEM considers this affirmation has been implemented as planned.



CFA volunteer day at AGL Loy Yang (Courtesy: AGL)



Batter rehabilitation (Courtesy: ENGIE)

7. Progress update – ongoing ENGIE recommendations and affirmations from 2014 Inquiry report

The 2014 Inquiry report made six recommendations and 17 affirmations to be led by GDF Suez (now ENGIE). The 2016 IGEM Hazelwood report found that two recommendations (recommendations 15 and 16) remained ongoing.

ENGIE contacted IGEM during 2017 to provide an update on recommendation 14, which was reported as complete in the 2016 IGEM Hazelwood report. ENGIE advised IGEM that given the closure of Hazelwood, the arrangements for back-up power supply had changed.

The following sections provide an update on recommendation 14 as well as ENGIE's progress in implementing the remaining recommendations.

7.1 2014 Inquiry report: recommendation 14

GDF Suez (ENGIE) establish enhanced back-up power supply arrangements that do not depend wholly on mains power, to:

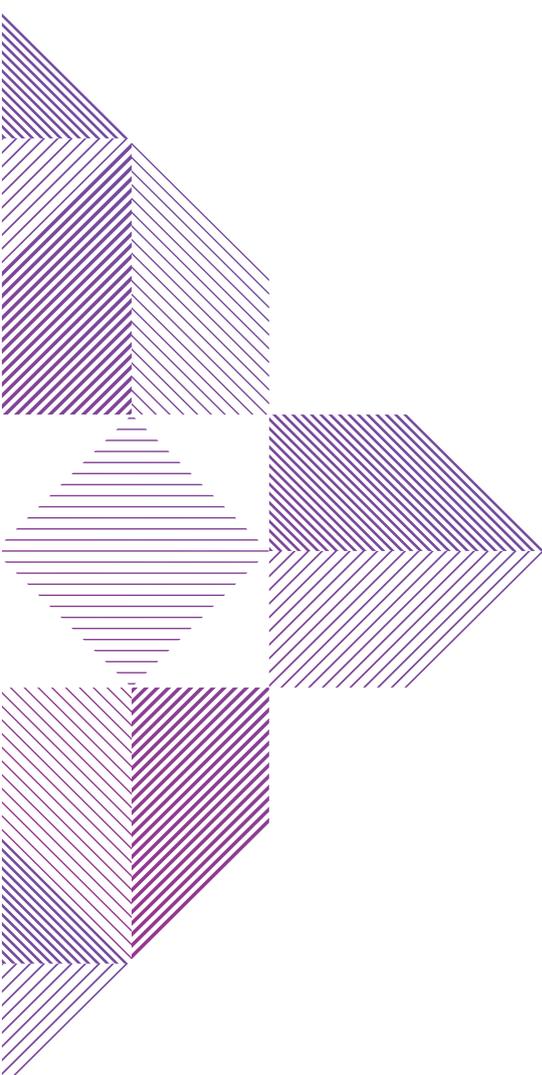
- **ensure that the Emergency Command Centre can continue to operate if mains power is lost**
- **ensure that the reticulated fire services water system can operate with minimal disruption if mains power is lost.**

The Implementation Monitor reported in 2015 that, in addition to multiple mains redundancy, the reticulated fire service water system had been connected to an alternative power supply should all mains power be lost.

ENGIE contacted IGEM during 2017 to provide an update on this recommendation following the closure of Hazelwood. Given that the power station operation has now ceased, the external pump station used for reticulated fire services is currently powered from mains supply. This limits the availability on on-site alternative power sources.

To provide redundancy in line with the intent of recommendation 14, ENGIE is in the process of installing diesel pumps for one of the key pump houses prior to the commencement of the 2017–18 fire season. This step will ensure the recommendation remains satisfied.

ENGIE advises that this planned use of diesel pumps is a temporary solution and it is working with government and regulators to develop a long-term closure and rehabilitation plan, which will include sustainable arrangements for fire risk and OHS.



7.2 2014 Inquiry report: recommendation 15

GDF Suez (ENGIE):

- **conduct, assisted by an independent consultant, a risk assessment of the likelihood and consequences of fire in the worked out areas of the Hazelwood mine, and an assessment of the most effective fire protection for the coal surfaces**
- **prepare an implementation plan that ensures the most effective and reasonably practicable controls are in place to eliminate or reduce the risk of fire and implement the plan.**

Table 39: Status of 2014 Inquiry report recommendation 15 actions

NO.	ACTION	DUE DATE	STATUS
R15.1	Conduct, assisted by an independent consultant, a risk assessment of the likelihood and consequences of fire in the worked out areas of the mine, including an assessment of the most effective fire protection means for exposed coal surfaces.	June 2015	Complete [†]
R15.2	Fire Risk Implementation Plan prepared	August 2015	Complete [#]
R15.3	Plan implemented	September 2015	Complete

[†] Previously reported as 'complete' in 2015 annual report

[#] Previously reported as 'complete' in 2016 IGEM Hazelwood report

In October 2014, ENGIE engaged an independent engineering and environment consultant to undertake a risk assessment, which was completed in April 2015. The assessment included six key recommendations for ENGIE to:

- complete the update of the Mine Fire Service Policy and Code of Practice and use this document as the system design and operational standards for use by ENGIE and other design parties
- undertake further work to develop additional improvement actions to raise the predicted adequacy level of the critical controls
- audit activities to be focused on the critical controls to ensure their effectiveness and robustness
- undertake additional analysis to support the selected fire protection controls
- conduct post-risk assessment review by appropriate specialists
- review documentation relating to each critical control to inform the adequacy assessment.

The 2016 IGEM Hazelwood report noted that the Fire Risk Implementation Plan had been submitted to DEDJTR and approved by the Minister for Resources on 19 May 2016.

This plan outlined actions to support the fire risk assessment and updated bow tie⁴⁶ diagrams/controls. IGEM considers that completion of the actions in the implementation plan constitutes implementation of the plan.

R15.3: Plan implemented

Following the approval of the Fire Risk Implementation Plan, ENGIE reported that it has implemented all 129 actions within the plan (the Fire Risk Implementation Plan Fire Risk Bow Tie Action Plan), with the last of the actions completed in July 2017.

ENGIE reports the status of outstanding recommendations to its Board annually through an attestation letter signed by the Chief Executive Officer of ENGIE in Australia and relevant senior executives, as part of its annual compliance and governance requirements. The attestation signed on October 2016 noted the implementation of the program for completion of recommendation 15.

FINDING

IGEM considers this action has been implemented as planned.

⁴⁶ ENGIE uses a 'bow tie' system to document the various preventative and responsive controls implemented in order to reduce the risk of a major fire within the mine.

7.3 2014 Inquiry report: recommendation 16

GDF Suez (ENGIE):

- review its ‘Mine Fire Service Policy and Code of Practice’ so that it reflects industry best practice and ensures that, by taking a risk management approach, it is suitable for fire prevention, mitigation and suppression in all parts of the Hazelwood mine; and
- incorporate the revised ‘Mine Fire Policy and Code of Practice’ into the approved work plan for the Hazelwood mine.

Table 40: Status of 2014 Inquiry report recommendation 16 actions

NO.	ACTION	DUE DATE	STATUS
R16.1	GDF Suez review its ‘Mine Fire Service Policy and Code of Practice’ so that it reflects industry best practice and ensures that, by taking a risk management approach, it is suitable for fire prevention, mitigation and suppression in all parts of the Hazelwood mine	September 2015	Complete [#]
R16.2	GDF Suez to apply to DEDJTR for its revised Mine Fire Service Policy and Code of Practice to be incorporated into the Hazelwood Mine Work Plan	December 2015	Ongoing

[#] Previously reported as ‘complete’ in 2016 IGEM Hazelwood report

R16.2 GDF Suez to apply to DEDJTR for its revised Mine Fire Service Policy and Code of Practice to be incorporated into the Hazelwood Mine Work Plan

IGEM reported in its 2016 IGEM Hazelwood report that ENGIE reviewed its Mine Fire Service Policy and Code of Practice on several occasions in 2014–15 and 2015–16 to ensure that it adopted a fire risk approach across the mine site.

Following the closure of the Hazelwood mine, the December 2016 work plan variation was reviewed and revised in accordance with the operational changes to the business, and included an update to risk management requirements.

DEDJTR has advised that there have been delays to the approval of work plan variations due to the closure of Hazelwood and the introduction of risk-based work plans.

The latest version, the July 2017 work plan variation, outlines the mine fire risk management and mitigation approach that is in line with the current Mine Fire Service Policy and Code of Practice.

ENGIE and DEDJTR are now finalising the approval of this current work plan variation.



Hazelwood mine (Courtesy: ENGIE)

FINDING

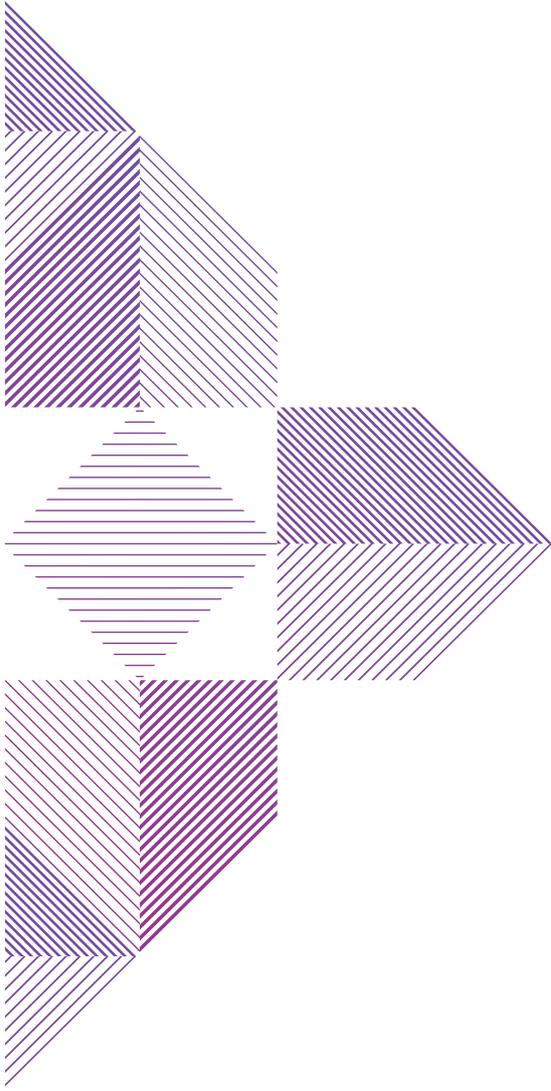
IGEM considers this action is progressing satisfactorily and will revisit in the next Annual Report.

8. Concluding remarks

Overall, IGEM has found that significant progress is being made in addressing the recommendations and affirmations from the 2014 and 2015–16 Inquiry reports. For a full summary of the status of all recommendations, affirmations and actions please refer to Appendix A of this report.

IGEM wishes to thank government departments and agencies, non-government health agencies and the coal mine operators for their cooperation and strong support of IGEM in carrying out its monitoring and reporting activities.

IGEM will continue monitoring the implementation of ongoing recommendations, affirmations and actions from both the 2014 and 2015–16 Inquiry reports and provide the Minister for Emergency Services with annual reports on progress until 2019.



Appendix A: Status of Hazelwood Mine Fire Inquiry recommendations and affirmations

2014 Hazelwood Mine Fire Inquiry Report

Table 41: Status of recommendations, affirmations and actions from the 2014 Hazelwood Mine Fire Inquiry Report

HAZELWOOD MINE FIRE INQUIRY REPORT 2014				
RECOMMENDATION 1				STATUS
The State empower and require the Auditor-General or another appropriate agency to: <ul style="list-style-type: none"> oversee the implementation of these recommendations and the commitments made by the State and GDF Suez during this Inquiry; and report publicly every year for the next three years on the progress made in implementing recommendations and commitments. 				Ongoing
No.	Action	Lead agency	Action status	
3	Assist the Minister for Emergency Services to request that the IGEM begins monitoring implementation of all 2014 Inquiry Report recommendations and affirmations, by Government and GDF Suez, with annual reports on progress	DJR	Complete	
5	Publicly released the IGEM's annual reports in the Victorian Parliament within a reasonable time of receipt by the Minister for Emergency Services	DJR	Ongoing	
RECOMMENDATION 2				STATUS
The State establish, for any future incident, integrated incident management teams with GDF Suez and other Victorian essential industry providers to: <ul style="list-style-type: none"> require that emergency services personnel work with GDF Suez and other appropriate essential industry providers; and implement the Australasian Inter-service Incident Management System. 				Ongoing
No.	Action	Lead agency	Action status	
205	Convene an industry forum in the Latrobe Valley, with quarterly attendance	CFA	Complete	
206	Update local emergency management plans to incorporate industry into emergency management planning and response. ⁴⁷	EMV	Complete	
207	Develop the Latrobe Valley Coal Mines Major Emergency – Strategic Concept of Operations and Industry Integration	EMV	Complete	
208	Hold exercise 'Latrobe 15' to implement and test the pilot integrated management structure, fully integrating industry into the REMT and IMTs	EMV	Complete	
209	Finalise the Latrobe Valley Coal Mines Major Emergency – Strategic Concept of Operations and Industry Integration	EMV	Complete	
210	Train Emergency Commanders and identified staff in AIMS Level 2 accreditation ⁴⁸ and enable designated ENGIE personnel to attend regional ICC during incidents that have potential to impact the mine.	EMV	Complete	

⁴⁷ The Gippsland Region Emergency Relief and Recovery Plan; the Gippsland Risk and Consequence Plan Bushfire and heat 2015-16; and the Gippsland RCT and REMT Fire Readiness Matrix 2015-16.

