Attachment 1 - Bushfire Management Strategy (Total Pages = 50)

Bushfire Management Strategy for Council Owned and Managed Land 2015-2025

City of LAUNCESTON

City Of Launceston Bushfire Management Strategy 2015

Version: Draft for public comment, May 2015.

Produced by:
Ground Proof Mapping (GPM) Pty Ltd.
P.O. Box 1027
Launceston TAS 7250
groundproofmapping.com.au

City of Launceston
Town Hall, 18-28 St John St
PO Box 396
Launceston 7250

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City of LAUNCESTON

1 INTRODUCTION AND PURPOSE

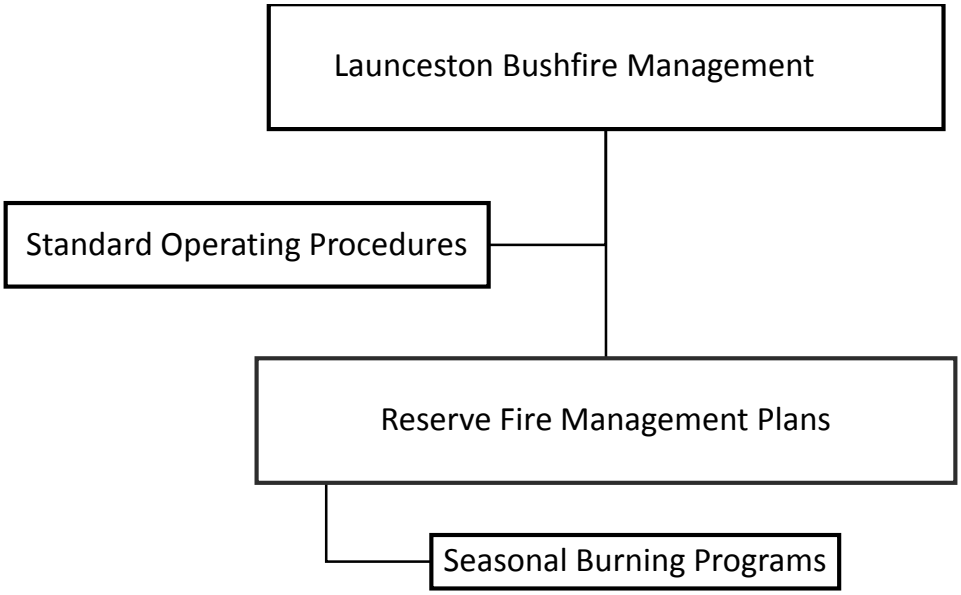
The City of Launceston owns and manages approximately 400 hectares of open forest, woodland and grassland vegetation in 34 reserves. These reserves are spread across the urban area and are important for public recreation, visual amenity and conservation of natural flora and fauna. They include significant popular areas such as Cataract Gorge Reserve and Punchbowl Reserve and also numerous small parcels of land that have been set aside as part of expanding urban development and measure only a few hectares in size. Cataract Gorge is additionally an important regional tourism destination. The reserves are almost all distinguished by their proximity to residential properties, often completely surrounding the reserves. A list of the reserves and area of each reserve is found in Appendix 1. The general location of the reserves is show on the set maps attached to this strategy in Appendix 3.

Fire is an integral part of the landscape in this part of Tasmania. The majority of the vegetation types in the reserves are fire dependent species, and wildfires will occur in these reserves at some time. It is impossible, and not desirable to completely exclude fire from these areas. However planned fire and other fuel management practices can reduce the intensity of wildfires when they occur, reducing the risk of damage to assets inside and outside the reserves, improving visitor safety, and additionally enhance flora and fauna values.

This document sets out the City of Launceston's strategic approach to fire management of the 34 reserves. It describes the context for fire management of the reserves which are largely in an urban setting, relationships to state-wide fire management systems, procedures and initiatives, and other Council plans and programs. The timing of this strategy follows a number of significant wildfire events in Tasmania and Victoria in recent years that have led to a review and publication of updated policies and procedures for wildfire prevention, safety and control. Additionally the most recent climate change modelling predicts a worsening in the fire season for this region. This strategy will assist Council's preparedness for a likely increased frequency of severe fire events.

It is important to note that Fire Management Plans have existed for most of the reserves for many years and there has been an active program of annual fuel reduction and track maintenance. However these plans are in need of review, and the approach taken is a new over-arching Strategy document covering all the reserves, complemented by updated specific Reserve Fire Management Plans. Some parks only require planned burns in selected areas within the park and some parks may require alternative treatments to planned burning such as grass cutting or manual fuel removal.

This Strategy Document describes a number of actions and is accompanied by a set of Standard Operating Procedures (SOP's) for fire management operations. Over the following two years, detailed Management Plans will be prepared for each reserve. The planning hierarchy for this document and the related management plans is shown below.



This version of the Strategy is a Draft, which has been approved by Council's Strategic Planning and Policy Committee. After receiving public comments, a finalised Strategy will be provided to Council for approval prior to being adopted as a Council Strategy. In the preparation of this Strategy, Council has consulted the Tasmania Fire Service, Parks and Wildlife and the Tamar Fire Management Area Committee. This Strategy is intended to be a 10 year strategy with a minor review at five years. The Strategy was prepared by Ground Proof Mapping Pty Ltd (GPM) in 2015.

2 OVERVIEW OF THE RESERVES

Significant Reserves for the Launceston Community

Map 1. Cataract Gorge, Gees Hill (193.96ha) , Hardwicke St (32.53ha) and Havelock St (7.99ha) – The regionally significant spectacular Cataract Gorge area and adjacent Gees Hill. Hardwicke and Havelock Reserves are located close by. These Reserves are connected by continuous bushland on mostly public land and some private property. The Trevallyn NRA managed by PWS is located to the North. Cataract Gorge contains a large number of threatened species, significant infrastructure and receives thousands of local, intrastate and interstate visitors each year. A high power transmission line easement passes through the Cataract Gorge and Hardwicke Reserves.

A walking track in Punchbowl Reserve with fuel reduced area on the right.

Map 2. Carr Villa Flora Reserve and Memorial Park (57.98ha). – Located in Kings Meadows, this is Launceston's main cemetery and adjoining parklands. The Reserve and Park contain nine threatened species, predominately in the flora reserve. The majority of the area is dry forest.

Map 3. Punchbowl Reserve (25.64ha) – a locally important and popular picnic area for Launceston residents. Approximately 50% of the areas of the reserve is forest, dominated by dry *Eucalyptus amygdalina.* The golf course on the southern boundary continues south to Carr Villa Reserve, and provides an important wildlife corridor between these two reserves.

Urban Reserves that predominantly serve the immediate residential area and largely surrounded by urban blocks

West Launceston Area & Trevallyn

Map 4. Freelands Lookout (1.92ha) – a small reserve of bushland on the top of hill with a lookout tower in Trevallyn. Primary access from Bald Hill Road.

Map 5. West Launceston Community Park (5.53ha) – a community park with a playing field, open grassland and small patches of trees. Surrounded by urban residential blocks.

Map 5. Christina Place Park (0.48ha) - a small park of grassland and a few trees surrounded by approximately 12 properties in West Launceston.

Map 5. Thomas Martin Park (0.47ha) – a small park of grassland and a few trees close to West Launceston Community Park, surrounded by 19 urban residential blocks. Access via Jessica Place, Sarah Court and Lucy Place

Map 5. Ingamells Reserve (0.87ha) - small lightly wooded bush area surrounded by relatively new housing developments.

Map 5. Pamela Court Reserve (2.37ha) – grassland areas with few trees, surrounded by relatively new housing developments.

Map 6. Fraser Reserve (5.64ha) – largely bushland in close proximity to Cataract Gorge reserve. The Gorge reserve boundary is approximately 100 metres away through residential properties with residences and sparse vegetation

Map 6. Woods Reserve (7.87ha) - a significant area of lightly wooded *Eucalyptus viminalis* forest with large grassy areas. Surrounded by urban residential blocks, and in close proximity to Cataract Gorge

Woods Reserve

Map 6. Salisbury Crescent Park (0.75ha) – a small patch of bush almost contiguous with Woods Reserve. A strip of residential properties separate these two reserves.

Map 6. Cambridge Street Reserve (4.31ha) – a small area of bush in close proximity to Woods Reserve, encircled by residential properties.

Map 6. Granville St Reserve (6.92ha) – an area of woodland, which is contiguous to a similar sized area of wooded private property to the south. The North, East and Western boundaries are urban residential areas.

<u>Ravenswood & Waverly Area</u>

Map 7. Ravenswood Bushland Reserve (34.26ha) – spare bushland with grass on the northern boundary of Ravenswood. Contiguous to a large area of private land of similar vegetation. The south western facing boundary joins approximately 20 residential properties.

Map 8. Vermont Road Bushland Park (5.03ha) – a long narrow strip reserve in Ravenswood of lightly wooded sheoak bounded by residential properties and Wildor Cres to the west and Vermont road to the east.

Map 9. Distillery Creek Gorge (13.26ha) - a historically important public recreation reserve with significant remaining Eucalyptus forest. It also contains an area of significant weed infestation.

Map 10. Tasman Highway Bushland Reserve (8.36ha) – a block of acacia, sheoak and grassland bounded by industrial properties along St Leonards Road to the west and pasture to the east.

Rocherlea Area

Map 11. Rocherlea Recreation Ground (8.20ha) – grassland reserve with a sporting ground and hall, which backs onto a large area of private land which is predominately cleared land with scattered vegetation.

Map 11. Rocherlea Old Rail Trail (5.94ha) – a 4 km section of the old rail reserve. Grassland and scrub, and surrounded by large areas of grassland on either side and in part a boundary to the Mowbray Golf Course to the West.

Map 12. Ti Tree Crescent Park (5.49 ha) – sparse forest on the slope of a hill from Ti Tree Crescent to a water tower.

Rocherlea Recreation Ground

Youngtown Regional Park

Kings Meadow Area

Map 13. Machens Reserve (4.19ha) - predominately grass and some scattered trees, running between Diprose and Chifley Streets, surrounded by residential properties

Map 14. Meadow Ridge Reserve (1.2ha) - a small area of scrub and forest contiguous to a larger area of reserve with forest important for conservation and scenic value.

