Feasibility for wallan wallan Regional Park

Report 2022

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Front cover: The iconic Brolga at a hydrological restoration site on the Victorian Volcanic Plains. Photo courtesy of Dr Rod Bird.

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1. EXECUTIVE SUMMARY

The Wurundjeri Woi-wurrung name for the Wallan region is known as 'wallan wallan'. The traditional name, which is not capitalised, is used throughout this report when referring to the park. The future name of the park will be determined by the traditional owners, the Wurundjeri Woi-wurrung people.

The Victorian Government committed to undertake a feasibility study for a regional park in Wallan, within the Northern Growth Corridor (NGA) in 2018. The wallan wallan Regional Park Feasibility Study project, led by the Department of Energy, Environment and Climate Action (DEECA) is a direct response to this commitment.

For the purposes of this project, regional parks are considered as large areas of open space that feature natural or semi-natural surroundings in close proximity to urban environments. Regional parks have high landscape, biodiversity and cultural values and provide a diversity of passive recreational, educational or tourism opportunities. They serve a wide catchment and draw visitors from across the region or metropolitan area. Regional parks are places where the Traditional Owners can connect with their heritage and continue cultural practices.

The future wallan wallan Regional Park has an anticipated catchment area of 15km from the park boundaries. Based on this catchment area, the wallan wallan Regional Park would provide a Metropolitan Open Space to serve a catchment population of at least 230,000 in 2021, and approximately 430,000 people by 2036.

This report outlines the detailed physical, planning and recreation settings within the study area for the wallan wallan Regional Park, and their role in informing the feasibility of any proposed park and in determining any potential locations for a park boundary.

Consideration of locating a regional park at Wallan has taken into account the setting that the landscape provides, the character of the parent landscape to determine an area which protects and enhances this essential character, and current open space planning (North Growth Corridor Plan, current and approved PSPs, other planning approvals). This review has particularly considered the following:

- Aboriginal cultural significance[1]
- Geomorphology, landform, and geology
- Hydrology and flooding
- Biodiversity and vegetation
- Other existing and proposed open space and community facilities
- Current and emerging community recreational needs

Consideration of the objectives or intended role of regional parks and the existing and proposed site conditions of the study area has led to the identification of land areas which have the potential to contribute to a network of open spaces, conservation areas and community facilities.

These areas include:

- Areas of cultural significance;
- Areas of geomorphological significance or prominent landform;
- Floodways and areas subject to inundation;
- Proposed community facilities and activity centres;
- Proposed active and municipal open space areas;
- Lineal open space connections including drainage lines; and

[1] The Cultural Heritage information referenced within this report is considered incomplete as further assessment of the cultural values within the study area is required.

- Areas of high biodiversity value or potential habitat.

These areas constitute an integrated vision for regional open and community space which the wallan wallan Regional Park will contribute to.

The network of spaces will require further refinement through future engagement with the Wurundjeri Woi-wurrung Cultural Heritage Aboriginal Corporation (WWCHAC), government agencies, environment groups, private landowners, the local community and other key stakeholders. The purpose of this engagement will be to guide further definition of land areas and sites which will be suitable as part of the wallan wallan Regional Park. The delivery of a detailed Cultural Values Study by WWCHAC will be an important input into this process to ensure significant Aboriginal cultural places and objects are identified and considered in further refinement of the park extent.

A number of criteria have been identified to guide the further definition, and ultimately a boundary, of the regional park. These are:

1. The park should incorporate representative elements of the diverse environmental character of the Wallan landscape
2. The park should reflect conservation outcomes to ensure environmental values are protected.
3. The park should be informed by an understanding of the cultural landscape and should reflect the presence and location of sites and areas of high cultural heritage significance
4. The park should respond to anticipated 100 ARI flood levels
5. The park should link different features to create an immersive experience for the park user
6. The park should connect with other regional open space
7. The park should respond to the form and activity of anticipated future urban growth
8. The park should recognise both the access potential and the potential barriers to access of the perceived future transport pattern
9. The park should recognise opportunities to connect with and maximise the utility service corridors and asset locations
10. The park should respond to the accessibility requirements of a diverse community.

The final selection of land inclusion in the wallan wallan Regional Park should not only be defined by the values and characteristics of the land but should also consider the contribution these values and characteristics will make to the experience of the park user – in other words, “what sort of park the wallan wallan Regional Park will be”.

The presence of ephemeral wetlands will provide for nature-based recreation activities, such as nature observation, walking/cycling, and community education, related to environmental and cultural heritage values in the headwaters of Kalkallo and Merri Creek. The visitor experience will vary from season to season and from year to year. Importantly, these wetlands also provide an opportunity for withdrawal from the urban environment, which is a key focus of the regional park.

In this regard the nature of land within the potential wallan wallan Regional Park will result in a diverse and stimulating cultural, recreational, and environmental experience for all park users, incorporating diverse landscape types including:

- Wetlands
- Volcanic Cones
- Ridges
- Waterways
- Pasture Areas
- Community Facilities and Municipal Open Space

The transfer of land for inclusion in the future wallan wallan Regional Park should be acquired through the mechanism of an Infrastructure Contribution Plan (ICP) or as encumbered open space where possible to minimise purchase costs. The ICP system is very specific about the type of land that can be identified as public purpose land and included in the ICP. For this reason, a large portion of the regional park will be land that is encumbered for environmental reasons.

Timing of the transfer of land for the wallan wallan Regional Park under a Precinct Structure Plan (PSP)/ICP would likely occur in a gradual manner, as land is subdivided across the various precincts. The transfer of batches of large continuous areas of land would ensure issues with connectively and access for land managers are avoided.

For land that is not able to be transferred under a PSP/ICP, a Public Acquisition Overlay (PAO) should be applied which would reserve the land for purchase by the designated authority, protect it from inappropriate use and development, and help to avoid further value uplift.

The option of a Growth Area Infrastructure Charge (GAIC) works in kind (WIK) agreement to facilitate the transfer of land from developers to the state for the purpose of the wallan wallan Regional Park should be explored. The GAIC WIK applies to growth area land brought into the Urban Growth Boundary 2005-06 or which is subsequently zoned for urban development. Consequently, GAIC WIK will not fund works outside the UGB.

Land identified for the future regional park should be zoned appropriately through the PSP process and transferred under ICPs to avoid the need for purchase, where possible.

Any land that must be purchased by the Victorian Government should be done so as soon as is practicable to avoid further value uplift associated with potential for more intensive land uses and/or increasing demand.

Land for incorporation into the wallan wallan Regional Park is not likely to require remediation works for its use as public open space, however, quarry sites will require necessary rehabilitation in order to be incorporated into the wallan wallan Regional Park. Rehabilitation of quarry sites is guided by Earth Resources Regulation's *Regulatory Practice Strategy for the Rehabilitation of Earth Resources Sites* (Department of Jobs, Precincts and Regions, 2020). Articulated in the strategy, quarry site rehabilitation should:

1) Protect people, land, infrastructure and the environment

2) Ensure land is returned to a safe, stable and sustainable landform

3) Minimise the State's exposure to rehabilitation liabilities

4) Be a best practice regulator

The rehabilitation plan created by the operator must also consult with the Wurundjeri Woi-wurrung people and consider their requirements concerning rehabilitation (Department of Jobs, Precincts and Regions, 2021). Considerations must be given to the ongoing management of the quarry and returning the area to healthy Country, consistent with Wurundjeri Woi-wurrung values. Further, Wurundjeri Woi-wurrung must be included in security calculation and rehabilitation plan assessments for the quarry.

In terms of management, the majority of the future wallan wallan Regional Park will be managed by Parks Victoria and the WWCHAC. Waterways in the wallan wallan Regional Park with Growling Grass Frog habitat (Merri Creek and wetlands) will likely be managed by Melbourne Water. Melbourne Water already manages the designated Growling Grass Frog conservation areas along Merri Creek that have been identified under the Melbourne Strategic Assessment (MSA). Further consideration will need to be given to how the park might be able to support improved habitat linkages for Growling Grass Frogs across the floodplains and how these would be best managed. For example, there is opportunity for the park to extend the linkages for Growling Grass Frogs from Merri Creek further into Herne Swamp and beyond. Given that critical Growling Grass Frog habitat areas will be inaccessible to park users, consideration should be given to the adequate provision of land outside of these areas to be used by the public.

2. INTRODUCTION

The Victorian Government committed to undertake a feasibility study for a regional park in Wallan, within the Northern Growth Corridor (NGC) in 2018. The wallan wallan Regional Park Feasibility Study project, led by the Department of Energy, Environment and Climate Action (DEECA) is a direct response to this commitment.

Continuing a long tradition of open space planning, this feasibility study investigates the need for a regional park in Mitchell Shire, where population growth is the fastest in the state at 4.5% per annum. There is an estimated resident population in Mitchell Shire of 47,837 in 2020 and this expected to increase by a further 53,400 people by 2036. Planned population growth across the townships of Wallan and Beveridge will significantly increase residential density. Wallan is a rapidly urbanising township, with population forecasts indicating a growth from 12,924 in 2019 to 43,712 in 2041, an increase of 238%. Beveridge is expected to grow from 4,006 people in 2019 to 46,092 in 2041, an increase of 1050%. The Shire has identified the establishment of a major park in Wallan and Beveridge as key to balancing urban development with open space, as well as protecting areas of environmental significance. (Mitchell Shire Council, 2013).

The Northern Growth Corridor Plans – Managing Melbourne's Growth (2012) recommends the retention of an interurban break between Beveridge and Wallan, to create two distinct urban areas. (Growth Areas Authority, 2012) This recommendation was reconfirmed when Wallan was included in the Urban Growth Boundary in 2011. The inter-urban break is still considered an important component of the northern growth corridor plan and is currently zoned Rural Conservation Zone (RCZ) for that intended purpose.

Planning for regional parks within urban growth corridors is based upon the standard of providing regional parks of at least 40 hectares of passive open space for every 150,000 people. Given new regional parks generally take a period of 10 – 15 years to establish, it is timely to commence an investigation into the feasibility of a park in Wallan.

Regional parks are large areas of open space characterised by having a natural or semi-natural condition within an urban setting, providing opportunities for members of local and Melbourne wide communities to escape from the urban landscape and enjoy a sense of space and connection with nature. Regional parks are places where the Traditional Owners can connect with their heritage and continue cultural practices. Regional parks contribute to the health and well-being of their communities through the provision of recreation and social opportunities.

In addition, they contribute to the health of the local, and broader, environment by protecting natural elements, enhancing biodiversity and sustaining essential ecological processes. Regional and Metropolitan Parks provide and enhance many social, ecological and economic benefits that are essential to the healthy functioning of the urban environment. (Parks Victoria, 2002)

Report scope

This report identifies the strategic and policy background into the investigation of the feasibility of a regional park in Wallan. The report outlines the detailed physical, planning and recreation settings within the study area and their role in informing the feasibility of any proposed park and in determining any potential locations for a park boundary.

Detail regarding an agreed park vision, park design, costs (land transfer, remediation, infrastructure), and a final park boundary will be determined via an appropriate consultative process.

Report limitations

The spatial analysis undertaken to inform the potential park extent considers the presence of biodiversity, hydrology, cultural heritage, landscape features, and the identity of the Wallan region.

The Cultural Heritage Sensitivity Overlay used to inform the potential park extent does not accurately represent the cultural values of the Wurundjeri Woi-wurrung people and further investigation is required. The delivery of a detailed Cultural Values Study by the Wurundjeri Woi-wurrung Cultural Heritage Aboriginal Corporation (WWCHAC) will ensure significant Aboriginal cultural places and objects are identified and considered in further refinement of the park extent.

2.1 The Study Area

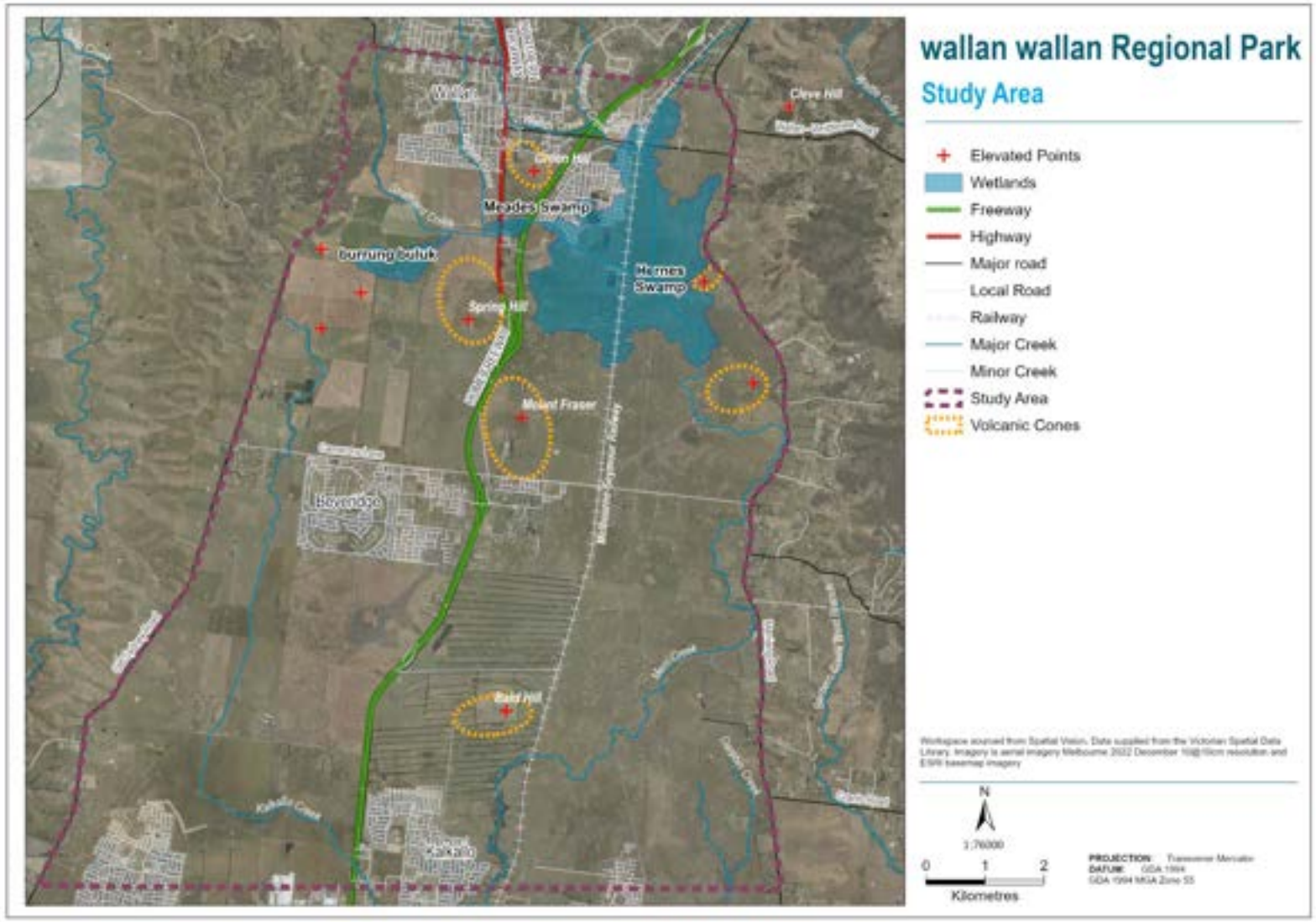

Figure 1 Study Area. Note: the southern sections of Merri Creek and Kalkallo Creek form part of the marram baba Merri Creek Regional Parklands. This section has been included within the wallan wallan Regional Park study area to ensure potential connections on both the eastern and western sides of the park are clearly depicted in the mapping of a potential regional park.

The Study Area is located on the lands of the Wurundjeri Woi-wurrung people and the entire area is considered culturally significant.

The Study Area is primarily in Mitchell Shire and includes the following key environmental features:

- The three volcanic cones (Mt Fraser, Spring Hill and Green Hill)
- Herne Swamp
- Meade Swamp
- burrung buluk (formally Hanna Swamp)
- The northern reaches of Merri Creek (the headwaters are located further to the north at Heathcote Junction
- The buffer area around the Wallan Sewage Treatment facility
- An area for flood mitigation as part of the upper Merri Catchment
- The wooded slopes to the west of Wallan.
- The Study Area also includes land that lies between the Melbourne – Albury Railway Line and Merri Creek, within the City of Whittlesea. This land is subject to a separate feasibility study for a potential intermodal freight terminal at Beveridge

View of Wallan suburb during flood event. Photo courtesy of Cr Rob Eldridge

2.2 Potential Characteristics of a Regional Park

A number of descriptions of a “regional park” have appeared in State and Local Government strategies and studies in over the years, without a final formal definition having been arrived at. However, the Metropolitan Open Space Network Distribution report released by the VPA (2017) includes a hierarchy for open spaces in Victoria. Because the future wallan wallan Regional Park is anticipated to be as large as 1,000ha, it would be considered a Metropolitan Open Space (greater than 50ha) in the Regional Network.

While a precise definition of a regional park is not apparent, there are a number of characteristics common in descriptions or definitions of regional parks or regional open space. These include:

- A large area of connected public land
- Access from urban centres or major tourist routes
- Provision of a range of unstructured, passive recreation and social opportunities,
- Accommodating large numbers of people
- Natural or semi-natural surroundings.

For the purposes of this study, these characteristics have been supplemented by the following site planning objectives:

- Acknowledging important conservation values and ensuring that integrated parkland uses will not impact on required ecological outcomes.
- Focussing on and highlighting the local landscape character, including local landform, hydrology, vegetation, and biodiversity connections.
- Incorporating a range of landscape character types representative of the environmental and landscape values typical of the locality.
- Incorporating Aboriginal cultural objectives.
- Integrating with the anticipated pattern and direction of future urban growth, responding to where people will live and where they will gather.
- Providing for a range of passive and unstructured recreation and social opportunities in response to anticipated community demographics.
- Connecting with other open space in the vicinity of the study area, including regional open space, active open space and local parks.
- Allowing for a positive integration of land not suitable for development, including flood prone land, steep land, and otherwise encumbered land.
- Allowing for an integration of unencumbered land to ensure viability of critical infrastructure (e.g. toilet facilities, trails etc) during possible flood events, as well as ensure that the park provides accessible nature-based recreation activities to all users.
- Integrating with the perceived future transport pattern, reflecting points of access and connection with residential neighbourhoods.
- Providing access and connectivity to the park for all transport modes.
- Providing blue-green spaces that support urban cooling, stormwater and flood management, and cultural and regeneration opportunities.
- Providing a buffer to Wallan that allows it to retain a character that is distinct from the outer north urban area.

Any proposed regional park will make a more valuable contribution to the recreation opportunities available to the regional community if it adds to the diversity of opportunities available and complements these. A proposed regional park should incorporate landscapes which are different to those already available or proposed in adjoining areas, should endeavour to build on any existing or proposed linear parklands, and / or allow the creation of new ones.

The creation of a new wallan wallan Regional Park would provide a unique opportunity to link important landscape features and waterways within the Mitchell Shire.

3. POLICY AND STRATEGIC CONTEXT

3.1 Key State Government Policy

There are a range of State Government policies relevant to the development of open space in the Growth Corridors of Melbourne.

Plan Melbourne 2017-2050 (Department of Environment, Land, Water and Planning, 2017)

Plan Melbourne seeks to integrate long-term land use, infrastructure and transport planning to meet the city's future environmental, population, housing, and employment needs. It incorporates implementation plans which are reviewed every five years. Outcomes and directions relevant to the wallan wallan Regional Park:

Outcome 4: *Melbourne is a distinctive and liveable city with quality design and amenity*

- 4.1 Create more great public places across Melbourne
- 4.4 Respect Melbourne's heritage as we build for the future
- 4.5 Plan for Melbourne's green wedges and peri-urban areas
- 4.6 Strengthen community participation in the planning of our city

Outcome 5: Melbourne is a city of inclusive, vibrant, and healthy neighbourhoods

- 5.1 Create a city of 20-minute neighbourhoods
- 5.2 Create neighbourhoods that support safe communities and healthy lifestyles
- 5.4 Deliver local parks and green neighbourhoods in collaboration with communities

Outcome 6: Melbourne is a sustainable and liveable city

- 6.3 Integrate urban development and water cycle management to support a resilient and liveable city
- 6.4 Make Melbourne cooler and greener
- 6.5 Protect and restore natural habitats

Implication:

The creation of a regional park will protect significant views, maintain non-urban breaks between urban areas, and conserve the cultural significance, tourism appeal and character of scenic rural landscapes. A park would provide land for a range of open space functions to meet community needs for active and passive recreation and for protection of the environment.

Growth Corridor Plans – Managing Melbourne's Growth (Growth Areas Authority, 2012)[2]

Growth Corridor Plans (GCP) provide a framework to guide the planning of new communities in each of Melbourne's Growth Corridors. The overarching planning framework informs the Precinct Structure Plan process. The Precinct Structure Plans are based on the GCPs and provide further detail as to their implications and implementation.

Of relevance to this study, the GCP's indicate areas of high environmental or landscape value, natural features, or open space to be preserved.

Implication:

This information may influence the decision making related to the potential location of open space, and who will be responsible for the ongoing management. It may be decided that these areas are best incorporated into a regional park.

[2] The Northern Metro Land Use Framework Plan (currently in draft) will build upon and provide a greater level of specificity to the existing policies contained in State planning documents such as the Growth Corridor Plans.

In addition, the GCP's broadly identify the location of future residential districts, industrial and employment areas, and open space networks.

The GCPs set the strategic direction for future urban development. In terms of open space planning, they indicate:

- Areas of high environmental or landscape value that must be protected from development. They also identify other areas of constrained land not expected to be able to be developed such as flood prone land.
- The integrated open space network that will provide the future amenity and recreational needs of the growth corridor communities and play a role in preserving natural features / character, heritage, sustaining biodiversity and healthy waterways in an urban environment.

The GCPs provide guidance for the way in which the Precinct Structure Planning process should address defining the edges between urban development and areas of high biodiversity significance or drainage significance.

Of the eight principles underpinning the GCPs, three are relevant to this study:

- P4: Create Growth areas of high amenity and character
- P5: Protect biodiversity, waterways and cultural heritage values
- P6: Create integrated open space networks

Principle 4 - Create Growth areas of high amenity and character

- Protect and reinforce the physical features that distinguish each Growth Corridor

  The protection and enhancement of existing landscapes within and adjoining Melbourne's Growth Corridors will provide the basis for creating new communities of high amenity and strong local identity.

  The ridgelines, hilltops, waterway corridors, areas of special environmental and cultural significance are key to creating a strong local character. Areas of special landscape significance that should be protected and enhanced are identified in the GCPs.

  Planning of each corridor should maximise the contribution these landscape features make to the local character and amenity of the Growth Corridor.

  In some instances, it may be sufficient to protect such landscape features by excluding them from areas identified for urban development. For more prominent areas it may be necessary to consider special planning controls that will prevent the gradual erosion of the character of such areas.

  Implication:

  There are landscape features within the study area that embody and express the local character. Including these areas in the regional park may be a way to preserve them, while enhancing local identity.

Principle 5 – Protect biodiversity, waterways and cultural heritage values

Melbourne Strategic Assessment agreement under the EPBC Act 1999

This bilateral agreement identifies a series of process and mitigation measures that the Victorian Government will use to meet the requirements of the EPBC Act 1999. Of relevance to this study it:

- Sets aside a series of sites within the UGB for protection due to their biodiversity values.
- Creates a series of prescriptions for managing Matters of National Environmental Significance (MNES) within the UGB.
- Requires the preparation of conservation strategies for the protection and management of the Golden Sun Moth, Growling Grass frog and Southern Brown Bandicoot.
- Requires the preparation of Biodiversity Conservation Strategies that draw together all relevant strategies for managing MNES in each corridor.

- Setting aside areas for biodiversity protection that are sufficient size and connectivity to sustain their biodiversity values in the longer term.

It is important to ensure all areas identified for biodiversity conservation are of a sufficient size and characteristics to have good prospects for managing their biodiversity value over time.

Connectivity between areas of habitat within a growth corridor and linkages to natural areas outside the Growth Corridor is often critical to biodiversity outcomes.

- Protecting and enhancing Growth Corridor waterways

  Major waterways and riparian corridors that run through growth corridors are important to biodiversity and cultural heritage conservation, the amenity of the Growth Corridors and the protection of water quality within and downstream of the Growth Corridor.

  Management of stormwater associated with urban development is extremely important for the health of waterways.

  For waterways with particular environmental value, the aim should be to maintain pre-development flow volumes, quality and frequency of stormwater discharges and in all cases adjustments to natural streams and floodways should be minimised.

- Protecting areas of significant Aboriginal cultural heritage and post contact heritage

  Within the GCPs, the known and likely areas of Aboriginal cultural heritage and post contact heritage value have been considered.[3]

  There is likely to be a strong correlation between sites of Aboriginal cultural heritage and waterways and other landscape and biodiversity features that are proposed to be included in open space networks. The GCPs provide for such cultural heritage values to be protected in the planning and management of the open space network of each Growth Corridor.

Principle 6 – Create Integrated Open Space Networks

- Plan open space to achieve multiple outcomes.

  The integrated planning of active and passive open space networks can play a key role in protecting environmental, heritage and drainage values, providing for the recreational needs of the community and establishing the liveability and 'sense of place' of each growth corridor.

  The identified open space networks within the GCPs are based on linear features such as creeks and ridgelines and incorporate other protected areas such as prominent hilltops, conservation reserves and existing regional parks along with encumbered land such as utility easements and retarding basins.

  Detailed planning, development and ongoing management of parts of the open space network should seek to contribute to biodiversity conservation, heritage protection, recreation, flood management, waterway and water quality protection and amenity enhancement.

- Locate regional parks in tranquil areas of high landscape value.

  Regional parks provide primarily for passive recreation rather than more intense active recreational needs. Active sporting infrastructure should not be located in the regional park.

  Often, they will also preserve areas of significant conservation value.

  GCP's make provision for regional parks to provide for passive recreation opportunities in tranquil locations with a high-quality landscape setting. Where possible they are located to take advantage of natural features such as waterways.

[3] Note: the whole study area is considered culturally significant as it is located on Wurundjeri Woi-wurrung Country.

The Department of Energy, Environment and Climate Action (DEECA) will determine the size boundary location and transfer process for these regional parks.

Some Growth Corridor Councils have well advanced plans for the development of regional parks that have been identified in the GCP's.

- Regional active open space areas are typically delivered by Council, however potential locations are suggested in the GCP's.

  There are possible opportunities to co-locate these areas of active open space with other areas of open space, including regional parks, passive parks and land set aside for drainage, landscape or biodiversity reasons.

- GCPs generally identify extensions to metropolitan trails within the Growth Corridor open space network.

  GCP's provide shared use paths for walkers and cyclists in open space settings for recreation and active transport.

  These trails link open space / recreation nodes (including regional parks and regional sports precincts) to protected hilltops and waterways and areas protected for their biodiversity and / or heritage values.

Northern Growth Corridor Plan (Growth Areas Authority, 2012)

The Northern Growth Corridor Plan seeks to preserve and enhance natural features including the significant landscape and biodiversity values within the corridor. This is achieved with an integrated open space network that provides a distinctive character and amenity and preserves and enhances the existing biodiversity values.

- Landscape, Environment and Open Space

The landscape of the Northern Growth Corridor is characterised by a large valley floor, with the hills to the west and north, a flat plateau towards the western edge and more undulating land towards the east. The Great Dividing Range forms a backdrop to the distant views to the north and north east. Merri Creek and Darebin Creek incise the valley floor and are significant elements within the landscape. Many of these natural features also have a range of cultural heritage values associated with them.

The Northern Growth Corridor Plan recognises the wide range of natural and cultural values, which combined make up an integrated open space network which provides a natural setting for the corridor.

The key landscape features that form part of the broader landscape setting for urban development include:

- Retention of key views to the hills that flank the growth corridor to the west, north and east.
- Retention of distant views from the growth corridor to the Great Dividing Range to the north and north east.
- Retention of an inter-urban break (area currently zoned as RCZ) between the northern edge of the growth corridor and Wallan.
  Note: the Growth Corridor boundary has since been relocated to the north of Wallan, however the notion of a 'break' between the urban expansion at Beveridge and increased residential development in Wallan is still valid[4].
- Retention of the red volcanic cones at Mt Fraser and the protection of vistas to these features from a range of vantage points across the growth corridor.
- Utilization of the natural drainage system across the growth corridor to create a network of open spaces which connect different parts of the corridor in both visual and landscape terms

Further work is required to determine the most appropriate mechanism for recognising and protecting these landscape features. In some cases, the land will remain undeveloped due to its intrinsic characteristics, e.g., hilltops, drainage and floodways. In other instances, it may become part of the more formal open space network.

[4] Planning and Environment Act 1987, Panel Report, Mitchell Planning Scheme Amendment C106mith, Beveridge North West Precinct Structure Plan, 2020

Implication:

Inclusion of these landscape features, which in some cases are not developable, into a regional park may be an appropriate method of protecting, enhancing and celebrating them.

- Biodiversity

  The Northern Growth Corridor includes areas of significant biodiversity values including:
  - stands of old River Red Gums scattered across the landscape
  - threatened communities of Natural Temperate Grasslands of the Victorian Volcanic Plain
  - threatened communities of Grassy Eucalypt Woodland of the Victorian Volcanic Plain

  Within the study area, the report identifies Merri Creek and its environs as an important breeding habitat for the Growling Grass Frog and also support Latham's Snipe.

- Drainage

  The Northern Growth Corridor forms part of the Yarra River Catchment and its major waterways include those of the Merri Creek and Darebin Creek catchments.

  These waterways and the numerous smaller tributaries include significant cultural heritage and provide habitat for native flora, native frog and fish species, and other flora.

  There are significant landscape features, including floodplains associated with Merri Creek, local wetlands and extensive former wetlands.

- Regional Parks and Open Space

  An open space buffer is identified between the northern edge of the Growth Corridor and Wallan. The ridge line to the west of the Growth Corridor and the prominent volcanic cones in the northern portion of the Growth Corridor will be protected from urban development. The Northern Growth Corridor Plan nominates the potential location for a regional active open space facility within the buffer.

- Wallan

  Over time, urban development in Melbourne's north will connect to the Wallan township, which will have a significant impact on the character and functional role of the town. The open space buffer is envisaged to allow Wallan to retain a character that is distinct from the outer northern urban area.

Implication:

The interurban break may include the previously identified landscape features that are not developable and which also create a sense of place, particularly the volcanic cones, treed hillsides and drainage and floodways. The existing RCZ land provides an important opportunity to link key landscape features within Beveridge NW PSP and serve broader park access to both Merri Creek and Old Sydney Road to the west.

<u>Biodiversity Conservation Strategy (BCS) for Melbourne's Growth Corridors</u> (Department of Environment and Primary Industries, 2013)

The BCS is the overarching strategy for the protection of biodiversity in the growth corridors. The BCS is a requirement to meet commitments under Part 10 of the EPBC Act 1999 as part of the MSA Program. It sets out all the conservation measures required for matters of national and state environmental significance to satisfy the commitments to the Commonwealth Government and to meet state requirements. It commits to a series of conservation outcomes for each matter of environmental significance within the growth corridors.

- Establish a network of permanently protected areas within and outside the growth corridors to enhance connectivity and protect native grasslands, grassy woodlands, wetlands, and threatened species and migratory species associated with these habitat types, and to achieve specified protection targets.
- No substantial negative change to populations of threatened flora that occur within the growth corridors at specific locations.

- Maintain functioning sustainable populations of Growling Grass Frog within and adjacent to the growth corridors with connectivity between populations.

Implication:

The BCS and supporting policy documents (GGF Master Plan, GGF habitat design standards, GGF crossing standards) will have implications on the design and locations of any acceptable uses within areas of the park that are covered by the BCS conservation area. It will also have implications for management of the land and likely land manager, and how the land will be secured.

In addition to the above statutory planning policy documents, there are a range of other State Government policies relevant to the development of open space in the Growth Corridors of Melbourne. Policies relevant to the creation of a regional park are referenced in Table 2 and Appendix D.

3.2 Local Government Policy

Planning Scheme Zones and Overlays

The Mitchell Shire is the relevant local authority for the majority of the study area. The City of Whittlesea covers the south-eastern portion of the study area. The zones covering the study area are illustrated in Figure 2.

Within the Mitchell Shire, a large proportion of the study area to the south of the Hadfield Road paper road is zoned Urban Growth Zone. This was the former extent of the Urban Growth boundary. Rural land to the north is zoned Farming Zone, and there is an area immediately to the south of Hadfield Road and at the base of the northern slopes of Mt Fraser zoned as Rural Conservation Zone. It is important to note that the zoning in the Mitchell Planning Scheme has not yet been updated to reflect zoning for the logical inclusions[5] or the anticipated land use areas in approved PSPs.

Urban Growth Zone

The purpose of the Urban Growth Zone is:

- To implement the Municipal Planning Strategy and Planning Policy Framework.
- To manage the transition of non-urban land into urban land in accordance with a Precinct Structure Plan (PSP).
- To provide a range of uses and development of land generally in accordance with a Precinct Structure Plan.
- To contain urban use and development to areas identified for urban development in a Precinct Structure Plan.
- To provide for the continued non-urban use of the land until urban development in accordance with a Precinct Structure Plan occurs.
- To prevent the use or development of land prior to a PSP being applied, that may prejudice the future urban use and development of the land.

Within the study area, the areas zoned Urban Growth Zone, Rural Conservation Zone, Farming Zone and Mixed-Use Zone are covered by a series of Precinct Structure Plans which are currently at various stages of preparation by the Victorian Planning Authority.

The following Precinct Structure Plans have been approved:

- Lockerbie
- Lockerbie North
- Beveridge Central

The following precincts are currently undergoing Precinct Structure Planning:

- Beveridge North West
- Wallan South
- Wallan East part 1

The following precincts are yet to undergo Precinct Structure Planning:

- Wallan East part 2
- Merrifield North
- Beveridge South West
- Northern Freight
- Beveridge North East

Rural Conservation Zone

The purpose of the Rural Conservation Zone is:

- To protect and enhance the natural environment and natural processes for their historic, archaeological and scientific interest, landscape, faunal habitat, and cultural values.
- To protect and enhance natural resources and the biodiversity of the area.
- To encourage development and use of land which is consistent with sustainable land management and land capabilities practices, and which

[5] In 2011, the Victorian Government identified an additional 6000 hectares of land for 'logical inclusions' in the growth corridors.

considers the conservation values and environmental sensitivity of the locality.

- To provide for agricultural use consistent with the conservation of environmental and landscape values of the area.
- To conserve and enhance the cultural significance of open rural and scenic non-urban landscapes.

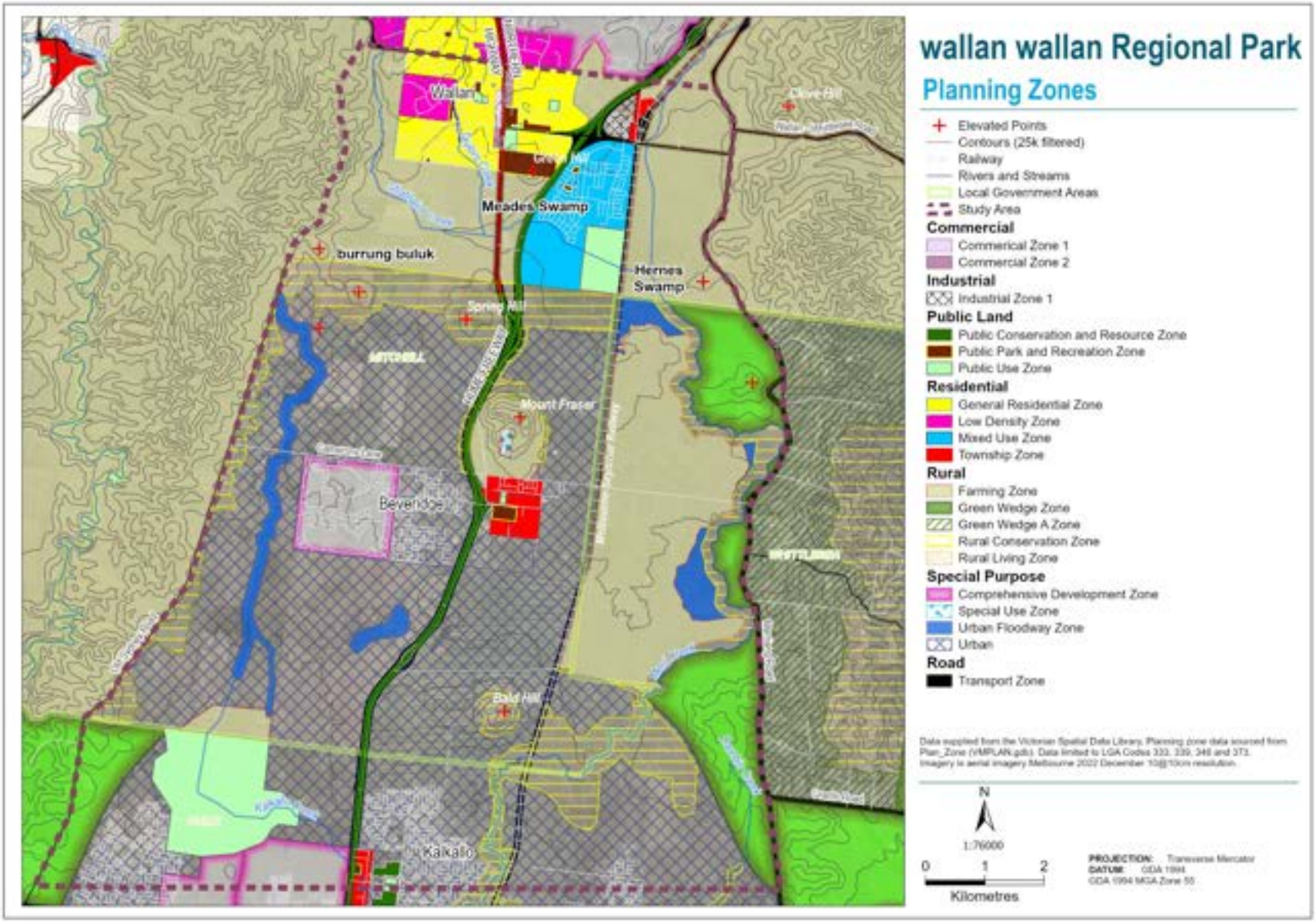

Figure 2 Planning Zones

There are various overlays within the Mitchell Planning Scheme that apply to the study area.

Vegetation Protection Overlay

The purpose of the Vegetation Protection Overlay VPO is:

- To protect areas of significant vegetation.
- To ensure that development minimises loss of vegetation.
- To preserve existing trees and other vegetation.
- To recognise vegetation protection areas as locations of special significance, natural beauty, interest and importance.
- To maintain and enhance habitat and habitat corridors for indigenous fauna.
- To encourage the regeneration of native vegetation.

Schedule 1 to the VPO recognises and protects roadside and wildlife corridor vegetation. Roadside vegetation and wildlife corridors contain pockets of remnant indigenous vegetation, rare, vulnerable and significant flora species. The objectives of VPO1 are to:

- Protect and preserve indigenous vegetation and rare and endangered flora and fauna species on linear reserves.
- Achieve high landscapes quality on roadsides.
- Maintain and enhance habitat and corridor requirements for indigenous fauna.

Within the study area, Schedule 1 of the VPO highlights an area along Old Sydney Road as of significance. Additional decision guidelines apply to permit applications in this area in order to meet the vegetation protection objectives.

Given the likelihood of remnant indigenous vegetation in this area, it may be a logical inclusion into the consideration of a regional park.

Schedule 2 to the VPO recognises and protects vegetation within wide freeway reservations. These reservations frequently contain remnant vegetation and habitat that may be substantially depleted in adjacent freehold areas. Freeways are also significant as the main viewing corridor of many visitors and local residents when travelling through the municipality, placing importance on the maintenance and enhancement of the freeway environs.

Schedule 2 to the VPO highlights the wide reservation of the Hume Freeway as it runs through the study area. Additional, decision guidelines apply to permit applications in this area both in relation to the operation of the freeway and for the protection of existing vegetation.

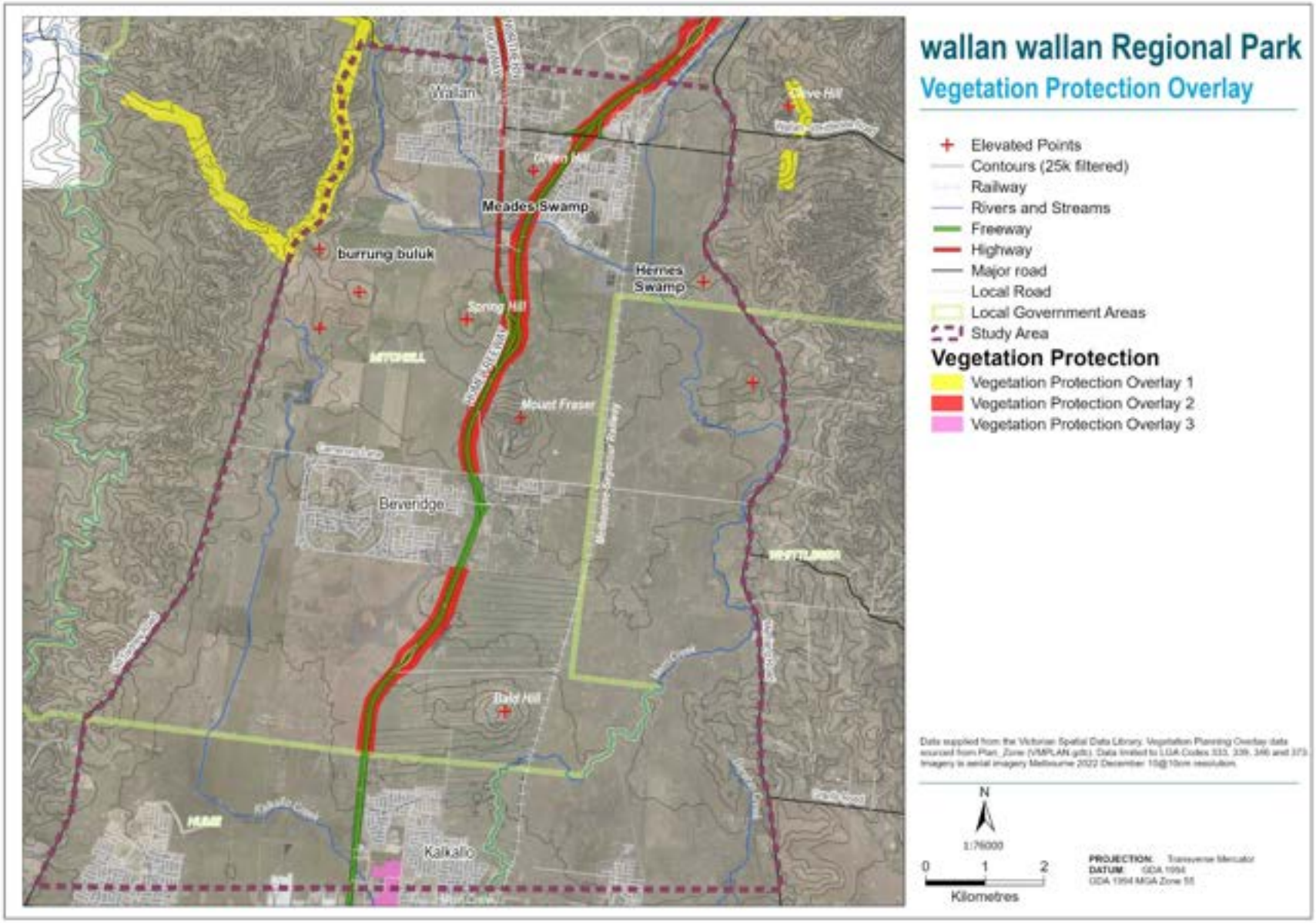

Figure 3 Vegetation Protection Overlay

Environmental Significance Overlay

The Environmental Significance Overlay (ESO) that is pertinent for this study comes from the Whittlesea Planning Scheme and covers the area along Merri Creek in the south-eastern portion of the study area.

The purpose of the overlay is to:

- identify areas where the development of land may be affected by environmental constraints.
- ensure development is compatible with identified environmental values.

The relevant schedules to the ESO are Schedule 3 and Schedule 4.

Schedule 3 to the ESO covers Merri Creek and environs. The statement of environmental significance indicates that "*Merri Creek and its immediate surrounds are host to some of the most threatened ecosystems in Australia. The Creek has a unique role to play in the preservation of threatened flora and fauna and the maintenance of vegetation communities that in other places have been almost totally destroyed."*

The statement of environmental significance also recognises that the creek is the focus of a number of significant pre and post contact archaeological sites.

Furthermore, revegetation works and parkland development have created a *'linear park of outstanding quality and landscape character"*

Schedule 3 seeks to achieve environmental objectives related to:

- Natural systems
- Waterway function
- Recreation use
- Landscape character
- Heritage

Schedule 4 to the ESO is related to the rural conservation area. This overlay applies to places identified as the location of significant biodiversity assets which can be retained and where urban development is not appropriate.

The areas covered by this overlay include existing conservation reserves, areas of significant remnant native vegetation and areas that provide habitat for threatened flora and fauna.

It is important that these areas are retained and managed to ensure that their biodiversity values and any habitat links are protected and enhanced.

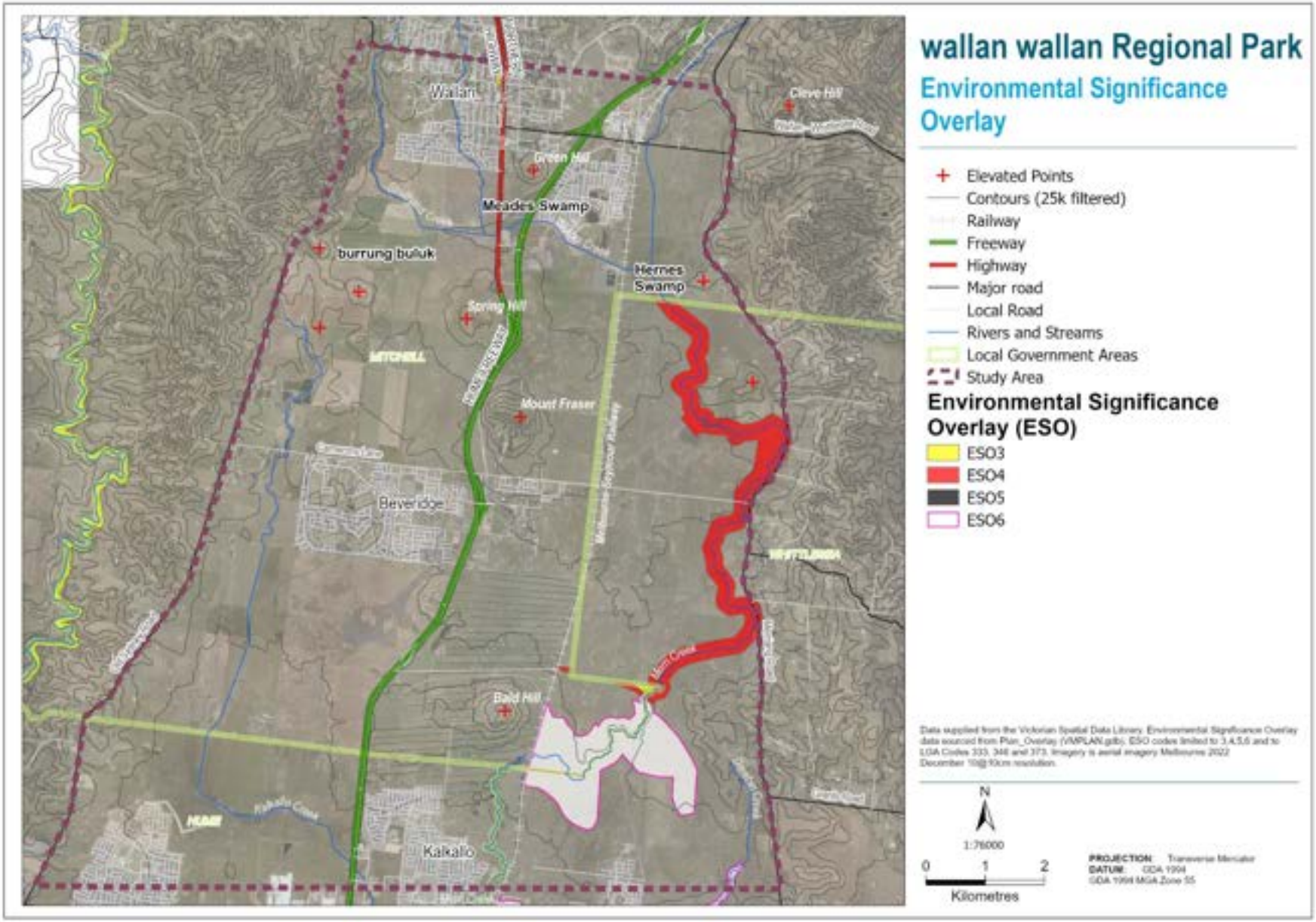

Figure 4 Environmental Significance Overlay

Land Subject to Inundation Overlay

The Mitchell Planning Scheme Land Subject to Inundation Overlay (LSIO) identifies land in a flood storage or flood fringe area affected by the 1 in 100 year flood or any other area determined by the floodplain management authority.

The purpose of the overlay is:

- to ensure that development maintains the free passage and temporary storage of floodwaters, minimises flood damage, is compatible with the flood hazard and local drainage conditions and will not cause any significant rise in flood level or flow velocity.
- to reflect any declaration under Division 4 of Part 10 of the Water Act 1989 where a declaration has been made.
- to protect water quality in accordance with the provisions of relevant State Environment Protection Policies, particularly in accordance with Clauses 33 and 35 of the State Environmental Protection Policy (Waters of Victoria).
- to ensure that development maintains or improves river and wetland health, waterway protection and flood plain health.

Outfall of Straithard Creek running into Meade Swamp. Photo courtesy of Rob Eldridge

Floodway Overlay

The purpose of the Mitchell Planning Scheme and Whittlesea Planning Scheme Floodway Overlay is:

- to identify waterways, major floodpaths, drainage depressions and high hazard areas which have the greatest risk of being affected by flooding.
- to ensure that any development maintains the free passage and temporary storage of floodwater, minimises flood damage and is compatible with flood hazard, local drainage conditions and the minimisation of soil erosion, sedimentation and silting
- to reflect any declarations under Division 4 of Part 10 of the Water Act, 1989 if a declaration has been made.
- to protect water quality and waterways as natural resources in accordance with the provisions of relevant State Environment Policies, and particularly in accordance with Clauses 33 and 35 of the State Environment Protection Policy (Waters of Victoria).
- to ensure that development maintains or improves river and wetland health, waterway protection and flood plain health.

It may be appropriate to consider the incorporation of land subject to either overlay within the open space network in order to retain areas subject to flooding free from development.

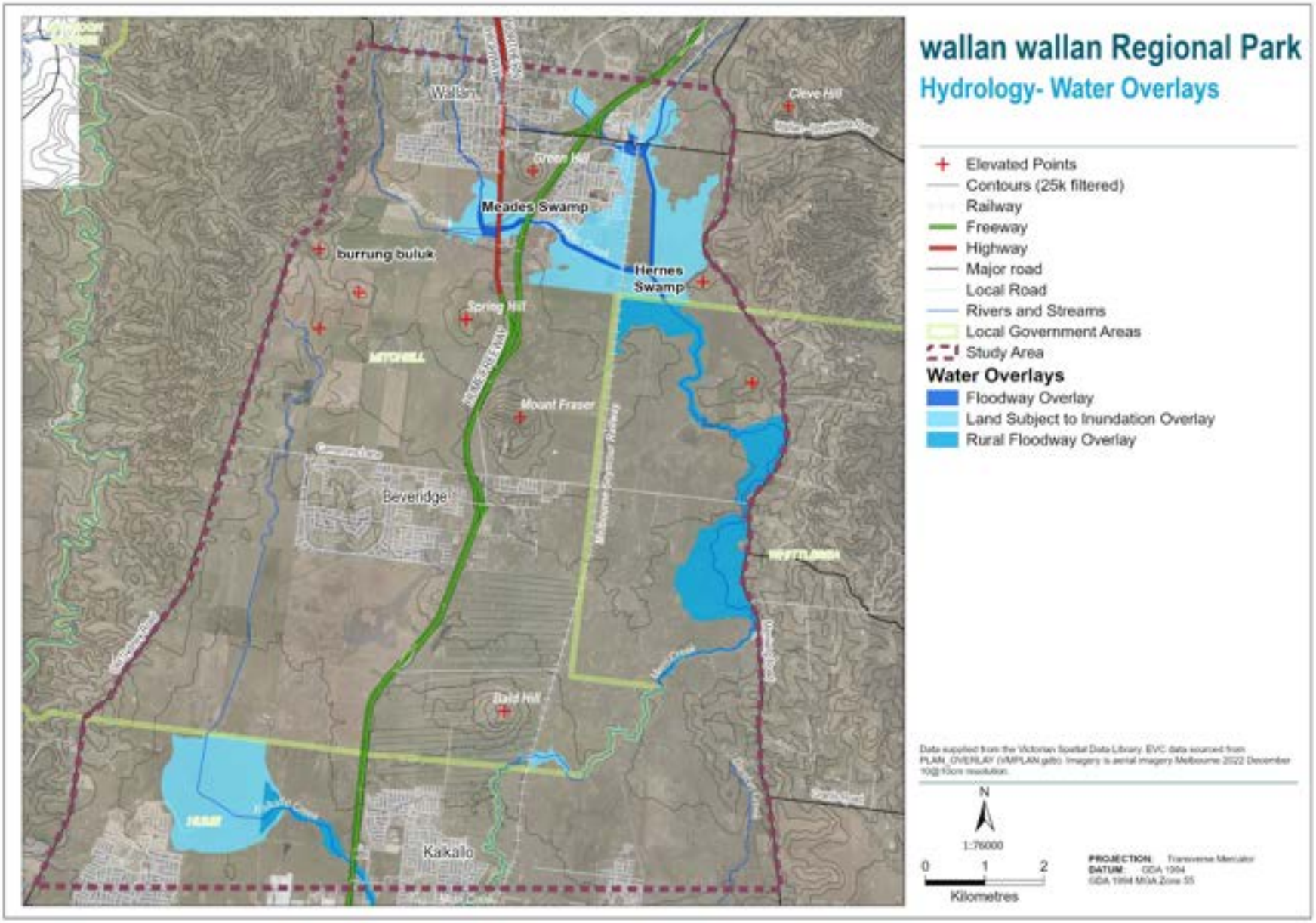

Figure 5 Land Subject to Inundation Planning Scheme Overlays

Bushfire Management Overlay

The purpose of the Bushfire Management Overlay (BMO) is:

- to ensure that the development of land prioritises the protection of human life and community resilience to bushfire
- to identify areas where bushfire hazard warrants bushfire protection measures to be implemented
- to ensure development is only permitted where the risk to life and property from bushfire can be reduced to an acceptable level.

