



BUSHFIRE MITIGATION PLAN 2023-2024

A4032

DATE: 23/10/2023

Metro Trains Melbourne
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Amendment record

Risk Assessment in INX 193941, RA is specific to changes to Inspector competencies

Updated for:

- Bushfire Season 2023/24.

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Executive Summary

Metro Trains Melbourne (MTM) as a 'Specified Operator' (Operator of an at-risk electric line), is required to prepare and submit to Energy Safe Victoria (ESV), for acceptance an annual Bushfire Mitigation Plan (BMP) before 1 July each year. An 'at-risk electric line' is defined in the Electrical Safety Act 1998 as an electric line (other than a private electric line) that is above the surface of land and in a hazardous bushfire risk area (HBRA).

MTM's Bushfire Mitigation Plan addresses the identification of at-risk electrical traction assets in MTM's HBRA and the inspection and maintenance of those assets, in compliance with the Bushfire Regulations within a 37-month program and up to 61 months in other areas. ESV approved training for asset inspectors of at-risk electric lines confirmed as UET20612 - Certificate II in ESI - Asset Inspection. The HBRA areas are defined by the Country Fire Authority (CFA). The BMP also outlines strategies and improvement actions, associated monitoring and auditing activities to minimise the risk of fire ignition from MTM at-risk assets.

The plan captures:

- Annual review of HBRA geographical areas that contain MTM's at-risk electrical traction assets based on CFA information.
- Specification of inspections and maintenance of at-risk electrical lines in HBRA that ensures that all at-risk electric lines are inspected at regular intervals of no longer than 37 months
- Strategies, actions, compliance measurement and annual performance review to continuously reduce the risk of fire ignition from MTM electrical traction assets.
- Ensuring that a copy of the ESV accepted BMP is available for inspection (a) on MTM's Internet site and (b) at MTM's principal office in Melbourne during ordinary business hours.
- Ensure electrical workers involved in electrical asset inspections and persons involved in inspection of structures supporting electrical assets in HBRA's have ESV accepted training to assess electrical equipment (refer section 5 J of this document).
- Delivery of at-risk asset inspections and corrective remedial works, in preparation for the commencement of the Victorian Bushfire Season, typically 1 November to the 31 March.

1. Purpose

The purpose of this plan is to define the responsibilities, priorities and controls to be implemented by MTM to mitigate the risk of fire ignition in hazardous bushfire risk areas due to the at-risk electric assets it manages and its associated operational work practices. It also describes actions to be taken to meet community, environmental and safety standards and relevant legislation, in particular the Electricity Safety Act 1998 (the Act) and the Electricity Safety (Bushfire Mitigation) Regulations 2023.

2. Scope

This BMP scope is to ensure that the Electricity Safety Bushfire Mitigation Regulations are met with regards to MTM's at-risk electric lines. For the purposes of this Plan, 'at-risk electric lines' means all overhead electric lines under MTM control that are within CFA declared hazardous bushfire risk areas, but does not include LV aerial lines within station carparks etc. which are considered private electric lines and thus are not at-risk electric lines within the meaning of the Electricity Safety Act 1998. The defined Hazardous Bushfire Risk Area covers approximately 38km of rail network managed by MTM as illustrated in Appendix 4.

MTM also has a series of complementary fire mitigation plans referenced in section 10.3.



3. Bushfire Mitigation Plan Particulars

The following particulars are provided as required by Section 83BA (2) (b) of the Act and Section 6 of the Regulations:

3.1. The business name, address and telephone number of the specified operator

Company/Business Name: Metro Trains Melbourne Pty. Ltd.
 ACN: 136 429 948
 ABN: 43 136 429 948
 C.E.O. (at time of writing): Mr. Raymond O'Flaherty
 Business Address: Level 16 700 Collins Street, Docklands VIC 3008
 Postal Address: PO Box 1880 Melbourne VIC 3001
 Telephone No.: (03) 9610 2400

3.2. The position, address and telephone number of the person who was responsible for the preparation of the plan

Position: Principle Technical Lead (Electrical Networks)
 Name (at time of writing): Alan Keating
 Email (at time of writing): alan.keating@metrotrains.com.au
 Business Address: E-Gate, Footscray Rd, West Melbourne, VIC 3004
 Postal Address: PO Box 12894, A'Beckett St Melbourne, Vic 8006
 Telephone No.: 03 9610 2400

3.3. The position, address and telephone number of the persons who are responsible for carrying out the plan

Position: MTM Electrical Networks Manager
 Name (at time of writing): Stephen Chambers
 Email (at time of writing): stephen.chambers@metrotrains.com.au
 Business Address: E-Gate, Footscray Rd, West Melbourne, VIC 3004
 Postal Address: PO Box 12894, A'Beckett St Melbourne, Vic 8006
 Telephone No.: 03 9610 2400

Position(s): MTM Structures Manager
 Address(s): E-Gate, Footscray Rd, West Melbourne, VIC 3004
 Postal Address: PO Box 12894, A'Beckett Street Vic. 8006
 Telephone No(s): 03 9610 2400

3.4. The telephone number of the specified operator's control room so that persons in the room can be contacted in an emergency that requires action by the specified operator to mitigate the danger of bushfire

Emergency contact number: Metrol – Metropolitan Train Control Centre 03 9610 7204
 Email: metrol@metrotrains.com.au

Metrol is responsible for enacting the emergency response procedures. The control room is available 24 hours a day, 7 days a week and 365 days a year.

3.5. The bushfire mitigation policy of the specified operator to minimise the risk of fire ignition from its at-risk electric lines

MTM's policy objective is to comply with the legislative requirements for bushfire mitigation in a cost-effective manner to achieve the safety of people, care for the environment and provide effective and safe train services.

MTM aims to:

- Appropriately manage as far as reasonably practicable the risk of its at-risk electric lines contributing to fire ignitions that could harm people and/or property.
- Operate the MTM traction electrical network in a manner that will achieve compliance with the Act and Regulations administered by Energy Safe Victoria
- Enhance the rail environment.
- Develop and regularly update preventative strategies, programs, processes and procedures to support the above three aims.

It should be noted that the inherent risk of electrical arcing (and subsequent fire ignition) with the 1500v DC assets is significantly lower than that experienced with higher distribution/transmission voltages, typically 22kV and above. Since the electrification of the railway, no bushfires have been initiated from a 1500V DC electrical fault.

3.6. The objectives of the Bushfire Mitigation Plan is mitigation of bushfire risk arising from MTM (specified operator)'s at-risk overhead electric lines;

The following are identified as the key objectives of this plan:

- Public Safety;
- Safety of employees and contractors;
- Safety of MTM and third-party assets.
- Continuity of train services.
- Risk Mitigation of ignition of fire from at-risk electric lines.
- Compliance with relevant legislation both environmental and electricity safety.
- Continuity of electricity supply
- Community satisfaction with the manner in which the necessary works are carried out.
- Monitoring and continuous improvement of bushfire risk mitigation.

3.7. A description, map or plan of the land to which the bushfire mitigation plan applies, identifying the location of the specified operator's at-risk electric lines;

MTM manages approximately:

- 998km of track (and approximately the same length of 1500V DC overhead wiring);
- Electrical reticulation poles and street lighting poles.

The declared hazardous bushfire risk areas containing MTM at-risk electric lines were determined based on CFA maps that identify the Bushfire risk areas. The identified at-risk lines are listed in Table 1 below and shown in Appendix 2 - At Risk Electric Lines Maps.