Map 15. Norwood Bushland Park (0.67 ha) – bush with light understorey adjacent to Norwood Primary School, and bounded by urban residential blocks to the North and East.

Map 16. Youngtown Regional Park (30.01ha), Miami Place (0.61ha) and Bluegum Parks (3.09 ha) – Youngtown Park is a large linear park following a small creek surrounded by new housing areas. It is a significant open space and recreation area for the locality. It is a mix of patches of grassland and patches of sparse forest, including one threatened community.

Reserves outside Launceston City, including sporting grounds and roadside picnic areas

Map 17. Karoola Recreation Ground (4.68 ha) – a predominately non-forest area with a sporting ground and pavilion surrounded by farmland.

Map 18. Lilydale Falls Reserve (18.15ha) – a picturesque roadside reserve with a well-established picnic ground and walking track to a small waterfall. It is located 3 km north of Lilydale. The reserve is dominated by dry *Eucalyptus obliqua* forest and surrounded by pasture.

Map 19. Los Angelos Bushland Reserve (2.59ha) - a small area of dry sparse forest adjacent to a new rural housing development at Swan Bay, approximately 20kms from Launceston

Map 20. Merthyr Park (50.1ha) – a significant block of woodland forest mostly surrounded by pasture 3 km North West of Lilydale. Dissected by Second River Road, the northern part of the reserve is contiguous to privately owned native forest.

Myrtle Park

Map 21. Myrtle Park (29.4ha) – halfway between Launceston and Scottsdale on the Tasman Highway, this reserve is dissected by the Saint Patrick River. The smaller Eastern side is a grassy camping ground and recreation area, popular with campervans and tents. The larger western side of the Reserve is predominantly dense wet Eucalypt Forest. This area also contains a small patch of a threatened vegetation community, Eucalyptus ovata forest and woodland.

Map 22. Overview Map – this map shows the City of Launceston Region and location of all reserves.

3 GUIDING POLICIES AND STATUTORY RESPONSIBILITIES

Council Policy and Documents with Relevance to this strategy

The City of Launceston has recently undertaken a Strategic Planning Process. The **Strategic Plan 2014** contains a number of Priority Areas, Goals and Key Directions. This strategy is one key document to contribute to the achievement of two 10 Year Goals, and directly responds to Key Direction 2.1.1

Priority Area	*2*	*A city where people choose to live*
10 Year Goal	*2.1*	*To promote Launceston as a unique place to live, work, study and play*
Key Direction	*2.1.1*	*To continue to offer an attractive network of parks, open spaces and facilities throughout Launceston.*
Priority Area	*5*	*A city that values its environment*
10 Year Goal	*5.1*	*To reduce the impacts on our natural environment and build resilience to the changing intensity of natural hazards.*

The **Launceston Strategic Tourism Plan** notes Cataract Gorge as a key tourism development site requiring further investment. The Reimagining the Gorge project due for completion mid 2015 will set out an agreed vision for future developments. Effective fire management and protection of assets is essential to realizing the goals of these tourism and reserve developments plans.

All of the reserves covered in this Strategy are noted in the Launceston Council **Open Space Strategy 2007** (currently under revision). Many of these reserves are central or primary Open Space, to which other smaller reserves can be linked to, creating extended recreation areas, and important bushland links. Launceston has long been known for its parks and gardens, and the Councils' Open Space Strategy aims to continue to provide significant areas of opens space for the community. The Open Space Strategy is based on the principles that open space provides an important role in the community contributing to environmental, economic and social well-being. Appropriate fire management of these reserves is essential to maintaining the quality of these Open Space areas. This Fire Management Strategy will contribute to achieving the Vision set out in the Open Space Strategy.

Many of the reserves also include important Play Spaces. Councils **Play Space Strategy 2013** has a focus on spaces for play as social and family recreation activity. It identifies 65 play spaces of which 12 occur within the reserves covered in this plan. The equipment at these play spaces are valuable assets to be protected, and more broadly, the quality of the play space environs are important to the enjoyment and use of the site. It is important for maintaining the popularity of these play spaces that the fire hazard around these sites is demonstrably reduced and actively managed.

The **City of Launceston Emergency Management Plan** describes the response process and approach to a bushfire emergency in the Council Municipality. The Emergency Management Governance and Responsibilities is described. For 'fires-urban, privately managed and rural land', Council is responsible for property identification, road closures and providing plant and machinery. Fire management plans for individual reserves will be an invaluable source of information for any fire in or adjacent to a reserve.

Councils **Fire Hazard Management Procedure 2013** describes Councils approach to management of fire hazards on private property and issuing of abatement notices. Council has the power under the Local Government Act 1993 as noted below to request landowners with fire hazards to remove the hazards by a specified date. If not removed, Council can enter the property to remove the hazard and seek costs from the landowner. Council document Reference number 10 – Pr – 009.

Council Policy Statement

The City of Launceston is committed to managing its bushland reserves in order to minimise the risk from bushfire to life and property, to facilitate habitat management and enhancement, and to ensure the long term sustainability of natural resources within those reserves. It is committed to managing the fire risk to ensure Launceston residents can freely recreate in these reserves, and enjoy in perpetuity the quality open space and the natural environment that these reserves offer.

State Legislation and Policy

The main responsibilities of land owners/occupiers under the **Fire Service Act 1979**, are:

- To take all reasonable precautions to prevent any fire lit on their property from spreading onto neighbouring land **(Section 63)**
- To take diligent steps to extinguish or control any unauthorised fire on their property during a fire permit period, and to report that fire to the Tasmanian Fire Service, or the Police **(Section 64)**

Additionally **Section 66 (1b)** of the Act requires persons lighting fires within the permit period with "the effect of clearing land of vegetation or for a like purpose" to do so "in accordance with the conditions of a permit granted by a fire permit officer"

Furthermore, **Section 66(12)** provides that "A person who lights and controls a fire in accordance with the conditions of a permit granted to that person under this section is exempt from the *Environmental Management and Pollution Control Act 1994".*

The **Local Government Act 1993, Section 93** allows a council to impose a service rate on rateable land for the purpose of providing fire protection.

Section 200 of the Act requires a council to issue a **hazard abatement notice** whenever it is satisfied there is, or is likely to be, a fire risk on any privately owned land. If the person served with an abatement notice fails to comply with the notice within the specified time, the council is empowered under **Section 201** of the Act to carry out the action specified in the notice, and recover the cost from the owner or occupier of the land.

The Weed Management Act 1999 provides a legislative framework for weed management throughout Tasmania. It includes a list of "Declared Weeds" which have statutory "Weed Management Plans" outlining how they are to be controlled. Actions in Weed Management Plans can be enforced through the Act. For many weeds, fire is a critical tool for control, and conversely with poor management can increase a weed problem. It is desirable to approach weed and fire management together to reduce weed problems. A strategic approach to management of weeds in association with fire will be most effective and addressed in each Reserve Fire Management Plan. Operational Guidelines are described in **SOP 1**.

The **Threatened Species Protection Act (TSPA) 1995**, provides for "the protection and management of threatened native flora and fauna, and to enable and promote the conservation of native flora and fauna". There are 82 known threatened flora sites and 13 known threatened fauna sites across 19 of the Reserves. A large number (39) of these sites occur with the Cataract Gorge Reserve. **Section 51(a)** of the Act states states that: "A person must not knowingly, without a permit - take, trade in, keep or process any listed flora or fauna". The Act defines 'take' as including: "kill, injure, catch, damage, destroy and collect". Accordingly, the implementation of a planned burn may require a permit from DPIWE. As there may be many benefits to threatened species from burning, a more strategic approach would be to agree on management action for threatened species as part of the Fire Management Plan, rather than consideration on an individual burn.

The **Environmental Management and Pollution Control Act 1994** provides for the regulation of smoke, amongst other pollutants. The objectives of the Act stated in Schedule 1 include

"3(c) to regulate, reduce or eliminate the discharge of pollutants and hazardous substances to air, land or water consistent with maintain environmental quality"

However, note that a person lighting and controlling a fire in accordance with the conditions of a permit issued under Section 66 of the Fire Services Act 1979, is exempt from the provision of this Act. As such, providing Council has a permit for fuel reduction burning, this Act does not apply.

The **Environment Protection Policy (Air Quality) 2004** covers "planned burning" which includes low intensity burning for fuel reduction and ecological management, but does not include back burning to control wildfires. **Clause 17** of the policy states that:

> (2) Persons or organisations involved in the conduct of planned burning or in the preparation of management guidelines for such operations must take account of the health and amenity impacts of smoke pollution on individuals and the community.
>
> (3) Best practice environmental management should be employed by those persons undertaking planned burning to minimise the effects of smoke pollution on individuals and the community. This includes, but is not limited to, complying with the State Fire Management Council Guidelines on high and low intensity burning.

The **Tasmanian Air Quality Strategy, 2006** has been developed under this Act, and of relevance is Objective 13, which seeks to improve the co-ordination of planned burning to minimise smoke impacts and additional seek improved ways to manage and respond to community complaints. For improved co-ordination, Council will inform TFS of planned burning and need to rely on TFS for knowledge of other burns in the locality which may need to be considered.

The **State Policy on Water Quality and Management 1997** requires Council to manage tracks including firebreaks in a way that does not reduce water quality. It provides for the provision of Codes of Practices or guidelines to achieve the objectives of the Policy. The main risk to water quality is runoff from tracks, be they roads, fire breaks or walking tracks. Track construction & maintenance standards will follow the **SOP 2.** Current water points will be reviewed during the preparation of the Reserve Fire Management Plans. Any modifications or new construction will follow **SOP 3**.

Aboriginal Relics Act 1975 provides for the management and protection of Aboriginal heritage and artefacts. Of particular relevance is **Section 14. Protection of relics**

> **(1)** Except as otherwise provided in this Act, no person shall, otherwise than in accordance with the terms of a permit granted by the Minister on the recommendation of the Director –
>
> **(a)** Destroy, damage, deface, conceal, or otherwise interfere with a relic

While fire is unlikely to impact on any artefact, machinery can pose a risk. There are known sites within the reserves. These, and any new sites, should they be identified, will be managed in consultation with the DPIPWE and documented in the Reserve Fire Protection Plan.