The BMO outlines additional requirements for subdivision and / or development in the nominated area.

Schedule 1 to the BMO is applicable to part of the study area, in the north-west.

Schedule 1 specifies the application requirements for the construction of dwellings within the BMO.

The BMO is associated with significant areas of vegetation and slope on the land. Consideration might be given to appropriate edge treatments in any adjacent precinct development to provide a buffer to areas of threat.

Erosion Management Overlay

The purpose of the Erosion Management Overlay is to protect areas prone to erosion, landslip or other land degradation processes by minimising land disturbance and inappropriate development.

The land identified in the EMO may be considered appropriate for inclusion into the open space network.

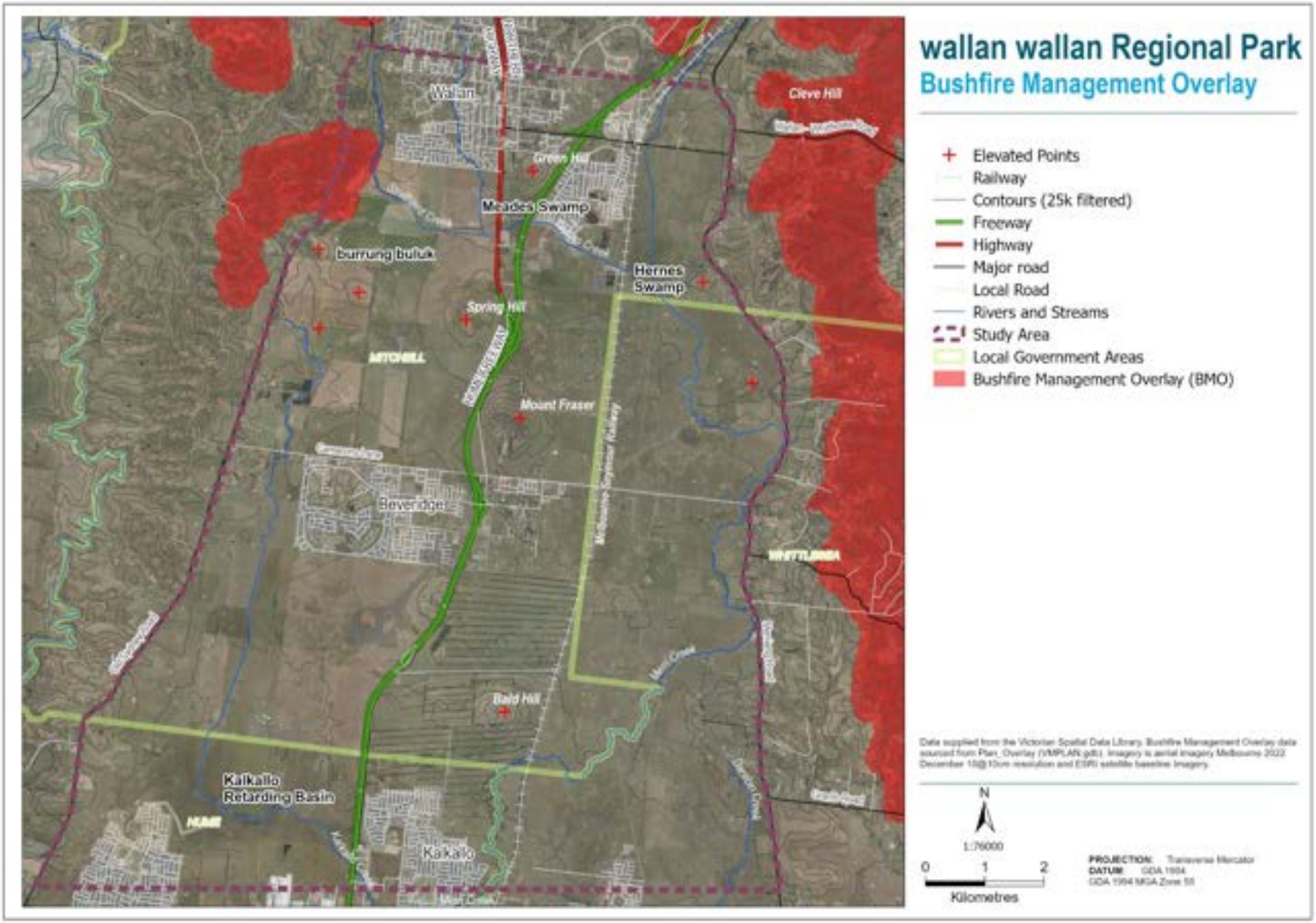

Figure 6 Bushfire Management Overlay

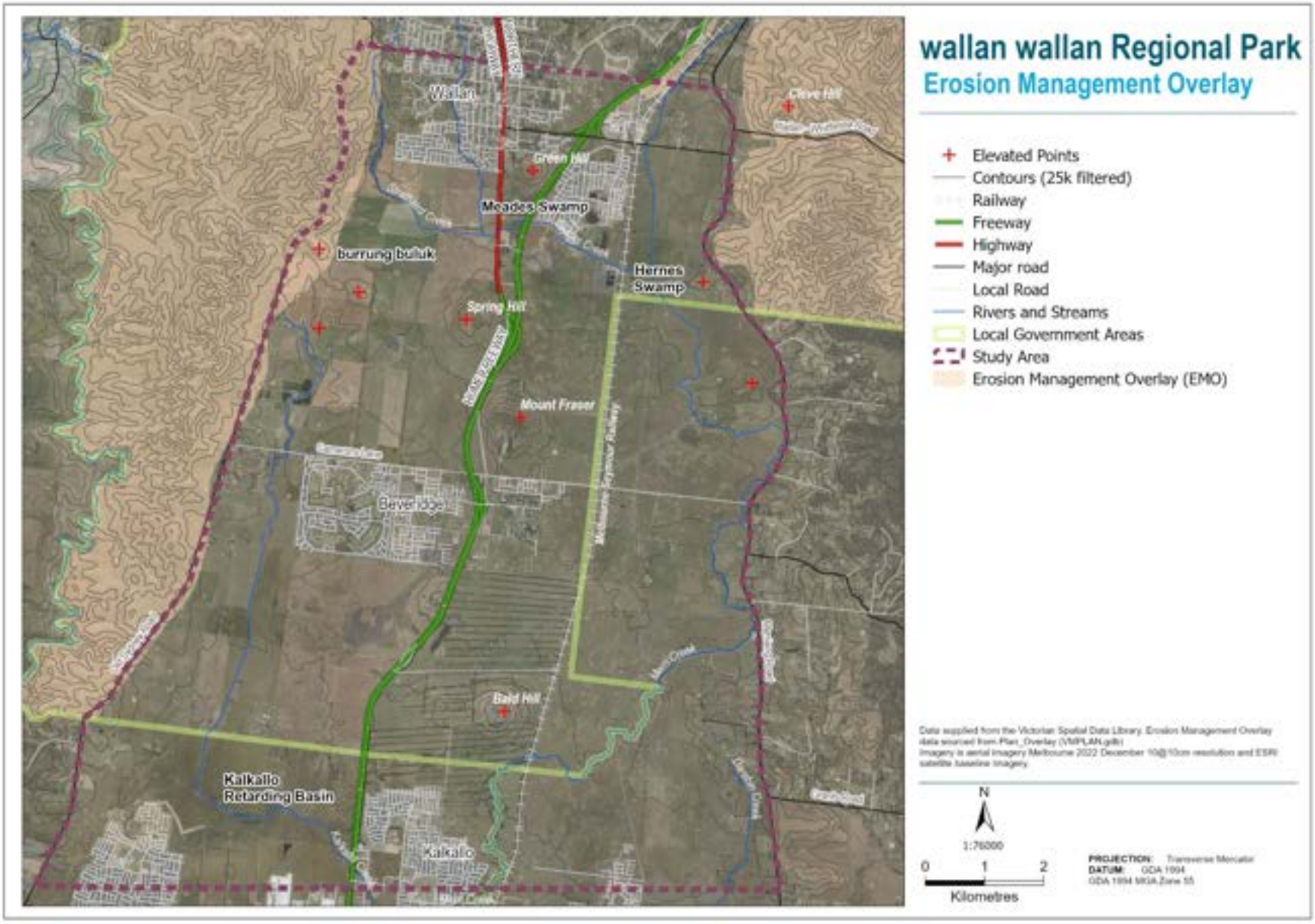

Figure 7 Erosion Management Overlay

Heritage Overlay

The purpose of the Mitchell Planning Scheme Heritage Overlay (HO) is to:

- conserve and enhance heritage places of natural or cultural significance
- conserve and enhance those elements which contribute to the significance of heritage places.
- to ensure that development does not adversely affect the significance of heritage places.
- to conserve specified heritage places by allowing a use that would otherwise be prohibited if this will demonstrably assist with the conservation of the significance of the heritage place.

The requirements of the HO apply to both the listed heritage item and its associated land.

There a number of heritage places listed in the planning scheme in proximity to the study area and these are shown in Figure 8. Most of these places fall within the townships of Wallan and Beveridge.

The heritage places that may come into consideration for the planning of a regional park in the area include:

HO2 Mt Fraser Homestead complex

HO3 Hume and Hovell monument

HO220 Walnarring Farm complex buildings, including the former Quinns Cottage

Implication:

While the Precinct Structure Planning process will generally lead to revision of the planning scheme, rendering the existing controls redundant, the extent of the existing controls provides some guidance in regard to areas of significance which should be considered in the definition of the wallan wallan Regional Park.

Most significant of these are:

- *The Rural Conservation Zone capturing the steep slopes of Spring Hill and vegetated land to the west of the study area*
- *The Vegetation Protection Overlay in the northwest of the site, parts of which are also covered by the Bushfire Management Overlay and the Erosion Management Overlay*
- *The Land Subject to Inundation Overlay and Floodway Overlay, which, although outdated by more recent Melbourne Water work, highlights land in the study area prone to flooding particularly around Herne Swamp and burrung buluk (Hanna Swamp).*
- *Environmental Significance Overlays along the Merri Creek*

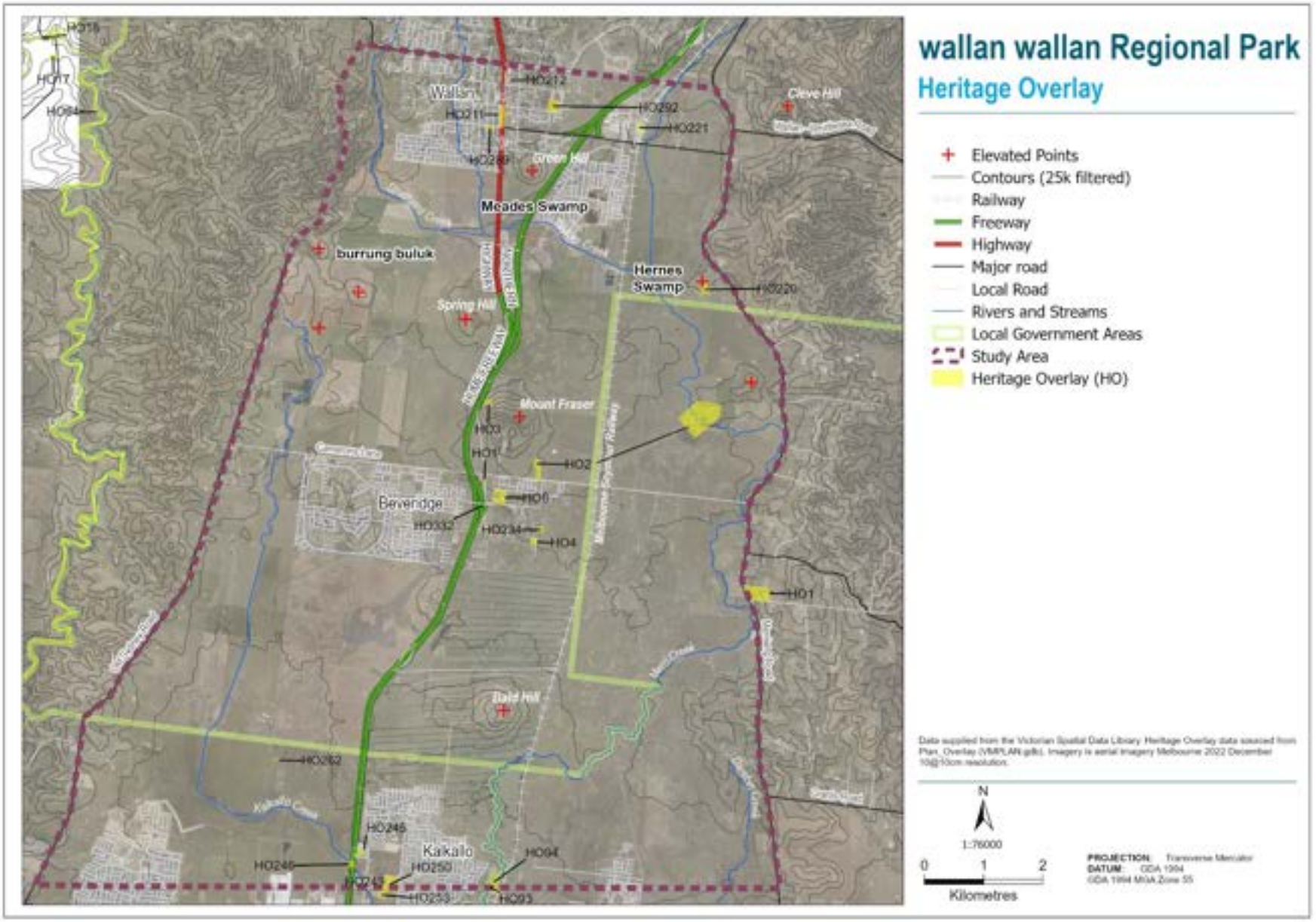

Figure 8 Heritage Overlay

4. EXISTING STUDY AREA CONDITIONS

Consideration of locating a regional park at Wallan should take into account the setting that the landscape provides and examine the character of the parent landscape to determine an area which protects and enhances this essential character.

There are a number of elements which contribute to landscape character.

4.1 Cultural Significance

The Wurundjeri Woi-wurrung people are the traditional owners of the area under investigation for the wallan wallan Regional Park. The Wurundjeri Woi-wurrung Cultural Heritage Aboriginal Corporation (WWCHAC) is a Registered Aboriginal Party (RAP) under the Victorian Aboriginal Heritage Act 2006 and represents the interests of the Wurundjeri Woi-wurrung people.

While the entire Wallan region is considered culturally significant to the Wurundjeri Woi-wurrung people, there is an incomplete understanding of the cultural landscape within the study area and further work is required before a final park boundary can be identified. To ensure the future location and attributes of the wallan wallan Regional Park are informed by an understanding of the cultural landscape, a Cultural Values Study (CVS) should be undertaken by WWCHAC across the potential park extent. A CVS is a critical next step that will set out the significance of the park as a cultural landscape and will provide guidance for future park planning.

In lieu of a completed CVS, this report relies on the Cultural Heritage layer and findings from a desktop analysis prepared for the Wallan Beveridge Waterway Assessment by Biosis in 2020. Both resources are limited as they do not accurately reflect the value of cultural ecology elements, archaeological extents or represent the breadth of Wurundjeri Woi-wurrung engagement on Country. For example, the historic waterways and the true extent of Herne Swamp are not accurately reflected in the Cultural Heritage layer and could result in the wrong areas being investigated for evidence of cultural heritage and sites of cultural significance.

According to the Biosis assessment, there are 61 Aboriginal places within the study area with a total of 97 components. The geomorphologic and ecological units and pre 1750 EVC's present in the study area suggest the area would have supplied abundant, easily accessible water, diverse vegetation, and a variety of fauna - supporting the occupation of the Wurundjeri Woi-wurrung people. The volcanic rock formations would also have provided material appropriate for stone tool manufacture. (Biosis, 2020)

The Wurundjeri Woi-wurrung people have a strong connection to Wallan and evidence of their presence prior to and after European settlement is identified across the study area. The waterways and swamps within the study areas are highly sensitive to the presence of Aboriginal cultural heritage material. Numerous landforms and areas of elevated ground also have a high potential to yield Aboriginal material culture. (Biosis, 2020)

Previous archaeological reports and registered Aboriginal places indicates there are areas of high significance within the study area. The eastern slopes of Mt Fraser are represented in the registered Aboriginal places, as are waterways, particularly Kalkallo Creek. Scarred trees have been shown to occur, particularly where land clearing has not taken place, although these are not common in the area. (Biosis, 2020)

Stony rises are known to be of high significance to Aboriginal people, and both the slopes and crests of these elevated landforms are of high sensitivity. The confluence of two or more waterways also has a high likelihood of yielding Aboriginal material culture and have a high level of sensitivity. (Biosis, 2020)

The Aboriginal Heritage Regulations 2018 state a cultural heritage management plan is required for an activity if all or part of the activity area is an area of cultural heritage sensitivity and all or part of the activity is a high impact activity. Three regulations are defined which are relevant to the study area

- Registered cultural heritage places, and the land within 50 metres
- Waterways and land within 200 metres (waterways also include a lake, lagoon, swamp or marsh, being a natural collection of water (other than

water collected and contained in a private dam or a natural depression on private land) into or through or out of which a current that forms as the whole or part of the flow of a river, creek, stream or watercourse passes, whether or not the flow is continuous).

- Volcanic cones of western Victoria

  Volcanic cones of western Victoria are defined as an area identified as

  a. 'Ne', Nep1' Nept', Neptp' and Nes in the Surface Geology of Victoria 1:250,000 map book or
  b. 'Qvs' on the Geological Survey of Victoria 1:250,000 map series sheet SJ54-11 entitled 'Portland' (2nd edition, 1997) (Biosis, 2020)

Implication

The Wurundjeri Woi-wurrung people are the traditional owners of the Wallan region. WWCHAC will have a key role in the future management of the wallan wallan Regional Park.

A Cultural Values Study is a critical next step in understanding the cultural landscape of the land identified as potential regional park. This work will ultimately guide the future location and attributes of the wallan wallan Regional Park. Any future regional park will seek to celebrate and embed Aboriginal cultural values.

View of Mt Fraser

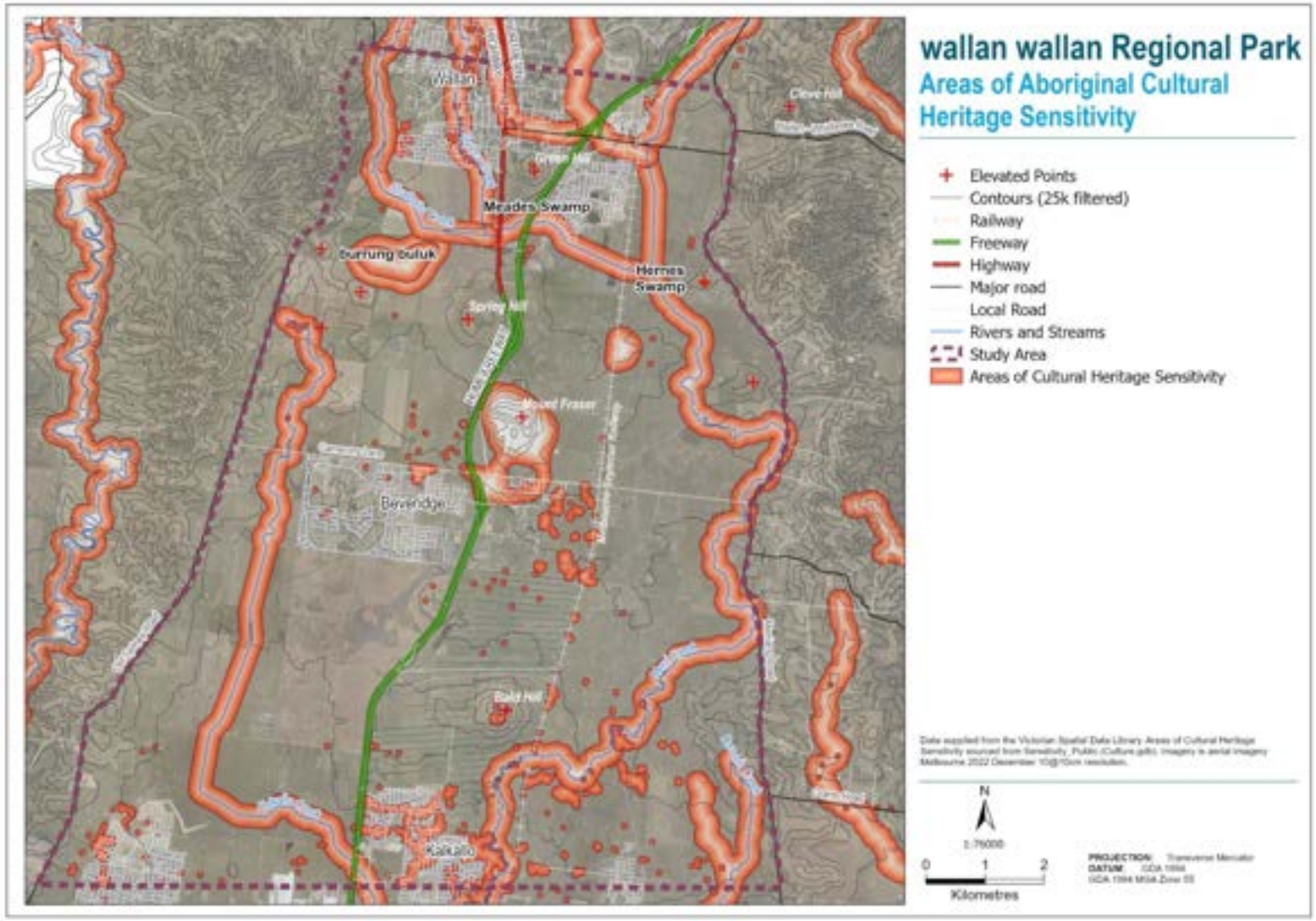

Figure 9: Areas of Aboriginal Cultural Sensitivity[6]

[6] A 200m buffer is used along named waterways and is accepted as the high sensitivity zone designed in the Aboriginal Heritage Regulations 2018. Note: Herne Swamp is not accurately represented in this figure.

4.2 Geomorphology and Landform

Geomorphology

Landscapes are shaped by geomorphological and pedological processes.

Geomorphology is the study of landforms, their origin and evolution, the investigation of relationships between landform development and processes that shape and configure these landforms. These processes might include tectonic movement, volcanism, erosion and deposition cycles.

'Geomorphology forms the fundamental template on which landscape processes and human interactions with those processes takes place.' (Victorian Resources Online, 2007)

Geomorphological maps have been used for purposes such as land use planning or hazard mapping. Maps of geomorphic land units can provide information relating to altitude, slope, aspect, soils, climate and vegetation. These landscape types have remained largely unchanged for thousands of years and can also provide useful information when investigating past human use of an area

On a broad scale, Wallan and its surrounds sit at the junction between the Victorian Western Plains and the Eastern Uplands.

The Victorian Western Plains consist of low-lying undulating plains formed on both volcanic and sedimentary rock units. The landscapes in this unit are formed on some of the youngest rocks in Victoria.

The stony rises are the youngest landscape within this unit and have skeletal uniform or gradational soils. Earlier lava flows have deeper soils.

Much of the Victorian Western Plains unit is a natural grasslands plain in which trees are scarce. In a relative sense, tree cover is more common along stony rise flows.

The younger stony rises landscapes are often rocky and undulating, characterised by stony mounds with little or no soil and no surface drainage development.

The volcanic landscapes of the Western Uplands demonstrate basalts of the Newer Volcanics, which fill many of the valleys creating undulating topography, usually fringed by streams of the displaced drainage.

Much of the area to the south of Wallan has experienced extensive volcanic activity, reflected in the underlying geology.

There are three volcanic cones within the study area - Mt Fraser, Spring Hill and Green Hill. There are an additional two cones to the east of the study area that are hills of sedimentary origin.

Mt Fraser is one of the largest scoria cones in the Newer Volcanic Province. The Geological Society of Australia (GSA) has assessed Mt Fraser as a significant geological heritage site, with state significance. It is the largest scoria cone near to Melbourne, with an elevation of 435m above sea level, and its location on a low elevation plain with little relief makes it a conspicuous landscape element of the plains north of Melbourne. Mt Fraser demonstrates the typical form of a simple scoria cone, with straight sides and a well-defined base contour. It is also significant as the source of lava flows that filled the valleys and some of the northern tributaries of the Yarra River.

Spring Hill is a circular lava cone that is currently recognised by the GSA as an eruption site of regional significance. The complexity of the eruption points on the cone could warrant state significance. (Victorian Resources Online, 2007). Spring Hill is the youngest eruption point in the Wallan-Yuroke lava field.

Green Hill is recognised as an eruption point with no assigned significance by the GSA. It is possibly the oldest eruption point in the area. (Hanks, 1955)

The basalt plains which emerged from volcanic activity are known for heavy clay soils that often result in surface ponding. Cracking clays, sodic brown, yellow and grey texture contrast soils are found throughout.

Swamps and alluvial plains are located across the basalt plains where a defined lateral stream has not yet developed.

There have been geomorphic investigations into some of the waterways in the study area between 2007 and 2021. The streams investigated, a reach of Strathaird Creek, Taylors Creek and Wallan Creek, generally found that the

creeks were in poor condition due to land clearing, agricultural run off or increased run off due to urban development. The poor condition of the streams was expressed as channel incision and widening, bank collapse and accelerated bank retreat. In some locations the reaches had undergone engineering creating stable banks with low geomorphic or ecological value. One reach of Wallan Creek had undergone waterway restoration, resulting in a stable trajectory, provided the vegetation remained intact. (Alluvium, 2020)

These studies suggest that restoration of waterways, potentially in the context of public open space has the capacity to improve geomorphic and ecological values and stabilise the stream banks. These restored waterways have the potential to provide lineal open space connections throughout the study area.

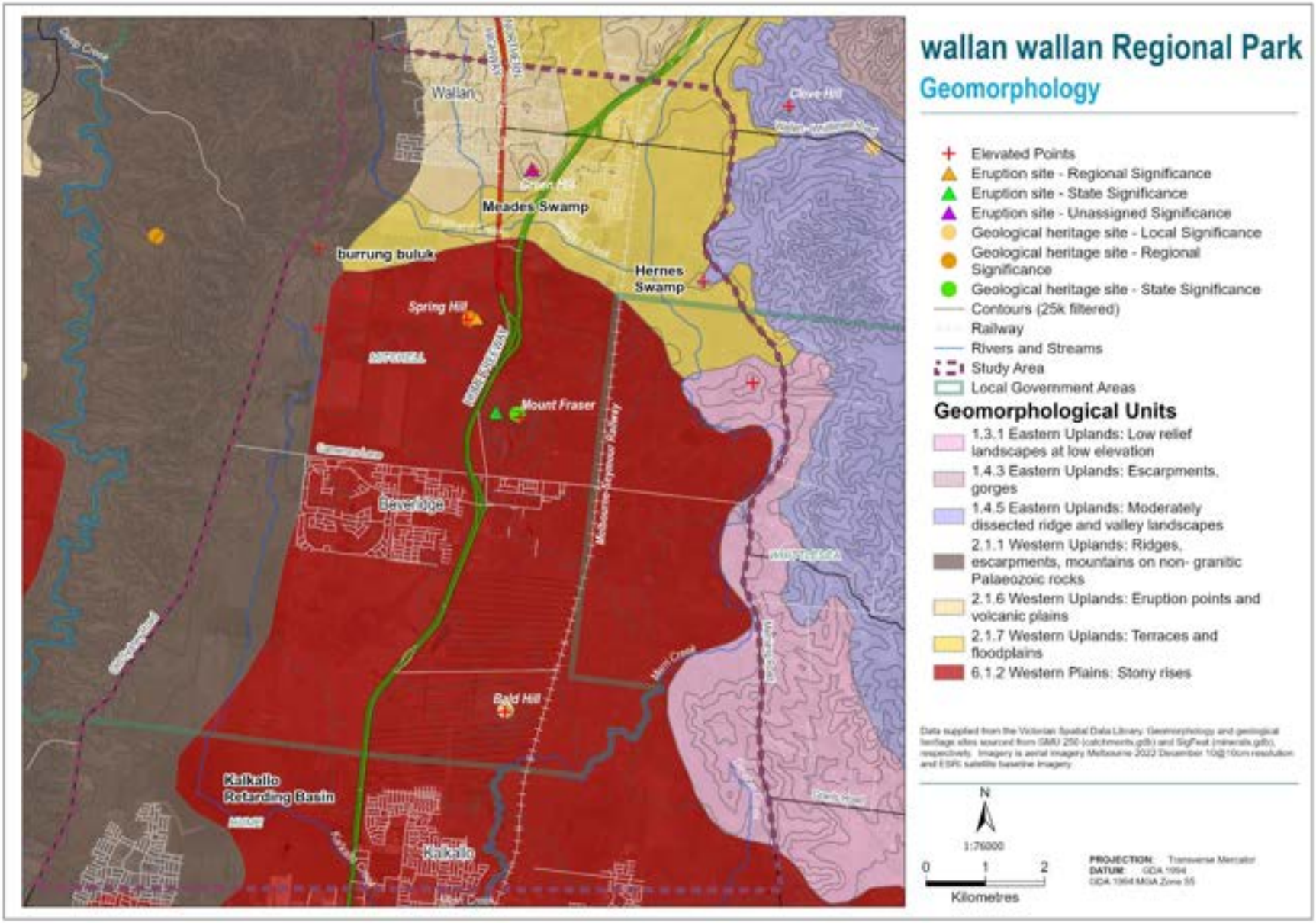

Figure 10 Geomorphology

Landform

The study area sits at the transition point of two distinct Landscape Character Zones in Victoria – the Western Plains and Foothills. The landform expresses the underlying geology and geomorphology as well as the landscape character.

To the west lie the foothills of the western uplands. The treed hills and ridge lines stretch to the Great Dividing Range. The hills to the east are also treed hills and ridges representative of the eastern uplands geomorphology and foothills landscape character type. They also stretch to the Great Dividing Range. The foothills frame the valley plain (water and hills emerging as a strong theme), and the treed nature provides a visual contrast to the plains, offering high scenic quality.

The volcanic cones of the area are a distinct landscape feature, rising from the plains landscape of the valley floor. They offer a distinct visual feature within the landscape and afford long views from their peaks. The cones have few to no trees and create a smooth mounding pastoral landscape. Volcanic rocks are scattered over the cones, providing a visual cue as to their geological history. The most prominent of the cones is Mt Fraser, rising 125m above the surrounding basalt plain.

The valley plain gently slopes south towards Melbourne. It is dissected by waterways and channels and contains former wetlands and swamps. The current character is generally one of a pastoral landscape, with urban development encroaching from the south as the urban growth area expands, as well as towards the south from Wallan.

Implication

The study area exhibits in a microcosm the fundamental geomorphic and landform elements of the northern and western region of Melbourne – volcanic cones, basalt flows and floodplains. The regional park would present the opportunity to retain these characteristics to expose the visitor community to the character of the original landscape in which they live. Further, the park would provide an opportunity to protect the cultural aspects of these landforms, as determined by and in partnership with the Wurundjeri Woi-wurrung.

Western Foothills

View towards Mt Fraser and Spring Hill from Taylors Lane

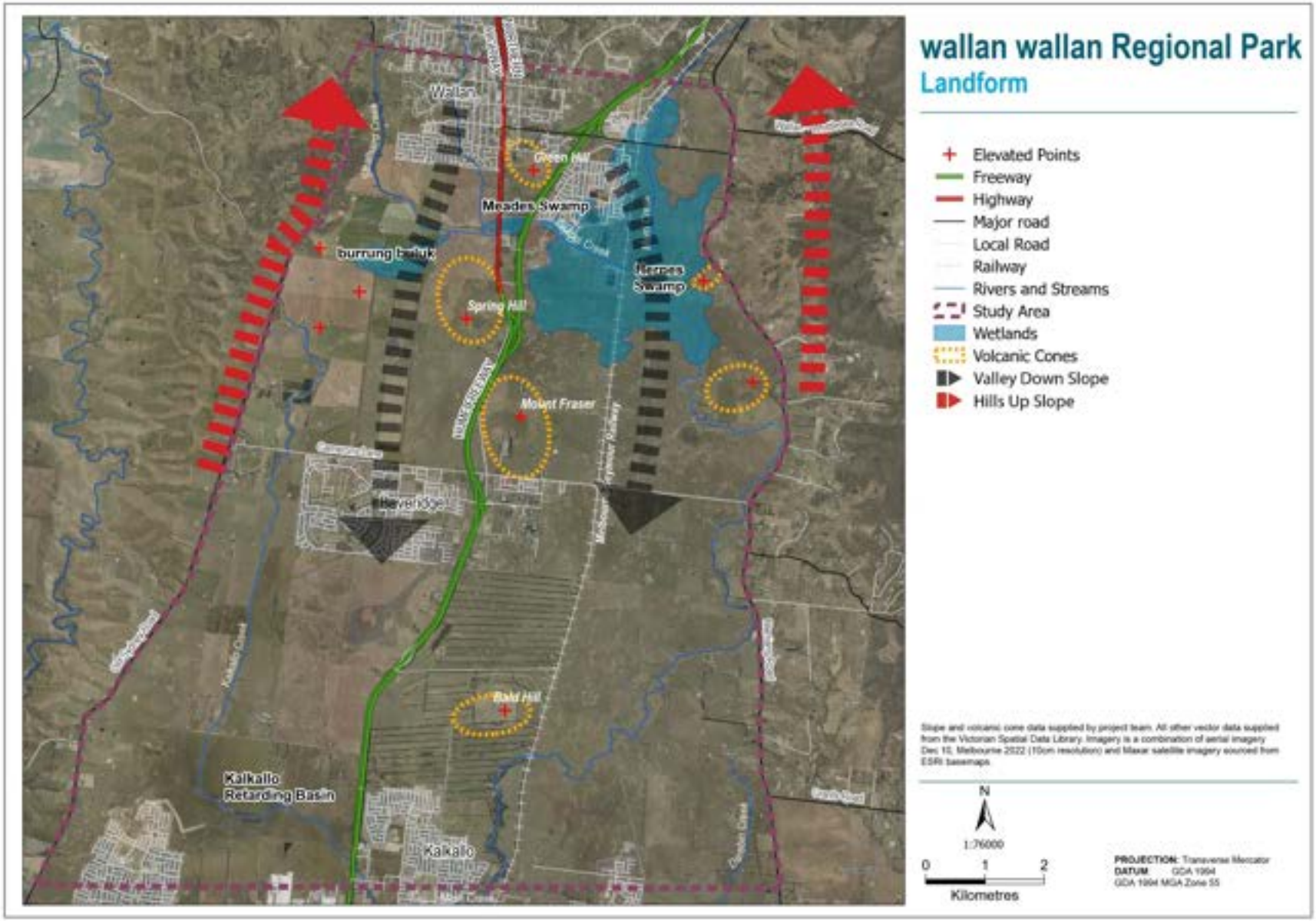

Figure 11 Landform

4.3 Geology

The underlying geology of the area dictates soil types and influences the biodiversity of an area, particularly vegetation communities.

The Wallan area is largely dominated by various units of the Newer Volcanic Group. This group comprises Miocene – Pleistocene basalt flows in scattered locations and Miocene – Holocene basalt stony rises and scoria deposits.

To the north of the study area, there is a large area overlaying Pleistocene sandy alluvial terrace deposits.

The eastern and western borders overlay the early Devonian deposits of the Humevale siltstone.

Looking towards Mt Fraser on the left and Spring Hill on the right from Green Hill

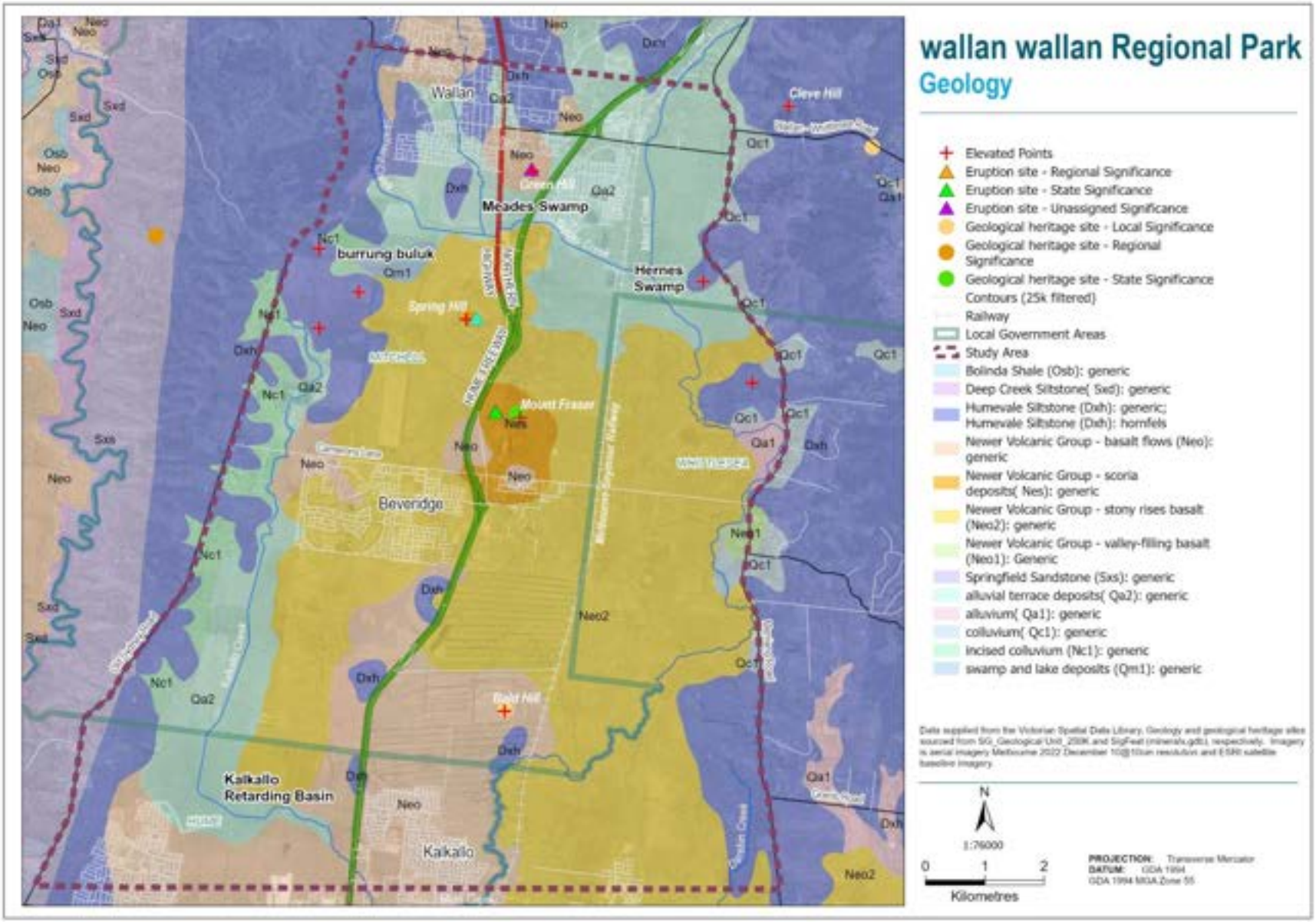

Figure 12 Geology

4.4 Sodic Soils

Sodic soils, or sodasols, are named for the principal identifying feature of high levels of sodium. The sodium in the soil results in a sodic soil that has low strength in the presence of water. There is vulnerability to compaction on productive soils, or weak foundations for infrastructure development if soils are not properly stabilised or compacted. The development of tunnel or gully erosion is often strongly evidenced in sodic landscapes.

Review of the available literature by others indicates that sodic soils are strongly present across the study area. There are two major landform units in the study area:

- The Wallan floodplain landform formed over alluvial floodplain deposits and
- The Quarternary volcanic plain landform formed over Newer Volcanic deposits.

Topsoils within the different landform units have varying levels of dispersibility. Subsoils that formed over the alluvial floodplain deposits within the Wallan Wetlands have high levels of dispersibility. Those formed over the volcanic deposits have low levels of dispersibility. (Alluvium, 2020) A sodic soil assessment undertaken by Jacobs (July 2020) for the Beveridge North West Precinct Area found that sodic and dispersive soils are present in the PSP area, where top soils were typically non-sodic but sub-soils varied from moderately to highly-sodic. In the case of the Beveridge North West PSP, there is moderate to high risk of erosion due to the variation in top-soil depth. Areas within the PSP most susceptible to the risk of erosion are drainage depressions/seasonal wetlands, Kalkallo Creek and its tributaries, and steep slopes. (Victorian Planning Authority, 2020)

Dispersive soils may be encountered over a large proportion of the study area. The low relief of the floodplains may reduce the risk of erosion. The main drivers of erosion are disturbances of the sodic layers (e.g. from urban development), and high water volumes and velocities. An impact of erosion caused by high water volumes is high sediment loads in waterways that are strategically important habitats, particularly for the Growling Grass Frog.

Implication

The presence of sodic soils within the study area indicates a constraint upon the type of landscape which can easily be established in public open space areas. The presence of sodic soils requires additional consideration when development takes place and areas at high risk of erosion may be better suited to a "natural or semi-natural landscape", typical of a regional park.

Any waterways and associated infrastructure within public open space will need to be designed and managed to minimise the risk of erosion and dispersion of sediment loads throughout the waterway system.

4.5 Hydrology and Flooding

The waterways of the study area consist of the upper reaches of the Merri Creek in the east, Kalkallo Creek in the west and Strathaird and Taylors Creeks, which flow north – south before flowing in an easterly direction to converge with the Merri Creek.

There are other unnamed tributaries, which flow into Merri Creek. In its upper reaches, the Merri Creek has been channelised, as have Taylors and Strathaird Creeks in the east –west channels, and Kalkallo Creek.

The study area also contains two large seasonal / ephemeral wetlands, Herne Swamp and burrung buluk (Hanna Swamp), as well as a number of smaller wetlands such as Meade Swamp – all of which are considered culturally significant to the Wurundjeri Woi-wurrung people. The wetlands have been drained for agricultural purposes, but the low-lying areas are still subject to inundation during heavy rainfall events. The full extent of these wetlands is still to be determined through investigation separate to this study. As they fell outside of the former Urban Growth Boundary, the biodiversity values of the logical inclusion areas were never assessed in the Biodiversity Conservation Strategy for Melbourne's Growth Corridors 2013. Further assessment is needed to understand the biodiversity value as well as the cultural value of these wetlands to the Wurundjeri Woi-wurrung people.

Herne Swamp is considered hydrologically constrained because of new and proposed urban development within the former footprint of the swamp. The potential for future restoration will be fundamentally impacted by these developments. There remains an opportunity to fully restore both burrung buluk and Meade Swamp along with the original waterway alignment above and below them. This would require significant hydrological restoration works.

The DEECA waterways layer referenced within this study largely reflects the location of modern modified waterways, drains, erosion gullies and diversion channels, not the original alignment of the waterways in their natural state. Should restoration works occur, the mapping of the current conditions is not considered appropriate for illustrating or modelling historic conditions or to inform restoration plans. (Nature Glenelg Trust, 2020)

It is recognised that natural wetlands in Melbourne's growth areas are at increasing risk of degradation or being destroyed due to development activities. It is a priority of the Healthy Waterways Strategy (HWS) to protect wetlands from further degradation through various mechanisms, including through Precinct Structure Planning. A target of the HWS is to 'protect, maintain, or improve wetland vegetation to support habitat values' (Melbourne Water Corporation, 2018).

Improving the environmental condition of waterways is supported in several other key State Government strategies[7]. Each strategy contains objectives relating to the improvement of wetlands and waterways to respond to climate change and other environmental threats using an Integrated Water Management (IWM) approach.

Herne Swamp in flood. Photo courtesy of Cr Rob Eldridge

[7] The Victorian Waterway Management Strategy (2013), and Biodiversity 2037 (2017), Open Space Strategy for Metropolitan Melbourne (2021), Hume Regional Climate Change Adaptation Strategy (2021)

IWM is a collaborative approach to the planning and management of all elements of the water cycle. An IMW approach should be applied across the catchment areas within the regional park and should influence any water sensitive urban design assets such as bioretention basins and constructed wetland systems. These systems could be based on the natural wetland systems present within the study area (Department of Environment, Land, Water and Planning, 2017).

Implementing water sensitivity into the planning and management of the regional park will help strengthen climate change mitigation and adaptability in the region. Water sensitive urban design is an important part of integrated water management and will create opportunities for inclusion in the regional park. Urban stormwater treatment and harvesting represents an opportunity to utilise stormwater runoff and provide an additional source of water to support the local environment, reduce urban heating, and maintain ecological complexity.

YVW treatment plant. Photo courtesy of Cr Rob Eldridge

Flooding around residential area in Wallan. Photo courtesy of Cr Rob Eldridge

Flood mapping

Areas subject to flooding are defined by the Land Subject to Inundation Overlay (LSIO) and Floodway Overlay (FO) within the Mitchell Shire Planning Scheme. These overlays have the following objectives relevant to this study:

- To identify waterways, major floodpaths, drainage depressions and high hazard areas which have the greatest risk and frequency of being affected by flooding. (FO)
- To identify land in a flood storage or flood fringe area affected by the 1 in 100 year flood or any other area determined by the floodplain management authority. (LSIO)
- To ensure that development maintains the free passage and temporary storage of floodwaters, minimises flood damage, is compatible with the flood hazard and local drainage conditions and will not cause any significant rise in flood level or flow velocity. (LSIO)

The extent of the study area impacted by these overlays is illustrated on Figure 13.

During the course of this study, Melbourne Water has undertaken additional investigation and modelling to more precisely determine the extent of the 100 ARI area. The intent of this investigation was to provide a contemporary “baseline” of flood extent in order to assess the impact of future development scenarios.

The extent of the 100 ARI area as revealed by this investigation is illustrated on Figure 14. This extent aligns with the historic extent of Herne Swamp according to modelling undertaken by Nature Glenelg Trust. Refer to Figure 15.

Implications

Land falling within a floodway, or subject to inundation in a 100 ARI event, is constrained in terms of urban development, unless major earthworks or infrastructure works are undertaken. Such land does however retain capacity for open space, biodiversity and conservation uses, as might be suitable within a regional park, and so should be considered for inclusion in the wallan wallan Regional Park.

The full extent of these wetlands is still to be determined through investigation separate to this study. As the wetlands fall within the ‘logical inclusion’ area of the Northern Growth Corridor, the biodiversity values were never assessed. The wetland locations and values past and present should inform future park planning.

There is significant potential for restoration of both terrestrial and wetland ecosystems within the regional park. This should be investigated in subsequent stages of park planning.

The preservation of natural wetlands within a regional park would not only provide significant nature viewing opportunities (e.g. migratory birds) but would also help cool the surrounding community that is vulnerable to urban heating.

Stormwater runoff from increased urbanisation will increase the risk of flooding in the area. Improving the natural water regime and stormwater management will have positive effects on water flow downstream, preventing flooding of Merri and Darebin Creeks.

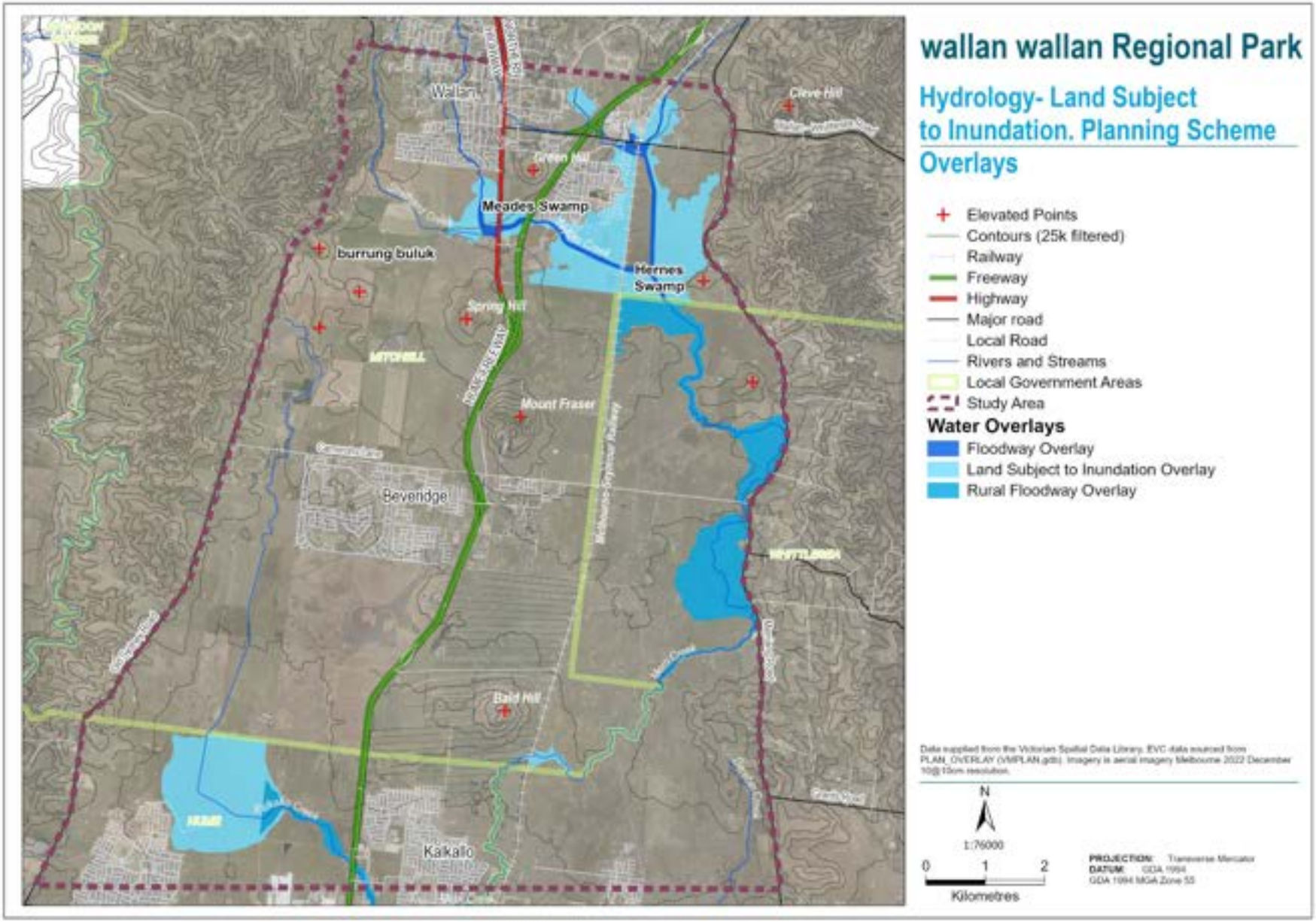

Figure 13 Land Subject to Inundation Overlay

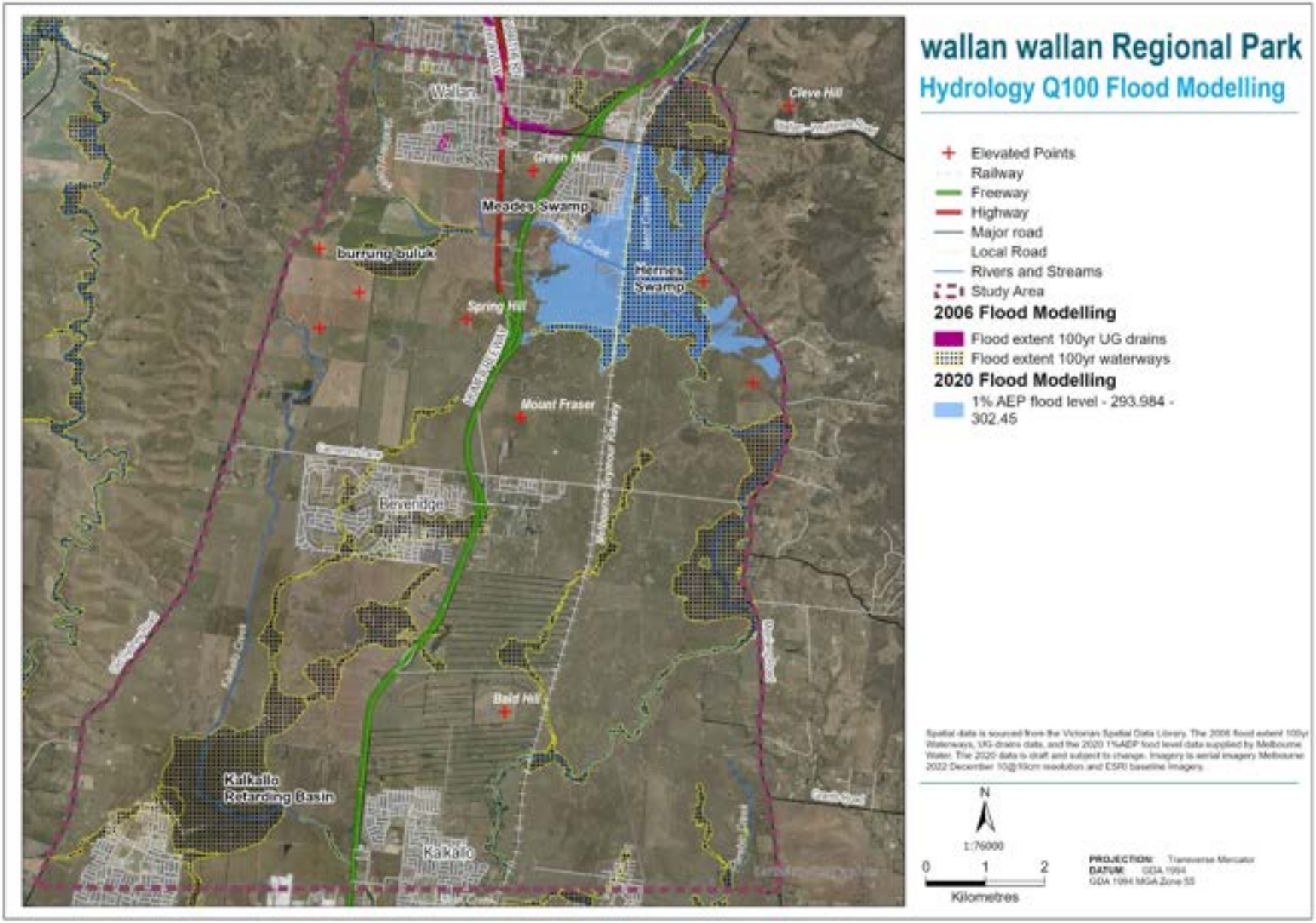

Figure 14 Melbourne Water ARI100 Flood Modelling

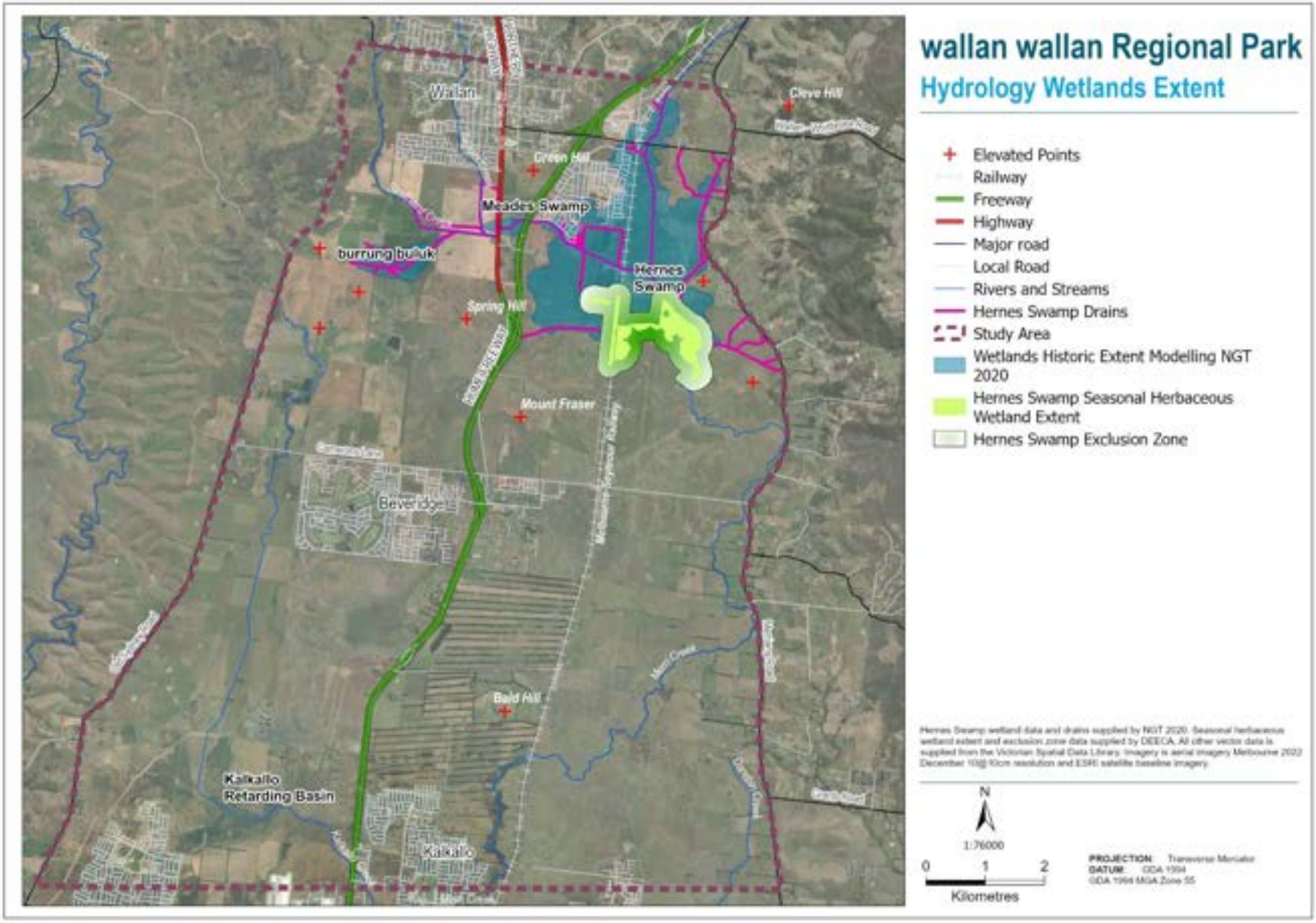

Figure 15 Hydrology Wetlands Extent

4.6 Biodiversity and Vegetation

The Nature Advisory Pty Ltd undertook a biodiversity overview assessment in 2020 to inform this study. Their report is included as an appendix. This has been supplemented by the Wallan-Beveridge Waterway Assessment conducted by Alluvium for Melbourne Water in 2021.

