BEVERIDGE NORTH-WEST

LANDSCAPE AND VISUAL ASSESSMENT

Final Report

METROPOLITAN PLANNING AUTHORITY
September 2014

Looking North West from the Kalkallo Creek

planisphere
PLANNING & DESIGN

PROJECT CONTROL

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Front Cover: Looking North West From The Kalkallo Creek

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View From Spring Hill Looking South

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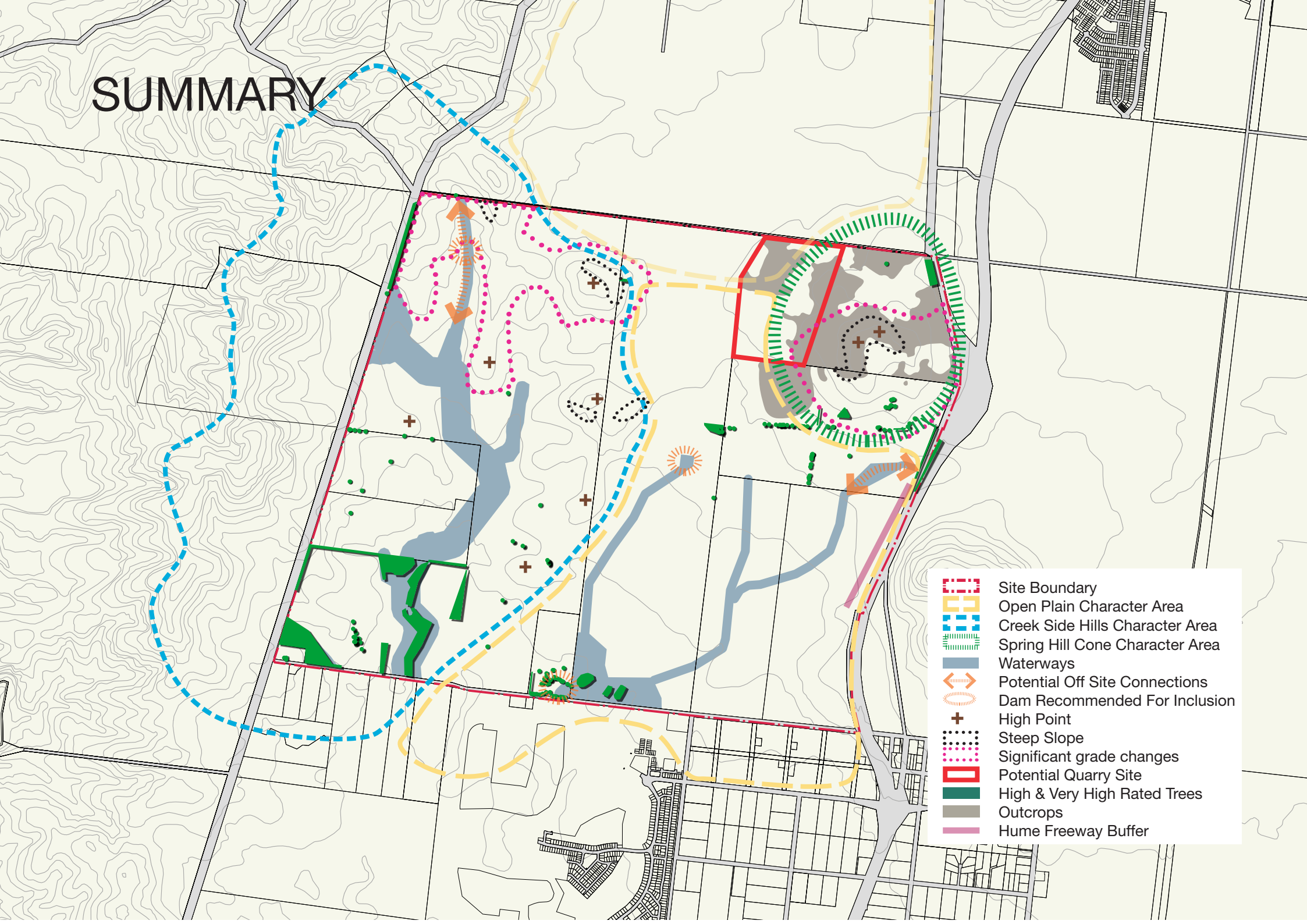
SUMMARY


Site Boundary
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In areas undergoing change and development, a local identity and sense of place can be acheived by integrating the area's key visual character features. This landscape and visual assessment for the Metropolitan Planning Authority looks at the various elements of the wider landscape at the Beveridge North West Precinct (including landform, land uses, water and views) to determine landscape visual character areas of the area.
Further investigation into other relevant site elements, including geology, trees, water elements and slope, are also analysed to determine the key elements important to maintaining a sense of place.

CHARACTER AREAS

Open Plain Character Area
Creek Side Hills Character Area
Spring Hill Cone Character Area

The three character areas require different approaches to development to help maintain a sense of place.

The Open Plain character area has minimal features with a few trees that should be retained.

The Creek Side Hills character area is part of the western hills character area and forms a bowl around the Kalkallo Creek.

The Spring Hill Cone character area is a highly visible and prominent visual feature, with a smooth land form that contains some trees and a rocky

WATERWAYS

Waterways
Potential Off Site Connections
Dam Recommended For Inclusion

The waterway corridor elements provide an opportunity for integrating water and creek features into development. Dams provide the opportunity for a year round water feature. Water levels in the creeks and drainage lines are more ephermal and variable in nature.

Connections along existing drainage lines to the surrounding context can complete drainage catchments and provide open space linkages.

LANDFORM

High Point
Steep Slope
Significant Grade Changes
Potential Quarry Site

High points provide remarkable views across the valley and should be integrated into the public realm.

Steep slopes in a few locations within the precinct may result in overly visible development. Built form should be avoided in such areas.

The potential quarry site will be highly visible on the Spring Hill Cone slope from Wallan to Beveridge and would require visual mitigation.

LANDSCAPE

High & Very High Rated Trees
Outcrops
Hume Freeway Buffer

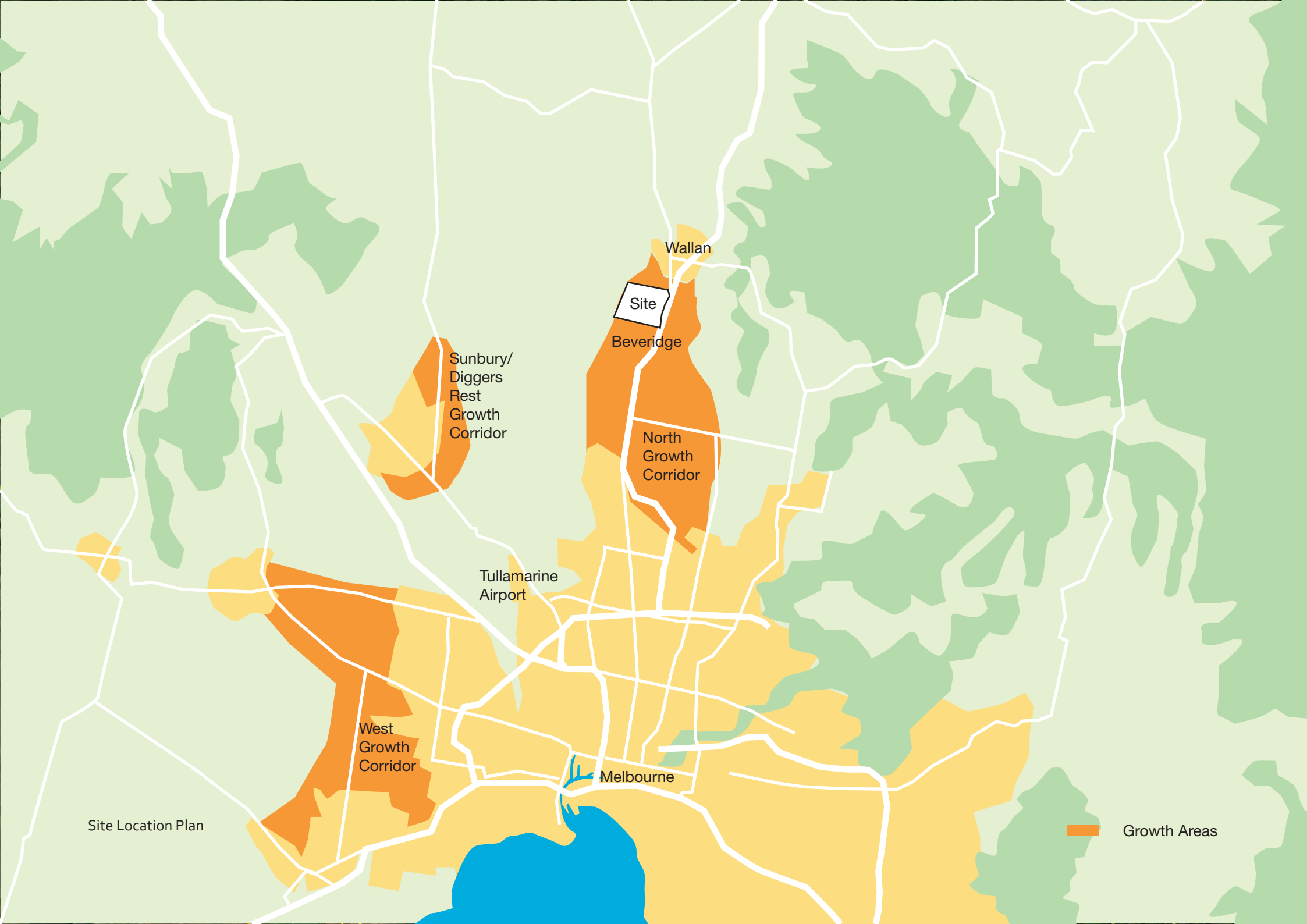
The High and Very High rated trees are established, prominent and in good condition. Retaining existing trees can provide a positive feature to new development.

The Stone Outcrops are an important feature in defining the Spring Hill Cone character area and is best retained where possible.

Where not in a cutting, the Hume Freeway dominates the landscape and its visual impact could readily be mitigated through the use of a small landscape buffer.

A Volcanic Rock Pile on the Spring Hill Cone

1 INTRODUCTION


Wallan
Site
Beveridge
Sunbury/
Diggers
Rest
Growth
Corridor
North
Growth
Corridor
Tullamarine
Airport
West
Growth
Corridor
Melbourne
Site Location Plan
Growth Areas

BACKGROUND

Planisphere was commissioned by the Metropolitan Planning Authority (MPA) to undertake a detailed landscape and visual assessment at Beveridge North West (PSP 1059) in Victoria. This assessment will enable a better understanding of the visual character and significance of the precinct's landscape character.

The site has been identified as future land supply primarily for residential land use. The assessment will be used to better inform the Precinct Structure Plan (PSP) that will guide the future urban development of the site, which currently being completed.

KEY PROJECT OBJECTIVES

The key objectives of this project were to:

- Complete a landscape and visual assessment for the precinct;
- Identify key landscape features in and around the precinct;
- Identify key links internal and external to the precinct; and
- Identify design outcomes of key landscape features.

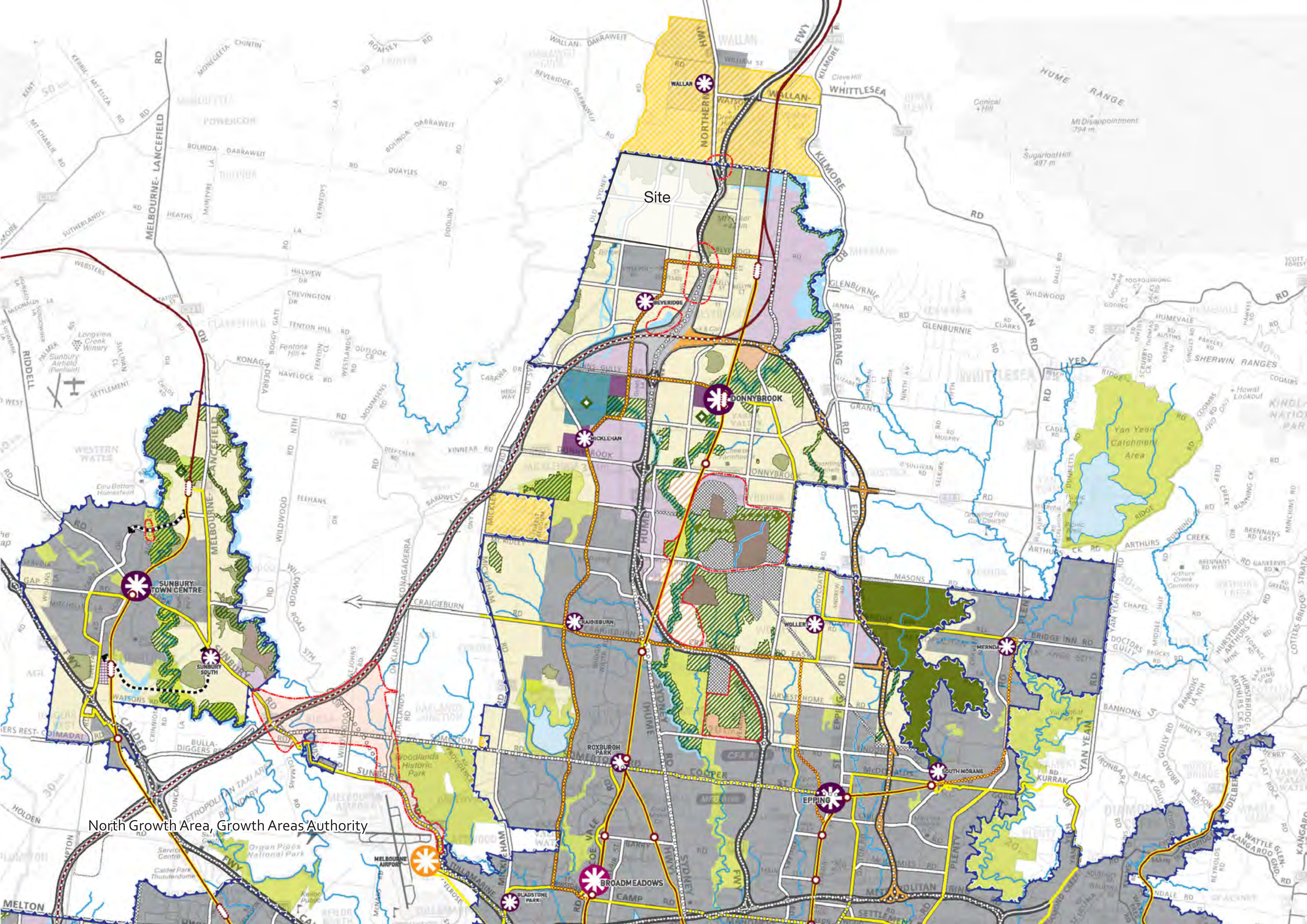
The approach and findings of the assessment, together with supporting information, are documented within this report.

LOCATION

The Beveridge North West Precinct Structure Plan is located within Mitchell Shire Council. It is bounded by Hume Freeway to the east, Camerons Lane to the south, Old Sydney Road to the west. The site is located south of the Wallan township.

This precinct forms part of the North Growth Corridor and currently comprises 15 properties with a total area of 1,259 hectares (gross).