⁴⁸ Training was used by personnel during mine declared SEVERE & EXTREME fire danger days in 2015-16. See initiatives from the **Latrobe Valley Coal Mine Emergency Taskforce status report** December 2015. < d1o5fm19p8kknj.cloudfront.net/wp-content/uploads/20141201055015/Coal-Mine-Emergency-Taskforce-Status-report-31-December-2015-V6-DraftCAedit-CLapp-and-PS-acc.pdf>

211	Finalise the Coal Mine Emergency Taskforce Status Report detailing the status and initiatives undertaken by the Taskforce members	EMV	Complete
212	Hold Coal Mine Taskforce Exercise to further implement and test the pilot integrated management structure, fully integrating industry into the REMT and IMTs.	EMV	Complete
213	District 27 District Command Centre is operational	CFA	Complete
214	Deliver the Final Report of the Latrobe Valley Coal Mine Taskforce	EMV	Complete
215	Attend bi-monthly CGEIG Standardisation Committee meetings	EMV & CFA	Complete
216	Update EMV Joint Standing Operating Procedure for Incident Management Team Operations to incorporate industry integration into IMT operations	EMV	Ongoing
217	Assist in the re-write of the AIMS doctrine to accommodate the full integration of industry into the AIMS structure and process	EMV	Complete
RECOMMENDATION 3			STATUS
The State enact legislation, to:			Ongoing
<ul style="list-style-type: none"> • require Integrated Fire Management Planning; and • authorise the Emergency Management Commissioner to develop and implement regional and municipal fire management plans. 			
No.	Action	Lead agency	Action status
222	Release the draft Emergency Management Legislative Amendment (Planning) Bill 2016 for public consultation	EMV	Complete
225	Full implementation of the Emergency Management Legislative Amendment (Planning) Bill 2016	EMV	Ongoing
RECOMMENDATION 4			STATUS
The State:			Complete
<ul style="list-style-type: none"> • bring forward the commencement date of s.16 of the Mineral Resources (Sustainable Development) Amendment Act 2014 (Vic), to facilitate the requirement that approved work plans specifically address fire prevention, mitigation and suppression; and • acquire the expertise necessary to monitor and enforce compliance with fire risk measures adopted by the Victorian coal mining industry under both the mine licensing and occupational health and safety regimes. 			
No.	Action	Lead agency	Action status
148	Develop a Latrobe Valley Mine Dust – Industry Sector Strategy	EPA	Complete
149	Bring forward the commencement of amendments to the MR(SD) Act, to facilitate the requirement that approved Work Plans specifically address fire prevention, mitigation and suppression	DEDJTR	Complete
150	Endorse schedules to the DEDJTR and EPA Statement of Agreement	DEDJTR & EPA	Complete
151	Establish a Mine Fire and Emergency Unit	DEDJTR	Complete
153	Undertake twice yearly workshops on the MOU between DEDJTR and WorkSafe	DEDJTR & WorkSafe	Complete

154	Engage technical specialists to assist WorkSafe in the assessment of coal mine fire risk	WorkSafe	Complete
157	Sign an MOU (DEDJTR and CFA) that describes roles and responsibilities around fires and fire risk at earth resource sites	DEDJTR & CFA	Complete

RECOMMENDATION 5			STATUS
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The State equip itself to undertake rapid air quality monitoring in any location in Victoria, to:

- collect all relevant data, including data on PM2.5, carbon monoxide and ozone; and
- ensure this data is used to inform decision-making within 24 hours of the incident occurring.

Ongoing

No.	Action	Lead agency	Action status
114	Endorse the Rapid Deployment of Air Quality Monitoring for Community Health Guideline	EPA	Complete
115	Endorse the JSOP 03:18 for Rapid Deployment of Air Quality Monitoring for Community Health	EPA	Complete
116	Deliver rapid response monitoring capacity for PM2.5 and CO, including transitional data and information management processes for decision making during an event	EPA	Complete
117	Refine the response model, decision support tools and deployment procedures for 2016/17 summer fire season by incorporating lessons learned	EPA	Complete
118	Two mobile stations built and operational for deployment to complex events of extended duration and significant community impact	EPA	Complete
119	Train relevant staff in EPA regional offices in air quality equipment deployment during emergency events	EPA	Complete
120	Pre-deploy smoke monitors to identified high-risk sites across regional Victoria	EPA	Complete
121	Establish EPA and VICSES partnership and train VICSES staff in deployment of smoke monitors	EPA	Complete
122	Deliver a fully functional integrated air quality monitoring and information systems	EPA	Ongoing

RECOMMENDATION 6			STATUS
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The State take the lead in advocating for a national compliance standard for PM2.5.

Complete

No.	Action	Lead agency	Action status
140	Advocate for NEPC decision on particulate standards for NEPM AAQ	EPA	Complete
141	Amend the SEPP AAQ to formally adopt the national PM2.5 standard, once approved	EPA & DELWP	Complete

RECOMMENDATION 7				STATUS
<p>The State review and revise the community carbon monoxide response protocol and the firefighter carbon monoxide response protocol, to:</p> <ul style="list-style-type: none"> ensure both protocols are consistent with each other; ensure both protocols include assessment methods and trigger points for specific responses; ensure GDF Suez and other appropriate essential industry providers are required to adopt and apply the firefighter carbon monoxide protocol; and inform all firefighters about the dangers of carbon monoxide poisoning, and in particular highlight the increased risks for those with health conditions and those who are pregnant. 				Complete
No.	Action	Lead agency	Action status	
135	Endorse a revised Standard for Managing Exposure to Significant Carbon Monoxide Emissions, which incorporates the expert panel assessment of CO air quality reference values and: Latrobe Valley Coal Fire Carbon Monoxide Response Protocol (February 2014) Standard for Managing Significant Carbon Monoxide Emission (for Occupational Exposure) (August 2014)	DHHS	Complete	
136	Endorse the JSOP 03.20 for Managing Significant Community Exposure to Carbon Monoxide from Smoke	DHHS	Complete	
RECOMMENDATION 8				STATUS
<p>The State review and revise the Bushfire Smoke Protocol and the PM2.5 Health Protection Protocol, to:</p> <ul style="list-style-type: none"> ensure both protocols are consistent with each other; and ensure both protocols include assessment methods and trigger points for specific responses. 				Complete
No.	Action	Lead agency	Action status	
127	Engage appropriate experts to undertake a review of internationally recognised graduated smoke frameworks and the epidemiological basis for these frameworks	DHHS	Complete	
137	Endorse the Community Smoke, Air Quality and Health Protocol	DHHS	Complete	
138	Endorse the Community Smoke, Air Quality and Health Standard	DHHS	Complete	
139	Endorse the JSOP 03.19 for Managing Significant Community Exposures to Fine Particles from Smoke	DHHS & EMV	Complete	
RECOMMENDATION 9				STATUS
<p>The State develop and widely disseminate an integrated State Smoke Guide, to:</p> <ul style="list-style-type: none"> incorporate the proposed State Smoke Plan for the management of public health impacts from large scale, extended smoke events; include updated Bushfire Smoke, carbon monoxide and PM2.5 protocols; and provide practical advice and support materials to employers, communities and individuals on how to minimise the harmful effects of smoke. 				Ongoing
No.	Action	Lead agency	Action status	
34	Review the Better Health Channel and health.vic site	DHHS	Complete	
36	Appoint a Senior Science Policy Adviser to assist in implementing the State Smoke Framework	DHHS	Complete	

37	Develop draft 'smoke and your health' communication materials for the 2015–16 summer season	DHHS	Complete
38	Develop a 'smoke and your health' engagement strategy for 2015–16	DHHS	Complete
39	Undertake community focus testing of the draft 'smoke and your health' communication materials for the 2015–16 summer season	DHHS	Complete
40	Finalise the 'smoke and your health' communication materials for the 2015–16 summer season	DHHS	Complete
41	Distribute 'smoke and your health' communications materials for 2015–16 summer season	DHHS	Complete
42	Evaluate 'smoke and your health' communications materials for 2015–16 summer season	DHHS	Complete
43	Develop an implementation plan for the 'smoke and your health' engagement strategy that outlines target groups, methods of engagement and timeframes until November 2017	DHHS	Complete
44	Evaluate the 'smoke and your health' community engagement strategy	DHHS	Complete
45	Update the 'smoke and your health' community engagement strategy to reflect learnings from engagement with stakeholders and the evaluation	DHHS	Complete
123	Endorse State Smoke Framework, Version 2.0	DHHS & EMV	Complete
124	Revise the fire warning templates to include smoke and health messaging	DHHS & EMV	Complete
128	Undertake a plume modelling project to develop an enhanced capability for the prediction of toxic smoke and chemical releases from fires and hazardous material incidents	CFA	Ongoing
129	Establish sector governance arrangements for the Predictive Services Framework, including Project Control Board comprising representation from EMV, DELWP, CFA and MFB	DELWP	Complete
130	Undertake a user and decision making needs assessment of community, industry and emergency management sector to inform development of predictive services systems, tools and products before, during and after hazard events	DELWP	Complete
131	Design an ICT system architecture (design) for the Predictive Services ICT Platform	DELWP	Complete
132	Build an ICT platform for hazard prediction (including smoke) models	DELWP	Ongoing
133	Design data management requirements for the Predictive Services Framework	DELWP	Complete
134	Incorporate Predictive Services smoke intelligence module, to incorporate social media, field sensors and satellite image data to calibrate and validate smoke predictions	DELWP	Ongoing

RECOMMENDATION 10			STATUS
<p>The State should continue the long-term health study, and:</p> <ul style="list-style-type: none"> • extend the study to at least 20 years; • appoint an independent board, which includes Latrobe Valley community representatives, to govern the study; and • direct that the independent board publish regular progress reports. 			Ongoing
No.	Action	Lead agency	Action status
96	Provide mortality and allied data to the Long Term Health Study lead contractor	DHHS	Complete
97	Publicly release the first annual Monash University Report on the Long Term Health Study	DHHS	Complete
98	Publicly release the second annual Monash University Report on the Long Term Health Study	DHHS	Complete
99	Publicly release the third annual Monash University Report on the Long Term Health Study	DHHS	Ongoing
RECOMMENDATION 11			STATUS
<p>The State review and revise its communication strategy, to:</p> <ul style="list-style-type: none"> • ensure all emergency response agencies have, or have access to, the capability and resources needed for effective and rapid public communications during an emergency; and • ensure, where appropriate, that private operators of essential infrastructure are included in the coordination of public communications during an emergency concerning that infrastructure. 			Ongoing
No.	Action	Lead agency	Action status
6	Circulate a draft State Communications Strategy to EMJPIC members for consultation	EMV	Complete
7	Test the draft State Communications Strategy at the Latrobe Valley Coal Mine Taskforce August 2016 Exercise	EMV	Complete
8	Incorporate private operators of essential infrastructure in the State Communications Strategy	EMV	Complete
9	Submit the State Communications Strategy to SCRC for consideration and approval	EMV	Complete
10	Develop operational guidelines/procedure to support the State Communications Strategy	EMV	Complete
11	Provide training to key managers at Incident, Regional and State Level (including EMJPIC members, Level 3 Controllers, Regional and State control positions) on the State Communications Strategy and supporting operational guideline/procedure	EMV	Ongoing

RECOMMENDATION 12			STATUS
The State, led by Emergency Management Victoria, develop a community engagement model for emergency management to ensure all state agencies and local governments engage with communities and already identified trusted networks as an integral component of emergency management planning.			Ongoing
No.	Action	Lead agency	Action status
17	Engage a dedicated EMV community engagement officer based in the Latrobe Valley	EMV	Complete
18	Develop a plan for the Latrobe Valley Community Engagement and Planning Project	EMV	Complete
19	Deliver the Latrobe Valley Community Engagement and Planning Project	EMV	Ongoing
RECOMMENDATION 13			STATUS
GDF Suez revise its Emergency Response Plan, to: <ul style="list-style-type: none"> • require an increased state of readiness on days of Total Fire Ban; • require pre-establishment of an Emergency Command Centre; • require pre-positioning of an accredited Incident Controller as Emergency Commander; and require any persons nominated as Emergency Commander to have incident controller accreditation and proficiency in the use of the Australasian Inter-service Incident Management System. 			Complete
RECOMMENDATION 14			STATUS
GDF Suez establish enhanced back-up power supply arrangements that do not depend wholly on mains power, to: <ul style="list-style-type: none"> • ensure that the Emergency Command Centre can continue to operate if mains power is lost; and • ensure that the reticulated fire services water system can operate with minimal disruption if mains power is lost. 			Complete
RECOMMENDATION 15			STATUS
GDF Suez: <ul style="list-style-type: none"> • conduct, assisted by an independent consultant, a risk assessment of the likelihood and consequences of fire in the worked out areas of the Hazelwood mine, and an assessment of the most effective fire protection for the exposed coal surfaces; • prepare an implementation plan that ensures the most effective and reasonably practicable controls are in place to eliminate or reduce the risk of fire; and • implement the plan. 			Complete
No.	Action	Lead agency	Action status
R15.1	Conduct, assisted by an independent consultant, a risk assessment of the likelihood and consequences of fire in the worked out areas of the mine, including an assessment of the most effective fire protection means for exposed coal surfaces	ENGIE	Complete
R15.2	Fire Risk Implementation Plan prepared	ENGIE	Complete
R15.3	Plan implemented	ENGIE	Complete