The study area would have supported a range of Ecological Vegetation Classes, with the extent of the pre-1750's EVCs illustrated in Figure 18. (DELWP, 2020) The current (2005) extent of all of these EVC's is severely diminished. Most of the study area vegetation communities have a Victorian conservation status of Endangered or Vulnerable. Furthermore, the Environment Protection and Biodiversity Conservation Act (EPBC) lists five threatened ecological communities in the study area.

The pre-1750 mapping is at a coarse scale, with most of the wetland areas not surveyed with consideration of the wetland EVC's described in the IWC manual. In addition, this mapping often does not represent original catchment conditions, where waterways and wetlands have been physically modified.

A review of the Victorian Biodiversity Atlas (VBA) indicates that there are records of 12 EPBC Act listed species and 10 FFG Act listed species in the study area. These species records tended to occur predominantly in the vicinity of the Melbourne – Seymour railway line and along the Merri Creek in the southern portion of the study area. Records of the Golden Sun Moth (EPBC Act listed) also occurred in the north-western portion of the study area. (Nature Advisory, 2020)

The field assessment undertaken by Nature Advisory confirmed that much of the study area has been cleared for agriculture, with paddocks consisting mostly of pasture grasses or crops. The volcanic cones have also been cleared of wooded vegetation, and there are stony outcrops within the vicinity.

Native vegetation is present predominantly around Spring Hill, the north-western side of the intersection of the Hume Freeway with Camerons Lane, along the Merri Creek in the southern regions of the study area, the north-western portion of the study area and along the Melbourne Seymour railway line. (Nature Advisory, 2020) The same modelling reveals the areas with vegetation with the highest condition scores are located in the north-west of the study area and along the Merri Creek in the southern portion of the study area.

Native vegetation was found to occur in the northwest of the study area, with remnants of Herb-rich Foothill Forest (EVC 23) and Grassy Dry Forest (EVC 22). These remnants were considered to be of value for conservation. Scattered River Red Gums were also present in paddocks at the foothills of this area.

The area around Spring Hill is infested with weed species, however scattered native black wattle trees, which form part of Plains Grassy Woodland (EVC 55), were present amongst the rock piles, suggesting the area has the potential to support further native vegetation.

The area south of Beveridge Road and to the west of the railway line has stony outcrops present, with hedge wattle growing amongst them. As there has been a lack of past rock clearing or ploughing in this area, it has the potential to support more native vegetation.

River Red-gums alongside the Melbourne – Seymour Railway line. Source: Nature Advisory

The area in the vicinity of the intersection of Camerons Lane with the Hume Freeway was largely infested with weed species, however native grasses were present away from these infestations. In association with the NVIM modelling and a record of an EPBC Act listed species in this location, this suggests that native vegetation may occur in this location, out of view from the road. Further investigation of the area is suggested, with its possible inclusion into the regional park should it be shown to support native vegetation.

The Kalkallo Creek runs north-south in the study area and appears quite degraded, although some revegetation has occurred along the creekline. It is recommended that the River Red Gums that inhabit the south-west of the study area be retained and connected to the regional park via Kalkallo Creek. Gunns Gully Road where it intersects with the Kalkallo Creek to the south of the study area was identified as holding environmental significance. DEECA modelling shows small patches of Plains Grassland in this area.

The field assessment undertaken by Alluvium identified significant remnant native vegetation including Red Gums on the eastern side of Herne Swamp as well as residual examples of Seasonal Herbaceous Wetland (SHW) in parts of burrung buluk and Herne Swamp. (Alluvium, 2021)

The majority of Herne Swamp contains Plains Grassy Wetland that qualifies as SHW, much of which is of very high quality. Plains Grassland is also present on more elevated areas. An assessment undertaken by the Department of Environment and Primary Industries (2013) apportioned 55 hectares of SHW within Herne Swamp for additional protection obligations under the EPBC Act. However, only a quarter of the original extent of Herne Swamp was assessed due to the old Urban Growth Zone boundary cutting through the Swamp. Further assessment is needed of areas of Herne Swamp excluded in the Melbourne Strategic Assessment (MSA) to ensure that biodiversity values are recorded and protected.

Plains Grassy Wetland (EVC 125) occurs in burrung buluk (Hanna Swamp), with the southern portion qualifying as very high quality SHW (Figure 16). A technical assessment of burrung buluk commissioned by the VPA also identified SHW in the Beveridge North West portion (Hanna Swamp Investigation). (Alluvium, 2021) The northern portion is highly degraded due to agricultural practices and would require significant rehabilitation to restore its wetland values.

There is an opportunity to return the natural wetland features of burrung buluk through reinstating the original watercourse to drain into the swamp, encouraging the return of SHW ecological communities. Previous data from the VBA identifies Growling Grass Frog and Golden Sun Moth within a 5km radius of burrung buluk. (Alluvium, 2021)

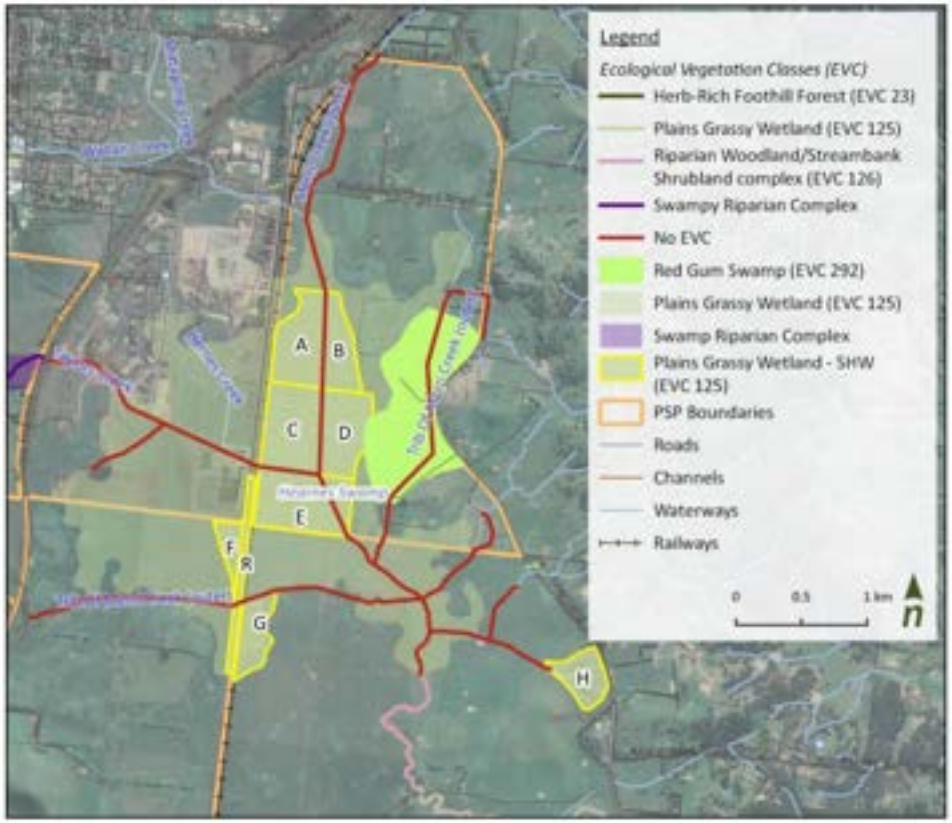

Figure 16: Herne Swamp - key values to retain and improve including Plains Grassy Wetland (sections A-H) and Red Gum Swamp (light green) Alluvium 2021

Merri Creek forms important Growling Grass Frog and Golden Sun Moth habitat, as identified in the MSA. The upper reaches of Merri Creek are channelised and have minimal vegetation. Rehabilitation works of channelised sections would have positive effects on improving SHW values. A tributary of Merri Creek to the east of Herne Swamp is identified as Red Gum Swamp with important conservation values, housing some Red Gum amongst exotic species. Overall, substantial weed control and revegetation is required to improve the health of Merri Creek and its surrounds. (Alluvium, 2021)

Plains Grassy Wetland of medium quality is present within the Meade Swamp area. Lathams Snipe was also observed at Meade Swamp in October 2020. (Alluvium, 2021) Mapping from Nature Glenelg Trust (Nature Glenelg Trust, 2020) shows two artificial drainage channels constructed off the original watercourse that runs into Meade Swamp (refer to Figure 28). Like burrung buluk, restoration of the original watercourse of Taylors Creek will improve ecological values in Meade Swamp.

Remnant Herb-Rich Foothill Forest (EVC 23) is found along the upper reaches of Strathaird Creek and should be retained to support ecological processes. The large old trees observed in the riparian zone are also recommended for protection. Exotic mid-storey species are present as well as remnant native groundcover which hold opportunities for rehabilitation. (Alluvium, 2021) Nature Advisory also recommends conserving the native vegetation present in this area and including it within the proposed regional park. Links to this area should include the scattered trees that occur between this area and Spring Hill/Meade Swamp.

Channelised portions of Taylors Creek are infested with gorse and weedy vegetation. Replacement of these weeds with native vegetation will improve ecological values along the Creek. (Alluvium, 2021)

An ecological assessment of the proposed Wallan South Precinct was undertaken by WSP Australia Pty Limited in November and December 2019. This assessment found a total of 134.586 hectares of native vegetation across the Wallan South Precinct study area from seven Ecological Vegetation Classes (EVC) and 180 scattered trees. A DEECA modelled wetland is present along the southern boundary.

One listed fauna species, Golden Sun Moth, had been previously recorded and additional records were made by WSP during targeted surveys. Habitat mapping for the species has been refined as a result.

A previously recorded community, Western (Basalt) Plains Grassland was confirmed during this assessment[8] (listed as critically endangered, EBPC Act).

WSP have proposed a retention area of 228 ha to protect a large proportion of the native vegetation, including large trees in patches, and Golden Sun Moth habitat. A preliminary total of 15.334 ha of native vegetation, 131 scattered trees and the large modelled wetland are outside the retention area. A 2.226 ha patch of Golden Sun Moth habitat is also outside the retention area. (WSP Australia Pty Limited, 2020)

The land areas outside of the recommended retention area are likely to be impacted by development.

Lathams Snipe, photo courtesy of Marcia Riederer

[8] The name of this ecological community was changed to the *Natural Temperate Grassland of the Victorian Volcanic Plan* and was listed as critically endangered in 2008

Biodiversity Conservation Strategy Growling Grass Frog Conservation Area

The Biodiversity Conservation Strategy for Melbourne's Growth Corridors and the Growling Grass Frog Master Plan for Melbourne's Growth Corridors identifies the headwaters of Merri Creek, within Herne Swamp as a conservation area to be protected. The site provides important habitat and buffer zones for Growling Grass Frogs as well as ensuring habitat connectivity.

The legislated MSA levy area (Figure 17) is based on the 2010 UGB. The logical inclusion area, added after the MSA was established, is not included in the levy area.

Herne Swamp has been specifically excluded from the MSA EPBC Act approval area and so any proposals impacting the swamp would require consideration under EPBC Act requirements.

There are significant conservation values along the Merri Creek that have been identified under the MSA and require protection. These conservation areas are intended to be managed by Melbourne Water and are represented in Figure 23.

Limitations of the *Wallan Regional Park - Biodiversity Overview Assessment (2020)*

Accessibility was a major limitation as the study area was surveyed from publicly accessible roads only (Nature Advisory, 2020). Consequently, areas of remnant vegetation that are present away from view from roads may not have been sighted. Further studies that locate areas of remnant vegetation, particularly for the logical inclusion areas of the urban growth zone, should be considered.

The timing of when the assessment took place would have determined the presence of some species of flora over others due to seasonal growing patterns, impacting what was covered by the report. The Wallan South PSP report has also suggested further investigation/survey for GGF, SLL as well as Brown and Southern Toadlet.

The report does not recognise important differences between remnant and residual vegetation, which could reveal further opportunities for the recovery of biodiversity in the local wetlands should their natural water regime be reinstated.

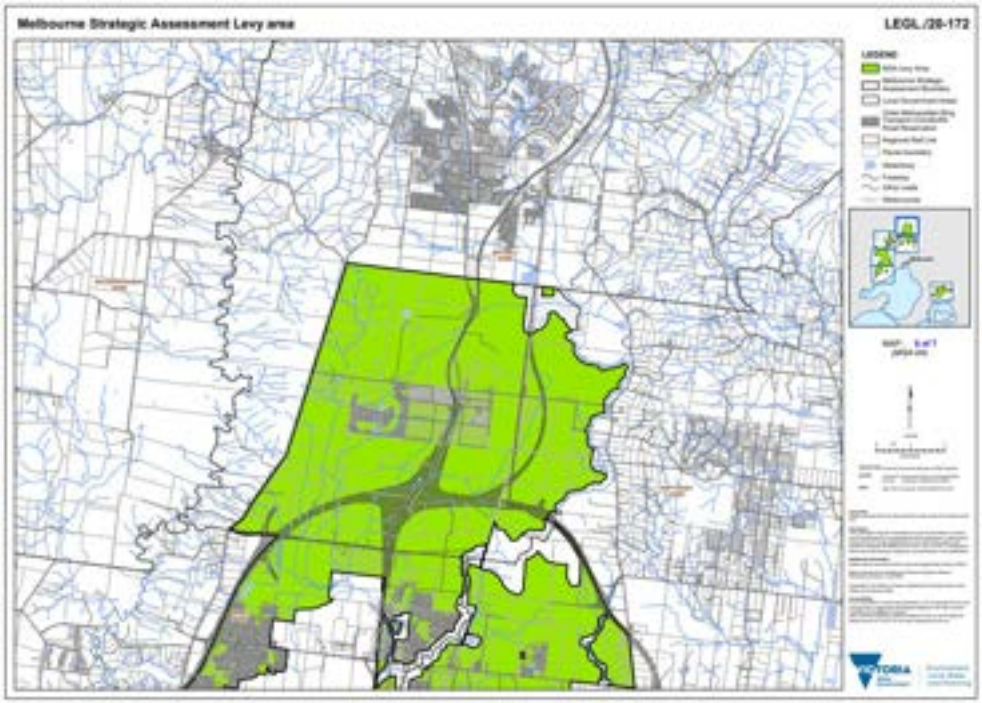

Figure 17: Melbourne Strategic Assessment Levy Area

Further investigation that goes beyond current mapped residual and remnant biodiversity values is required to ensure it reflects recent surveys and assessments undertaken by agencies and environmental groups. More biodiversity data is necessary on private land, as much of the regional park will comprise land that is currently privately owned. Biodiversity assessments should also include areas not currently identified as having 'existing values' that could provide valuable remediation or revegetation opportunities for biodiversity values as a result of their incorporation into the regional park.

A comprehensive, up-to-date assessment of biodiversity values across the entire study area is therefore needed. It should also account for seasonal changes that affect the presence of certain species.

Implications

The existing and historical ecological values, as well as further values to be identified through a Cultural Values Study, carry various implications for the wallan wallan Regional Park.

In order to achieve ecological, cultural and amenity objectives, significant remediation and revegetation of native flora is required. Increased vegetation and habitat areas will increase connectivity for migratory fauna and improve fauna populations which in-turn will have positive effects on community experience.

Management of areas that are under restoration such as the local wetlands will need to be considered in park planning. Wetland restoration should also align with the Healthy Waterways Strategy, improving wetland values such as vegetation condition, buffer condition, water quality, water regime, and habitat (Melbourne Water Corporation, 2018). *Outcomes from a Cultural Values Study will also inform restoration activities.*

Improving populations of EPBC listed species will also carry additional management responsibilities which may require such areas of ecological significance to be designated as nature reserves or conservation zones to ensure their protection.

Should the natural water regimes of the wetlands be reinstated, managing the restoration of these wetlands will be an important consideration when developing a park vision for the wallan wallan Regional Park.

North-west of the study area in the vicinity of Strathaird Creek. Source: Nature Advisory

North-west of the study area alongside Old Sydney Road. Source: Nature Advisory

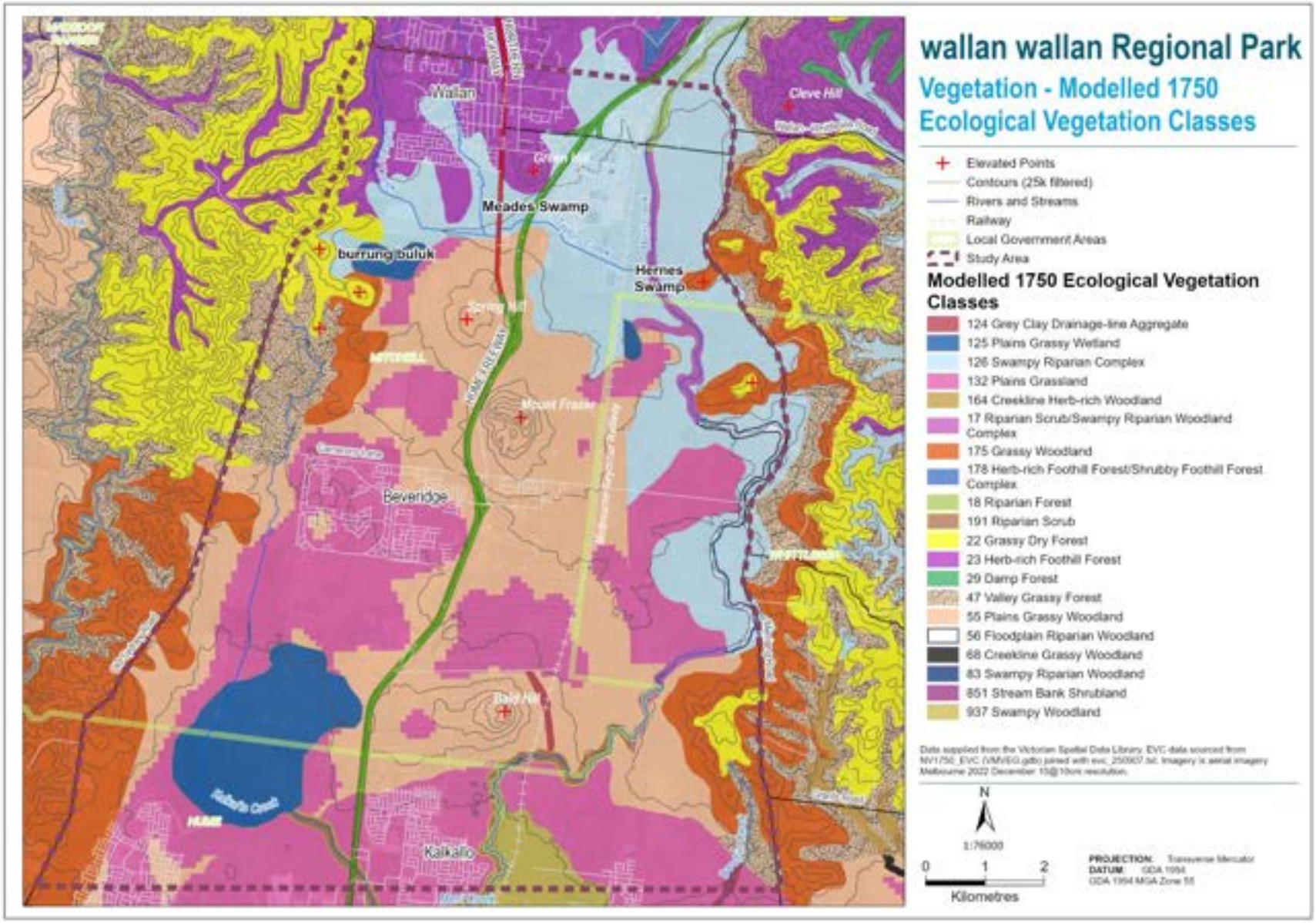

Figure 18 Pre 1750 Vegetation Communities

4.7 Urban heating and climate vulnerability

Urban Heating

Open space reduces the urban heat island effect by having trees to provide shade and evapotranspiration from trees, plants and grasses, irrigation and waterways that cool the air. It also increases thermal comfort and reduces heat stress on vulnerable people.

Mitchell Shire is susceptible to the impact of urban heating from rising temperature and is ranked 3 (above average) on the 2018 heat vulnerable index (figure 19). Expanding greenfield urban development without adequate provision of open space has resulted in an urban heat island effect that has increased temperatures in urban environments. Increased heat has significant health and wellbeing impacts on local communities relating to heat stress and heat related illness. Establishing a regional park in Wallan will contribute to community health and wellbeing objectives as well as climate change mitigation actions.

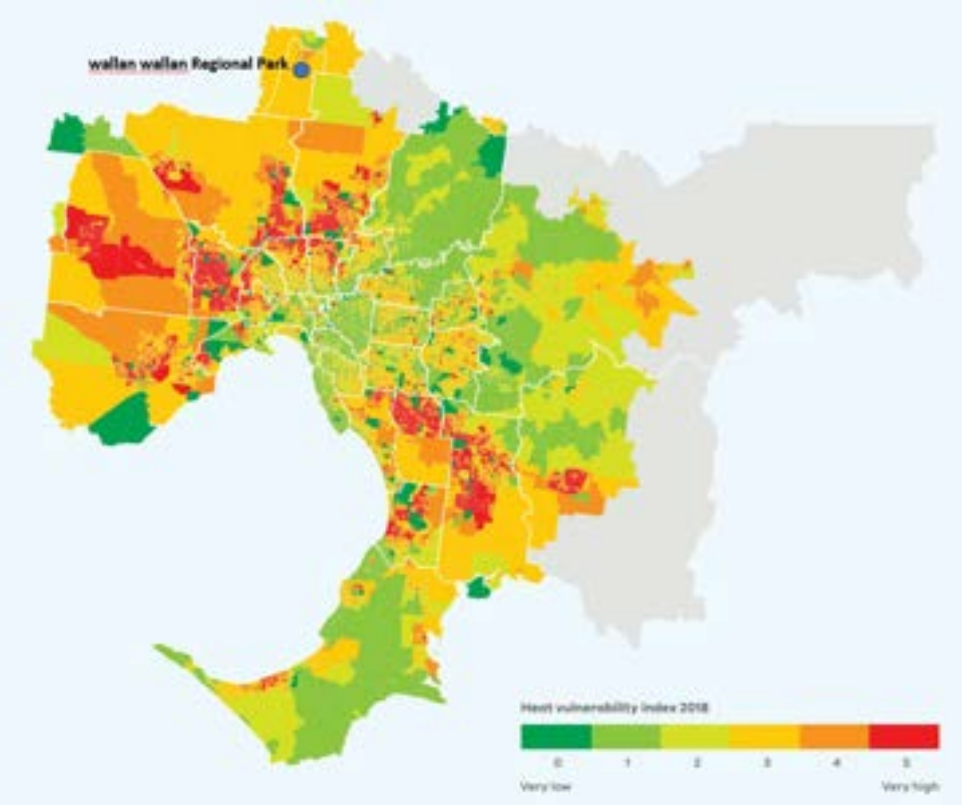

Figure 19 – Heat vulnerability in metropolitan Melbourne
Source: Open Space Strategy for Metropolitan Melbourne 2021

Climate Change

Mitigation and adaptation strategies to address climate change are significant considerations for planning and management of the wallan wallan Regional Park. The Victorian Government has outlined its plan to achieve net-zero emissions by 2050 within Victoria's Climate Change Strategy (Department of Environment, Land, Water and Planning, 2021), which will work in conjunction with climate change objectives of WWCHAC, relevant agencies and local councils.

The Strategy contains a five-point plan to help secure net-zero emissions. Of relevance to the wallan wallan Regional Park are:

Point 3: Resilient Farms and Forests

Revitalising and building resilience into our natural landscape supports climate change, heals Country, protects biodiversity, improves water and air quality, and provides tangible community benefits.

This creates a number of opportunities for inclusion into the wallan wallan Regional Park.

- Protection of Wurundjeri Woi-wurrung cultural values that will in turn support ecological and climate resilience.
- Increased tree cover and green open space to improve air quality by absorbing carbon dioxide. Additional ecological benefits include improved soil and water quality.
- Remediation and restoration of remnant and residual vegetation communities around waterways and the surrounding landscape that are resilient to changes in climate. This includes burrung buluk, Herne Swamp and other wetland areas, which can serve as carbon sinks to store large amounts of carbon, preventing the release of CO2 emissions into the atmosphere.

Urban development in Wallan. Photo courtesy of Cr Rob Eldridge

Point 5: A Climate Resilient Victoria

Victoria has become a much drier landscape – its climate has warmed by 1.2 degrees since national records began in 1910 (Department of Environment, Land, Water and Planning, 2021). This results in hotter days, longer fire seasons and more intense bushfires.

Increased urban development coupled with a hotter climate increases the urban heat island effect and contributes to associated adverse health effects. A regional park will provide increased tree cover and green open space, which will provide shade and facilitate evapotranspiration that reduces air temperature. Restoration of local wetlands will also play a significant role in cooling the environment, as well as improve stormwater management and floodwater detention with potential increased rainfall resulting from climate change.

Implications

Taking into consideration the landscape features of the study area, as well the proximity to large natural areas such as the Mount Disappointment State Park, it is integral that a regional park responds to climate change threats through appropriate bushfire, flood and storm management.

The regional park must ensure that it has appropriate buffers that protect both ecological and cultural values of the park as well as adjoining land uses.

The regional park has potential to address community health and wellbeing, and climate change mitigation objectives through creating green open space and reducing the urban heat island effect.

4.8 Other Existing and Proposed Open Space and Community Facilities

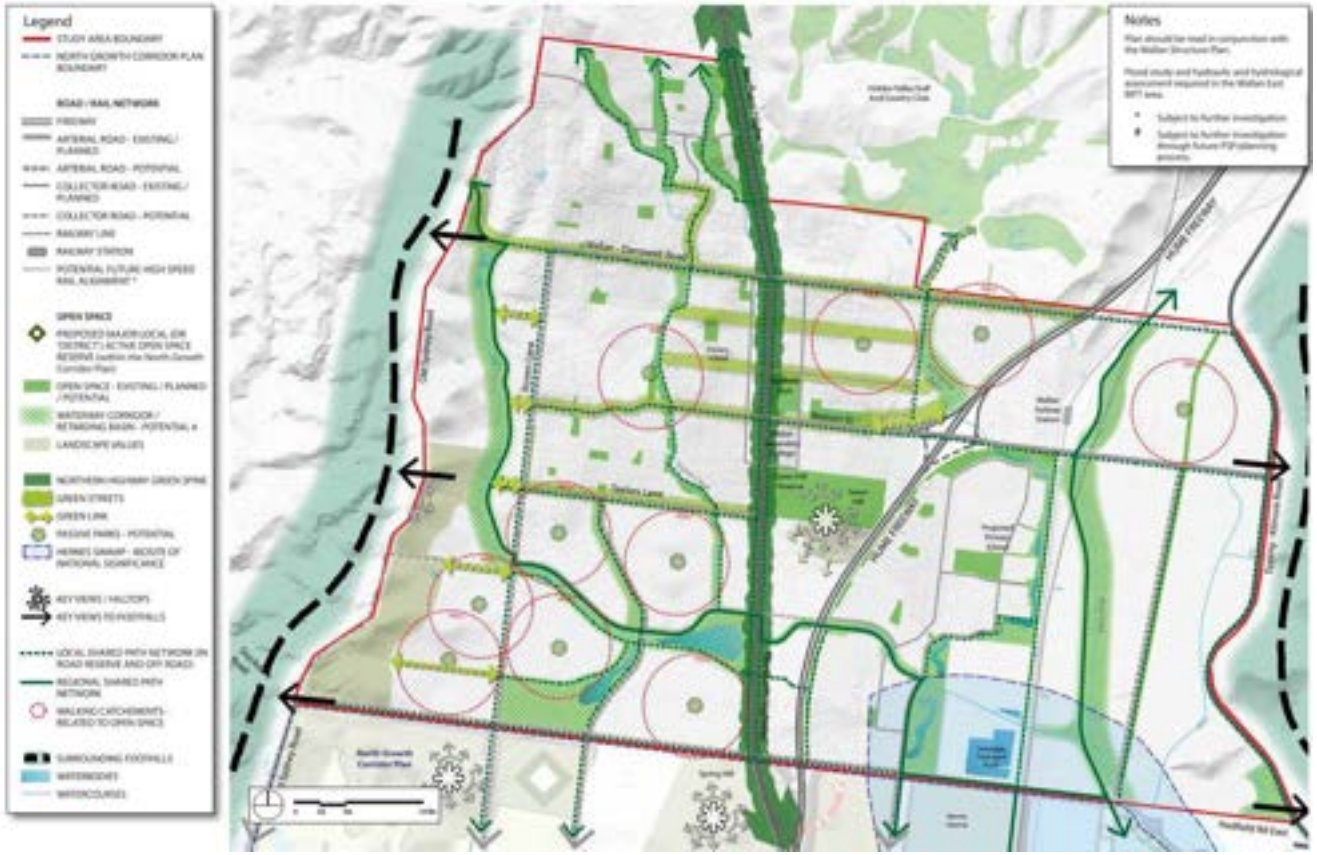

Figure 20 Wallan Structure Plan Open Space

The existing open space network in the study area is within the Wallan township.

Mitchell Shire has undertaken a Structure Plan for Wallan which outlines the Shire's preferred location and network of open space, rural conservation zones and drainage reserves. This plan takes into consideration the existing township structure of Wallan and creates a network of open space linked into this.

Refer to Figure 20.

In addition to the proposed wallan wallan Regional Park, the urban development of the study area will lead to a network of proposed municipal open spaces and community facilities of diverse scale and character.

The various precincts are indicated in Figure 21.

The Beveridge North West Precinct Structure Plan locates the residential neighbourhoods *'between ridgelines, prominent volcanic cones and rolling hills. A significant network of open spaces formed by waterways, hilltops and linear parks will connect the diverse residential neighbourhoods…'*

The open space plan nominates 25 local parks, about half of which have some flexibility regarding location. The local parks with a fixed location to protect Aboriginal heritage sites are located between drainage corridors, link local town centres or are adjacent to sporting reserves.

In addition, four sports reserves are nominated. These are connected to local town centres directly or by lineal local parks.

Areas on sloping land, including Spring Hill volcanic cone are nominated as 'landscape values', and are uncredited open space.

Precinct Structure Planning for the Beveridge North West PSP is underway. Of consequence to this study is the decision regarding the extent of land designated 'landscape values', in particular the land around Spring Hill. The determination regarding the location of a quarry and associated buffer zones to key areas of sensitivity and residential interfaces may also influence the outcomes of this study.

In the 2020 Panel Report for the Mitchell Planning Scheme Amendment C106mith Beveridge North West Precinct Structure Plan, the RCZ boundaries as submitted by the VPA (in its Part A submission) were deemed appropriate for:

- the RCZ west of the western arterial road
- the northern and eastern sides of the Spring Hill Cone
- the western 'protrusion' from the Spring Hill Cone

The panel recommended the need for a mechanism to ensure a link is provided between the eastern and western RCZ land. In relation to the southern boundary of the RCZ, it was recommended that built form in this area should not rise above RL 333 to retain views to the Spring Hill Cone from all viewpoints (Victorian Planning Authority, 2020).

Furthermore, the panel recommended that the Conservation Values described in the RCZ Schedule 2 should recognise the geological importance of the Spring Hill Cone and the western hills. Regarding the proposed quarry in the RCZ, it was concluded that the landscape values on the land of the proposed quarry can be reinstated following stone extraction.

The draft Beveridge North West PSP shows the current Open Space Plan for Beveridge North West, indicated in Figure 22.

The Wallan East (Part 1) and Wallan South Structure Plan have commenced and are currently in the analysis stage and agency consultation stage, respectively. Some early workshops with stakeholders identified issues and opportunities in the precinct.

The issues that may have a bearing on this study are:

- Water

  Melbourne Water are undertaking a draft Development Services Scheme as a base case which will include best practice Stormwater Quality treatment and 100 year flood management.

- Sodic Soils

  Sodic soils can have an impact on waterway health and can erode waterways if not designed and managed correctly. The impacts of sodic soils include increased development costs, the inability to develop land and impacts on the environment.

- Biodiversity and Landscape

  There is potential for any proposed regional park to influence precinct design, particularly if this study identifies desired areas and linkages within the precinct.
  A regional park has the potential to attract investment from the State Government for the establishment of the park, purchasing the land and managing the land via Parks Victoria.
  Wallan South is outside the Melbourne Strategic Assessment and the Commonwealth needs to be satisfied under the EPBC act about the impact to endangered flora and fauna

- Bushfire Risk

  There are areas with significant vegetation and slope on the land, and the community must be protected from the threat of bushfire.
  The future precinct will need to provide edge treatments to provide buffers to areas of threat.

- Undulating Land – extent of Development, Long Term Use and Management

  The precinct structure plan needs to determine how it will respond to hilltops. Hilltop land may be difficult to develop due to the slope combined with sodic soils and the significant areas of vegetation.

  The hilltop areas are likely to be zoned “Rural Conservation Zone’ instead of ‘Urban Growth Zone’

A conceptual plan developed during the stakeholder workshops captures how some of these issues may be resolved in the precinct structure planning process. Refer to Figure 23.

Implication

The location, form and character of the wallan wallan Regional Park should respond to and reflect the range of community facilities and spaces to be delivered through the urban development process, to create a diverse and cohesive open space network.

The Wurundjeri Woi-wurrung people will be implicated in all aspects described above, and ongoing engagement with WWCHAC will ensure that cultural values are considered when seeking to resolve issues.

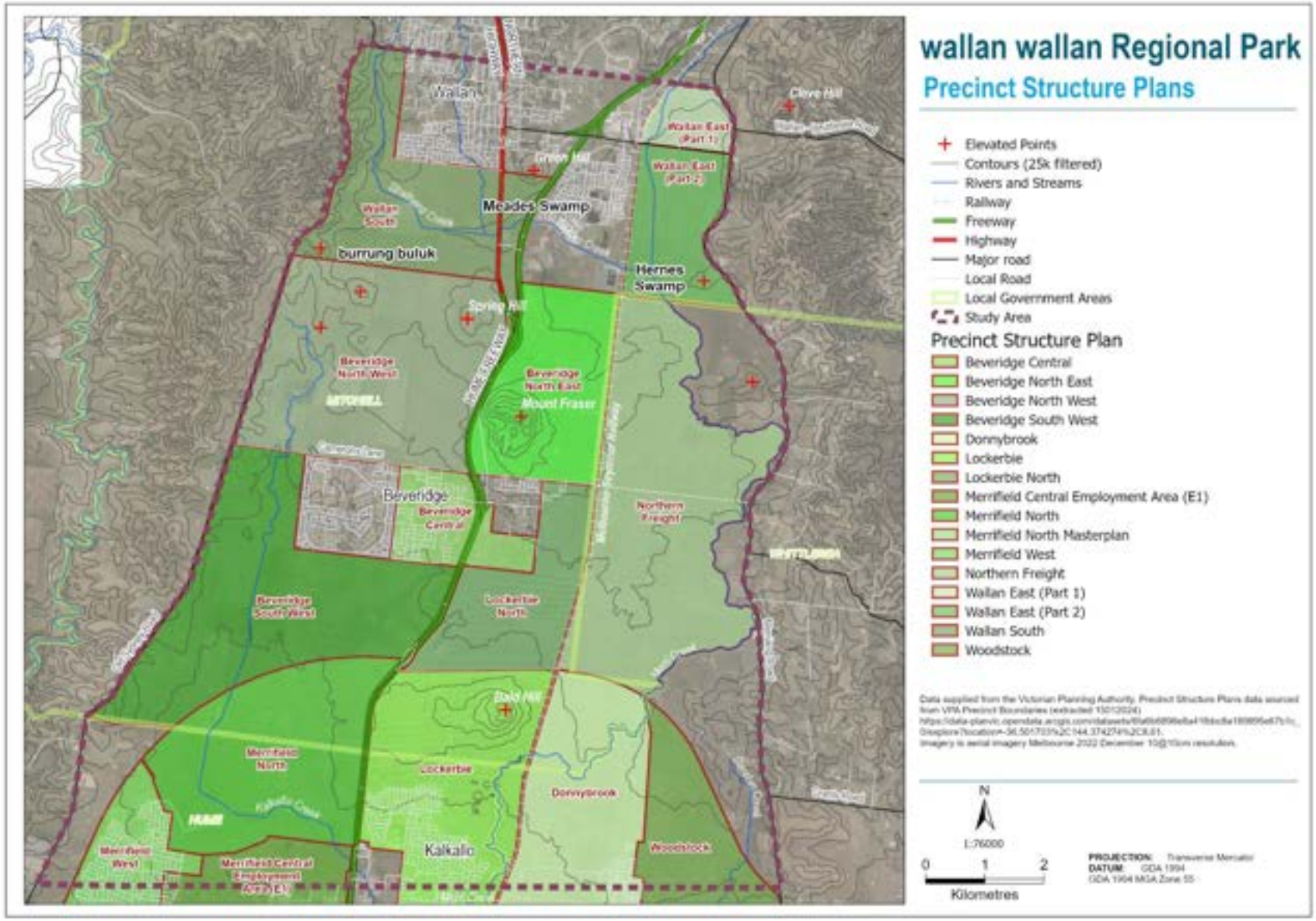

Figure 21 Precinct Structure Plan Boundaries

Figure 22 Beveridge North West Precinct Structure Plan (PSP) – Draft November 2021

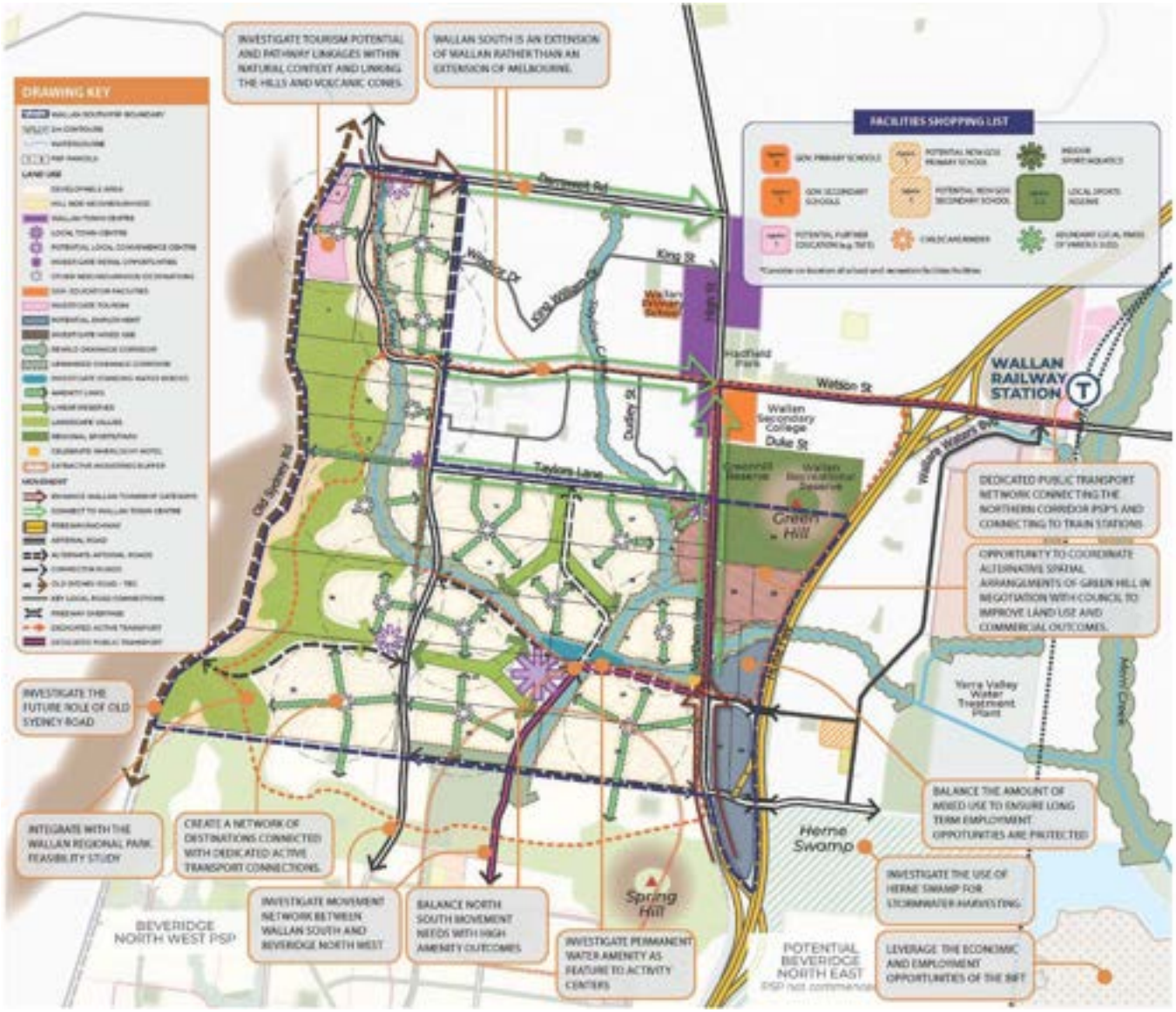

Figure 23 Conceptual Plan Wallan South and East Part 1 PSP. Subject to substantial review and change

5. POTENTIAL CANDIDATE PARK / CONSERVATION AREAS

As noted in Section 2.2 above, and in accordance with the Metropolitan Open Space Network Distribution report, Metropolitan Open Space (or "Regional Park") offers opportunity to accommodate a range of open space types.

The future wallan wallan Regional Park would likely accommodate a combination of the following open space categories as outlined in the Open Space Strategy for Metropolitan Melbourne (Department of Environment, Land, Water and Planning, 2021):

- **Conservation reserves (protected areas):**

  These areas are set aside for the conservation and protection of natural ecosystems, landscape character and/or historical and scenic features. Generally, these areas are Crown land and part of Victoria's protected area system, however some private land may be set aside for conservation - Trust for Nature is one such example. Conservation reserves can be used for some non-organised recreation and informal activities, depending on circumstances and/or in accordance with management plans. Environmentally significant sites in the wallan wallan Regional Park may be considered conservation reserves, including burrung buluk (Hanna Swamp), Herne Swamp, and Mount Fraser. The Growling Grass Frog corridor along the Merri Creek is a fixed commitment under the MSA program and is subject to clear requirements under the EPBC Act approvals that the wallan wallan Regional Park would need to be consistent with. Additionally, remnant vegetation along Merri Creek would also be a considered as potential conservation reserves within the park (Figure 24).

  There is significant opportunity for linkages across conservation reserves identified in future park planning. Such linkages would connect areas of intact native vegetation to enhance the ability of native plants and animals to disperse, recolonise, and adapt naturally to climate change. Such areas could include:

  - Constructed drains and channels
  - Natural watercourses and associated riparian communities
  - Vegetated road and rail reserves
  - Utility easements

- **Culturally sensitive sites**
  Aligning with the core principle, 'Community at the centre of what we do' in the Open Space Strategy for Metropolitan Melbourne (Department of Environment, Land, Water and Planning, 2021), the regional park will select candidate areas that enable self-determination and opportunities for the Wurundjeri Woi-wurrung people to manage open spaces directly or jointly. Potential sites should reflect the Wurundjeri Woi-wurrung goals in decision making, planning and management, while the Wurundjeri Woi-wurrung knowledge in land management will be respected through working with people and community groups with a deep knowledge and experience of Country.

- **Parks and gardens:**

  These are generally landscape areas that provide for a range of non-organised recreation and informal activities. They may also have natural values and may provide pedestrian and or bicycle links between streets to connect into the open space network.

- **Natural and seminatural open space:**

  Natural and semi-natural areas of remnant native vegetation through to revegetated and semi-landscaped areas. These areas may include land managed for the conservation of their natural and heritage values that are not included in Victoria's protected area system. Natural and semi-natural areas can include long relatively narrow, interconnected areas of open space which may provide visual buffers, movement corridors for pedestrians, cyclists (where appropriate) and/or flora and fauna. Some Crown and public authority land within this category may have a resource use (e.g. state forests) or drainage function (e.g. stream frontages, drainage lines/reserves, reservoirs, and retarding basins). For example, the Yarra Valley Water treatment station may be utilised as natural and

seminatural open space. Careful design of these spaces will be required to ensure the protection of assets and services within the regional park.

Recreation corridors:

Off-road trails used for walking and/ or cycling that link areas of open space and provide formal or informal connections between and within neighbourhoods and districts. Linear areas of the wallan wallan Regional Park may be considered recreation corridors that allow for informal recreation and pedestrian/cyclist movement between larger areas of the park. Old Sydney Road, Station Street and Rowes Lane offer strong potential as recreation corridors, whilst also providing a strategic background for park users to appreciate the local landscape settings and viewlines. Furthermore, these two country lanes provide a strong sense of place for the park.

There is also opportunity for the wallan wallan Regional Park to form the link between the two major metropolitan and regional open space corridors - the proposed Heathcote to Wallan Rail Trail and the Merri Creek Parklands. The proposed Heathcote to Wallan Rail Trail has the potential to link with the existing O'Keefe Rail Trail (Bendigo-Heathcote). Linking the regional park with this project could see the park being a destination link between Melbourne and Bendigo for cycling tourists.

Careful design of recreation corridors will be required to ensure conservation values and other uses within the park are considered.

- **Metropolitan and Regional links:**

  Areas typically > 5km (Metropolitan) or 1-5km (Regional) in length that provide formal or informal linkages between metropolitan, regional, and district open spaces. These areas can encompass smaller links (local/ neighbourhood/ regional) and may/may not contain a formal pathway. These links could be used to link various areas of the wallan wallan Regional Park and to link the park to other open spaces in the broader region.

The wallan wallan Regional Park may also connect to or interface with sports fields and other organised recreation spaces serving the communities of Wallan-Beveridge, however these would be spaces provided through a PSP, and managed by Council rather than State Government, and are not considered as part of the wallan wallan Regional Park.

Consideration of the objectives or intended role of regional parks and the existing and proposed site conditions of the wallan wallan Regional Park study area (refer to Section 4 of this report) has led to the identification of land areas which have the potential to contribute to a network of open spaces, conservation areas and community facilities as illustrated on Figure 25. These areas include:

- Areas of geomorphological significance or prominent landform;
- Floodways and areas subject to inundation;
- Proposed community facilities and activity centres;
- Proposed active and municipal open space areas;
- Lineal open space connections including drainage lines, and water and sewer reserves;
- Areas of high biodiversity value or potential habitat; and
- Areas of significant cultural values.

These areas constitute an integrated vision for regional open and community space which the wallan wallan Regional Park will contribute to.

The network of spaces will be refined further through future engagement with the Wurundjeri Woi-wurrung people, government agencies, environment groups, and private landowners. The purpose of this engagement will be to guide further definition of land areas and sites which will be suitable as part of the wallan wallan Regional Park.