The MPA has recently completed other PSPs within the North Growth Corridor. This includes the Lockerbie North PSP to the east of the precinct and Beveridge Central and Mandalay PSPs located to the south of the precinct.



North Growth Area, Growth Areas Authority

GROWTH AREAS

The State Government has prepared four Growth Corridor Plans, providing a broad framework for the future long term development of Melbourne's growth corridors. Plans have been developed for the North Growth Corridor, the South East Growth Corridor, the Sunbury Growth Corridor and the West Growth Corridor.

Each Growth Corridor Plan identifies the existing context of the growth corridor, including key transport links and areas of high environmental or landscape value. The future vision for the corridor and strategic directions on the preferred areas for housing, jobs, transport, town centres, open space and infrastructure are also outlined. The Beveridge North West PSP forms part of the North Growth Corridor.

The Plans are underpinned by eight key principles relating to land use, transport, employment, and the environment. It is intended that these principles be consistent with Precinct Structure Plans (PSPs) developed during the implementation of each Growth Plan.

A key principle of the four Growth Plans is the long term protection of biodiversity and cultural values (Principle 5). The protection of these values are noted to be important to the liveability of Growth Corridor areas and may be achieved by the protection of key waterways, and the setting aside areas of sufficient size and connectivity to natural areas within and outside of Growth Corridors.

The creation of integrated open space networks is also identified as a key principle of the Growth Plans (Principle 6). Integrated networks of both active and passive space enhance the protection of environmental, heritage and drainage values as well as providing areas for recreation. To achieve these multiple outcomes, the designation of open space networks may consider creeks and ridgelines and incorporate areas such as prominent hilltops, conservation reserves and regional parks.

The final environmental principle seeks to establish environmental sustainability within the Growth Corridors. This includes the need to design open space networks to reduce and delay stormwater runoff.

Further directions on the protection of the environmental values are provided within vision and principles the North Growth Corridor Plan. Most significantly, the Plan identifies the north portion of the site as an area of landscape value. This may relate to the role of the area as an inter-urban break to Wallan.

The vision for the North Growth Corridor includes the creation of communities with a distinctive natural character. Natural character may be defined by grasslands, creeks and waterways. Ways identified by the Plan to enhance and maintain the natural character include:

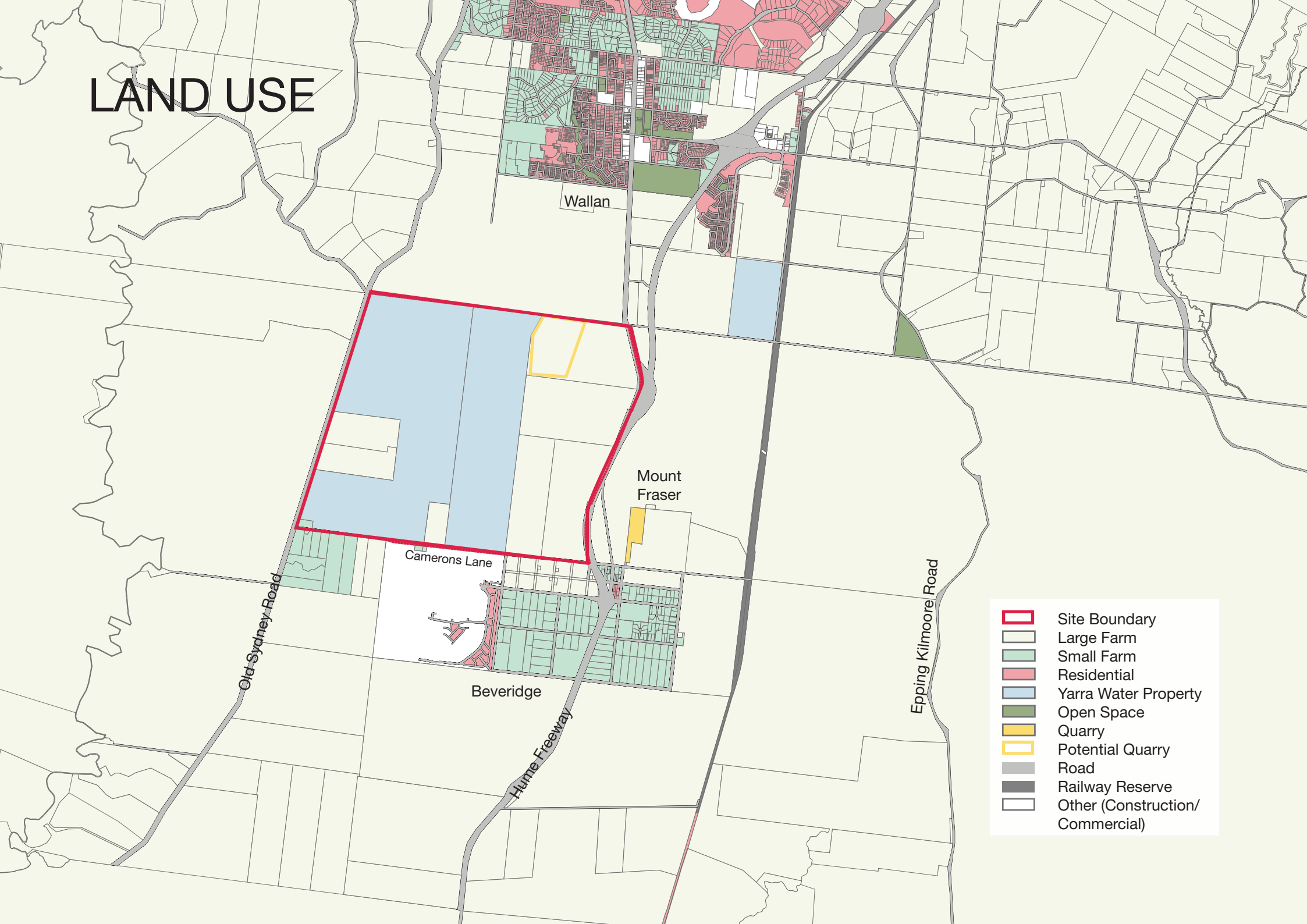
- Retaining key views to the hills that flank the Growth Corridor to the west, north and east
- Protect vistas to Mount Fraser from a range of vantage points across the Growth Corridor
- Utilise natural drainage systems to create a network of visually and environmentally connected open spaces
- Improve waterways and restore waterway health and address flooding risks

Precinct Structure Planning Guidelines have been developed by the State Government and set out the objectives and process for planning new communities in the growth areas.

Kalkallo Creek Looking West

2 SETTING & CONTEXT

LAND USE


Wallan
Mount Fraser
Camerons Lane
Old Sydney Road
Beveridge
Hume Freeway
Epping Kilmoore Road
Site Boundary
Large Farm
Small Farm
Residential
Yarra Water Property
Open Space
Quarry
Potential Quarry
Road
Railway Reserve
Other (Construction/ Commercial)

The Beveridge North West area and the surrounding localities of Wallan and Beveridge have a range of farming lot sizes, all differing in character. Generally, the smaller farms have more trees while the larger farms tend to have pastures with minimal planting.

Large Farm Properties

Large farm properties tend to be open grass land for grazing cattle or sheep. There are very few groupings of trees with one or two remnant trees in the field. On the rare locations where buildings exist, there tends to be trees and garden type planting.

Large farms are predominantly open plain due to deforestation and may contain dams and small hills.

Small Farm Properties

Smaller farm properties are at a hobby farm scale and often have a main residence with some out buildings. Tree rows mark the boundaries and garden planting surround the buildings.

The planting is often trees but may also contain shrubs and long grass which breaks up the open plain feel that exists on the larger farms.

Yarra Valley Water Properties

The Yarra Valley Water property is more lush in drier months due to water treatment procedures that irrigate the soil. The site has a reservoir and series of smaller dams which, when viewed from down hill, appear as mounds of earth in the landscape.

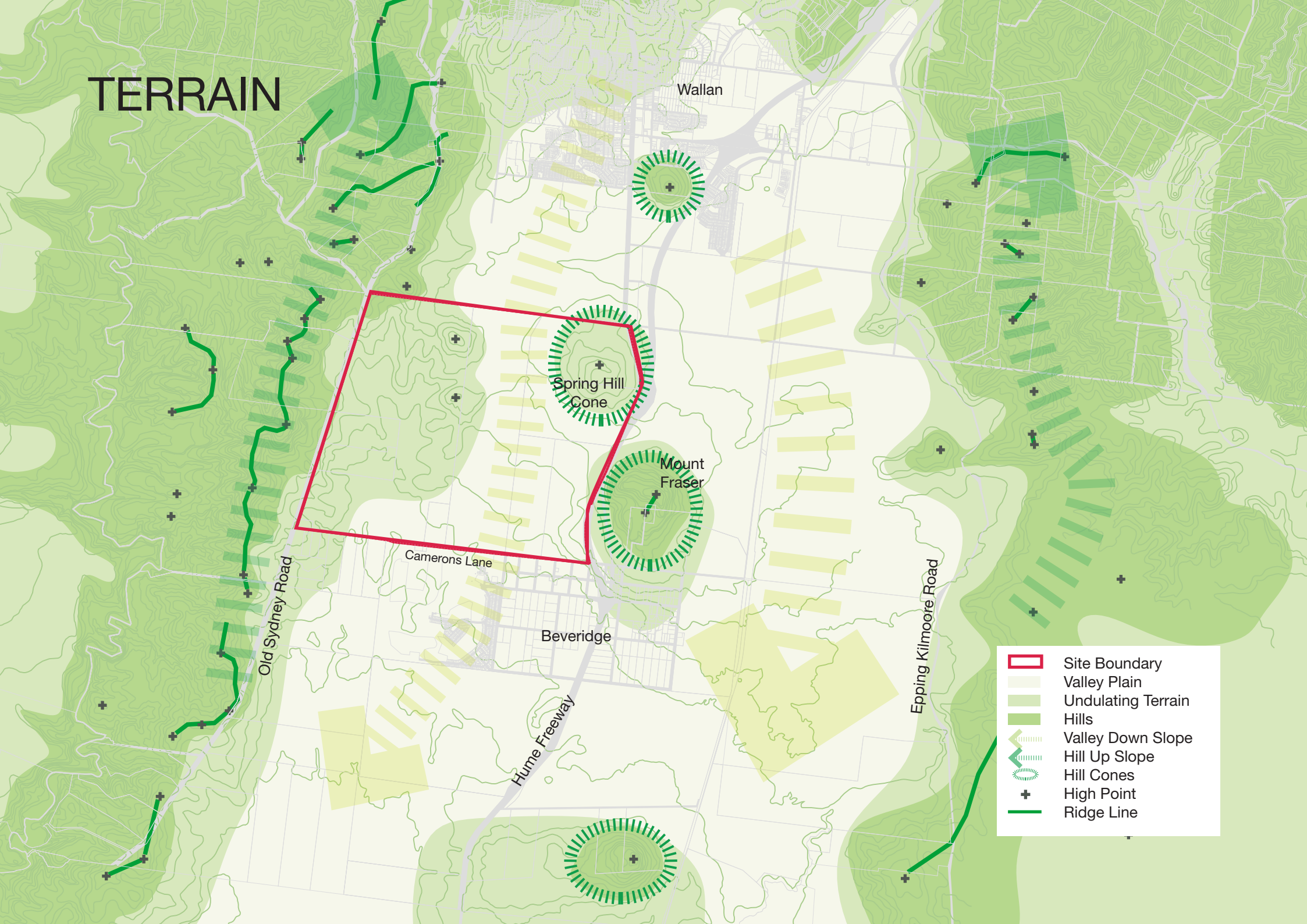
The boundaries between pastures are usually planted with rows of young trees and irregular planting is located along the creeks.

Existing Quarry
Potential Quarry

An operational quarry is located near the site at the foothills of Mount Fraser. While open cut rock faces have been concealed, trees surrounding the quarry are a prominent feature and the formal arrangement with non-native trees contrast the smooth pastured hill cone.

A potential quarry site is located on the northern boundary of precinct. The site incorporates the lower hill face of Spring Hill Cone.

TERRAIN


Wallan
Spring Hill Cone
Mount Fraser
Camerons Lane
Old Sydney Road
Beveridge
Hume Freeway
Epping Kilmoore Road
Site Boundary
Valley Plain
Undulating Terrain
Hills
Valley Down Slope
Hill Up Slope
Hill Cones
High Point
Ridge Line

Terrain in the Beveridge North West area can be best described as the intertwining of two landform typologies. The eastern Victorian plains with hill cones connecting up from Melbourne and hills, typical of eastern Victoria, connecting down from the north.

✚ High points offer views to the Melbourne CBD

Hill Cones

Cones are prominent hills that punctuate the centre of the Wallan Beveridge valley. While the height of the hill cones vary, all offer opportunities for long distant views.

They have few or no trees resulting in a smooth mounding and pastoral landscape in high contrast to the flat valley plain areas.

The cones are often dotted with small volcanic rocks and act as visual cues of the geological history as volcanic vents.

Hills
Hills Connection to Great Dividing Range

To the west of Old Sydney Road and to the east of Epping-Kilmore Road are a series of hills stretching to the Great Dividing Range. This landscape is representative of eastern Victoria with treed hills and ridge lines.

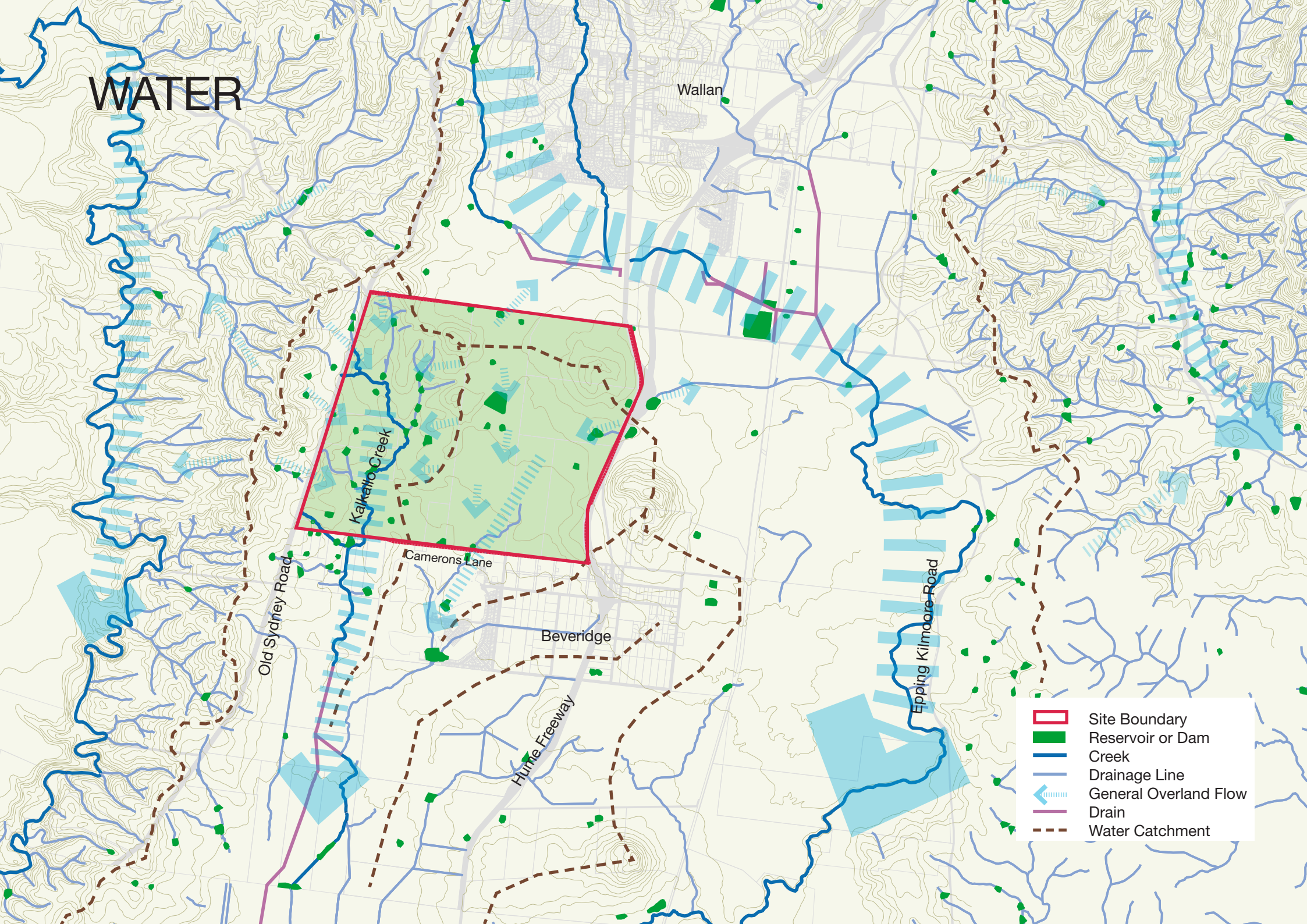
Valley Plain
Valley Connection to Melbourne

The Valley Plain is between Epping-Kilmore Road and Old Sydney Road and gently slopes south towards Melbourne beginning just north of Wallan.