The **Nature Conservation Act (2002)** is an act to make provision for the conservation and protection of the flora, fauna and geological diversity of the State; and to provide for the declaration of national parks and other reserved land. Of relevance is **Schedule 3A Threatened Native vegetation communities**. It is of note that a number of these communities occur in the reserves. Appropriate fire management of these communities will be considered in the preparation of the Reserve Fire Management Plans.

National and State Bushfire Policies and Guidelines

The **National Bushfire Management Policy Statement for Forests and Rangelands (2014)** outlines a set of Strategic Objectives and National Goals for broad area fire management. It is written to achieve the vision that *'Fire regimes are effectively managed to maintain and enhance the protection of human life and property, and the health, biodiversity, tourism, recreation and production benefits derived from Australia's forests and rangelands'.* This strategy is consistent with the objectives stated in the Policy statement, namely

1. Effectively Manage the Land with Fire
   - *LCC will utilize fire for fuel reduction in some reserves as appropriate*
2. Involved and Capable Communities
   - *LCC will consult with residents and inform stakeholders of fire management actions*
3. Strong Land, Fire and Emergency Partnerships and Capability
   - *LCC will engage with other key land management agencies and facilitate a partnership approach to land management*
4. Actively and Adaptively Manage Risk
   - *LCC will monitor and record information on fuel loads and burn effectiveness to continually improve practices to reduce the impact of unplanned fire*

The statement recognizes in some situations, fire cannot be used as a tool for managing bushfire risk and other techniques must be utilized to reduce fire hazards.

The **State Vegetation Fire Management Policy 2012** identifies a number of Action Areas with a strategy and supporting actions. This Council strategy applies the principles outlined in the policy and in part contributes to *Action Area 5.1 Management of Fire in Vegetation* and *Action Area 5.2 Community Awareness and Engagement.*

The Tamar Fire Protection Plan (November 2014) outlines the regions strategic protection plan, and is endorsed by the State Fire Management Council. The Plan contains a number of priority areas for fuel reduction. A representative of Council sits on the Tamar Fire Management Area Committee. The primary focus of the current plan is strategic cross tenure large scale fuel reduction burning. This does not currently include any of the reserves managed by LCC. However, the fundamental principle in the plan, of a tenure-blind approach to fire risk management is an approach that will be taken with the preparation and implementation of reserve management plans.

The State Fire Management Council position paper on the **Management of Smoke Arising from Prescribed Burning of Vegetation** will be used as guide for management of smoke from fuel reduction burning in the Reserves. Further to the legislation noted above, this position paper outlines the related legislation and guidelines, and advocates a number of practices. Council will follow these practices in the use of fire for fuel reduction. Clearly, burning in a residential area has the potential to cause significant nuisance to many households. Great attention will be paid to planning burning to occur in weather conditions that minimise the smoke pollution to residents. Consideration will be given to fuel type and management to minimise smoke and to alternatives to burning where there are particular smoke issues. Where burning is the most appropriate method

for fuel reduction, smoke is unavoidable and good communication with residents is important for affected households to minimise their exposure to smoke and the impact on their environment. The position paper is included as **SOP 4**.

Following the damaging 2013 fires season, a report of enquiry was conducted. The **2013 Tasmanian Bushfires Enquiry** made a number of recommendations. This strategy supports the implementation of some of the recommendations particularly

Recommendation 82: That the State Emergency Management Committee determine suitable risk management tools, such as the Bushfire Risk Assessment Model, and encourages their use in assessing bushfire risk in a consistent manner.

Recommendation 86: That the State Fire Management Committee considers developing a structured, systemic and proactive bushfire hazard reduction program with municipal councils and Tasmania Fire Service; and advises the Government on any legislative or other changes required to implement such a program.

4 RESERVE ASSETS, RISKS, ISSUES AND OPPORTUNITIES

The primary **assets** in these reserves are:

- Native vegetation and bushland areas important for species conservation, amenity and open space.
- Visitor infrastructure ranging from walking tracks and small picnic tables, to large playgrounds, buildings and a chairlift.
- Utility infrastructure or easements that passes through or on the boundaries of the reserves

The primary **risks** of fire in these reserves come from:

- Fire from adjacent lands, principally from adjacent properties. With a very high number of adjacent residential properties, the number of potential ignition points in close proximity to the reserves is significant
- Fire starting in a reserve. With high general usage and a large number of visitors during summer, the risk of accidental ignition is not insignificant.
- For any fire occurring in a reserve, there is a risk of escape onto adjacent property which would threaten surrounding assets, principally residential housing.

A fire **risk assessment** will be carried out for each reserve in the preparation of the Reserve Fire Management Plans. The **National Emergency Risk Assessment Guidelines 2010** will be used as a framework.

To assess **landscape level** risk for each reserve, The **Bushfire Risk Assessment Model (BRAM)** developed and managed by PWS (DPIPWE) will be utilised as part of the preparation of each

specific management plan. It is a computer based geographical information system (GIS) modelling tool that uses a series of inputs (spatial data, fire behaviour equations & climate records etc.) to assess the spatial risk of a bushfire to a specific area. A representation of risk is developed when the factors of **likelihood** and **consequence** are combined. Likelihood is defined as a qualitative method to assess the likelihood rating to the consequences occurring. The likelihood of an event is generated by the average combinations of the output generated from the following spatial information: ignition potential, suppression capabilities and fire behaviour potential, followed by assigning these output values to categories in a likelihood matrix. Consequences (values at risk) are defined as a qualitative rating of damage from fire to values. Values at Risk are defined as objects or locations that hold a relative economic, social or environmental worth and include Constructed (buildings), Forestry / Agriculture values, Natural – (flora, fauna, geo-conservation).

The model assists in objectively defining areas where genuine risk is present. In-depth analysis will indicate what factor is driving the risk for a given area. It must be noted that the BRAM and therefore the consequences, likelihood and risk outputs are based on available spatial data. The analysis has been undertaken on a state-wide basis, and maps are presented as complete for Tasmania. Examination of previous state-wide modelling suggest that for the majority of the reserves, the BRAM modelling will indicate a High or Moderate risk. Notwithstanding limitations, the model does provide an objective spatial analysis of bushfire risk in a landscape consequence.

At the **Reserve level**, detailed field assessments will be carried out to classify fire risks and identify mitigation actions. This will include classification of vegetation types and treatable areas, slope, aspect, prevailing fire weather, vulnerability of assets, defendable space, firefighting infrastructure and consequences of an unplanned fire. A fuel hazard assessment **(SOP 5**), will be utilised as a tool for determining the need for fuel reduction operations. The application of the overall hazard rating as a threshold for mitigation action will be with consideration of the needs of special values (such as burning requirements for threatened species) and the value and vulnerability of adjacent assets to be protected. Mitigation actions will be developed in consultation with key stakeholders and a schedule of works included in the Reserve Management Plan.

Fuel Reduction Options

Planned fuel reduction burning is one of the most cost effective methods of vegetation management involving reducing the fuel loads around infrastructure and assets. Fuel management burning is undertaken in asset protection and fuel modified buffer zones, and requires fires of sufficient intensity to meet objectives whilst ensuring safety standards are not compromised and escapes are minimised. The objectives of fuel management burning are to increase the potential for wildfire suppression and/or the likelihood that fires will self-extinguish. Thus, it is critical that the fuel hazards immediately adjacent to assets and/or sources of ignition are prioritised. The Planned Burning form used by Council is found in **SOP 6**.

In some instances, planned burning for vegetation management may not be able to be undertaken. This could be due to the area being zoned as a fire exclusion zone. These zones are generally located adjoining high value assets (such as some visitor infrastructure), where under no circumstance, should planned burning be used. Another reason for not using planned burning is where weeds may become an issue and the fuel management is actually compromised over a period of time with an increase in fuel loads.

Alternatives to fuel reduction burning may include but not limited to the following;

- Slashing and/or mowing
- Mulching
- Chipping
- Hand Removal
- Mechanical Removal

Planning Approvals and location of new buildings adjacent to reserves.

The reserves are located in established suburbs and residential properties surrounding. However, some of the Reserves are located in new residential developments with as yet, few houses on the boundary of the Reserve. For new buildings adjacent to the Reserves, Council has the power through the residential planning approvals to ensure buildings comply with best practice for building in fire prone areas. There will be opportunities to plan for an effective defendable space and minimise the risk of damage to adjacent assets should a wildfire become established in a Reserve. The primary reference for planning in these areas is the Council Interim Planning Scheme 2012, section E1.0 Bushfire Prone Areas Code. Additional resources include the Tasmanian Fire Service Guidelines for Development in Bushfire Prone Areas and Australian Standard AS 3959 – 2009.

Where there are existing properties around the Reserves, in the preparation of the Fire Management Plans for each Reserves, particular attention will be paid to creating a defendable space around assets. More information on creating and maintaining defendable space is described in **SOP 7**.

Species conservation and enhancing biodiversity

Many species in the Australian environment are adapted to fire. Changes in fire regimes, in frequency and intensity, can cause one species to become extinct, while favour other species. Planned fuel reduction burning can be effectively used to enhance biodiversity within an area. Through utilising a mosaic burning approach, aiming for a patchwork of burn unit size, and burn intensity, an area of forest can be maintained with variable fuel loads and understorey characteristics, while reducing overall fuel loads to protect the areas from damage that a high intensity damage unplanned wildfire can cause. Variation in habitats created from a mosaic burning regime will best provide for a variety of flora and fauna. Particular attention will be paid to the threatened species that occur with the reserves, and burning regimes will be discussed with experts to ensure they support the recovery of these species.