Table 1: At Risk Electric Lines Listing



Asset type	Location
1500V Traction Overhead Exposed aerial conductors (contact & catenary) installed directly above and to the sides of railway tracks and tensioned to provide for contact with train pantographs. Conductors are supported from steel structures with concrete foundations, with age varying from new to approximately 70 years; or from fixed structures such as bridges.	Belgrave Line (1 track) Str 1194-1203 (0.27km) Belgrave Line (1 track) Str 1242-1260 (0.55km) Craigieburn Line (2 tracks) Str 911-1026 excluding Craigieburn Sidings (3.51km) Hurstbridge Line (1 track) Str. 1027-1210 (5.58km) Mernda Line (2 tracks) Str 905-1039 (4.08km) Pakenham Line (2 tracks) Str 1118-1175 (1.74km) Pakenham Line (2 tracks) Str 1208-1274 (2.01km) Pakenham Line (2 tracks) Str 1478-1628 (4.57km) Pakenham Line (2 tracks) Str 1629-1670 (1.25km) Pakenham Line (2 tracks) Str 1744-1747 (0.09km) Pakenham Line (2 tracks) Str 1953-2033 (2.44km) Sunbury Line (2 tracks) Str 896-1114 including Calder Park Sidings (6.64km) Sunbury Line (2 tracks) Str 1139-1258 (3.63km)
22kV Aerial Feeders Bare aerial copper conductors installed within the rail reserve, sharing steel structures with the 1500V traction wiring, or on dedicated steel structures. <i>Across the network some concrete and timber poles are in use, but not on at-risk lines</i>	22/34 – Belgrave Line Str 1194-1203 (0.27km) 22/34 – Belgrave Line Str 1242-1260 (0.55km)
Substations with exposed outdoor buswork Exposed conductors mounted on steel structures within a fenced switchyard devoid of significant vegetation.	Wattle Glen S/S

3.8. The preventative strategies and programs to be adopted by the specified operator to minimise the risk of the specified operator's at-risk electric lines starting fires;

MTM has a Fire Prevention and Preparedness Plan (A2034) which is updated annually to cover whole of business fire risks. It is the parent document to this and related plans such as the Vegetation Management Plan, and Electric Line Clearance Plan. It defines at a high level the content of each plan and the responsibilities across the company.

In January 2015, MTM introduced a strategy to mitigate as far as reasonably practicable the risk of the 22kV 22/34 supply line initiating or contributing to a Bushfire event by de-energisation of 22/34 during declared Fire Ban and Catastrophic Fire Days. Refer L2-ELN-WOI-002 MTM Bushfire Mitigation Procedure Disconnection and Reconnection of 22kV Feeder 22/34

Bushfire mitigation strategies such as undergrounding or insulating overhead 1500V DC contact wiring are not applicable due to a requirement for train pantograph contact with overhead traction wiring. Similarly, it is not possible to implement REFCL on these lines. The MEC REFCL program does not impact MTM's bushfire risk. MTM's existing assets will, where affected, be isolated from the MEC's REFCL equipment to ensure their proper functioning and mitigate any increased failure risk due to REFCL operation.

MTM bushfire prevention program focuses on the uninsulated 1500V DC assets and involves at-risk asset inspections within regulatory inspection requirements, associated remedial maintenance works and vegetation clearance. Vegetation clearance is elaborated upon in the Electric Line Clearance Plan (L2-INF-PLA-002).

3.9. A plan for inspection that ensures that all of the specified operator's at-risk electric lines are inspected at regular intervals of no longer than 37 months

The majority of MTM rail electrical assets are supported by steel structures (for example Figure 1). The electrical assets and support fittings are inspected by MTM Electrical Lineworkers. The support structures, both poles and steel traction assets, are routinely inspected, managed by MTM's Structures department.

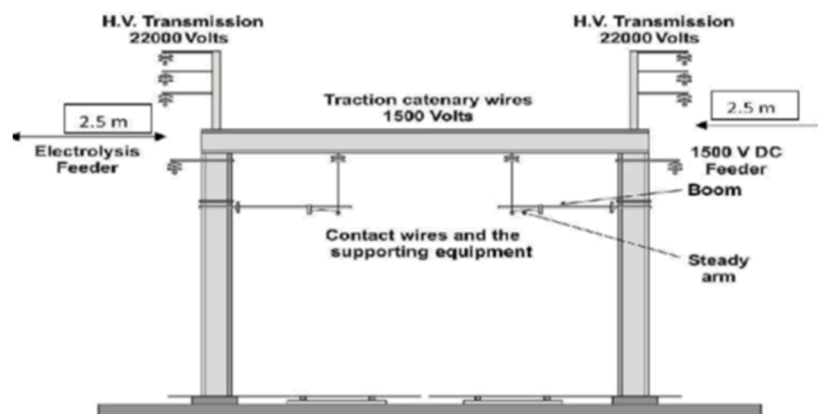


Figure 1: Typical Rail support structure for 1500V DC and 22kV assets

Electrical asset walking inspections of overhead assets are carried out on MTM's at-risk electric lines as defined in L2-ELN-SCH-216 Service Schedule Walking Examinations for Hazardous Bushfire Areas and L2-ELN-SCH-204 Service Schedule Walking Examination (AC Aerial Feeders). The inspections involve at-risk overhead electrical asset inspection in HBRA's for both low voltage (1500V DC) and high voltage (22kV assets). MTM's inspection frequencies comply with Bushfire Mitigation regulation frequencies as shown in Table 2.



Table 2: At-risk electric line 1500V DC & 22kV conductors & fittings Inspection Frequencies

Description	Scheduled Frequency
High Voltage 22kV Aerial Walking Examination Visual ground based electrical asset inspection: Aerial Lines; Vegetation, Insulators, Structures & Switches. Reference Doc L2-ELN-SCH-204	12 months (+/- 2 months) Regulatory frequency requirement for MECs inspecting private electric lines (for reference): less than 37 months
1500V DC Walking Inspections HBRA Visual ground based electrical asset inspection: Traction overhead wiring and associated fittings. Reference Doc. L2-ELN-SCH-216	36 months (+/- 1 month) Regulatory frequency requirement for MECs inspecting private electric lines (for reference): less than 37 months

Maintenance and repair of overhead line assets are scheduled as part of MTM's maintenance program defined in the technical maintenance plan L2-ELN-PLA-001. This involves walking inspections/observations of MTM overhead lines which are carried out by MTM's qualified Lineworkers. The assets inspected include cross-arms, insulators, conductors, spark gaps, switches and associated line hardware. Compliance requirements are defined in L2-ELN-MAI-020 Walking Examination (Bushfire Areas). Defects identified are then captured and prioritized in MTM's corrective work order data base with appropriate priorities applied to ensure they are rectified within a reasonable time.

MTM inspections also address the integrity of structures that support the at-risk electrical assets. Support structures are considered to be any structure supporting the 1500V DC catenary and train contact wires, 22kV wires and the guy wires that anchor structures.

Table 3: Structures supporting Electrical at-risk Lines Inspection Typical Frequencies

Description	Scheduled Frequency
Electrical Distribution, Service & Lighting Pole Inspections Visual ground-based asset inspection with specific requirements for Concrete, Steel and Timber Reference Doc L2-STF-PRO-008	33 months +/- 3 months Regulatory frequency requirement for MECs inspecting private electric lines (for reference): less than 37 months
Overhead Rail Structures Supporting 1500V DC and 22kV Assets Visual ground-based asset inspection Reference Doc. A5039	33 months +/- 3 months Regulatory frequency requirement for MECs inspecting private electric lines (for reference): less than 37 months

The MTM Pole Inspection Procedure (A4246) defines the method by which the pole inspections are completed. Pole Inspection Forms for use by inspectors are provided for Timber (A4245), Steel (A4244) and Concrete (A4243) poles. These templates and the procedure support a consistent inspection process.