Mount Fraser

Mount Fraser is a very prominent breached scoria cone that formed one of a small number of eruption points producing lava flows which covered much of the northern suburbs of Melbourne one million years ago.

An active quarry is removing scoria from the southern rim of the volcano, which is sold for various uses, including BBQ rocks.


WATER
Wallan
Kalkallo Creek
Camerons Lane
Old Sydney Road
Beveridge
Hume Freeway
Epping Kilmore Road
Site Boundary
Reservoir or Dam
Creek
Drainage Line
General Overland Flow
Drain
Water Catchment

Water flows from the north of the site to south through creeks and drainage lines that eventually connect to the Merri Creek, a tributary of the Yarra River in Melbourne. The primary water courses in the valley go around the site to the east.
The western half of the site is in a small gully catchment separate to all the other water flows located to the East.

Reservoir or Dam

The Beveridge North West precinct contains a number of constructed dams which range in size. This includes small farming dams and the larger Yarra Valley Water site reservoir.

Most are not visible in the landscape from a distance and instead appear as a mounds of earth and are not surrounded by trees.

Creek

Creeks within the precinct only flow during wet periods and are wider and deeper than drainage lines. They tend to meander through the landscape and the banks are eroded or have weedy tree species.

In some locations landowners have relocated stones from the fields and placed them in the Creek, potentially to help alleviate bank erosion.

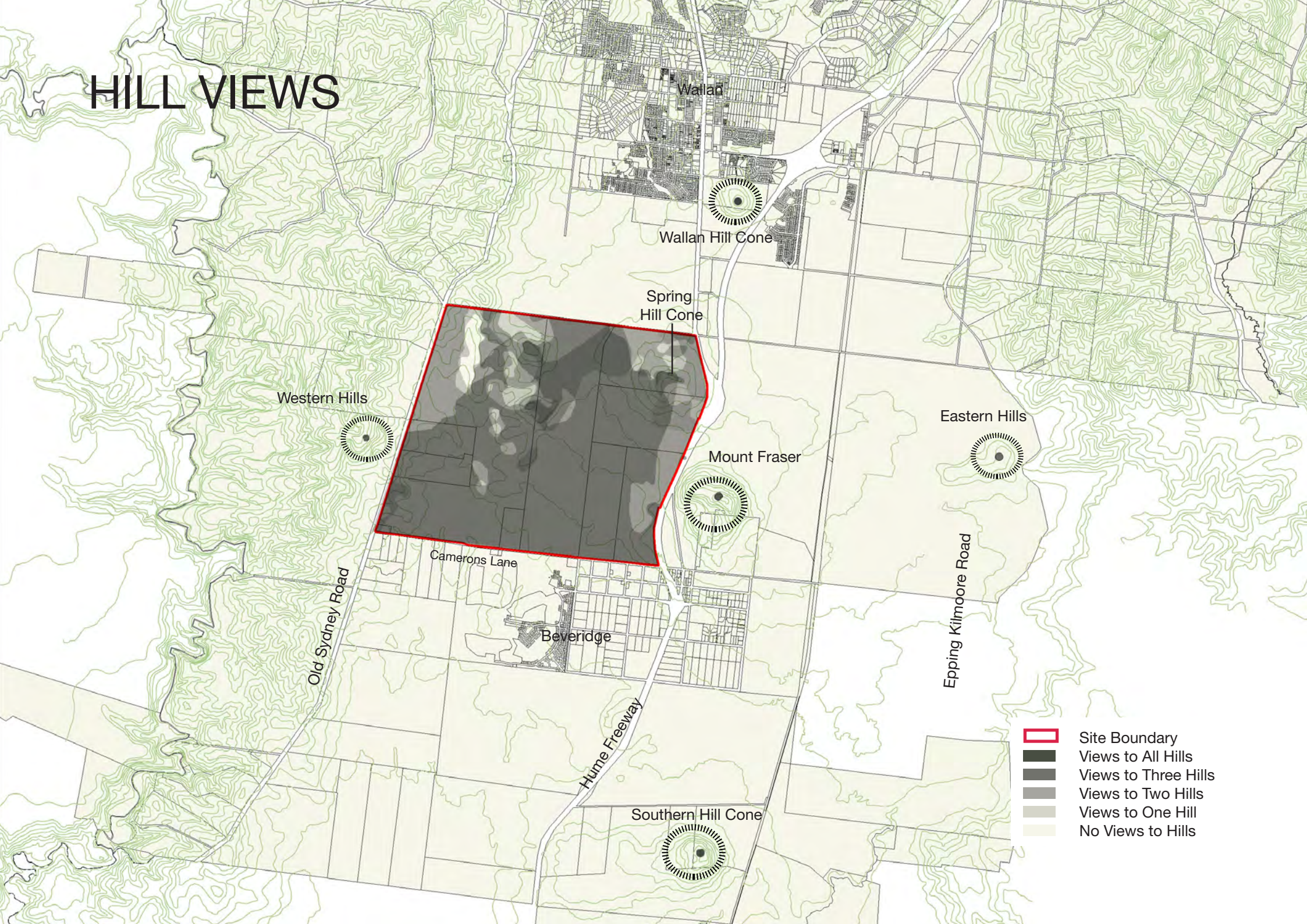
Drainage Line

Drainage lines are depressions in the flatter plains that carry rain water run off. They may be treed in some locations but are generally indistinguishable from a distance. Over time they generally erode into a ditch form.

Overland Flow

Generally, the overland flow is from north to south and the site is divided into three catchments. The east catchment drains into the Kalkallo Creek creating a more intimate scaled valley. The west drains south along the plain and eventually join the Kalkallo Creek. The north boundary of the site drains north away from the site.

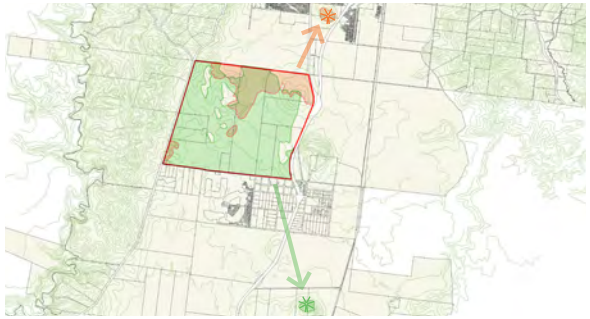
HILL VIEWS


Wallan
Wallan Hill Cone
Spring
Hill Cone
Western Hills
Eastern Hills
Mount Fraser
Camerons Lane
Old Sydney Road
Beveridge
Epping Kilmoore Road
Hume Freeway
Southern Hill Cone
Site Boundary
Views to All Hills
Views to Three Hills
Views to Two Hills
Views to One Hill
No Views to Hills

Views to surrounding hills help as visual guides in identifying an area as within a valley, on a plain or on the edge of foot hills. The view shed analysis is a study of landform and shows that most of the site has views of Mount Fraser and the Western Hills. The precinct's Spring Hill Cone has 360 degree views to all surrounding hills and is the best location to view and understand the overall terrain. It is noted that structures and vegetation may obscure long range views.

Views to Mount Fraser

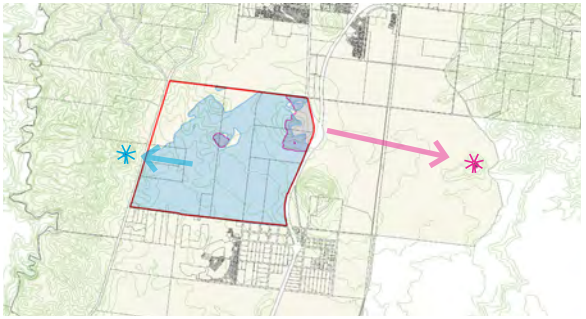
Mount Fraser is a dominant feature in the area and contrasts greatly with the flat terrain of the valley. The hill is visible from most of the site except some valleys in the north western part of the site and behind the Spring Hill Cone.



Views to Southern Hill Cone
Views to Wallan Hill Cone

A terrain study undertaken for this report indicates the Southern Hill Cone, south of Beveridge, is visible from most of the site. This is due to the land sloping south and the considerably higher rise of this hill, despite its location four kilometres away.

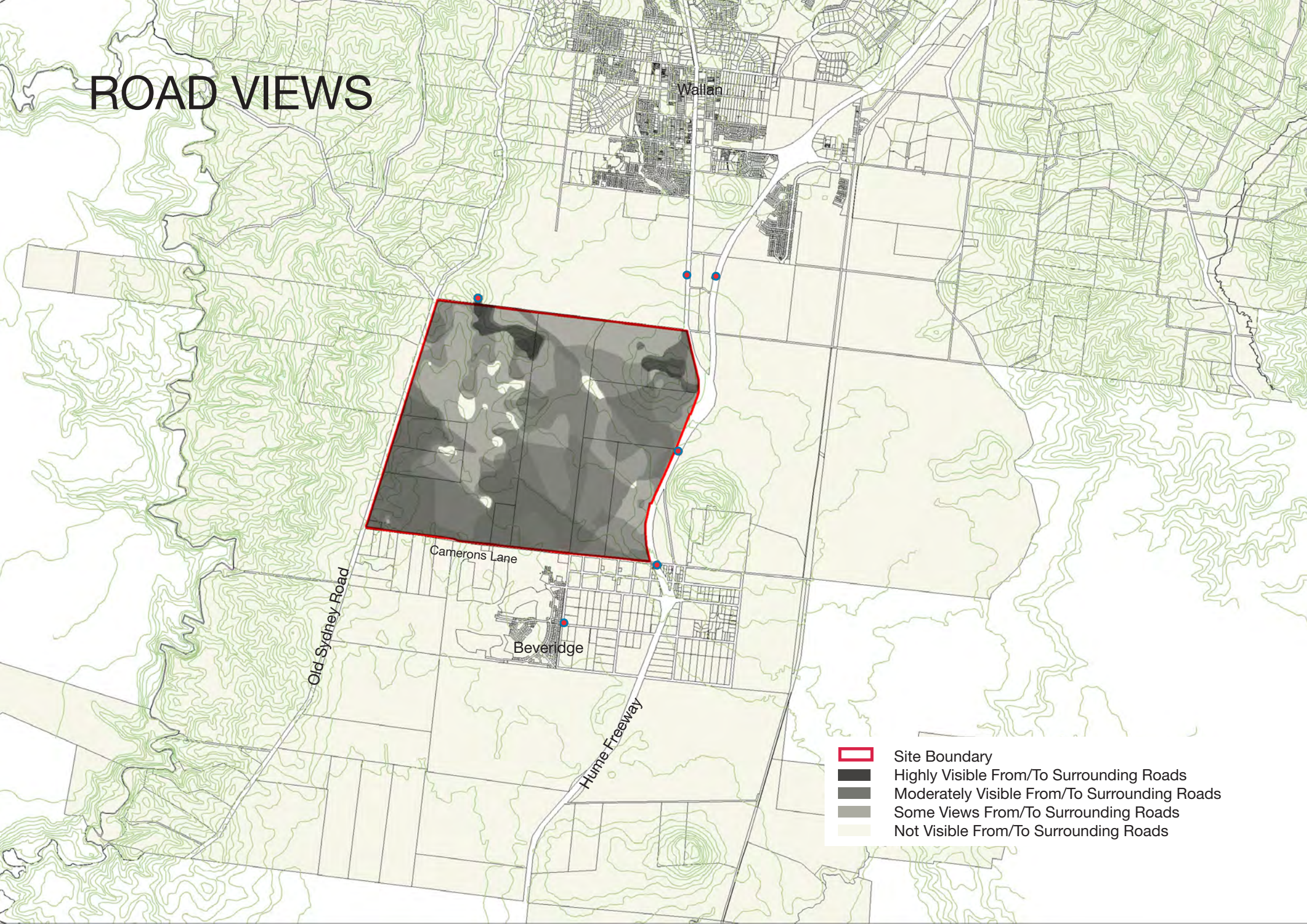
The Wallan Hill Cone may be considered a landform gateway to Wallan appearing between the Hume Freeway and the Northern Highway. It is lower than the other Hills and is not visible from the site except on the down slopes of the northern boundary and through a valley that is in the centre of the site.



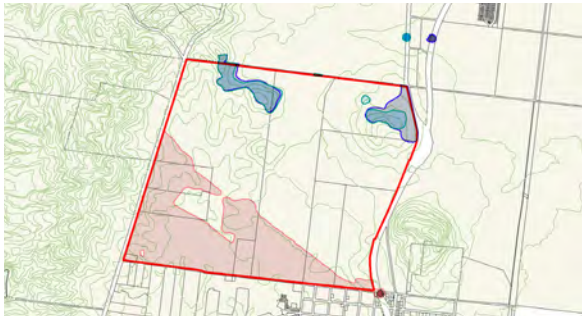
Views to Eastern Hills
Views to Western Hills

The hills to the west and east define the edges of the valley. Views to the extents of the valley act as visual markers and indicate the area is a valley rather than an open plain. The above analysis shows the eastern hills beyond the Epping-Kilmoore Road are not apparent from the site yet the eastern hills near Old Sydney Road are visible from everywhere except some minor on-site gullies.