Implications

- *The wallan wallan Regional Park offers opportunity to accommodate a number of open space types to cater to a range of informal/passive recreation and conservation objectives.*
- *The wallan wallan Regional Park will link with marram baba Regional Parklands and may connect with other open spaces in surrounding areas.*

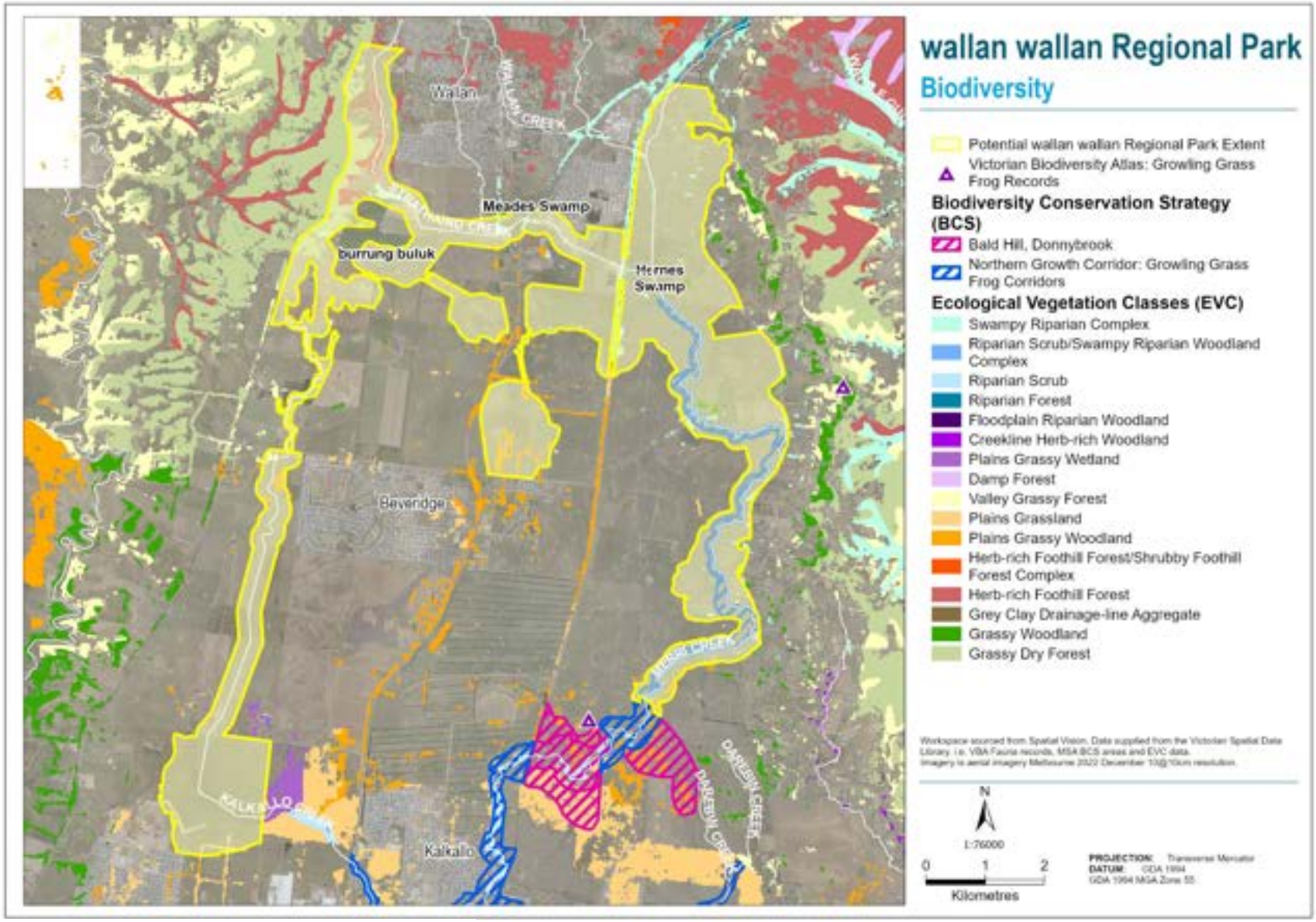

Figure 24: Ecological vegetation classes – current extent

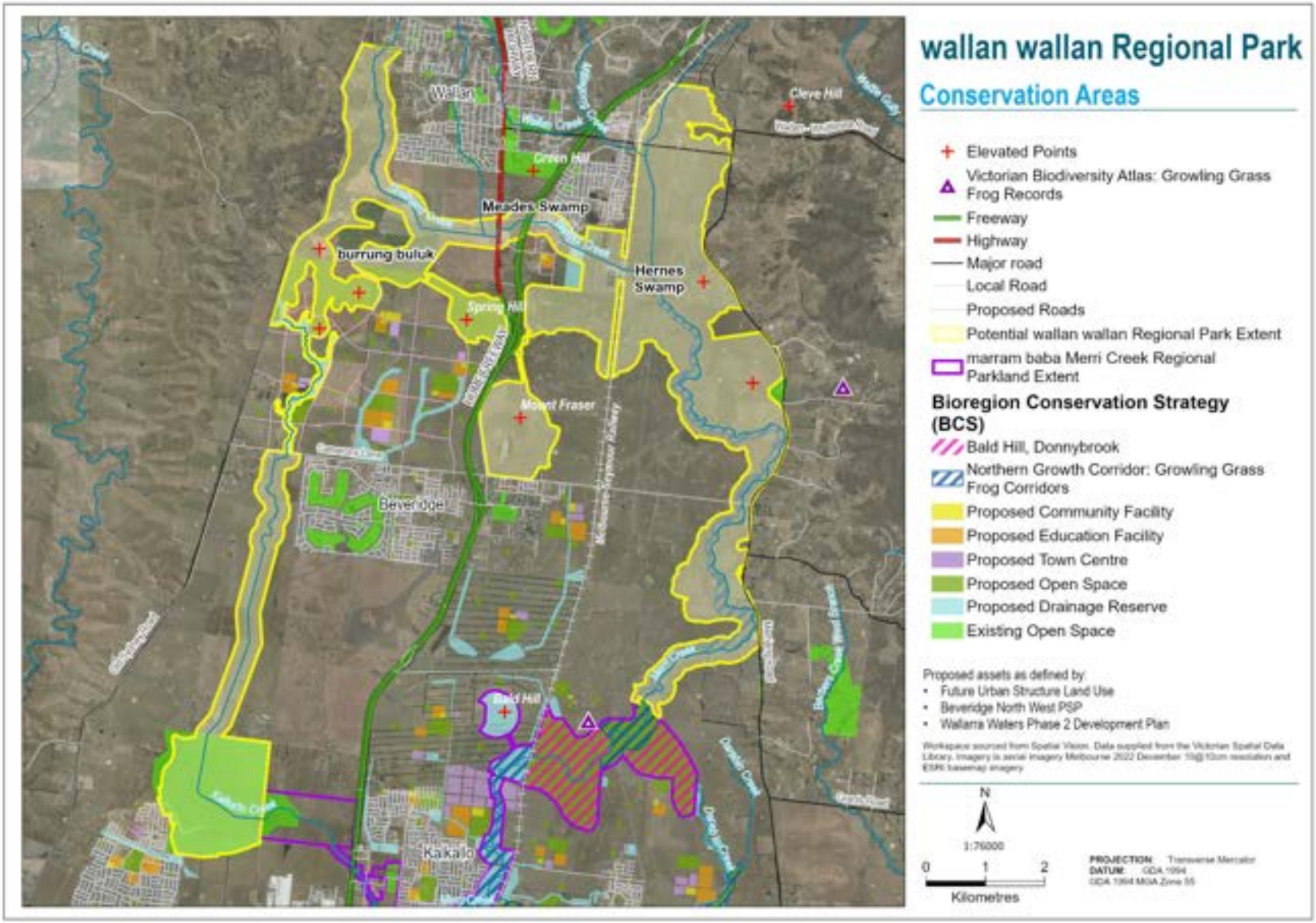

Figure 25: Potential Candidate Public Open Space, Conservation Areas and Community Facilities

6. POTENTIAL PARK CATCHMENT

6.1 Catchment Area

The Victorian State Government released the Open Space Strategy for Metropolitan Melbourne (OSSMM) in 2021. The OSSMM highlights the importance of open space in the context of a rapidly growing metropolitan area and identifies the wallan wallan Regional Park Feasibility Study as a key initiative of the Suburban Parks Program. Although the OSSMM encourages new regional parks and trails in outer growth areas, it does not classify types of open spaces or contain objectives for what a regional space may include or whom it may serve.

The Metropolitan Open Space Network Distribution report released by the VPA in June 2017 includes a hierarchy for open spaces in Victoria. Because the future wallan wallan Regional Park is anticipated to be as large as 1,000ha, it would be considered a Metropolitan Open Space (greater than 50ha) in the Regional Network. This type of open space would have a catchment area of up to 15km. Figure 26 depicts the wallan wallan Regional Park study area and its potential catchment area (15km radius from the boundary line).

Based on the anticipated 15-kilometre catchment area of the future wallan wallan Regional Park, the park will serve a catchment area that spans across the LGAs of Mitchell Shire, the City of Whittlesea, the City of Hume, and Macedon Ranges Shire.

The table below summarises the current and anticipated future population of the wallan wallan Regional Park's 15-kilometre catchment area.

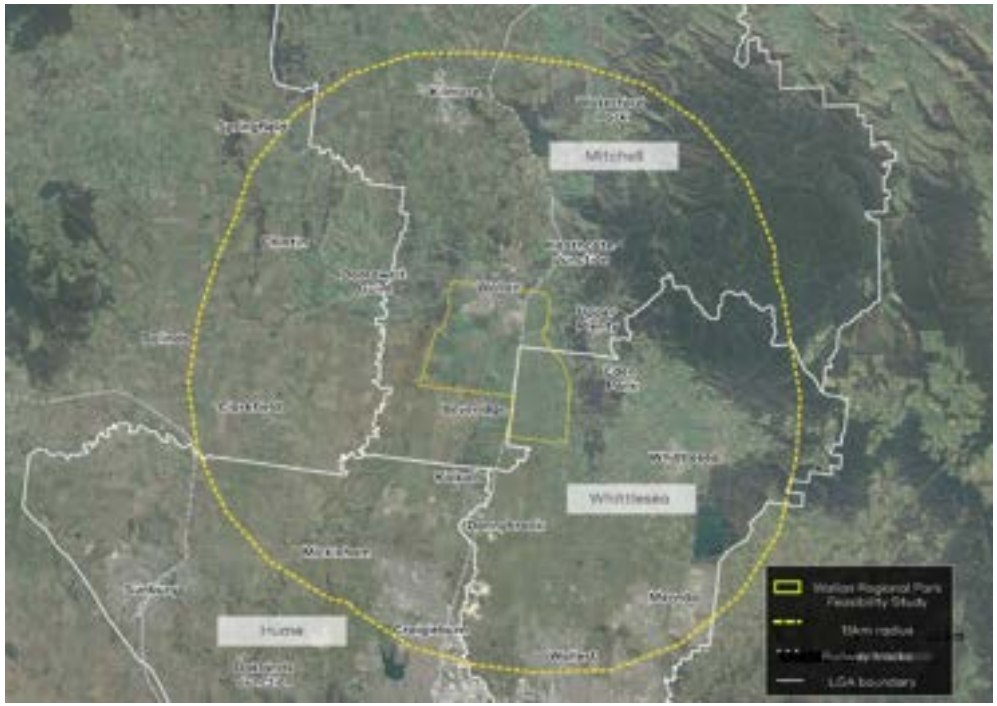

Figure 26: wallan wallan Regional Park Potential Catchment Area

Population figures have been drawn from the statistical area level one (SA1) boundaries which intersect with the catchment radius drawn around the study area.

Table 1: wallan wallan Regional Park catchment area current and future population estimates

Source: Victoria in Future (State Government 2019); Ethos Urban

	2016	2021	2026	2031	2036	2021 – 2036 increase
Population	159,330	231,030	299,790	367,090	429,680	198,650
Average Annual Growth (no.)	-	14,340	13,750	13,460	12,520	13,240
Average Annual Growth (%)	-	7.7%	5.3%	4.1%	3.2%	4.2%

According to the table:

- In 2021, the wallan wallan Regional Park catchment area has a residential population of approximately 231,030 persons.
- From 2016 to 2021, the wallan wallan Regional Park catchment area annual population growth rate increased by 14,340 persons, equating to 7.7% per annum.
- Across the 15 years projected to 2036, the wallan wallan Regional Park catchment area population is projected to increase by approximately 198,650 persons, to ultimately include a total of approximately 430,000 persons.

The future wallan wallan Regional Park would therefore serve a large existing population in the Wallan region that is anticipated to nearly double by 2036 and should be delivered as soon as is possible to meet the needs of the growing population.

Key Findings

- *The future wallan wallan Regional Park has an anticipated catchment area of 15km from the park boundaries.*
- *Based on this catchment area, the wallan wallan Regional Park would provide a Metropolitan Open Space to serve a catchment population of at least 230,000 in 2021, and approximately 430,000 people by 2036.*

6.2 Existing and Anticipated Community Needs

According to the 2017 Metropolitan Open Space Network Distribution report, some of the LGAs in which the study area is located currently have lower proportions of public open space than the metropolitan average of 9.3% (as a proportion of total land in the municipal area). Mitchell Shire in particular, where the majority of the study area is located, has a low share of public open space, at 0.7%. As most of the future urban areas of Mitchell Shire is still to be developed, a significant amount of new public open space will need to be created to service new communities.

Table 2 provides a review of the following strategic plans and policies to identify community needs relevant to the wallan wallan Regional Park.

- *Open Space Strategy for Metropolitan Melbourne 2021* (Victoria State Government, 2021)
- *Mitchell Shire Council Plan 2017-2021* (Mitchell Shire Council, 2017)[9]
- *Mitchell 2020 Community Plan* (Mitchell Shire Council, 2020)
- *Opens Space Strategy 2013-2023* (Mitchell Shire Council, 2013)
- *Whittlesea Council Plan 2017-2021 Update 2020* (City of Whittlesea Council, 2020)
- *Whittlesea 2030 Strategic Community Plan* (City of Whittlesea Council, 2016)
- *Hume City Council Plan 2017-2021* (Hume City Council, 2017)
- *Healthy Waterways Strategy – Yarra Catchment* (Melbourne Water)
- *Integrated Water Management Yarra SDS and Desired State Targets* (DELWP)
- *Protecting Victoria's Environment Biodiversity 2037* (DELWP, 2017)
- *Environment Strategy 2014-2024,* (Mitchell Shire Council, 2014)

[9] The Mitchell Shire Council has adopted a new strategic plan, *Community Vision: Mitchell 2050,* replacing the *Mitchell 2020 Community Plan.* An overview of the new Council plan is included in Appendix D.

Table 2: Strategic policy review

Source: Ethos Urban 2020[10]

Strategy, Author, Date	Purpose/Vision	Relevant directions/actions
Open Space Strategy for Metropolitan Melbourne 2021 Author/s: Victoria State Government Dated: 2021	The *Open Space for Everyone* strategy enacts a framework to guide planning, transfer, design, management, use, and maintenance regarding the Melbourne metropolitan open space network. The vision for the strategy is as follows: *Melbourne is a city in nature with a flourishing and valued network of public open space that is shared and accessible by everyone.*	The strategy identifies the following goals relevant to the wallan wallan Regional Park: • *Improved community health and wellbeing* • *Healthier biodiversity* • *Enhanced climate change resilience* • *Maximised economic and social benefits* • The strategy establishes the following directions relevant to the wallan wallan Regional Park: • *A network connected at the local and landscape scales to better protect biodiversity, reduce the fragmentation of habitat, and enable people to enjoy a more expansive and richer open space experience* • *Open space that enables an immersive experience: open space that creates a city in nature and that enhances the enjoyment of nature, connections with others, appreciation of quality design and amenity of a cooler greener city as part of everyday life: in our laneways, streets, local and regional parks, bays, and waterways* • *An equitably accessible network shared by everyone as a community asset we can all access, enjoy and benefit from, regardless of age, gender, ability, or location* • *Identifying new, high-quality open space in city-fringe, greenfield growth areas, infill development and precinct and city development projects* • *Identifying parks, trails and waterway corridors that improve radial and cross-radial connectivity* • *Strategically and proactively acquiring land and applying public transfer overlays that anticipate future needs*
Mitchell Shire Council Plan 2017-2021 Author/s: Mitchell Shire Council Dated: 2017	The Council Plan is a commitment to the future of Mitchell Shire. It identifies a number of objectives, actions, and measures to be delivered upon, as well as a plan for implementation. The vision for the plan is as follows: *Together with the community, creating a sustainable future.*	• The population of Mitchell Shire is growing by 3-4% per annum and is expected to double by 2036 to over 90,000 people and 30,000 households. It is a key strategy (3.1) to *plan for growth and change through best practice design of services, infrastructure, open space, and recreation*. • The plan identifies the following strategies relevant to the wallan wallan Regional Park: • Strategy 3.7: *Improve the liveability of Mitchell Shire* • Strategy 3.10: *Protect and enhance local ambience, amenity, and character* • Strategy 4.3: *Establish and maintain high quality roads, footpaths, parks, recreation facilities, streetscapes, bike paths and public open spaces* • Strategy 5.6: *Promote our region and towns as a destination for tourists and visitors* • Strategy 7.5: *Provide opportunities for the community to experience nature in their everyday lives*

[10] The Ethos Urban report was submitted to Land Design Partnership in March 2020. Since this time, a number of policies have been published that are relevant to this study. Refer to Appendix D for a summary of each.

Strategy, Author, Date	Purpose/Vision	Relevant directions/actions
Community Vision: Mitchell 2050 Author/s: Mitchell Shire Council Dated: December 2021	A healthy, vibrant and connected community that values nature, diversity and innovation. Mitchell will become a place that people of all ages love to call home. Where we celebrate our natural beauty and where businesses prosper.	• In 2050, Mitchell is home to a vibrant and thriving natural environment, where nature and parks are part of resident's everyday life. Our parks and reserves will be inviting and well utilised and foster a connected and healthy community for all ages and abilities. • wallan wallan Regional Park contributes to rich ecological systems that support native flora and fauna. Flora and fauna are spotted regularly by residents. • wallan wallan Regional Park aids the protection, enhancement, and connection of landscapes by increasing extent and quality of native vegetation and sustainable landscape management.
Open Space Strategy 2013-2023 Author/s: Mitchell Shire Council Dated: 2013	The Open Space Strategy establishes a planning and development framework for the provision of open space in the Shire to 2023, in *order to achieve a balance in the equitable distribution of a diverse range of open space and off-road trails for people that live, work, and visit the Shire.*	The strategy identifies the following concerns relevant to the wallan wallan Regional Park: • *One concern in the growth area development process is that few open spaces to serve district or regional catchments are being provided. It has also been suggested that Mitchell Shire requires more 'destination' parks for residents and to attract visitors, particularly in the southern areas. The Melbourne North Growth Corridor Plan recommended retention of an interurban break between the northern edge of the North Growth Corridor and Wallan. Other investigations have recommended the establishment of a regional park in this vicinity to protect areas of environmental significance.* • *As smaller towns grow, the model for provision of open space may need to change from pockets of open space into one central site (such as a major recreation reserve) with other community or recreation facilities as well as a school, to providing multiple sites, serving different needs, equitably distributed within walking distance of all dwellings.* The strategy establishes the following goals relevant to the wallan wallan Regional Park: • 5.2 Equity: *An equitable distribution of open space for social and family recreation, sport, and off-road trails, in accordance with the nature of the settlement* • 5.3 Amenity: *High environmental quality in parks, and landscape character of the Shire, that enhances amenity, restorative values, recreation experiences, civic pride and connection with nature*
Whittlesea Council Plan 2017-2021 Update 2020 Author/s: City of Whittlesea Council Dated: 2020	The Council Plan articulates a number of key initiatives to be delivered upon in achievement of the community vision: *A place for all*.	The plan identifies the following goals relevant to the wallan wallan regional Park: • *Our city is well-planned and beautiful, and our neighbourhoods and town centres are convenient and vibrant places to live, work and play* – 2.2: *We want well-designed neighbourhoods and vibrant town centres where we have:* 1. *Attractive streetscapes and public spaces* 2. *Easy access to local shops and major commercial centres* 3. *Access to quality local facilities, parks, and amenity* • *Our city's superb landscapes and natural environment are an enduring source of pride* – 4.1: *We want valued natural landscapes and biodiversity where the community:* 1. *Protect and improve local biodiversity*

Strategy, Author, Date	Purpose/Vision	Relevant directions/actions
		2. *Has sustainable land management* 3. *Has an appreciation of local natural environment* – 4.2: *We want to be climate ready, with more:* 1. *Trees for cooling and shelter* 2. *Infrastructure built to withstand the changing climate* 3. *Community resilience*
Whittlesea 2030 Strategic Community Plan Author/s: City of Whittlesea Council Dated: 2016	The Whittlesea 2030 Strategic Community Plan outlines the community vision and priorities to be delivered upon over the next 10 years, as well as a plan for implementation.	The plan establishes the following strategic objectives relevant to the wallan wallan Regional Park: • We have open spaces that are welcoming and safe for public gathering • We can access recreation facilities and open spaces that reflect and respond to local need
Hume City Council Plan 2017-2021 Author/s: Hume City Council Dated: 2017	The Council Plan is a commitment to delivering positive outcomes for those who live, work, and study in Hume. The vision for the plan is as follows: *Hume City Council will be recognised as a leader in achieving social, environmental and economic outcomes with a common goal of connecting our proud community and celebrating the diversity of Hume.*	The plan establishes the following objectives and expectations relevant to the wallan wallan Regional Park: • Objective 2.1: *Foster a community which is active and healthy* – Expectation 2.1.1: *The health and wellbeing of residents is supported through an accessible and affordable range of formal and informal leisure options that address local needs* • Objective 3.1*: Foster socially connected and supported communities* – Expectation 3.1.1: *Local community groups are supported through the provision of accessible, inclusive, and affordable community infrastructure* • Objective 4.1: *Facilitate appropriate urban development while protecting and enhancing the City's environment, natural heritage, and rural spaces* – Expectation 4.1.3: *The City's natural heritage, environment and rural spaces are protected, enhanced, maintained, and valued*
Healthy Waterways Strategy 2018-2028 Author: State Government of Victoria Dated: 2018	Vision: *Healthy and valued waterways are integrated with the broader landscape and enhance life and liveability. Waterways connect diverse and thriving communities of plants and animals; provide amenity to urban and rural areas and engage communities with their environment; and are managed sustainably to enhance environmental, economic, social and cultural values.*	Subject site falls within the Yarra Catchment. Population modelling shows that the Yarra catchment will increase from some 1.8 million people to over 2.4 million in the next 20 years, resulting in an additional 14,000 dwellings per year. Goals for Yarra Catchment: Communities and individuals connect with and appreciate the values of waterways. Waterway corridors are used appropriately for places of solitude, enjoyment of nature, and active and passive recreation that support mental and physical wellbeing. Cultural and heritage values are recognised, protected, maintained and enhanced.

Strategy, Author, Date	Purpose/Vision	Relevant directions/actions
	The Healthy Waterways Strategy provides a single framework for addressing community expectations and the obligations for waterway management, as outlined in State, national and international legislation, policy and agreements. For each of the five major catchments, the Strategy provides detailed, catchment-specific visions, goals, long-term targets and 10-year performance objectives	The environmental values and significant ecological processes of all of the Yarra Catchment waterways are protected and improved facilities and navigation aids, many of which are associated with waterways. Parks Victoria commits to: • Managing parks and conservation reserves in which many waterways are located, including national, State, metropolitan and regional parks, marine national parks and sanctuaries, and conservation and natural features reserves. • Creating, managing, and maintaining visitor sites and managing a range of assets, including visitor facilities and access points, piers and jetties, sporting facilities and navigation aids, many of which are associated with waterways.
Integrated Water Management **Author: State Government of Victoria** Dated: September 2017	The Integrated Water Management Framework for Victoria aims to help government, the water sector and the community work together to better plan, manage and deliver water in Victoria's towns and cities. The Framework outlines how greater community value can be delivered by consistent and strategic collaboration within the water sector – including water corporations, local governments and catchment management authorities – and through their links with organisations involved in land use planning. The IWM process described here is adaptive and can be applied to existing collaborative forums, building on their demonstrated strengths.	Water related outcomes that build resilient and liveable cities and towns identified by the IWMF within 'healthy and valued urban landscapes' include: • Waterways accessible as valuable open space. • Aboriginal cultural values associated with waterways are protected.
Protecting Victoria's Environment Biodiversity 2037 **Author: State Government of Victoria Department of Environment, Land, Water and Planning** Dated: 2017	Vision: That Victoria's biodiversity is healthy, valued and actively cared for. The Plan represents a contemporary approach to managing biodiversity and promotes collaboration and improved alignment across government, business, communities, Traditional Owners, Aboriginal Victorians and private land managers, to restore our biodiversity and strengthen our economy.	The current public open-space planning provision for growth areas and urban infill sites aims to locate local parks within safe walking distance (400 metres) of at least 95 per cent of all dwellings. Valuation of benefits from Victoria's parks: Health benefits: visits to parks are estimated to save Victoria between $80 million and $200 million per year from avoidance of disease, mortality and lost productivity. a) Tourism: $1.4 billion in spending per year associated with visits by tourists to Victoria's parks, generating $1 billion gross value added to the state economy and 14,000 jobs.
Environment Strategy 2014-2024 **Author: Mitchell Shire Council Dated: July 2014**	Vision: Our community supports a healthy and resilient natural environment. This Strategy has been prepared to guide Council in its role as a custodian of Mitchell Shire's natural	Desired outcomes: − Well planned and sustainable urban growth and development, incorporating open space, access to services, retail/trade and transport.

Strategy, Author, Date	Purpose/Vision	Relevant directions/actions
	environment. It shows how Council can act, inform and guide over the next decade to conserve Mitchell's natural environment for the present and future.	– Rural living qualities including open space, landscape amenity and easy access to the natural environment are maintained

Local and state policy alike encourages the creation of high-quality, accessible open space to support the health and wellbeing and recreation needs of growing communities. Mitchell Shire in particular seeks to provide 'destination' higher-order open spaces for residents and visitors in growth areas, including a regional park in the study area.

While local policies do not specify current or anticipated shortfalls in recreation and leisure infrastructure, the wallan wallan Regional Park has potential to accommodate higher-order facilities. The nature of recreation and leisure infrastructure to be provided at the regional park should be determined in consultation with the various Councils in the area, to ensure any gaps in future provision can be addressed.

Open space creates and sustains jobs through a variety of industries including environment and land management, tourism, recreation, creative arts, urban and landscape design, services and facilities management and maintenance, and asset construction. A connected open space network that allows for walking and cycling also reduces congestion and spending on infrastructure and vehicle operating costs (Department of Environment, Land, Water and Planning, 2021).

In Victoria, $1.4 billion in spending is associated with visits by tourists to parks, generating $1 billion gross value added to the state economy and 14,000 jobs. Visits to parks are also estimated to save Victoria between $80 million and $200 million per year from avoidance of disease, mortality and lost productivity (Parks Victoria, 2015). Potential economic benefits of the proposed wallan wallan Regional Park include increased expenditure by visitors, an increase to the value of properties nearby, active transport options (and consequent savings due to decreased reliance on vehicles), job creation, and health savings.

Social benefits of the regional park include opportunities for individuals, families and communities to interact and build relationships in an accessible environment, the potential to increase environmental awareness through greater access to open space, as well as help lessen inequality through providing equitable access to open space and its subsequent benefits (Department of Environment, Land, Water and Planning, 2021).

The regional park has the potential to become a significant destination that offers cultural, biodiversity, catchment, liveability, water treatment and infiltration benefits to the local community and visitors. The restoration of the study area's significant environmental features could attract visitors from well beyond the 15km catchment area for ecotourism.

Implications

- *The wallan wallan Regional Park has potential to fulfil a number of state and local policy objectives for open space provision.*
- *The Regional Park has potential to fulfil a number of state and local policy objectives for integrated water management, climate resilience and liveability.*
- *The regional park has potential to address gaps in higher-order recreation and leisure infrastructure to serve the region; need for this infrastructure should be determined in consultation with the Councils of Mitchell Shire, City of Whittlesea, and City of Hume.*
- *The regional park has potential to become a significant destination that offers economic, social, cultural, and environmental benefits to the local community as well as park visitors.*

7. CRITERIA FOR SELECTION OF LAND IN A REGIONAL PARK

In addition to engagement with the stakeholder groups outlined above, the final nomination of land for inclusion within the park will be guided by a range of site selection criteria. These criteria have been derived through consideration of the objectives of a regional park generally (refer to section 2.2 of this report) as well as through a review of the characteristics of the study area and its planned development.

The future wallan wallan Regional Park should respond to the following:

1. The park should incorporate representative elements of the diverse environmental character of the Wallan landscape

The Wallan area includes, in close proximity, a range of landscape elements which are fundamental components of the regional landscape both geomorphologically and aesthetically. These include waterways, wetlands, plains, volcanic cones and ridges. The wallan wallan Regional Park should incorporate examples of each of these landscape forms to enable visitors to interact with and experience these landscapes and to learn about them. By incorporating a representative range of natural environments, the Regional Park may incorporate areas of bushfire risk, as identified by Bushfire Management Overlay. The future design and management should include appropriate measures to minimise risk to the community.

2. The park should reflect conservation outcomes to ensure environmental values are protected.

Beyond the MSA Conservation Area, there are a number of ecologically significant sites that the selection of park land could help to protect. The inclusion of areas with high biodiversity value would ensure their protection and provide an opportunity for enhancement through future park establishment. Additionally, the protection of waterways and riparian corridors is important to biodiversity, cultural heritage conservation, downstream water quality and the amenity of the park. The inclusion of these natural assets also provides significant opportunities for park visitors to connect with nature.

3. The park should be informed by an understanding of the cultural landscape and should reflect the presence and location of sites and areas of high cultural heritage significance

The incorporation of representative landscape forms will not only enhance visitor experience and understanding of the local landscape but will also enable the protection of places of cultural heritage significance and the explanation of Wurundjeri Woi-wurrung stories. Cultural values should be embedded in all future planning for the wallan wallan Regional Park.

4. The park should respond to anticipated 100 ARI flood levels

The 100 ARI flood level of local waterways is a significant constraint upon urban development, limiting the range of uses which can occur on land located below this level. This level does not, necessarily however, preclude park development, provided built infrastructure is located higher than the flood level or sizable retarding basins are established to mitigate flood risk to development. The Park boundaries should be framed in recognition of this constraint, taking the incorporation of flood prone land as an opportunity to diversify the visitor experience, manage downstream flood impacts and encourage the retention and re-establishment of local ecosystems and biodiversity.

For the purposes of this study, the 100 ARI flood level has been used to identify potential park extent. A final park boundary will need to respond to the form and shape of future storm water retarding while also balancing the need for accessible open space for park visitors.

5. The park should link different features to create an immersive experience for the park user

The wallan wallan Regional Park should link the landscape features of Merri Creek, Herne Swamp, burrung buluk, Kalkallo Creek, Mount Fraser and Spring Hill. These connections would provide for the protection of culturally significant waterways, ensuring ongoing access for the Wurundjeri Woi-wurrung people as well as providing important linkages for biodiversity and benefits to the health of the Merri-Creek waterway and catchments.

While out of the scope of this study, there is also potential for future consideration of recreation and habitat corridors to be created through the regional park linking the Merri Creek corridor with the Deep Creek corridor in the north-west of the

study area, as well as with the Mount Disappointment State Forest and Kinglake National Park to the east of the study area. This would further enhance ecological connectivity in the region.

6. The park should connect with other regional open space

The wallan wallan Regional Park has potential for direct connection with the proposed marram baba (Upper Merri Creek Parklands) and the Kalkallo Retarding Basin (historically known as Inverlochy Swamp) and thereby contributing to a broad open space network across the northern Metropolitan Melbourne area.

The regional park could also connect to the future Wallan-Heathcote Rail Trail and other open spaces through pathways along drainage lines or other utility corridors, providing active transport options for walkers and cyclists. Significant planning and funding to enable these links will be required to ensure the different features throughout the park are connected.

7. The park should respond to the form and activity of anticipated future urban growth

Development in accordance with the Wallan Structure Plan, the Wallan East Precinct Structure Plan, the Wallan South Precinct Structure Plan, the Beveridge North West Precinct Structure Plan and the Beveridge North East Precinct Structure Plan will see urban growth and residential growth occurring across the nominated study area.

The Park boundary should recognise the form and direction of this growth and provide connection and positive interfaces with future residential neighbourhoods, with proposed activity centres, with proposed active and passive open space, (such as sports reserves and playgrounds) and with schools and other community facilities in order to integrate the Park and its values with local communities.

8. The park should recognise both the access potential and the potential barriers to access of the perceived future transport pattern

The future transport pattern, as outlined on the relevant Precinct Structure Plans, is subject to final confirmation. However, the definition of the regional park should allow a regional population to access the park, via the regional road network and also use the regional road network to connect disparate park areas. Visitors should also be able to access the park via public transport options (trains, buses) and have the opportunity to walk or cycle across the contiguous sections of parkland.

The linkages between key features will be critical to the park's feasibility and future function. There are significant transport barriers that will require resolution if the park is to connect across the Hume Freeway, Northern Highway and the railway. Mansfield road is an existing crossing over the Hume Freeway in the Northern section of the park however significant planning is required to connect the two contiguous sections of parkland along Merri Creek in the east and Kalkallo Creek in the west. The definition of the park area will need to consider alternative means of connection across the freeway corridor, either by road or off-road means. Solutions to these existing barriers to pedestrians, cyclists, and (potentially) wildlife, will be explored in future park planning.

The Regional Park might impact on the north-south connectivity between Wallan and Beveridge and the provision of arterial roads will need to be considered in order to create connected communities. Crossing across Hume Freeway, Northern Highway, a future Beveridge Intermodal Freight Terminal, and the Melbourne-Sydney Railway line (passenger and freight movements) will require significant infrastructure investment. Further, the future Outer Metropolitan Ring (OMR) / E6 Transport Corridor will also create challenges in connecting Kalkallo Creek corridor to the Kalkallo Creek retarding basin and the marram baba Regional Parklands to the east and west of the study area. Consideration of viable attractive shared trail linkages (and ideally biodiversity corridors as well) will need to be considered in future park planning and to help shape criteria for design of the OMR at these points.

The 'what', 'where' and 'how' of linkages across the landscape: important sites to link, the most appropriate route, and the means and cost of providing such connections will be explored in future park planning.

9. The park should recognise opportunities to connect with and maximise the utility service corridors and asset locations

There are a number of utility corridors that are already owned or required that have an opportunity to connect with and maximise the benefit of the wallan wallan Regional Park. This includes drainage corridors, retarding basins, urban

wetlands, gas mains, water and sewer pipe track reserves, tanks, reservoirs and treatment plants. Integrating these features into the wallan wallan Regional Park as part of an Integrated Water Management approach will maximise the community, environment and cultural opportunities of the park.

10. The park should respond to the accessibility requirements of a diverse community.

The Inclusive Victoria: State Disability Plan 2022-2026 has stated actions to 'create more inclusive parks and park management in which all Victorians have the opportunity to experience nature, enabling many health and wellbeing benefits' (Department of Families, Fairness and Housing, 2022). These include designing the park in line with universal design principles, engaging with the disability community, providing accessible park information, communications and signage, and fostering inclusivity and accessibility with partners involved in park planning and management.

Taking into account the topography, steep cones and flood prone swamps in the study area that may not be accessible for all users, it is important the wallan wallan Regional Park also targets unencumbered areas for inclusion that are universally accessible.

8. POTENTIAL REGIONAL PARK AND OPEN SPACE NETWORK

8.1 The land comprising the Regional Park

The wallan wallan Regional Park will contribute to a broad and diverse network of open space to ensure the liveability of Melbourne's future communities.

This network will integrate "municipal" open space, such as active sports reserves, local and neighbourhood passive parks, and lineal connections and reserves with the future regional park.

The potential network of municipal and regional open space is illustrated on Figure 27.

The regional park will include land with a diverse range of values and characteristics (Figures 25, 27 and 31), including:

- Land with "environmental" characteristics
  - Flood plain land
  - Drainage lines and waterways
  - Habitat areas
  - Areas protected by legislation, such as the EPBC Act
  - GGF Conservation Area 34 under the MSA Program
- Land with "landscape" values or characteristics
  - Prominent landforms
  - Steep land unsuitable for development
- Land with high cultural heritage sensitivities[11]
- Land providing connective routes between open spaces
- Land suitable for points of community focus and activity, such as open land following previous agricultural uses
- Land rehabilitated following previous uses

On this basis, potential regional park has been defined based on the values and characteristics of the land, including:

- Existing Open Space
- The Aboriginal Cultural Sensitivity Overlay (200m on either side of waterways)
- The Aboriginal Cultural Sensitivity Overlay (geological features). Geological features such as the volcanic cones have been included as they are believed to have been once used by the Wurundjeri people for navigation purposes. The potential extent does not consider individual sites as these have not been properly assessed.
- Historic Watercourse (as identified by Nature Glenelg Trust)
- The 1% ARI[12] level (as defined by Melbourne Water Corporation in 2020) for areas including Herne Swamp, burrung buluk (Hanna Swamp), Northern Hwy Retarding Basin, Meade Swamp, Merri Bend Swamp, Camoola Swamp and waterways Strathaird Creek, Taylors Creek, Kalkallo Creek, Mittagong Creek, Wallan Creek, Merri Creek and related tributaries.
- The location of Rural Conservation Zone (RCZ) within the Mitchell Shire Planning Scheme.
- The areas identified as having landscape value in planning for Beveridge North West and Wallan South PSPs.
- Land covered by an Environmental Sensitivity Overlay in the City of Whittlesea Planning Scheme and EPBC exclusion zone for seasonal herbaceous wetland.
- Logical recreation and biodiversity corridors to ensure connectivity between park features.
- Linkages to the marram baba Regional Parklands.

The total area available for the regional park is 2888 hectares. This includes restricted (e.g. MSA conservation areas) and encumbered open space (e.g. retarding basins, utility easements), some of which will not be accessible to the public for use as a regional park. An example is the Growling Grass Frog habitat along Merri Creek which will be largely unavailable for community/visitor use.

[11] The data used does not present a complete picture of cultural landscape and regional cultural values. A Cultural Values Study must be undertaken to address limitations in cultural mapping.

[12] 1% ARI is the 1 in 100 year Average Recurrence Interval. Flood which has a 1% chance of occurring in any given year.

Where candidate areas for inclusion within the regional park may also be nominated as open space within the PSP's, this is based on a clear alignment with the characteristics and features sought for the regional park. For example, the Kalkallo Retarding Basin is included within the proposed extent to ensure future planning for the regional park considers the significant opportunity to link with the retarding basin[13].

The land identified as forming regional park based on the 100 ARI flood modelling is not considered suitable for some visitor infrastructure. If the hydrology remains unaltered and flooding is an issue for built infrastructure assets, the park extent should be extended to minimise future potential flood damage and to ensure visitor access. Park infrastructure such as path network, shelters, trail heads, toilets and carparks will be considered in future park planning.

The Cultural Heritage Sensitivity (200m buffer along named waterways) has been used to identify potential regional park in lieu of a complete understanding of the cultural values within the study area. The buffer reflects the current altered hydrological conditions rather than the original hydrology of Wallan. Figure 28 shows the discrepancy between the major creeks and the historical watercourse and indicates where a revised 200m buffer could be located.

It would appropriate for a future regional park to consider the protection and restoration of historic water courses. This would be best informed through a Cultural Values Study.

The BIFT project (to be developed in the Northern Freight PSP) will also impact on a proportion of the proposed park extent, as will several planned quarries. Strategic planning for the Wallan South and Wallan East (part 1 and part 2) PSPs will also further shape the potential park extent.

[13] The Merrifield Development Master Plan (MAB Corporation) has identified the Kalkallo Retarding Basin for a future Merrifield Park. The VPA will be preparing a high-level concept plan for the Merrifield Park which will be refined as part of the Merrifield North Employment PSP.

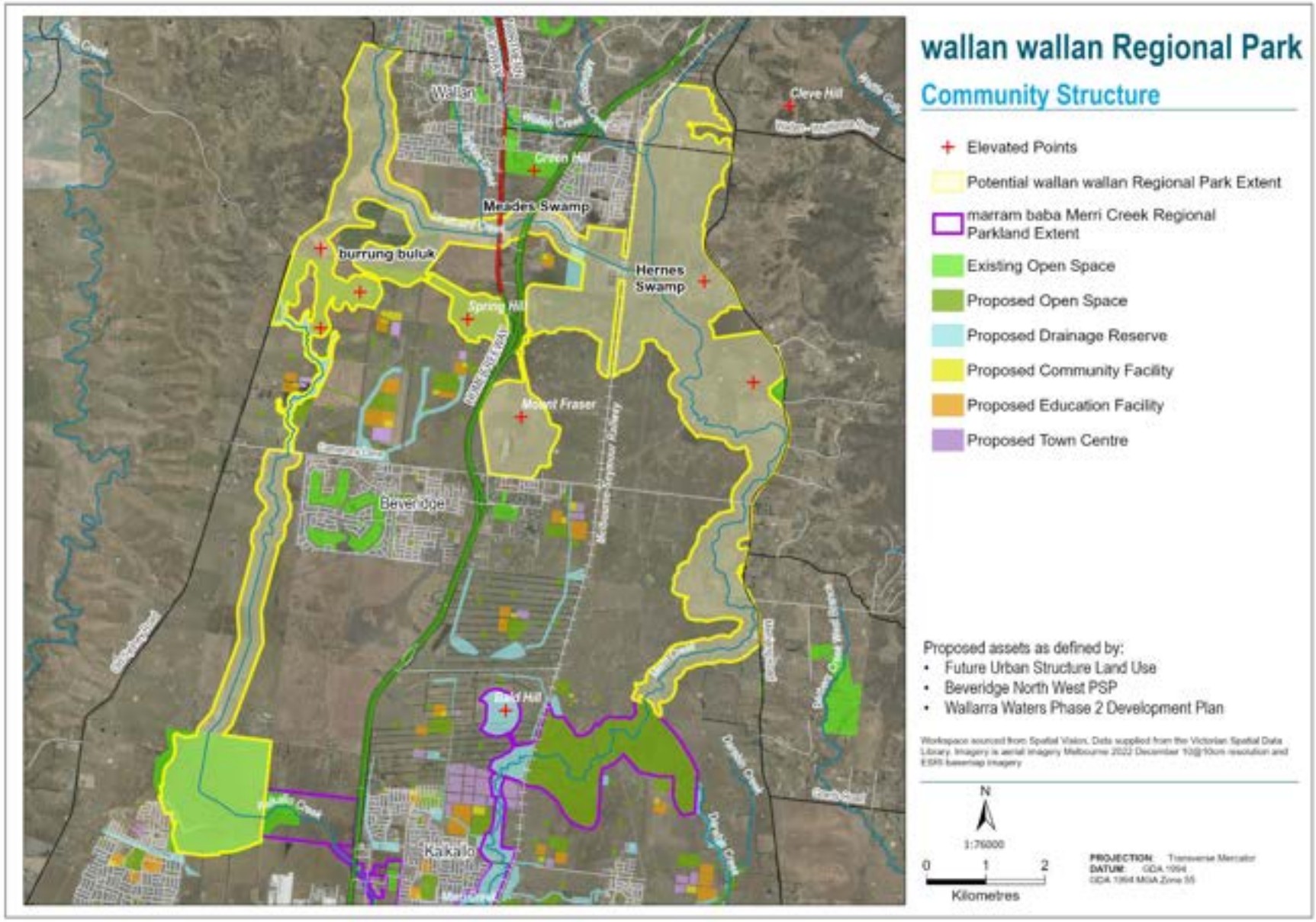

Figure 27: Potential Park / Open Space / Community Structure

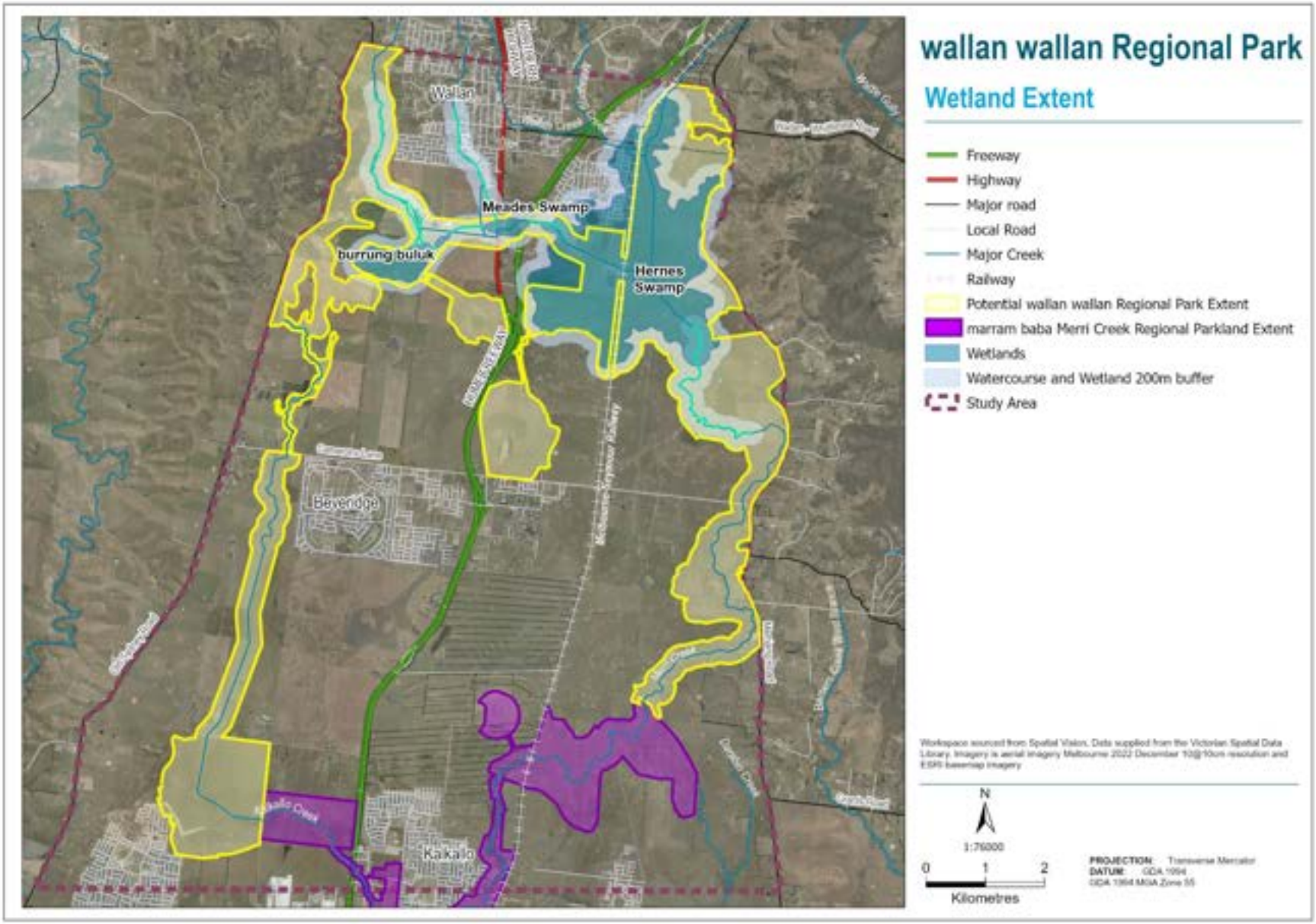

Figure 28: Potential Park / Historic Wetland Extent/ Watercourse & Wetland Buffer

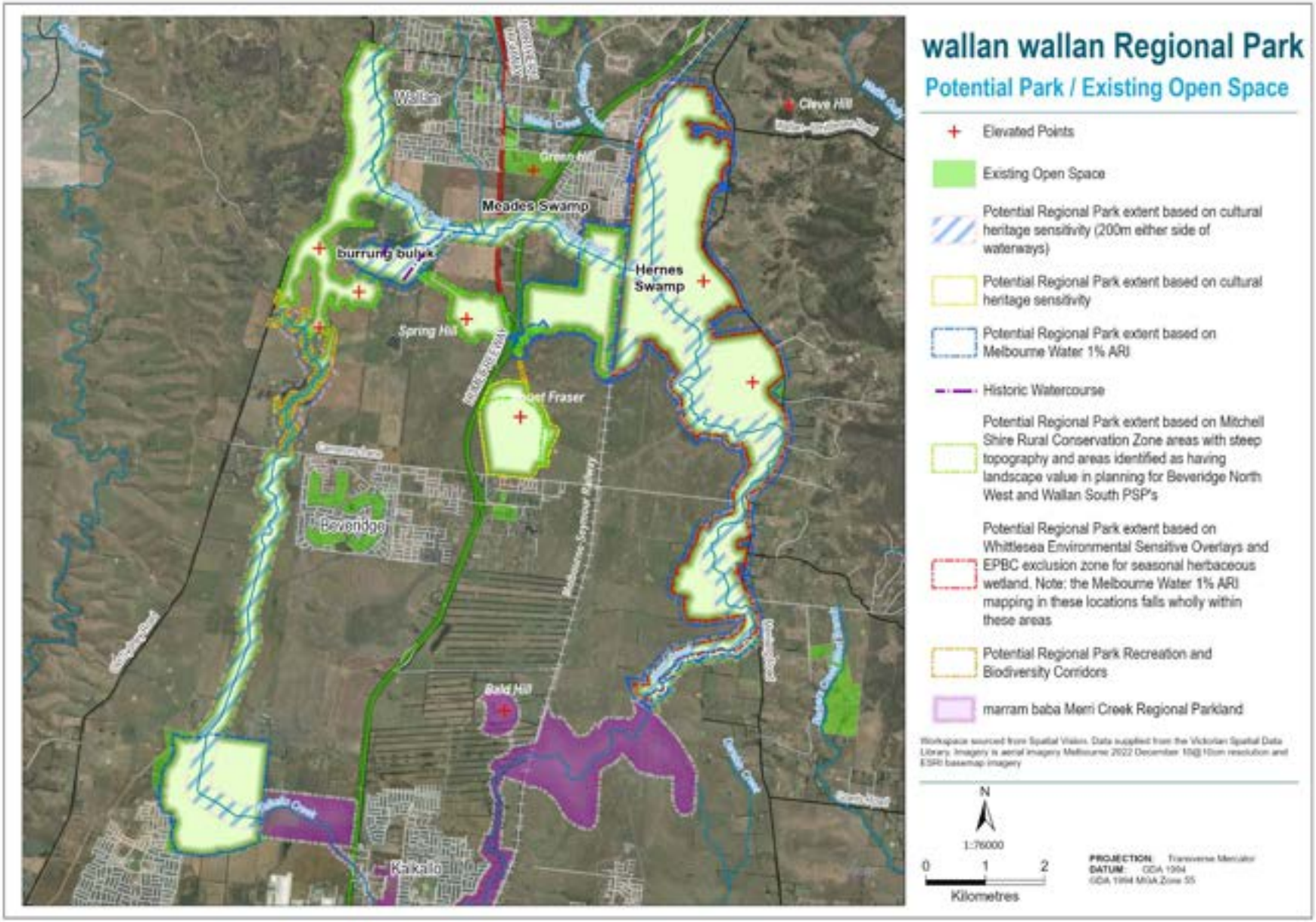

Figure 29 Potential Park / Open Space with basis for inclusion

8.2 The experience of the Regional Park

As indicated by the criteria outlined in Section 7, the selection of land for inclusion in the wallan wallan Regional Park should not only be defined by the values and characteristics of the land but should also consider the contribution these values and characteristics will make to the experience of the park user – in other words, “what sort of park will the wallan wallan Regional Park be”.

The nature of land within the potential wallan wallan Regional Park will result in a diverse and stimulating recreational and environmental experience for park users, as summarised below:

Wetlands

In addition to conservation and flood management opportunities, the presence of ephemeral wetlands, such as the Herne Swamp, Meade Swamp, burrung buluk (Hanna Swamp) and Merri Bend Swamp within the wallan wallan Regional Park will provide for nature-based recreation activities, such as nature observation, walking/cycling, and community education, related to environmental and cultural heritage values in the headwaters of Kalkallo and Merri Creek. The visitor experience will vary from season to season and from year to year. Importantly, these wetlands also provide an opportunity for withdrawal from the urban environment, which is a key focus of the regional park. Visitor infrastructure should be located on the perimeter of wetlands to ensure these assets are protected within the park.

Volcanic Cones

As noted above, the volcanic cones landforms of Mt. Fraser, Green Hill, and Spring Hill are a defining element of the Wallan/Beveridge landscape. The incorporation of two of these landforms (Mt. Fraser and Spring Hill) into the regional park, along with its connection to Green Hill (crown land) through recreation corridors such as shared-use trails, will not only provide a dramatic contrast with the experience of ephemeral wetlands described above, but will also provide a unique range of recreation and community opportunities, including sightseeing, nature observation, walking/cycling, community events, community education, picnic/barbecues and potentially commercial operations. The connectivity across these landforms is an important feature of the regional park and will be considered in future park planning.

While physically contrasting with the low-lying wetland, the volcanic cones provide a similar and complementary respite from the urban environment.

Ridges

The third key landform suggested to be incorporated into the wallan wallan Regional Park is the broad ridge located to the west of Wallan and Beveridge. Spatially, this broad ridge defines the area which the existing townships and the growth corridor sit within and so are an important element of the landscape character of the region.

Incorporation of the ridge landform into the regional park will further contribute to the “nature-based recreation” opportunities provided by both the ephemeral wetlands and the volcanic cones. These will include cycling, bush walking, sightseeing, nature observation and environmental education. The western ridge will create a point of difference from a visitor experience perspective as it is a treed landscape, as compared to the grassy landscapes that comprise the wetlands and volcanic cones in the study area.

Waterways

The integration of waterways and drainage lines into the regional park will provide a number of key benefits, including environmental benefits such as flood management and enhancement of biodiversity. The waterways in the wallan wallan Regional Park are the headwaters of culturally significant waterways.

Best urban stormwater management practices are required to prevent their decline from the increasing urban stormwater runoff in these Upper Merri Creek stormwater priority areas. Additionally, their health and cultural connection will rely on the wallan wallan Regional Park land integration of the natural wetlands and swamps in the region.

While flood management is the responsibility of the Water Authorities, a large regional park would provide significant opportunity to implement water sensitive urban design assets and could be a key mechanism for integrating urban planning effectively.

Importantly, waterways will also provide essential recreation and open space connection roles within the regional park. Shared walking and cycle trails are a

fundamental component of modern urban environments and are most often aligned with waterways. In the case of the wallan wallan Regional Park, waterway trails would provide a comprehensive off-road recreation and circulation network, connecting the key environmental elements (wetlands, volcanic cones and ridges) with residential and community areas.

In this regard, the waterways would feature pathways, gathering spaces, revegetation, and environmental protection initiatives. Further 'master planning' to define potential access hierarchy and strategically position gathering nodes will be determined in future park planning.

Pasture Areas

In addition to “environmental” areas, the regional park will incorporate open areas of pasture and former agricultural land. Pasture areas provide a buffer for ecological outcomes and fuel management. They will also provide important opportunities for areas of community focus, such as regional scale picnic and social spaces, car parking and “trail head” areas, and potential community event spaces. Such spaces will thereby reduce visitor pressure on more sensitive areas and provide the opportunity for larger gatherings that may be appropriate in “municipal” open space.