RECOMMENDATION 16			STATUS
GDF Suez: <ul style="list-style-type: none"> review its 'Mine Fire Service Policy and Code of Practice' so that it reflects industry best practice and ensures that, by taking a risk management approach, it is suitable for fire prevention, mitigation and suppression in all parts of the Hazelwood mine; and incorporate the revised 'Mine Fire Service Policy and Code of Practice' into the approved work plan for the Hazelwood mine. 			Ongoing
No.	Action	Lead agency	Action status
R16.1	GDF Suez reviews its 'Mine Fire Service Policy and Code of Practice' so that it reflects industry best practice and ensure that, by taking a risk management approach, it is suitable for fire prevention, mitigation and suppression in all parts of the Hazelwood mine	ENGIE	Complete
R16.2	GDF Suez to apply to DEDJTR for its revised Mine Fire Service Policy and Code of Practice to be incorporated into the Hazelwood Mine Work Plan	ENGIE	Ongoing
RECOMMENDATION 17			STATUS
GDF Suez adopt and apply the firefighter carbon monoxide response protocol.			Complete
RECOMMENDATION 18			STATUS
GDF Suez improve its crisis management communication strategy for the Hazelwood mine in line with international best practice.			Complete
AFFIRMATION 1			STATUS
The State develop a Strategic Action Plan to improve and strengthen Victoria's emergency management capability.			Complete
AFFIRMATION 2			STATUS
The State establish Emergency Management Victoria as the new overarching body for emergency management in Victoria.			Complete
AFFIRMATION 3			STATUS
The State establish an Emergency Management Commissioner to ensure that control arrangements are in place, and coordinate the response roles of relevant agencies' resources.			Complete
AFFIRMATION 4			STATUS
The State establish Inspector General Emergency Management as the assurance authority for Victoria's emergency management arrangements.			Complete
AFFIRMATION 5			STATUS
The State establish a Volunteer Consultative Forum for the government to consult with volunteers and ensure their views are heard.			Complete

AFFIRMATION 6			STATUS
The State implement actions set out in the White Paper on Emergency Management Reform to improve community awareness and education, and make information available during emergencies.			Complete
No.	Action	Lead agency	Action status
12	EM-COP to be operational	EMV	Complete
13	Upgrade the VicEmergency website to support all-communities all emergencies use over 2015–16 summer season	EMV	Complete
14	Launch the VicEmergency app	EMV	Complete
15	Roll all existing emergency management information systems into EM-COP, to be available for use by all emergency management personnel	EMV	Complete
16	Align call centre arrangements for all government departments and agencies for emergency management messaging	EMV	Complete
AFFIRMATION 7			STATUS
The State strengthen industry engagement with the community. No specific actions have been assigned to address this affirmation in the Victorian Government Implementation Plan, however IGEM notes that it is contingent on a number of engagement activities (see Actions 208, 209 and 211).			Complete
AFFIRMATION 8			STATUS
The State improve the State planning framework for emergencies.			Ongoing
No.	Action	Lead agency	Action status
222	Release the draft Emergency Management Legislative Amendment (Planning) Bill 2016 for public consultation	EMV	Complete
225	Full implementation of the Emergency Management Legislative Amendment (Planning) Bill 2016	EMV	Ongoing
AFFIRMATION 9			STATUS
The State improve government engagement with the coal mine sector regarding emergency management plans. No specific actions have been assigned to address this affirmation in the Victorian Government Implementation Plan, however IGEM notes that it is contingent on a number of engagement activities (see Actions 205, 206 and 213).			Complete
AFFIRMATION 10			STATUS
The State improve integration of industry in the response to an emergency.			Ongoing
No.	Action	Lead agency	Action status
205	Convene an industry forum in the Latrobe Valley, with quarterly attendance	CFA	Complete
206	Update local emergency management plans to incorporate industry into emergency management planning and response.	EMV	Complete

207	Develop the Latrobe Valley Coal Mines Major Emergency – Strategic Concept of Operations and Industry Integration	EMV	Complete
208	Hold exercise 'Latrobe 15' to implement and test the pilot integrated management structure, fully integrating industry into the REMT and IMTs	EMV	Complete
209	Finalise the Latrobe Valley Coal Mines Major Emergency – Strategic Concept of Operations and Industry Integration	EMV	Complete
210	Train Emergency Commanders and identified staff in AIIMS Level 2 accreditation ⁴⁹ and enable designated ENGIE personnel to attend regional ICC during incidents that have potential to impact the mine.	EMV	Complete
211	Finalise the Coal Mine Emergency Taskforce Status Report detailing the status and initiatives undertaken by the Taskforce members	EMV	Complete
212	Hold Coal Mine Taskforce Exercise to further implement and test the pilot integrated management structure, fully integrating industry into the REMT and IMTs.	EMV	Complete
214	Deliver the Final Report of the Latrobe Valley Coal Mine Taskforce	EMV	Complete
215	Attend bi-monthly CGEIG Standardisation Committee meetings	EMV & CFA	Complete
216	Update EMV Joint Standing Operating Procedure for Incident Management Team Operations to incorporate industry integration into IMT operations	EMV	Ongoing
217	Assist in the re-write of the AIIMS doctrine to accommodate the full integration of industry into the AIIMS structure and process	EMV	Complete
AFFIRMATION 11			STATUS
The State improve training for career and volunteer firefighters to include lessons highlighted by the Hazelwood mine fire.			Ongoing
No.	Action	Lead agency	Action status
226	Retrofit two heavy tankers with specialist CAFS capability for deployment in Churchill and Traralgon South (within District 27)	CFA	Complete
230	Develop a pilot Brown Coal Mine Firefighting Training Package, which incorporates Standard for Managing Exposure to Significant Carbon Monoxide Emissions and associated JSOPs	CFA	Complete
231	Development of a Detection Team (Scientific Officers and HAZMAT) Training Package	CFA & MFB	Complete
234	Release tender for two purpose-built specialist CAFS trucks	CFA	Complete
235	Convert pilot Brown Coal Mine Fire-fighting Training Package into a blended learning program (e-learning and face to face)	CFA	Ongoing
236	Develop and deliver training to IMTs with a focus on Incident Controllers	CFA & MFB	Complete
237	Deliver Detection Team Training (Scientific Officers and HAZMAT)	CFA & MFB	Complete
238	Deliver Brown Coal Mine Firefighting Training Package	CFA & MFB	Ongoing

⁴⁹ Training was used by personnel during mine declared SEVERE & EXTREME fire danger days in 2015-16. See initiatives from the **Latrobe Valley Coal Mine Emergency Taskforce status report** December 2015. < d1o5fm19p8kknj.cloudfront.net/wp-content/uploads/20141201055015/Coal-Mine-Emergency-Taskforce-Status-report-31-December-2015-V6-DraftCAedit-CLapp-and-PS-acc.pdf>

AFFIRMATION 12				STATUS
The State improve OHS in emergency response to include lessons highlighted by the Hazelwood mine fire.				Ongoing
No.	Action	Lead agency	Action status	
135	Endorse a revised Standard for Managing Exposure to Significant Carbon Monoxide Emissions, which incorporates the expert panel assessment of CO air quality reference values and: Latrobe Valley Coal Fire Carbon Monoxide Response Protocol (February 2014) Standard for Managing Significant Carbon Monoxide Emission (for Occupational Exposure) (August 2014)	DHHS	Complete	
136	Endorse the JSOP 03.20 for Managing Significant Community Exposure to Carbon Monoxide from Smoke	DHHS	Complete	
227	Undertake a health monitoring trial with LifeAid at emergency site in Portland and Kaladbro	CFA	Complete	
228	Locate CFA Health monitoring teams located at nine locations across Victoria (eight regionally, and one at headquarters)	CFA	Complete	
229	Release the revised CFA District 27 Operating Procedures for Latrobe Valley Open Cut Mines, which aligns to the Standard for Managing Exposure to Significant Carbon Monoxide Emissions (July 2015)	CFA	Complete	
230	Develop a pilot Brown Coal Mine Fire-fighting Training Package, which incorporates Standard for Managing Exposure to Significant Carbon Monoxide Emissions and associated JSOPs	CFA	Complete	
232	Contract on-call capability with health services and fire services	CFA & MFB	Complete	
233	Provide personal monitoring equipment to MFB firefighters	MFB	Ongoing	
AFFIRMATION 13				STATUS
The State develop an integrated emergency resource planning framework for the Latrobe Valley.				Complete
No.	Action	Lead agency	Action status	
221	Develop guidelines to support the management of ongoing response requirements in relation to Class 1 emergencies impacting on the Latrobe Valley Coal Mines	EMV	Complete	
224	Consider emergency resource planning in CFA's District 27 boundaries at the industry forum	CFA	Complete	
AFFIRMATION 14				STATUS
The State review emergency management communications arrangements across Government commissioned by the State Crisis and Resilience Council, including consideration of:				Complete
<ul style="list-style-type: none"> the roles and functions of emergency communications committees; enhancing specialist crisis communications capability within Government; the use of established local networks as a way to communicate during emergencies; additional emergency communications training for Government employees; and developing a coordinated approach to the use of social media by Government during emergencies. 				

AFFIRMATION 15				STATUS
The State conduct a National Review of Warnings and Information.				Complete
AFFIRMATION 16				STATUS
The State review Environment Protection Authority (EPA) emergency protocols, incorporating lessons from the Hazelwood mine fire.				Complete
No.	Action	Lead agency	Action status	
30	Complete a review of DHHS structures for public health and emergency management related communications teams	DHHS	Complete	
33	Establish a Communications Health and Emergency Management Team	DHHS	Complete	
35	Develop new processes and protocols (including standard messaging templates) for Better Health Channel and health.vic site based on the review	DHHS	Complete	
142	Revise the EPA's emergency management accountabilities	EPA	Complete	
143	Conduct exercises to test EPA protocols	EPA	Complete	
144	Establish the Environment Protection Incident Management System, using the AIIMS structure	EPA	Complete	
145	Refine the relevant EPA protocols, incorporating lessons from exercises	EPA	Complete	
146	Train staff in emergency management and response protocols for 2015–16 summer fire season	EPA	Complete	
AFFIRMATION 17				STATUS
The State clarify future expectations of incident air monitoring and scenarios, and determine the appropriate inventory of equipment.				Ongoing
No.	Action	Lead agency	Action status	
114	Endorse the Rapid Deployment of Air Quality Monitoring for Community Health Guideline	EPA	Complete	
115	Endorse the JSOP 03.18 for Rapid Deployment of Air Quality Monitoring for Community Health	EPA	Complete	
116	Deliver rapid response monitoring capacity for PM2.5 and CO, including transitional data and information management processes for decision making during an event	EPA	Complete	
117	Refine the response model, decision support tools and deployment procedures for 2016/17 summer fire season by incorporating lessons learned	EPA	Complete	
118	Two mobile stations built and operational for deployment to complex events of extended duration and significant community impact	EPA	Complete	
119	Train relevant staff in EPA regional offices in air quality equipment deployment during emergency events	EPA	Complete	
120	Pre-deploy smoke monitors to identified high-risk sites across regional Victoria	EPA	Complete	

121	Establish EPA and VICSES partnership and train VICSES staff in deployment of smoke monitors	EPA	Complete
122	Deliver a fully functional integrated air quality monitoring and information systems	EPA	Ongoing
AFFIRMATION 18			STATUS
EPA to coordinate a meta-analysis, including smoke plume modelling, of air monitoring data and other relevant information collected during the Hazelwood mine fire to create a body of knowledge of the impacts of extended brown coal fire events.			Ongoing
No.	Action	Lead agency	Action status
147	Release a report on information and knowledge generated from the Hazelwood Mine Fire meta-analysis	EPA	Ongoing
AFFIRMATION 19			STATUS
The Department of Health and EPA to undertake further development on the carbon monoxide and PM2.5 protocols and an engagement and education programs around environmental and health standards.			Complete
No.	Action	Lead agency	Action status
127	Engage appropriate experts to undertake a review of internationally recognised graduated smoke frameworks and the epidemiological basis for these frameworks	DHHS	Complete
135	Endorse a revised Standard for Managing Exposure to Significant Carbon Monoxide Emissions, which incorporates the expert panel assessment of CO air quality reference values and: Latrobe Valley Coal Fire Carbon Monoxide Response Protocol (February 2014) Standard for Managing Significant Carbon Monoxide Emission (for Occupational Exposure) (August 2014)	DHHS	Complete
136	Endorse the JSOP 03.20 for Managing Significant Community Exposure to Carbon Monoxide from Smoke	DHHS	Complete
137	Endorse the Community Smoke, Air Quality and Health Protocol	DHHS	Complete
138	Endorse the Community Smoke, Air Quality and Health Standard	DHHS	Complete
139	Endorse the JSOP 03.19 for Managing Significant Community Exposures to Fine Particles from Smoke	DHHS & EMV	Complete
AFFIRMATION 20			STATUS
EPA review its communications response and implement a structured community engagement process with the Morwell and surrounding communities.			Ongoing
No.	Action	Lead agency	Action status
20	Deliver the EPA Emergency Response Communications Protocol	EPA	Complete
21	Evaluate the pilot Citizen Science Program	EPA	Complete
22	Identify local community networks and their environment information sources by undertaking a social network analysis	EPA	Complete