Working together across the landscape

With recent severe fires in Tasmania and Victoria, greater attention has been placed on strategic risk reduction across the landscape. As wildfires have no regard for property boundaries, the same approach should be taken for fire risk reduction, with a tenure blind approach to burning and fire preparedness. Where reserves bound large bush properties, Council will seek to manage the fire risk in these areas together with neighbours in operationally appropriate vegetation units. One particular opportunity to take this approach is to examine the fire risk management across the Cataract Gorge Reserve and the Trevallyn Nature Reserve managed by PWS.

Through the Fire Protection Plan preparation and implementation, Council will work with residential neighbours for localized fuel management and treatment of fire hazards. Council will identify ways to reduce fire risk from addressing fuel in the reserve and on their properties.

Additionally, the fuel reduction burning program provides an opportunity for Council to work closer with TFS. While Council has its own works crews, some burns are already conducted with involvement of TFS staff. This is of assistance to Council, but beneficial to provide TFS staff with familiarity with the reserves which would be useful for response to a wildfire in the Reserves.

Mitigate intensity of events from climate change

Climate change has the potential to significantly impact Tasmania, and increase the challenge of fire management for these Reserves. The Climate Commission's report of 2013, *A Critical Decade*,

identifies for Tasmania a 0.8 degrees warming since the 1950's, together with longer summers, and drying autumns. This lengthening of the fire season is expected to continue.

The ACE CRC *Climate Futures for Tasmania* report has used downscaled projection models to examine extreme climatic events. The project arose from the 4th IPCC report, which suggests that even a small increase in mean temperature could be accompanied by a disproportionate change in the intensity and frequency of extreme climate events. The model projected an increase in the number of summer days (days above 25 degrees) and number of heat waves (three consecutive days above 28). There will be more warm days and warm nights in future decades.

The CSIRO/BOM Climate Futures report 2014, provides the most recent overview of recent trends in temperature and rainfall, and also model predictions for future climate scenarios. In recent decades, fires seasons have been longer and there has been an increase in severe fire weather days. For Launceston, there has been a 0.5 point increase per decade for Forest Fire Danger Index since the 1970's.

Two future scenarios (high and low emissions) have been examined. Taking the period 1980-1999 as the baseline, by 2050, the number of extreme fire days in southern and eastern Australia is expected to increase 10-50 percent under low emissions and 100-400 per cent under high emission scenario. A longer fire season is also expected with additionally an increase in droughts.

The trend towards a worsening fire seasons is clear. Council will need to review its preparedness for dealing with the increased frequency of high fire danger days in coming years. A precautionary approach should be taken with building infrastructure in and adjacent to reserves, and ensure risk assessments take into consideration the probability of an increased frequency of high fire danger days. In preparation of the Fire Management Plans, Council will consider long term fire infrastructure needs and possible scenarios for burning schedules.

Engagement with the local community on fire management practices and fire safety

Recent policy reviews and fire preparedness statements have emphasised the need for building community resilience and improving community preparedness. This is reflected in the **State Bushfire Safety Policy (2014)** and also the **Tamar Fire Protection Plan 2014**. While the priority is for vulnerable communities in more rural bush settings, the principles of improving community information and community preparedness are relevant for residential areas adjacent to the Council Reserves.

There are opportunities for Council to engage with the community in the following ways:

- In the preparation of the Reserve Fire Management Plans, the public will be invited to comment and contribute to risk reduction strategies. Large adjacent properties will be consulted with in detail, as will adjacent properties where particular high fire risks are identified
- For burning operations, every adjacent neighbour to a reserve will be notified of the planned burn. Additionally, other landowners, schools or businesses who may be affected in the nearby

vicinity will also be notified. The Council template for written neighbour notification is found in SOP 8.

- Council will utilise its website and other social media to inform the community of fire preparedness
- Signage will be placed in reserves ahead of fuel management actions
- Advertisements will be placed in the local paper

5 FIRE MANAGEMENT OBJECTIVES

1. Manage fuel loads across the reserves in order to
   - reduce the intensity of unplanned burns
   - reduce the likelihood of a burn entering a reserve causing catastrophic damage
   - increase the opportunities for control of any unplanned burn within a reserve
   - protect physical and cultural assets in the Reserves, and reduce the risk of uncontrollable fire to adjacent properties
   - maintain or improve the visitor experience of Council Reserves
   - maintain or improve visitor safety to Council Reserves

2. Maintain or improve biodiversity within the reserve through a mosaic of burning areas and intensities.

3. Reduce weed problems within reserves through burning with pre burn and follow up treatment.

4. Maintain fire infrastructure to enable access for effective fuel management and wildfire control

5. Identify and facilitate operational efficiencies and cross tenure infrastructure and vegetation management

6. Record and manage appropriate fire management data about each reserve in an easily accessible format for improved planning, management and incident response.

7. Community engagement in the fire management planning process

8. Improve the communities understanding of fire hazards and actions to remove hazards and reduce the fire risk.

6 STRATEGIC ACTIONS

1. **Management Plans**. Council will prepare management plans to cover each of the 34 reserves. Larger reserves will be covered by an individual plan. Some smaller reserves occurring in the same locality may be included in a single plan if operationally appropriate.

2. **PWS Partnership** Council will enter into an MOU with PWS with respect to burning adjacent areas and combining burn units regardless of tenure boundaries with Trevallyn State Recreation Area and Cataract Gorge Reserve.

3. **TFS Partnership** Council will renew and maintain the MOU with TFS for planned burning.

4. **Competent Staff**. Council will ensure staff have adequate up to date training in order to implement the annual fire infrastructure inspection and maintenance program and fuel reduction program

5. **Communication**. Council will utilise social media and the Councils online information site to inform the community on fire management actions and responsibilities of adjoining landowners. Other media will also be used to improve community understanding and preparedness.

6. **Community input** will be sought for the implementation and review of this strategy and for the preparation and implementation of each Reserve Fire Management Plan

7. **Management of risks on adjacent land**. Council will discuss fire risks on adjacent land with landowners and where necessary utilize Council regulations to request landowners to reduce the hazard.

8. **Interagency cooperation**. Council will continue to participate in the Tamar Fire Area Committee meetings and other State Fire Management meetings which have relevance to the City of Launceston lands.

9. **Annual monitoring and mitigation works**. Council will annually inspect each reserve prior to the fire season and prepare a plan of works reducing the risk and severity of unplanned fire. The annual inspection will look at fire risk and hazard within the reserves and adjacent to the reserves.

10. **Weed Control**. Council will consider weed management during fuel reduction treatment and optimise the outcomes for both reducing weeds (including follow-up action after treatment) and reducing fire risk. Council will ensure resources are available for appropriate weed control following burning.

11. **Data Management**. Council will utilize appropriate information technology to assist with the management and control of these reserves. This includes maintaining up to date GIS maps of fire infrastructure, burn history and creation of a database for recording the impact of planned and unplanned burns. This data must be readily accessible for both Council staff and TFS.

7 MONITORING AND EVALUATION

Monitoring and Record Keeping

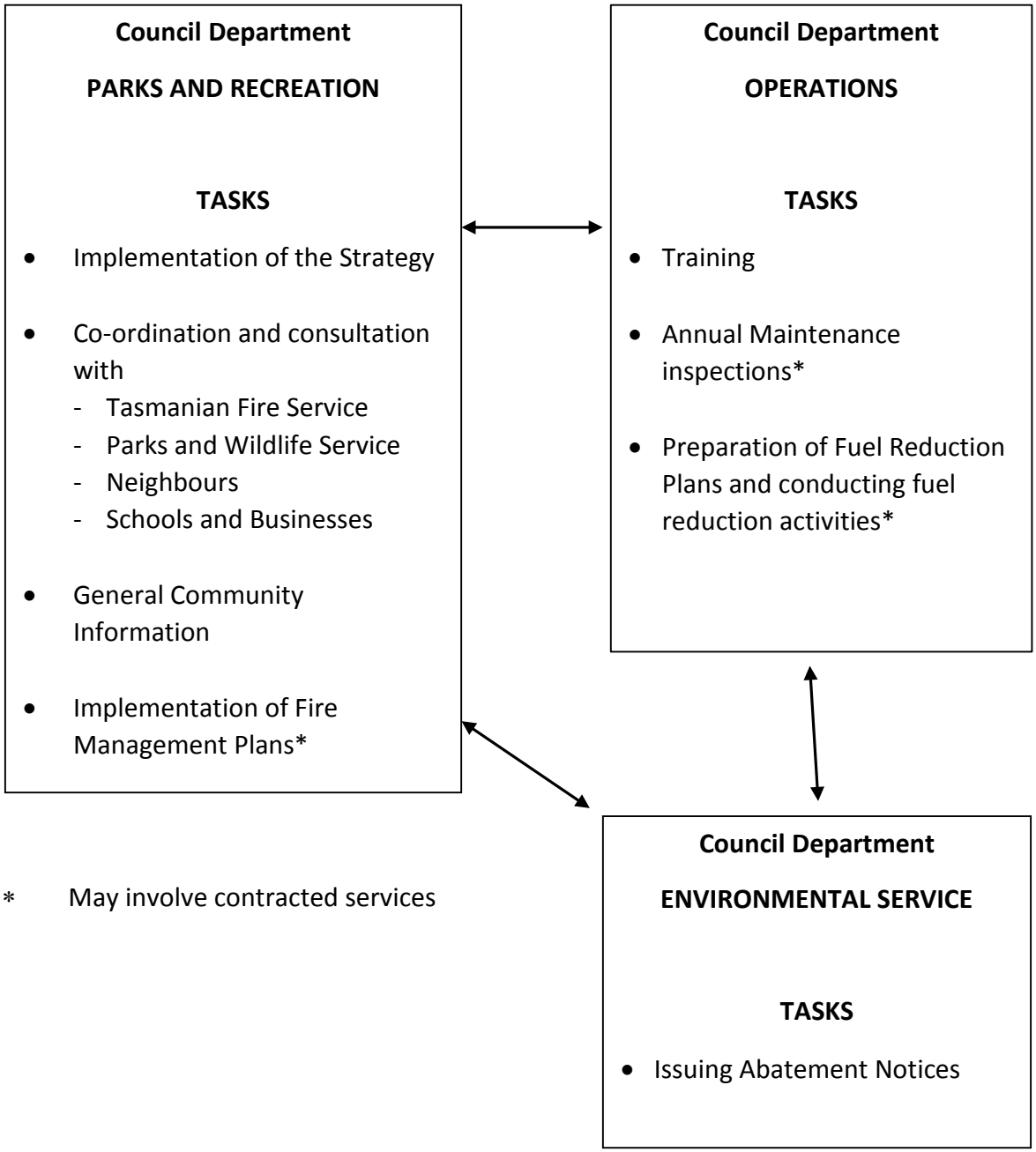
Prompt and accurate record keeping of management actions and results of planned burns, and impact of unplanned burns is critical to continuous improvement in fire management of these reserves. Consistent with the National Policy Statement Objective *4 Actively and Adaptively Manage Risk*, good records and improving information is necessary for adaptive management of the reserves to be effective. Fire management plans are written at a single point in time and much information will change as will the vegetation and fuel loads. It is important for Council staff be alert to changes in fuels and vegetation, condition of fire infrastructure, new knowledge of species of importance and to adapt plans appropriately.