ROAD VIEWS

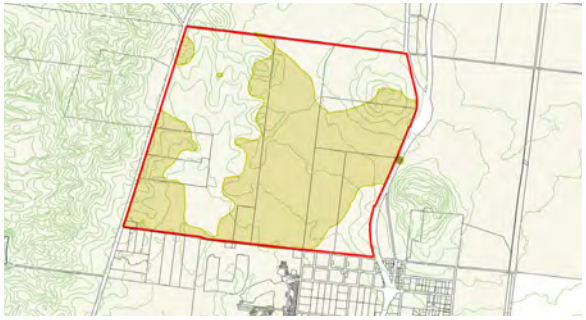

Wallan
Camerons Lane
Old Sydney Road
Beveridge
Hume Freeway
Site Boundary
Highly Visible From/To Surrounding Roads
Moderately Visible From/To Surrounding Roads
Some Views From/To Surrounding Roads
Not Visible From/To Surrounding Roads

Visual impact from roads can be defined in two directions: from future land uses within the site towards the road and views from the roads towards areas within the site. This report notes that both are not equal. Views from the central stretch of the Hume Freeway shown in the centre diagram below would be a momentary side glance toward the site. Yet, from within the site, the road would appear more invasive as a constant stream of traffic drives by.



Views To/From Northern Hwy
Views To/From North Hume Fwy
Views To/From South Hume Fwy

The most frequently viewed aspect of the site is from vehicles looking forward from the Hume Freeway, as well as the Northern Highway out of Wallan. From this aspect, the site is not overly visible with the northern rises being glimpsed from the road and the southern areas glimpsed before the Fraser Mountain cutting.

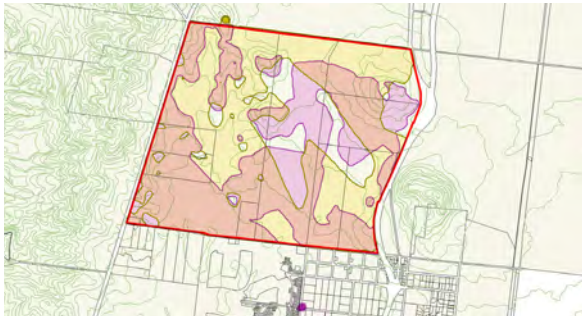


Views To/From Central Hume Fwy

Views west from the Hume Freeway provide the most extensive views of the site, although this is a sideway glance, at 110kph from a vehicle, and is also occasionally interrupted by trees.

However, the visual impact of the road from the site is significant as the road is highly exposed, it is the closest point, is not obscured by road cuttings or hills and is higher than the site.

Vegetative screening along the road edge would mitigate this visual intrusiveness of the roadway.



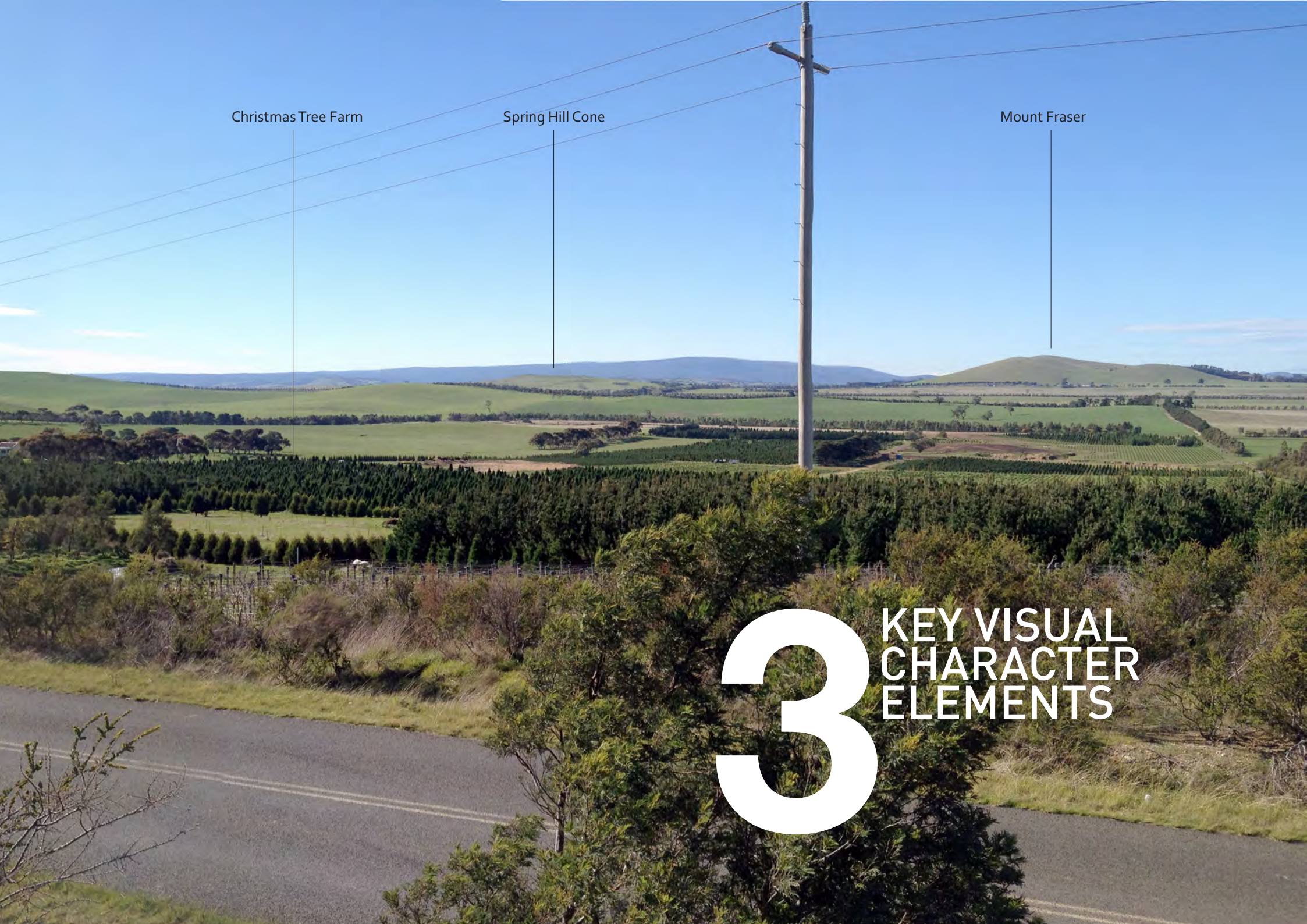
Views To/From North Boundary
Views To/From South Beveridge
Views To/From Both Directions

The hill at the northern boundary on the north west corner is a predominant high point that enables views across the site.

Views to and from Beveridge to the south would also be available from the southern areas of the site and the Spring Hill Cone.

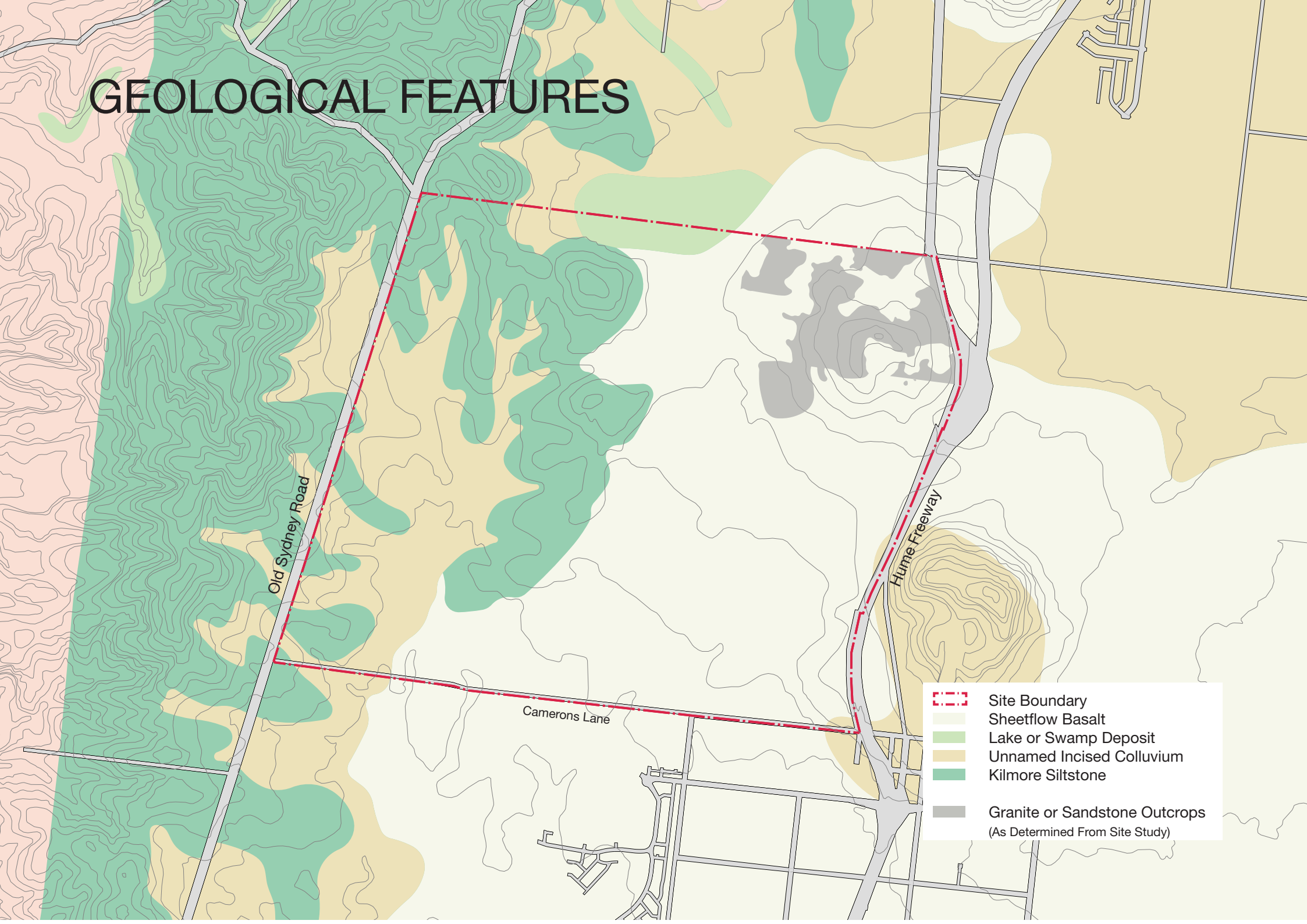
Views in both directions indicate flatter areas and high points.

West Of Old Sydney Road Looking East Towards The Site



3 KEY VISUAL CHARACTER ELEMENTS

GEOLOGICAL FEATURES



Sheetflow basalt is typical of the newer volcanic plains that dominate the north and west of Melbourne and are usually associated with thin clay loam soil overlaying heavy clay subsoils formed from decomposing basalt. The landscape is also typically littered with basalt boulders and cobbles.

Stone Outcrops

Granite, sandstone or scoria rocks are visible on the surface of pastures due to farming practices (such as ploughing) causing rocks to percolate to the surface, erosion or simply a natural occurrence.

The map shows areas where stones have not been removed from pastures and are embedded in the surface. Although an extensive survey of all locations has not been undertaken stones that remain in situ in the area shown are typical of the Hill Cone character area.

Stone Piles

Farmers have removed embedded stones from the fields to establish smooth pasture for grazing or crops. The stones have been piled at various locations across the site creating an interesting feature in this otherwise featureless landscape. Over time, groups of trees have grown in and around some stone piles.

The pile locations do not need to be a fixed feature of the landscape as their placement is random yet it would be considered indicative of this character if these features are integrated into any landscape design to maintain a connection to the farming past.

Creek Edges

Farmers have placed stones along the Creek edges, potentially to help control erosion.

Unnamed Incised Colluvium

Unnamed incised colluvium deposits associated with drainage corridors and creeks occur in the western portion of the site.

TREES


Old Sydney Road
Camerons Lane
Hume Freeway
Site Boundary
Very High Rated
High Rated
Moderate/Low Rated
Low Rated (Tree Plantation)

An arboricultural assessment was carried out on the site that rated trees from Very High to Low as described below. Trees rated Very high and High are recommended to be retained. Although Moderate and Low rated trees are not all recommended to be removed, they are considered of low health and may require considerable management to enable retention.

Very High Rated

Individual trees and groupings rated as Very High are considered to be in good condition and a prominent arboricultural feature. These trees are considered capable of tolerating changes in the environment, if managed appropriately.

High Rated

Trees of High quality are generally of sound structural condition and good health. These trees have the potential to become a prominent landscape feature.

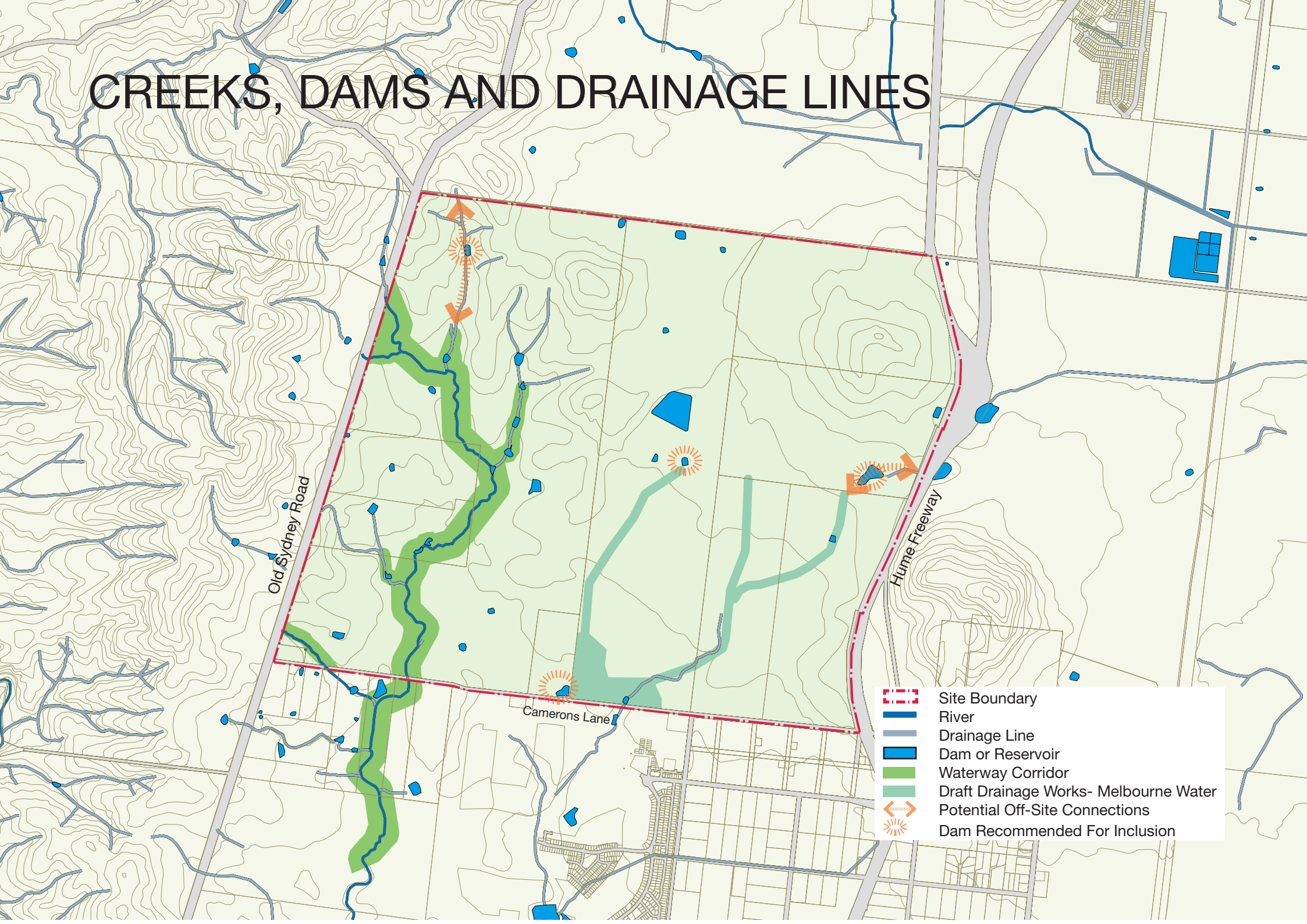
Moderate/Low Rated

Trees considered less than High rated are considered to be less tolerant of development associated modifications, have a structure that is prone to failure or cause injury, or is of a size that does not provide a contribution to the landscape.