Methodology of Inspection of overhead rail structures supporting 1500V DC and 22kV assets is defined in A5039 Structures Inspection Procedure.



3.10. Details of the processes and procedures for ensuring that each person who is assigned to carry out the inspections has satisfactorily completed a training course approved by Energy Safe Victoria and is competent to carry out such inspections

3.10.1. HBRA At-risk line inspection program inspector competency

Training requirement for undertaking inspection of MTM overhead electrical lines in HBRA (MTM at-risk lines) is ESV approved UET20619 - Certificate II in ESI - Asset Inspection training which may include recognition of prior learning (RPL) by suitably registered training organisations (RTO), unless training otherwise approved by ESV.

MTM competent Lineworkers shall work with a person holding Cert II in ESI – Asset Inspection to conduct the inspections, to assist the asset inspector by providing up to date and specialised traction network information and knowledge as required.

MTM currently programs its asset inspections so that inspections of the overhead lines are concurrent with the inspections of the supporting structures/poles, thereby utilizing the services of the same qualified asset inspector (refer section 4.10.2 below for competency of inspectors).

MTM has introduced high resolution binoculars and cameras as support tools to provide a more detailed evaluation of overhead HV line asset condition and photo capture of assets at time of inspection.

3.10.2. HBRA Pole and Overhead Structure Inspector Competency

The structures HBRA visual inspections shall be performed by suitably qualified inspector(s) as outlined below.

Training requirement for **Pole Inspectors** undertaking inspection of MTM Wood, Steel or Concrete Poles is listed below:

- The inspector(s) of **poles** must hold the following competencies:
 - UET20619 (or equivalent) – Certificate II in ESI – Asset Inspection;
 - UETDRAI001 - Inspect and test poles at and below ground level;

Training requirement for **Overheads Inspectors** undertaking inspection of MTM Overhead Structures (including portals, cantilever & masts), as well as substation switchyard structures supporting overhead electrical lines in HBRA (MTM at-risk lines) is listed below:

- The inspector(s) of **overhead structures** must hold the following competencies:
 - TLIB3098A Examination of steel structures AND
 - TLIB3088A Examination of concrete/masonry structures

Requirements for both Pole and Overhead Inspectors:

- New inspector(s) shall work under the supervision of an experienced inspector as approved by the MTM Structures Production/Asset Manager or his / her nominated representative.
- In addition, the Contractor shall demonstrate the competency of all nominated inspector(s) to the satisfaction of the MTM Structures Production/Asset Manager by providing evidence of prior satisfactory inspection. This evidence may include:
 - CV of inspector(s) including certificates of relevant qualifications such as engineering degrees or national competencies
 - References (from previous inspection clients)
 - Completed inspection forms from previous inspections completed by the inspector(s)
 - Digital copy samples of asset photos from previous inspections

Personnel undertaking the structures inspector role will be provided for their reference the MTM procedures (A4246) Pole Inspection Procedure and A5039 Structure Inspection Procedure (as applicable) and appointed by the Structures Manager or delegate.



Figure 2 Rail Substation Switchyard and Steel Rail Structures - example only

3.11. Details of the processes and procedures for ensuring that persons (other than persons referred to above) who carry out or will carry out functions under the plan are competent to do so;

MTM employees and contractors undertaking bushfire mitigation work other than asset inspectors (as defined in section 4.10), for example auditors and incident investigators to comply with the following procedures and processes: -

Auditors: L0-SQE-PRO-044 MTM Management of Compliance Activities.

Investigators: A2132 Investigation Management Guidelines

3.11.1. Arborists and Tree clearance Crew Qualification

MTM engages a number of Vegetation Management Companies (VMC) under contract:

- Tree Synergy for tree clearance inspections and clearance works;
- Eastern Tree Services (ETS) for tree clearance works;
- Evergreen for tree clearance works.

These contractors are required to hold the following competencies:

- National Certificate Level IV in Horticulture and Arboriculture qualification, including the "Assess Trees" module, or an equivalent qualification; and
- At least 3 years or under supervision of a certified and experienced arborist

The VMC personnel are required to have current training based on functions performed (i.e. ground crew, inspections or EWP operation). VMCs provide a skills query report to support refresher training compliance for arborists and tree clearing crews. VMCs also undertake training compliance inspections on their work sites. Compliance results are reviewed as part of MTM/VMC contract performance meetings. MTM (SER) also undertakes contractor employee competency audits to validate training records compliance.

3.12. The operation and maintenance plans for the specified Operator's at-risk electric lines:

3.12.1. In the event of a fire

MTM's Emergency and Crisis Management Plan, has been developed in consultation with key internal and external stakeholders including external Emergency Services.

MTM is deemed as a Support Agency in relation to Emergency Management. Within the plan MTM's response is dependent on the incident level.

The role of MTM's Crisis Management Team will be one of support to the agencies such as SES, CFA, FRV and Victorian Police, including matters relating to traction electricity supply and security.

3.12.2. During a total fire ban day; and during a fire danger period

Rail services may continue on fire ban days, however, speed restrictions, CFA hot work permits and a review of work plans would apply. Also refer Fire Prevention and Preparedness Plan (A2034)

MTM electricity supply is provided by Electrical Network Companies. On Fire Ban days and Catastrophic Fire Days supply restoration could be delayed due to restrictions on auto re-closures. MTM has developed contingencies to avoid the potential of stranded trains from loss of a network supply. PTV also has a Summer Season Preparation Plan involving LO-OPS-PRO-020 Catastrophic Fire Day Rail Service Restrictions impacting MTM rail services.

A specific plan has been developed for the high voltage overhead line that runs in the HBRA's between Ferntree Gully Substation and Upwey Substation, referred to as 22/34, which involves de-energising and restoration of this supply line during Catastrophic Fire and Total Fire Ban periods. Details of the procedure can be found in A4033 Electrical Networks Disconnection and Reconnection of 22kV Feeder 22/34 Work Instruction.

Due to the safety risks associated with passengers being stranded on trains without power, MTM's normal reclosure procedures for the 1500V DC supplies apply.

3.12.3. Other than during a fire danger period, total fire ban day or fire

MTM has a Technical Maintenance Plan for both structures (A4487 Structures Technical Maintenance Plan) and electrical assets (A4115 Electrical Networks Technical Maintenance Plan). These plans detail all the various types of inspections and planned preventative maintenance activities to be undertaken on assets across the network, as part of at-risk electric lines or otherwise. The goal of these plans is to ensure the condition of assets remains appropriate at all times, including in the lead up to a fire season.

Compliance with the requirements of these plans is monitored using MTM's maintenance management system, Ellipse, and reported to management and to the state as part of franchise commitments.

3.13. The investigations, analysis and methodology to be adopted by the specified operator for the mitigation of the risk of fire ignition from its at-risk electric lines

The overall methodology and approach to investigating and analysing fires is contained within the MTM Fire Prevention & Preparedness Plan (A2034)

The principle objective of fire prevention at MTM is to minimise the risk of ignition and spread of fires on the MTM network through the following actions:

- Maintain vegetation clearances around electrical network assets.
- Identify and manage bushfire hazards elsewhere in the infrastructure leased areas within the rail reserve.
- Control vegetation growth on infrastructure leased land to a standard consistent with that required by the local municipality or other landowner.
- Liaise with the CFA, FRV, DEECA and municipal Fire Prevention Officers, to identify and agree on necessary actions to attend to other identified bushfire hazards, within the availability of funds and resources.
- Analyse fire incident reports, inspection reports and audit findings to identify trends and high-risk areas.
- Annual inspections of at-risk electric lines

Fire incidents are investigated in accordance with A2132 Investigation Management Guideline. The purpose of the procedure is to define the requirements for incident investigation of any incident affecting the safety of persons, property or railway operations and that have caused, or have the potential to cause, injury, illness, damage and/or property loss on MTM premises

Over the course of the year from August 2022 to 31st March 2023, 52 fire start incidents were identified and captured in MTM's INX Incident Reporting and Investigation System. A review of the location and nature of these incidents indicated that none were attributable to MTM's at risk electric lines and therefore, no investigations of fire starts due to at risk electric lines are relevant to this plan.