Good records of the burn history and management of a reserve are also a critical piece of information for any Incident Response team when a wildfire does enter a reserve. Knowledge of past actions can be an invaluable tool for choosing the best control option. The majority of fire management information related to a reserve should be recorded spatially. Annual inspection results should be documented in systematic database for easy recovery and use for review and planning.

Post Burn Evaluation and Recovery

After any fire, either planned or unplanned, a post burn assessment will be carried out. For a planned burn, the main focus of the post burn assessment will review if the burn has achieved its objective, record information on burn severity and extent, and any issues or further work required, such as extinguishment of smouldering material, track maintenance or to ensure a safe site. An assessment of the need for any environmental rehabilitation, such as remedial track maintenance, and protection of water sources will be noted. The burn area boundaries should also be recorded and entered on the GIS system. For wildfires, similar information will be recorded, but further attention on safety issues will be required. Periodic assessment of vegetation recovery may be necessary, particularly in areas where there has been a very hot fire, and/or areas where weeds are present and require treatment. A post burn assessment for is specified in **SOP 9**.

8 RESPONSIBILITY AND COMMUNICATION WITHIN THE COUNCIL



* May involve contracted services

City of LAUNCESTON

9 REFERENCE DOCUMENTS

Council Documents related to this Strategy

City Of Launceston Strategic Plan 2014-2024
http://www.launceston.tas.gov.au/upfiles/lcc/cont/_council/community_engagement/2015/city_of_launceston_strategic_plan_final.pdf

Draft Tourism Strategy 2012
http://www.launceston.tas.gov.au/upfiles/lcc/cont/_council/community_engagement/strategies_plans_and_reports/draft_launceston_tourism_strategic_plan.pdf

City of Launceston Open Space Strategy 2007
http://www.launceston.tas.gov.au/upfiles/lcc/cont/_council/community_engagement/strategies_plans_and_reports/lcc_open_space_strategy_10thJuly_2007.pdf

City of Launceston - A guide to Parks and Reserves.
http://www.launceston.tas.gov.au/upfiles/lcc/cont/_facilities/recreation/parks_and_playgrounds/parks_brochurepdf.pdf

Launceston Municipal Emergency Management Plan 2012

Launceston Interim Planning Scheme 2012, Part E1.0 Bushfire Prone Areas Code.

Fire Management Guidelines and Policies, Codes of Practice

COAG 2014. Forest Fire Management Group *National Bushfire Management Policy Statement for Forests and Rangelands.*

State Fire Management Council 2012 *State Vegetation Fire Management Policy* Version 4.0 June 2012.

State Fire Management Council 2014 *State Bushfire Safety Policy* Version 1 June 2014

State Fire Management Council 2014. *Bushfire in Tasmania. A new approach to reducing our state-wide relative risk*. State Fire Management Council Unit, Tasmania Fire Service, Hobart.

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Marsden-Smedley J. B. (2009) *Planned Burning in Tasmania, operational guidelines and review of current knowledge.* Fire Management Section, Parks and Wildlife Service, Department of Primary Industries, Water and the Environment, Hobart.

Forest Practices Board 2000. *Forest Practices Code 2000*

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Tasmanian Fire Service (undated) *Guidelines for Vegetation Burning*.

Climate Change

ACE CRC 2010 *Climate Futures for Tasmania: Extreme Events, the Summary*. Antarctic Climate and Ecosystems Cooperative Research Centre, Hobart, Tasmania.

BOM and CSIRO 2014. *State of the Climate 2014.*

Climate Commission 2013. *The Critical Decade – Climate Change Science, Risks and Response.* W. Steffen and L. Hughes.

Buildings in Bushfire Prone Areas

TFS (2005) *Guidelines for Development in Bushfire Prone Areas of Tasmania.* Tasmania Fire Service, Hobart. https://www.fire.tas.gov.au/publications/Bush_Guide.pdf

Standards Australia Limited. (2011). AS 3959 – 2009 (Incorporating Amendment No's 1, 2 & 3) – *Construction of buildings in bush fire-prone areas*.

Tasmanian Planning Commission. (2012). *Planning Directive No. 5. Bushfire-Prone Areas Code*.

APPENDIX 1

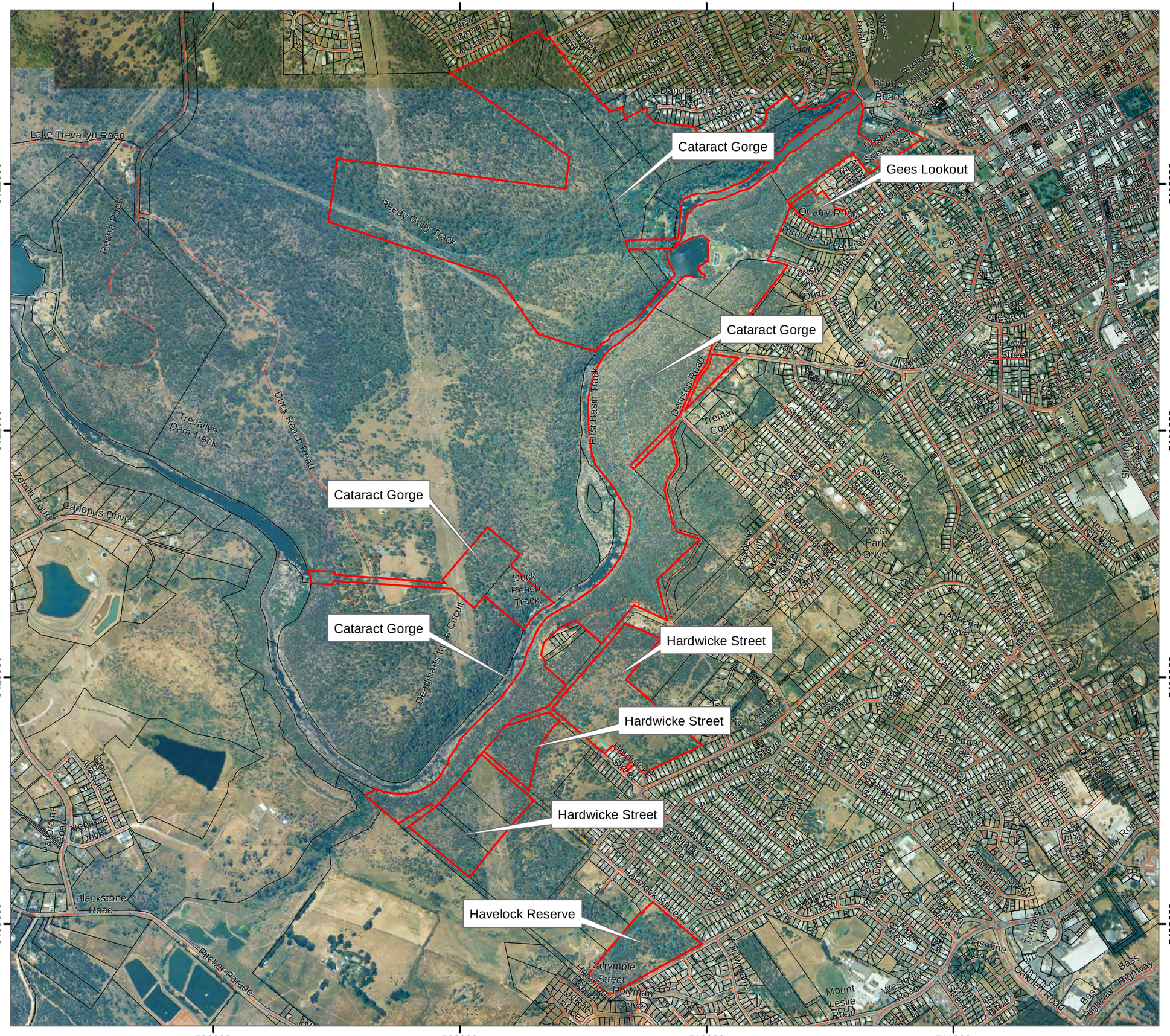
List of Reserves

Reserve Name	Locality	Total Area (ha)	Bushland Area (ha)
Bluegum Park	Youngtown	3.09	0.74
Cambridge Street Reserve	West Launceston	4.31	2.82
Carr Villa Flora Reserve and Memorial Park	Kings Meadows	57.98	21.22
Cataract Gorge Reserve (incl. Gees Lookout)	Trevallyn, West Launceston, Summerhill	193.96	177.22
Christina Place Park	West Launceston	0.48	0.13
Distillery Creek Gorge	Waverley	13.26	8.06
Fraser Reserve	West Launceston	5.64	1.27
Freelands Lookout	Trevallyn	1.92	1.18
Granville Street Reserve	West Launceston	6.92	5.94
Hardwicke Street Reserve	Summerhill	32.53	22.98
Havelock Reserve	Summerhill	7.99	5.73
Ingamells Reserve	Prospect	0.87	0.58
Karoola Recreation Ground	Karoola	4.69	0.66
Lilydale Falls Reserve	Lilydale	18.16	14.98
Los Angelos Bushland Reserve	Windermere	2.59	2.29
Machens Reserve	Kings Meadows	4.20	1.64
Meadow Ridge Reserve	Kings Meadows	1.21	0.57
Merthyr Park	Lilydale	50.01	41.86
Miami Place Park	Youngtown	0.61	0.41
Myrtle Park	Targa	29.40	18.59
Norwood Bushland Park	Norwood	0.68	0.49
Pamela Court Reserve	Prospect	2.37	0.73
Punchbowl Reserve	Punchbowl	25.64	13.06
Ravenswood Bushland Reserve	Ravenswood	34.27	29.36
Rocherlea Old Rail Trail	Rocherlea, Mowbray	5.94	1.84
Rocherlea Recreation Ground	Rocherlea	8.21	1.06
Salisbury Crescent Park	West Launceston	0.75	0.48
Tasman Highway Bushland Reserve	Waverley	8.37	7.26
Thomas Martin Reserve	Summerhill	0.47	0.20
Ti Tree Crescent Park	Rocherlea	5.50	4.43
Vermont Road Bushland Park	Ravenswood	5.03	4.93
West Launceston Community Park	Summerhill	5.53	0.49
Woods Reserve	West Launceston	7.87	6.10
Youngtown Regional Park	Youngtown	30.02	11.55