Low Rated (Tree Plantation)

Plantation trees located on a Christmas Tree farm are low rated and are not considered to be of arboricultural interest although they do offer an agricultural interest.

CREEKS, DAMS AND DRAINAGE LINES



Dams, creeks and drainage lines are features of the landscape that define some character areas more than others. The waterways of the Creek Side Hills are and integral part of defining this character area, yet the drainage lines in the Open Plains character area are far less apparent and provide simply a functional role. Dams are scattered throughout the site and through out the valley.

Waterway Corridor

The water way corridor is an ephemeral creek with dams located along or next to it. Although it is in poor condition with eroded banks it is a unique and defining feature of the Creek Side Hills character area and should be rehabilitated and integrated into future development.

Draft Drainage Works

Melbourne Water has identified drainage lines across the site that would need to be integrated into any future development.

These lines are not visually prominent but do provide a water flow function.

Potential Off Site Connections

Two locations are indicated as providing opportunity for connections between the existing waterways/ drainage lines to off-site locations. These connections incorporate existing dams along the route.

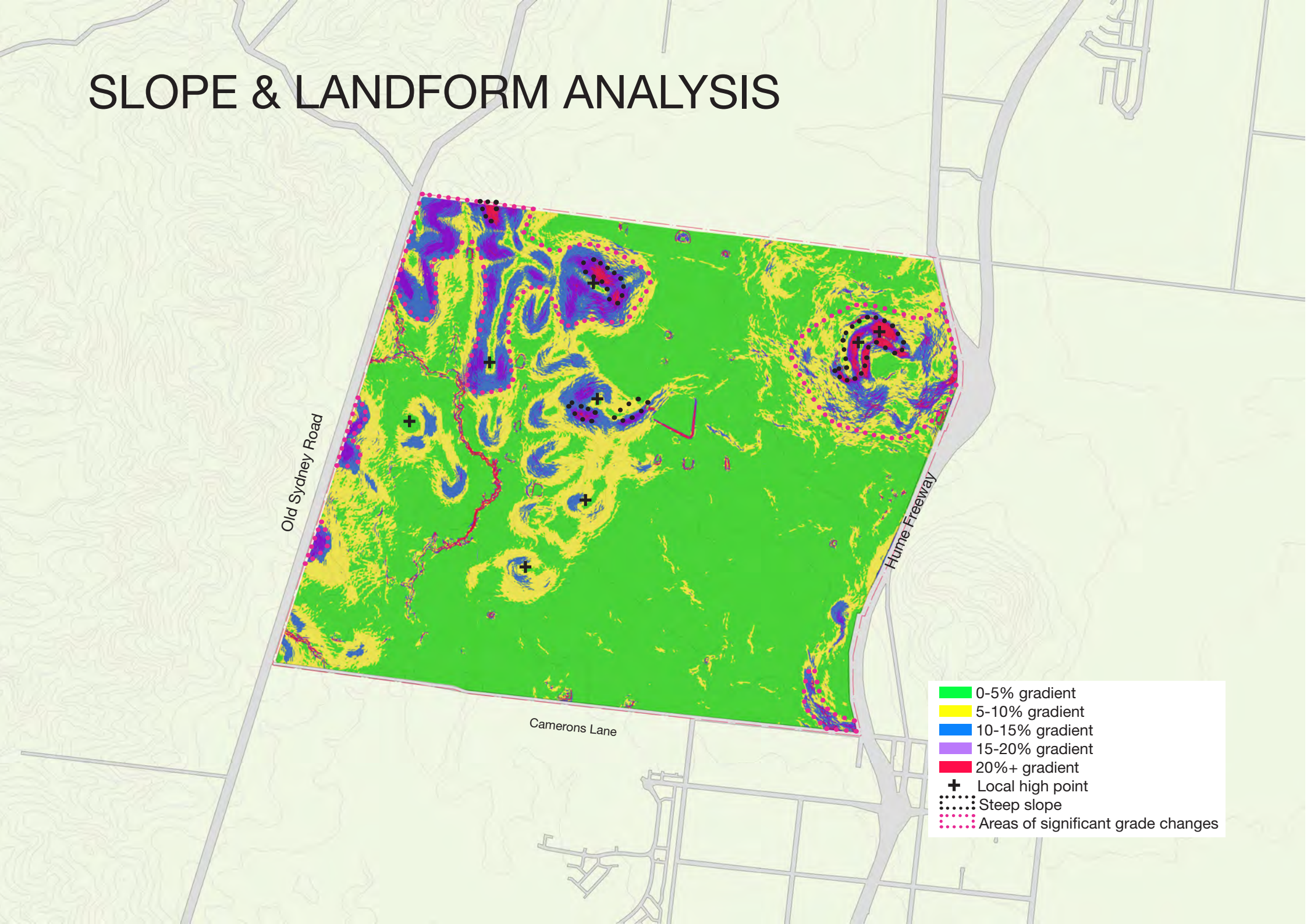
The link north west of the site is a gully that connects to a treed area off site and has the potential to act as a wildlife corridor or nature trail.

The link on the eastern boundary incorporates a dam and captures an existing small creek.

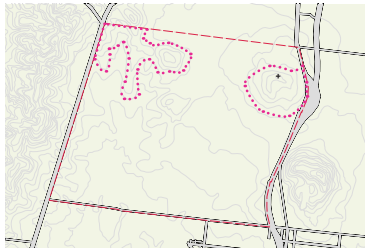
Dam recommended for inclusion

Dams, although often visually hidden in the landscape, are still typical of the rural pasture land. Retention of some of the dams associated with waterways would provide an alternative experience of water that could be present all year round.

SLOPE & LANDFORM ANALYSIS

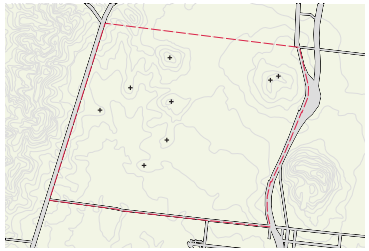


The hilly topography of the site and surrounding areas may act as a constraint on development. A slope analysis has been undertaken to identify areas that are affected by the topographic constraints. Contour data provided by the MPA was analysed using computer modelling. The map to the left outlines the slopes at 5 per cent increments, up to 20 percent. It is considered that land above 10 per cent will require more sensitive and responsive built form designs.



Areas of Significant Grade Changes

Areas of significant grade changes are identified as large areas with a break of slope. These areas may change from flat to 20% or more in grade and are considered a significant landform feature.



\+ Local high point

Tops of hills are high points that offer views to surrounding areas. Development on these areas points would dominate the landscape.

10-15% Gradient

Land with a gradient of 10-15% is fairly dispersed, but is generally found to the west and the north of the site. Land at this slope is predominately found at the hill cone and along waterway corridors. Small areas are located along the western boundary and near the south-east corner of the site.

Development on this gradient would require more sensitive urban and build form design.

15-20% Gradient

Land with a gradient of 15-20% is primarily located to the north of the site in areas abutting waterways and at the steeply sloped hill cone. Land at this gradient is fairly dispersed across the site and covers relatively small areas of land.

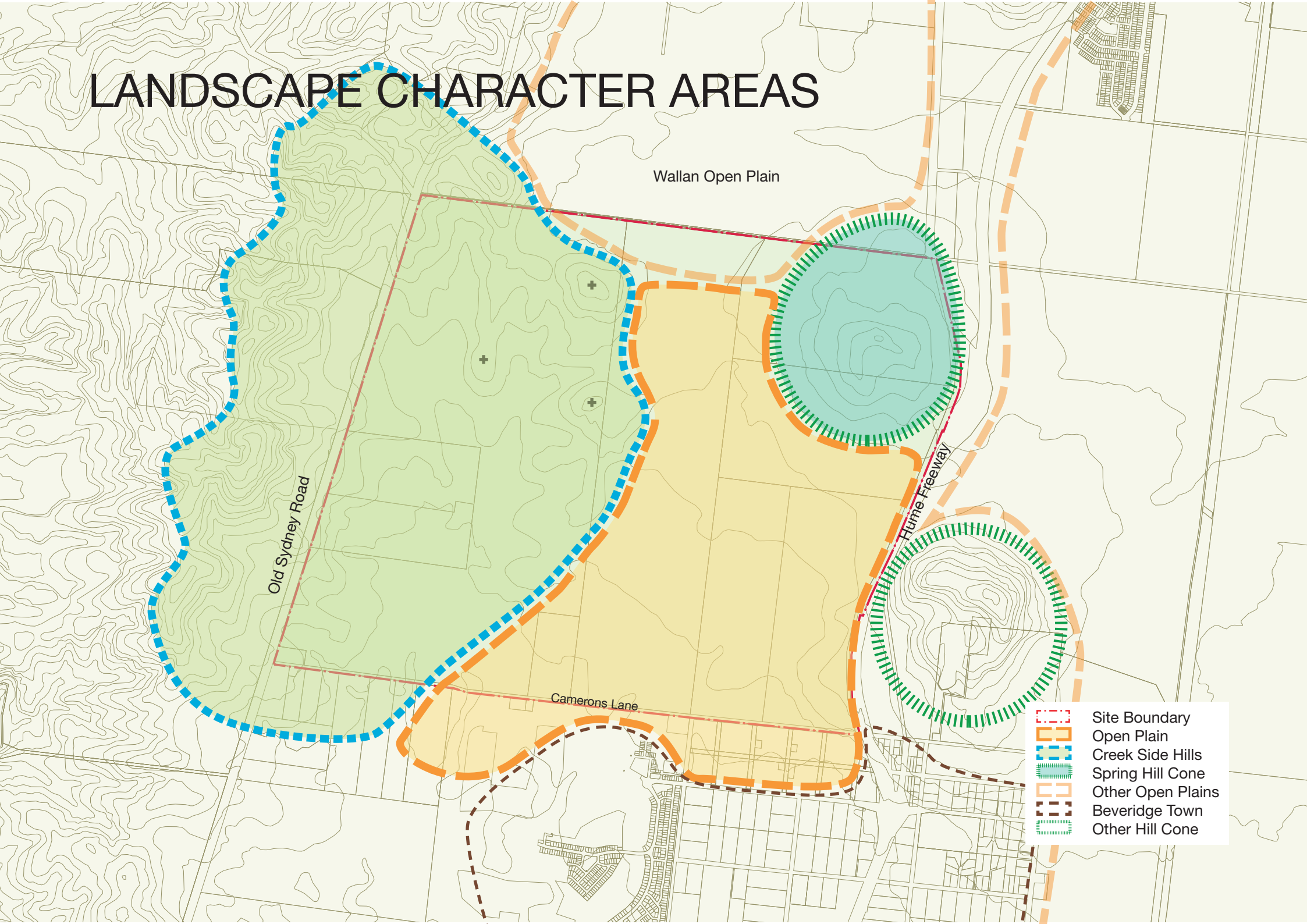
Development on this gradient would require more sensitive urban and build form design.

20%+ Gradient
Steep slope

Very little of the site has a gradient of more than 20%. Land at this gradient is fairly dispersed but is generally found around the hill cone and along waterway corridors. It covers small, discontinuous areas of land.

Areas with 20% slope or more are not recommended for development as the amount of excavation required would destroy the landform character.

LANDSCAPE CHARACTER AREAS



Character areas are identified by synthesising the findings of the previous sections and take into account land use, landform, water and its impact on the land, and views to and from these character elements.
Three distinctive landscapes character areas identified within and around the precinct are defined below.

Open Plain

The Open Plain character area is generally flat with minimal tree planting. There are long views to and from this area to the surrounding context. This character area typifies the Western Plains of Victoria and has a connection to Northern Melbourne and slopes in that direction.

It is bounded by the change in terrain on the west, the hobby farms and new development in Beveridge to the south, the Hume Freeway to the east and the base of Spring Hill Cone.

To the north is the Wallan Open Plain which slopes towards Wallan creating a minimal ridge line and separate catchment between the two plains.

Creek Side Hills

The Creek Side Hills character area is located to the west of the site, it has more tree planting, has more rises and falls and is a result of the Kalkallo Creek meandering through the terrain.

Views to and from this area are more obscured with long views from high points that encircle the creek. This area is representative of the Eastern areas of Victoria.

The hills to the west of Old Sydney Road complete the edges of this valley character area and changes in terrain slope mark the eastern edge.

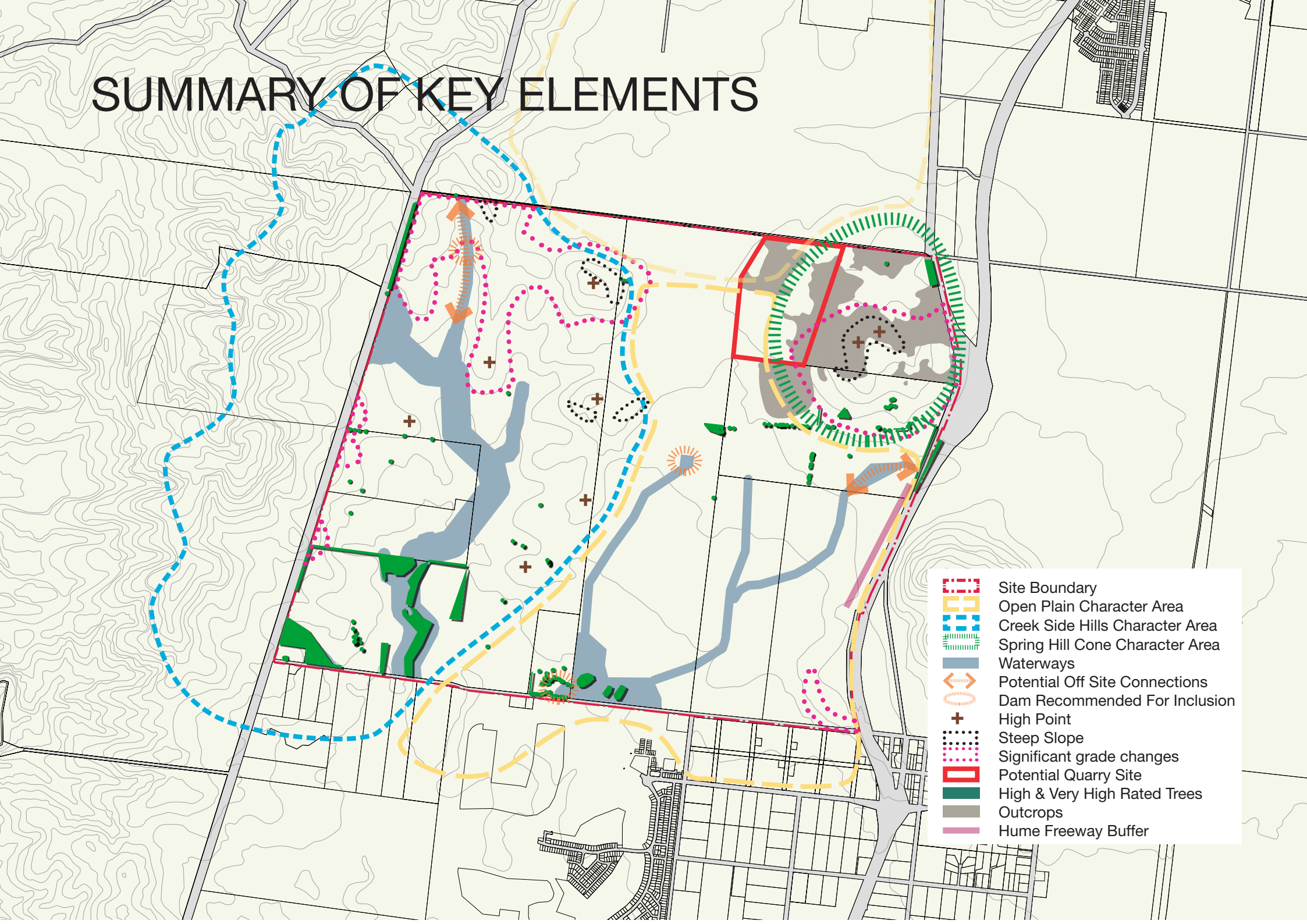
Spring Hill Cone

The on site hill cone is part of a series of cones that run north-south in the centre of the wider valley. It has few trees which is typical of the hill cones and a rocky pasture surface.