3.14. Details of the processes and procedures by which the specified operator will monitor the effectiveness of the plan

The carrying out of the preventative inspections and corrective actions is managed through MTM's enterprise management system, Ellipse, in accordance with the relevant Technical Maintenance Plan. Any work orders generated which are not completed within the required timeframe are reviewed weekly and escalated to senior management and the risk assessed and mitigated so far as is reasonably practicable until the required work is able to be completed.

The effectiveness of the plan shall be monitored annually by a Post Fire Season Review, held after the end of the fire danger period. The Electrical Networks Manager, Structures Manager and other relevant staff shall review the incidence of fires in the previous fire danger period and determine any required alterations or improvements to the Bushfire Mitigation Plan for the following year.

As part of the Safety & Environment Internal Audit Program, MTM annually audits Bushfire Mitigation and Vegetation Management as per the Safety & Environment Internal Audit Program Procedure A1019. MTM also conducts ad-hoc discipline specific audits for compliance to individual requirements, i.e. Hot Work Permits, Technical Maintenance Plans etc.

3.15. The policy of the specified operator in relation to the assistance to be provided to fire control authorities in the investigation of fires near the specified operator's at-risk electric lines.

In the event of an investigation into a fire near MTM's at-risk electric lines, MTM commits to cooperate with the investigating authority through the reasonable provision of access to site and information readily available to MTM.

4. Exemption

No exemption requested.

5. Availability of ESV approved MTM's Bushfire Mitigation Plan

Availability Details: -

Business Address:	Level 16 700 Collins Street, Docklands VIC 3008
Postal Address:	PO Box 1880 Melbourne VIC 3001
Telephone No.:	(03) 9610 2400
Office Hours:	9:00 AM - 5:00 PM Mon- Fri excluding public holidays
On MTM's Internet Site:	https://www.metrotrains.com.au/contact-us/

6. Abbreviations

BMP	Bushfire Mitigation Plan
HBRA	Hazardous Bushfire Risk Area
INX	MTM's software platform to manage risks, corrective actions, audits & investigations.
LBRA	Low Bushfire Risk Area
Metrol	Metropolitan Train Control Centre
MTM	Metro Trains Melbourne
PTV	Public Transport Victoria



7. Definitions

Nil

8. Document hierarchy

8.1. Parent document

Critical Risk Primary Document – Fire Standard (A2258).

8.2. Subordinate documents

Nil.

9. References

Electricity Safety Act 1998

Electricity Safety (Bushfire Mitigation) Regulations 2023

Electricity Safety (Electric Line Clearance) Regulations 2020

Electric Line Clearance Code of Practice 2015

L2-INF-PLA-001/A4078	Electric Line Clearance Plan 2021-2024
L2-ELN-MAI-020/A4577	Electrical Networks Maintenance Instruction Walking Examination Bushfire Areas
A1019	Safety & Environment Internal Audit Program Procedure
A2130	Incident Management and Reporting Procedure
A2132	Investigation Management Guideline
L2-STF-PRO-008/A4246	Pole Inspection Procedure
L2-ELN-PLA-001/A4115	Electrical Networks Technical Maintenance Plan
A4487	Structures Technical Maintenance Plan
L4-STF-FOR-037/A4243	Pole Inspection Form – Concrete Poles
L4-STF-FOR-038/A4244	Pole Inspection Form – Steel Poles
L4-STF-FOR-039/A4245	Pole Inspection Form – Timber Poles
A5039	Structures Inspection Procedure
L4-ELN-INF-007/A4234	Overhead Wiring TMP Zone Map
L0-SQE-PRO-031/A2023	Integrated Risk Management Procedure
A2034	Fire Prevention and Preparedness Plan
L0-OPS-PRO-020/A6186	Operational Procedure for Declared Code Red Days
A4033	Electrical Networks Disconnection and Reconnection of 22kV Feeder 22/34 Work Instruction
L2-ELN-SCH-216/A4578	Electrical Networks Walking Examination (Bushfire Areas) Service Schedule
L2-ELN-SCH-204/A3969	Electrical Networks 22kV Aerial Feeders Walking Examination Service Schedule.



10. Appendices

10.1. Appendix 1 - Prescribed Particulars of Bushfire Mitigation Plan

Regulation	Electrical Safety (Bushfire Mitigation) Regulations 2023 Prescribed particulars for bushfire mitigation plans—specified operators	BMP Reference
6 (a)	Name, address and telephone number of the specified operator;	Section 3.1
6(b)	Position, address and telephone number of the person who was responsible for the preparation of the plan	Section 3.2
6 (c)	Position, address and telephone number of the persons who are responsible for carrying out the plan;	Section 3.3
6 (d)	The telephone number of the specified operator's control room so that persons in the room can be contacted in an emergency that requires action by the specified operator to mitigate the danger of bushfire.	Section 3.4
6 (e)	The bushfire mitigation policy of the specified operator to minimise the risk of fire ignition from its at-risk electric lines;	Section 3.5
6 (f)	The objectives of the plan to achieve the mitigation of fire danger arising from the specified operator's at-risk electric lines;	Section 3.6
6 (g)	A description, map or plan of the land to which the bushfire mitigation plan applies, identifying the location of the specified operator's at-risk electric lines;	Section 3.7 & Appendix 2 - At Risk Electric Lines Maps
6 (h)	Preventative strategies and programs to be adopted by the specified operator to minimise the risk of the specified operator's at-risk electric lines starting fires	Section 3.8
6 (i)	A plan for inspection that ensures that all of the specified operator's at-risk electric lines are inspected at regular intervals of no longer than 37 months;	Section 3.9
6 (j)	Details of the processes and procedures for ensuring that each person who is assigned to carry out the inspections referred to in paragraph (i) has satisfactorily completed a training course approved by Energy Safe Victoria and is competent to carry out such inspections;	Section 3.10
6 (k)	Details of the processes and procedures for ensuring that persons (other than persons referred to in paragraph (j)) who carry out or will carry out functions under the plan are competent to do so;	Section 3.11