* as per Council GIS system

APPENDIX 2

Maps



Important:
PROJECTION: Universal Transverse Mercator (UTM).
HORIZONTAL DATUM: Geocentric Datum of Australia 1994(GDA94)
MAP GRID: Mapping Grid of Australia (MGA94)

Disclaimer:
Whilst GPM (and its agents) make every reasonable effort to locate and identify features on the land which is the subject of this map not all features either above or below the surface have been located. Users are advised to independently verify all data for accuracy and completeness prior to use.

Appendix 2A

Map Type: Map 1

Map Production: GPM P/L

Production Date: 23/04/2015

Reserves:

Cataract Gorge & Gees Hill Lookout - 193.96 ha
Hardwicke Street - 32.53 ha
Havelock Street - 7.99 ha

Legend

🟥 Reserve Boundaries
☐ Cadastre

Base data from theLIST (www.thelist.tas.gov.au), © State of Tasmania

0 100 200 300 400 500 600 Metres
SCALE 1:15,000 (at A3 Print Size)
N

City of LAUNCESTON

GPM GROUND PROOF MAPPING

Important:

PROJECTION: Universal Transverse Mercator (UTM).

HORIZONTAL DATUM: Geocentric Datum of Australia 1994(GDA94)

MAP GRID: Mapping Grid of Australia (MGA94)

GDA

Disclaimer:

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Appendix 2B

Map Type: Map 2

Map Production: GPM P/L

Production Date: 23/04/2015

Reserves:

Carr Villa Flora Reserve
Carr Villa Memoral Park
Total Area - 57.98 ha

Legend

Reserve Boundaries

Cadastre

Base data from theLIST (www.thelist.tas.gov.au), © State of Tasmania

0 50 100 150 200 Metres

N

SCALE 1:4,000 (at A3 Print Size)

City of LAUNCESTON

GPM GROUND PROOF MAPPING

Important:

PROJECTION: Universal Transverse Mercator (UTM).

HORIZONTAL DATUM: Geocentric Datum of Australia 1994(GDA94)

MAP GRID: Mapping Grid of Australia (MGA94)

GDA

Disclaimer:

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Appendix 2C

Map Type: Map 3

Map Production: GPM P/L

Production Date: 23/04/2015

Reserves:

Punchbowl Reserve - 25.64 ha

Legend

Reserve Boundaries

Cadastre

Base data from theLIST (www.thelist.tas.gov.au), © State of Tasmania

0 20 40 60 80 100 Metres

N

SCALE 1:3,000 (at A3 Print Size)

City of LAUNCESTON

GPM GROUND PROOF MAPPING

Important:

PROJECTION: Universal Transverse Mercator (UTM).

HORIZONTAL DATUM: Geocentric Datum of Australia 1994(GDA94)

MAP GRID: Mapping Grid of Australia (MGA94)

GDA

Disclaimer:

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Appendix 2D

Map Type: Map 4

Map Production: GPM P/L

Production Date: 23/04/15

Reserves:

Freelands Lookout - 1.92 ha

Legend

Reserve Boundaries

Cadastre

Base data from theLIST (www.thelist.tas.gov.au), © State of Tasmania

0 20 40 60 80 Metres

N

SCALE 1:2,000 (at A3 Print Size)

City of LAUNCESTON

GPM GROUND PROOF MAPPING

Important:

PROJECTION: Universal Transverse Mercator (UTM).

HORIZONTAL DATUM: Geocentric Datum of Australia 1994(GDA94)

MAP GRID: Mapping Grid of Australia (MGA94)

GDA

Disclaimer:

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Appendix 2E

Map Type: Map 5

Map Production: GPM P/L

Production Date: 23/04/15

Reserves:

Christina Place Park - 4,781 m²
West Launceston Commmunity Park - 5.53 ha
Thomas Martin Reserve - 4,700 m²
Ingamells Reserve - 8,688 m²
Pamela Court Reserve - 2.37 ha

Legend

Reserve Boundaries

Cadastre

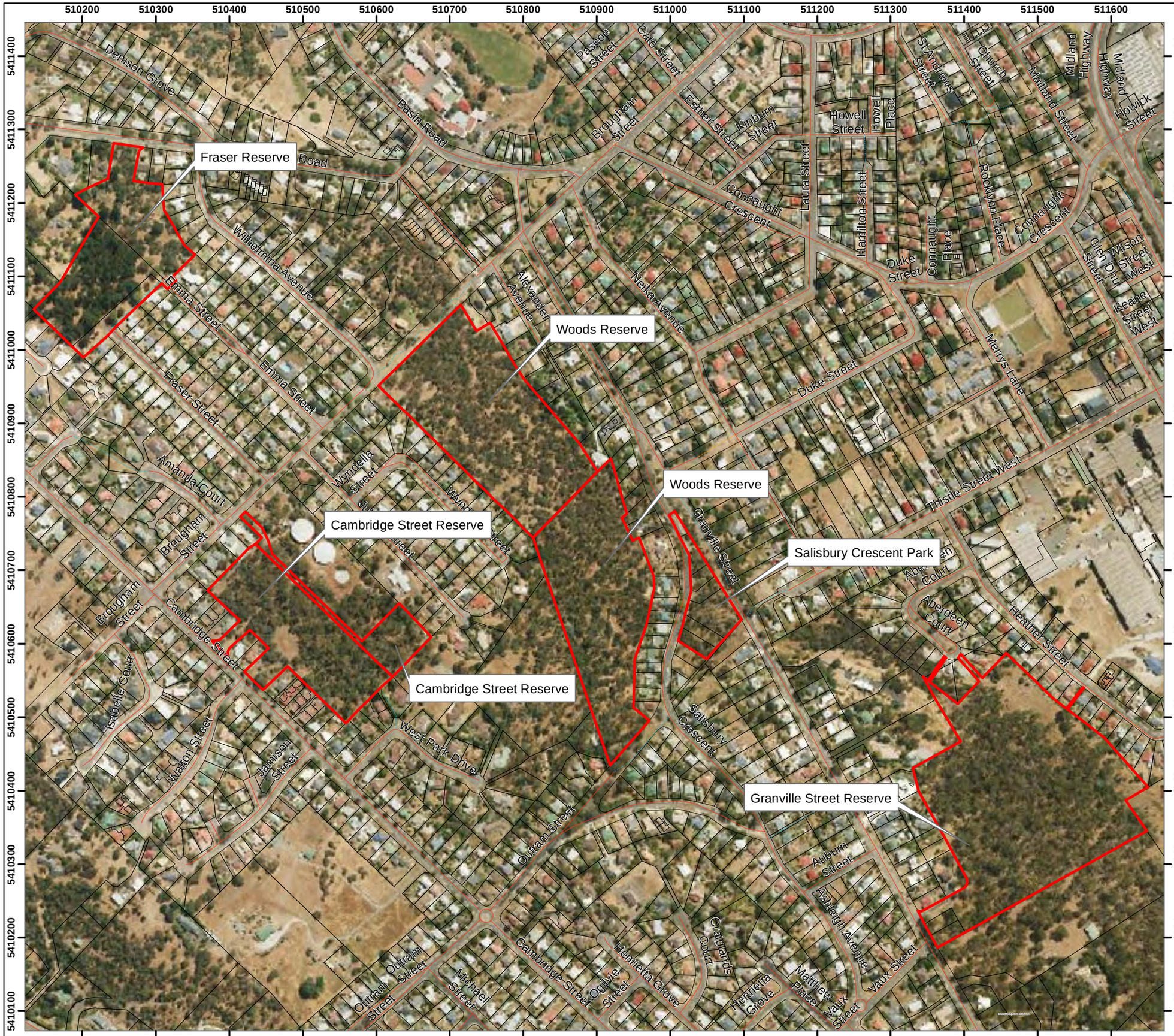
Base data from theLIST (www.thelist.tas.gov.au), © State of Tasmania

0 50 100 150 200 Metres

N

SCALE 1:4,000 (at A3 Print Size)

City of LAUNCESTON



GPM GROUND PROOF MAPPING

Important:

PROJECTION: Universal Transverse Mercator (UTM).

HORIZONTAL DATUM: Geocentric Datum of Australia 1994(GDA94)

MAP GRID: Mapping Grid of Australia (MGA94)

GDA

Disclaimer:

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Appendix 2F

Map Type: Map 6

Map Production: GPM P/L

Production Date: 23/04/15

Reserves:

Fraser Reserve - 5.64 ha
Woods Reserve - 7.87 ha
Salisbury Crescent Park - 7,477 m²
Cambridge Street Reserve - 4.31 ha
Granville Street Reserve - 6.92 ha

Legend

Reserve Boundaries

Cadastre

0 50 100 150 200 250 Metres

N

SCALE 1:5,000 (at A3 Print Size)

City of LAUNCESTON

GPM GROUND PROOF MAPPING

Important:

PROJECTION: Universal Transverse Mercator (UTM).