23	Evaluate the pilot communication and engagement approach	EPA	Complete
25	Evaluate existing activities of the Citizen Science Program and adapt them as necessary to remain relevant to the local community	EPA	Ongoing
27	Deliver new participation opportunities as part of the Citizen Science Program for the Latrobe Valley community	EPA	Ongoing
AFFIRMATION 21			STATUS
EPA will be monitoring PM2.5 at all its fixed automatic air quality monitoring locations by the end of July 2014.			Complete
AFFIRMATION 22			STATUS
The State will have an automatic air quality monitoring station in the south of Morwell for the next 12 months [to March 2015].			Complete
AFFIRMATION 23			STATUS
The State review the State Environment Protection Policy for Ambient Air Quality.			Complete
No.	Action	Lead agency	Action status
140	Advocate for NEPC decision on particulate standards for NEPM AAQ	EPA	Complete
141	Amend the SEPP AAQ to formally adopt the national PM2.5 standard, once approved	DELWP & EPA	Complete
AFFIRMATION 24			STATUS
The State develop a State Smoke Plan covering the management of potential public health impacts from large scale, extended smoke events.			Ongoing
No.	Action	Lead agency	Action status
34	Review the Better Health Channel and health.vic site	DHHS	Complete
36	Appoint a Senior Science Policy Adviser to assist in implementing the State Smoke Framework	DHHS	Complete
37	Develop draft 'smoke and your health' communication materials for the 2015–16 summer season	DHHS	Complete
38	Develop a 'smoke and your health' engagement strategy for 2015–16	DHHS	Complete
39	Undertake community focus testing of the draft 'smoke and your health' communication materials for the 2015/16 summer season	DHHS	Complete
40	Finalise the 'smoke and your health' communication materials for the 2015–16 summer season	DHHS	Complete
41	Distribute 'smoke and your health' communications materials for 2015–16 summer season	DHHS	Complete
42	Evaluate 'smoke and your health' communications materials for 2015–16 summer season	DHHS	Complete
43	Develop an implementation plan for the 'smoke and your health' engagement strategy that outlines target groups, methods of engagement and timeframes until November 2017	DHHS	Complete

44	Evaluate the 'smoke and your health' community engagement strategy	DHHS	Complete
45	Update the 'smoke and your health' community engagement strategy to reflect learnings from engagement with stakeholders and the evaluation	DHHS	Complete
123	Endorse State Smoke Framework, Version 2.0	DHHS & EMV	Complete
124	Revise the fire warning templates to include smoke and health messaging	DHHS & EMV	Complete
127	Engage appropriate experts to undertake a review of internationally recognised graduated smoke frameworks and the epidemiological basis for these frameworks	DHHS	Complete
128	Undertake a plume modelling project to develop an enhanced capability for the prediction of toxic smoke and chemical releases from fires and hazardous material incidents	CFA	Ongoing
129	Establish sector governance arrangements for the Predictive Services Framework, including Project Control Board comprising representation from EMV, DELWP, CFA and MFB	DELWP	Complete
130	Undertake a user and decision making needs assessment of community, industry and emergency management sector to inform development of predictive services systems, tools and products before, during and after hazard events	DELWP	Complete
131	Design an ICT system architecture (design) for the Predictive Services ICT Platform	DELWP	Complete
132	Build an ICT platform for hazard prediction (including smoke) models	DELWP	Ongoing
133	Design data management requirements for the Predictive Services Framework	DELWP	Complete
134	Incorporate Predictive Services smoke intelligence module, to incorporate social media, field sensors and satellite image data to calibrate and validate smoke predictions	DELWP	Ongoing

AFFIRMATION 25			STATUS
The State undertake projects to understand health impacts and predict the movement of smoke from planned burning and bushfires.			Ongoing
No.	Action	Lead agency	Action status
123	Endorse State Smoke Framework, Version 2.0	DHHS & EMV	Complete
124	Revise the fire warning templates to include smoke and health messaging	DHHS & EMV	Complete
127	Engage appropriate experts to undertake a review of internationally recognised graduated smoke frameworks and the epidemiological basis for these frameworks	DHHS	Complete
128	Undertake a plume modelling project to develop an enhanced capability for the prediction of toxic smoke and chemical releases from fires and hazardous material incidents	CFA	Ongoing
129	Establish sector governance arrangements for the Predictive Services Framework, including Project Control Board comprising representation from EMV, DELWP, CFA and MFB	DELWP	Complete

130	Undertake a user and decision making needs assessment of community, industry and emergency management sector to inform development of predictive services systems, tools and products before, during and after hazard events	DELWP	Complete
131	Design an ICT system architecture (design) for the Predictive Services ICT Platform	DELWP	Complete
132	Build an ICT platform for hazard prediction (including smoke) models	DELWP	Ongoing
133	Design data management requirements for the Predictive Services Framework	DELWP	Complete
134	Incorporate Predictive Services smoke intelligence module, to incorporate social media, field sensors and satellite image data to calibrate and validate smoke predictions	DELWP	Ongoing
AFFIRMATION 26			STATUS
The State improve local engagement on health issues.			Complete
No.	Action	Lead agency	Action status
46	Appoint a dedicated community engagement officer, based in the DHHS Traralgon office	DHHS	Complete
AFFIRMATION 27			STATUS
The State improve communication around psycho-social support to communities affected by emergencies.			Complete
AFFIRMATION 28			STATUS
The State commission a long-term study into the long-term health effects of the smoke from the Hazelwood mine fire.			Ongoing
No.	Action	Lead agency	Action status
96	Provide mortality and allied data to the Long Term Health Study lead contractor	DHHS	Complete
97	Publicly release the first annual Monash University Report on the Long Term Health Study	DHHS	Complete
98	Publicly release the second annual Monash University Report on the Long Term Health Study	DHHS	Complete
99	Publicly release the third annual Monash University Report on the Long Term Health Study	DHHS	Ongoing
AFFIRMATION 29			STATUS
The State review the Personal Hardship Assistance Program and Implementation Guidelines for consistency and clarity of purpose.			Complete
AFFIRMATION 30			STATUS
The State implement new technology for recording emergency assistance payments.			Ongoing
No.	Action	Lead agency	Action status
246	Introduce new technology to track payments	DHHS	Ongoing

AFFIRMATION 31			STATUS
Local Government Victoria coordinate emergency management officers across local councils.			Ongoing
No.	Action	Lead agency	Action status
240	Hold planning days with all 11 collaborative council clusters to assist with strategic planning	DELWP	Complete
241	Conduct an annual forum for all council emergency management staff in Bendigo	DELWP	Complete
242	Define the roles and responsibilities of local government in emergency management	DELWP	Ongoing
243	Review the current roles and responsibilities of local government in emergency management for alignment with the defined roles and responsibilities	DELWP	Ongoing
244	Review the capability and capacity required for local government to fulfil their emergency management roles and responsibilities	DELWP	Ongoing
245	Develop an action plan to address any local government emergency management capability and capacity gaps	DELWP	Ongoing
AFFIRMATION 32			STATUS
The State improve relief and recovery information available to Culturally and Linguistically Diverse communities.			Complete
AFFIRMATION 33			STATUS
The State review relief and recovery communications and community engagement initiatives.			Complete
AFFIRMATION 34			STATUS
The State prepare Regional Growth Plans.			Complete
AFFIRMATION 35			STATUS
The State implement a risk-based approach for work plans.			Complete
The 2015 Annual report indicated this affirmation was ongoing but would be fulfilled by the 2015 actions R4.2, 4.8 and R4.11. As these are now complete, IGEM considers this affirmation has been completed.			
AFFIRMATION 36			STATUS
The State implement the Victorian Critical Infrastructure Resilience Strategy.			Complete
No.	Action	Lead agency	Action status
218	Publish the Critical Infrastructure Resilience Strategy	EMV	Complete
219	Enact the <i>Emergency Management (Critical Infrastructure Resilience) Act 2014</i>	EMV	Complete
220	Declare 'vital' critical infrastructure in the Latrobe Valley	EMV	Complete
223	Begin the Critical Infrastructure Resilience Improvement Cycle	DEDJTR & EMV	Complete

AFFIRMATION 37				STATUS
The State enhance emergency risk mitigation planning.				Ongoing
No.	Action	Lead agency	Action status	
222	Release the draft Emergency Management Legislative Amendment (Planning) Bill 2016 for public consultation	EMV	Complete	
225	Full implementation of the Emergency Management Legislative Amendment (Planning) Bill 2016	EMV	Ongoing	
AFFIRMATION 38				STATUS
The State review the Latrobe City Municipal Emergency Management Plan.				Complete
No.	Action	Lead agency	Action status	
239	Assist the Latrobe City Council to finalise their Municipal Emergency Management Plan, based on the review undertaken by Regional Emergency Management Committee and the audit by VicSES.	DELWP	Complete	
AFFIRMATION 39				STATUS
The State initiate a joint program for regulators, emergency service agencies and the Emergency Management Commissioner to assess the prevention and preparedness controls on sites across Victoria.				Complete
No.	Action	Lead agency	Action status	
152	Establish a Victorian Earth Resources Regulator Forum, with membership including WorkSafe and EPA	DEDJTR	Complete	
AFFIRMATION 40				STATUS
The State establish an appropriate mechanism to monitor implementation of the actions set out in its submission and the Government's response to the Board of Inquiry's recommendations.				Complete
No.	Action	Lead agency	Action status	
3	Assist the Minister for Emergency Services to request that the IGEM begins monitoring implementation of all 2014 Inquiry Report recommendations and affirmations, by Government and GDF Suez, with annual reports on progress.	DJR	Complete	
GDF SUEZ AFFIRMATION 1				STATUS
GDF Suez nominate a group of staff to be trained in the Phoenix Rapidfire modelling tool prior to the 2014/2015 fire season.				Complete
GDF SUEZ AFFIRMATION 2				STATUS
GDF Suez offer enhanced training prior to the 2014/2015 fire season and on an ongoing basis, to personnel who are intended to perform a role under the emergency command structure and relevant emergency service agencies.				Complete
GDF SUEZ AFFIRMATION 3				STATUS
GDF Suez establish an emergency command structure at the mine to deal with Extreme Fire Danger Days.				Complete

GDF SUEZ AFFIRMATION 4		STATUS	
GDF Suez notify Country Fire Authority (CFA) of the identity and contact details of those personnel holding these roles.		Complete	
GDF SUEZ AFFIRMATION 5		STATUS	
On Extreme Fire Danger Days, GDF Suez ensure more personnel are rostered on and additional contractors are available for dedicated fire protection duties.		Complete	
GDF SUEZ AFFIRMATION 6		STATUS	
GDF Suez upgrade signage within the mine to make orientation easier for non-mine personnel.		Complete	
GDF SUEZ AFFIRMATION 7		STATUS	
GDF Suez negotiate with SP AusNet regarding a feasibility study to upgrade the MHO substation from temporary to permanent standard.		Complete	
GDF SUEZ AFFIRMATION 8		STATUS	
GDF Suez initiate a programme for reducing vegetation in the worked out areas of the northern batters to reduce fire risk commencing in the areas closest to Morwell.		Complete	
GDF SUEZ AFFIRMATION 9		STATUS	
GDF Suez maintain and continue to use the additional pipe system located in the northern batters which was installed during the 2014 fire and install additional pipework as identified.		Complete	
GDF SUEZ AFFIRMATION 10		STATUS	
GDF Suez conduct a review of the current pipework and condition in the areas of the mine other than the eastern section of the northern batters.		Complete	
GDF SUEZ AFFIRMATION 11		STATUS	
On Extreme Fire Danger Days GDF Suez instigate wetting down of non-operational areas.		Complete	
GDF SUEZ AFFIRMATION 12		STATUS	
GDF Suez nominate a representative to attend the meetings of the Municipal Fire Prevention Committee convened by Latrobe City Council.		Complete	
GDF SUEZ AFFIRMATION 13		STATUS	
GDF Suez nominate designated people to be in attendance at the CFA Incident Control Centre during an emergency which threatens the mine.		Complete	
GDF SUEZ AFFIRMATION 14		STATUS	
GDF Suez review its own communications protocol to ensure that during the response to a fire which is capable of impacting on the community, it is able to communicate messages to the community via any protocol adopted following the review by all agencies.		Complete	
No.	Action	Lead agency	Action status
GDF A15.1	Giving proper regard to OH&S Regulations, and in consultation with WorkSafe, GDF Suez Safety Assessment and Safety Management Systems for mine fire revised	ENGIE	Complete

GDF SUEZ AFFIRMATION 15	STATUS
GDF Suez work with Victorian WorkCover Authority (VWA) to review its Safety Assessment and Safety Management System in light of rr. 5.3.21 and 5.3.23 of the Occupational Health and Safety Regulations 2007 (Vic).	Complete
GDF SUEZ AFFIRMATION 16	STATUS
GDF Suez develop a Carbon Monoxide management protocol for firefighter and mine employee safety prior to the 2014/2015 fire season, in consultation with VWA and CFA.	Complete
GDF SUEZ AFFIRMATION 17	STATUS
GDF Suez undertake the rehabilitation set out in Exhibit 88 – Statement of James Faithful, annexure 5 and discuss the appropriate timing of each sequence of rehabilitation with the Department of State Development, Business and Innovation.	Complete