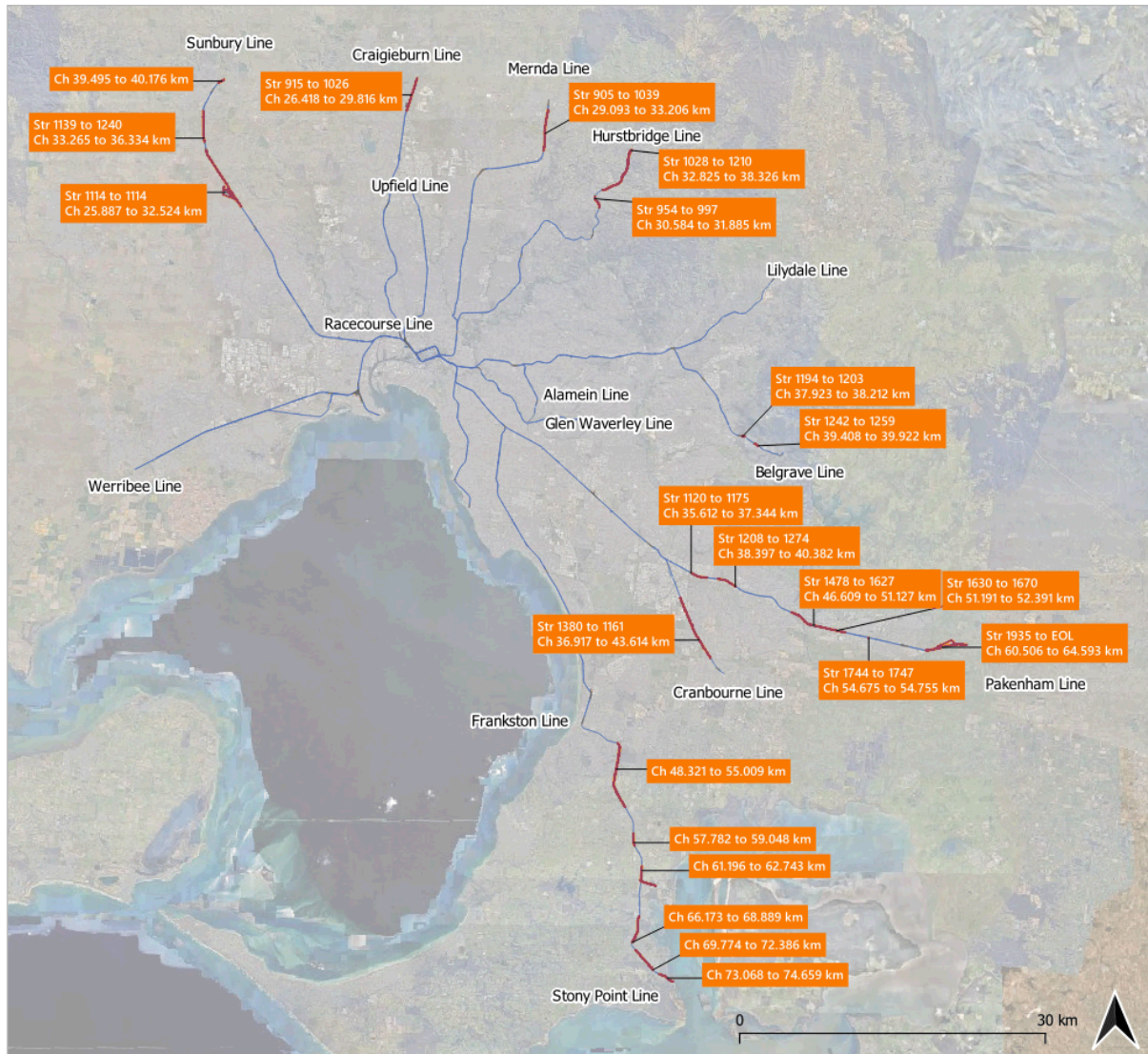


Regulation	Electrical Safety (Bushfire Mitigation) Regulations 2023 Prescribed particulars for bushfire mitigation plans—specified operators	BMP Reference
6 (l)	The operation and maintenance plans for the specified operator's at-risk electric lines- (i) in the event of a fire; and (ii) during a total fire ban day; and (iii) during a fire danger period	Section 3.12
6 (m)	The investigations, analysis and methodology to be adopted by the specified operator for the mitigation of the risk of fire ignition from its at-risk electric lines	Section 3.13
6 (n)	Details of the processes and procedures by which the specified operator will: - (i) monitor the implementation of the bushfire mitigation plan; and (ii) audit the implementation of the plan; and (iii) identify any deficiencies in the plan or the plan's implementation; and (iv) change the plan and the plan's implementation to rectify any deficiencies identified under subparagraph (iii); and (v) monitor the effectiveness of inspections carried out under the plan; and (vi) audit the effectiveness of inspections carried out under the plan;	Section 3.14
6 (o)	The policy of the specified operator in relation to the assistance to be provided to fire control authorities in the investigation of fires near the specified operator's at-risk electric lines.	Section 3.15

Section	Electricity Safety Act 1998	BMP Reference
83BA (3)	Section A specified operator must cause a copy of an accepted bushfire mitigation plan to be available for inspection- (a) on the operator's Internet site; and (b) at the operator's principal office in the State during ordinary business hours.	Section 5