HORIZONTAL DATUM: Geocentric Datum of Australia 1994(GDA94)

MAP GRID: Mapping Grid of Australia (MGA94)

GDA

Disclaimer:

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Appendix 2H

Map Type: Map 7

Map Production: GPM P/L

Production Date: 10/03/15

Reserves:

Ravenswood Bushland Reserve - 34.26 ha

Legend

Ravenswood Bushland Reserve Boundary

Cadastre

0 20 40 60 80 100 Metres

N

SCALE 1:3,000 (at A3 Print Size)

City of LAUNCESTON

513400 513500 513600 513700 513800 513900 514000 514100

5415300 5415200 5415100 5415000 5414900 5414800 5414700

Vermont Road

Wildor Crescent

Vermont Road Bushland Park

GPM GROUND PROOF MAPPING

Important:

PROJECTION: Universal Transverse Mercator (UTM).

HORIZONTAL DATUM: Geocentric Datum of Australia 1994(GDA94)

MAP GRID: Mapping Grid of Australia (MGA94)

GDA

Disclaimer:

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Appendix 2I

Map Type: Map 8

Map Production: GPM P/L

Production Date: 27/04/2015

Reseve:

Vermont Road Bushland Park - 5.03 ha

Legend

Vermont Road Bushland Park Boundary

Cadastre

Base data from theLIST (www.thelist.tas.gov.au), © State of Tasmania

0 20 40 60 80 100 Metres

SCALE 1:2,500 (at A3 Print Size)

N

City of LAUNCESTON

GPM GROUND PROOF MAPPING

Important:

PROJECTION: Universal Transverse Mercator (UTM).

HORIZONTAL DATUM: Geocentric Datum of Australia 1994(GDA94)

MAP GRID: Mapping Grid of Australia (MGA94)

GDA

Disclaimer:

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Appendix 2J

Map Type: Map 9

Map Production: GPM P/L

Production Date: 27/04/2015

Reserve:

Distillery Creek Gorge - 13.26 ha

Legend

Distillery Creek Gorge Boundary

Cadastre

0 50 100 150 200 Metres

N

SCALE 1:4,000 (at A3 Print Size)

City of LAUNCESTON

514900 515000 515100 515200 515300 515400 515500 515600

5412500 5412400 5412300 5412200 5412100 5412000

Tasman Highway
Brookes Court
Anson Street
Craig Street
St Leonards Road
Tasman Highway Bushland Reserve

GPM GROUND PROOF MAPPING

Important:

PROJECTION: Universal Transverse Mercator (UTM).

HORIZONTAL DATUM: Geocentric Datum of Australia 1994(GDA94)

MAP GRID: Mapping Grid of Australia (MGA94)

GDA

Disclaimer:

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Appendix 2K

Map Type: Map 10

Map Production: GPM P/L

Production Date: 27/04/2015

Reserve:

Tasman Highway Bushland Reserve - 8.36 ha

Legend

Tasman Highway Bushland Reserve Boundary

Cadastre

0 20 40 60 80 100 Metres

N

SCALE 1:2,500 (at A3 Print Size)

City of LAUNCESTON

GPM GROUND PROOF MAPPING

Important:

PROJECTION: Universal Transverse Mercator (UTM).

HORIZONTAL DATUM: Geocentric Datum of Australia 1994(GDA94)

MAP GRID: Mapping Grid of Australia (MGA94)

GDA

Disclaimer:

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Appendix 2L

Map Type: Map 11

Map Production: GPM P/L

Production Date: 27/04/2015

Reserves:

Rocherlea Recreation Ground - 8.20 ha
Rocherlea Old Rail Trail - 5.94 ha

Legend

- Reserve Boundaries
- Cadastre

City of LAUNCESTON

GPM GROUND PROOF MAPPING

Important:

PROJECTION: Universal Transverse Mercator (UTM).

HORIZONTAL DATUM: Geocentric Datum of Australia 1994(GDA94)

MAP GRID: Mapping Grid of Australia (MGA94)

GDA

Disclaimer:

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Appendix 2P

Map Type: Map 12

Map Production: GPM P/L

Production Date: 27/04/2015

Reserve:

Ti Tree Crescent Park - 5.49 ha

Legend

Reserve Boundary

Cadastre

0 20 40 60 80 Metres

N

SCALE 1:2,000 (at A3 Print Size)

City of LAUNCESTON

GPM GROUND PROOF MAPPING

Important:

PROJECTION: Universal Transverse Mercator (UTM).

HORIZONTAL DATUM: Geocentric Datum of Australia 1994(GDA94)

MAP GRID: Mapping Grid of Australia (MGA94)

GDA

Disclaimer:

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Appendix 2M

Map Type: Map 13

Map Production: GPM P/L

Production Date: 27/04/2015

Reserve:

Machens Reserve - 4.19 ha

Legend

Reserve Boundary

Cadastre

Base data from theLIST (www.thelist.tas.gov.au), © State of Tasmania

0 20 40 60 80 100 Metres

N

SCALE 1:2,000 (at A3 Print Size)

City of LAUNCESTON

GPM GROUND PROOF MAPPING

Important:

PROJECTION: Universal Transverse Mercator (UTM).

HORIZONTAL DATUM: Geocentric Datum of Australia 1994(GDA94)

MAP GRID: Mapping Grid of Australia (MGA94)

GDA

Disclaimer:

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Appendix 2N

Map Type: Map 14

Map Production: GPM P/L

Production Date: 27/04/2015

Reserve:

Meadow Ridge Reserve - 1.20 ha

Legend

Reserve Boundary

Cadastre

Base data from theLIST (www.thelist.tas.gov.au), © State of Tasmania

0 20 40 60 80 100 Metres

N

SCALE 1:2,000 (at A3 Print Size)

City of LAUNCESTON

514500 514600 514700 514800 514900

5410200 5410100 5410000 5409900

Hingston Crescent
Hymath Place
Hingston Crescent
Heathfield Street
Hawthorn Street
Norwood Bushland Park
Grandview Place
Rossmoyne Street
Avonbury Court
Bolton Hill Road
Charlton Street
Bettina Avenue
Norwood Avenue

GPM GROUND PROOF MAPPING

Important:

PROJECTION: Universal Transverse Mercator (UTM).

HORIZONTAL DATUM: Geocentric Datum of Australia 1994(GDA94)

MAP GRID: Mapping Grid of Australia (MGA94)

GDA

Disclaimer:

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Appendix 2O

Map Type: Map 15

Map Production: GPM P/L

Production Date: 27/04/2015

Reserve:

Norwood Bushland Park - 6,751 m²

Legend

Reserve Boundary

Cadastre

0 10 20 30 40 50 Metres

SCALE 1:1,500 (at A3 Print Size)

N

City of LAUNCESTON

GPM GROUND PROOF MAPPING

Important:

PROJECTION: Universal Transverse Mercator (UTM).

HORIZONTAL DATUM: Geocentric Datum of Australia 1994(GDA94)

MAP GRID: Mapping Grid of Australia (MGA94)

GDA

Disclaimer:

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Appendix 2G

Map Type: Map 16

Map Production: GPM P/L

Production Date: 17/04/15

Reserves:

Youngtown Regional Park - 30.01 ha
Bluegum Park - 3.09 ha
Miami Place Park - 6099 m²

Legend

Reserve Boundaries
Cadastre

Base data from theLIST (www.thelist.tas.gov.au), © State of Tasmania

0 50 100 150 200 250 Metres

N

SCALE 1:6,000 (at A3 Print Size)

City of LAUNCESTON

GPM GROUND PROOF MAPPING

Important:

PROJECTION: Universal Transverse Mercator (UTM).

HORIZONTAL DATUM: Geocentric Datum of Australia 1994(GDA94)

MAP GRID: Mapping Grid of Australia (MGA94)

GDA

Disclaimer:

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Appendix 2Q

Map Type: Map 17

Map Production: GPM P/L

Production Date: 27/04/2015

Reserve:

Karoola Recreation Ground - 4.68 ha

Legend

Reserve Boundary

Cadastre

Base data from theLIST (www.thelist.tas.gov.au), © State of Tasmania

0 20 40 60 80 100 Metres

N

SCALE 1:2,000 (at A3 Print Size)

City of LAUNCESTON

GPM GROUND PROOF MAPPING

Important:

PROJECTION: Universal Transverse Mercator (UTM).

HORIZONTAL DATUM: Geocentric Datum of Australia 1994(GDA94)

MAP GRID: Mapping Grid of Australia (MGA94)

GDA

Disclaimer:

Whilst GPM (and its agents) make every reasonable effort to locate and identify features on the land which is the subject of this map not all features either above or below the surface have been located. Users are advised to independently verify all data for accuracy and completeness prior to use.

Appendix 2R

Map Type: Map 18

Map Production: GPM P/L

Production Date: 27/04/2015

Reserve:

Lilydale Falls Reserve - 18.15 ha

Legend

Reserve Boundary

Cadastre

Base data from theLIST (www.thelist.tas.gov.au), © State of Tasmania

0 20 40 60 80 100 Metres

N

SCALE 1:3,000 (at A3 Print Size)

City of LAUNCESTON

503300 503400 503500 503600 503700 503800

5427600 5427500 5427400 5427300 5427200

Walford Rise

Sherborne Drive

Los Angelos Bushland Reserve

Los Angelos Road

GPM GROUND PROOF MAPPING

Important:

PROJECTION: Universal Transverse Mercator (UTM).

HORIZONTAL DATUM: Geocentric Datum of Australia 1994(GDA94)

MAP GRID: Mapping Grid of Australia (MGA94)

GDA

Disclaimer:

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Appendix 2S

Map Type: Map 19

Map Production: GPM P/L

Production Date: 27/04/2015

Reserve:

Los Angelos Bushland Reserve - 2.59 ha

Legend

Reserve Boundary

Cadastre

Base data from theLIST (www.thelist.tas.gov.au), © State of Tasmania

0 20 40 60 80 Metres

N

SCALE 1:2,000 (at A3 Print Size)

City of LAUNCESTON

GPM GROUND PROOF MAPPING

Important:

PROJECTION: Universal Transverse Mercator (UTM).