Hazelwood Mine Fire Inquiry Report 2015–2016, Volume II – Investigations into 2009–2014 deaths

Table 42: Status of recommendations, affirmations and actions from the Hazelwood Mine Fire Inquiry Report 2015–16, Vol II

HAZELWOOD MINE FIRE INQUIRY REPORT 2015–16, VOLUME II			
RECOMMENDATION 1			STATUS
The State should review the State Smoke Framework and the Community Smoke Air Quality and Health Protocol in light of the findings of this Inquiry about an increased risk of death from air pollution due to fire. The State should engage independent expert consultants to assist in this review.			Complete
No.	Action	Lead agency	Action status
125	Engage an independent consultant to undertake a review of the use of the protocols under the State Smoke Framework and during a smoke event in the 2015/16 summer season (Somerton tip fire)	EMV	Complete
126	Publicly release independent consultant report on the review of the use of the State Smoke Framework and associated protocols during the Somerton tip fire	EMV	Complete
RECOMMENDATION 2			STATUS
The State should reconsider, as a matter of priority, its approach to improving community engagement relevant to the health of the Latrobe Valley, which it committed to improving in the <i>Hazelwood Mine Fire Inquiry Report Victorian Government Implementation and Monitoring Plan</i> , October 2014. No specific actions have been assigned to address this recommendation in the Victorian Government Implementation Plan, however IGEM notes that it is contingent on a range of actions assigned to the Latrobe Valley Health Assembly (See Section 4.3)			Complete
RECOMMENDATION 3			STATUS
The State should strengthen its processes to ensure that health information provided by the State to the general public is transparent, reliable and appropriate, to facilitate a good understanding of public health issues as required by the <i>Public Health and Wellbeing Act 2008</i> (Vic).			Complete
No.	Action	Lead agency	Action status
30	Complete a review of DHHS structures for public health and emergency management related communications teams	DHHS	Complete

33	Establish a Communications Health and Emergency Management Team	DHHS	Complete
35	Develop new processes and protocols (including standard messaging templates) for Better Health Channel and health.vic site based on the review	DHHS	Complete
RECOMMENDATION 4			STATUS
The State should mandate a rigorous process for the investigation of matters of public health concern to avoid real or perceived conflicts of interest, which includes requiring independent experts to declare whether the State has suggested any substantial changes to their advice and whether any changes have been adopted.			Complete
No.	Action	Lead agency	Action status
28	Deliver refresher contract management training for DHHS procurement staff	DHHS	Complete
29	Engage an independent consultant to undertake a review of DHHS procurement and contract management policies and procedures for obtaining independent expert advice	DHHS	Complete
31	Develop a plan to implement the findings and recommendations of the independent expert report on DHHS procurement and contract management policies and procedures	DHHS	Complete
32	Deliver the plan to implement the findings and recommendations of the independent expert report on DHHS procurement and contract management policies and procedures	DHHS	Complete
RECOMMENDATION 5			STATUS
The State should engage the Hazelwood Mine Fire Implementation Monitor to monitor and report publicly, on a regular basis, the implementation of the recommendations adopted by the State arising from this report.			Ongoing
No.	Action	Lead agency	Action status
4	Assist the Minister for Emergency Services to request that the IGEM begins monitoring implementation of all reopened Inquiry Report recommendations and affirmations by Government and non-Government organisations, with annual reports on progress	DPC & DJR	Complete
5	Publicly released the IGEM's annual reports in the Victorian Parliament within a reasonable time of receipt by the Minister for Emergency Services	DJR	Ongoing
AFFIRMATION 1			STATUS
The Board affirms the State's commitment to reimburse Voices of the Valley the amount it paid to the Victorian Registry of Births, Deaths and Marriages for death records data.			Complete
No.	Action	Lead agency	Action status
2	Reimburse Voices of the Valley for fee paid to Victorian Registry of Births, Deaths and Marriages for death records data	DPC	Complete

Hazelwood Mine Fire Inquiry Report 2015–2016, Volume III – Health Improvement

Table 43: Status of recommendations, affirmations and actions from the Hazelwood Mine Fire Inquiry Report 2015–16, Volume III

HAZELWOOD MINE FIRE INQUIRY REPORT 2015–16, VOLUME III			
RECOMMENDATION 1			STATUS
<p>The State empower the Hazelwood Mine Fire Implementation Monitor or another appropriate agency to:</p> <ul style="list-style-type: none"> oversee the implementation of these recommendations report publicly on progress every year for the next eight years identify in each report any additional actions the State should take to ensure the intent of this report is achieved. 			Ongoing
No.	Action	Lead agency	Action status
4	Assist the Minister for Emergency Services to request that the IGEM begins monitoring implementation of all reopened Inquiry Report recommendations and affirmations by Government and non-Government organisations, with annual reports on progress	DPC & DJR	Complete
5	Publicly released the IGEM's annual reports in the Victorian Parliament within a reasonable time of receipt by the Minister for Emergency Services	DJR	Ongoing
RECOMMENDATION 2			STATUS
<p>The State designate the Latrobe Valley as a special geographical zone for health improvement (Latrobe Valley Health Zone) for a minimum of eight years (two electoral cycles), with a focus on innovation, integration, and community engagement.</p>			Complete
No.	Action	Lead agency	Action status
48	Designate the Latrobe Valley as the Latrobe Valley Health Zone	DHHS	Complete
RECOMMENDATION 3			STATUS
<p>The State establish the Latrobe Valley Health Assembly and executive Board to promote, support and oversee the development of the Latrobe Valley Health Zone.</p> <p>The Latrobe Valley Health Assembly should ensure that:</p> <ul style="list-style-type: none"> Health improvement strategies: <ul style="list-style-type: none"> are informed by a strong community engagement process focus on reducing health inequities draw on the capacity, goodwill and opportunities present integrate actions across relevant providers are evaluated for their wider applicability across Victoria. Initial health improvement programs are focused on innovative ways to deliver: <ul style="list-style-type: none"> social marketing programs which build pride of place integrated care for people with chronic diseases, especially those with related mental health conditions tele-medicine services to reduce the barriers of access to medical specialists and other health practitioners promotion of mental wellbeing, including the prevention of family violence smoking cessation programs which are effective for priority groups. In allocating funding for health improvement programs, serious consideration is given to the proposals supported by the Board in Parts 4–7 of this report. Funds are principally distributed to the organisations of the Latrobe Valley that may singly or in partnership deliver health improvement programs supported by the Latrobe Valley Health Assembly. The Board of the Latrobe Valley Health Assembly may also directly fund and manage programs through the Office of the Health Advocate. 			Ongoing

No.	Action	Lead agency	Action status
51	Assist the Latrobe Valley Health Taskforce to recruit an initial local team to support the work of the taskforce and Latrobe Valley Health Assembly	DHHS	Complete
52	Develop an engagement strategy to help the Latrobe Valley Health Taskforce to identify and attract broad community and business and industry representatives to consider membership of the Latrobe Valley Health Assembly	DHHS	Complete
53	Begin an expression of interest process to establish the membership of the Latrobe Valley Health Assembly	DHHS	Complete
54	Support the Latrobe Valley Health Taskforce to develop and finalise terms of reference and associated operating model in active partnership with the Latrobe community and incorporating development of: <ul style="list-style-type: none"> the governance structure of the Latrobe Valley Health Assembly, including forums and groups reporting to the Assembly a constitution, partnering agreement or MOU (as appropriate) for the Latrobe Valley Health Assembly preparation of information to assist the Latrobe Valley Health Assembly to identify outcomes and processes for monitoring and reporting 	DHHS	Complete
55	Facilitate the appointment of the Latrobe Valley Health Assembly, and an independent Chair of the Latrobe Valley Health Assembly	DHHS	Complete
56	Facilitate consideration by the Latrobe Health Assembly of all draft documents prepared by the Latrobe Health Taskforce for amendment and adoption	DHHS	Complete
58	Work with the Latrobe Health Assembly to develop a measurement and reporting plan, utilising an outcomes framework, so that the impact of health innovation in the Latrobe Valley Health Zone can be monitored	DHHS	Ongoing
59	Participate as a member of the Latrobe Health Assembly to identify priorities	DHHS	Ongoing
60	Work with the Latrobe Health Assembly to conduct annual monitoring of the impact of innovation	DHHS	Ongoing
RECOMMENDATION 4			STATUS
<p>The State appoint a suitably qualified Health Advocate on the recommendation of the executive Board of the Latrobe Valley Health Assembly, to be supported by an Office.</p> <p>No specific actions have been assigned to address this recommendation in the Victorian Government Implementation Plan, however IGEM notes that it is contingent on the establishment of the Latrobe Valley Health Assembly (see Action 55).</p>			Ongoing

RECOMMENDATION 5			STATUS
<p>The State support and fund the development and delivery of health improvement strategies in the Latrobe Valley Health Zone.</p> <p>The State should:</p> <ul style="list-style-type: none"> • provide earmarked funding for the Health Zone and the establishment of the Office of the Health Advocate to the Board of the Latrobe Valley Health Assembly, which will be held accountable for the appropriate use of such funding • allocate funding that is at least three times that for the Hazelwood Mine Fire Health Study per annum, and not less than \$8.1 million per year (indexed to inflation) for an initial period of eight years • require that the funding for the health improvement strategies is allocated to reduce health inequities by: <ul style="list-style-type: none"> • strengthening health services (including chronic disease management, mental health services, early detection and high risk screening, health workforce development) • promoting health living (including health behaviours, healthy workplaces, healthy environments, children and young people, mental wellbeing and prevention of family violence) • building pride of place (including community, community engagement and social marketing). 			Ongoing
No.	Action	Lead agency	Action status
50	Work with the Latrobe Valley Health Taskforce to map current area partnerships	DHHS	Complete
57	Develop the roles and responsibilities of the Health Advocate, in consultation with the Latrobe Valley Health Assembly	DHHS	Complete
60	Work with the Latrobe Valley Health Assembly to conduct annual monitoring of the impact of innovation	DHHS	Ongoing
65	Provide information and evidence regarding previous place-based prevention interventions to inform the Latrobe Valley Health Taskforce and the Latrobe Health Assembly's work	DHHS	Complete
66	Support the Latrobe Health Taskforce and the Latrobe Health Assembly to partner with Latrobe City Council in the development of the Latrobe MPH Plan 2017-21	DHHS	Ongoing
67	Facilitate active and ongoing partnerships with both local and statewide organisations to drive an integrated, place-based approach to preventive health in the Latrobe Valley	DHHS	Ongoing
68	Allocate funding to support locally determined actions to improve health and wellbeing in agreed priority areas and settings	DHHS	Ongoing
69	Review current population and opportunistic screening rates, practices and services in the Latrobe Valley	DHHS	Complete
70	In consultation with the community and other relevant stakeholders, develop a plan for implementing a system-wide approach to encourage health professionals to ask patients about their smoking and offer support to quit	DHHS	Complete
71	Implement the smoking cessation initiative, in partnership with the Latrobe Health Assembly, the community and other stakeholders.	DHHS	Complete
72	Based on the outcomes of the review of population screening rates, practices and services, develop a strategy and implementation plan to improve access to screening services for vulnerable and high-risk groups	DHHS	Complete
73	Based on the outcomes of the review of opportunistic screening rates, practices and services, support the Latrobe Health Assembly to develop a strategy and implementation plan to improve access to opportunistic screening and early intervention services for identified priority areas	DHHS	Complete

74	Support the Latrobe Health Assembly to commence a trial of integrated screening and assessment approaches for chronic disease	DHHS	Complete
75	Promote, and increase the use of, existing primary care systems to assist healthcare providers to identify clients for screening	DHHS	Ongoing
76	Partner with providers across the Latrobe Valley's health system to develop and implement recruitment and health promotion strategies to encourage community participation in available health screening opportunities	DHHS	Ongoing
77	Embed the smoking cessation initiative, in partnership with key service providers	DHHS	Ongoing
78	Facilitate the establishment of a Chronic Disease Forum, involving both local and statewide providers and experts, to work with the Latrobe Health Assembly to design and develop care pathways to improve coordination for people with chronic disease	DHHS	Ongoing
79	Invite primary health partner agencies to investigate options for co-location of respiratory nurses within general practices in the Latrobe Valley	DHHS	Complete
80	Provide an additional 1,000 hours of respiratory nursing service at Latrobe Community Health Service (compared to 2015–16 base level)	DHHS	Complete
81	Expand the early intervention in chronic disease program, delivered by Latrobe Community Health Service, to provide an additional 2,500 hours of allied health and care coordination services (compared to 2015–16 base level)	DHHS	Complete
82	Provide an additional 1,500 hours of respiratory nursing service (compared to 2015–16 base level)	DHHS	Ongoing
83	Provide an additional 3,400 hours of allied health and care coordination services (compared to 2015–16 base level)	DHHS	Ongoing
84	Facilitate the establishment of a Latrobe Community Mental Health Forum, comprising both local and statewide providers, experts and the community, to focus on strategies and opportunities to work with the Latrobe Health Assembly to enhance the mental health of the Latrobe Valley community	DHHS	Ongoing
85	Work with health and community sector partners to develop an approach to the delivery of workforce skills in primary mental health service delivery, which will involve mentoring, supervision and training (where required) in managing mental health issues associated with chronic disease	DHHS	Complete
86	Provide funding for the development of strategies to increase awareness and community understanding of mental health issues, and how and where to get help	DHHS	Complete
87	Expand local mental health support in line with agreed community priorities	DHHS	Complete
88	Provide funding for the development and delivery of programs to increase awareness of mental health issues	DHHS	Complete
89	Develop and implement a marketing campaign to promote telehealth as an option for accessing health services	DHHS	Complete
90	Enable telehealth capacity at more points of primary and acute healthcare	DHHS	Complete
91	Facilitate the development of telehealth education and training packages targeted to health service providers	DHHS	Complete
92	Facilitate the delivery of telehealth education and training packages to health service providers in the Latrobe Valley	DHHS	Complete