Community Facilities and Municipal Open Space

The wallan wallan Regional Park would interact closely with the range of community facilities and municipal open spaces proposed as part of the Wallan Structure Plan. These interactions will be fundamental to the creation of an integrated open space network and, importantly, will allow for the shared use of infrastructure, such as car parks and open space amenities. A further benefit of integration of the regional park with local community and open space resources will be to enhance the diversity of community experience to encompass commercial, active recreation, passive recreation and environmental activities.

The treatment of the interfaces and transitions will be a critical issue in the future planning and designs of the regional park, but importantly provides a key opportunity to provide for clear access and interaction between communities and their broader environment.

Cultural and ecological hub

The Wurundjeri Woi-wurrung people have a cultural right to care for Country. The creation of the park would provide an opportunity to protect the cultural landscape and improve access to Country for the Wurundjeri Woi-wurrung people. The creation of a park in the region would also provide an opportunity to celebrate and share Woi-wurrung culture through initiatives such as signage, artwork, potential cultural centre, and planning controls. The experience of the park will be guided by the Wurundjeri Woi-wurrung people to ensure areas of high ecological and cultural significance are protected.

The wallan wallan Regional Park would also provide significant opportunity for the public to access nature. The seasonal wetlands would likely attract migratory birds and other wetland species while also providing riparian views and access to water within the landscape. The remnant vegetation would also provide opportunity for immersion in nature.

Health and wellbeing

The wallan wallan Regional Park would provide significant health and wellbeing benefits as well as education opportunities for visitors and the neighbouring community.

Natural environments in cities have a calming effect, reducing depression, anxiety and stress. Consequently, pressure on health systems is relieved. Open space also provides environments for active recreation activities and connection with nature. These will be enhanced through the inclusion of trails, spaces to rest and relax and areas to appreciate the natural and cultural heritage of the park.

Nature-based education opportunities may include community engagement, cultural events, information signage, guided tours, and citizen science initiatives. Interpretative material also helps foster environmental awareness and education, participation and connection. Fostering community engagement with nature and the protection of the park will benefit both the management of the park and the health and wellbeing of those involved in such initiatives.

8.3 Ownership of land comprising the Regional Park

Land suggested for inclusion in the wallan wallan Regional Park falls into a number of different ownerships, including private, public and traditional ownership. Land parcels affected by the potential regional park area are identified on Figure 30 and land ownership has been categorised.

The refinement of the regional park area and hence the future definition of a park boundary, will be subject to consideration of competing land uses and engagement with landowners.

The total area represented as potentially forming the wallan wallan Regional Park is 2888 hectares and further analysis of each parcel will be required to significantly refine the park extent. Specifically, the benefits and obstacles of each parcel must be understood as well as the mechanisms that can be utilised for inclusion.

The properties identified on Figure 30 have been selected for consideration based on the spatial analysis of biodiversity value, hydrology, steep topography, landscape values, and cultural sensitivities within the study area. Engagement with landowners along with a detailed analysis of each parcel will be a critical next step in establishing a strong rationale for the inclusion of particular properties.

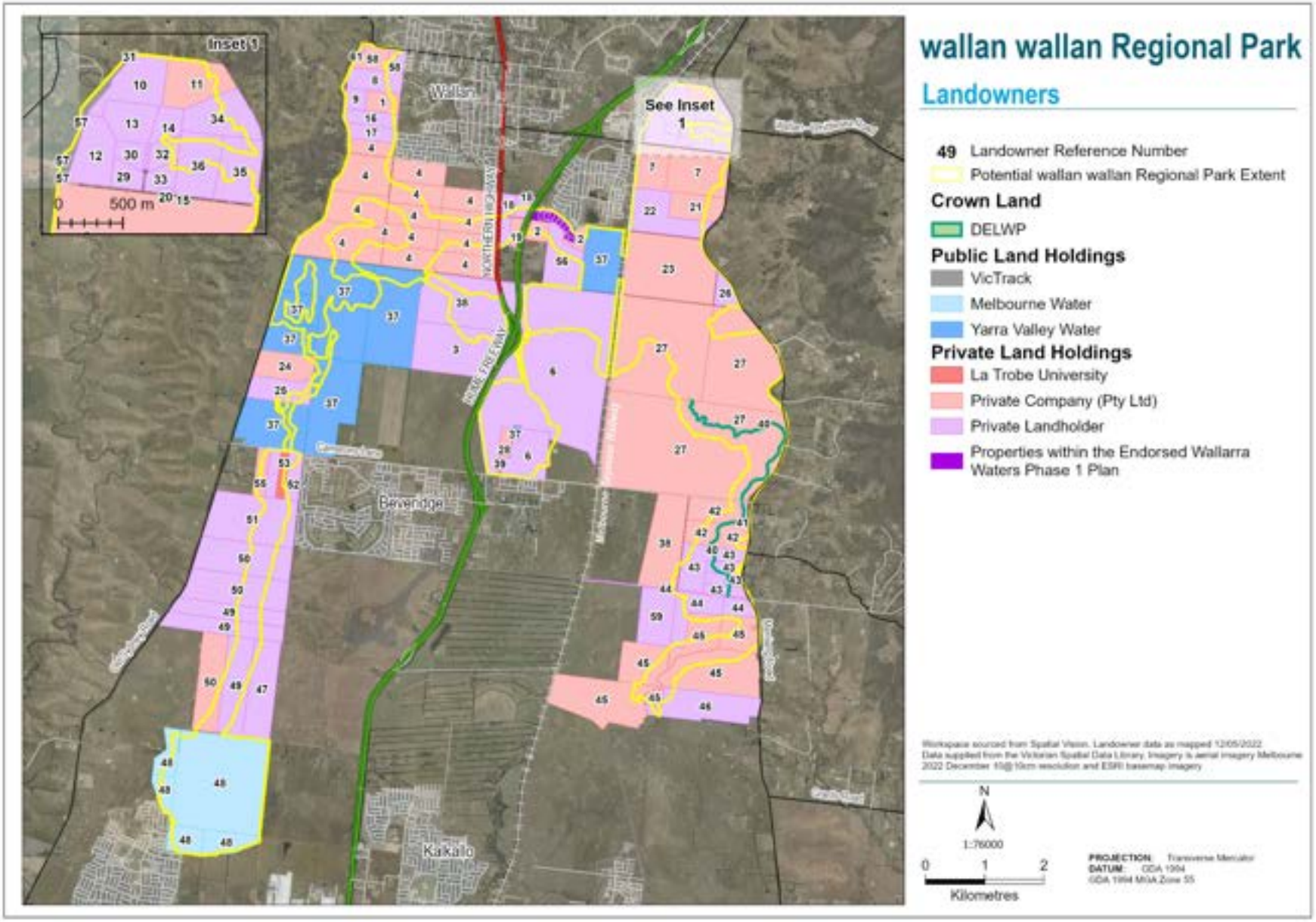

Figure 30 Potential Park / Open Space with title boundaries and land ownership

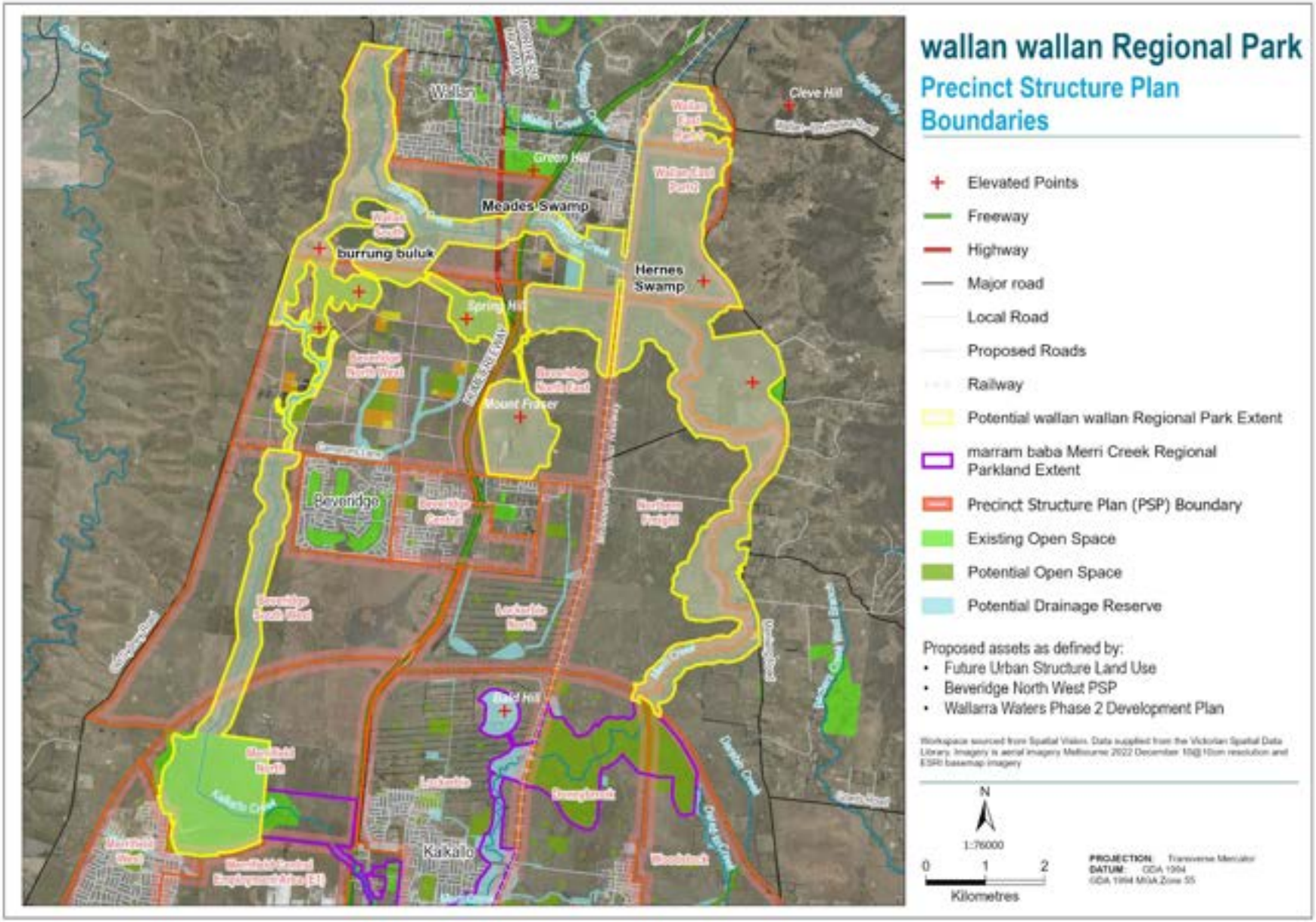

Figure 31 Potential Park / Open Space with Precinct Structure Plan boundaries

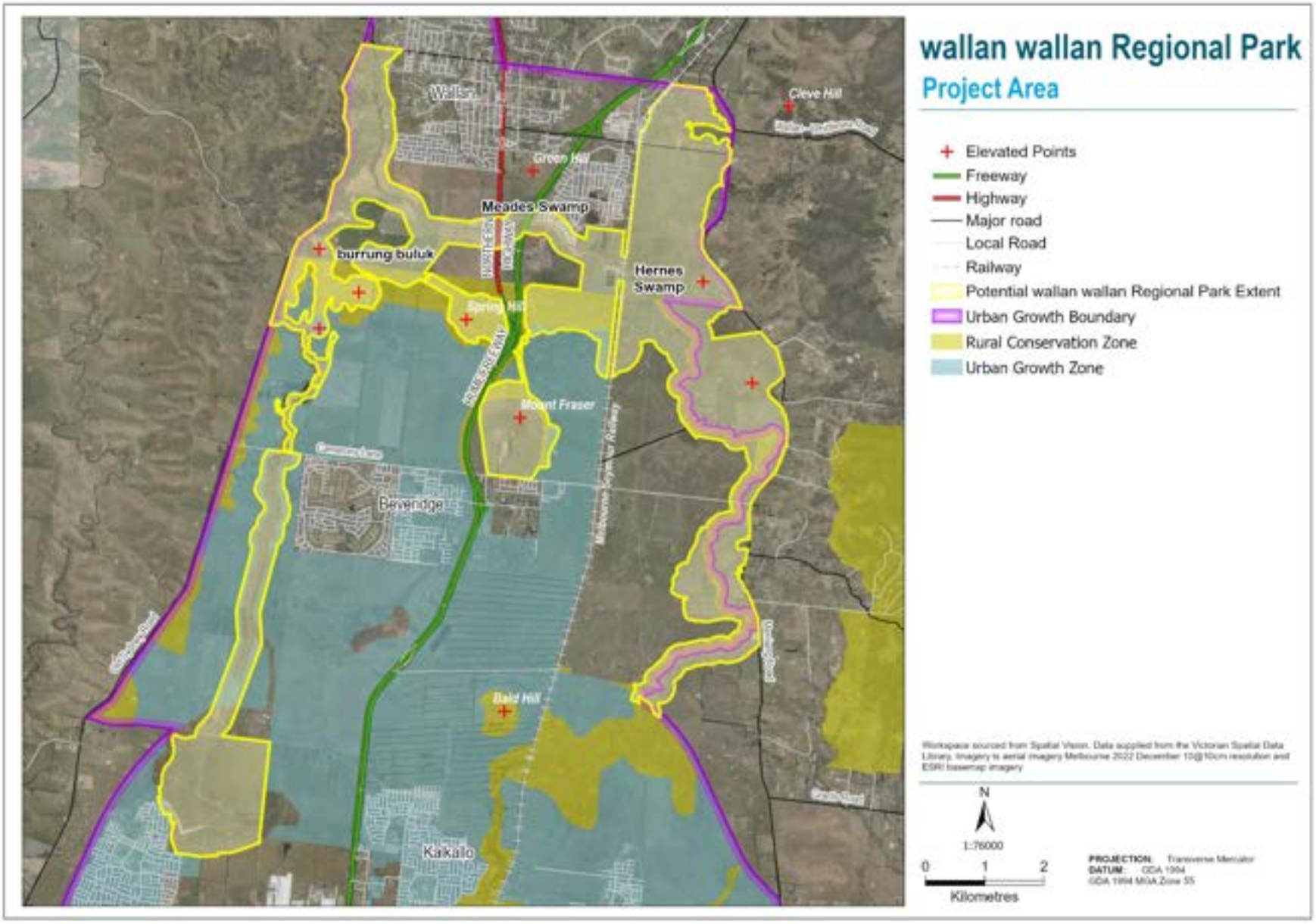

Figure 32 Potential Park / Urban Growth Zone & Rural Conservation Zone

8.4 Overview of transfer of land comprising the Regional Park

DEECA recognises that the Wurundjeri Woi-wurrung are the Traditional Owners of the land that will comprise the proposed wallan wallan Regional Park and that the processes of colonisation in Victoria resulted in the dispossession of their land (Department of Premier and Cabinet, 2018).

Mechanisms and Timing of Transfer

A number of mechanisms exist in the planning process to facilitate either the transfer of private land to government for public purposes, or the compulsory transfer of land by government. In growth area planning, the typical mechanisms include the following:

- Identification through Precinct Structure Plan (PSP), and transfer via subsequent subdivision of land. This includes encumbered land (as identified in the PSP), and unencumbered land through associated Developer Contributions Plan (DCP)/Infrastructure Contributions Plan (ICP), for local public purposes; and
- Growth Area Infrastructure Contribution (GAIC) WIK (works in kind) agreement, for regional or state level public purposes.

The PSP process allows for land to be transferred to government at no cost under an ICP, however is limited for specific purposes. This process is utilised to create new public open space in each growth area precinct. The quantity of land set aside for open space is based on the anticipated total population of the precinct. The PSP must identify any parcels that are to be public open space accordingly in its land use plans, and the corresponding ICP must set out the requirements for the transfer of the identified land to government to facilitate its use as public open space. Land is typically transferred at the time of subdivision. If the wallan wallan Regional Park seeks to acquire land at no cost to Council or the State under an ICP, it would therefore need to incorporate the parks and reserves within a precinct that serve the local population. Refer to figure 31 for applicable PSPs.

Timing of transfer of land through this mechanism is dependent on the timing of the preparation, gazettal, and implementation of each PSP, and the subsequent development of land. Because of this, transfer of land for the wallan wallan Regional Park through PSPs would occur over a number of years as the land is subdivided for development.

However, given the regional role and significant scale of the proposed wallan wallan Regional Park, it is likely that the vast majority of land required could not be transferred via an ICP. Funding would likely be required to acquire land for open space that is over and above that required for the future population of any particular PSP area. Cost for this transfer could be minimised by identifying encumbered land to form the wallan wallan Regional Park in each PSP, where possible; land identified as encumbered in a PSP is able to be acquired at a lower cost, or no cost. Land identified as unencumbered would require purchase at valuation.

An alternative to State Government purchase of the land would be a GAIC (Growth Area Infrastructure Contribution) WIK (works in kind) agreement, whereby the landowner would transfer the land to Government in lieu of a GAIC payment.

Land for the wallan wallan Regional Park that is not able to be designated and transferred under a PSP and/or ICP (i.e. if the PSP process is already complete or one is not required) would require purchase for use as public open space. The designation of land in the PSP as encumbered for drainage, landscape values, or conservation will assist to secure the land with an appropriate zoning that will facilitate transfer. In order to facilitate this future transfer, a Public Acquisition Overlay (PAO) should be applied as soon as is practicable to ensure that the land is reserved for a public purpose and to avoid uses and development that may prejudice the purpose for which the land is to be acquired. The application of a PAO would also help to avoid any further increase in the value of land, as it would significantly limit any development potential the land may have had. However, it should be noted that compensation may also be payable to landowners as a result of any compulsory acquisition.

Land located within the MSA program area

Most of the study area located south of the Wallan township falls within the MSA program area, however Herne Swamp has been excluded. For subdivisions containing the MSA Conservation Area 34, there will be a planning permit condition to secure the conservation area land.

For remnant vegetation outside of a conservation area, the payment of Environment Mitigation Levies applies if a levy event is triggered. In these cases, relevant local policies to protect remnant vegetation will still apply.

Land located outside of PSPs

There is a portion of park extent that falls outside of the Northern Freight PSP to the east of Merri Creek as well as a section of Taylors Creek, on the eastern side of the Hume Freeway. For these sections of park, the mechanism for the transfer of land would involve a future planning process to consider an adequate buffering along Merri Creek for conservation and regional park.

Implications:

- *Land for the wallan wallan Regional Park should be acquired through the mechanism of an ICP or as encumbered open space where possible to minimise purchase costs.*
- *Timing of transfer of land for the wallan wallan Regional Park through transfer under a PSP/ICP would likely occur in a gradual manner, as land is subdivided across the various precincts. The first areas to undergo a formal structure planning process are Beveridge North West PSP and Wallan South PSP, followed by Wallan East.*
- *For land that is not able to be transferred under a PSP/ICP, a PAO should be applied which would reserve the land for purchase by the designated authority, protect it from inappropriate use and development, and help to avoid further value uplift.*
- *The option of a GAIC WIK agreement to facilitate the transfer of land from developers to the state for the purpose of the wallan wallan Regional Park should be explored.*

Cost Factors Impacting Transfer

Land in the Feasibility Study area is largely in private ownership and must be acquired (by transfer or purchase) by the State or Local Government for use as public open space. Costs associated with the purchase of land are subject to a number of factors impacting land values, including (but not limited to):

- Potential land use(s) and development
- Market Demand
- Existing and planned infrastructure
- Contamination

A summary of these cost factors and potential implications for the park are provided below.

Potential land use(s) and development

All land in Victoria is subject to planning controls that determine its use and development potential. Sites with significant potential for more intensive use and development than is currently present are therefore more valuable to developers, who seek to use/develop a site to its 'highest and best use' in order to maximise return on assets/investment.

Land with potential for residential use and development in particular is typically highly valued relative to other uses. Significant increase in value (or 'value uplift') is often created at the time that policy and planning controls change to encourage/allow these more intensive (and therefore more lucrative) uses. Value uplift can also be speculative in nature, that is, it occurs based on assumptions that planning controls will change in future. Land in the Feasibility Study area has likely already undergone significant value uplift in recent years.

Melbourne's Urban Growth Boundary (UGB) was revised in 2012 to incorporate an additional 6,000 hectares of land into Metropolitan Melbourne, including the northern section of the Feasibility Study area (refer to Figure 32). At the time of incorporation, the majority of this land was rezoned as Urban Growth Zone to facilitate its transition to urban land. This would have resulted in significant value uplift to the land based on the understanding that it would be developed in future.

The value of the study area was also impacted on the release of the North Growth Corridor Plan, identifying the majority of study area for urban residential or industrial use. However, this change in use and associated development remains subject to preparation of PSPs and associated changes to planning controls for each parcel within the identified Precincts in the Urban Growth Zone land. The gazettal of a PSP typically results in further value uplift, as it provides greater certainty of the extent of individual land parcel's development potential.

Prior to gazettal, the exhibition of a Draft PSP or early concept plans may create value uplift, as landowners and developers assume that land uses indicated in the draft plans will likely eventuate. Land designated for residential use and development is likely to experience the greatest value uplift, while land designated for less intensive uses, particularly open space, would experience more limited uplift.

Since incorporating the land into Metropolitan Melbourne as Urban Growth Zone land, PSPs and rezoning have been exhibited or gazetted for a number of the Precincts in the study area. A significant portion of the rezoned (or soon-to-be rezoned) land under completed PSPs is designated for residential use and development and as a result has likely already experienced significant value uplift. For these Precincts where the PSP process has already been completed, land transfer is no longer an option and any additional open space identified for inclusion in the wallan wallan Regional Park would therefore be a costly transfer.

For Precincts currently undergoing the PSP process (Beveridge North West, Wallan South, and Wallan East - Part 1), there is still opportunity to designate open space land for inclusion in the wallan wallan Regional Park and require its transfer under an ICP. The remaining land that has yet to undergo a PSP process has significant potential to be acquired at reduced cost through PSP processes. For example, there is opportunity to ensure land is rezoned to Rural Conservation Zone and for a PAO to be placed over this land for future transfer.

Market Demand

Market demand for land can also significantly impact its value. As the population of Greater Melbourne continues to grow, it is expected that there will be greater demand for residential, commercial, and industrial land for new residents and workers. The Growth Corridors are anticipated to accommodate approximately

half of Melbourne's housing growth and significant additional industrial and commercial areas through the next 30 years. The Corridors will be developed progressively over this period to align with demand from the growing population.

Much of the North Growth Corridor where the study area is located is in the earlier stages of development, undergoing—or yet to undergo—PSP processes. Consequently, its development potential is currently constrained, which would limit its demand in comparison to land more readily developable. It is therefore desirable to identify and acquire any land for incorporation to the wallan wallan Regional Park as early as possible before its value increases due to greater development pressures.

Existing and planned infrastructure

According to the NGCP, the area has excellent existing and planned road, rail, freight, and public transport infrastructure, including the following:

- **Sydney-Melbourne railway line:**

  Operates freight and passenger services between Sydney and Melbourne.

- **The future Beveridge Intermodal Freight Terminal (BIFT):**

  Planning for the Beveridge Intermodal Freight Terminal is underway and may impact on the boundaries of the park but also potentially provide opportunities for access. The BIFT will enable freight to be transferred from Victoria's largest ports at Melbourne and Geelong to the rest of Australia along the Sydney-Melbourne railway line. The project is anticipated to create significant local and regional employment opportunities and encourage additional investment in the North Growth Corridor. Initial master planning investigations show this majority of stabling infrastructure south of Herne Swamp on land less prone to flooding. The project team is investigating measures to ensure that hydrology supports ecological processes within the floodplain.

- **Hume Freeway:**

  One of Australia's major interstate highways, connecting Melbourne and Sydney.

- **The future Outer Metropolitan Ring Road/E6:**

  This connection will create a 100-kilometre-long transport link across Melbourne's North and West.

The study area also enjoys access to existing community and commercial infrastructure in the established area of Wallan, which may attract future residents and other land uses in the short-medium term in comparison with other growth areas that are more isolated.

The existing and planned infrastructure network within and around the study area likely presents an attractive offering for investors, which may contribute to higher land values.

Contamination

Many sites across Victoria are identified for their land and/or groundwater contamination resulting from historical industrial activities, dumping of agricultural chemicals, landfills, or other sources. Contaminated land may require remediation before it is appropriate for re-use, either for open space or for urban development. Up-front remediation activities can be costly, and some sites require special environmental management in the long-term. Re-use of contaminated land therefore may be a more costly option for purchasers and developers than uncontaminated land. On the other hand, contaminated land may be associated with lower land values, as the contamination may render the land's highest and best use as open space.

Victoria Unearthed is a State Government tool that identifies sites with potential land and groundwater contamination, or with uses/occupiers with the potential to generate environmental impacts such as contamination. According to the tool, there are two sites within the study area:

- **200 South Station St, Wallan:**

  The site is the Wallan Sewage Treatment, owned and operated by Yarra Valley Water. Conditions are imposed on the license for this site to ensure that the land or groundwater is not contaminated from treatment activities. This site may interface or be included in the future wallan wallan Regional Park as encumbered open space as it is located within the Herne Swamp

wetland complex, but will remain a functional sewage treatment site and would therefore not be subject to remediation activities.

- **Lot Z PS 818939 Newbridge Subdivision, Wallan East:**

  The site has experienced illegal dumping and requires assessment. This lot is part of the Newbridge residential development from Resimax, and the clean-up works have now been completed. The mapping is yet to be updated based on the remediation works being completed.

While extractive industry sites will require further investigation as to their future use, sites to be incorporated or considered within the park would require some treatment in order to convert them to open space once extraction activities have ceased, including investigating for any contamination. As noted, there is an existing quarry at Mount Fraser and two proposed quarries elsewhere in the study area. The type and extent of treatment required is dependent on the nature of extraction activities at each site. It may be that any existing or future quarry sites in the study area do not require remediation due to contamination (as they are stone or clay extraction sites), but would likely require some rehabilitation to ensure they are safe and appropriate sites for public open space. Open-face quarries would, at minimum, require the site to be filled with soil or converted to a waterway.

Implications

- *Land in the study area has likely already experienced significant value uplift from planning policy and controls which encourage/allow primarily residential use and development in the area.*
- *Land identified for the future regional park should be appropriately identified in PSPs and transferred under ICPs to avoid the need for purchase, where possible.*
- *Any land that must be purchased should be done so as soon as is practicable to avoid further value uplift associated with potential for more intensive land uses and/or increasing demand.*
- *The study area is in an infrastructure-rich environment that is likely to attract investment in comparison with other growth areas; this may also contribute to higher land values.*
- *Land for incorporation to the wallan wallan Regional Park is not likely to require remediation works for its use as public open space, however, quarry sites will likely require some rehabilitation to be incorporated into the wallan wallan Regional Park.*

8.5 Extractive industries within land comprising the Regional Park

There are three sites in the study area where quarrying activities are existing or proposed. These are summarised below.

- **Mount Fraser scoria quarry (existing):**

  Operational open-cut quarry at the southern rim of the Mt Fraser cone. It is located in the Beveridge North East Precinct (PSP unprogrammed).

- **2330 Epping-Kilmore Road (approved):**

  A clay quarry, located in the Wallan East Part 2 (PSP unprogrammed). Mitchell Shire Council refused to grant a permit on the grounds that it was not supported by state policy, and it may result in amenity impacts to surrounding future development. The decision was overturned at VCAT and a permit granted in 2018. There are significant remnant wetland values on these parcels (including a Red Gum Wetland and Seasonal Herbaceous Wetland communities), which form part of Herne Swamp. The extraction works permit includes consideration of these values as part of staging plans and land management plans for the site. Merri Creek and Taylors Creek also connect through the site. The quarry has not commenced works.

- **175 Northern Hwy (proposed):**

  Potential stone quarry, located in the Beveridge North West Precinct (PSP under preparation). A planning permit application was rejected by Mitchell Shire Council and in 2021, the Minister for Planning appointed a Ministerial Advisory Committee (MAC) for Beveridge North West PSP to consider the PSP, ICP and the permit application for the quarry. The MAC is in progress and a recommendation has not yet been made. In the event that the site is not used for that purpose, priority should be given to determining an appropriate quantum of land to be set aside for the regional park; and ordinances put in place to secure the land for that purpose.

By nature, operational quarry sites could not form a part of the wallan wallan Regional Park. The sites would not be publicly accessible for the duration of extraction activities, and the activities may also result in amenity impacts to the surrounding areas, including dust, noise, vibrations, and visual impacts. Sites with operational quarries would therefore be excluded from the wallan wallan Regional Park in the short-medium term, impacting on the connectivity of the park for both visitors and fauna. However, such sites may be incorporated to the wallan wallan Regional Park once their operation period has ceased and they have been remediated appropriately.

Ultimately these sites should be incorporated into the wallan wallan Regional Park however the timing of their transfer would be subject to extraction activities and rehabilitation/remediation requirements. The buffer areas of quarry sites may be acquired earlier, however the use of these areas is dependent on the nature of activities being undertaken at the sites.

Implications

- *There are three existing or proposed resource extraction sites in the wallan wallan Regional Park study area.*
- *These sites would not be suitable for incorporation into the wallan wallan Regional Park until extraction activities have ceased and rehabilitation/remediation has occurred.*

8.6 Potential management of the Regional Park

According to DEECA[14] there are currently 110,000 parcels which form parks, reserves, and areas of State Forest in Victoria. The ownership and management of this land is dependent on the size, type, and environmental/cultural significance of the land that comprises the open space. While the area is managed by non-traditional owners, management principles are aligned to Wurundjeri Woi-wurrung values. The remit of each of the state and local agencies relevant to the wallan wallan Regional Park is summarised below.

- **DEECA:**

  Incorporates over 100 major agencies and over 1,200 committees of management to manage crown land in Victoria. DEECA manages State forests and other public land reserves with a broad range of purposes. The wallan wallan Regional Park would likely be owned by the State Government and managed by Parks Victoria in partnership with the Wurundjeri Woi-wurrung people and Melbourne Water.

- **Parks Victoria:**

  Parks Victoria is a statutory authority of the Victorian Government acting in accordance with the Parks Victoria Act 2018. Parks Victoria manages 18 per cent of Victoria's landmass (4.1 million hectares). Parks Victoria manages this estate in partnership with Traditional Owners, government and non-government organisations, park neighbours, Friends' groups, and the broader community. While some unique regions or areas may be managed by a specialised board (e.g. Royal Botanic Gardens Board, Alpine Resort Management Board), Parks Victoria typically manages national parks and conservation parks in the state. Parks Victoria would be the most appropriate manager for the ongoing management and maintenance responsibilities of the majority of the land in the wallan wallan Regional Park.

- **The Wurundjeri Woi-wurrung Cultural Heritage Aboriginal Corporation:**

  The Wurundjeri Woi-wurrung people are recognised as rights holders, having direct input into managing and healing Country. It is the expectation of the Traditional Owners, that Wurundjeri Country will be returned to the Wurundjeri Woi-wurrung people. This is set out in their statement below:

  '"The Wurundjeri Woi-wurrung people have a cultural obligation and a cultural right to care for Country. Healthy Country is linked to healthy people and it is therefore necessary to return the management of Wurundjeri Country to the Wurundjeri Woi-wurrung people.

  Recognising the increased and ongoing pressures on the environment in the past few hundred years, and particularly in more recent times, there is a need to facilitate and provide resources to Care for County in an ongoing capacity. Providing ongoing funding and enabling the Wurundjeri Woi-wurrung people to Care for Country aligns with the self-determined objectives identified through multiple strategies and endorsed by Corporation Elders and members."

- **Melbourne Water:**

  Melbourne Water Corporation is one of 19 water corporations serving Victoria. Melbourne Water manages major water resources across the Greater Melbourne region, including the protection of waterways.

  The DEECA Growling Grass Frog Masterplan program involves constructing approximately 80 breeding wetlands over the next 20 years as development occurs in Melbourne's growth corridors. Due to the known presence of the Growling Grass Frog in the waterways in the study area identified under the Melbourne Strategic Assessment as conservation areas, these areas of the wallan wallan Regional Park would likely be managed by Melbourne Water. As these areas would be Crown land,

[14] Managing Crown Land (DELWP 2021), https://www.forestsandreserves.vic.gov.au/land-management/managing-crown-land

Melbourne Water would be assigned as the public land manager under an agreement between DEECA and Melbourne Water.

The designated conservation area currently only extends as far north as Hadfield Road. However, there are significant opportunities to promote stronger linkages (recolonisation) for Growling Grass Frogs throughout the remainder of the regional park within floodplain areas. For example, Growling Grass Frogs were recorded in Herne Swamp into the 1990s (prior to the spread of the deadly chytrid fungus and then the millennial drought) and this area was recommended as a biodiversity site of significance. Historic GGF populations in Herne Swamp were likely to connect with the Merri Creek populations, as GGFs migrate between breeding waterbodies in order to maintain diversity in the gene pool. Future management of these would need to be determined through further strategic discussions among agencies.

- **Local Councils:**

  Smaller open spaces contained within a single municipality would typically be owned and/or managed by the local Council. This includes local parks and recreational spaces, including sports fields.

- **Yarra Valley Water:**

  Yarra Valley Water is one of 19 water corporations servicing Victoria. Yarra Valley Water manages the Wallan Treatment Plant and the surrounding land that is located within Herne Swamp. Part of the treatment plant land is planned for regeneration of Herne Swamp for the purpose of being a key feature of the wallan wallan Regional Park land.

The model used for the management of the Jacksons Creek Parklands could be adopted for the wallan wallan Regional Park. In this model, the parkland partners (Parks Victoria, Melbourne Water, Hume City Council, Greater Western Water and WWCHAC) manage and make decisions about their own land and meet as a group to determine shared issues. The partners also support the goals of the Wurundjeri Woi-wurrung people for future management of the parklands. As such, it is considered that partners are managing the land as a transitional measure until such time that the WWCHAC has been provided the capacity and resources to take on the land manager role.

Implications:

- *The majority of the future wallan wallan Regional Park will likely be managed by Parks Victoria in partnership with the Wurundjeri Woi-wurrung people.*
- *Melbourne Water will likely manage the Growling Grass Frog Conservation Area within the Urban Growth Boundary as well as other waterway and stormwater treatment assets.*
- *Encumbered land around treatment plants and water and sewer assets will be managed by Yarra Valley Water.*
- *Future planning for the park may consider renaming the park to 'parklands' to reflect the various land managers and likely different land uses.*

APPENDIX A BIODIVERSITY ASSESSMENT

Wallan Regional Park

Biodiversity Overview Assessment

Prepared for
Land Design Partnership Pty Ltd

August 2020
Report No. 19272 (1.0)

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Figures

Appendices

1. Introduction and methods

Land Design Partnership Pty Ltd engaged Nature Advisory Pty Ltd to undertake a biodiversity overview assessment to inform a feasibility study for the Wallan Regional Park. A regional park was proposed as part of the Victorian Planning Authority's Northern Growth Corridor Plans — Managing Melbourne's Growth (2012). The study area for this investigation included the localities of Wallan and Beveridge. The specific boundaries of the study area were the Wallan township in the north, Gunns Gully Road in the south, Merri Creek in the east and Old Sydney Road in the west (as shown in Figure 1).

Areas proposed for inclusion in the Regional Park included the four volcanic cones (Bald Hill, Mt Fraser, Spring Hill and Green Hill), Herne Swamp, the headwaters of the Merri Creek, the buffer area around the Wallan Sewerage Treatment Facility and the area for flood mitigation as part of the upper Merri Catchment.

1.1. Scope of Works

The scope of works for this investigation involved determining areas of biodiversity and environmental significance within the study area and recommending features and locations to be included in the Wallan Regional Park.

1.2. Methodology

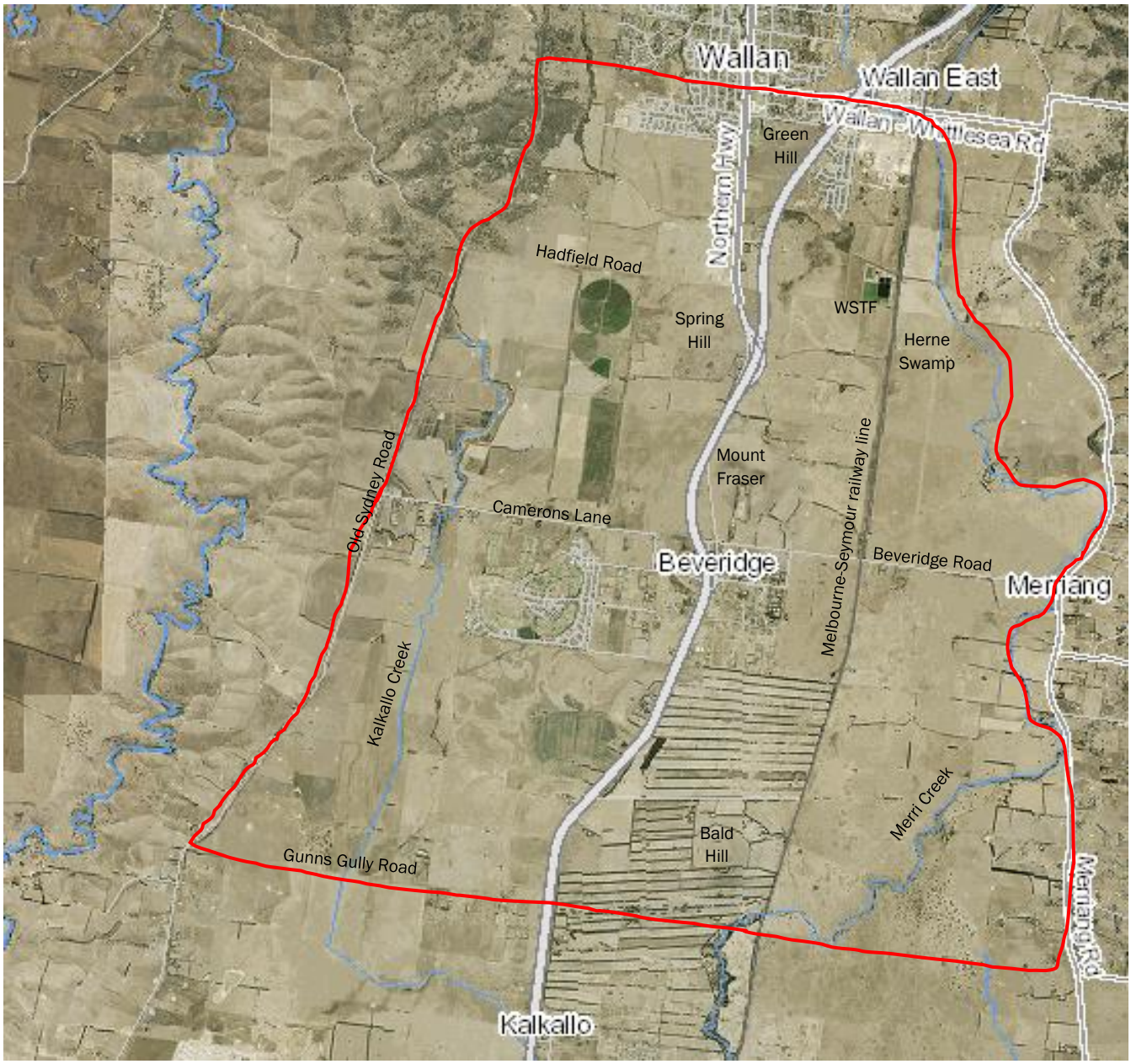
Existing information relating to the study area was reviewed, as follows:

- *NatureKit* (DELWP 2020a)
- *Native Vegetation Information Management* (NVIM) system (DELWP 2020b)
- *Ecological Vegetation Classes* (EVCs)
- *Victorian Biodiversity Atlas* (VBA) (DELWP 2020c)
- *Environment Protection and Biodiversity Conservation Act 1999*
- *Flora and Fauna Guarantee Act 1988*
- *Donnybrook-Woodstock Precinct Structure Plan*
- *Lockerbie North Precinct Structure Plan*
- *Beveridge North West Precinct Structure Plan*
- *Beveridge Central Precinct Structure Plan*
- *Mitchell Planning Scheme*
- *Growling Grass Frog Masterplan for Melbourne's Growth Corridors* (DELWP 2017)
- *Upper Merri Creek Sub-catchment – Issues Paper 2019*
- *NearMap* (aerial imagery)

A field assessment was undertaken on the 30th June 2020. During this assessment, the study area was surveyed by vehicle from publicly accessible roads. Sites supporting environmental values as identified from the review of existing information were ground-truthed where possible, and any additional sites in the study area found to support environmental values were identified.

Accessibility was the major limitation for this investigation.

Figure 1: Study area (indicated in red)



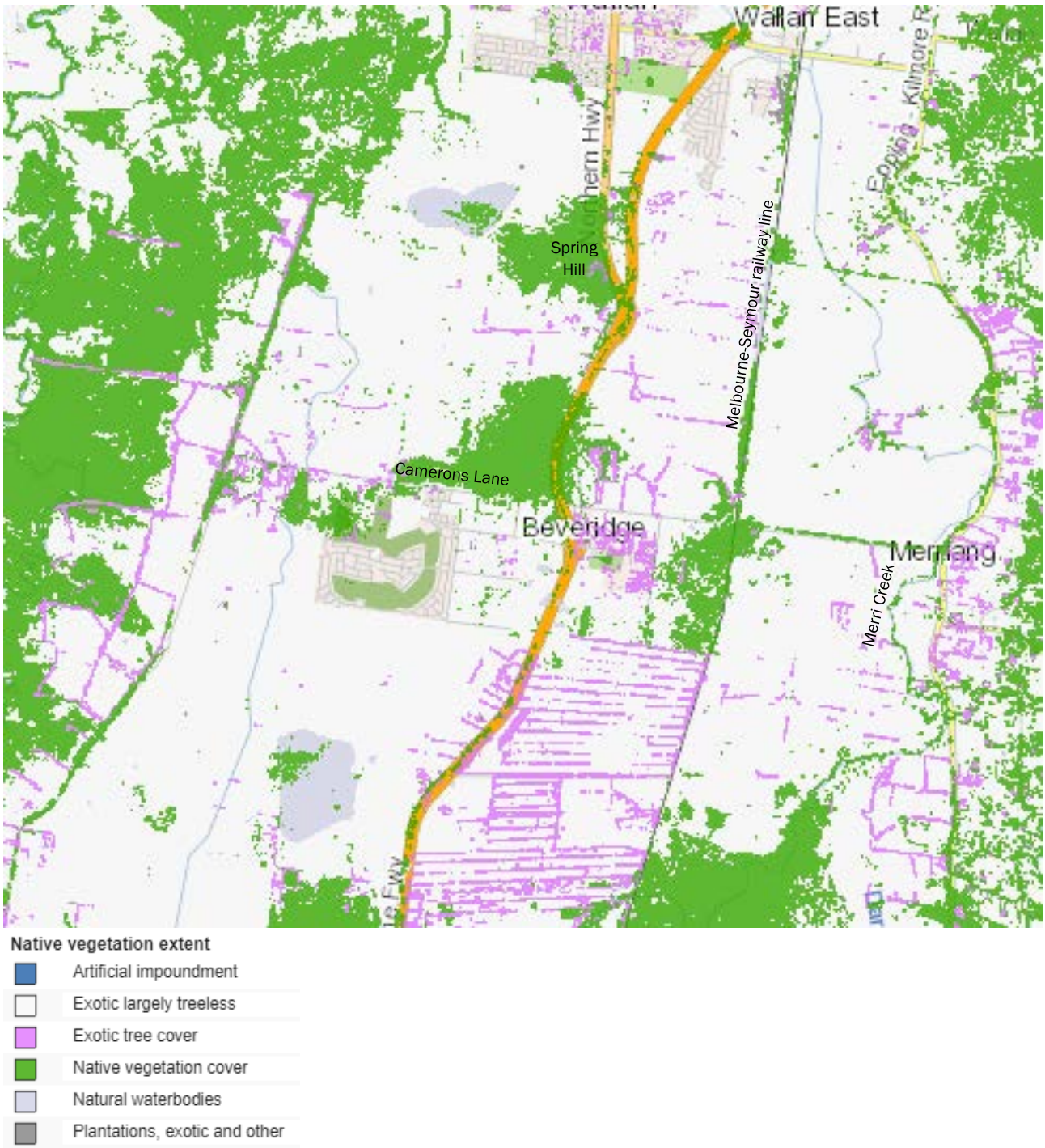
2. Assessment results

2.1. Existing information

2.1.1. Native vegetation extent and condition

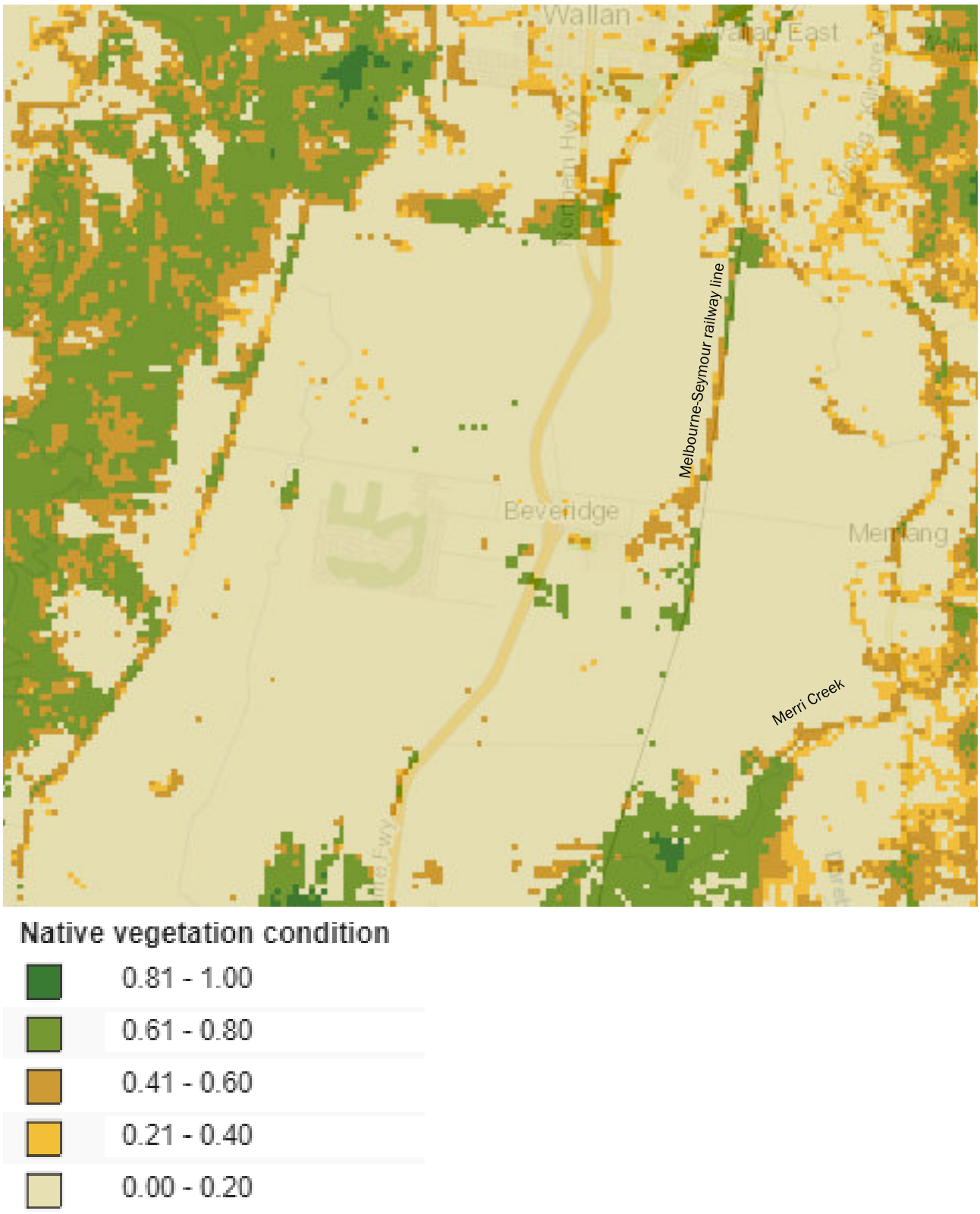
NVIM (DELWP 2020b) indicated that native vegetation was present throughout the study area (Figure 2). This was modelled to occur predominantly around Spring Hill, the north-western side of the intersection of the Hume Freeway with Camerons Lane, the Merri Creek in the southern portion of the study area, the north-western portion of the study area and along the Melbourne-Seymour railway line east of Beveridge.

Figure 2: Modelled native vegetation extent



The modelled condition scores of this vegetation ranged from low to high (Figure 3), with the highest condition scores modelled for vegetation along the Merri Creek in the southern portion of the study area and in the northwest of the study area.

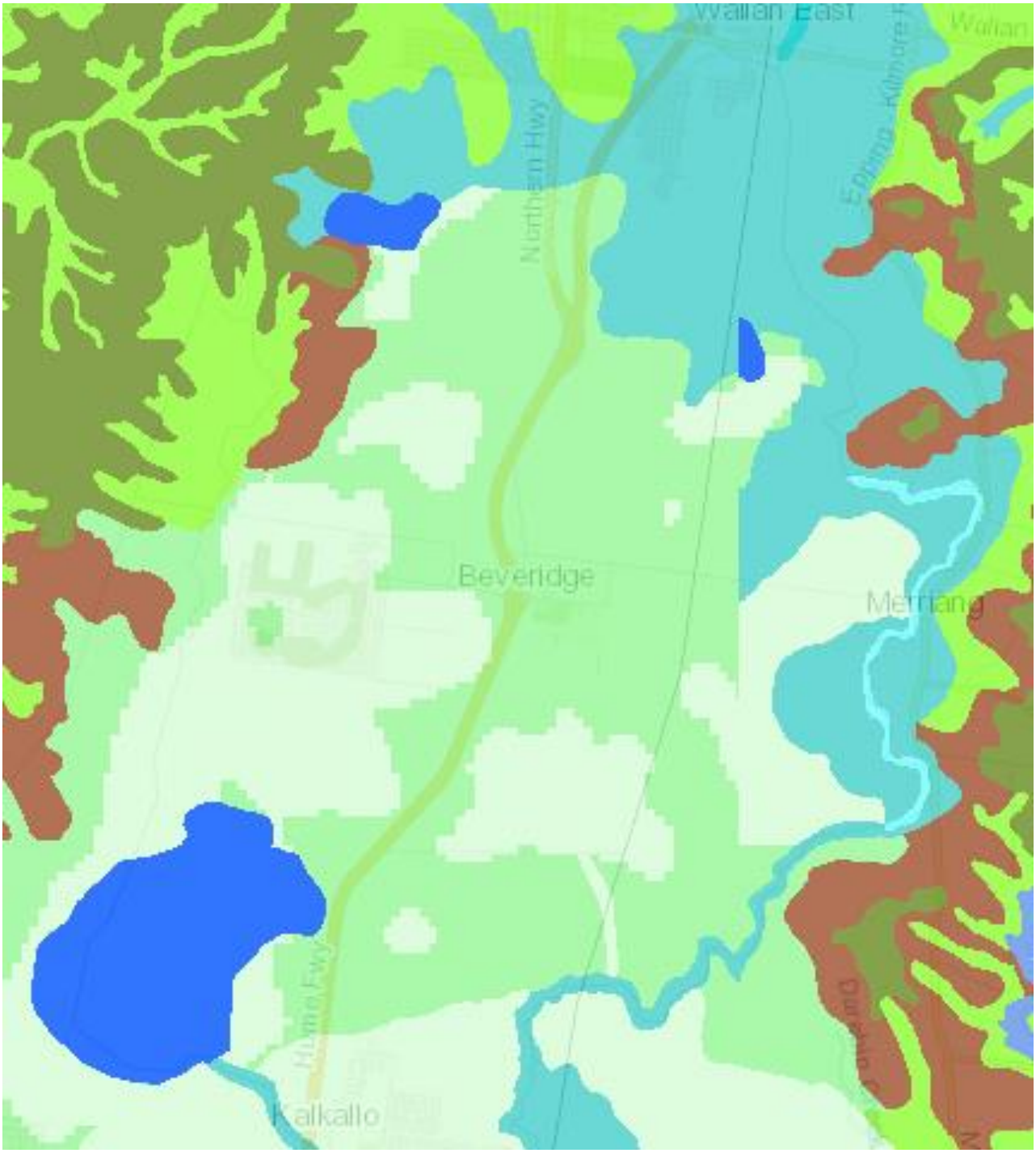
Figure 3: Modelled native vegetation condition



2.1.2. Ecological Vegetation Classes

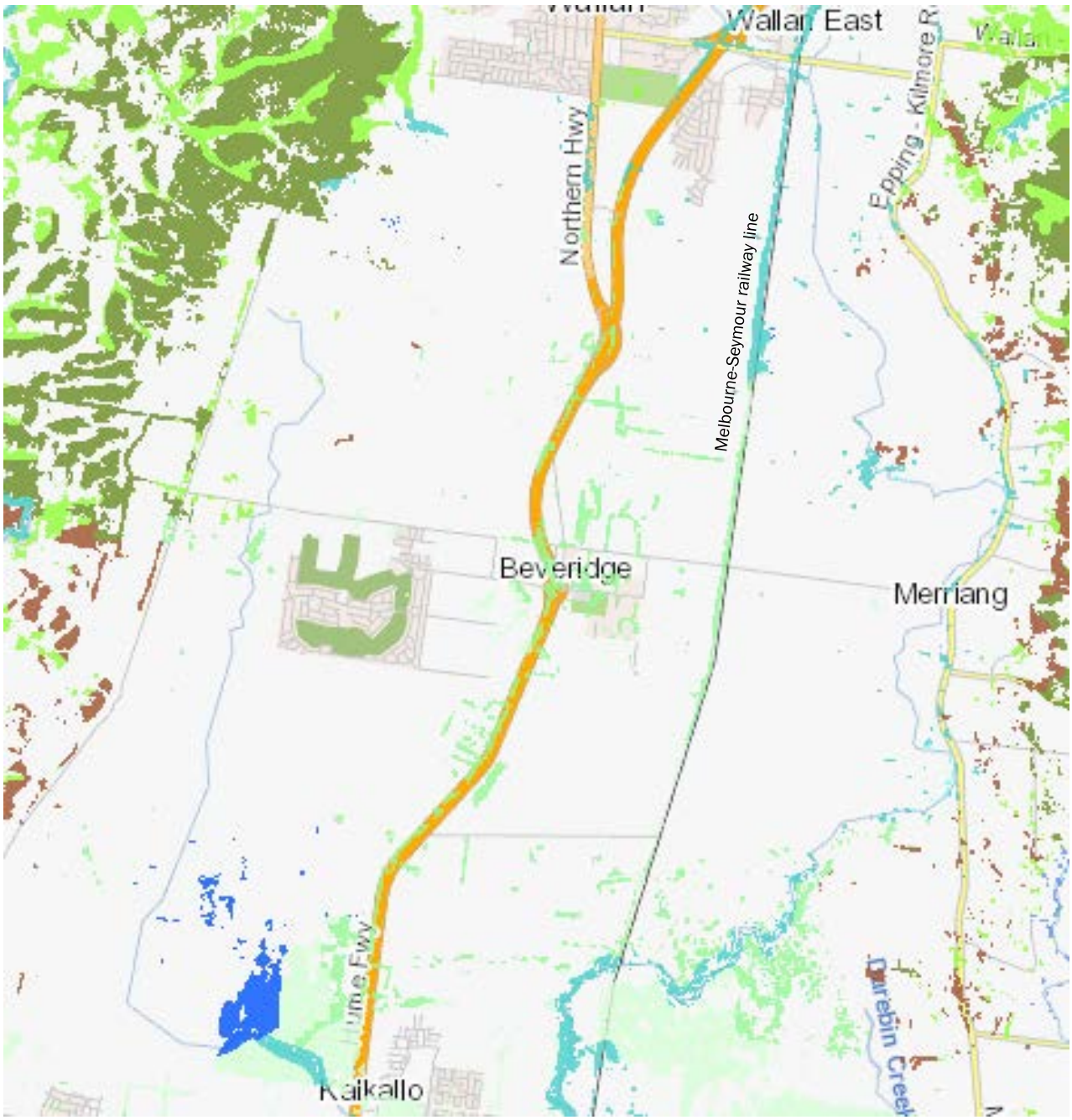
NVIM indicated that the study area would have supported Plains Grassland (EVC 132), Plains Grassy Wetland (EVC 125), Plains Grassy Woodland (EVC 55), Riparian Scrub (EVC 191), Swampy Riparian Complex (EVC 126), Grassy Woodland (EVC 175), Valley Grassy Forest (EVC 47), Herb-rich Foothill Forest (EVC 23) and Grassy Dry Forest (EVC 22) pre-1750. The pre-1750s extent of EVCs across the study area are shown in Figure 4.