The Hill provides 360 degree views to Wallan, Beveridge and also to Melbourne City.

The Hume Freeway marks the eastern boundary of the character area and the changes in grade to the north open plain marks the northern edge.

SUMMARY OF KEY ELEMENTS



The key landscape elements shown below summarise the previous pages looking specifically at elements that require recommendations to maintain a sense of the existing character of each of the character areas.
The topic areas are divided into four sections- character areas, waterways, slope and landscape.

CHARACTER AREAS

Open Plain Character Area
Creek Side Hills Character Area
Spring Hill Cone Character Area

The three character areas require different approaches to development to help maintain a sense of place.

The Open Plain area has minimal features with a few trees that should be retained.

The Creek Side Hills area is part of the western hills character area forming a bowl around the Kalkallo Creek.

The Spring Hill Cone area is a highly visible prominent visual feature, with a smooth land form of few features and a rocky outcrop surface.

WATERWAYS

Waterways
Potential Off Site Connections
Dam Recommended For Inclusion

The waterway corridor elements provide an opportunity for integrating water and creek features into development. Dams provide the opportunity for a year round water feature as opposed to the ephemeral creeks and drainage lines.
Connections along existing drainage lines to the surrounding context can complete drainage catchments and provide open space linkages.

LANDFORM

High Point
Steep Slope
Significant Grade Changes
Potential Quarry Site

High points provide remarkable views across the valley and would best be integrated into the public realm.

Steep slopes in a few locations on the site may result in overly visible development through retaining walls which would best be avoided.

The potential quarry site will be highly visible on the Spring Hill Cone slope from Wallan to Beveridge and would require mitigation.

LANDSCAPE

High & Very High Rated Trees
Outcrops
Hume Freeway Buffer

Trees rated Very High and High are established, prominent and in good condition. Retaining existing trees can provide a positive feature to new development.

The Stone Outcrops are an important feature in defining the Spring Hill Cone character area and is best retained where possible.

While some of the Hume Highway is obscured by a cutting, it generally dominates the landscape. Its visual impact could be mitigated through the use of a small landscape buffer.

Camerons Lane Looking North East

4 CASE STUDIES

Typical Stone On Site

INTRODUCTION

Several of the key elements and features found within the precinct are examined in more detail in this chapter. The purpose of the case studies is to demonstrate how such elements have been managed and interpreted at other local developments, including the following:

- Built form on sloping sites
- Creek rehabilitation: Mills Park Lake Village
- Quarry interfaces: Boral Quarry in Epping
- Hill conservation: Quarry Hills Bushland Park
- Retention of existing trees: Lyndarum Estate

The findings of the case studies will assist in identifying key recommendations for the Beveridge North-West precinct.

BUILT FORM ON SLOPING SITES

Built form on sloping sites should be designed to accentuate the existing topography of the area. This may be achieved by designs that are responsive to the gradient of the land such as the use of split level designs and the considered lay out of built form volumes.
Dwellings should maintain a built form presence to the street. Tall retaining walls, or roof lines located below street level should be avoided.
Development should avoid protruding above the surrounding tree level or above any significant ridgelines.
Significant cut and fill of site should be limited where possible on sloping sites. This helps to better maintain the quality and quantity of stormwater traversing the site and minimises any detriment to surrounding sites.

Example One: Side Slope

A split level design is used to respond to the slope of the site.

While the dwelling sits above the street level a pitched roof is used to reduce the visual bulk of the building. This is further accentuated by the set back and reduced size of the upper level.

Example Two: Down Hill Slope

The dwelling is comprised of three levels which respond to the downward slope of the street. Dwelling access points (front door entry, garage) are level with the street front and a built form presence is maintained across the entire length of the street elevation.

The built form reads as three stepped volumes, accentuating the terrain.

The wider lot means changes in slope from the road can be easily incorporated.

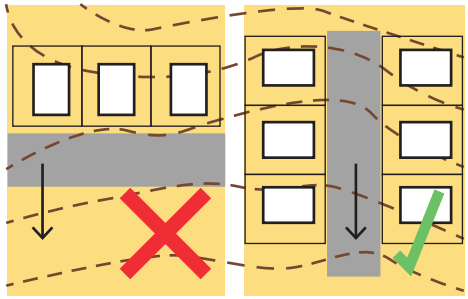
Example Three: Up Hill Slope

The dwelling is located on the up hill slope of a road that follows the contour. The driveway is constructed up the slope due to the thin lot frontage and the opportunity to build across the slope. The dwelling appears bulky in form due to lack of opportunity to incorporate level changes within the building.

Example Four: Retaining Walls

Dwellings on significant up hill slopes require many or large retaining walls. Integrating planting between walls can help to reduce the visual bulk of the walls.

STREET LAYOUT SOLUTION



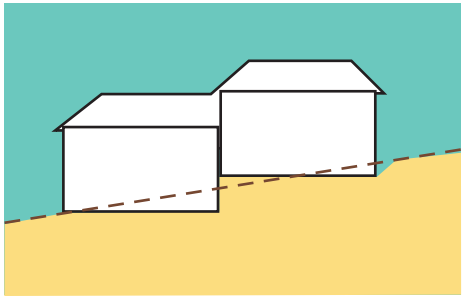
✕ Avoid Building On Up Hill Slope

✓ Orient Roads So Houses Are Across The Slope

Dwellings on significant up hill slopes require many or large retaining walls to cater for the changes in grade.

Lots position perpendicular to the slope require side retaining walls that are less visible from the street and garages can be placed at a lower level to take up the slope in the building form.

BUILDING DESIGN SOLUTION

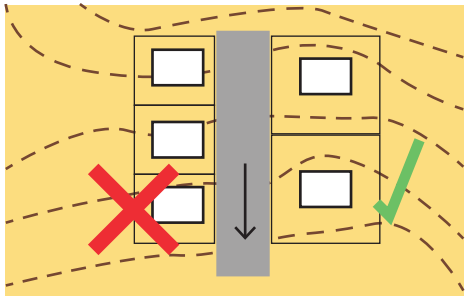


Use Split Level Buildings

Avoid Major Disturbance to the Slope

Building designs should incorporate site slopes into the building design through the use of split levels or the incorporation of the slope into the second floor.
Large retaining walls should be avoided.

LOT SIZE SOLUTION

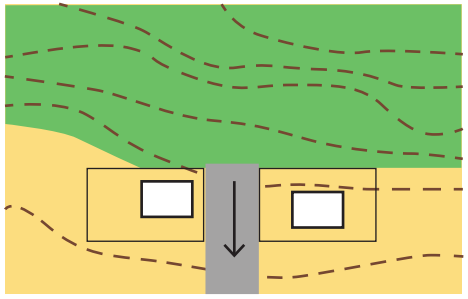


✕ Small lots with small setback require large retaining walls

✓ Large lots can grade soil to adjust slope

Small lots with small setbacks cannot require large retaining walls or high floor levels to incorporate the changes in levels.
Lots should be large with large setbacks between the boundaries and building so changes in slope can graded into the site.

OPEN SPACE SOLUTION



Areas With Slope Greater 20%

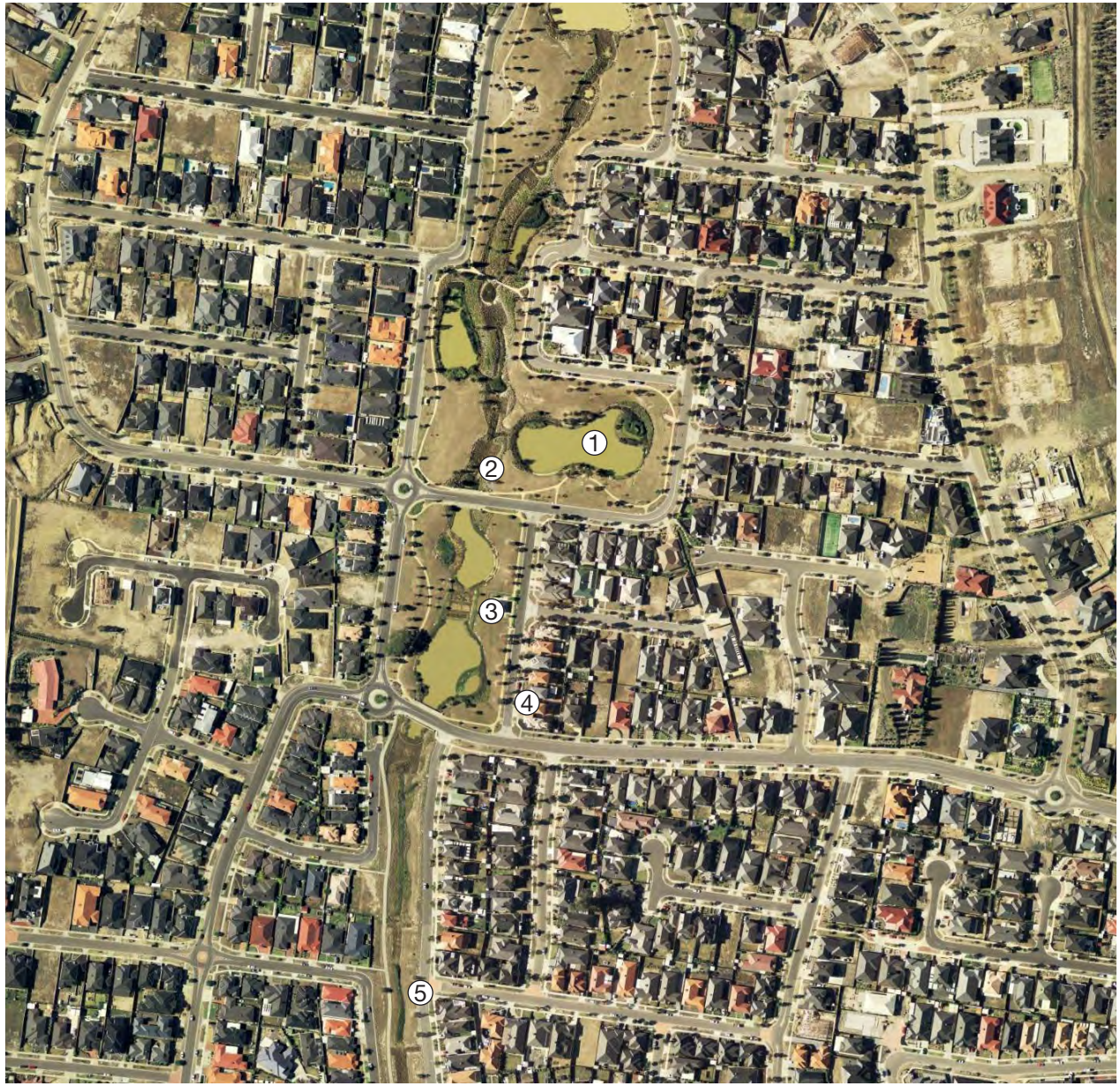
Areas of 20% slope should be set aside as areas of open space and should not be developed. This avoids large scarring of the land and the need for major earth works that significantly modify the landform.

CREEK REHABILITATION

A key feature of the open space network at Mills Park Lake Village, South Morang is the linear park adjacent to Hendersons Creek. The park balances development and conservation and provides an example of how creek rehabilitation may be achieved in establishing residential areas.

The existing course of the creek is largely retained, but the waterway has been enhanced by the establishment of wetlands. Created through a series of dams along the creek, native grasses have been established in the wetlands and the rehabilitated creek provides a habitat for local fauna.

A network of continuous walking tracks, a BBQ shelter and a number of crossing opportunities encourages active uses along the creek. This is enhanced by the orientation of houses to face the park, which results in active interfaces to the park and increases passive surveillance.



① A series of dams along the course of the Creek is used to create a series of wetlands. Native grasses have been established. The rehabilitated creek environment also provides a habitat for local fauna.

② The water volume is left unaltered at this point, indicating the natural water levels of the Creek.

③ Public facilities within the park include continuous shared pathways, frequent pedestrian bridges and a BBQ shelter.

④ Houses are oriented with front elevations facing the park to provide an attractive interface and passive surveillance. The use of front fencing is minimised.

⑤ Physical connections are maintained to open space networks beyond the Village.

QUARRY INTERFACES

The Boral Quarry in Epping offers a number of examples on how interfaces between an operational quarry and establishing residential areas can be positively managed. These measures reduce the visual impact of site from surrounding properties and roads.

A significant area of open space area is located around the quarry. Grass is maintained within the open space area and trees are planted around the entire perimeter. The Quarry Hills Bushland Park is located to the east of the site, increasing the buffer distance between the quarry and nearby residential housing.

Transmission lines have been co-located with the quarry site and run along the southern boundary. This maximises the use of the open space area.

① A single access point to the quarry is located off Findon Road to better manage traffic flows from the quarry.

② Open space buffers are located around the quarry. Transmission lines are co-located to the south of the quarry.

③ The visual impact of the quarry from adjacent residential areas has been reduced through the use of canopy trees around the perimeter of the site.

④ The orientation of roads and pathways in the surrounding areas limit direct views towards the quarry.

⑤ Residential lots do not directly front the quarry site or the adjacent buffer zone.

⑥ Quarry Mill Park is located to the east of the site. Additional tree planting is provided to the western edge of the park.