RECOMMENDATION 6				STATUS
<p>The State review the scope and structure of the Hazelwood Mine Fire Health Study.</p> <p>The State should:</p> <ul style="list-style-type: none"> • review the scope of the Hazelwood Mine Fire Health Study to consider whether the Adult Survey can include additional cohorts who do not reside in Morwell, including emergency responders to the Hazelwood mine fire • reaffirm its commitment to a 20 year study and the importance of having a strong governance structure which ensures that the interests of the Latrobe Valley community are foremost in the short, medium and longer-term • establish a process whereby key health information obtained through the Health Study about the health status of the population and the effects from the Hazelwood mine fire is provided to the study participants, the community, local health practitioners and the Latrobe Valley Health Assembly • establish a process whereby policy-relevant health information obtained through the Health Study is considered by the State for action to improve the health of the Latrobe Valley and other populations in Victoria. 				Complete
No.	Action	Lead agency	Action status	
100	Engage an independent contractor to review the scope and structure of the Long Term Health Study	DHHS	Complete	
101	Agree on a project plan for the review of the scope and structure of the Long Term Health Study	DHHS	Complete	
102	Agree of the consultation and stakeholder engagement strategy for the review of the scope and structure of the Long Term Health Study	DHHS	Complete	
103	Publicly release contractor report on the review of the scope and structure of the Long Term Health Study	DHHS	Complete	
104	Response to report on the review of the scope and structure of the Long Term Health Study released	DHHS	Complete	
RECOMMENDATION 7				STATUS
<p>The State assist in establishing an independent community controlled health organisation for the Latrobe Valley Aboriginal community and cofund a new culturally appropriate health and community facility which will help with the engagement of Aboriginal young people.</p>				Ongoing
No.	Action	Lead agency	Action status	
93	Work with the Latrobe Local Aboriginal community to identify priorities for investment	DHHS	Complete	
94	Work with the Latrobe Local Aboriginal Community Partnership to scope the potential for a gathering place	DHHS	Complete	
95	Support implementation of initiatives to address priorities identified with the local Latrobe Aboriginal community	DHHS	Ongoing	

RECOMMENDATION 8				STATUS
<p>The State engage with the Commonwealth Government at the highest ministerial level so that the Commonwealth Department of Health:</p> <ul style="list-style-type: none"> formally recognises the designation of the Latrobe Valley as the Latrobe Valley Health Zone pools funding with the State to provide integrated services for the management of chronic disease and mental health conditions in the Latrobe Valley provides health innovation funding to the Gippsland Primary Health Network, commensurate to innovation funds provided by the State for community health and health promotion in the Latrobe Valley. 				Complete
No.	Action	Lead agency	Action status	
61	Develop a proposal for a COAG integrated chronic disease trial in Victoria, with Gippsland as the preferred priority location	DHHS	Complete	
62	Engage directly with the Federal Minister for Health to identify the health needs of the Latrobe Valley community and the importance of the recommendations of the Health Improvement Report	DHHS	Complete	
63	Present the Gippsland proposal for integrated chronic disease trial to Commonwealth officials	DHHS	Complete	
64	Progress a bilateral agreement with joint Commonwealth and State investment for a chronic disease integration trial in Gippsland if selected by the Commonwealth as trial site	DHHS	Complete	
RECOMMENDATION 9				STATUS
<p>The State ensure that ash contained in roof cavities in Morwell is analysed and acted on. The State should:</p> <ul style="list-style-type: none"> commission an analysis of the ash contained in roof cavities of houses in Morwell and publish the results of that analysis to the community and Latrobe Valley Health Assembly, together with clear advice about the potential known, or unknown health effects. if the analysis of the ash residue in roof cavities reveals any content that is potentially hazardous to health or of unknown impact on health, conduct an audit of the extent of the exposure to ash and develop an action plan to remove the ash from all affected houses. 				Complete
No.	Action	Lead agency	Action status	
105	Develop a project proposal for sampling ash residue in roof cavities in Morwell	DHHS	Complete	
106	Publish a factsheet on hazards in roof cavities to provide advice to the community on how to protect their health when entering roof cavities	DHHS	Complete	
107	Engage with key stakeholders, such as the Long Term Health Study Community Advisory Committee, Latrobe Valley Health Assembly and Voices of the Valley, in a workshop to discuss the proposed implementation plan to assess the risk from exposure to ash in roof cavities (as a result of the Hazelwood Mine Fire)	DHHS	Complete	
108	Engage an independent expert (with project management and health risk assessment expertise) to: <ul style="list-style-type: none"> refine the proposed sampling plan for the analysis of ash residue in roof cavities assist with implementation of the project 	DHHS	Complete	
109	Establish communication tools including a dedicated web page for project updates and other tools recommended by the key stakeholders in the initial engagement	DHHS	Complete	

110	Hold a community forum to engage with community stakeholders on: <ul style="list-style-type: none"> • final project plan and planned activities in Morwell • finalised sampling plan • communication tools 	DHHS	Complete
111	Commence project with sampling activities (recruitment of houses, testing and analysis). The independent expert will engage an occupational hygienist to conduct the testing and analysis	DHHS	Complete
112	Publicly release independent expert report	DHHS	Complete
113	Engage stakeholders through open house to communicate and discuss the report's assessment of the health risk from exposure to ash in roof cavities as a result of the coal mine fire in 2014	DHHS	Complete
RECOMMENDATION 10			STATUS
The State create, as an interim measure for 12 months, a Latrobe Valley Health Innovation Taskforce to assist in progressing recommendations 1–4.			Complete
No.	Action	Lead agency	Action status
49	Establish a time-limited Latrobe Health Taskforce to support the creation of the Latrobe Valley Health Assembly	DHHS	Complete
51	Assist the Latrobe Health Taskforce to recruit an initial local team to support the work of the taskforce and Latrobe Health Assembly	DHHS	Complete
RECOMMENDATION 11			STATUS
Each of the four principal health agencies in the Latrobe Valley commit to, support and promote the Latrobe Valley Health Innovation Zone. In particular they should support health innovations and service integration, including the pooling of resources.			Ongoing
RECOMMENDATION 12			STATUS
Each of the four principal health agencies in the Latrobe Valley commit to, support and promote the Latrobe Valley Health Innovation Zone. These bodies should prioritise the Latrobe Valley Health Innovation Zone for investments in program delivery and health innovation projects, recognising that the lessons learned will have broader application.			Ongoing
AFFIRMATION 1			STATUS
The Board affirms the commitment of the principal stakeholder organisations for health in the Latrobe Valley to making improvements in the way that they engage with the Latrobe Valley community.			Ongoing
AFFIRMATION 2			STATUS
The Board affirms the commitment of Latrobe Regional Hospital to continue to develop as a regional hospital for the people of the Latrobe Valley and the wider Gippsland area. The Board considers that the State should give serious consideration to ensuring that future investment in this facility is at least equitable with other regional areas in Victoria.			Ongoing
AFFIRMATION 3			STATUS
The Board affirms the commitment of Ms Kellie O'Callaghan, Chair of the Board of Latrobe Regional Hospital, to progress a community screening day, in partnership with the community and other major health services. This day could be approached as the 'launch' of a new outreach screening program to support chronic disease prevention.			Complete

AFFIRMATION 4	STATUS
The Board affirms the intention of Dr Alistair Wright, general physician from Latrobe Regional Hospital and Dr Daniel Steinfort, respiratory physician from the Royal Melbourne Hospital, to work together to understand the risk profile of the Latrobe Valley relevant to lung cancer, and the implications of this for a possible lung cancer screening program.	Ongoing
AFFIRMATION 5	STATUS
The Board affirms the proposal of the State to move towards a 'person-centred' healthcare system with equitable access, as documented in the Health 2040 Summit discussion paper.	Complete
AFFIRMATION 6	STATUS
The Board affirms the intention of Monash Health and Latrobe Regional Hospital to consider the development of an advanced physician training program for general physicians in the short term.	Ongoing
AFFIRMATION 7	STATUS
The Board affirms the commitment of the Gippsland Primary Health Network to develop 'care pathways' to assist general practitioners in the management of complex conditions.	Complete
AFFIRMATION 8	STATUS
The Board affirms the commitment of state-level statutory and non-government health agencies to assist Latrobe Valley organisations and the broader community to improve health through policies, plans, funding, infrastructure, programs, campaigns, training, research and evaluation, recognising that for action to be effective it needs to be community-led as much as possible.	Ongoing
AFFIRMATION 9	STATUS
The Board affirms the commitment by the Children and Youth Area Partnership to include an early intervention focus to protect vulnerable children and support access to education for children in out-of-home care, having regard to the fact that children in the Latrobe Valley often start school developmentally behind their peers when measured according to the Australian Early Development Index.	Ongoing
AFFIRMATION 10	STATUS
The Board affirms the commitment of the Latrobe City Council to develop a tracks, trails and paths strategy to create supportive environments for physical activity and community engagement.	Complete
AFFIRMATION 11	STATUS
The Board affirms the commitment of members of a Health improvement Forum expert panel on community engagement and communication to work together to develop a community-led shared vision for the health, wellbeing and prosperity of the Latrobe Valley. The panel comprised representatives from EW Tipping Foundation, Gippsland Multicultural Service, GDF Suez Australian Energy, Latrobe City Council, Latrobe Valley Express, Morwell Community Recovery Committee, Morwell Neighbourhood House, VicHealth and Voices of the Valley.	Complete
AFFIRMATION 12	STATUS
The Board affirms work being undertaken by the Community Wellbeing Study (part of the Hazelwood Mine Fire Health Study) to enhance agencies' ability to effectively engage with the Latrobe Valley community.	Ongoing

Hazelwood Mine Fire Inquiry Report 2015–2016, Volume IV – Mine Rehabilitation

Table 44: Status of recommendations, affirmations and actions from the Hazelwood Mine Fire Inquiry Report 2015–16, Volume IV

HAZELWOOD MINE FIRE INQUIRY REPORT 2015–16, VOLUME IV				
RECOMMENDATION 1				STATUS
<p>The State empower the Hazelwood Mine Fire Implementation Monitor, in a legislated role independent from the Victorian public service, to:</p> <ul style="list-style-type: none"> oversee the implementation of these recommendations and the commitments made by the State and the mine operators during this Inquiry for the next three years report publicly on an annual basis on the progress made in implementing the recommendations and commitments for the next three years. 				Ongoing
No.	Action	Lead agency	Action status	
4	Assist the Minister for Emergency Services to request that the IGEM begins monitoring implementation of all reopened Inquiry Report recommendations and affirmations by Government and non-Government organisations, with annual reports on progress	DPC & DJR	Complete	
5	Publicly released the IGEM's annual reports in the Victorian Parliament within a reasonable time of receipt by the Minister for Emergency Services	DJR	Ongoing	
RECOMMENDATION 2				STATUS
<p>The State redress gaps in expertise by employing or engaging suitably skilled and experienced personnel in mine closure and rehabilitation liability assessments, and obtaining regular advice and guidance from the Technical Review Board.</p>				Complete
No.	Action	Lead agency	Action status	
156	Employ or engage suitable expertise in mine closure and rehabilitation liability assessments	DEDJTR	Complete	
RECOMMENDATION 3				STATUS
<p>The State provide appropriate and ongoing resources to the Technical Review Board, particularly for the purpose of providing strategic advice on mine stability and rehabilitation.</p> <p>No specific actions have been assigned to address this recommendation in the Victorian Government Implementation Plan, however IGEM notes that it is related to the ongoing appointment of the Technical Review Board (see Action 156).</p>				Complete
RECOMMENDATION 4				STATUS
<p>The State increase the rate of progressive rehabilitation by developing milestones within the mines' progressive rehabilitation plans in consultation with the mine operators and the Technical Review Board, and require the successful achievement of the milestones.</p>				Ongoing
No.	Action	Lead agency	Action status	
158	Develop progressive rehabilitation milestones, with support from the TRB or other experts	DEDJTR	Ongoing (Overdue)	
204	Ongoing monitoring and adaptation of the Latrobe Valley Regional Rehabilitation strategy as new information becomes available, including research and in-mine trials by the operators of the Latrobe Valley Coal Mines and progressive rehabilitation	DEDJTR	Ongoing	