10.2. Appendix 2 - At Risk Electric Lines Maps

10.2.1. Overview

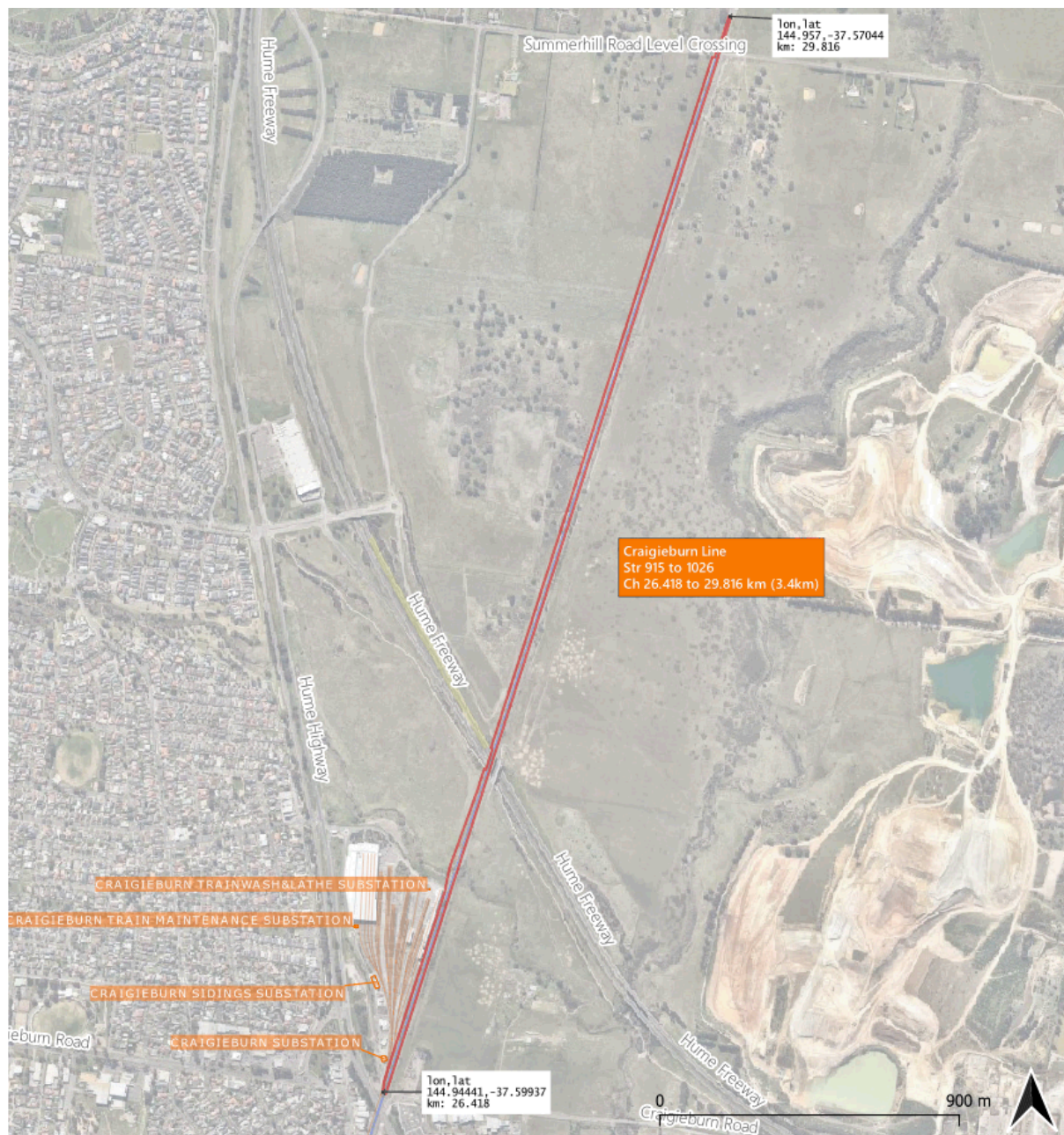


10.2.2. Belgrave Line





10.2.3. Craigieburn Line

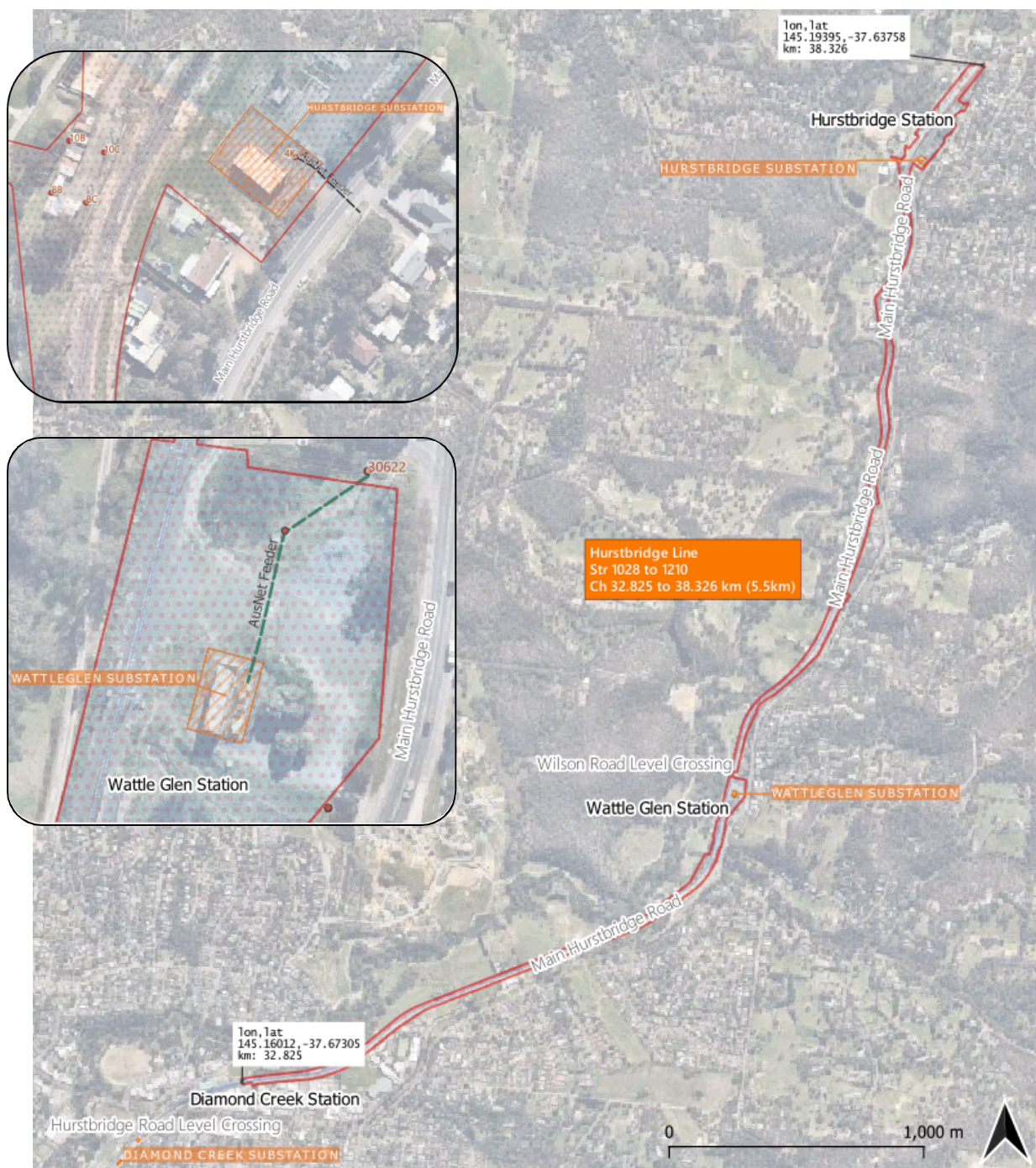