Figure 4: Pre-1750s extent of EVCs across the study area



The current (2005) extent of these EVCs is severely diminished across the study area, as shown in Figure 5, with the remainder occurring mostly in the northwest of the study area, along the Melbourne-Seymour railway line, along the Merri Creek, and along roadsides.

Figure 5: Current (2005) extent of EVCs across the study area



2.1.3. Listed species

A review of the VBA showed that there were records of 12 EPBC Act-listed and ten FFG Act-listed species in the study area. These species records tended to occur predominantly within the vicinity of the Melbourne-Seymour railway line and along the Merri Creek in the southern portion of the study area. Records of Golden Sun Moth (EPBC Act-listed) also occurred in the north-western portion of the study area.

EPBC Act-listed species with records in the study area were:

Flora

- Adamson's Blown-grass
- Basalt Peppercress
- Matted Flax-lily
- Swamp Everlasting
- Swamp Fireweed

Fauna

- Australasian Bittern
- Golden Sun Moth
- Grassland Earless Dragon
- Growling Grass Frog
- Striped Legless Lizard
- Swift Parrot
- White-throated Needletail

FFG Act-listed species with records in the study area were:

Flora

- Curly Sedge
- Small Scurf-pea
- Tough Scurf-pea

Fauna

- Black Falcon
- Blue-billed Duck
- Brown Toadlet
- Great Egret
- Red-chested Button Quail
- Speckled Warbler

The Merri Creek in the southern portion of the study area is identified as a high priority for investment in Growling Grass Frog habitat (DELWP 2017).

The location of records of EPBC Act-listed and FFG Act-listed species within the study area is shown in Figure 6.

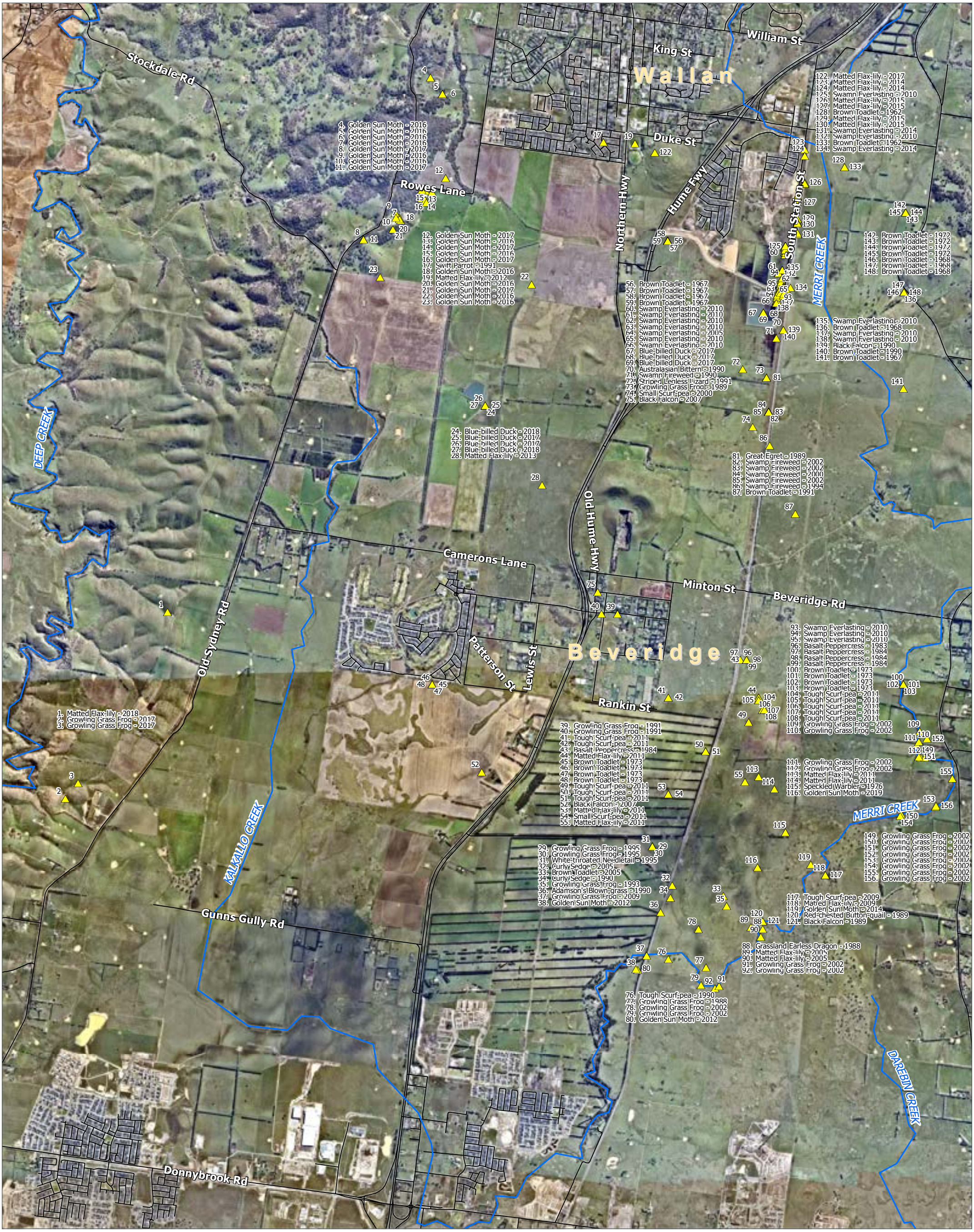


Figure 6: The location of records of EPBC Act-listed and FFG Act-listed species within the study area

Project: Wallan Regional Park **Client**: Land Design Partnership Pty Ltd **Date**: 11/08/2020

△ VBA records - FFG and EPBC listed species

N

Metres 0 800

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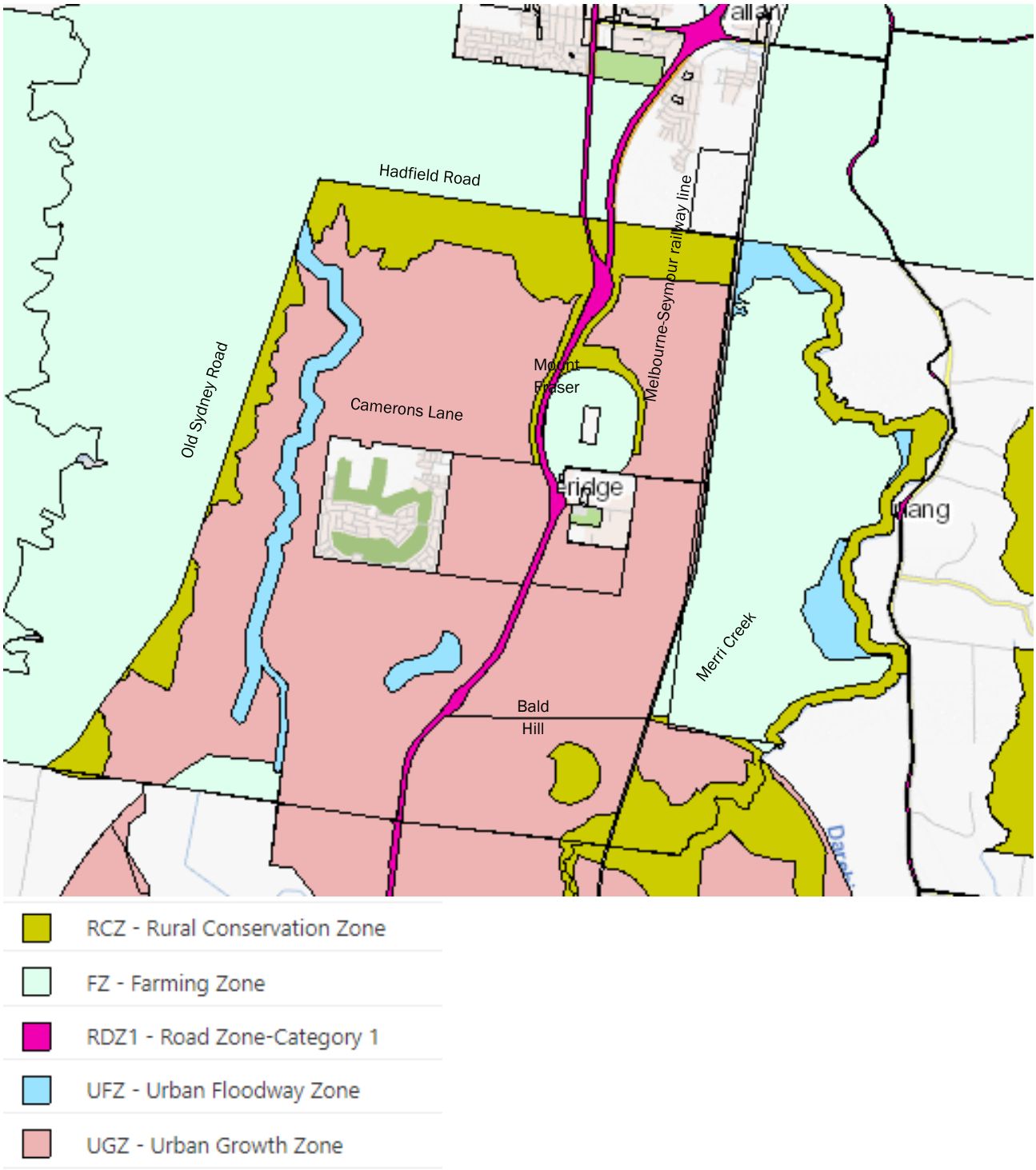
2.1.4. Planning Scheme Zones and Overlays

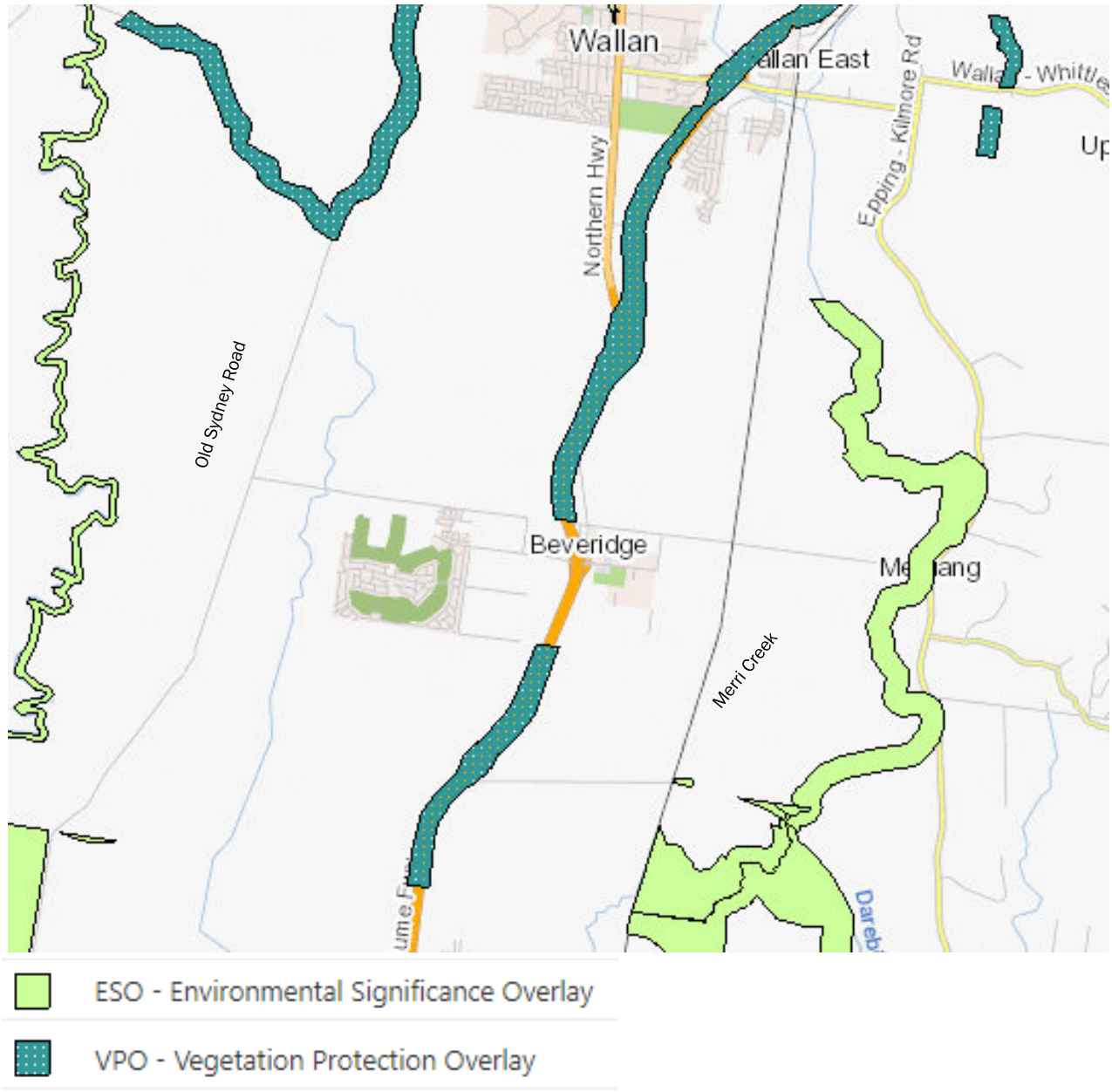
The majority of the study area is zoned Urban Growth Zone (see Figure 7). Rural Conservation Zones are present along the Merri Creek and Old Sydney Road, on Bald Hill, around the northern side of Mount Fraser, and to the south of Hadfield Road. The Rural Conservation Zone is in place to prevent land degradation and erosion and to ensure that existing cover of vegetation is maintained where possible.

Figure 7: Relevant Planning Scheme Zones across the study area



An Environmental Significance Overlay occurs along the Merri Creek (see Figure 8) which is in place to protect and enhance environmental values in the area. A Vegetation Protection Overlay occurs along parts of the Hume Freeway and Old Sydney Road. This overlay is in place to protect indigenous vegetation along roadsides and to provide habitat corridors for indigenous fauna.

Figure 8: Relevant Planning Scheme Overlays across the study area



2.2. Field assessment

The study area was found to mostly consist of land that has been used for agriculture, with paddocks consisting mostly of pasture grasses or crops. Trees had been planted in windrows across much of the study area. The Kalkallo Creek ran north-south through the western portion of the study area and appeared to be quite degraded. Some revegetation had occurred along the creekline. A quarry was operating on Mt Fraser. All four volcanic cones were cleared of wooded vegetation. Stoney outcrops were

scattered within the vicinity of the volcanic cones. New housing developments and construction was taking place in both Beveridge and Wallan.

Native vegetation was found to occur in the northwest of the study area where there were remnants of Herb-rich Foothill Forest (EVC 23) and Grassy Dry Forest (EVC 22). Messmate Stringybark, Bundy, Black Wattle, Hedge Wattle and Wallaby grass was found to be present in this area. This area was considered to be of value for conservation.

Scattered River Red-gum trees were present in paddocks at the foothills of the north-western portion of the study area. Scattered River Red-gum trees were also present to the north of Gunns Gully Road.

Native vegetation occurred along the Melbourne-Seymour railway line in the northern portion of the study area. This included River Red-gum and Lightwood trees. In the area around Spring Hill, introduced Cocksfoot and Artichoke Thistle were common, however, scattered native Black Wattle trees were present among rock piles and the area has the potential to support further native vegetation. Similarly, south of Beveridge Road and west of the Melbourne-Seymour railway, stoney outcrops were present with native Hedge Wattle growing amongst them. While weed species, particularly Cocksfoot, appeared to be prevalent in this area, the lack of past rock clearing or ploughing means that this area has the potential to support native vegetation as modelled by NVIM. According to the *Lockerbie North Precinct Structure Plan* however, any native vegetation in this area is to be removed for development.

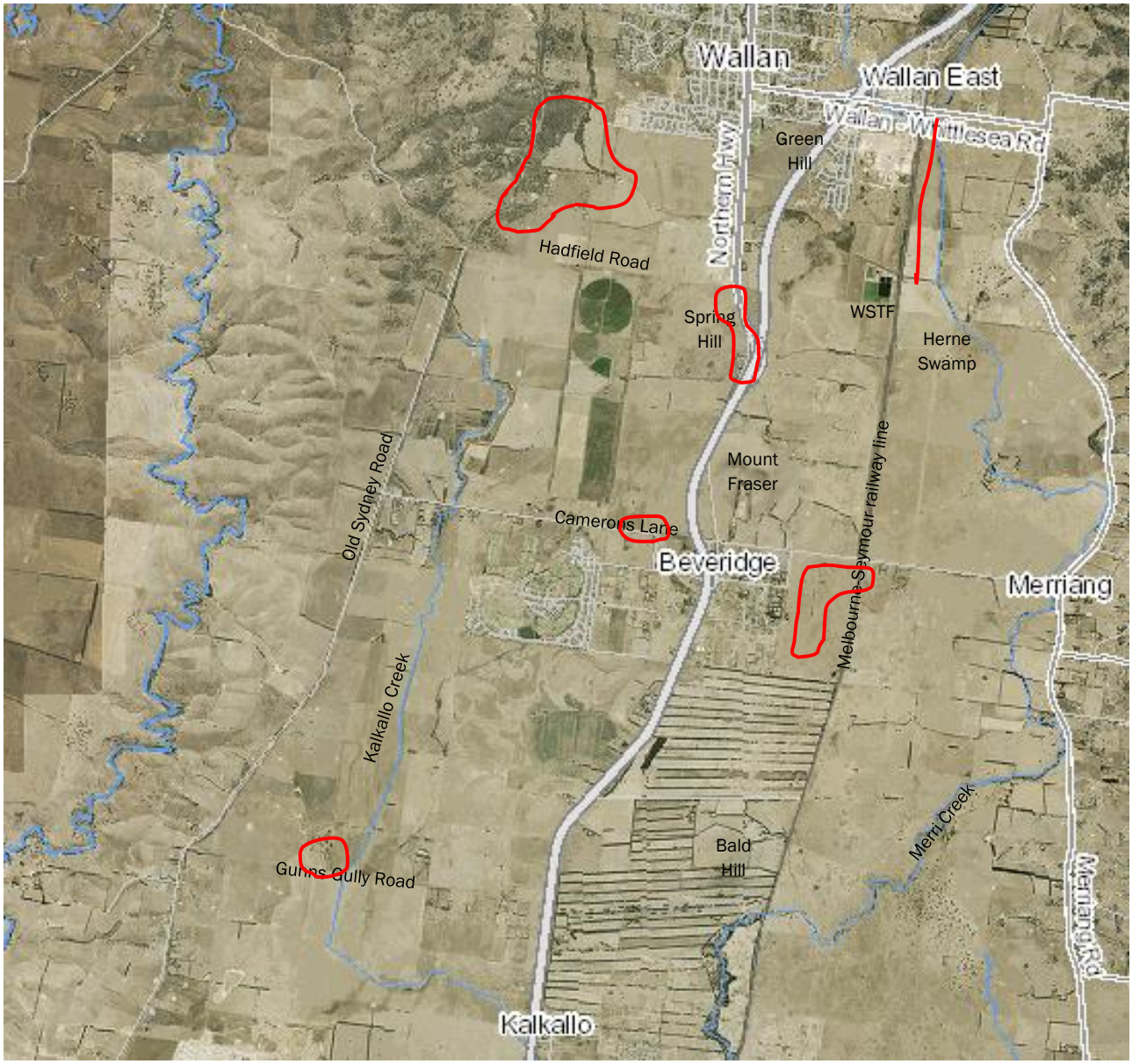
Investigation of NVIM modelled native vegetation in the north-western corner of the intersection of Camerons Lane with the Hume Freeway showed that this area closest to Camerons Lane was largely infested with introduced Artichoke Thistle and Gorse. Native grasses, such as Wallaby grass, were present away from these infestations and the review of the VBA indicated that the endangered Matted Flax-lily (EPBC Act-listed) has been found in the northern part of this area. This suggested that native vegetation may have occurred in this northern part out of view from the road.

The modelled native vegetation to the south of Camerons Lane did not appear to be present.

Photographs of vegetation in the study area are provided in Appendix 1.

The locations of significant native vegetation within the study area as recorded during the field assessment are shown in red in Figure 9.

Figure 9: The locations of significant native vegetation (shown in red) within the study area as recorded during the field assessment



3. Recommendations

Areas of biodiversity and environmental significance within the study area were found to occur predominantly in the north-western portion of the study area and within the vicinity of the Melbourne-Seymour railway line. A small area was identified in the southwest of the study area in the vicinity of Gunns Gully Road. Additionally, there is the potential for environmental values to occur around Spring Hill and at the Hume Freeway-Camerons Lane intersection. Although inaccessible in the field assessment, the review of existing information also indicated that biodiversity and environmental values were present along the Merri Creek in the southern portion of the study area.

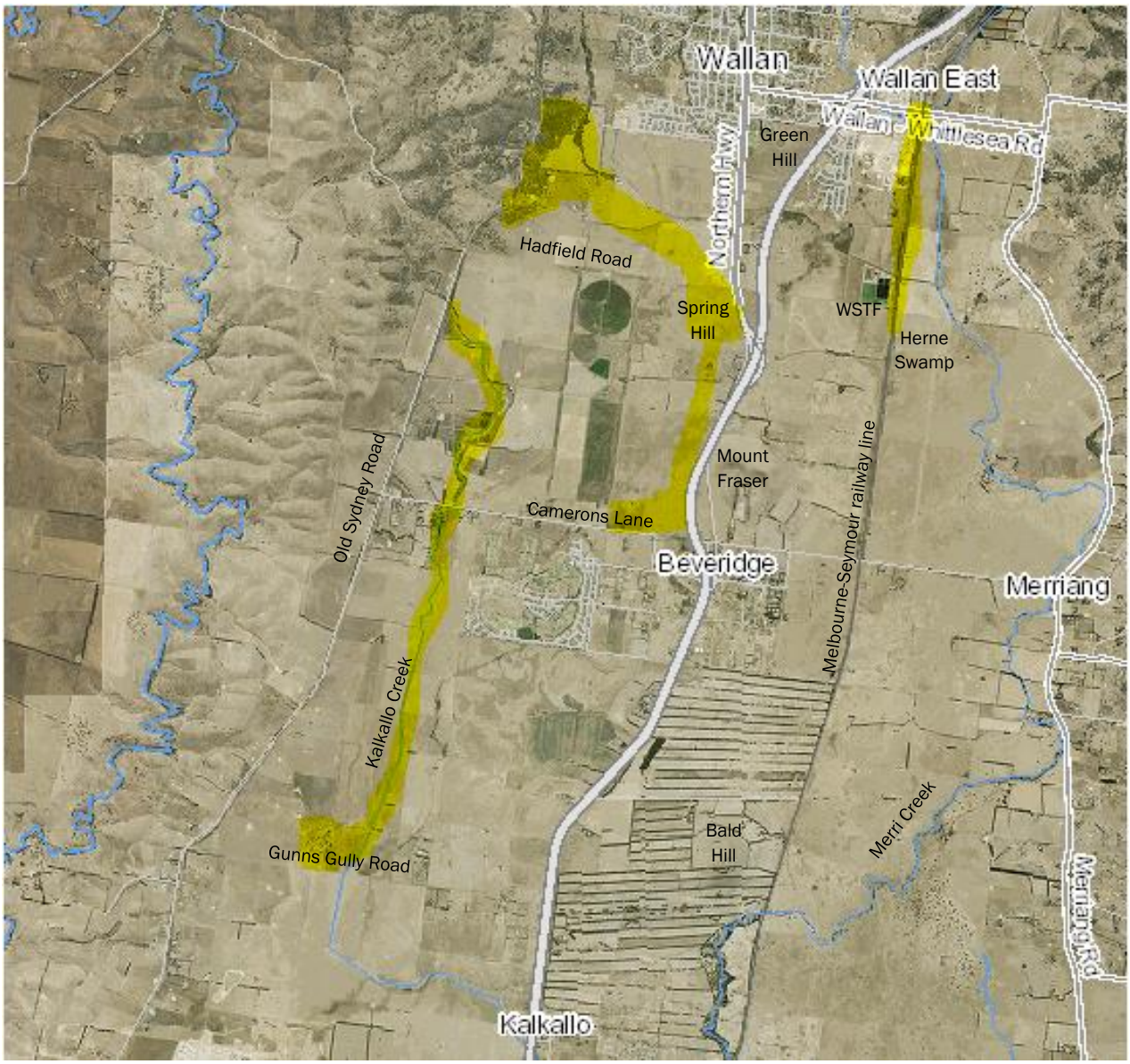
It is recommended that the proposed Wallan Regional Park includes and conserves the native vegetation in the northwest of the study area. Links to this area should include the scattered trees that occur between this area and the proposed inclusion of Spring Hill in the Regional Park. The River Red-gums in the southwest of the study area should be retained and connected to the Wallan Regional Park via Kalkallo Creek. Restoration and revegetation of the Kalkallo Creek is recommended. The potential for environmental values to occur in the area at the Hume Freeway-Camerons Lane intersection warrants further investigation and the possible inclusion in the Wallan Regional Park. This would provide a link between Beveridge, Spring Hill and Wallan.

The environmental values found to be present along the Melbourne-Seymour railway may be included in the Wallan Regional Park as part of a bicycle/walking path adjacent to the railway line. However, given it is within a narrow corridor, it is imperative that these values are not impacted upon or reduced for the development of such paths.

It is understood that the environmental values along the Merri Creek are being considered as part of a separate conservation plan. As such, these areas are not considered in this feasibility study for inclusion in the Wallan Regional Park.

Locations of environmental values and areas recommended for inclusion in the Wallan Regional Park are highlighted in yellow in Figure 10.

Figure 10: The location of environmental values and areas recommended for inclusion in the Wallan Regional Park (highlighted in yellow)



4. References

DELWP 2017, *Growling Grass Frog Masterplan for Melbourne's Growth Corridors – Melbourne Strategic Assessment,* Department of Environment, Land, Water and Planning, East Melbourne, Victoria.

DELWP 2020a, *NatureKit*, Department of Environment, Land, Water and Planning, East Melbourne, Victoria, viewed 29 June 2020, https://www.environment.vic.gov.au/biodiversity/naturekit.

DELWP 2020b, *Native Vegetation Information Management system*, Department of Environment, Land, Water and Planning, East Melbourne, Victoria, viewed 29 June 2020, https://nvim.delwp.vic.gov.au/.

DELWP 2020c, *Victorian Biodiversity Atlas 3.2.5*, Department of Environment, Land, Water and Planning, East Melbourne, Victoria, viewed 29 June 2020, https://vba.dse.vic.gov.au.

Department of Sustainability and Environment (DSE) 2004a, *Ecological Vegetation Class (EVC) Benchmarks by Bioregion*, Department of Environment, Land, Water and Planning, East Melbourne.

Appendix 1: Photographs of the study area

The majority of the study area was cleared agricultural land and housing. Bald Hill in the background.

Native River Red-gum trees along the Melbourne-Seymour railway in the northern portion of the study area.

Native treed vegetation in the northwest of the study area.

Native vegetation in the northwest comprised Messmate Stringybark, Bundy, Hedge Wattle and Black Wattle.

Dense infestation of weeds near the intersection of Camerons Lane and the Hume Freeway.

Away from the weed infestations, native grasses were present near the Camerons Lane and Hume Freeway intersection. Mt Fraser in the background.

Rock piles on Spring Hill with the potential to support native vegetation.

Revegetation along Kalkallo Creek at the Camerons Lane crossing.

APPENDIX B BACKGROUND REVIEW – RELEVANT POLICY AND PREVIOUS ENGAGEMENT

ETHOS URBAN

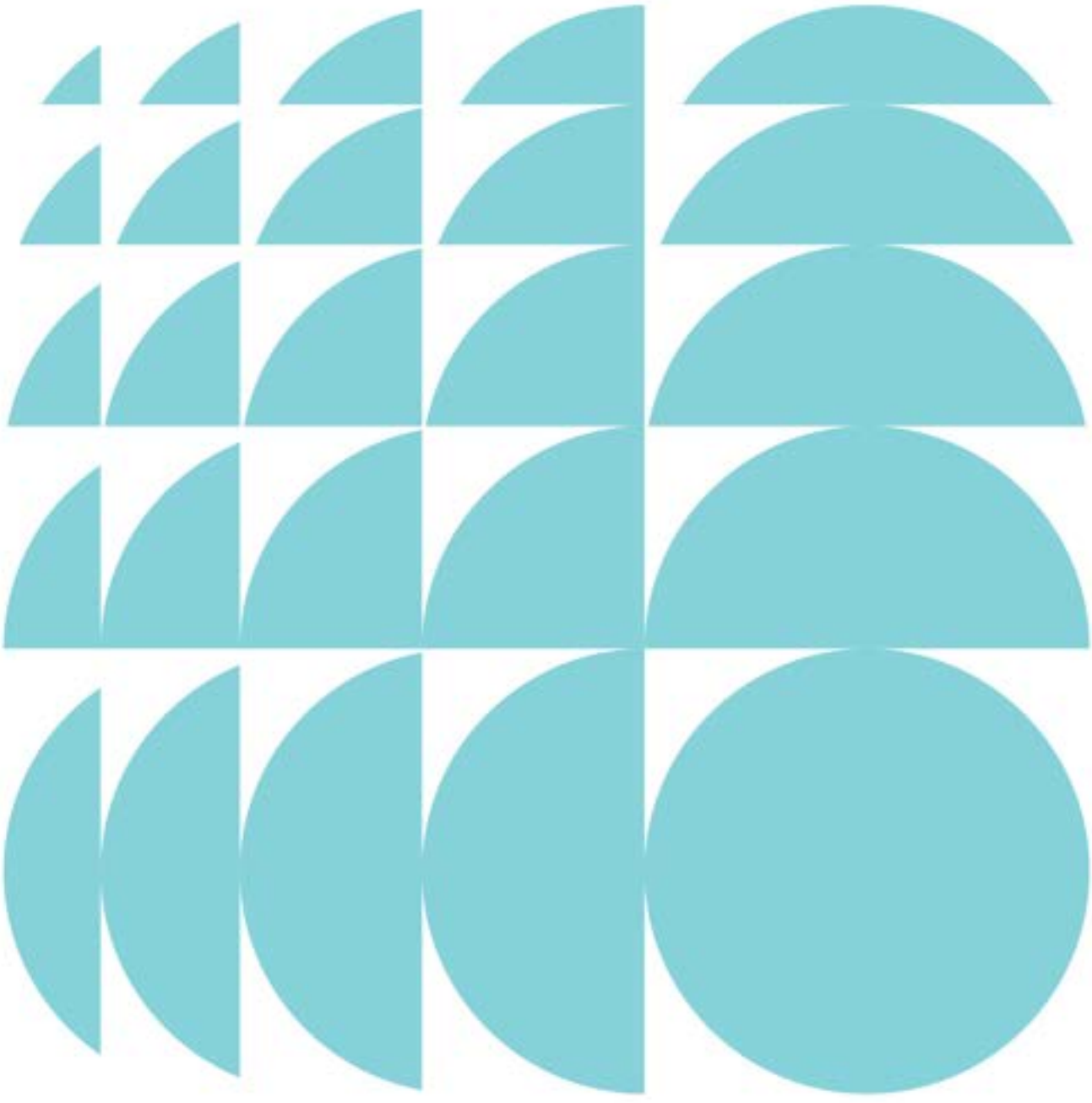
Background Review

Relevant Policy and Previous Engagement

Wallan Regional Park Feasibility Study

Submitted to Land Design Partnership

March 2020 | 3200039



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Matilda Chaney and Liz Webster	13 March 2020	Jo Cannington	27/03/2020

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Contents

1.0 Introduction

1.1 Purpose of this Report

This report provides a summary of policies and strategic documents produced by the State Government, Mitchell Shire Council, Whittlesea City Council and other independent bodies, and their implications for the proposed Wallan Regional Park. It also evaluates the relevant interests and priorities of prior engagement and communications with stakeholder and community groups.

1.2 Project Drivers and Context

In July 2017, the Andrews Labor Government committed to conducting a feasibility study for a new regional park in Wallan. The Wallan Regional Park Feasibility Study project, led by the Department of Environment, Land, Water and Planning (DELWP) is a direct response to this commitment.

The study area for the Wallan Park Feasibility Study identified by DELWP is located largely in Mitchell Shire Council. Mitchell Shire is experiencing the fastest population growth in the state at 4.5% per annum, with an estimated resident population of 47,837 in 2020. Victoria in Future (2019) projects that the Local Government Area will add 53,400 people by 2036, totalling 97,690, with 85% of growth occurring in the 3% of land area within Melbourne's Urban Growth Boundary. Expectations from Mitchell Shire Council are that the number of dwellings in the LGA are forecast to grow to 30,077 by 2031, with an average household size of 2.78. In February 2019, Mitchell Shire Council estimated that the ultimate build out of Beveridge and Wallan would result in a total future population in the Mitchell Growth Corridor of at least 192,578 people. As a result, the Shire has identified the establishment of a major park in Wallan and Beveridge as key to balancing urban development with open space, as well as protecting areas of environmental significance.

Wallan and Beveridge are more generally situated within the North Growth Corridor (NGC). The Victorian Planning Authority's Growth Corridor Plans: Managing Melbourne's Growth identifies that the Northern Growth Corridor (that also includes areas of the City of Whittlesea and City of Hume will ultimately accommodate a population that exceeds 260,000 or more people and has the capacity to provide for at least 83,000 jobs. Planning for regional parks in the Growth Corridors is based upon the standard of providing regional parks of at least 40 hectares of passive open space for each 150,000 people.

Plan Melbourne 2017-2050 seeks to provide land for a range of open space functions to meet community needs for active and passive recreation, and for protection of the environment. It requires that open space provision must be fair and equitable, with the aim of providing access that meets the needs of all members of the community.
The Wallan Precinct Structure Plan (PSP) refers to the need for a central green spine that connects the southern and northern ends of the site. Several State policies recommend the retention of an interurban break between the corridor and Wallan, to create a distinct separation of the two urban areas. The provision of active open space and sports facilities within the urban break would serve both Wallan and Beveridge. This will facilitate connectivity between the communities, whilst allowing for distinct development.

Mitchell Shire Council identified that a regional park in the southern growth area could potentially encompass: the four volcanic cones (Bald Hill, Mt Fraser, Spring Hill and Green Hill), Herne Swamp, the headwaters of Merri Creek, the buffer area around the Wallan Sewage Treatment facility or an area for flood mitigation as part of the upper Merri Catchment.

There is currently a number of existing land use approvals as well other Precinct Structure Planning processes occurring, i.e.. Beveridge North West Precinct Structure Plan and Wallan South Structure Plan. The capacity of this project to influence these current and future Precinct Structure Planning processes will be important in providing the best regional park outcome for the future community.

2.0 Key Planning Considerations

The State and Council policies focus on four key considerations for the location of the Regional Park: biodiversity, drainage, landscape and the Wallan Sewage Treatment Plant.

2.1 Biodiversity

The North Growth Corridor includes significant biodiversity values, with substantial areas of River Red Gums scattered across the landscape, and threatened communities of Natural Temperate Grasslands of the Victorian Volcanic Plain and Grassy Eucalypt Woodland of the Victorian Volcanic Plain. The *Biodiversity Conservation Strategy* for Melbourne's growth corridors identifies that retention of these areas of biodiversity value will be additional to the delivery of a 1,200 hectare woodland reserve outside the UGB and west of the E6 road reservation between Wollert and Woodstock. The Merri Creek in Beveridge runs through Wallan and has been identified by the *Growling Grass Frog Masterplan* as a conservation area. Modelling undertaken for the Masterplan determined that Merri Creek is a very low risk waterway in terms of investment priority.

The *Growling Grass Frog Masterplan* identifies the headwaters of Merri Creek, within Herne Swamp, as an important habitat buffer zone. In fact, a restored Herne Swamp is likely to provide extensive Growling Grass Frog habitat, including breeding habitat in deeper pools. The restored major wetland feature (Herne Swamp), supporting a diverse assemblage of flora and fauna, would form the spectacular ecological, aesthetic, recreational and cultural centrepiece of the future Wallan Regional Park, and a community and environmental asset for all Victorians. A major destination node on part of the former Herne Swamp would re-establish a wetland of national significance supporting thousands of ducks, geese, swans and other wildlife.

Strategies advocated for increased State and Federal investment in habitat and open space corridors in Mitchell Shire. Further, they recommended additional protection for Crown land with remnant native vegetation be provided by reserving unreserved Crown land for a purpose that includes the protection of its remnant native vegetation; and amending the reservation purpose of reserved Crown land, where appropriate, to include the protection of such vegetation.

2.2 Drainage

The Wallan Wallan Wetlands are acknowledged to be naturally flood-prone. Numerous reports state that a regional park on the southern edge of Wallan would embrace the flood-prone land unsuitable for development and identify the potential role of Herne Swamp in buffering floods and improving water quality. If the Wallan regional park were to connect with trails leading to Melbourne, it would travel along the five creeks that drain into Herne Swamp. In addition, Melbourne Water's proposed regional retarding basin at Kalkallo has the potential to become an important regional open space facility which should be considered in relation to a regional park.

2.3 Landscape

The key messages and recommendations made by the strategic policies typically include buffer areas between differing land use zones, rural fringe areas protected to provide scenic views, ridge lines which provide a backdrop to urban land uses, views to and from hills tops and key gateway experiences, where major access routes are directly tied to landscape experience. The green wedges around the semi-rural areas of Whittlesea aare key environmental assets, particularly given significant and projected urban expansion. Several policies recognised the possibility of incorporating Herne Swamp, Taylors Creek and other significant natural resources into a regional park. Herne Swamp retains nationally significant ecological values. The volcanic hills of Bald Hill, Mt Fraser, Spring Hill and Green Hill have been identified as having significant values and should be incorporated and retained as open space as the corridor develops.

Opportunities have been identified to create new active and passive recreation areas alongside waterways, in the flat plateau towards the west of Wallan and the more undulating red gum areas towards the east. The ridge line to the west of the Growth Corridor, along with the prominent volcanic hills within the northern portion of the Growth Corridor should also be protected from urban development. This ridge line has been identified by several strategies as a potential location for a regional active open space facility, along with potential facilities on the Merri Creek south of Donnybrook Principal Town Centre, and at the Kalkallo retarding basin. However, anywhere within 200m of Kalkallo Creek is an area of cultural heritage sensitivity as defined by The Aboriginal Heritage Regulations and therefore,

further archaeological investigations would be required prior to the construction of any frog ponds, drainage basins, passive open space and bridge structures.

2.4 Wallan Sewage Treatment Plant

Several policies acknowledge that the regional park could potentially encompass the buffer area around the Wallan Sewage Treatment Plant.

2.5 Expectations and Recommendations for a Regional Park

The reviewed policies outline recommendations for regional parks. Consensus is that minor resource use may be permitted, however, recreational objectives are generally given priority over nature conservation objectives. Regional parks vary in their specific values and characteristics, but typically they provide an environment where residents and visitors can enjoy a broader range of activities such as dog walking than are usually allowed in national, state and wilderness parks. The overarching function of regional parks is to provide for informal recreation for large numbers of people associated with the enjoyment of natural or semi-natural surroundings or open space. The site should be of sufficient size to accommodate the range of uses typically associated with a regional park, including adequate unencumbered land to accommodate park infrastructure and facilities.

Key requirements of a regional park identified by the *Metropolitan Melbourne Investigation Final Report* are that they should:

- Provide for informal recreation for large numbers of people associated with enjoyment of natural or semi-natural surroundings;
- Conserve and protect natural landscapes and scenic values;
- Conserve and protect biodiversity to the extent that it is consistent with above;
- Protect significant cultural and historic sites, landscapes and places, including Aboriginal cultural sites and places;
- Where appropriate, be restored to re-establish ecosystems or return them to a state more closely resembling their natural condition;
- Include unused road reserves adjoining parks, where appropriate;
- Have a management plan prepared for each park in partnership with key user groups, local authorities and the community; and
- Be permanently reserved under the Crown Land (Reserves) Act 1978 for the purpose of regional park, if not already appropriately reserved.

Regional parks should generally provide for bushwalking, nature observation, heritage appreciation, picnicking, cycling, camping, dog walking, car touring, mountain bike and trailbike riding, horse riding, metal detecting, prospecting and research (subject to permit). Such parks should generally exclude harvesting of forest products, grazing by domestic stock, hunting and the use of firearms and licensed apiculture.

3.0 Key Messages from Community and Stakeholder Groups

DELWP have provided documentation of engagement activities undertaken with relevant stakeholder and community groups prior to the initiation of this project, including:

- A roundtable discussion with members of the Project Control Group (PCG) attended by Mitchell Shire Council, Parks Vic, Melbourne Water, DELWP
- Comments from the Friends of Merri Creek Inc group on the Beveridge North West Precinct Structure Plan
- A concept plan for a Wallan-Merri State/Regional Park from the Merri Creek Management Committee
- Submission to the Wallara Waters proposal from the Nature Glenelg Trust
- A discussion paper on the restoration for of the Wallan Wallan Wetlands from the Nature Glenelg Trust
- Results of a targeted cultural heritage values site inspection with the Wurundjeri Woi-Wurrung Party.

Key messages from the previous consultation/ feedback is summarised below into themes.

3.1 Project Expectations and the Role of the New Wallan Park

According to the PCG members in attendance (representatives from Mitchell Shire Council, Parks Vic, Melbourne Water, DELWP) at an initial project roundtable discussion, it is important that the feasibility study clearly defines the role of the future Wallan Park. This requires the project to differentiate which open spaces serve a regional function compared to a local function in the area and apply a hierarchy of open space to determine the primary purpose of different open space areas. This includes the wider context of potential parklands north of the UGB, e.g. the Beveridge Foothills.

The project should respond to the myriad environmental concerns in the study area, including the relationship with existing waterways and potential impacts on flooding, flows, water supply and waterway health. Herne Swamp should be assessed for inclusion in the park.

Configuration of the park should consider and explore a potential park connection across the Hume Freeway, interface with the rail line and proposed OMR, as well as how to incorporate known Aboriginal sites and cultural heritage values.

Assessment of risks and potential costs should also be undertaken for the project.

3.2 Biodiversity Remains an Important Focus

The Friends of Merri Creek Inc state that there is very little remaining native vegetation in Beveridge North West. The group argues that the requirements and guidelines for biodiversity in the Precinct Structure Plan are insufficient and should be reworded to encourage revegetation, habitat restoration and removal of any obstructions to fauna movement. They strongly support the inclusion of an east-west corridor of 'landscape values land' as part of the Regional Park, effectively linking the Kalkallo and Merri Creeks.

The Nature Glenelg Trust's Discussion Paper views Herne Swamp, if restored, as the natural centrepiece for the proposed Regional Park. Existing ecological values that the paper cites include state significant fauna species such as the Black Falcon, Brown Toadlet, Eastern Great Egret, Hardhead, Musk Duck, Royal Spoonbill and Southern Toadlet. The Swamp also retains nationally significant ecological values protected under the *EPBC Act 1999*.

The Nature Glenelg Trust view the Herne Swamp area as an underutilised asset and foresee that if restored, benefits will include flood buffering and erosion prevention, and groundwater protection and recharge.

3.3 Strong Support for a New Regional Park in the Area

The Merri Creek Management Committee (MCMC) appear to have been advocating for a new park since 2016. They reason that there is a need to plan for a major park at a scale that conserves nature in the metropolis and creates a green spine linking Wallan to inner Melbourne. MCMC envisages the park connecting the proposed Marran Baba Parklands to the Merri Creek bushland and trail corridor through the northern suburbs.

MCMC's major perceived benefits of the park include that it would be a major asset for Melbourne's northern suburbs that protects special natural areas and landscape features, enhances liveability and curates a distinctive identity for the planned suburbs in the Northern Growth Corridor. The park would be an open space network for residents, workers and visitors who

would be able to utilise the long-distance trail network. The park would play a major role as the focal entrance point to Greater Melbourne for the northern suburbs and provide a level of protection of Aboriginal Cultural Heritage.

MCMC foresee the park being a wildlife habitat and movement corridor that would sustain migratory and resident native species and reduce the impacts of urban growth on the Merri Creek downstream. The large expanses of vegetation and wetlands would help mitigate the high temperatures expected with climate change and provide opportunities to protect high-quality native vegetation as offsets for clearing.

3.4 Enhance and Celebrate the Cultural Heritage Values of the Area

An inspection with the Wurundjeri Woi-Wurrung Cultural Heritage Aboriginal Corporation of the Beveridge North West Precinct was undertaken in 2014. The results from the inspection note that anywhere within 200 metres of Kalkallo Creek is an area of cultural heritage sensitivity, which necessitates further archaeological investigations prior to construction or works.

According to the Wurundjeri Woi-Wurrung, cultural values may be incorporated to the Precinct through the collaboration with the Corporation and land managers in a number of ways, for example the inclusion of interpretive signage and Woi-Wurrung naming of places.

Appendix A. Strategic Policy Review

Strategy, Author, Date	Purpose / Vision	Implications for Wallan Regional Park
State Government Policies and Reports		
Plan Melbourne 2017-2050 Author: State Government of Victoria Dated: 2017	*Vision: Melbourne will continue to be a global city of opportunity and choice.* The Plan seeks to integrate long-term land use, infrastructure and transport planning to meet the city's future environmental, population, housing and employment needs. It is designed to manage, adapt to and harness change for the social, economic and environmental benefit of future generations of Victorians.	Protect significant views, maintain non-urban breaks between urban areas, and conserve the cultural significance, tourism appeal and character of scenic rural landscapes. Provide land for a range of open space functions to meet community needs for active and passive recreation and for protection of the environment. 1. Open space provision must be fair and equitable with the aim of providing access that meets the needs of all members of the community, regardless of age, gender, ability or a person's location.
Growth Corridor Plans: Managing Melbourne's Growth Authors: Growth Areas Authority and the State Government of Victoria Dated: June 2012	1. The Growth Corridor Plans provide a framework to guide the planning of new communities in the Growth Corridors. 2. The GCPs set an overarching strategic planning framework to guide future development in the four Growth Corridors. Specifically, they: a) Indicate areas of high environmental or landscape value, natural features or open space to be preserved. b) Broadly identify the location of future residential districts, industrial and employment areas and open space networks. c) Indicate the likely strategic transport infrastructure required to support urban development. d) Identify the locations for future Major and Principal Town Centres.	Wallan is located in the North Growth Corridor. In some cases, regional active open space is suggested adjacent to regional parks. Wherever possible the design of the PPTN and local bus routes should make it possible to access regional active open space and regional parks by public transport. Planning for regional parks in the Growth Corridors is based upon the standard of providing regional parks of at least 40 hectares for each 150,000 people. Specific to North Growth Corridor: There are opportunities to create new active and passive recreation areas alongside waterways and both in the flat plateau towards the west and the more undulating red gum areas towards the east. The ridge line to the west of the Growth Corridor along with the prominent volcanic hills within the northern portion of the Growth Corridor will also be protected from urban development. e) This ridge line has been identified as a potential location for a regional active open space facility, along with potential facilities on the Merri Creek south of the Donnybrook Principal Town Centre, and at the Kalkallo retarding basin.
Protecting Victoria's Environment Biodiversity 2037 Author: State Government of Victoria Department of Environment, Land, Water and Planning Dated: 2017	*Vision: That Victoria's biodiversity is healthy, valued and actively cared for.* The Plan represents a contemporary approach to managing biodiversity and promotes collaboration and improved alignment across government, business, communities, Traditional Owners, Aboriginal Victorians and private land managers, to restore our biodiversity and strengthen our economy.	The current public open-space planning provision for growth areas and urban infill sites aims to locate local parks within safe walking distance (400 metres) of at least 95 per cent of all dwellings. Valuation of benefits from Victoria's parks: Health benefits: visits to parks are estimated to save Victoria between $80 million and $200 million per year from avoidance of disease, mortality and lost productivity. a) Tourism: $1.4 billion in spending per year associated with visits by tourists to Victoria's parks, generating $1 billion gross value added to the state economy and 14,000 jobs.