RECOMMENDATION 5				STATUS
The State, by 31 December 2016, specify the manner and form of rehabilitation liability assessments for use by the Latrobe Valley mine operators in their 2016–17 rehabilitation liability assessments and future assessments.				Complete
No.	Action	Lead agency	Action status	
167	Specify the manner and form for rehabilitation liability assessments for the Latrobe Valley Coal Mines	DEDJTR	Complete	
RECOMMENDATION 6				STATUS
The State, by 31 December 2016, review whether the criteria for accreditation of auditors under s. 53S of the <i>Environment Protection Act 1970</i> (Vic) are appropriate having regard to the necessary skills and expertise required to conduct an audit under s. 79A of the <i>Mineral Resources (Sustainable Development) Act 1990</i> (Vic). If necessary, the Mineral Resources Act and the accreditation process should be amended to ensure appropriately qualified auditors can be engaged for s. 79A audits.				Complete
No.	Action	Lead agency	Action status	
168	Identify skills and expertise for the conduct of rehabilitation liability assessment audits	DEDJTR	Complete	
169	Amend the accreditation criteria as necessary for auditors appointed under section 53S of the EP Act	EPA	Complete	
170	Assess current pool of appointed auditors for the appropriate skills and expertise	DEDJTR & EPA	Complete	
RECOMMENDATION 7				STATUS
The State require that the 2016–17 rehabilitation liability assessments provided by mine operators are conducted in accordance with the requirements developed under Recommendation 5.				Complete
No.	Action	Lead agency	Action status	
171	Finalise rehabilitation liability assessments	DEDJTR	Complete	
RECOMMENDATION 8				STATUS
The State, by 30 June 2017, require each of the Latrobe Valley mine operators to engage an auditor, under s. 79A(3) of the <i>Mineral Resources (Sustainable Development) Act 1990</i> (Vic), to certify that its 2016–17 rehabilitation liability assessment has been prepared in accordance with the rehabilitation liability assessment guidelines (as per Recommendations 5 and 7); to certify that the assessment is accurate; and pursuant to s. 79A(4) of the Act, to forward a copy of the certificate to the Minister for Resources.				Complete
No.	Action	Lead agency	Action status	
171	Finalise rehabilitation liability assessments	DEDJTR	Complete	

RECOMMENDATION 9			STATUS
<p>The State, by 30 June 2016, request the Minister for Resources to consider the sufficiency of the existing rehabilitation bonds pursuant to s. 80(4) of the <i>Mineral Resources (Sustainable Development) Act 1990</i> (Vic) having regard to this report and any other relevant material.</p> <ul style="list-style-type: none"> • If the Minister for Resources deems the existing rehabilitation bonds insufficient, the Minister should consider increasing the rehabilitation bonds on an interim basis to at least: <ul style="list-style-type: none"> – Yallourn mine: \$34.25 million – Hazelwood mine: \$36.7 million – Loy Yang mine: \$56 million • The interim increase should be undertaken in accordance with s.80(4) of the Mineral Resources Act. • If the Minister deems the existing rehabilitation bonds sufficient, the Minister should publish a statement setting out the reasons for that conclusion on the website of the Department of Economic Development, Jobs, Transport and Resources. 			Complete
No.	Action	Lead agency	Action status
163	Consult under section 80 of the MR(SD) Act with each of the Latrobe Valley Coal Mines' licensees and the Latrobe City Council on the proposal to implement further Rehabilitation Bonds at 50 per cent of the Latrobe Valley Coal Mines self-assessed liabilities	DEDJTR	Complete
RECOMMENDATION 10			STATUS
<p>The State, upon completing the Bond Review Project, review the bond amount required by the mine operators. This should take into account the mine operators' 2016–17 rehabilitation liability assessment, conducted in accordance with Recommendations 5, 7 and 8 and the findings of this Inquiry. The Minister for Resources should then require the mine operators to enter into further rehabilitation bonds, if the rehabilitation bonds are deemed to be insufficient.</p>			Complete
No.	Action	Lead agency	Action status
172	Implement further Rehabilitation Bonds if required based on final rehabilitation liability assessments, bond policy review and Inquiry findings, and publish statement of reasons for decision on the DEDJTR website	DEDJTR	Complete
RECOMMENDATION 11			STATUS
<p>The State include risk-based financial assurance mechanisms in the revised financial assurance system, as a method of encouraging progressive rehabilitation. The mechanisms should take into account the size, assets and ownership of the mine operator; the mine operator's history of compliance; demand for coal; and the nature of the mine operation. The mechanisms should also be consistent and transparent, with the level of the financial assurance assessed on a case-by-case basis.</p>			Complete
No.	Action	Lead agency	Action status
166	Complete bond policy review	DEDJTR	Complete
RECOMMENDATION 12			STATUS
<p>The State establish a post-closure trust fund to mitigate the likely costs arising from ongoing monitoring, maintenance and management of the rehabilitated mine sites after closure. The State should also consider establishing a post-closure community fund for the Latrobe Valley, to mitigate the likely social and economic impacts of mine closure. The mine operators and the State should contribute to both of these funds.</p>			Ongoing
No.	Action	Lead agency	Action status
173	Determine an effective mechanism to manage: <ul style="list-style-type: none"> • the costs of ongoing monitoring, maintenance and management of the earth resources industry sites. • risks of closure on the community's social and economic welfare. 	DEDJTR	Ongoing

RECOMMENDATION 13				STATUS
The State, by 31 December 2016, undertake Action 6.8 of the 2011 Gippsland Region Sustainable Water Strategy, to review the mines' rehabilitation strategies and consider impacts on groundwater and surface water resources.				Complete
No.	Action	Lead agency	Action status	
185	Review current mine rehabilitation strategies, in consultation with DELWP and EPA, to identify water requirements for mine closure and restoration strategies.	DEDJTR	Complete	
RECOMMENDATION 14				STATUS
The State, by 30 June 2017, establish an independent Latrobe Valley Mine Rehabilitation Commissioner, until the Statutory Authority is established under Recommendation 15. It should be a statutory appointment by amendment to the <i>Mineral Resources (Sustainable Development) Act 1990 (Vic)</i> with the following core functions relevant to mine rehabilitation:				Ongoing
<ul style="list-style-type: none"> • Advising the Minister, State and industry on a range of matters, including policy, legislation and regulation. • Monitoring the implementation and effectiveness of strategies. • Undertaking strategic audits of State departments and mine operators. • Conducting investigations into significant issues with powers to obtain information. • Coordinating parties to resolve outstanding issues. • Promoting and coordinating research to address knowledge gaps, as contained in Recommendation 18. • Sharing and publishing information including research findings. • Undertaking public education and community engagement. • Publishing an annual report. 				
No.	Action	Lead agency	Action status	
161	Consult with the Latrobe Valley Mine Rehabilitation Commissioner about the options for policy, administrative and legislative reform for the Latrobe Valley Coal Mines' regulatory framework	DEDJTR	Ongoing	
179	Establish MOU between DEDJTR and DELWP to implement the project as a schedule to the existing partnership agreement	DEDJTR	Complete	
180	Prepare an overarching stakeholder engagement strategy for the project (and refine in response to experience)	DEDJTR	Complete	
181	Appoint independent peer reviewers	DEDJTR	Complete	
182	Conduct workshop(s) to develop project scope, methodology, including consultation with the operators of the Latrobe Valley Coal Mines to ensure integration with research program to be undertaken by the operators	DEDJTR	Complete	
183	Establish Latrobe Valley Mine Rehabilitation Advisory Committee	DEDJTR	Complete	
184	Review Stage 1 Project outputs and confirm Stage 2 work plan, including technical peer review	DEDJTR	Complete	
186	Establish the Latrobe Valley Mine Rehabilitation Commissioner as a statutory appointment under the MR(SD) Act	DEDJTR	Complete	
187	Review of existing Latrobe Valley coal mine and power station water entitlements and water licensing (groundwater and surface waters)	DELWP	Complete	
188	Report on existing water use, water availability, aquatic ecosystems and water quality to provide baseline data and inform the works program	DELWP	Complete	

189	Brief the Latrobe Valley Mine Rehabilitation Commissioner, upon commencement, on the work program delivered to date, the forecast work program and the engagement approach	DEDJTR	Complete
190	Conduct annual progress review and produce a report	DEDJTR	Complete
191	Assess possible impacts on water availability due to climate change and climate variability (not including possible additional water demand for mine closures) to be used in the modelling on water availability and potential impacts	DELWP	Ongoing
192	Review Stage 2 Project outputs and confirm Stage 3 work plan, including technical peer review	DEDJTR	Ongoing
193	Integrate findings and outcomes from parallel studies related to mine rehabilitation including the Batter Stability Project, MR(SD) Act review and local and state land planning policy review.	DEDJTR	Ongoing
194	Deliver a regional geotechnical study including: <ul style="list-style-type: none"> • investigation of potential water demands for pit lake fill scenarios • investigation of regional ground stability and associated potential impacts on land use, communities and infrastructure • monitoring – outline likely requirements for long-term regional geotechnical monitoring. 	DEDJTR	Ongoing
195	Deliver a regional water study on the viability of pit lake filling options and impacts, including: <ul style="list-style-type: none"> • potential water availability and use of regional water resources • analysis of potential alternative sources of water to those currently available to the Latrobe Valley Coal Mines, including a high-level technical and financial assessment • potential water quality impacts in pit lakes, groundwater and off-site surface waters • potential impacts on aquatic ecosystems and downstream users • the scope of likely requirements for long-term regional groundwater monitoring. 	DELWP	Ongoing
196	Review Stage 3 Project outputs and confirm Stage 4 work plan, including technical peer review	DEDJTR	Ongoing
197	Conduct annual progress review and produce a report	DEDJTR	Ongoing
199	Review of the Latrobe Valley Coal Mine and power generator water entitlements and licences that may be required to implement and comply with the Latrobe Valley Regional Rehabilitation Strategy	DELWP	Ongoing
200	Release draft assessment of potential impacts at a regional scale for consultation	DEDJTR (with DELWP support)	Ongoing
201	Release draft integrated regional scale mine rehabilitation Strategy for consultation	DEDJTR	Ongoing
202	Assess potential impacts at a regional scale	DEDJTR (with DELWP support)	Ongoing
203	Deliver Integrated regional scale mine rehabilitation strategy	DEDJTR	Ongoing

RECOMMENDATION 15			STATUS
<p>The State establish an independent Latrobe Valley Mine Rehabilitation Authority, as a statutory body by amendment to the <i>Mineral Resources (Sustainable Development) Act 1990</i> (Vic) to commence no later than 2026, or earlier in the event of premature closure of one of the Latrobe Valley mines.</p> <p>The Statutory Authority's responsibilities should include those of the Commissioner, with increased or additional focus on the following:</p> <ul style="list-style-type: none"> • planning for post-closure monitoring and maintenance, including clarifying roles and financial obligations • identifying processes for community and key stakeholder input into the assessment of rehabilitation against closure criteria • addressing key issues that arise as a result of final rehabilitation • monitoring water availability and conducting regional water modelling that more accurately estimates pit lake fill times. 			Ongoing
No.	Action	Lead agency	Action status
179	Establish MOU between DEDJTR and DELWP to implement the project as a schedule to the existing partnership agreement	DEDJTR	Complete
180	Prepare an overarching stakeholder engagement strategy for the project (and refine in response to experience)	DEDJTR	Complete
181	Appoint independent peer reviewers	DEDJTR	Complete
182	Conduct workshop(s) to develop project scope, methodology, including consultation with the operators of the Latrobe Valley Coal Mines to ensure integration with research program to be undertaken by the operators	DEDJTR	Complete
183	Establish Latrobe Valley Mine Rehabilitation Advisory Committee	DEDJTR	Complete
184	Review Stage 1 Project outputs and confirm Stage 2 work plan, including technical peer review	DEDJTR	Complete
187	Review of existing Latrobe Valley coal mine and power station water entitlements and water licensing (groundwater and surface waters)	DELWP	Complete
188	Report on existing water use, water availability, aquatic ecosystems and water quality to provide baseline data and inform the works program	DELWP	Complete
189	Brief the Latrobe Valley Mine Rehabilitation Commissioner, upon commencement, on the work program delivered to date, the forecast work program and the engagement approach	DEDJTR	Complete
190	Conduct annual progress review and produce a report	DEDJTR	Complete
191	Assess possible impacts on water availability due to climate change and climate variability (not including possible additional water demand for mine closures) to be used in the modelling on water availability and potential impacts	DELWP	Ongoing
192	Review Stage 2 Project outputs and confirm Stage 3 work plan, including technical peer review	DEDJTR	Ongoing
193	Integrate findings and outcomes from parallel studies related to mine rehabilitation including the Batter Stability project, MR(SD) Act review and local and state land planning policy review.	DEDJTR	Ongoing