10.2.4. Cranbourne Line



10.2.5. Hurstbridge Line

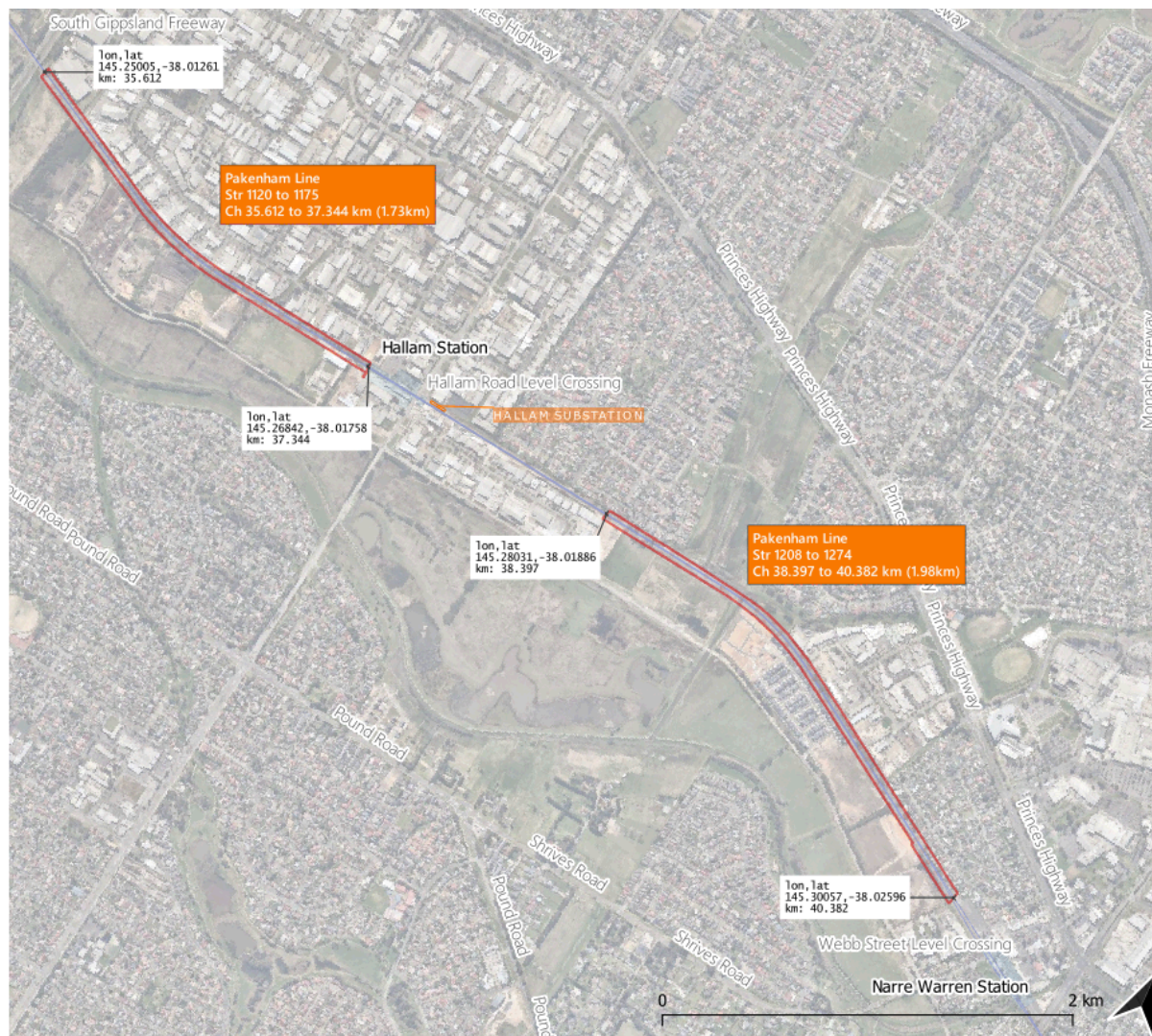


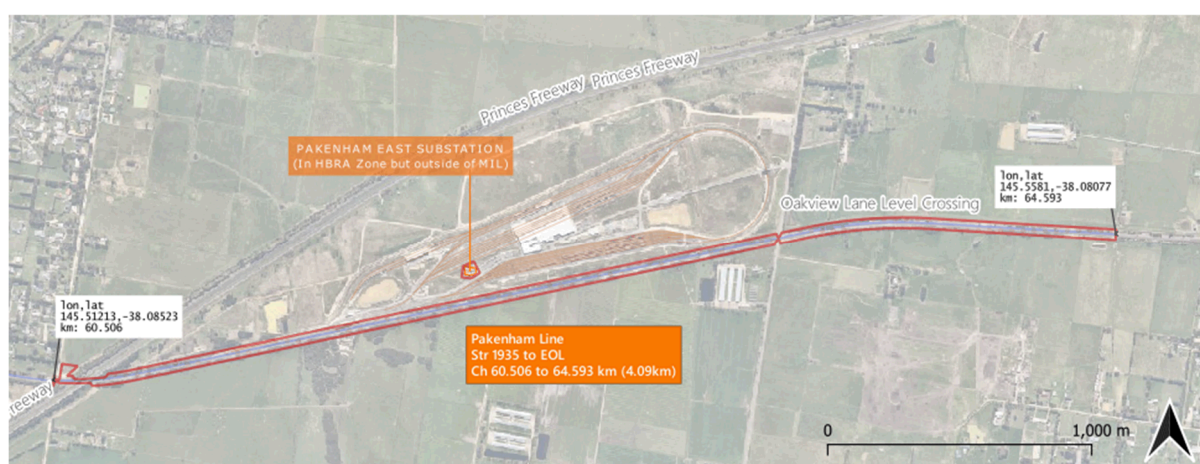
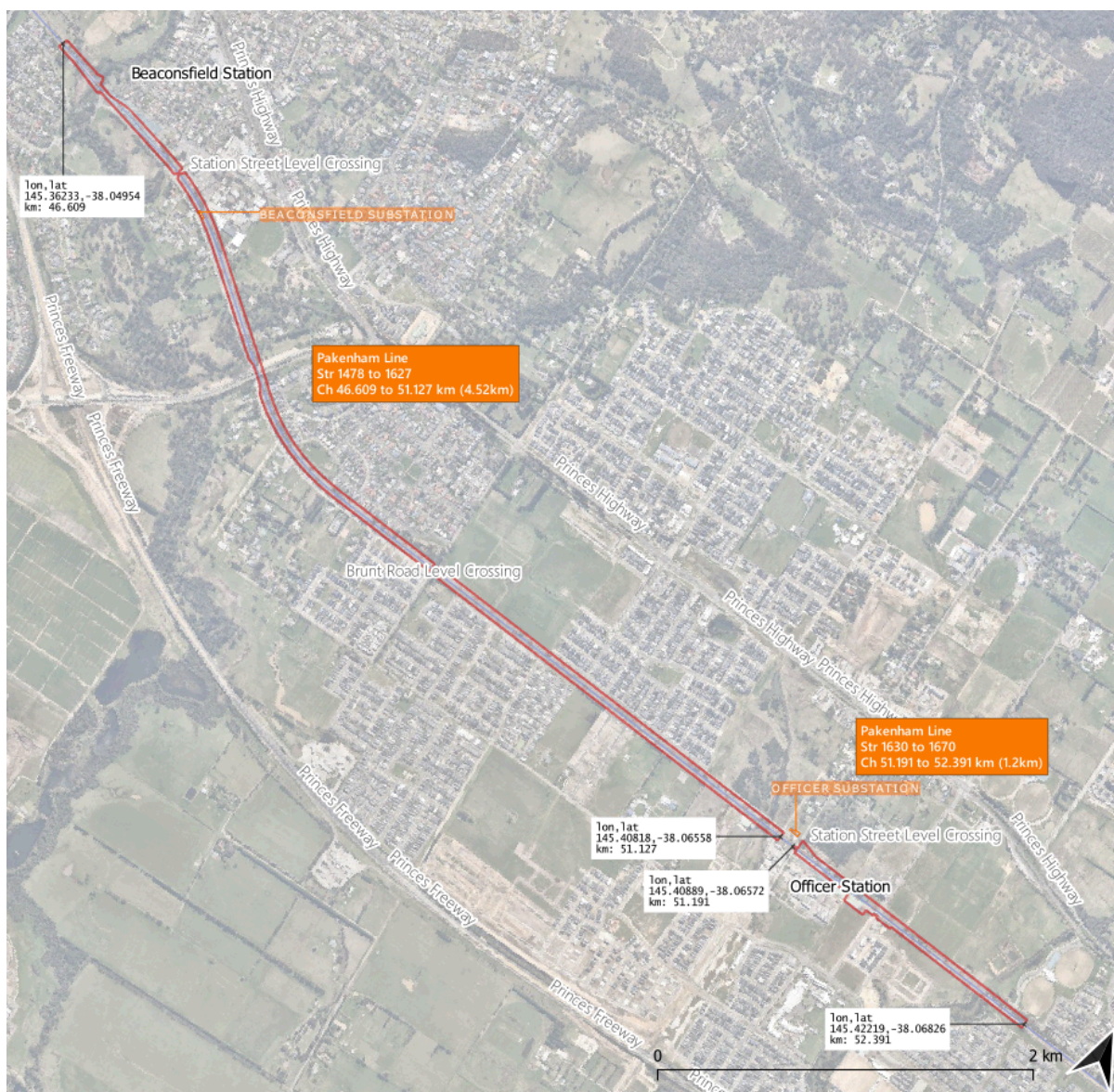