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Biodiversity Conservation Strategy for Melbourne's Growth Corridors Author: State Government of Victoria Dated: June 2013	The BCS is the overarching strategy for the protection of biodiversity in the growth corridors. It sets out all the conservation measures required for matters of national environmental significance and state significance to satisfy the commitments to the Commonwealth Government and to meet state requirements Note: Ministerial Approval – The approved class of actions excludes development in the Northern growth corridor within the boundary of Hernes Swamp.	The North Growth Corridor includes significant biodiversity values, with substantial areas of River Red Gums scattered across the landscape, and threatened communities of Natural Temperate Grasslands of the Victorian Volcanic Plain and Grassy Eucalypt Woodland of the Victorian Volcanic Plain. Much of these areas have been excluded from development. Retention of these areas of biodiversity value will be additional to the delivery of a 1,200 hectare woodland reserve outside the UGB and west of the E6 road reservation between Wollert and Woodstock. Due to highly erosive waterways in the upper catchment, development may need to be carefully staged in some areas to allow for construction of appropriate stormwater management infrastructure. • Melbourne Water's proposed regional retarding basin at Kalkallo has the potential to become an important regional open space facility for Melbourne's north.
Growling Grass Frog Masterplan for Melbourne's Growth Corridors Melbourne Strategic Assessment Author: State Government of Victoria Department of Environment, Land, Water and Planning Dated: March 2017	1. The purpose of the Growling Grass Frog Masterplan for Melbourne's Growth Corridors (Masterplan) is to provide guidance on implementing protection measures and investing in habitat creation and enhancement within Growling Grass Frog conservation areas. 2. The Masterplan consists of design standards, guidance on habitat construction, high level priority reaches for habitat creation and areas of strategic importance mapping for the protection of existing and potential breeding habitats.	The Merri Creek runs through Wallan and has been identified by the Masterplan as 'Conservation Area 34' in the northern growth corridor. Modelling determined Merri Creek to be the lowest risk waterway in terms of investment priority. 3. The Merri Creek is considered medium-high priority reach in terms of investment in Growling Grass Frog habitats. 4. The preferred layout of medium sized and larger wetlands are that they be no more than 200-300 metres apart.
Living with Wildlife Action Plan Author: State Government of Victoria, Department of Environment, Land, Water and Planning Dated: 2018	*Vision: Victorian communities value wildlife and work together to achieve the sustainable management and conservation of wildlife.* The Action Plan ensures that Victoria looks after wildlife species while appropriately managing their impacts. It provides decisive action on wildlife management for communities, government and industry.	The following principles guide the 'living with wildlife' approach to how Victorians think about and interact with wildlife. Human safety is paramount. Wildlife belongs in the wild. Wildlife and their habitat should be sustainably managed The welfare of all wildlife must be protected, and all actions taken to manage the impacts of wildlife should be justified, humane and effective. Non-lethal control methods should be used where practical and feasible, and where they do not result in reduced animal welfare outcomes.
Victoria's Climate Change Framework Author: State Government of Victoria, Department of Environment, Land, Water and Planning Dated: 2016	The Framework sets out the State Government's vision for Victoria in 2050 and their approach in achieving it, the steps the Government is taking in the period to 2020 to commence the transition, how the proposed Climate Change Act will drive action to 2050	The impacts of climate change on community and health in Victoria include: Our natural and cultural heritage affected by extreme weather events and sea level rise, including significant areas of coastal indigenous heritage that would be at risk with 1 metre of sea level rise. Impacts on community services, for example, restructured use of green space and access to local shops and services. Impacts on the environment include:

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	and the transition required across the economy and some of the challenges to be addressed to 2050.	Hotter temperatures and reduced rainfall alter or destroy habitat for plants and animals. Existing challenges facing catchment management are compounded, including changes to waterways and wetlands, water flows and pests and diseases. Species' viability threatened by more frequent extreme events, such as bushfire.
Victoria's Climate Change Adaption Plan 2017-2020 Author: State Government of Victoria, Department of Environment, Land, Water and Planning Dated: 2016	1. The Adaption Plan lays out a blueprint for action that will help Victoria meet the challenges and act on the opportunities of climate change. 2. It lays out the priorities for the next four years for the Victorian Government to better understand and manage current impacts, and to prepare for the long-term risks of climate change. It clarifies the role of the Government and helps Victorians understand how they can take action.	More broadly, Victoria's national parks and conservation reserves will continue to provide the foundation for protecting our biodiversity, covering over four million hectares of the state. • Major bushfires, storms and floods over the last 15 years demonstrate the growing challenges of climate change faced by our parks and reserves. As well as affecting species and habitats, climate change causes damage to park facilities including coastal piers, jetties, seawalls, roads, walking tracks and visitor facilities. The Government will continue to build the resilience of our existing parks and reserves, to protect biodiversity, community wellbeing and our natural heritage.
Water for Victoria: Water Plan Author: State Government of Victoria October 2016	*Vision: Water is fundamental to our communities. We will manage water to support a healthy environment, a prosperous economy and thriving communities, now and into the future.* 1. Water for Victoria is a strategic plan for management of Victoria's water resources, now and into the future. The document is the Government's adaption response to the impacts of climate change on our water resources and on the availability of water in the future.	Integrated water management supports 'green and blue infrastructure' such as parks, wetlands, streams and urban vegetation, and can deliver multiple benefits including flood mitigation, urban cooling, clean air, healthy streams and increased biodiversity, as well as contributing to recreation and amenity. Action 5.1 – Use diverse water sources to protect public spaces. Water corporations will work with local government and other public open space managers to identify water sources to maintain community assets, such as sporting facilities, public gardens and street trees during drought to enhance community health, wellbeing and liveability. The Department of Environment, Land, Water and Planning in partnership with the Environment Protection Authority and the Department of Health and Human Services will clarify and improve the regulatory arrangements for recycled water and stormwater.
Integrated Water Management Framework for Victoria Author: State Government of Victoria Dated: September 2017	1. The Integrated Water Management Framework for Victoria aims to help government, the water sector and the community work together to better plan, manage and deliver water in Victoria's towns and cities. 2. The Framework outlines how greater community value can be delivered by consistent and strategic collaboration within the water sector – including water corporations, local governments and catchment management authorities – and through their links with organisations involved in land use planning. 3. The IWM process described here is adaptive and can be applied to existing collaborative forums, building on their demonstrated strengths.	Water related outcomes that build resilient and liveable cities and towns identified by the IWMF within 'healthy and valued urban landscapes' include: Waterways accessible as valuable open space. Aboriginal cultural values associated with waterways are protected.

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Healthy Waterways Strategy 2018-2028 Author: State Government of Victoria Dated: 2018	*Vision: Healthy and valued waterways are integrated with the broader landscape and enhance life and liveability. Waterways connect diverse and thriving communities of plants and animals; provide amenity to urban and rural areas, and engage communities with their environment; and are managed sustainably to enhance environmental, economic, social and cultural values.* 1. The Healthy Waterways Strategy provides a single framework for addressing community expectations and the obligations for waterway management, as outlined in State, national and international legislation, policy and agreements. 2. For each of the five major catchments, the Strategy provides detailed, catchment-specific visions, goals, long-term targets and 10-year performance objectives.	Subject site falls within the Yarra Catchment. Population modelling shows that the Yarra catchment will increase from some 1.8 million people to over 2.4 million in the next 20 years, resulting in an additional 14,000 dwellings per year. Goals for Yarra Catchment: Communities and individuals connect with and appreciate the values of waterways. Waterway corridors are used appropriately for places of solitude, enjoyment of nature, and active and passive recreation that support mental and physical wellbeing. Cultural and heritage values are recognised, protected, maintained and enhanced. The environmental values and significant ecological processes of all of the Yarra Catchment waterways are protected and improved. Parks Victoria commits to: Managing parks and conservation reserves in which many waterways are located, including national, State, metropolitan and regional parks, marine national parks and sanctuaries, and conservation and natural features reserves. Creating, managing and maintaining visitor sites and managing a range of assets, including visitor facilities and access points, piers and jetties, sporting facilities and navigation aids, many of which are associated with waterways.
Victorian Aboriginal Affairs Framework 2018-2023 Author: State Government of Victoria Dated: 2018	*Vision: All Aboriginal Victorian people, families and communities are healthy, safe, resilient, thriving and living culturally rich lives.* 1. The VAAF is the Victorian Government's overarching framework for working with Aboriginal Victorians, organisations and the wider community to drive action and improve outcomes. 2. It sets out whole of government self-determination enablers and principles, and commits government to significant structural and systemic transformation.	• Objective 18.1 – Increase the recognition and enjoyment of Aboriginal land, water and cultural heritage rights.
Victorian Public Health and Wellbeing Plan 2019-2023 Author: State Government of Victoria Dated: August 2019	1. The Public Health and Wellbeing Plan sets out a comprehensive approach to deliver improved public health and wellbeing outcomes for all Victorians. 2. The Plan sets 10 priorities for public health and wellbeing, giving continuity to the priorities of the previous plan. It places increased attention on four focus areas where additional support will be	Strategic action: Increase easy access to parks, open spaces and public spaces with opportunities for physical activity where appropriate. Higher levels of physical activity support improved academic performance throughout early childhood and school and increased workplace productivity. Encouraging this activity to occur in natural environments (including parks) can increase people's connection with nature and catalyse actions to conserve and protect our natural environments. • A healthy start in life requires the promotion of optimal conditions for parenting and early development such as loving caregivers, safe communities, secure housing, access to

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	provided and identifies three strategic actions to direct effort across the focus areas.	parklands, environments free from toxins, and access to affordable, nutritious foods (*Centre for Community Child Health 2018*).
Metropolitan Melbourne Investigation: Final Report Authors: State Government of Victoria and the Victorian Environmental Assessment Council Dated: August 2011	The report provides a stocktake of public land across most of metropolitan Melbourne and an inventory of open space on both public land and land owned by councils.	Relevant findings: □Public open space is a key contributor to Melbourne's liveability. □The community perceives that Melbourne's increasing population will result in a loss of quantity and quality of public open space. □Melbourne's public open space is highly valued by the community. □Different sectors of the community use and value public open space in different ways. □Without the retention and creation of open space on both public land and local council land, public open space per capita will decrease over time for almost all municipalities in the investigation area. □Current planning to ensure that adequate open space is provided in growth municipalities needs to continue. Without this planning, there is a risk that areas of these municipalities will have similar or lower levels of open space than some established municipalities because of their rapidly growing populations. Additional protection for Crown land with remnant native vegetation be provided by: □Reserving unreserved Crown land for a purpose that includes the protection of its remnant native vegetation; and □ Amending the reservation purpose of reserved Crown land, where appropriate, to include the protection of its remnant native vegetation. □Public open space on public land and land owned by local councils be managed to maximise public access and to provide the widest range of user opportunities. □Government encourage multiple uses of public authority land where appropriate as one means of providing additional public open space in metropolitan Melbourne. Whittlesea has among the highest proportion of public open space per municipality with 34.2%. Regional Parks: □Minor resource use may be permitted in some regional parks. Recreational objectives are generally given priority over nature conservation objectives in regional parks. □Regional parks vary in their specific values and characteristics, but typically they provide an environment where residents and visitors can enjoy a broader range of activities such as dog walking than are usually allowed in national, state and wilderness parks. Recommendations for regional parks: □Provide for informal recreation for large numbers of people associated with enjoyment of natural or semi-natural surroundings □Conserve and protect natural landscapes and scenic values □Conserve and protect biodiversity to the extent that is consistent with above, and □Protect significant cultural and historic sites, landscapes and places, including Aboriginal cultural sites and places; □Generally provide for the following activities, according to the specific characteristics of each park:

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		i) bushwalking, nature observation, heritage appreciation, picnicking, recreational fishing, cycling ii) camping iii) dog walking iv) car touring and four wheel driving on formed roads and tracks v) mountain bike and trailbike riding on formed roads and tracks vi) horse riding on formed roads and tracks and overnight camping with horses vii) metal detecting, prospecting, and viii) research, subject to permit; Generally exclude the following activities: harvesting of forest products grazing by domestic stock hunting and use of firearms, and licensed apiculture Where appropriate, be restored (subject to clearly defined, transparent and scientifically supported ecological objectives) to re-establish ecosystems or to return them to a state more closely resembling their natural condition. Include unused road reserves adjoining parks, where appropriate; Have a management plan prepared for each park in partnership with key user groups, local authorities and the community; and 3. Be permanently reserved under the Crown Land (Reserves) Act 1978 for the purpose of regional park if not already appropriately reserved.
Analysis of Opportunities & Priorities for Open Space Network Planning for Melbourne's Growth Area Author: Tract Consultants Dated: April 2011	1. The report is a technical background report for the Growth Area Authority on the provision for regional open space for each of the expanded growth areas. 2. The resultant open space system is to form a key input in the Growth Corridor Plans for Melbourne's new growth areas.	Site located within the 'North' Precinct (Whittlesea, Hume and Mitchell). Wallan lies to the north of the growth area. This study recommends that a green space be provided between the north growth area and Wallan to create a distinct break between the two urban areas. Provision of active open space and sports facilities within the urban break would serve both Wallan and the north. This will facilitate connectivity between the communities, whilst allowing for distinct development of the two. Bald Hill has been recommended to be retained as open space and hilltop park also providing views and vistas of the region. A number of opportunities for the siting of major active open space and sporting facilities have been identified as suitable to serve the area. In particular, the site adjacent to Hayes Hill off Donnybrook Road is considered an ideal location situated central within the urban precinct. Recommendations typically include buffer areas between differing land use zones, rural fringe areas protected to provide scenic views, ridge lines which provide a backdrop to urban land uses, views to and from hills tops and key gateway experiences, where major access routes are directly tied to landscape experience. Major links in the north regional trail network include: A new recreation trail between Plenty River and Merri Creek utilising the Darebin Creek Trail through the proposed Grassy Woodlands Reserve.

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		a) The extension and completion of the Merri Creek trail, particularly from the northern extents of the growth area to the Craigieburn Grasslands and other existing nodes (south).
Northern Metropolitan Partnership: Report Back Author: State Government of Victoria Dated: 2019	1. The Partnerships provide a way for communities to engage directly with state and local government, and advise the top priorities and opportunities for jobs, services and infrastructure. 2. This Report Back provides a snapshot of the Northern Metropolitan Partnership's advice for 2018, its engagement, and our response.	The Yarra River catchment, which provides 70 per cent of Melbourne's drinking water, features significant parkland. The green wedges around the semi-rural areas of Whittlesea and Nillumbik are key environmental assets, particularly given significant and projected urban expansion. The Government will invest $10 million in new cycling and walking trails across northern municipalities and deliver the new Upper Merri Parklands from Broadmeadows to Wallan. This is part of the Government's $154 million commitment to a new Suburban Parks Program to deliver 6,500 hectares of parkland, including new walking and bike trails across Melbourne. • The Government will undertake a feasibility study for a new Wallan Regional Park and expand the Quarry Hills Park to 1,088 hectares near South Morang. (Timeframe is 1-4 years and the lead department is the Department of Environment, Land, Water and Planning).
Regional Parks Standing Advisory Committee (Advisory Committee Report) Author: State Government of Victoria Dated: 2 November 2018	The Standing Committee's purpose is to provide advice to the Minister for Planning on the suitability of proposed changes to planning provisions to facilitate the delivery of open space proposed by the Victorian Government and/or other project partners.	Community benefits of a regional park is: The creation of additional open space with Melbourne's growing communities. The nature of a regional park allows for greater diversity of open space. Each of the proposed sites deliver a connected network of quality and diverse open space. The regional open space will be used for a variety of informal, active, formal and passive recreation forms, including trails and social/family recreation nodes in a semi-natural environment. The development of regional open space in both locations is compatible with the protection of the identified biodiversity qualities of the land and its surrounding area. a) "The benefits that will be delivered in the long term from the reservation and creation of new regional parkland significantly outweigh any negative consequences". Overarching function of regional parks: – To provide for informal recreation for large numbers of people associated with the enjoyment of natural or semi-natural surroundings or open space. – • The site should be of sufficient size to accommodate the range of uses typically associated with a regional park, including adequate unencumbered land to accommodate park infrastructure and facilities
Draft Metropolitan Open Space Strategy Authors: Department of Environment, Land, Water and Planning Dated: September 2019	*Not yet available to view.*	

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Melbourne Water Drainage Scheme	Schemes comprise of a catchment-based drainage strategy outlining the functional designs of the relevant infrastructure required to service urban growth. There's a pricing arrangement detailing how Melbourne Water will recoup the infrastructure costs through financial contributions paid by developers.	Relevant drainage schemes: 6535 Wallan Street Drain Strategy 6534 Mittagong Creek DS 6531 Taylors Creek DS 6530 Wallan Airfield Strategy 6523 Hadfield Road DS 6550 Kalkallo Creek DS • 6513 Beveridge East DS
Linking People and Spaces: A strategy for Melbourne's open space network Author: Parks Victoria Dated: 2002	*Vision: A linked network of open space for all to enjoy as part of everyday life, preserved and enhances into the future.* Previous strategies have been a part of defining and developing the open space network. Through Linking People and Spaces the network will continue to be built and improved, so that open space becomes an integral part of our everyday life.	Although Parks Victoria is a key provider of regional parks, the management of metropolitan open space is widely spread and under the direct control of no single body. Large regional parks and significant conservation areas should be protected under legislation, ideally by being permanently reserved under the Crown Lands (Reserves) Act 1978. • In producing Linking People and Spaces the Government and community are committed to a twenty-year plan, whereby six new regional parks are planned for the outer urban areas of Werribee, Melton, Hume/Whittlesea and Cranbourne.
Beveridge North West Precinct Structure Plan Author: VPA Dated: August 2019	The PSP is a long-term plan for urban development. It describes how the land is expected to be developed, and how and where services are planned to support the development of new communities.	*No specific implications for Wallan Regional Park.*
Donnybrook-Woodstock Precinct Structure Plan Author: VPA Dated: October 2017	The PSP is a long-term plan for urban development. It describes how the land is expected to be developed, and how and where services are planned to support the development of new communities.	*No specific implications for Wallan Regional Park.*
Lockerbie Precinct Structure Plan Author: VPA Dated: May 2012	This structure plan guides use and development where a planning permit is required under the Urban Growth Zone or another zone where that zone references this structure plan.	• A regional park will be provided where the east-west Main Street and Merri Creek meet to provide a green 'nodal' point. This park will act as the main gateway between Merri Creek and the town centre core. The regional park will provide opportunities for picnics, outdoor group recreation activities and a place for large outdoor community celebrations and festivals.
Lockerbie North Precinct Structure Plan Author: VPA Dated: March 2012	This structure plan guides use and development where a planning permit is required under the Urban Growth Zone or another zone where that zone references this structure plan.	*No specific implications for Wallan Regional Park*.

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Wallan South PSP: Pitching Sessions Authors: Victorian Planning Authority (VPA) and Mesh Dated: 21-22 November 2019 N.B. Consultation report is due to be released soon.	The purpose of the pitching session was to understand core values early in the process of reviewing the PSP planning process, foster a collaborative working group of stakeholders and develop a vision and objectives for the site.	Identified issues: – Wallan Regional Park extent and area. Feasibility Study for Wallan Regional Park underway by DELWP (land) as part of the State Government election commitment to create new parks in Melbourne's North. – Alignment of the Wallan Regional Park project timeframes and the PSP process. A consultant is being appointed to deliver the feasibility study and will report back to DELWP Land, expected in mid 2020. – Potential protection of Herne Swamp, Taylors Creek and sloped areas in Wallan Regional Park. Identified opportunities: – Incorporation/connecting Potential Wallan Regional Park into the PSP and leveraging the amenity and regional connections. – PSP to align with the objectives of the Wallan Regional Park. – Involving the Wurundjeri, traditional owners of the land, in the planning and design of the precinct, particularly regional parks and connections. – A central green spine that connects the southern and northern ends of the site.
Media Release - 'Planning a Great New Local Park for Wallan' Author: Dan Andrews Dated: 17 July 2019	The media release announces that the Andrews Labor Government would do a feasibility study for a brand new park in Wallan, which would consider the proposed Greater Wallan-Merri State Park as part of a community consultation process.	The regional park will be the size of more than 500 MCGs. Labor will invest $150 million to create more than 6,500 hectares of parkland and new walking and bike trails, giving families great places to spend a day off. • "Many locals in the growing community of Wallan have told me they need extra parklands. Only Labor will deliver for local families."
Mitchell Shire Council Policy Basis		
Mitchell 2020 Community Plan Author: Mitchell Shire Council Dated: 2020	• The Mitchell 2020 – Community Plan describes the Council and community's vision and priorities for the next 10 years and establishes a shared basis for joint planning, service delivery and advocacy. • The Community Plan reflects ideas for the community and is based on community consultation undertaken in 2011.	Community priorities: – Ensure all public open space and indoor activity areas, including parks are accessible to people with limited mobility, are equipped with public amenities that meet the needs of the community and are maintained in accordance with best practice. – Enhance public open space areas through continuing installation of drought tolerant grass, synthetic grass, landscaping, sports ovals and provision of public art in parks. – Support the integration of significant natural resources into the regional open space systems of the area. – Ensure that facilities and structures in open spaces are consistent with our diverse community needs. – Advocate for State and Federal investment in habitat and open space corridors in Mitchell.
Council Plan 2017-2021 Author: Mitchell Shire Council Dated: June 2017 (2019 Revision)	*Vision: Together with the community, creating a sustainable future.*	Key strategies: – Establish and maintain high quality roads, footpaths, parks, recreation facilities, streetscapes, bike paths and public open spaces.

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	The Council Plan is a commitment to the community for the next four years and into the future. It is based on community ideas, input and vision.	– Plan for growth and change through best practice design of services, infrastructure, open space and recreation facilities.
Environment Strategy 2014-2024 Author: Mitchell Shire Council Dated: July 2014	*Vision: Our community supports a healthy and resilient natural environment.* This Strategy has been prepared to guide Council in its role as a custodian of Mitchell Shire's natural environment. It shows how Council can act, inform and guide over the next decade to conserve Mitchell's natural environment for the present and future.	Desired outcomes: – Well planned and sustainable urban growth and development, incorporating open space, access to services, retail/trade and transport. – Rural living qualities including open space, landscape amenity and easy access to the natural environment are maintained.
Parks and Environment Service Standards for Mitchell Shire Council 2013 Author: Mitchell Shire Council Dated: 2013	These Standards are for the provision of routine and specialist park, horticultural and other trade services that effectively provide for the maintenance and minor improvement of Mitchell Shire's Open Space assets, Council Centres and Council Car Parks.	At the date of publication, Mitchel Shire had 52 parks amassing approximately 180 hectares of land and 8 bushland parks amassing approximately 250 hectares of land. • The Standards provide details about the provision of new parks and the maintenance required upon opening.
Infrastructure Asset Management Plan Part 'E' – Parks and Open Spaces Author: Mitchell Shire Council Dated: December 2012	This Asset Management Plan has been developed to document Council's asset management processes, to guide the planning, acquisition, operation, maintenance, renewal and disposal of parks and open space assets with an objective to maximise service delivery potential and manage related risks and costs over entire asset lives.	With an ever-growing community (currently around 2% pa), the demand for increased public open space and improved facilities on that open space will continue to be a high priority for Council. • An initial audit and condition assessment of most of Mitchell Shire's parks and open spaces assets has recently been undertaken. In general the average condition of these assets was rated "very good" or higher, however in each asset category there were assets that were reaching the end of the useful life.
Wallan Structure Plan Author: Mitchell Shire Council Dated: March 2015	The Wallan Structure Plan sets a clear framework for the future growth of Wallan from a town of around 10,000 people to approximately 50,000. It is guided by a vision that aims to support sustainable growth of the town while retaining aspects of Wallan's 'country town' character, which is highly valued by the community.	Direction C7 – Make Hadfield Park an iconic open space. Direction B5 – Enhance Wallan's open space and environmental networks. Investigate the possibility of incorporating Hernes Swamp as part of a regional park. • Ensure future parks are connected with trails and integrated with community hubs and retail centres.
Open Space Strategy 2013-2023 Author: Mitchell Shire Council Dated: October 2013	• The Mitchell Open Space Strategy provides a planning and development framework for the provision of open space and off-road trails in the Shire to 2023.	Key issue: Protection of regional open spaces and ensuring open space provision is suitable (e.g. topography, flora, fauna, cultural heritage, hydrology, landscape character). A major park in the south: One concern in the growth area development process is that few open spaces to serve district or regional catchments are being provided.

Strategy, Author, Date	Purpose / Vision	Implications for Wallan Regional Park
	• The Strategy seeks to achieve a balance in the equitable distribution of a diverse range of open space and off-road trails for people that live, work and visit the Shire.	It has also been suggested that Mitchell Shire requires more 'destination' parks for residents and to attract visitors, particularly in the southern areas. The Melbourne North Growth Corridor Plan recommended retention of an interurban break between the northern edge of the North Growth Corridor and Wallan. Other investigations have recommended the establishment of a regional park in this vicinity to protect areas of environmental significance. A regional park in the southern growth area could potentially encompass one or more of the following significant sites: – The four hills volcanic cones, (Bald Hill, Mt Fraser, Spring Hill and Green Hill) – Hernes Swamp – The headwaters of Merri Creek – The buffer area around the Wallan Sewage Treatment facility – An area for flood mitigation as part of the upper Merri Catchment. Ensure district and regional open spaces are planned before, or in conjunction with, precinct or other structure plans and any other development plans. Advocate for the provision of open space to serve a regional and district catchment, especially that recommended in the southern growth area. Ensure district or regional parks are provided to serve all new residential development areas in the Shire. • Advocate for a Regional Park in the Wallan / Beveridge growth area.
Mitchell Open Space Strategy 2016/17 Action Plan Author: Mitchell Shire Council Dated: 2013	The Action Plan is a subset of the *Open Space Strategy 2013-2023*.	Actions: – Deliver regional wet/dry place space at Hadfield Park, Wallan, based on universal design principles. – Identify opportunities for the provision of new active open space areas in Wallan and Beveridge (through Structure Plan and Precinct Structure Plan processes) – Advocate for a regional active open space serving the needs of future residents in the south of the Shire. – Continue environmental enhancement of bushland reserves.
Whittlesea City Council Policy Basis		
Shaping Our Future: Whittlesea 2030 Strategic Community Plan Author: City of Whittlesea Dated: 2017	• The Community Plan comprises the long-term aspirations of the Whittlesea community. To help realize the aspirations of the community, Council develops a four-year Council Plan, which articulates the actions Council will take to work towards the type of City the community wants. • This plan articulates the strategic objectives for each future direction, along with Council's role and an indication of who else can be involved to help them progress towards achieving the community's long-term vision.	Strategic objectives: We have open spaces that are welcoming and safe for public gathering. We can access recreation facilities and open spaces that reflect and respond to local need. Community wellbeing indicators: – Use of open space – measured by % of households that visit one or more types of local open spaces at least monthly.

Strategy, Author, Date	Purpose / Vision	Implications for Wallan Regional Park
Council Plan 2017-21: Shaping Our Future Author: City of Whittlesea Dated: 2017	*Vision: Creating vibrant self-sustaining communities together.* The Plan outlines what Council aims to achieve for the City of Whittlesea from 2017 to 2021.	*No specific implications for Wallan Regional Park.*
Whittlesea 2040: A Place for All Author: City of Whittlesea Dated: 2017	*Vision: In 2040, the City of Whittlesea will be a place for all.* • Whittlesea 2040: A place for all, builds on the achievements of Shaping Our Future Whittlesea 2030 and provides a new long-term vision for the City of Whittlesea. • The four goals each with key directions are as follows: connected community, liveable neighbourhoods, strong local economy and sustainable environment.	*No specific implications for Wallan Regional Park.*
Environmental Sustainability Strategy 2012-2022 Author: City of Whittlesea Dated: 2012	*Vision: To live sustainably in our urban and rural areas. To ensure our carbon footprint, water, waste, energy use, flora and fauna are managed sustainably so future generations can enjoy the environment in which we live. Immigration, strong housing demand, economic growth, climate change, alternative energies and transport all provide challenges for our environment, future planning and how we live. Our daily routines have changed; we plan for tomorrow and use innovation to become more sustainable. Everyone does their bit to help.*	Strategies and Approaches: – Continue to investigate and facilitate the establishment of new opportunities for additional conservation parkland reserves which secure areas of high conservation significance outside the urban growth boundary. – Advocate, facilitate and support the establishment and long-term management of key regional conservation parklands within the municipality which maximise biodiversity and community outcomes. Particular examples include the Merri Creek Regional Park and the Quarry Hill Parklands. – Review the municipality's Open Space Strategy 1997 to better acknowledge the significant role it now plays in the management of local biodiversity.
Biodiversity Strategy 2019-2029 Author: City of Whittlesea Dated: 2019	*Goal: To protect and improve local biodiversity.* The City of Whittlesea Biodiversity Strategy (2019-2029) provides directions to improve the management and protection of biodiversity across the Municipality into the future.	*No specific implications for Wallan Regional Park.*

Strategy, Author, Date	Purpose / Vision	Implications for Wallan Regional Park
Other Guiding Documents		
Delivering the Goods: Creating Victorian Jobs **Victorian Freight Plan** Author: State Government of Victoria Dated: 2018	• Delivering the Goods sets out short, medium and long-term priorities to support Victoria's freight and logistics system through a period of unprecedented growth in freight volumes and rapid change in the broader environment, while allowing the state to embrace new opportunities in the future. • It will provide a central point for industry, local government and other stakeholders on freight and logistics matters.	*No specific implications for Wallan Regional Park.*
Living Melbourne: Our Metropolitan Urban Forest Authors: Resilient Melbourne and The Nature Conservancy Dated: 2019	*Vision: Our thriving communities are resilient, connected through nature. Our urban forest protects human health, nurtures abundant nature, and strengthens natural infrastructure.* In pursuit of the vision and the three goals that support this vision – healthy people, abundant nature and natural infrastructure – this strategy proposes a series of actions to help our rapidly changing city better protect, connect and enhance our urban forest.	• Action 1: Protect and restore habitats, and increase ecological connectivity of all types between streetscapes, conservation reserves, riparian and coastal areas, open spaces and other green infrastructure across metropolitan Melbourne.
Aboriginal Waterways Assessment Program Author: Australian Government Dated: May 2017	• The Aboriginal Waterways Assessment (AWA) project tested and adapted a Ma-ori-originated water assessment tool to suit Traditional Owners' needs and preferences in the Murray–Darling Basin. • The purpose of the project was to develop a tool that consistently measures and prioritises river and wetland health so that Traditional Owners can more effectively participate in water planning and management in the Basin.	*No specific implications for Wallan Regional Park.*
Upper Merri Creek Integrated Water Management Plan (Pending - Yarra Valley Water, Wurundjeri and other partners)	*Not yet available to view.*	
Discussion Paper – Herne Swamp	This paper describes a new vision for Herne Swamp that works with the natural characteristics of the site, to	Herne Swamp is a little known, hidden gem, awaiting the opportunity to be brought 'back to life' as a community asset, within the Wallan Wallan Regional Park concept.

Strategy, Author, Date	Purpose / Vision	Implications for Wallan Regional Park
Author: Nature Glenelg Trust Dated March 2019	create a natural centrepiece for the proposed Wallan Wallan Regional Park that will add both value and resilience to adjacent future development.	The area is within the Northern Growth Corridor and is earmarked for several developments that appear to be moving ahead in an ad hoc fashion; without due regard or full consideration of catchment characteristics and the natural flood prone character of the Wallan Wallan Wetlands, nor the environmental, aesthetic and recreational values, or restoration potential of Herne Swamp. Herne Swamp retains nationally significant ecological values. Benefits of the Herne Swamp project include: Flood buffering and erosion prevention Amenity, recreational and educational values Groundwater protection and recharge Urban design and local climate considerations Complementary future management of the Yarra Valley Water site Cultural values The Growling Grass Frog Masterplan for Melbourne's Growth Corridors (DELWP 2017), which identifies the headwaters of Merri Creek, within Herne Swamp, as an important habitat buffer zone. In fact, a restored Herne Swamp is likely to provide extensive Growling Grass Frog habitat, including breeding habitat in deeper pools. • The restored major wetland feature (Herne Swamp), supporting a diverse assemblage of flora and fauna, would form the spectacular ecological, aesthetic, recreational and cultural centrepiece of the future Wallan Wallan Regional Park, and a community and environmental asset for all Victorians.
Targeted Cultural Values Inspection of PSP 1059 Authors: Wurundjeri Woi-wurrung Cultural Heritage Aboriginal Corporation Dated: October 2014 (Revised 2019)	The document presents the results of a targeted cultural values site inspection at PSP 1059 Beveridge North West, prepared for the Metropolitan Planning Authority (now the Victorian Planning Authority) by the Wurundjeri Woi-wurrung Cultural Heritage Aboriginal Corporation.	• Anywhere within 200m of Kalkallo Creek is an area of cultural heritage sensitivity as defined by The Aboriginal Heritage Regulations (2018: 14, Reg. 26), and therefore, further archaeological investigations would be required prior to the construction of any frog ponds, drainage basins, passive open space and bridge structures.
Greater Wallan-Merri State/Regional Park: A living landscape for a liveable Melbourne Authors: Friends of Merri Creek, Wallan Environment Group and Merri Creek Management Committee Dated: March 2016	*Vision: A living landscape for a liveable Melbourne.* The document puts forward an argument for the need to plan now for a major park at a scale that conserves nature in the metropolis and creates a green spine linking Wallan to inner Melbourne	Benefits of the Greater Wallan-Merri State Park: A major asset for Melbourne's northern suburbs that protects special natural areas and landscape features. An open space network for residents, workers and visitors to northern Melbourne that encourages healthy outdoor recreation. A long-distance trail network that connects with other trails in metropolitan Melbourne and regional Victoria and acts as a focal entrance point to Greater Melbourne. Protection of Aboriginal cultural heritage. Wildlife habitat and movement corridor that will sustain migratory and resident native species. Flood buffering and water quality treatment to reduce the impacts of urban growth on the Merri Creek downstream.

Strategy, Author, Date	Purpose / Vision	Implications for Wallan Regional Park
		Enhanced liveability and distinctive identity for planned suburbs in the Northern Growth Corridor. Large expanses of vegetation and wetlands that will help mitigate the high temperatures expected with climate change. Opportunities to protect high-quality native vegetation as offsets for clearing. At the northern end of the park, a major destination node on part of the former Hernes Swamp would re-establish a wetland of national significance supporting thousands of ducks, geese, swans and other wildlife. It would be a magnet for outdoor recreation such as picnicking and bikeriding, as well as environmental education and eco-tourism. The roles of the Swamp in buffering floods and improving water quality would be enhanced to meet growing needs due to urbanisation and climate change. The Park on the southern edge of Wallan would embrace the inter-urban break between Wallan and Beveridge, flood-prone land unsuitable for development, part of the soon to be redundant Wallan Sewage Treatment Plant and an endangered wetland vegetation community to the southeast. A Regional Trail Hub As a regional trail hub, the Wallan part of the Park would connect with trails leading to Melbourne, along the five creeks that drain into the Swamp, and into the Dividing Range and regional Victoria via the planned Heathcote-Wallan rail trail. • To the south The Greater Wallan – Merri State Park would connect to the proposed Marran Baba Parklands south of Craigieburn East Road, and to the Merri Creek bushland and trail corridor through the northern suburbs.

Appendix B. Community & Stakeholder Feedback Review

Source	Summary

Mitchell Shire Council, Parks Vic, Melbourne Water, DELWP
'Roundtable Discussion'
(14 August 2019)
	• Assess the wider context of potential parklands north of the UGB, e.g. the Beveridge Foothills
	• Differentiate which open spaces serve a regional function compared to a local function when considering existing and draft future PSPs; apply a hierarchy of open space
	• Address water considerations that impact on open space feasibility, e.g. flooding, flows, water supply, and waterway health
	• Investigate and advise on the inclusion of Hernes Swamp
	• Consider the relationship to creeks, including the Wallan Creek, Mittagong Creek, Straithard Creek, and Taylors Creek
	• Investigate traditional owner values/ interests, and known Aboriginal sites
	• Assess risk to consider known and potentially contaminated land
	• Identify significant cost impacts, for example:
	  ○ Will most land be delivered at no cost via the development process?
	  ○ Will land contamination costs be high in some locations?
	  ○ Will some open space uses be higher cost?
	  ○ Will we need land bridges and links across major roads etc?
	• Investigate potential for connection over Hume Freeway, train line, and proposed OMR, including recommendations for land to be acquired
	• Assess risk of Conundrum Quarry to nearby parklands
	• Determine the primary purpose of different open space areas and their impact on biodiversity

Friends of Merri Creek Inc 'Beveridge North West Precinct Structure Plan – Comments by Friends of Merri Creek Inc.' (October 2019)	There is very little remaining native vegetation in the precinct. The Requirements and Guidelines for Biodiversity in the PSP are very weak. There should be stronger guidance towards biodiversity restoration and connectivity, primarily through indigenous revegetation and provision for fauna movement along waterway corridors, on steep slopes and in the 'Landscape values' land. Guideline G42 should be reworded to encourage revegetation, habitat restoration and removal/avoidance of obstructions to fauna movement. The paper advocates for a network of habitat links through the Merri catchment, to provide connections for fauna to move between larger habitat nodes. The Beveridge North West PSP has a unique and important opportunity to implement the VPP biodiversity provisions, by providing a link between important areas of biodiversity to the west and east of the precinct and habitat corridors along Kalkallo Creek and the constructed waterways. The Kalkallo Creek corridor should provide an important north-south link, but PSP only refers to drainage and recreation functions. The waterway corridor should be at least 200m wide to adequately function in its drainage, recreation and habitat corridor roles. An east-west link would connect the larger nodes, which are the areas of native vegetation to the northwest of the precinct (Old Sydney Road and further west), and Hernes Swamp and the Merri Creek corridor to the east. The land designated as 'Landscape Values' provides the obvious opportunity for this to occur. Continuity is essential if habitat links are to function as movement corridors. The group strongly supports the inclusion of the east-west corridor Landscape values land as part of the Regional Park, linking Kalkallo and Merri Creeks.

Source	Summary
	The potential of the former swamp for restoration as a wetland and/or utilisation as a retarding basin should be considered as part of a proposed review of the drainage strategy for this area.
Merri Creek Management Committee 'Greater Wallan-Merri State/Regional Park: A living landscape for a liveable Melbourne' (March 2016)	There is a need to plan now for a major park at a scale that conserves nature in the metropolis and creates a green spine linking Wallan to inner Melbourne. Benefits of the Greater Wallan-Merri State Park: – A major asset for Melbourne's northern suburbs that protects special natural areas and landscape features. – An open space network for residents, workers and visitors to northern Melbourne that encourages healthy outdoor recreation. – A long-distance trail network that connects with other trails in metropolitan Melbourne and regional Victoria and acts as a focal entrance point to Greater Melbourne. Protection of Aboriginal cultural heritage. Wildlife habitat and movement corridor that will sustain migratory and resident native species. – Flood buffering and water quality treatment to reduce the impacts of urban growth on the Merri Creek downstream. Enhanced liveability and distinctive identity for planned suburbs in the Northern Growth Corridor. – Large expanses of vegetation and wetlands that will help mitigate the high temperatures expected with climate change. Opportunities to protect high-quality native vegetation as offsets for clearing. Herne Swamp would be a magnet for outdoor recreation, environmental education and eco-tourism. • Merri State Park would connect to the proposed Marran Baba Parklands south of Craigieburn East Road, and to the Merri Creek bushland and trail corridor through the northern suburbs.
Nature Glenelg Trust 'Restoration Vision for the Wallan Wallan Wetlands, including Herne Swamp, as the centrepiece of the Wallan Wallan Regional Park' Discussion Paper (March 2019)	Herne Swamp is a prime candidate for a restoration project, due to its: reliable catchment, majority of its former extent is currently undeveloped, viable dormant seedbank of native wetland plants, broad community support and consistency with strategic planning documents. The Swamp is located in the Yarra Valley Water treatment plant irrigation paddocks that could be decommisioned and made available for a larger restoration project. The proposed developments do not fully consider the catchment characteristics, environmental, aesthetic or recreational values, or the restoration potential of the Swamp. Herne Swamp, if restored, would create a natural centrepiece for the proposed Wallan Wallan Regional Park and would add value and resilience to adjacent future development. Existing ecological values – state significant fauna species recorded at the site include the Black Falcon, Brown Toadlet, Eastern Great Egret, Hardhead, Musk Duck, Royal Spoonbill and Southern Toadlet. The Swamp alsp retains nationally significant ecological values protected under the EPBC Act 1999. Allowing Herne Swamp to function naturally again will have a wide range of benefits, including: Flood buffering and erosion prevention Amenity, recreational and educational values Groundwater protection and recharge Urban design and local climate considerations Complementary future management of the Yarra Valley Water site Cultural values Challenges that need to be overcome, include: Already approved urban residential development in the area A clay quarry in the heart of the wetland has been granted development approval Ensuring the remaining areas of the wetland remain as open space and available for wetland restoration and floor buffering

Source	Summary
	Obtaining agreement from all the relevant parties to work towards a unified strategic vision for the Swamp The restoration vision is consistent with the following strategies: Yarra Healthy Waterways Strategy North Growth Corridor Plan (Victorian Planning Authority) Yarra Strategic Directions Statement – Action 17 Wallan Restorative Project (Yarra Valley Water, Melbourne Water and Mitchell Shire Council) Merri Creek and Environs Strategy (Merri Creek Management Committee) Mitchell Shire Council Plan 2017-2021 The Growling Grass Frog Masterplan for Melbourne's Growth Corridors (DELWP)
Nature Glenelg Trust 'Summary Points – Wallara Waters' (November 2019)	• Key issues overlooked by Wallara Waters: – Taylors Creek is an agricultural drain in a wetland. – These drains have limited capacity and the wetland regularly inundates. – To ignore the presence of Herne Swamp and seek to further deepen or enlarge the Taylors Creek Drain is contrary to all current strategic waterway policy in Victoria, and as urbanisation around Wallan continues would cause major capacity and water quality problems for Merri Creek downstream. – Herne Swamp itself was overlooked, despite flood modelling. – Merri Creek proper (downstream) has been overlooked. – Beyond Wallara Waters Phase 2, parts of Herne Swamp have been inappropriately designated for ongoing future development, without apparent regard for its flood-prone character, role in buffering the Merri Creek proper downstream and current/future environmental values (as articulated in a wide range of government strategies and plans). • Recommendation to Mitchell Shire Council: – Council should take a more proactive stance and make resources available to facilitate a smarter design philosophy. – Nature Glenelg Trust is willing to take an active role, upon Council's request. • Potential outcomes: – Rather than bypassing the wetland by channelling low and moderate flows down the agricultural drains (the original Wallara Waters proposal), Herne Swamp would be strategically restored to capture all flows.
Wurundjeri Woi-wurrung Cultural Heritage Aboriginal Corporation 'Targeted Cultural Values Inspection of PSP 1059' (October 2014, revised 2019)	• Anywhere within 200m of Kalkallo Creek is an area of cultural heritage sensitivity as defined by The Aboriginal Heritage Regulations (2018: 14, Reg. 26), and therefore, further archaeological investigations would be required prior to the construction of any frog ponds, drainage basins, passive open space and bridge structures. • Incorporation of cultural values into the precinct can be developed through a collaborative approach between the Wurundjeri Corporation and land managers in a number of ways; for example, by incorporating Wurundjeri land management practices into any retained natural open spaces, or by including interpretive signage and Woi wurrung naming of places and/or plant and animal species along Kalkallo Creek.

APPENDIX C PLANNING, COST FACTORS, MANAGEMENT AND COMMUNITY PROFILE REVIEW

ETHOS URBAN

Memo

To:	Land Design Partnership
From:	Ethos Urban

Date:	7 July 2021
Re:	Wallan Regional Park Feasibility Study – Part B

Project Name:	Wallan Regional Park Feasibility Study
Project No:	3200039

Introduction

The Wallan Regional Park Feasibility Study (the Feasibility Study) was commissioned in 2019 by the Department of Environment, Land, Water, and Planning (DELWP) in fulfillment of a 2018 election commitment from the Andrews Labor Government. Mitchell Shire, where the future park would primarily likely be located, also supports the establishment of a major park in the Wallan-Beveridge area in order to balance fast-paced urban development and associated population growth with open space needs, as well as to protect areas of environmental significance.

The Feasibility Study area (the study area) is depicted in Figure 1. It is anticipated to be as large as 1,000 hectares, located primarily in Mitchell Shire in the Wallan-Beveridge area. Note that the future Wallan Regional Park (WRP) will not necessarily comprise the entirety of the identified study area, and may be spread across several parcels of open space connected by linear corridors.

Since the announcement of the Feasibility Study, many Precinct Structure Plans in the area have progressed, and the Victorian State Government have released the Open Space Strategy for Metropolitan Melbourne 2021. The purpose of this memo is to provide planning advice for input to the Feasibility Study, prepared by Land Design Partnership, regarding the following:

- Land for the WRP, including:
    - Identification of land and future planning controls,
    - Existing and proposed quarry sites,
    - Key land cost factors,
    - Mechanisms and timing for acquisition, and
    - Management of future park lands.
- Community use of the WRP, including:
    - Potential catchment area,
    - Purpose of a Metropolitan Open Space, and
    - Existing and anticipated community needs.

Key findings are provided to identify opportunities for future allocation and use of land for the purpose of the WRP.

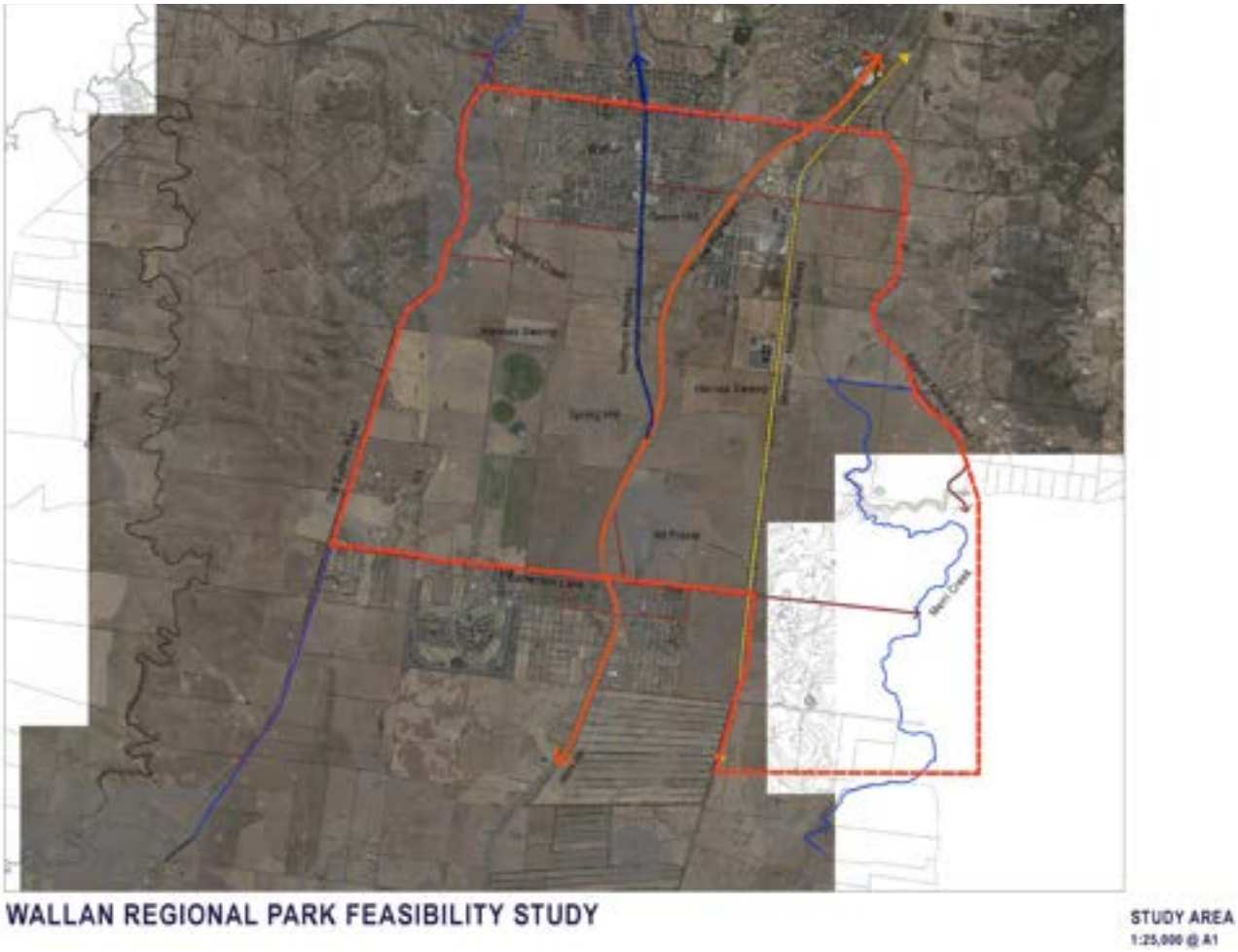


Figure 1: Feasibility Study area

Source: Land Design Partnership

ETHOS URBAN

Land for the WRP

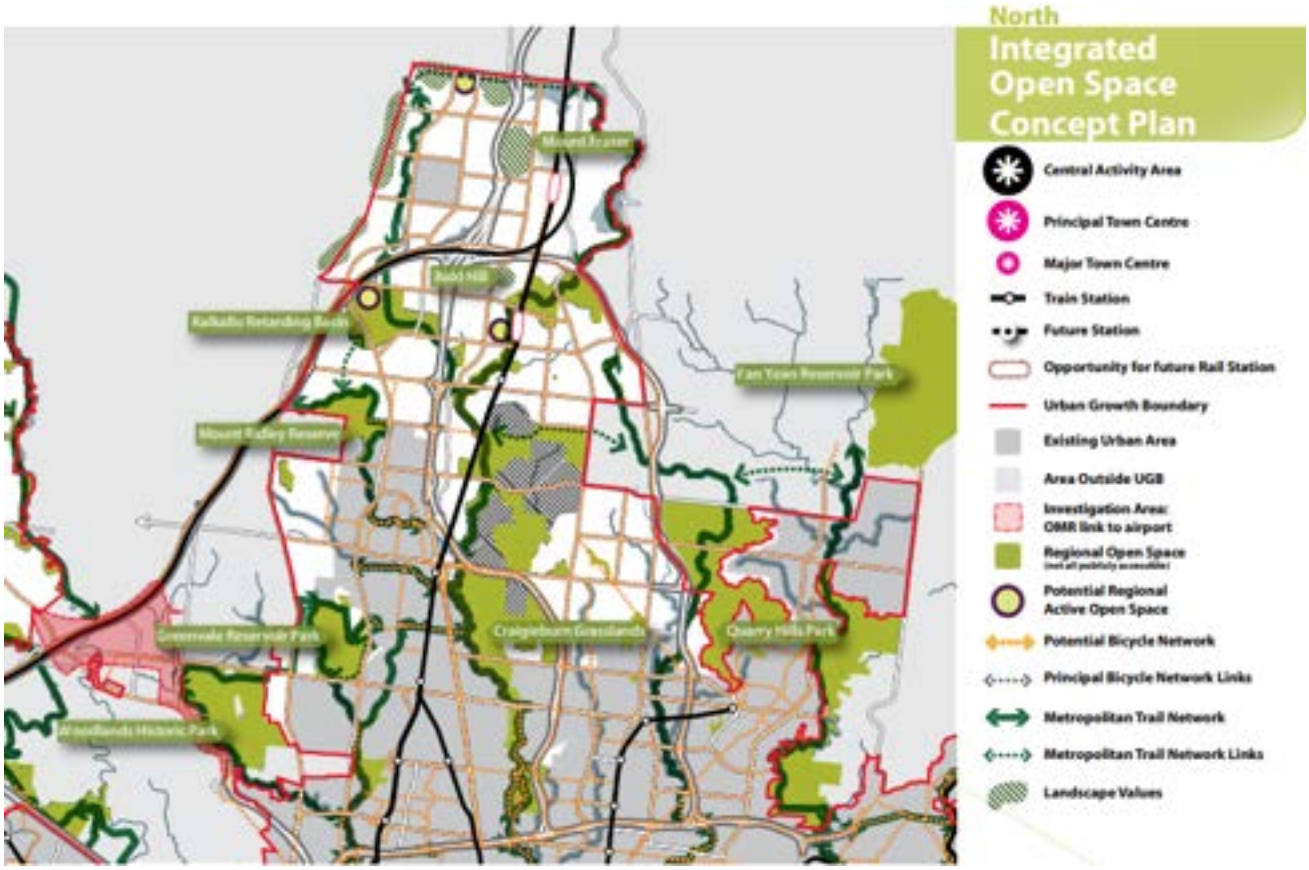
Identification of Land and Future Planning Controls

The primary mechanism for the designation of future land uses in a growth area such as Wallan-Beveridge is a Precinct Structure Plan (PSP). PSPs set out the future structure of new neighbourhoods, with guidance on the form of subdivision and development of land over the long term. This includes the provision of land or funds for public infrastructure under an Infrastructure Contributions Plan (ICP) for each PSP area.

PSPs are developed in accordance with state and regional policy, including Plan Melbourne 2050, Melbourne Industrial and Commercial Land Use Plan (2020), and the Growth Corridor Plans produced by the then Growth Areas Authority (GAA) in 2012. The Growth Corridor Plans provide high-level integrated land use and transport plans with strategic directions for each of the four growth corridors in Metropolitan Melbourne.

The study area is situated in the North Growth Corridor and the 'Logical Inclusion' area of established Wallan. Depicted in Figure 2, the North Growth Corridor Plan (NGCP) identifies some of the Feasibility Study area as Landscape Values, and a Regional Active Open Space (under investigation) near Spring Hill. The majority of the study area in the North Growth Corridor is identified as Residential land. It is noted that Melbourne's UGB has been extended, and now includes additional land to the north of the UGB indicated at Figure 2.

Figure 2: North Growth Corridor Plan - Integrated Open Space Concept Plan



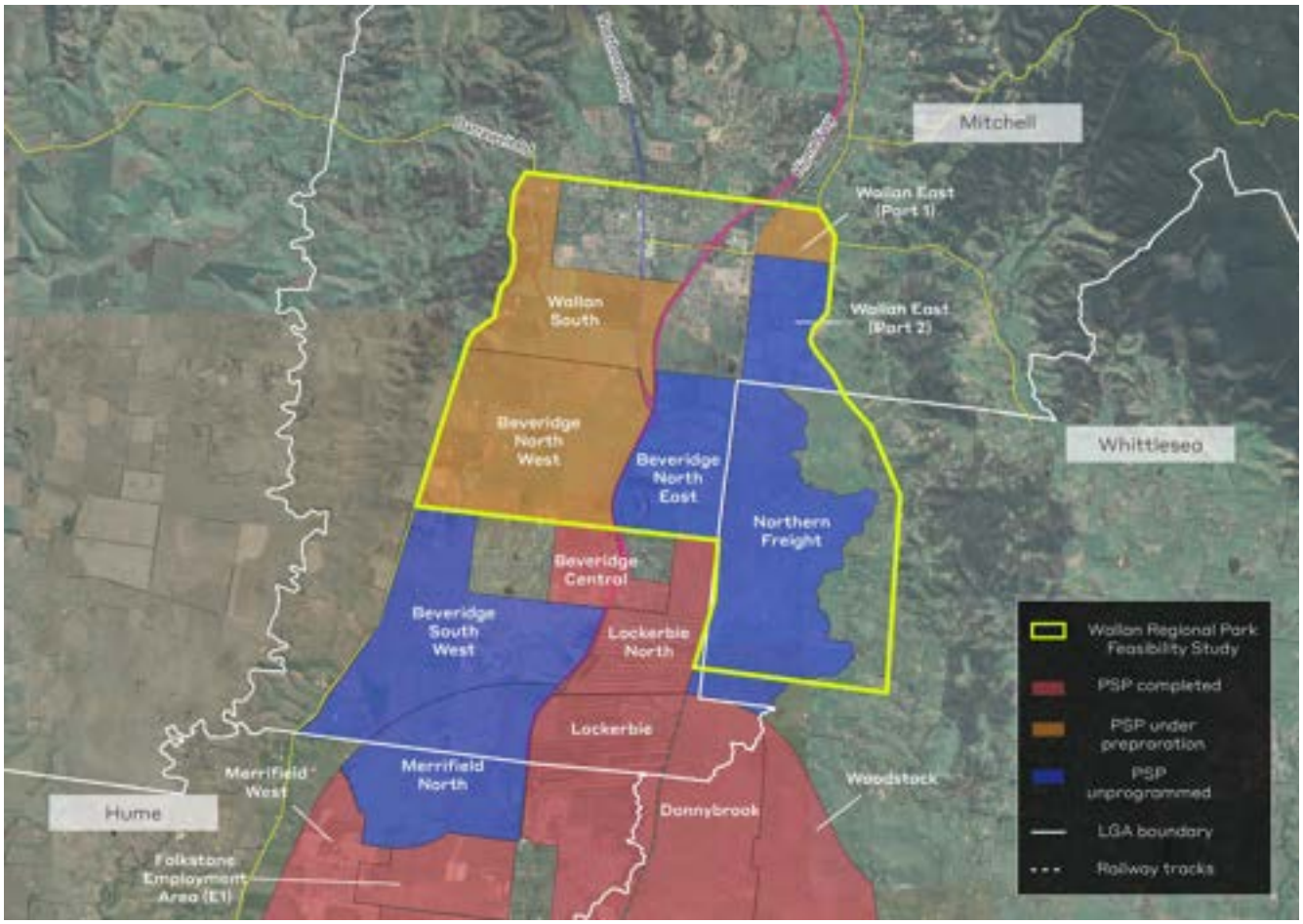
Plan Melbourne 2050 and the Melbourne Industrial and Commercial Land Use Plan (MICLUP; 2020) also contains strategic directions for some of the land in the study area. These plans designated the Northern Freight and Wallan East – Part 2 PSP areas as future State Significant Industrial Land which will provide major industrial development linked to the Principal Freight Network and transport gateways. It is state policy that these areas are to be protected from incompatible land uses to allow continual growth in freight, logistics and manufacturing investment.