194	Deliver a regional geotechnical study including: <ul style="list-style-type: none"> • investigation of potential water demands for pit lake fill scenarios • investigation of regional ground stability and associated potential impacts on land use, communities and infrastructure • monitoring – outline likely requirements for long-term regional geotechnical monitoring. 	DEDJTR	Ongoing
195	Deliver a regional water study on the viability of pit lake filling options and impacts, including: <ul style="list-style-type: none"> • potential water availability and use of regional water resources • analysis of potential alternative sources of water to those currently available to the Latrobe Valley Coal Mines, including a high-level technical and financial assessment • potential water quality impacts in pit lakes, groundwater and off-site surface waters • potential impacts on aquatic ecosystems and downstream users • the scope of likely requirements for long-term regional groundwater monitoring. 	DELWP	Ongoing
196	Review Stage 3 Project outputs and confirm Stage 4 work plan, including technical peer review	DEDJTR	Ongoing
197	Conduct annual progress review and produce a report	DEDJTR	Ongoing
199	Review of the Latrobe Valley Coal Mine and power generator water entitlements and licences that may be required to implement and comply with the Latrobe Valley Regional Rehabilitation Strategy	DELWP	Ongoing
200	Release draft assessment of potential impacts at a regional scale for consultation	DEDJTR (with DELWP support)	Ongoing
201	Release draft integrated regional scale mine rehabilitation Strategy for consultation	DEDJTR	Ongoing
202	Assess potential impacts at a regional scale	DEDJTR (with DELWP support)	Ongoing
203	Deliver Integrated regional scale mine rehabilitation strategy	DEDJTR	Ongoing
RECOMMENDATION 16			STATUS
The State consult with the Commissioner and subsequent Statutory Authority about all work plan variations for the Latrobe Valley Coal Mines, and the development of policy, legislation and regulation relating to mine rehabilitation in the Latrobe Valley.			N/A ⁵⁰

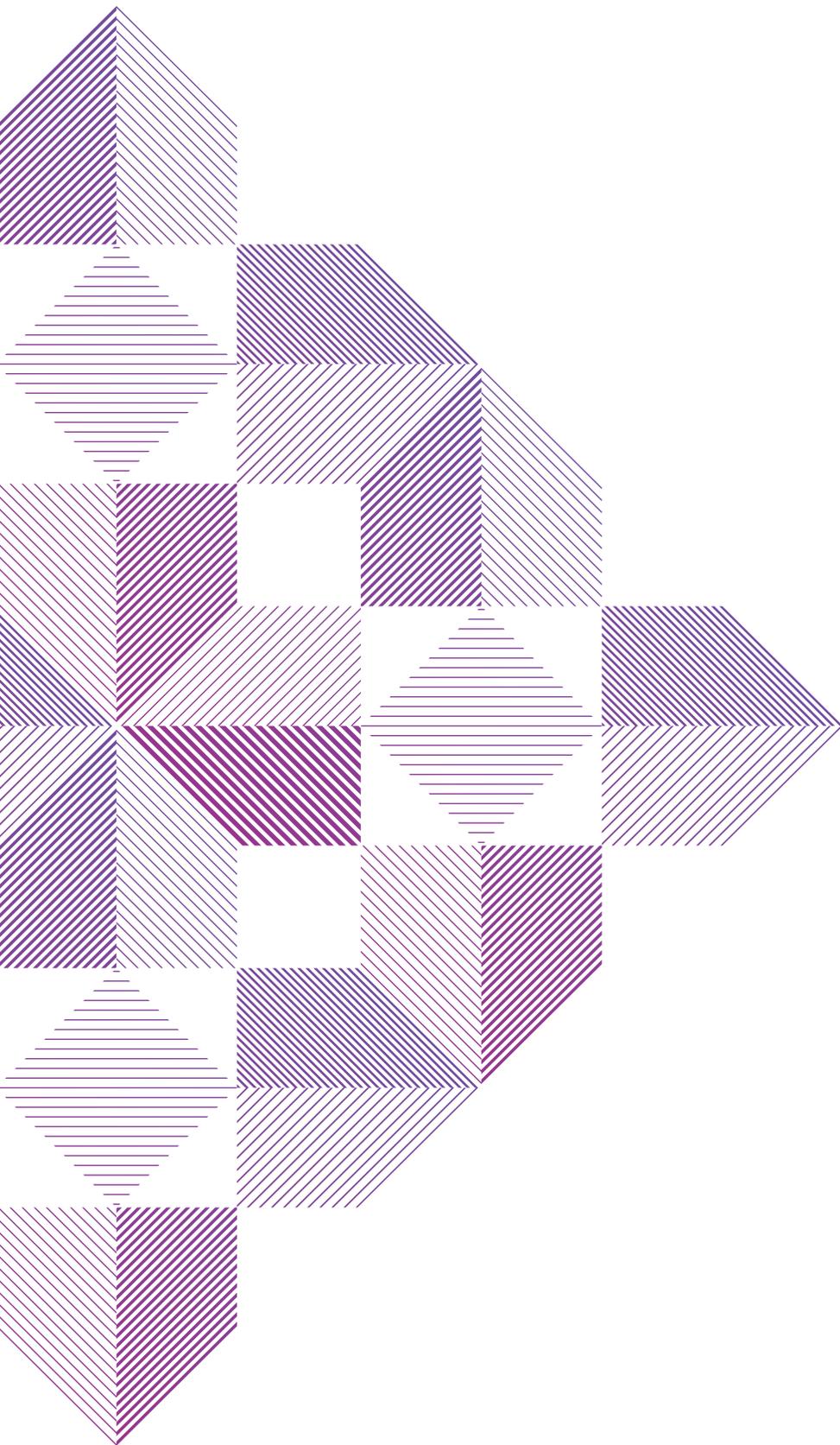
⁵⁰ This action is beyond the scope of the Victorian Government Implementation Plan and will be implemented after October 2019.

RECOMMENDATION 17			STATUS
<p>The State amend the <i>Mineral Resources (Sustainable Development) Act 1990 (Vic)</i> and the <i>Mineral Resources (Sustainable Development) (Mineral Industries) Regulations 2013 (Vic)</i> to address the issues that have been raised throughout the Inquiry, such as the need for:</p> <ul style="list-style-type: none"> • a dedicated Part of the Mineral Resources Act that exclusively regulates the Latrobe Valley mines • definitions and criteria for progressive and final rehabilitation • definitions and criteria for closure • transparent processes for the referral of work plans and work plan variations to relevant State agencies and referral authorities, which compel the Mining Regulator to act on the advice received • strengthened criteria for community consultation and engagement under s. 39A of the Mineral Resources Act and/or in community engagement plans • clarity about the roles of the mine operators and the State in ongoing post-closure monitoring and maintenance • clarity about the role and required skills and expertise of auditors of rehabilitation liability assessments and the auditor accreditation process (see Recommendation 6). 			Ongoing
No.	Action	Lead agency	Action status
160	Review the regulatory framework for the Latrobe Valley Coal Mines and develop options for policy, administrative and legislative reform	DEDJTR	Ongoing
162	Implement policy, administrative and legislative reforms for the Latrobe Valley Coal Mines' regulatory framework	DEDJTR	Ongoing
179	Establish MOU between DEDJTR and DELWP to implement the project as a schedule to the existing partnership agreement	DEDJTR	Complete
180	Prepare an overarching stakeholder engagement strategy for the project (and refine in response to experience)	DEDJTR	Complete
181	Appoint independent peer reviewers	DEDJTR	Complete
182	Conduct workshop(s) to develop project scope, methodology, including consultation with the operators of the Latrobe Valley Coal Mines to ensure integration with research program to be undertaken by the operators	DEDJTR	Complete
183	Establish Latrobe Valley Mine Rehabilitation Advisory Committee	DEDJTR	Complete
184	Review Stage 1 Project outputs and confirm Stage 2 work plan, including technical peer review	DEDJTR	Complete
187	Review of existing Latrobe Valley coal mine and power station water entitlements and water licensing (groundwater and surface waters)	DELWP	Complete
188	Report on existing water use, water availability, aquatic ecosystems and water quality to provide baseline data and inform the works program	DELWP	Complete
189	Brief the Latrobe Valley Mine Rehabilitation Commissioner, upon commencement, on the work program delivered to date, the forecast work program and the engagement approach	DEDJTR	Complete
190	Conduct annual progress review and produce a report	DEDJTR	Complete
191	Assess possible impacts on water availability due to climate change and climate variability (not including possible additional water demand for mine closures) to be used in the modelling on water availability and potential impacts	DELWP	Ongoing
192	Review Stage 2 Project outputs and confirm Stage 3 work plan, including technical peer review	DEDJTR	Ongoing

193	Integrate findings and outcomes from parallel studies related to mine rehabilitation including the Batter Stability Project, MR(SD) Act review and local and state land planning policy review.	DEDJTR	Ongoing
194	Deliver a regional geotechnical study including: <ul style="list-style-type: none"> • investigation of potential water demands for pit lake fill scenarios • investigation of regional ground stability and associated potential impacts on land use, communities and infrastructure • monitoring – outline likely requirements for long-term regional geotechnical monitoring. 	DEDJTR	Ongoing
195	Deliver a regional water study on the viability of pit lake filling options and impacts, including: <ul style="list-style-type: none"> • potential water availability and use of regional water resources • analysis of potential alternative sources of water to those currently available to the Latrobe Valley Coal Mines, including a high-level technical and financial assessment • potential water quality impacts in pit lakes, groundwater and off-site surface waters • potential impacts on aquatic ecosystems and downstream users • the scope of likely requirements for long-term regional groundwater monitoring. 	DELWP	Ongoing
196	Review Stage 3 Project outputs and confirm Stage 4 work plan, including technical peer review	DEDJTR	Ongoing
197	Conduct annual progress review and produce a report	DEDJTR	Ongoing
198	Review and identify policy, administrative or legislative mechanisms necessary to implement the Latrobe Valley Regional Rehabilitation Strategy and require the Latrobe Valley Coal Mine licence holders to comply	DEDJTR	Ongoing
RECOMMENDATION 18			STATUS
By 31 December 2016, develop an integrated research plan that identifies common research areas and priorities for the next 10 years, to be reviewed every three years. The plan should be developed in consultation with the Mining Regulator and relevant agencies, research bodies and experts. The list of research topics identified in Part 6.11 can be used as a starting point for discussion. The Commissioner and Statutory Authority should promote and coordinate this research (see Recommendations 14 and 15).			Ongoing
No.	Action	Lead agency	Action status
159	Contribute to the preparation of an integrated research plan, which identifies common research areas between the operators of the Latrobe Valley Coal Mines for the next 10 years	DEDJTR	Complete
179	Establish MOU between DEDJTR and DELWP to implement the project as a schedule to the existing partnership agreement	DEDJTR	Complete
180	Prepare an overarching stakeholder engagement strategy for the project (and refine in response to experience)	DEDJTR	Complete
181	Appoint independent peer reviewers	DEDJTR	Complete
182	Conduct workshop(s) to develop project scope, methodology, including consultation with the operators of the Latrobe Valley Coal Mines to ensure integration with research program to be undertaken by the operators	DEDJTR	Complete

183	Establish Latrobe Valley Mine Rehabilitation Advisory Committee	DEDJTR	Complete
184	Review Stage 1 Project outputs and confirm Stage 2 work plan, including technical peer review	DEDJTR	Complete
190	Conduct annual progress review and produce a report	DEDJTR	Complete
204	Ongoing monitoring and adaptation of the Latrobe Valley Regional Rehabilitation strategy as new information becomes available, including research and in-mine trials by the operators of the Latrobe Valley Coal Mines and progressive rehabilitation	DEDJTR	Ongoing
RECOMMENDATION 19			STATUS
The mine operators increase the rate of progressive rehabilitation by achieving milestones within the mines' progressive rehabilitation plans, as set by the Mining Regulator under Recommendation 4.			Ongoing
AFFIRMATION 1			STATUS
The Board affirms the commitments of EnergyAustralia, GDF Suez and AGL Loy Yang to increase coordination and collaboration between themselves and the regulatory authorities.			Complete
AFFIRMATION 2			STATUS
The Board affirms the commitments of the Mining Regulator contained in the Earth Resources Regulation 2015–16 Action Plan to:			Ongoing
<ul style="list-style-type: none"> • lead and strengthen its relationship with the Department of Environment, Land, Water and Planning and other regulators (for example, the Environment Protection Authority and WorkSafe) to ensure information is shared, and there is consistency and cooperation in carrying out regulatory functions • draft a guideline for providing clear information to industry about requirements under risk-based work plans • build its operational technical capability by drawing on the Technical Review Board to provide more strategic technical advice • implement risk-based mining work plans as required by recent changes to the Mineral Resources Act and the Mineral Industries Regulations • establish a work plan assessment taskforce to identify relevant high-risk sites to submit risk-based work plans (which will most likely include the Latrobe Valley mines) • establish a Mine Fire Safety Unit to provide advice and lead regulatory, compliance and education activities related to fire safety. 			
No.	Action	Lead agency	Action status
151	Establish a Mine Fire and Emergency Unit	DEDJTR	Complete
152	Establish a Victorian Earth Resources Regulator Forum, with membership including WorkSafe and EPA	DEDJTR	Complete
155	Deliver DEDJTR ERR 2015–16 Action Plan	DEDJTR	Ongoing (Overdue)

AFFIRMATION 3				STATUS
The Board affirms the commitment of the Mining Regulator, the mine operators and research groups to progress key studies such as the Mine Batter Stability Project at the Yallourn mine and the Loy Yang mine rehabilitation trials.				Ongoing
No.	Action	Lead agency	Action status	
174	Execute contracts with EnergyAustralia and Federation University for the Batter Stability Project	DEDJTR	Complete	
175	Appoint Project Manager within DEDJTR to review progress reports and report to the DEDJTR Project Control Board	DEDJTR	Complete	
176	Public launch of the Batter Stability Project	DEDJTR	Complete	
177	Participate in the Technical Advisory Group administered by Federation University as required	DEDJTR	Ongoing	
178	Provide funding upon completion of milestones as per schedules to the contracts with EnergyAustralia and Federation University	DEDJTR	Ongoing	



Inspector-General for
Emergency Management