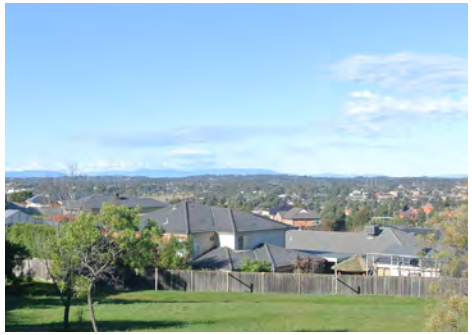
Ridge Line protects views from neighbouring residential area

HILL CONSERVATION ZONES

The Quarry Hills Bushland Park is a regional park located to the east of an operational quarry site (Boral Quarry). Covering over 114 hectares, the park encompasses areas of steeply sloping terrain and has been set aside to protect bushlands, grasslands and areas of geological significance.

The site offers elevated panoramic views above recent development and across to nearby ranges and includes a network of walking trails. A series of sculptural viewing shelters and high quality interpretive signs are provided at scenic resting points along the trail. A visitor car park has also been incorporated into the open space design.

The use of elevated areas as protected parkland and recreational space provides a scenic backdrop to residential development in the area and preserves the undulating quality of the landscape.



RETENTION OF EXISTING TREES

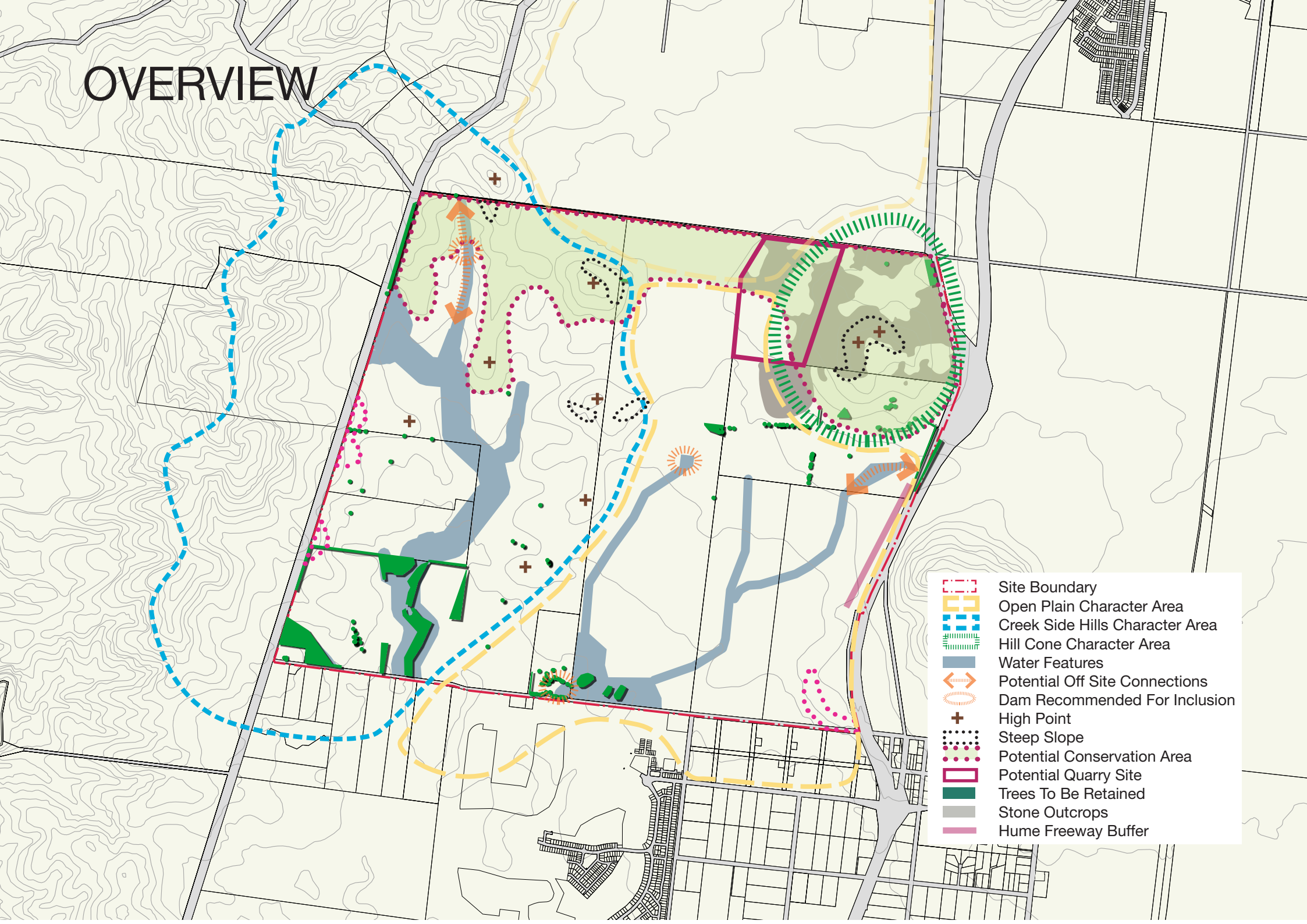
Lyndarum Estate in Epping offers a number of examples on how existing trees may be integrated into new residential development. With over a quarter of the Estate dedicated to open space, a significant number of established River Red Gums have been retained. The preservation of the Gums is further enhanced by the arrangement of open spaces, with linear networks of wetlands and easements used to maintain ecological connectivity across the Estate.

The subdivision layout responds to location of significant vegetation, with local roads designed to sweep around larger trees. Local roads are laid out to create viewlines towards trees, which act as landmarks to delineate key nodes and intersections. Fencing is minimised around the trees and housing has been oriented to face open space.

View South On Yarra Waters Site Towards Camerons Lane

5 RECOMMENDATIONS

OVERVIEW


Site Boundary
Open Plain Character Area
Creek Side Hills Character Area
Hill Cone Character Area
Water Features
Potential Off Site Connections
Dam Recommended For Inclusion
High Point
Steep Slope
Potential Conservation Area
Potential Quarry Site
Trees To Be Retained
Stone Outcrops
Hume Freeway Buffer

The following recommendations are derived from an analysis of the key visual and landscape elements of the Beveridge North West precinct and an assessment of the case study sites. It is considered that the recommendations implement the following objectives of the Precinct Structure Planning Guidelines:

- Image and character
- Open space and natural systems
- Integrated water cycle management.

LANDSCAPE CHARACTER AREAS

Reflect the key characteristics (as listed below) of the landscape character areas in new development.

- Open Plain:
  Retain significant trees and waterway features
- Creek Side Hills:
  Retain undulating topography and the creek valley
- Spring Hill Cone:
  Retain the smooth land form and rock outcropped surface free of buildings and major alterations to the landform.

Further recommendations relating to the landscape character areas are outlined in the following pages of this recommendations chapter.

WATERWAYS

Provide pedestrian and visual connections along waterway corridors.

Retain existing dams where possible to provide wetland and water features.

Utilise waterway corridors to provide linkages between open space areas.

Extend connections along waterways where identified to provide additional linkages to surrounding areas.

Development along creeks and water features should front these spaces to provide an attractive interface and passive surveillance. Minimal fencing should be used along these interfaces.

LANDFORM

Retain Spring Hill Cone as a significant visual landmark in the area.

Utilise high points to provide public views over the surrounding landscape.

Development on undulating landforms should incorporate larger lot sizes and frontages to allow for more sensitive development.

Buildings on steeper slopes (e.g. >20%) should be avoided.

Lay out roadways to minimise sites that slope uphill from roadways.

Any quarry developed on the site should avoid the Spring Hill Cone slopes if possible, and be well screened by informal native or indigenous planting.

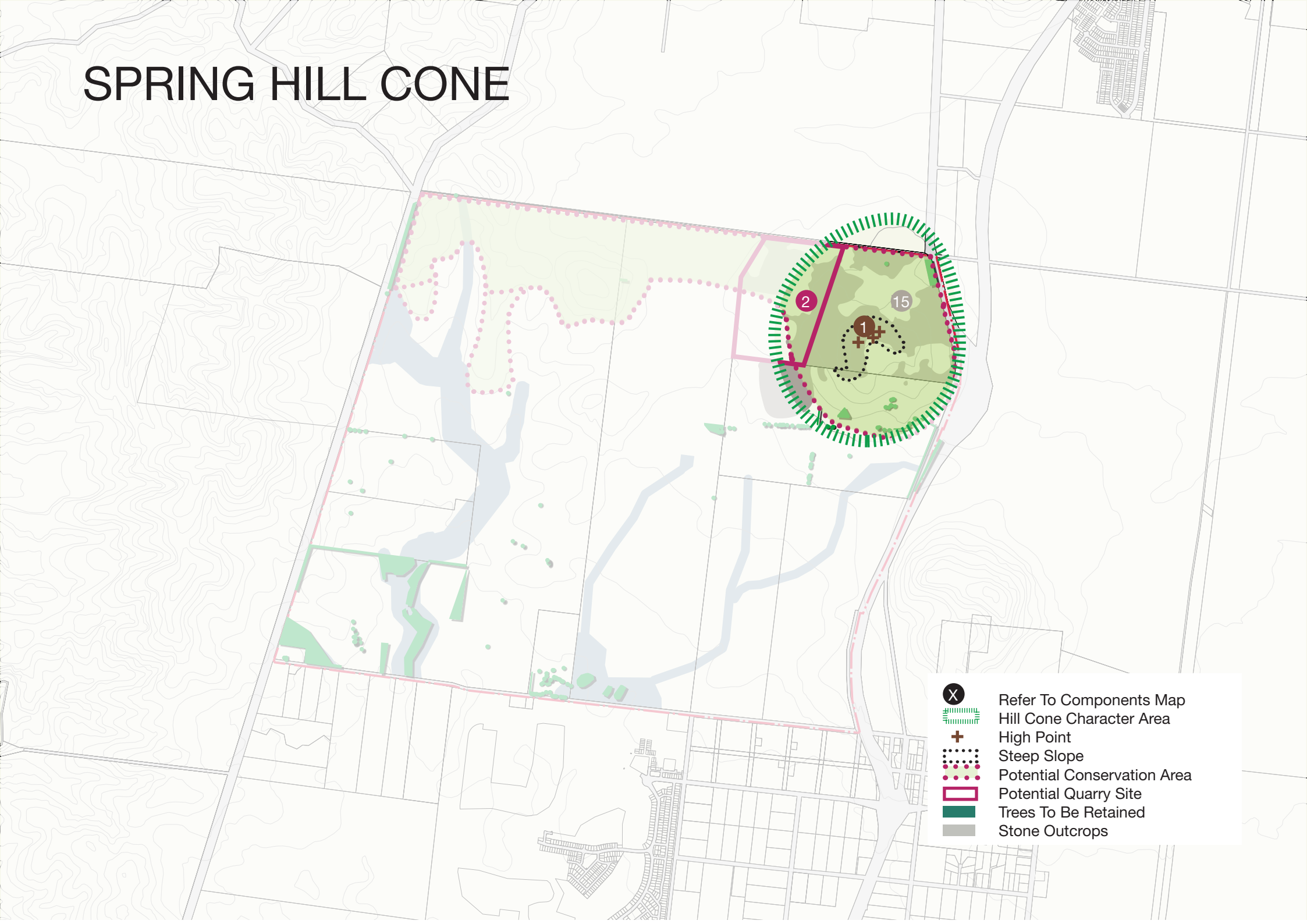
LANDSCAPE

Retain identified High and Very High Value trees, preferably within the public realm (e.g. along roadsides, public open space).

Retain stone outcrops and incorporate into public realm where possible.

Provide vegetative screening along the Hume Highway interface where elevated above the site.

SPRING HILL CONE



CHARACTER AREA RECOMMENDATIONS: SPRING HILL CONE

The Spring Hill Cone has the highest significance of the three identified landscape character areas. This character area is considered more significant due to its high visibility from long and short distances and the quality of the landscape.

VISUAL SIGNIFICANCE

View From Spring Hill Cone Towards Mount Fraser

As a single landform, the Spring Hill Cone is the most significant landscape feature of the precinct because of its visual prominence from surrounding areas, particularly along the Hume Freeway.

This land form is a significant feature both as a single hill and as its role in the series of cone hills which punctuate the valley from north to south.

LANDSCAPE SIGNIFICANCE

View Up Spring Cone Hill

The landscape quality of the Spring Hill Cone is significant due to its stoney surface and the lack of planting. This creates a smooth pastured landform that represents the typical Hill Cones in the valley. The lack of trees also create open views across the site to all directions.

RECOMMENDATIONS: OVERALL

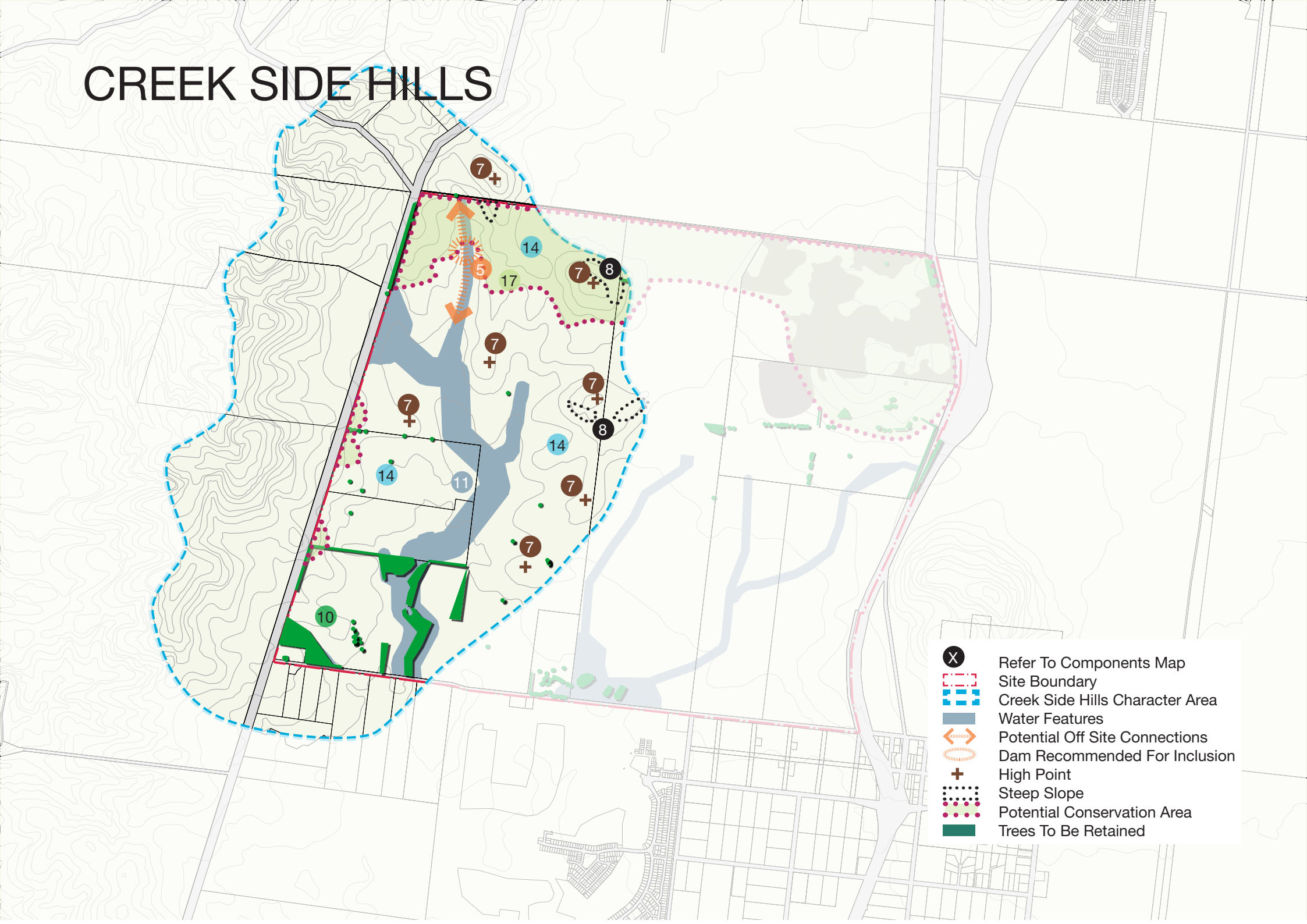
View From Spring Hill West

Any built form or development on the Spring Hill Cone would be highly visible from most locations in the valley. Furthermore, it would require significant earthworks to establish functional road gradients and viable building sites.