Growth area land (this excludes land outside the UGB and land that constitutes the established area of Wallan) within and adjacent to the study area is divided into 9 Precincts, which vary in their status. The table below provides a summary of the status of each PSP and its implications for the Feasibility Study. PSP locations and statuses is also depicted in Figure 3. Once a PSP is complete, it is implemented through a Planning Scheme Amendment with planning controls applied to the Precinct land according to the PSP and ICP.

PSP details have been drawn from the material currently available from the Victorian Planning Authority (VPA) on each PSP area and the details included in the NGCP.

Figure 3: WRP study area with PSP and LGA boundaries

Source: VPA; Ethos Urban



ETHOS URBAN

Table 1: PSPs - status and implications

Source: VPA; Ethos Urban

PSP Name	Status	Implications for the Feasibility Study
Lockerbie North (outside the WRP study area)	Completed 2012	• Lockerbie North PSP is south of Mount Fraser and does not contain any major natural assets that would lend themselves to being incorporated in the WRP. • 27ha of active and passive open space is included in the PSP. • The PSP has been approved and does not make reference to the future WRP.
Beveridge Central (outside the WRP study area)	Completed 2018	• Beveridge Central is south of Mount Fraser does not include any major natural assets that would lend themselves to being incorporated in the WRP. • 13.02ha of active and passive open space is included in the PSP. • The former Kelly House (Ned Kelly) is located in the PSP and has the capacity to be a regional tourism drawcard that may complement visitation to the WRP. • The PSP has been approved and does not make reference to the future WRP.
Beveridge North West	Panel complete Fast-track Program	• A Draft PSP was exhibited in mid-2019, and has since been through a Panel process; the VPA are currently considering Panel recommendations before finalising the PSP. • The PSP area includes the Spring Hill Cone in the east, the southern portion of Hanna Swamp in the north and the Kalkallo Creek in the west. • The PSP plan includes significant areas identified as having landscape values across the north of the precinct, in alignment with the NGCP. • These areas are proposed to be retained as Rural Conservation Zone (RCZ) in the exhibited Amendment, however the PSP does not designate them as public open space. • The retention of areas of Hanna Swamp have not at this stage been confirmed or otherwise. • The Panel recommended that the PSP recognise the potential for the future WRP to incorporate the land identified as having significant landscape values. • The Panel recommends that the PSP be revised to include an open space link between the east and west sides of existing Rural Conservation Zone land in the Precinct. • A quarry is proposed near the Spring Hill Volcanic Cone; the planning permit application currently sits with the Minister for Planning. • The exhibited PSP does not consider the potential for a quarry at this site. • The Panel deliberated on the potential for a quarry and the proposal site in the PSP, noting that there was significant policy support for resource protection in the PSP, but that extraction activities could significantly hinder the urban development of the precinct. • The Panel concluded that urban development of most of the PSP area should be possible alongside resource extraction activities, with the balance of development undertaken post-quarrying. • The Panel recommended that the PSP and Amendment be advised to explicitly address the proposed quarry before being finalised. • Planning permit approval of a quarry at the Spring Hill Volcanic Cone could impact the delivery of the WRP and significantly alter the landscape values of the WRP.
Wallan South	Draft PSP preparation	• The Wallan South PSP is identified on the VPA fast-track program.

PSP Name	Status	Implications for the Feasibility Study
	Fast-track Program	• Co-design workshops have been conducted in late 2020 with landowners and agencies; the draft PSP is currently being prepared. • The PSP area includes Hanna Swamp in the south and a large area of undulating land in the west that has been identified as having landscape values. • The Place-Based Plan utilised for the purposes of the co-design workshops refers to the WRP and includes the objective to create east-west biodiversity links from the WRP to Deep Creek, and to investigate connections into the WRP and Hernes Swamp. • The Placed-Based-Plan notes the Hanna Swamp area is under investigation by Melbourne Water. • This PSP area has potential to provide an important link to the west side of the freeway and Spring Hill Cone that may not be possible from Mount Fraser within the Wallan North East PSP.
Wallan East (Part 1)	Draft PSP preparation Fast-track Program	• The Wallan East (Part 1) PSP is identified on the VPA Fast-track program. • Co-design workshops have been conducted in late 2020 with landowners and agencies; the draft PSP is currently being prepared. • The PSP area includes the Wallan Station area and the Merri Creek Corridor. • The current draft plan identities Merri Creek as an opportunity for an open space corridor, however the Place-Based Plan utilised for the purposes of the co-design workshops makes no reference to the WRP and does not set aside land for open space aside from waterway/drainage corridors.
Wallan East (Part 2)	Commencement not scheduled	• According to the MICLUP, this Precinct will primarily comprise industrial uses. • Part 2 covers the southern area of the Wallan East precinct. • Merri Creek passes through the area, and it includes the eastern portion of Herne's Swamp. • There is an opportunity to incorporate the Hernes Swamp and Merri Creek corridor in this area as part of the WRP. • The future PSP process will provide the mechanism for this land to be formally identified for this purpose.
Beveridge South West (outside the study area)	Commencement not scheduled	• Total PSP area is 1,266ha. • The NGCP suggested the PSP incudes area that are likely to be provided as drainage related encumbered open space as well as area of landscape value in the west. • It is located south of the area being considered as part of the WRP.
Northern Freight	Commencement not scheduled	• According to the MICLUP, this Precinct will primarily comprise industrial uses. • There is an opportunity to incorporate Hernes Swamp and the Merri Creek corridor in this area as part of the WRP. • The future PSP process will provide the mechanism for this land to be formally identified for this purpose.

PSP Name	Status	Implications for the Feasibility Study
Beveridge North East	Commencement not scheduled	• Includes Mount Fraser and Herne's Swamp area in addition to the Wallan wastewater treatment plant and associated irrigation areas. • This area provides a significant opportunity for both Mount Fraser and Hernes Swamp to be included in the WRP. • The future PSP process will provide the mechanism for this land to be formally identified for this purpose.

In order to ensure that land is set aside for the future WRP and avoid the need to purchase, it is critical that the PSPs that are not yet commenced or in preparation should designate land identified by the Feasibility Study for inclusion in the WRP for this purpose (as public open space) and require the transfer of this land at the time of subdivision under an associated ICP, potentially with additional external government funding. Once growth area land has already undergone a complete PSP process, there is no longer the opportunity to acquire land through this process, and an alternative compulsory acquisition would be required. This is discussed further in subsequent sections of this memo.

Once completed, PSPs will be implemented through Planning Scheme Amendments that apply Zones, Overlays, and other provisions in accordance with each PSP. Public Land Zones would likely best facilitate the use of the majority of the land designated for the future WRP. More specifically:

- **Public Conservation and Resource Zone (PCRZ):** the purpose of this Zone is to:
    - Protect and conserve the natural environment and natural processes for their historic, scientific, landscape, habitat, or cultural values.
    - To provide facilities which assist in public education and interpretation of the natural environment with minimal degradation of the natural environment or natural processes.
    - To provide for appropriate resource based uses.
- **Public Park and Recreation Zone (PPRZ):** the purpose of this Zone is to:
    - To recognise areas for public recreation and open space.
    - To protect and conserve areas of significance where appropriate.
    - To provide for commercial uses where appropriate.

The best Zone for the various areas within the future WRP is dependent on the uses to be accommodated. The PPRZ is somewhat less restrictive than the PCRZ, and therefore better suited to accommodate more formal sport and recreation activities, as well as retail/commercial uses.

Outside of the established area of Wallan, most of the land in the study area is currently zoned as Urban Growth Zone, to facilitate its future urban use and development, or as Farming Zone, as it has yet to undergo a PSP process.

The existing Yarra Valley Water treatment station in the study area is currently zoned as Public Use Zone – Schedule 1 to facilitate the service and utility activities on site. Some of this land may be incorporated to the future WRP as encumbered open space. No changes to planning controls would be necessary to facilitate part of its use as public open space. However, application of the PCRZ or PPRZ to this area would better ensure it is publicly accessible and integrated with the WRP overall.

Other areas concentrated around the northern and western boundaries of the study area, as well as the land where Mount Fraser is located, are zoned as Rural Conservation Zone (RCZ), with the exception of the existing scoria quarry site at Mount Fraser, which is zoned as part Farming Zone and Special Use Zone – Schedule 1 to facilitate the resource extraction activities on site, and to identify required buffer areas.

The RCZ is similar in nature to the PCRZ, with more restrictions on potential uses. While land subject to this zone enables biodiversity conservation and informal recreation as encumbered open space, and more formal uses and development would likely be subject to permit requirements (or prohibited), rezoning RCZ land identified for the WRP as PCRZ or PPRZ would ensure its use as public open space.

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Key Findings

- According to state policy, most of the study area is growth area land to be developed for residential purposes, with the exception of some significant landscape areas and the State Significant Industrial Land in the Northern Freight and Wallan East (Part 2) Precincts.
- The completed PSPs (Lockerbie North and Beveridge Central) have not designated any land for inclusion in the future WRP, nor referenced potential connections to the future WRP from open space areas in the Precinct.
- The PSPs currently in preparation (Beveridge North West, Wallan South, and Wallan East - Part 1) offer limited consideration of the potential for the future WRP and do not indicate that land will be set aside for its purpose.
- An urgent review of the Draft PSPs and concept plans that have been prepared thus far is needed to ensure that land is appropriately designated as public open space for the WRP in alignment with the Feasibility Study. If PSPs progress without appropriate designation of land for inclusion in the WRP, any land identified for acquisition would require purchase.
- Land in the future WRP would best be zoned as PCRZ or PPRZ. Rezonings should occur through Planning Scheme Amendments to implement the PSPs.

Existing and Proposed Quarries

There are three sites in the study area where quarrying activities are existing or proposed. These are summarised below.

- **Mount Fraser scoria quarry (existing):** Operational open-cut quarry at the southern rim of the Mt Fraser cone. It is located in the Beveridge North East Precinct (PSP unprogrammed).
- **2330 Epping-Kilmore Road (proposed):** Potential clay quarry, located in the Northern Freight Precinct (PSP unprogrammed). Mitchell Shire Council refused to grant a permit on the grounds that it was not supported by state policy and it may result in amenity impacts to surrounding future development. The decision was overturned at VCAT and a permit granted in 2018.
- **175 Northern Hwy (proposed):** Potential stone quarry, located in the Beveridge North West Precinct (PSP under preparation). A planning permit application has been lodged with Mitchell Shire Council for the site. Mitchell Shire does not support the application, however it was 'called in' to the Minister for Planning to determine in early 2021. It has not yet been determined. There is an existing Work Authority for stone extraction at the site.

By nature, operational quarry sites could not form a part of the WRP. The sites would not be publicly accessible for the duration of extraction activities, and the activities may also result in amenity impacts to the surrounding areas, including dust, noise, vibrations, and visual impacts. Sites with operational quarries would therefore be excluded from the WRP in the short-medium term, however they may be incorporated to the WRP once their operation period has ceased and they have been remediated appropriately.

Ultimately these sites should be incorporated into the WRP if so identified by the Feasibility Study, however the timing of their acquisition would be subject to extraction activities and rehabilitation/remediation requirements. The buffer areas of quarry sites may be acquired earlier, however the use of these areas is dependent on the nature of activities being undertaken at the sites.

Key Findings

- There are three existing or proposed resource extraction sites in the WRP study area.
- These sites would not be suitable for incorporation into the WRP until extraction activities have ceased and rehabilitation/remediation has occurred.

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Land Cost Factors

Land in the Feasibility Study area is largely in private ownership and must be acquired (by transfer or purchase) by the State or Local Government for use as public open space. Costs associated with the purchase of land are subject to a number of factors impacting land values, including (but not limited to):

- Potential land use(s) and development
- Market Demand
- Existing and planned infrastructure
- Contamination

A summary of these cost factors and potential implications for the park are provided below.

Potential land use(s) and development

All land in Victoria is subject to planning controls that determine its use and development potential. Sites with significant potential for more intensive use and development than is currently present are therefore more valuable to developers, who seek to use/develop a site to its 'highest and best use' in order to maximise return on assets/investment.

Land with potential for residential use and development in particular is typically highly valued relative to other uses. Significant increase in value (or 'value uplift') is often created at the time that policy and planning controls change to encourage/allow these more intensive (and therefore more lucrative) uses. Value uplift can also be speculative in nature, that is, it occurs based on assumptions that planning controls will change in future. Land in the Feasibility Study area has likely already undergone significant value uplift in recent years.

Melbourne's Urban Growth Boundary (UGB) was revised in 2012 to incorporate an additional 6,000 hectares of land into Metropolitan Melbourne, including the northern section of the Feasibility Study area. At the time of incorporation, the majority of this land was rezoned as Urban Growth Zone to facilitate its transition to urban land. This would have resulted in significant value uplift to the land based on the understanding that it would be developed in future.

The value of the study area was also impacted on the release of the North Growth Corridor Plan, identifying the majority of study area for urban residential or industrial use. However, this change in use and associated development remains subject to preparation of PSPs and associated changes to planning controls for each parcel within the identified Precincts in the Urban Growth Zone land. The gazettal of a PSP typically results in further value uplift, as it provides greater certainty of the extent of individual land parcel's development potential.

Prior to gazettal, the exhibition of a Draft PSP or early concept plans may create value uplift, as landowners and developers assume that land uses indicated in the draft plans will likely eventuate. Land designated for residential use and development is likely to experience the greatest value uplift, while land designated for less intensive uses, particularly open space, would experience more limited uplift.

Since incorporating the land into Metropolitan Melbourne as Urban Growth Zone land, PSPs and rezonings have been exhibited or gazetted for a number of the Precincts in the study area. A significant portion of the rezoned (or soon-to-be rezoned) land under completed PSPs is designated for residential use and development and as a result has likely already experienced significant value uplift. For these Precincts where the PSP process has already been completed, land transfer is no longer an option and any additional open space identified for inclusion in the WRP would therefore be a costly acquisition.

For Precincts currently undergoing the PSP process (Beveridge North West, Wallan South, and Wallan East - Part 1), there is still opportunity to designate open space land for inclusion in the WRP and require its transfer under an ICP. The remaining land that has yet to undergo a PSP process has significant potential to be acquired at reduced cost through PSP processes.

Market Demand

Market demand for land can also significantly impact its value. As the population of Greater Melbourne continues to grow, it is expected that there will be greater demand for residential, commercial, and industrial land for new residents and workers. The Growth Corridors are anticipated to accommodate approximately half of Melbourne's housing growth and significant additional industrial and commercial areas through the next 30 years. The Corridors will be developed progressively over this period to align with demand from the growing population.

Much of the North Growth Corridor where the study area is located is in the earlier stages of development, undergoing—or yet to undergo—PSP processes. Consequently, its development potential is currently constrained, which would limit its demand in comparison to land more readily developable. It is therefore desirable to identify and acquire any land for incorporation to the WRP as early as possible before its value increases due to greater development pressures.

Existing and planned infrastructure

According to the NGCP, the area has excellent existing and planned road, rail, freight, and public transport infrastructure, including the following:

- **Sydney-Melbourne railway line:** operates freight and passenger services between Sydney and Melbourne.
- **The future Beveridge Intermodal Freight Terminal (BIFT):** the BIFT will enable freight to be transferred from Victoria's largest ports at Melbourne and Geelong to the rest of Australia along the Sydney-Melbourne railway line. The project is anticipated to create significant local and regional employment opportunities and encourage additional investment in the North Growth Corridor.
- **Hume Freeway:** one of Australia's major interstate highways, connecting Melbourne and Sydney.
- **The future Outer Metropolitan Ring Road/E6:** this connection will create a 100-kilometre-long transport link across Melbourne's North and West.

The study area also enjoys access to existing community and commercial infrastructure in the established area of Wallan, which may attract future residents and other land uses in the short-medium term in comparison with other growth areas that are more isolated.

The existing and planned infrastructure network within and around the study area likely presents an attractive offering for investors, which may contribute to higher land values.

Contamination

Many sites across Victoria are identified for their land and/or groundwater contamination resulting from historical industrial activities, dumping of agricultural chemicals, landfills, or other sources. Contaminated land may require remediation before it is appropriate for re-use, either for open space or for urban development. Up-front remediation activities can be costly, and some sites require special environmental management in the long-term. Re-use of contaminated land therefore may be a more costly option for purchasers and developers than uncontaminated land. On the other hand, contaminated land may be associated with lower land values, as the contamination may render the land's highest and best use as open space.

Victoria Unearthed is a State Government tool that identifies sites with potential land and groundwater contamination, or with uses/occupiers with the potential to generate environmental impacts such as contamination. According to the tool, there are two sites within the study area:

- **200 South Station St, Wallan:** The site is the Wallan Sewage Treatment, owned and operated by Yarra Valley Water. Conditions are imposed on the license for this site to ensure that the land or groundwater is not contaminated from treatment activities. This site may interface or be included in the future WRP as encumbered open space, but will remain a functional sewage treatment site and would therefore not be subject to remediation activities.
- **Lot Z PS 818939 Newbridge Subdivision, Wallan East:** The site has experienced illegal dumping and requires assessment. May require clean-up. This lot is part of the Newbridge residential development from Resimax, and would therefore not be incorporated as part of the WRP.

Quarry sites would require some treatment in order to convert them to open space once extraction activities have ceased, including investigating for any contamination. As noted, there is an existing quarry at Mount Fraser and two

proposed quarries elsewhere in the study area. The type and extent of treatment required is dependent on the nature of extraction activities at each site. It may be that any existing or future quarry sites in the study area do not require remediation due to contamination (as they are stone or clay extraction sites), but would likely require some rehabilitation to ensure they are safe and appropriate sites for public open space. Open-face quarries would, at minimum, require the site to be filled with soil or converted to a waterway.

Key Findings

- Land in the study area has likely already experienced significant value uplift from planning policy and controls which encourage/allow primarily residential use and development in the area.
- Land identified for the future Regional Park should be appropriately identified in PSPs and transferred under ICPs to avoid the need for purchase, where possible.
- Any land that must be purchased should be done so as soon as is practicable to avoid further value uplift associated with potential for more intensive land uses and/or increasing demand.
- The study area is in an infrastructure-rich environment that is likely to attract investment in comparison with other growth areas; this may also contribute to higher land values.
- Land for incorporation to the WRP is not likely to require remediation works for its use as public open space, however, quarry sites will likely require some rehabilitation to be incorporated into the WRP.

Mechanisms and Timing of Acquisition

A number of mechanisms exist in the planning process to facilitate either the transfer of private land to government for public purposes, or the compulsory acquisition of land by government. In growth area planning, the typical mechanisms include the following:

- Identification through Precinct Structure Plan, and transfer via subsequent subdivision of land. This includes encumbered land (as identified in the PSP), and unencumbered land through associated DCP/ICP, for local public purposes; and
- Growth Area Infrastructure Charge (GAIC) WIK (works in kind) agreement, for regional or state level public purposes.

The PSP process allows for land to be transferred to government at no cost under an ICP, however is limited for specific purposes. This process is utilised to create new public open space in each growth area precinct. The quantity of land set aside for open space is based on the anticipated total population of the precinct. The PSP must identify any parcels that are to be public open space accordingly in its land use plans, and the corresponding ICP must set out the requirements for the transfer of the identified land to government to facilitate its use as public open space. Land is typically transferred at the time of subdivision. If the WRP seeks to acquire land at no cost under an ICP, it would therefore need to incorporate the parks and reserves within a precinct that serve the local population.

Timing of acquisition of land through this mechanism is dependent on the timing of the preparation, gazettal, and implementation of each PSP, and the subsequent development of land. Because of this, acquisition of land for the WRP through PSPs would occur over a number of years as the land is subdivided for development.

However, given the regional role and significant scale of the proposed WRP, it is likely that the vast majority of land required could not be transferred via an ICP. Funding would likely be required to acquire land for open space that is over and above that required for the future population of any particular PSP area. Cost for this acquisition could be minimised by identifying encumbered land to form the WRP in each PSP, where possible; land identified as encumbered in a PSP is able to be acquired at a lower cost, or no cost. Land identified as unencumbered would require purchase at valuation.

An alternative to State Government purchase of the land would be a GAIC (Growth Area Infrastructure Contribution) WIK (works in kind) agreement, whereby the landowner would transfer the land to Government in lieu of a GAIC payment.

Land for the WRP that is not able to be designated and transferred under a PSP and/or ICP (i.e. if the PSP process is already complete or one is not required) would require purchase for use as public open space. In order to facilitate this future acquisition, a Public Acquisition Overlay (PAO) should be applied as soon as is practicable to ensure that the

land is reserved for a public purpose and to avoid uses and development that may prejudice the purpose for which the land is to be acquired. The application of a PAO would also help to avoid any further increase in the value of land, as it would significantly limit any development potential the land may have had. However, it should be noted that compensation may also be payable to landowners as a result of any compulsory acquisition.

Key Findings

- Land for the WRP should be acquired through the mechanism of an ICP or as encumbered open space where possible to minimise purchase costs.
- Timing of acquisition of land for the WRP through transfer under a PSP/ICP would likely occur in a gradual manner, as land is subdivided across the various precincts.
- For land that is not able to be transferred under a PSP/ICP, a PAO should be applied which would reserve the land for purchase by the designated authority, protect it from inappropriate use and development, and help to avoid further value uplift.
- The option of a GAIC WIK agreement to facilitate the transfer of land from developers to the state for the purpose of the WRP should be explored.

Management

According to DELWP[1] there are currently 110,000 parcels which form parks, reserves, and areas of State forest in Victoria. The ownership and management of this land is dependent on the size, type, and environmental/cultural significance of the land that comprises the open space. The remit of each of the state and local agencies relevant to the WRP is summarised below.

- **DELWP:** Incorporates over 100 major agencies and over 1,200 committees of management to manage crown land in Victoria. DELWP manages State forests and other public land reserves with a broad range of purposes. The WRP would likely be owned by the State Government and managed by DELWP agencies.
- **Parks Victoria:** Parks Victoria is a statutory authority under the *Parks Victoria Act 1998* and the foremost land management agency subsidiary to DELWP. While some unique regions or areas may be managed by a specialised board (e.g. Royal Botanic Gardens Board, Alpine Resort Management Board), Parks Victoria typically manages national parks and conservation parks in the state. Parks Victoria would be the most appropriate manager for the majority of the land in the WRP.
- **Melbourne Water:** Melbourne Water Corporation is one of 19 water corporations serving Victoria. Melbourne Water manages major water resources across the Greater Melbourne region, including the protection of waterways. Their Growling Grass Frog Masterplan program involves constructing approximately 80 breeding wetlands over the next 20 years as development occurs in Melbourne's growth corridors. Due to the known presence of the growling grass frog in the waterways in the study area, these areas of the WRP would likely be managed by Melbourne Water.
- **Local Councils:** Smaller open spaces contained within a single municipality would typically be owned and/or managed by the local Council. This includes local parks and recreational spaces, including sportsfields.

Key Findings

- The majority of the future WRP will likely be managed by Parks Victoria, a DELWP agency.
- Waterways in the WRP with growling grass frog habitat (Merri Creek and wetlands) will likely be managed by Melbourne Water.

[1] Managing Crown Land (DELWP 2021), https://www.forestsandreserves.vic.gov.au/land-management/managing-crown-land

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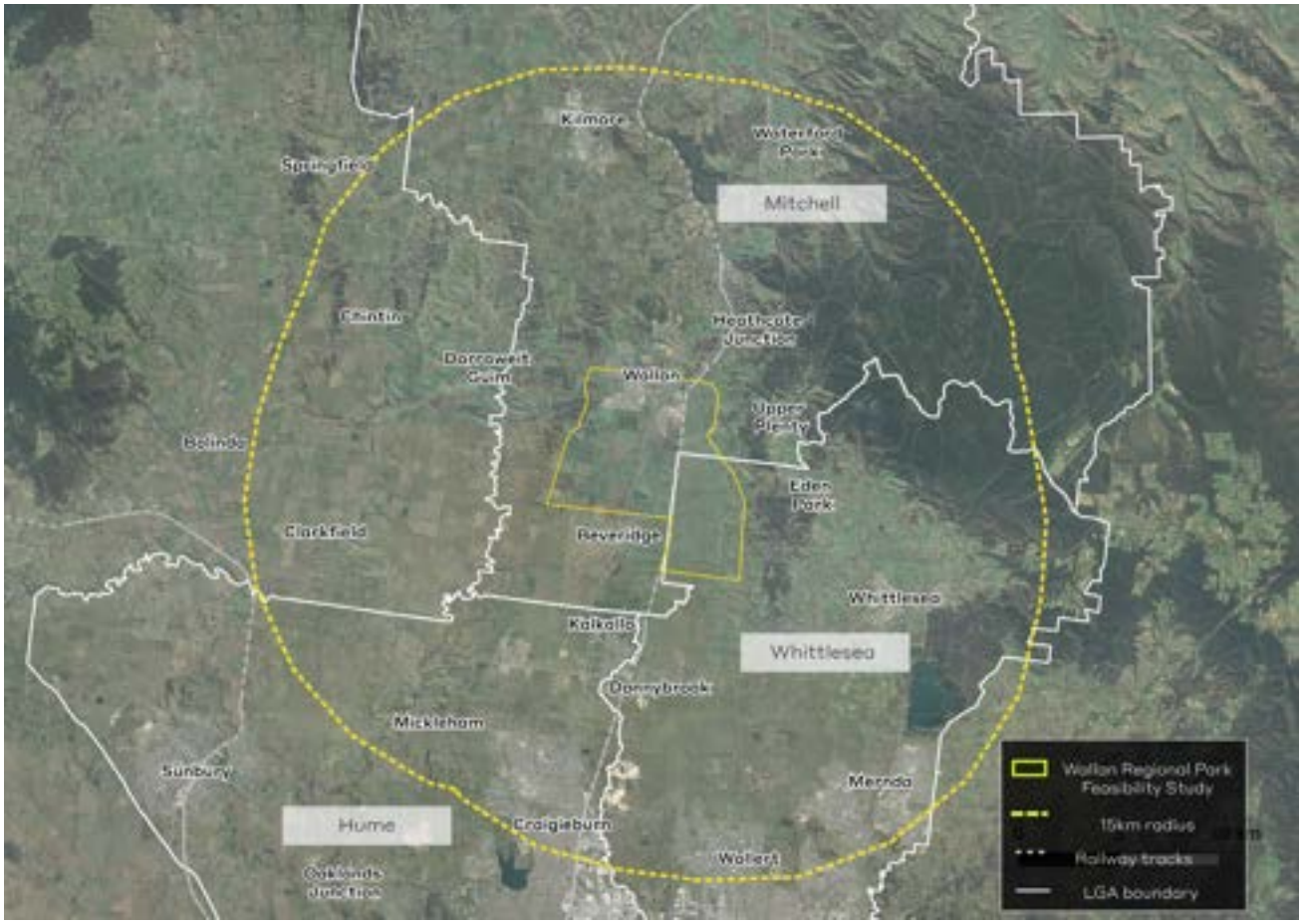
Community Use of the WRP

Catchment Area

The Victorian State Government released the Open Space Strategy for Metropolitan Melbourne (OSSMM) in 2021. The OSSMM highlights the importance of open space in the context of a rapidly growing metropolitan area, and identifies the Wallan Regional Park Feasibility Study as a key initiative of the Suburban Parks Program. Although the OSSMM encourages new regional parks and trails in outer growth areas, it does not classify types of open spaces or contain objectives for what a regional space may include or whom it may serve.

The Metropolitan Open Space Network Distribution report released by the VPA in June 2017 includes a hierarchy for open spaces in Victoria. Because the future WRP is anticipated to be as large as 1,000ha, it would be considered a Metropolitan Open Space (greater than 50ha) in the Regional Network. This type of open space would have a catchment area of up to 15km. Figure 4 depicts the WRP study area and its potential catchment area (15km radius from the boundary line).

Figure 4: WRP Potential Catchment Area



Based on the anticipated 15-kilometre catchment area of the future WRP, the park will serve a catchment area that spans across the LGAs of Mitchell Shire, the City of Whittlesea, the City of Hume, and Macedon Ranges Shire. The table below summarises the current and anticipated future population of the WRP's 15-kilometre catchment area.

Population figures have been drawn from the statistical area level one (SA1) boundaries which intersect with the catchment radius drawn around the study area.

Table 2: WRP catchment area current and future population estimates

Source: Victoria in Future (State Government 2019); Ethos Urban

	2016	2021	2026	2031	2036	2021 – 2036 increase
Population	159,330	231,030	299,790	367,090	429,680	198,650
Average Annual Growth (no.)	-	14,340	13,750	13,460	12,520	13,240
Average Annual Growth (%)	-	7.7%	5.3%	4.1%	3.2%	4.2%

According to the table:

- In 2021, the WRP catchment area has a residential population of approximately 231,030 persons.
- From 2016 to 2021, the WRP catchment area annual population growth rate increased by 14,340 persons, equating to 7.7% per annum.
- Across the 15 years projected to 2036, the WRP catchment area population is projected to increase by approximately 198,650 persons, to ultimately include a total of approximately 430,000 persons.

The future WRP would therefore serve a large existing population in the North Growth Corridor that is anticipated to nearly double by 2036, and should be delivered as soon as is possible to meet the needs of the growing population.

Key Findings

- The future WRP has an anticipated catchment area of 15km from the park boundaries.
- Based on this catchment area, the WRP would provide a Metropolitan Open Space to serve a catchment population of at least 230,000 in 2021, and approximately 430,000 people by 2036.

Purpose of a Metropolitan Open Space

Open space can include parks, pathways, roadway greens, land for recreation, environmental purposes, visual amenity, golf courses, cemeteries, and other types of alternative use open space. According to the Metropolitan Open Space Network Distribution report, a Metropolitan Open Space offers opportunity to accommodate a range of open space types. The future WRP would likely accommodate a combination of the following open space categories:

- **Parks and gardens:** These are generally landscaped areas that provide for a range of non-organised recreation and informal activities. May also have natural values and may provide pedestrian and or bicycle links between streets to connect into the open space network. The WRP would generally be considered parks and gardens space.
- **Natural and seminatural open space:** Natural and semi-natural areas of remnant native vegetation through to revegetated and semi-landscaped areas. These areas may include land managed for the conservation of their natural and heritage values that are not included in Victoria's protected area system. Natural and semi-natural areas can include long, relatively narrow, interconnected areas of open space which may provide visual buffers, movement corridors for pedestrians, cyclists (where appropriate) and/or flora and fauna. Some Crown and public authority land within this category may have a resource use (e.g. state forests) or drainage function (e.g. stream frontages, drainage lines/reserves, reservoirs, and retarding basins). Recreational uses vary, depending on how compatible they are with the conservation values and other uses of the area. In some areas (e.g. regional parks), recreation may be the primary use. Encumbered land in the WRP may be natural and seminatural open space, including the Yarra Valley Water treatment station.

- **Recreation corridors:** Off-road trails used for walking and/ or cycling that link areas of open space, and provide formal or informal connections between and within neighbourhoods and districts. Linear areas of the WRP may be considered recreation corridors that allow for informal recreation and pedestrian/cyclist movement between larger areas of the park.
- **Metropolitan and Regional links:** Areas typically > 5km (Metropolitan) or 1-5km (Regional) in length that provide formal or informal linkages between metropolitan, regional, and district open spaces. These areas can encompass smaller links (local/ neighbourhood/ regional), and may/may not contain a formal pathway. These links could be used to link various areas of the WRP, and to link the park to other open spaces in the broader region.
- **Conservation reserves (protected areas):** These areas are set aside for the conservation and protection of natural ecosystems, landscape character and/or historical and scenic features. Generally, these areas are Crown land and part of Victoria's protected area system, however some private land may be set aside for conservation, such as Trust For Nature reserves. Conservation reserves can be used for some non-organised recreation and informal activities, depending on circumstances and/or in accordance with management plans. Environmentally significant sites in the WRP may be considered Conservation reserves, including Hanna Swamp, Hernes Swamp, and Mount Fraser.

The WRP may also connect to or interface with sportsfields and other organised recreation spaces at the residential communities of Wallan-Beveridge, however these would be standard spaces provided through a PSP, and managed by Council rather than State Government.

Key Findings

- The WRP offers opportunity to accommodate a number of open space types to cater to a range of informal/passive recreation needs.
- It may also incorporate links to different areas of the park or connect the WRP to other open space in the surrounding area.

Existing and Anticipated Community Needs

According to the 2017 Metropolitan Open Space Network Distribution report, some of the LGAs in which the study area is located currently have lower proportions of public open space than the metropolitan average of 9.3% (as a proportion of total land in the municipal area). Mitchell Shire in particular, where the majority of the study area is located, has a low share of public open space, at 0.7%. As most of the future urban areas of Mitchell Shire is still to be developed, a significant amount of new public open space will need to be created to service new communities.

Table 3 provides a review of the following strategic plans and policies to identify community needs relevant to the WRP:

- *Open Space Strategy for Metropolitan Melbourne 2021* (Victoria State Government, 2021)
- *Mitchell Shire Council Plan 2017-2021* (Mitchell Shire Council, 2017)
- *Mitchell 2020 Community Plan* (Mitchell Shire Council, 2020)
- *Opens Space Strategy 2013-2023* (Mitchell Shire Council, 2013)
- *Whittlesea Council Plan 2017-2021 Update 2020* (City of Whittlesea Council, 2020)
- *Whittlesea 2030 Strategic Community Plan* (City of Whittlesea Council, 2016)
- *Hume City Council Plan 2017-2021* (Hume City Council, 2017)

Note that Macedon Ranges Shire was excluded from this policy review; although the study area includes land in this LGA, it is outside the urban growth boundary and its population will therefore remain modest relative to the other LGAs in the area.

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Table 3: Strategic policy review

Source: Ethos Urban

Strategy, Author, Date	Purpose/Vision	Relevant directions/actions
Open Space Strategy for Metropolitan Melbourne 2021 Author/s: Victoria State Government Dated: 2021	The *Open Space for Everyone* strategy enacts a framework to guide planning, acquisition, design, management, use, and maintenance regarding the Melbourne metropolitan open space network. The vision for the strategy is as follows: *Melbourne is a city in nature with a flourishing and valued network of public open space that is shared and accessible by everyone.*	The strategy identifies the following goals relevant to the WRP: • *Improved community health and wellbeing* • *Healthier biodiversity* • *Enhanced climate change resilience* • *Maximised economic and social benefits* The strategy establishes the following directions relevant to the WRP: • *A network connected at the local and landscape scales to better protect biodiversity, reduce the fragmentation of habitat, and enable people to enjoy a more expansive and richer open space experience* • *Open space that enables an immersive experience: open space that creates a city in nature and that enhances the enjoyment of nature, connections with others, appreciation of quality design and amenity of a cooler greener city as part of everyday life: in our laneways, streets, local and regional parks, bays, and waterways* • *An equitably accessible network shared by everyone as a community asset we can all access, enjoy and benefit from, regardless of age, gender, ability, or location* • *Identifying new, high-quality open space in city-fringe, greenfield growth areas, infill development and precinct and city development projects* • *Identifying parks, trails and waterway corridors that improve radial and cross-radial connectivity* • *Strategically and proactively acquiring land and applying public acquisition overlays that anticipate future needs*
Mitchell Shire Council Plan 2017-2021 Author/s: Mitchell Shire Council Dated: 2017	The Council Plan is a commitment to the future of Mitchell Shire. It identifies a number of objectives, actions, and measures to be delivered upon, as well as a plan for implementation. The vision for the plan is as follows: *Together with the community, creating a sustainable future.*	• The population of Mitchell Shire is growing by 3-4% per annum and is expected to double by 2036 to over 90,000 people and 30,000 households. It is a key strategy (3.1) to *plan for growth and change through best practice design of services, infrastructure, open space, and recreation*. The plan identifies the following strategies relevant to the WRP: • Strategy 3.7: *Improve the liveability of Mitchell Shire* • Strategy 3.10: *Protect and enhance local ambience, amenity, and character* • Strategy 4.3: *Establish and maintain high quality roads, footpaths, parks, recreation facilities, streetscapes, bike paths and public open spaces* • Strategy 5.6: *Promote our region and towns as a destination for tourists and visitors* • Strategy 7.5: *Provide opportunities for the community to experience nature in their everyday lives*
Mitchell 2020 Community Plan Author/s: Mitchell Shire Council Dated: 2020	The Mitchell 2020 Community Plan outlines the community vision and priorities to be delivered upon over the next 10 years, as well as a plan for implementation. The vision for the plan is as follows:	The plan identifies the following community priorities relevant to the WRP: • Ensure all public open space and indoor activity areas, including parks are accessible to people with limited mobility, are equipped with public amenities that meet the

Strategy, Author, Date	Purpose/Vision	Relevant directions/actions
	Mitchell Shire in 2020 will be seen as a municipality that has embarked upon a journey of significant growth. In doing so it will have been recognised for achieving sustainable outcomes and prosperity for its distinctive communities. Mitchell will be a sought after location in which to actively live and work. Visitors will seek to explore the many and varied experiences within the Shire.	needs of the community and are maintained in accordance with best practice • Ensure that facilities and structures in open spaces are consistent with our diverse community needs. • Extend the network of physical activity opportunities in open spaces to attract a wide range of residents • Enhance public open space areas through continuing installation of drought tolerant grass, synthetic grass, landscaping, sports ovals, and provision of public art in parks
Open Space Strategy 2013-2023 Author/s: Mitchell Shire Council Dated: 2013	The Open Space Strategy establishes a planning and development framework for the provision of open space in the Shire to 2023, in *order to achieve a balance in the equitable distribution of a diverse range of open space and off-road trails for people that live, work, and visit the Shire.*	The strategy identifies the following concerns relevant to the WRP: • *One concern in the growth area development process is that few open spaces to serve district or regional catchments are being provided. It has also been suggested that Mitchell Shire requires more 'destination' parks for residents and to attract visitors, particularly in the southern areas. The Melbourne North Growth Corridor Plan recommended retention of an interurban break between the northern edge of the North Growth Corridor and Wallan. Other investigations have recommended the establishment of a regional park in this vicinity to protect areas of environmental significance.* • *As smaller towns grow, the model for provision of open space may need to change from pockets of open space into one central site (such as a major recreation reserve) with other community or recreation facilities as well as a school, to providing multiple sites, serving different needs, equitably distributed within walking distance of all dwellings.* The strategy establishes the following goals relevant to the WRP: • 5.2 Equity: *An equitable distribution of open space for social and family recreation, sport, and off-road trails, in accordance with the nature of the settlement* • 5.3 Amenity: *High environmental quality in parks, and landscape character of the Shire, that enhances amenity, restorative values, recreation experiences, civic pride and connection with nature*
Whittlesea Council Plan 2017-2021 Update 2020 Author/s: City of Whittlesea Council Dated: 2020	The Council Plan articulates a number of key initiatives to be delivered upon in achievement of the community vision: *A place for all*.	The plan identifies the following goals relevant to the WRP: • *Our city is well-planned and beautiful, and our neighbourhoods and town centres are convenient and vibrant places to live, work and play* – 2.2: *We want well-designed neighbourhoods and vibrant town centres where we have:* ○ *Attractive streetscapes and public spaces* ○ *Easy access to local shops and major commercial centres* ○ *Access to quality local facilities, parks, and amenity*

Strategy, Author, Date	Purpose/Vision	Relevant directions/actions
		• *Our city's superb landscapes and natural environment are an enduring source of pride* – 4.1: *We want valued natural landscapes and biodiversity where the community:* ○ *Protect and improve local biodiversity* ○ *Has sustainable land management* ○ *Has an appreciation of local natural environment* – 4.2: *We want to be climate ready, with more:* ○ *Trees for cooling and shelter* ○ *Infrastructure built to withstand the changing climate* ○ *Community resilience*
Whittlesea 2030 Strategic Community Plan Author/s: City of Whittlesea Council Dated: 2016	The Whittlesea 2030 Strategic Community Plan outlines the community vision and priorities to be delivered upon over the next 10 years, as well as a plan for implementation.	The plan establishes the following strategic objectives relevant to the WRP: • We have open spaces that are welcoming and safe for public gathering • We can access recreation facilities and open spaces that reflect and respond to local need
Hume City Council Plan 2017-2021 Author/s: Hume City Council Dated: 2017	The Council Plan is a commitment to delivering positive outcomes for those who live, work, and study in Hume. The vision for the plan is as follows: *Hume City Council will be recognised as a leader in achieving social, environmental and economic outcomes with a common goal of connecting our proud community and celebrating the diversity of Hume.*	The plan establishes the following objectives and expectations relevant to the WRP: • Objective 2.1: *Foster a community which is active and healthy* – Expectation 2.1.1: *The health and wellbeing of residents is supported through an accessible and affordable range of formal and informal leisure options that address local needs* • Objective 3.1*: Foster socially connected and supported communities* – Expectation 3.1.1: *Local community groups are supported through the provision of accessible, inclusive, and affordable community infrastructure* • Objective 4.1: *Facilitate appropriate urban development while protecting and enhancing the City's environment, natural heritage, and rural spaces* – Expectation 4.1.3: *The City's natural heritage, environment and rural spaces are protected, enhanced, maintained, and valued*

Local and state policy alike encourages the creation of high-quality, accessible open space to support the health and wellbeing and recreation needs of growing communities. Mitchell Shire in particular seeks to provide 'destination' higher-order open spaces for residents and visitors in growth areas, including at a regional park in the study area.

The WRP presents an opportunity to fulfill these policy objectives and ensure that adequate public open space is provided to meet the needs of the existing and future communities in the region. While local policies do not specify current or anticipated shortfalls in recreation and leisure infrastructure, the WRP has potential to accommodate higher-order facilities. The nature of recreation and leisure infrastructure to be provided at the WRP should be determined in consultation with the various Councils in the area, to ensure any gaps in future provision can be addressed.

Key Findings

- The WRP has potential to fulfill a number of state and local policy objectives for open space provision.
- The WRP also has potential to address gaps in higher-order recreation and leisure infrastructure to serve the region; need for this infrastructure should be determined in consultation with the Councils of Mitchell Shire, City of Whittlesea, and City of Hume.

APPENDIX D APPENDMENT TO APPENDIX B - BACKGROUND REVIEW

APPENDIX D Appendment to APPENDIX B - BACKGROUND REVIEW

Strategy, Author, date	Purpose/vision	Relevant directions/actions
Victoria's Climate Change Strategy Author: State Government of Victoria, Department of Environment, Land, Water and Planning Dated: 2021	Vision: Victoria will achieve net-zero emissions by 2050. Purpose: The Strategy sets out the Victorian Government's current responses to climate change and its next steps towards achieving net-zero emissions.	• Energy required by wallan wallan Regional Park comes from renewable sources. • Revitalise and protect lands and forests • Victoria's biodiverse ecosystems will be functional and resilient in the face of climate change. They will be actively managed and enjoyed, balancing sometimes competing values and uses. • Partner with Traditional Owners, Registered Aboriginal Parties and other Aboriginal communities to ensure their cultural, ecological and economic values and expertise are integrated into climate change adaptation planning. • Employ innovative methods to achieve net zero emissions such as soil carbon sequestration
Community Vision: Mitchell 2050 Author: Mitchell Shire Council Dated: December 2021	A healthy, vibrant and connected community that values nature, diversity and innovation. Mitchell will become a place that people of all ages love to call home. Where we celebrate our natural beauty and where businesses prosper.	• In 2050, Mitchell is home to a vibrant and thriving natural environment, where nature and parks are part of resident's everyday life. Our parks and reserves will be inviting and well utilised and foster a connected and healthy community for all ages and abilities. • wallan wallan Regional Park contributes to rich ecological systems that support native flora and fauna. Flora and fauna are spotted regularly by residents. • wallan wallan Regional Park aids the protection, enhancement, and connection of landscapes by increasing extent and quality of native vegetation and sustainable landscape management.
Mitchell Shire Council Environment Policy 2020	Vision: Mitchell Shire Council is a leader in sustainable environmental management in all our business operations and in support of the wider community. Purpose: To guide Council's decision-making processes and embed environmental considerations across the organisation	• Council's assets are planned and built to respond to the effects of a changing climate. • All Council policies and plans take account of climate change and its implications for Council operations. • Climate Change risk mitigation is part of business as usual at Mitchell Shire Council. • Mitchell Shire's biodiversity values and natural environment are embedded within and protected by the planning scheme and local policy • The majority of our population is connected to nature. • Prevent new high-risk invasive plants and animals from establishing in the Shire • Indigenous land management practices are recognised and respected • No vulnerable or near threatened species will have become endangered. • Net gain of the overall extent and condition of habitats across Council managed land.

		• Mitchell Shire communities are
		  ○ provided with water,
		  ○ protected from floods,
		  ○ interact with healthy waterways; and
		  ○ benefit from cooler, greener urban spaces and healthier environments.
		• Environmentally Sustainable Design is a core principle for all new developments.

Mitchell Shire Open Space Strategy 2013-2023 Author: Mitchell Shire Council Dated: 2013	*Vision* Mitchell Shire Council's vision is to provide open spaces that serve the needs of people of all ages, cultural backgrounds and abilities. *Purpose* The Mitchell Open Space Strategy provides a planning and development framework for the provision of open space and off-road trails in the Shire to 2023. The Strategy seeks to achieve a balance in the equitable distribution of a diverse range of open space and off-road trails for people that live, work and visit the Shire.	The following principals and actions as part of the Strategy will have implications for the wallan wallan Regional Park: Council will seek to utilise open space to enhance the protection of the natural environment and features, landscape character and cultural heritage for future generations. Opportunities will be sought to allow residents and visitors to explore and interact with this heritage in a manner that also supports and encourages its conservation Wallan and Beveridge • Ensure an off-road trail network is provided as part of new residential development. • Seek opportunities to enhance the off-road trail network by providing connections between residential areas, the town centre, open spaces, and existing trails. • Investigate ways to ensure key buffer areas and view corridors are protected in the long term. • Advocate for a Regional Park in the Wallan/Beveridge growth area • Work in partnership with land developers and other agencies to acquire land for open space ensuring appropriate provision in Wallan and Beveridge growth areas. • Undertake development plan for Green Hill Reserve • As resources allow, undertake land transfer to improve aggregate of open space provision in Wallan.
North Growth Corridor Plan	Vision: The North Growth Corridor will make a significant contribution to the growth and diversification of the broader northern metropolitan area. It will offer a diversity of housing, employment and lifestyle opportunities, supported by a high quality transport network that focuses on Broadmeadows, Epping and Donnybrook. The Corridor takes the form of a series of distinct urban districts interspersed with open space and employment precincts. Communities will be well	Landscape features relevant to wallan wallan Regional Park: • Retention of distant views from the growth corridor to the Great Dividing Range to the north and north east. • Retention of key views to the hills that flank the growth corridor to the west, north and east. • Retention of an inter-urban break (area currently zoned as RCZ) between the northern edge of the growth corridor and Wallan.

	connected to jobs, town centres and the broader region by a high quality transport network. Each community will have a distinctive character, defined by its natural setting – the foothills, grasslands, woodlands, creeks and waterways – and well designed, accessible town centres. Purpose: These Plans set out the strategic plan for the future development of Melbourne's Growth Corridors over the next 30 to 40 years. The Plans are a tool to guide and inform future decisions regarding urban development and infrastructure that may be required to service these new communities over the long term.	• Note: the Growth Corridor boundary has since been relocated to the north of Wallan, however the notion of a 'break' between the urban expansion at Beveridge and increased residential development in Wallan is still valid[1]. • Retention of the red volcanic cones at Mt Fraser and Bald Hill and the protection of vistas to these features from a range of vantage points across the growth corridor. • Utilization of the natural drainage system across the growth corridor to create a network of open spaces which connect different parts of the corridor in both visual and landscape terms Biodiversity • The Northern Growth Corridor includes areas of significant biodiversity values including: - stands of old River Red Gums scattered across the landscape - threatened communities of Natural Temperate Grasslands of the Victorian Volcanic Plain - threatened communities of Grassy Eucalypt Woodland of the Victorian Volcanic Plain Within the study area, the report identifies Merri Creek and its environs as an important breeding habitat for the Growling Grass Frog and also support Latham's Snipe.Drainage • The Northern Growth Corridor forms part of the Yarra River Catchment and its major waterways including Merri Creek, Darebin Creek and Kalkallo Creek. • These waterways and the numerous smaller tributaries include significant cultural heritage and provide habitat for native flora, native frog and fish species, and other flora. • There are significant landscape features, including floodplains associated with Merri Creek and local wetlands. Regional Parks and Open Space • An open space buffer is identified between the northern edge of the Growth Corridor and Wallan. The ridge line to the west of the Growth Corridor and the prominent volcanic cones in the northern portion of the Growth Corridor will be protected from urban development. • The Northern Growth Corridor Plan nominates the potential location for a regional active open space facility within the buffer.

[1] Planning and Environment Act 1987, Panel Report, Mitchell Planning Scheme Amendment C106mith, Beveridge North West Precinct Structure Plan, 2020

		Wallan • Over time, urban development in Melbourne's north will come close to the Wallan township, which will have a significant impact on the character and functional role of the town. The open space buffer is envisaged to allow Wallan to retain a character that is distinct from the outer northern urban area.
Precinct Structure Planning Guidelines: New Communities in Victoria (2021)	Purpose: The Precinct Structure Planning Guidelines: New Communities in Victoria (the Guidelines) are a Victorian Government initiative to ensure the Victorian Planning Authority and other planning authorities prepare plans for laces that enable best practice, liveable new communities for Victoria.	The 20-minute neighbourhood framework is key to structure planning and used as the core component of the overarching framework for these Guidelines. The hallmarks of a 20-minute neighbourhood (Plan Melbourne 2017-2050): • be safe, accessible and well connected for pedestrians and cyclists to optimise active transport • offer high-quality public realm and open spaces • provide services and destinations that support local living • facilitate access to quality public transport that connects people to jobs and higher-order services • deliver housing/population at densities that make local services and transport viable • facilitate thriving local economies. To plan for best practice outcomes for open space, public realm and sustainability, planning for new communities should ensure: • appropriate provision of passive and active open space to meet community needs • diversity in form, function and character of the streetscapes, local parks, and sports and recreation facilities, including through enhancing the role that encumbered or restricted open space plays in the network • a green public realm with increased vegetation and canopy tree cover to contribute to a distinct sense of place, urban cooling, and an enhanced sense of wellbeing • waterways provide valuable open space corridors for walking and cycling paths, cooling and greening, rest and recreation • the preservation and enhancement of biodiversity features, such as natural wetlands, waterway corridors and their parklands, which can help regulate our climate, protect against hazards, provide

		habitat and wildlife corridors for local flora and fauna, and offer opportunities for nature-based recreation.
Victorian Waterway Management Strategy Author: State Government of Victoria, Department of Environment and Primary Industries Dated: 2013	Vision: Victoria's rivers, estuaries and wetlands are healthy and well-managed; supporting environmental, social, cultural and economic values that are able to be enjoyed by all communities. The *Victorian Waterway Management Strategy* provides the framework for government, in partnership with the community, to maintain or improve the condition of rivers, estuaries and wetlands so that they can continue to provide environmental, social, cultural and economic values for all Victorians. The framework is based on regional planning processes and decision-making, within the broader system of integrated catchment management in Victoria.	The following actions are relevant to the wallan wallan Regional Park: • Improve the condition of waterways to sustain populations of native plants and animals as well as support other environmental, social, cultural and economic values. • Facilitate Traditional Owner and community participation in waterways management. • Manage threats to relevant wetlands on public lands. • Identify wetlands that have a high value for protecting or improving landscape connectivity • Improve information about wetland vegetation and develop guidance to assist local government in the application of native vegetation planning controls for wetland vegetation • Develop and apply a method to routinely monitor changes in wetland extent and changes in wetland water regime. • Develop a framework to manage risks to waterways from rural drainage.

APPENDIX E STAKEHOLDER ENGAGEMENT

APPENDIX E – STAKEHOLDER ENGAGEMENT

The wallan wallan Regional Park Feasibility Study report has been delivered through effective stakeholder engagement and information gathering, drawing on vital expertise and knowledge of government agencies, Traditional Owners, and a targeted group of Environmental NGOs.

Agency Group representation:

- Wurundjeri Woi-wurrung Cultural Heritage Aboriginal Corporation
- Mitchell Shire Council
- Whittlesea Council
- Victorian Planning Authority
- Melbourne Water
- Yarra Valley Water
- Parks Victoria
- Department of Transport
- Department of Jobs, Precinct and Regions
- DELWP – Water and Catchments
- DELWP – Planning
- DELWP – Biodiversity
- DELWP – Land Management Policy

Environmental NGO Group representation:

- Wallan Environment Group
- Nature Glenelg Trust
- Merri Creek Management Committee
- Friends of Merri Creek

The refinement of the potential regional park extent will be subject to further engagement with WWCHAC, government agencies, environment groups, private landowners, the local community, and other key stakeholders. The delivery of a detailed Cultural Values Study by WWCHAC will be an important input into this process.