10.2.6. Mernda Line



10.2.7. Pakenham Line





10.2.8. Sunbury Line

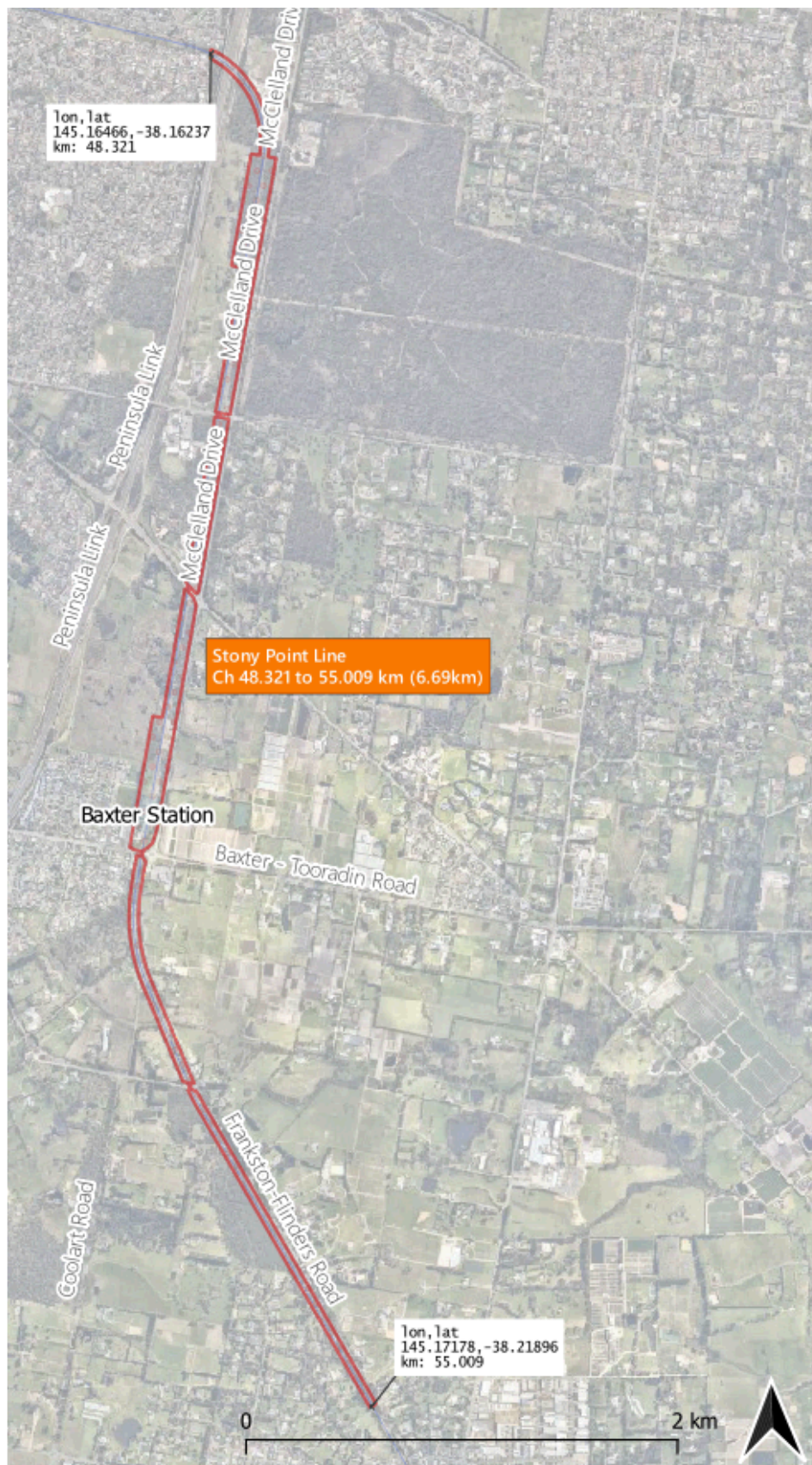




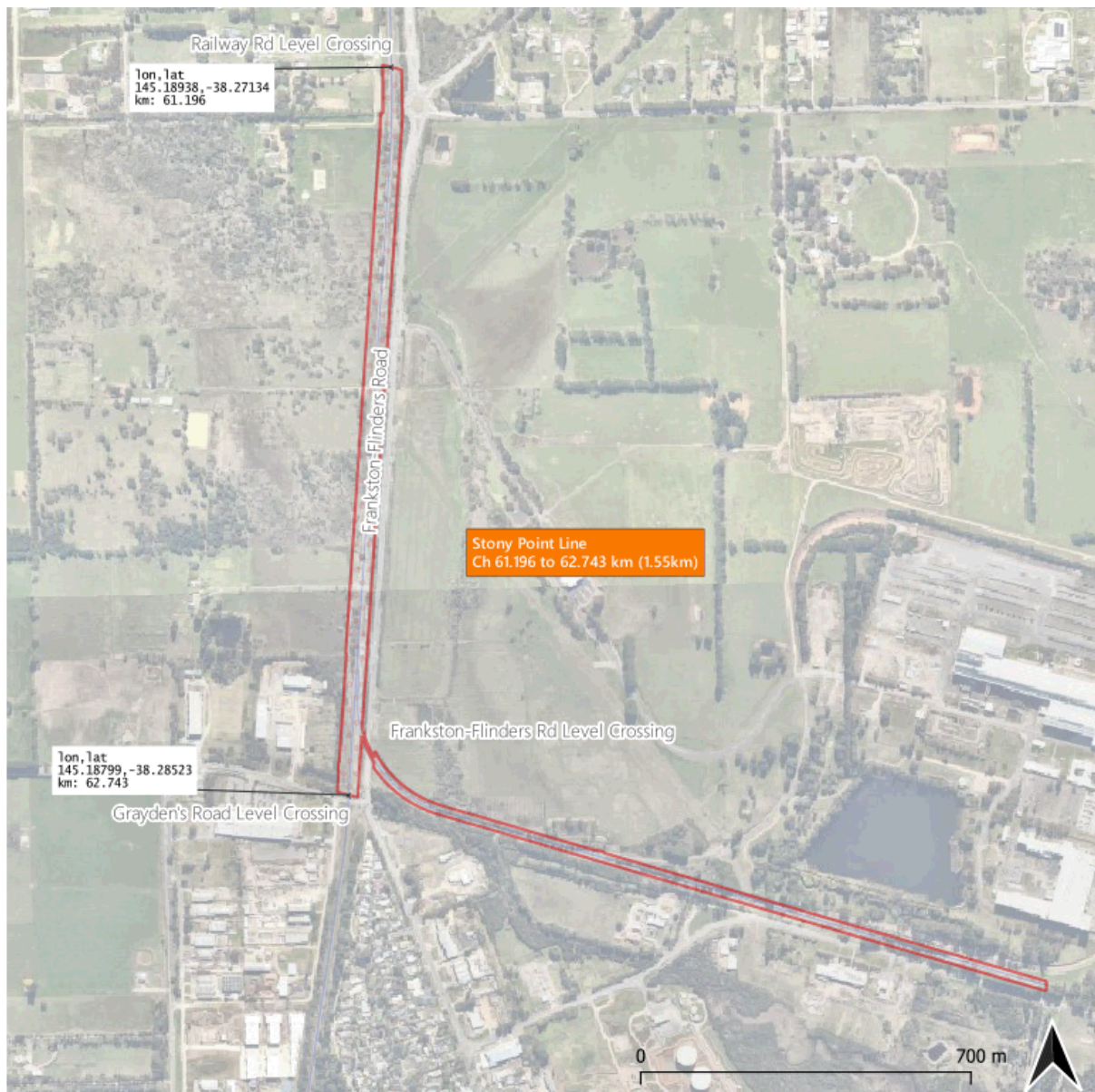




10.2.9. Stony Point Line













10.3. Appendix 3 - MTM Vegetation and Fire Mitigation Plans

METRO KEY DELIVERABLES & MILESTONES Bushfire Season Readiness	Review/Current status	Division Accountability and Stakeholders
Electric Line Clearance Plan L2-INF-PLA-001/A4078	Review Date: Prior to 31 March each year	Infrastructure
Bushfire Mitigation Plan L2-ELN-PLA-003/A4032	Review Date: Prior to 1 July each year	Infrastructure
Fire Prevention & Preparedness Plan A2034	Next Review Date: 18/12/2023	Emergency Management Advisor - Author
Emergency & Crisis Management Plan A2016	Next Review Date: 23/12/2023	Chief Executive Officer
BUSHFIRE SEASON	Nominally 1 Nov – 31 March.	
Post Fire Season Review Incorporated in MTM Fire Prevention and Preparedness Plan A2034 sections 10.4 and 14.2	Prior to 1 July each year	Emergency Management Advisor - Author