HORIZONTAL DATUM: Geocentric Datum of Australia 1994(GDA94)

MAP GRID: Mapping Grid of Australia (MGA94)

GDA

Disclaimer:

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Appendix 2T

Map Type: Map 20

Map Production: GPM P/L

Production Date: 27/04/2015

Reserve:

Merthyr Park - 50.01 ha

Legend

Reserve Boundary

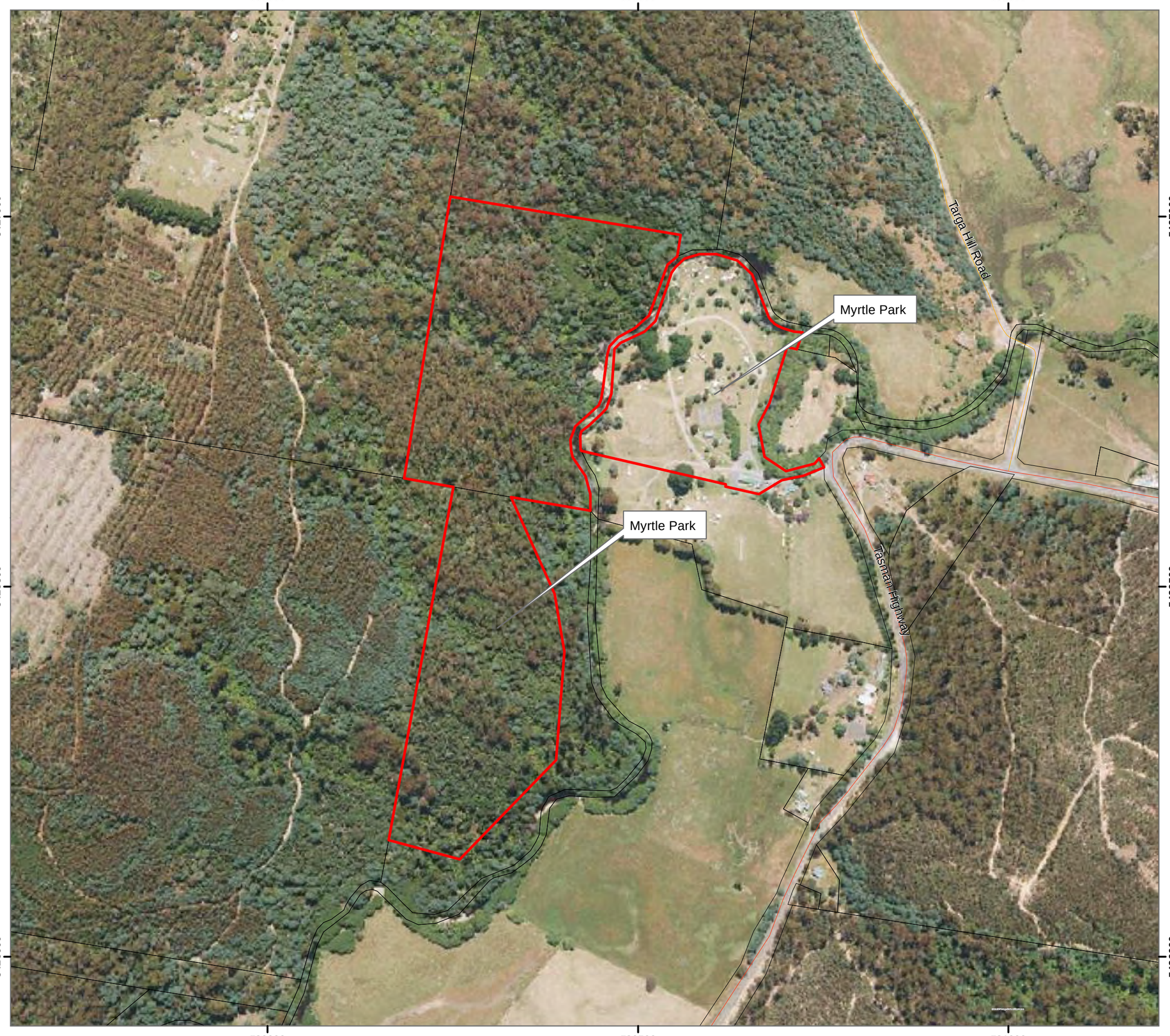
Cadastre

0 50 100 150 200 Metres

N

SCALE 1:4,000 (at A3 Print Size)

City of LAUNCESTON



GPM GROUND PROOF MAPPING

Important:

PROJECTION: Universal Transverse Mercator (UTM).

HORIZONTAL DATUM: Geocentric Datum of Australia 1994(GDA94)

MAP GRID: Mapping Grid of Australia (MGA94)

GDA

Disclaimer:

Whilst GPM (and its agents) make every reasonable effort to locate and identify features on the land which is the subject of this map not all features either above or below the surface have been located. Users are advised to independently verify all data for accuracy and completeness prior to use.

Appendix 2U

Map Type: Map 21

Map Production: GPM P/L

Production Date: 27/04/2015

Reserve:

Myrtle Park - 29.40 ha

Legend

Reserve Boundary

Cadastre

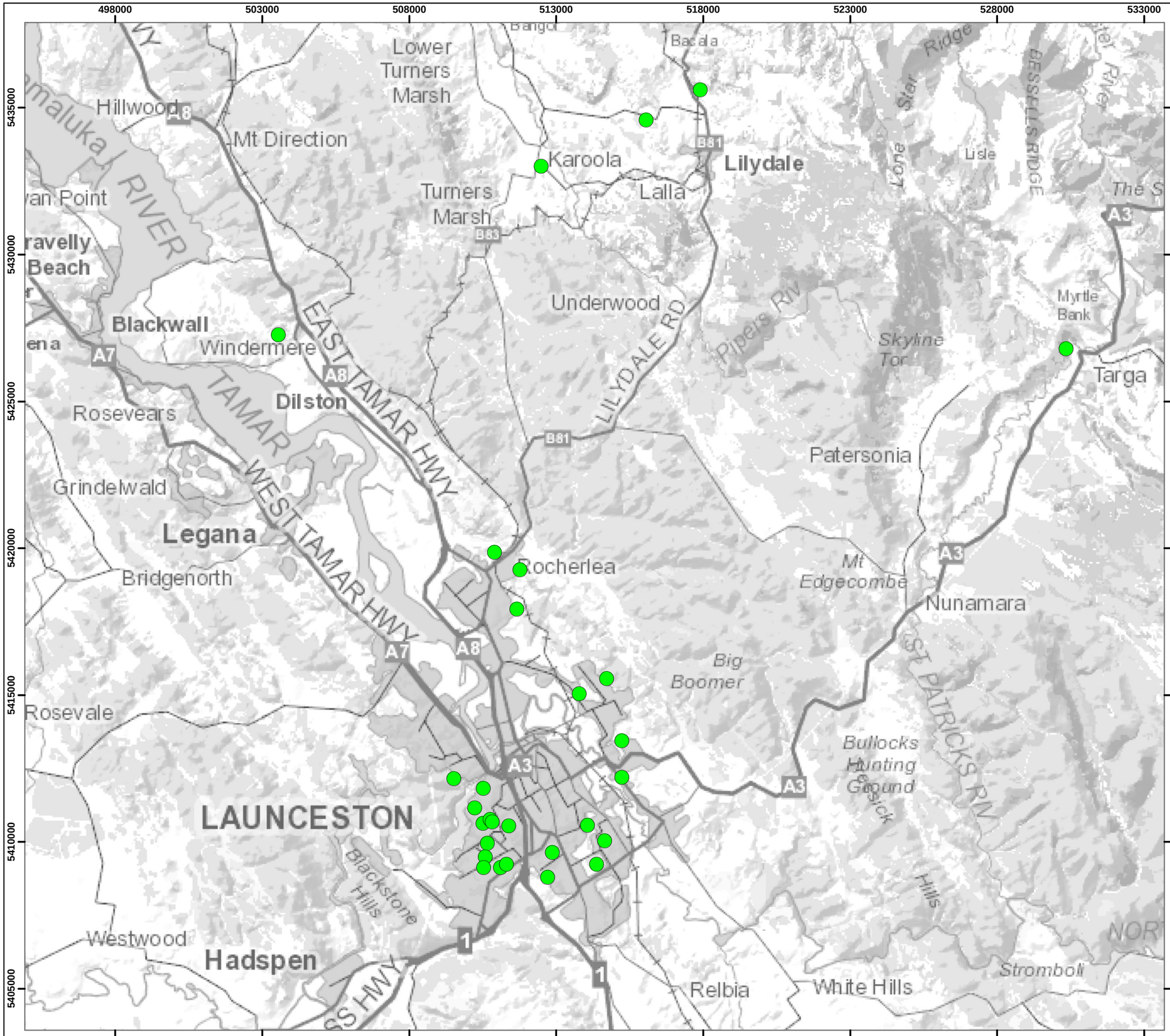
Base data from theLIST (www.thelist.tas.gov.au), © State of Tasmania

0 50 100 150 200 250 Metres

N

SCALE 1:5,000 (at A3 Print Size)

City of LAUNCESTON



GPM GROUND PROOF MAPPING

Important:

PROJECTION: Universal Transverse Mercator (UTM).

HORIZONTAL DATUM: Geocentric Datum of Australia 1994(GDA94)

MAP GRID: Mapping Grid of Australia (MGA94)

GDA

Disclaimer:

Whilst GPM (and its agents) make every reasonable effort to locate and identify features on the land which is the subject of this map not all features either above or below the surface have been located. Users are advised to independently verify all data for accuracy and completeness prior to use.

Appendix 2V

Map Type: Map 22

Map Production: GPM P/L

Production Date: 27/04/15

Legend

Reserve Locations

0 1 2 3 4 5 Kilometers

N

SCALE 1:125,000 (at A3 Print Size)

City of LAUNCESTON

APPENDIX 3

Agency Agreements

To be finalised and added to this document prior to the 2015-2016 fire season.