The landscape and visual assessment undertaken for the site considers the site significant enough to remain undeveloped and to be used as public open space. This could be enhanced through the use low height landscaping and possibly a viewing platform.

Components indicated are detailed further on the Components page of this report. (Page 59)

CREEK SIDE HILLS



CHARACTER AREA RECOMMENDATIONS: CREEK SIDE HILLS

The Creek Side Hills character area is considered less significant in terms of visual assessment compared to the Spring Hill Cone area as it is less visible from longer distances. Therefore development would have less of a visual impact on the surrounding context. Although, the landscape is more significant in places with some components of higher significance, development that is sensitive to landform and does not impact significant components would be more acceptable.

RECOMMENDATIONS: OVERALL

The Creek Side Hills landscape character area has an undulating terrain that creates a system of intimate valleys. Development in this area should be discouraged from using large retaining walls or raised foundations.

To better integrate development with the undulating terrain, lots in this character area should be designed to be larger in size with large side setbacks. Areas of steep slope (above 20%) are not be recommended for development due to the significant earth works required.

Development in this area can be better integrated into landscapes if roads are aligned to be perpendicular to the contours to create lots sloped to the side, rather than to the front or rear.

RECOMMENDATIONS: WATER FEATURES

Water Features

The Kalkallo Creek landscape character area has difficult terrain that would require detailed land forming and drainage to facilitate development. As this feature is important for drainage and defines the character of the area as a strong visual element and a functional landscape element, it is recommended that the space be used as lineal open space.

The case study example of creek rehabilitation at Mills Park Lake Village is an example how water in this location can be retained throughout the year and a the corridor can be used for ecological as well as recreational purposes.

RECOMMENDATIONS: OTHER COMPONENTS

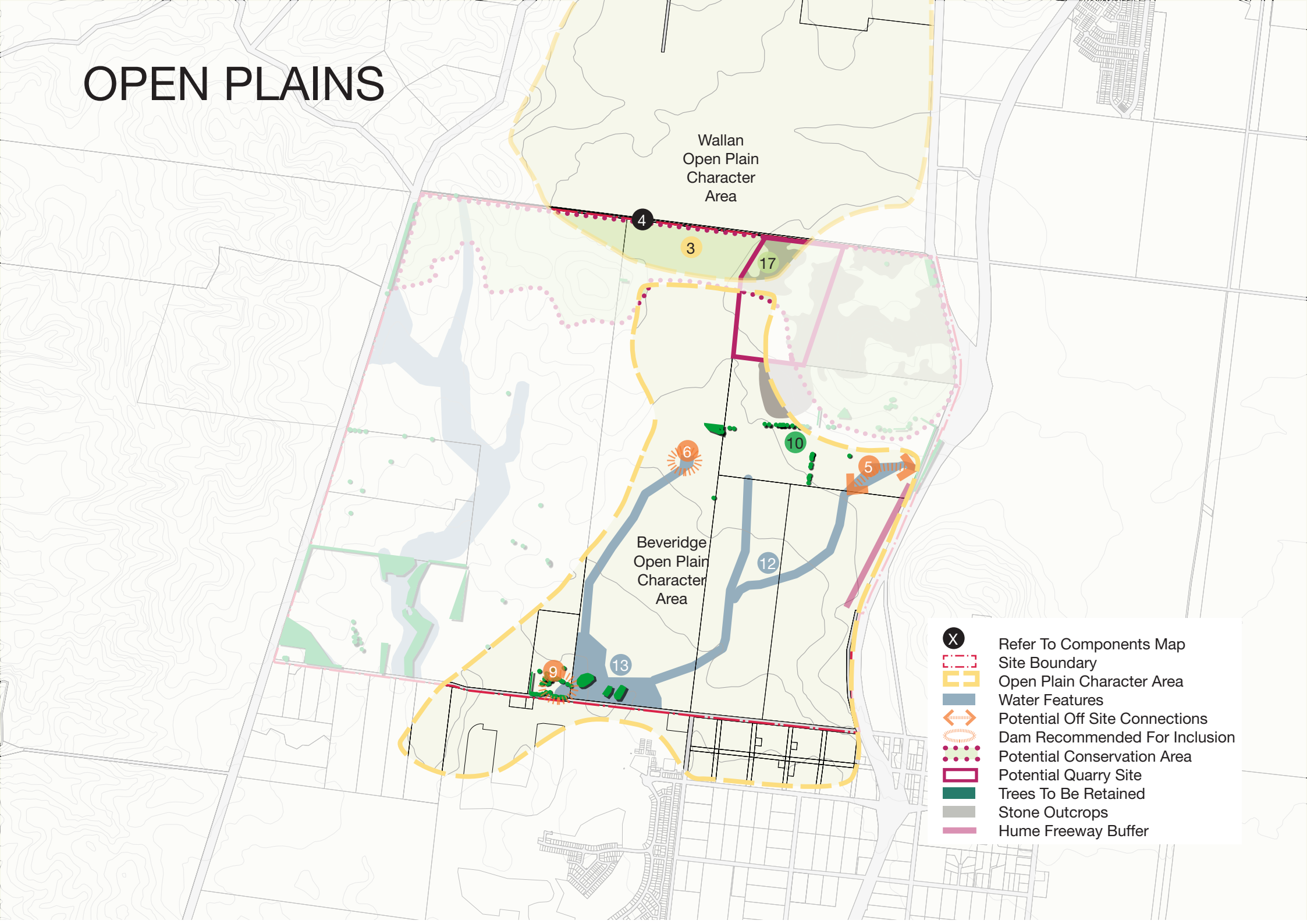
\+ High Points

X Other Components

High points offer views to the surrounding context and are visible from within the valley. Development at this locations would be visually obtrusive due to the prominence of these locations. Avoiding development at these locations by integrating these areas into the public realm would be beneficial at retaining the overall character of the area.

Components indicated are detailed further on the Components page of this report. (Page 59)

OPEN PLAINS


Wallan
Open Plain
Character
Area
Beveridge
Open Plain
Character
Area
4
3
17
6
10
5
12
13
9
X
Refer To Components Map
Site Boundary
Open Plain Character Area
Water Features
Potential Off Site Connections
Dam Recommended For Inclusion
Potential Conservation Area
Potential Quarry Site
Trees To Be Retained
Stone Outcrops
Hume Freeway Buffer

CHARACTER AREA RECOMMENDATIONS: OPEN PLAINS

The Open Plains character area is less significant than the identified other character areas as they are less visible from long distances, have minimal land forming, and less landscape character elements.

The Beveridge Open Plain slopes to the south and the Wallan Open Plain, slopes to the north, forming a ridge that runs east west between the plains. The ridge is highly visible from outside the site, increasing its relative landscape significance.

RECOMMENDATIONS: WATER FEATURES

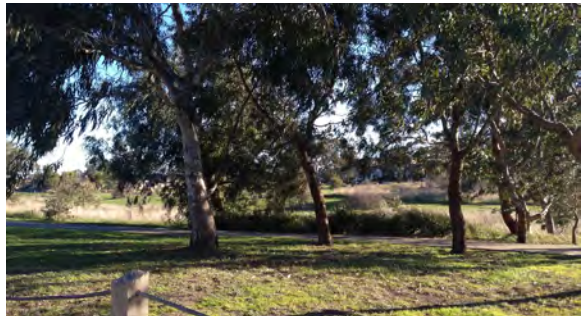
Water Features

Dam Recommended For Inclusion

The drainage lines are not a major feature in the landscape, but are important in function and drain water away to the south.

These areas could form a lineal open space corridor with dams, as shown in the creek rehabilitation case study in Chapter 4 of this report.

RECOMMENDATIONS: VISUAL BUFFER



Hume Freeway Buffer

The lack of visual and landscape significance of the character area means that development could follow the character typical of Beveridge and the northern growth areas.

The Hume Freeway is visually obtrusive from the site and development would be conspicuous from the freeway, therefore it is recommended a vegetative buffer is integrated along the eastern boundary between the Cone Hill cutting and the Mount Fraser cutting.

RECOMMENDATIONS: OTHER COMPONENTS

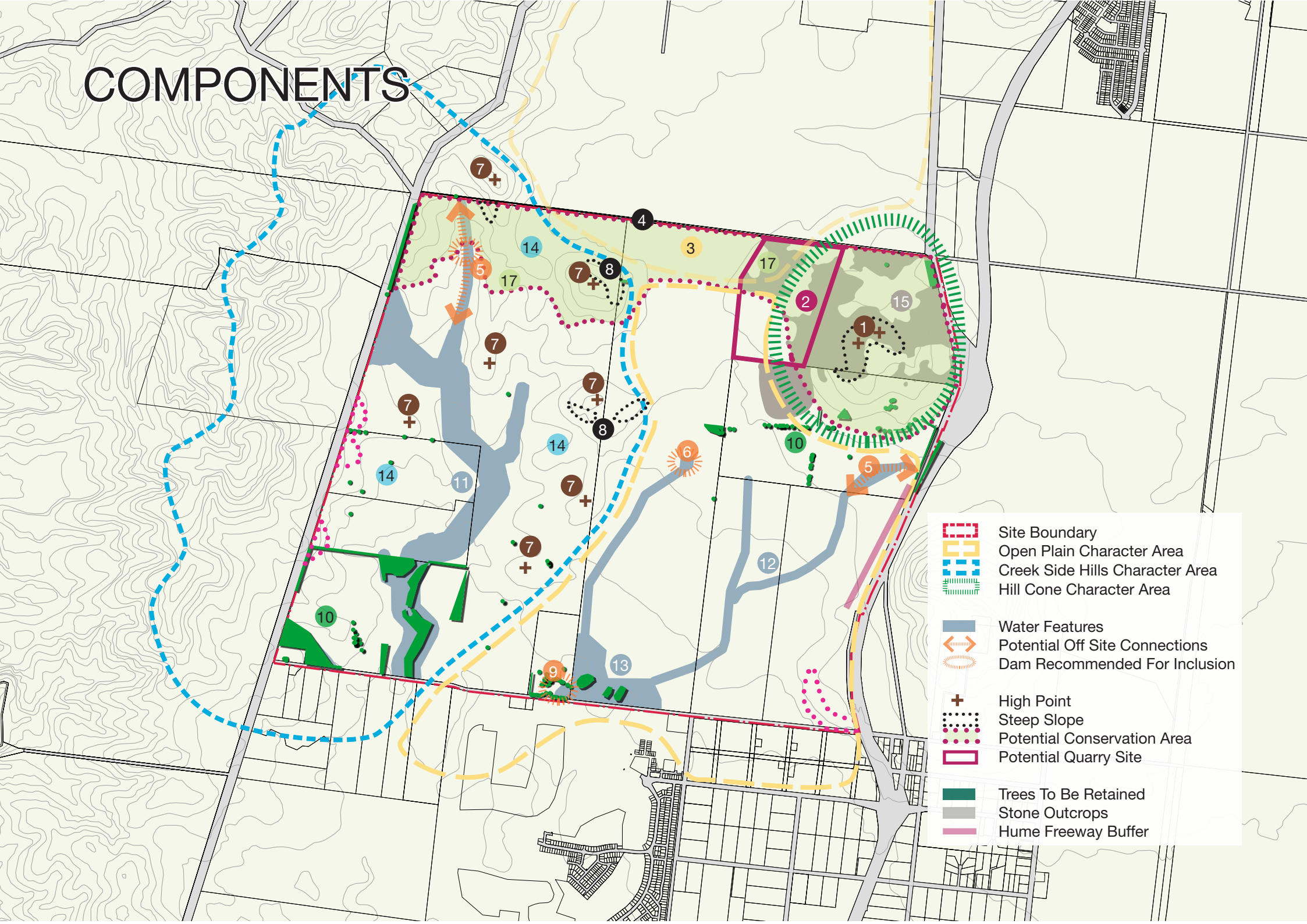
Potential Off Site Connections

X Refer To Components Map

South of Spring Hill is an area of undulating land and possibly a natural spring. This area also links to water courses east of the site and it is recommended that this area be incorporated into open space.

Components indicated are detailed further on the Components page of this report. (Page 59)

COMPONENTS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Stone Outcrops
Hume Freeway Buffer

ITEM	KEY	OBJECTIVE *	RECOMMENDATION
1		Image and Character	The Spring Hill Cone visual and landscape character could be retained by designating the area as open space
2		Image and Character	The proposed quarry could disturb the sloping pasture character of Spring Hill and is located in a highly visible location from both the north and south. If the quarry construction could not be avoided planting around the quarry should be in an informal arrangement following contours to blend in with the landform as much as possible.
3		Image and Character	To maintain the Wallan Open Plain ridge area, so views from Wallan are not obstructed by development, it would be beneficial to designate the ridge area as open space.
4		Image and Character	An arterial road following the northern boundary line would require cutting into the Creek Side hills and Cone Hill. If a road is necessary, the road would be less intrusive if it followed the contours.
5		Open Space and Natural Systems Integrated Water Cycle Management	The extension of planned open spaces along existing waterways and incorporating existing dams or springs, would help integrate the natural water system with the context.
6		Image and Character Integrated Water Cycle Management	Small farming dams could be incorporated as landscape open space features within the development.
7		Image and Character	Site high points can be incorporated into the public realm to maintain landscape character and a sense of the natural terrain.
8		Image and Character	Steep slopes may require significant excavation to facilitate development, it would be beneficial if the noted areas remain undeveloped and possibly incorporated into open space.
9		Image and Character Integrated Water Cycle Management	Successful incorporation of existing dams, that are located along drainage lines, and significant trees into public open space would help maintain the character of the area.
10		Image and Character	Incorporating retained trees into the public realm by planning roads to align with significate tree rows would help in maintaining the existing character elements.
11		Image and Character Integrated Water Cycle Management Open Space and Natural features	The Kalkallo Creek may be incorporated into the an open space network.
12		Integrated Water Cycle Management Open Space and Natural features	The water drainage lines may be incorporated into an public open space network
13		Integrated Water Cycle Management Open Space and Natural features	The water catchment area may be incorporated into an open space network
14		Image and Character	The Creek Side Hills character maybe maintained by the use of wider lots to accommodate level changes, avoiding tall retaining walls and avoiding up hill housing on streets that follow contour lines. The use of split level housing where possible to encourage building forms to follow topography would also help retain the character.
15		Image and Character	Where possible, retention of stoney surfaces and outcrops and incorporating them into the open space landscape design would help maintain the landscape character.
16		Image and Character	Extending the existing tree planting area, which is to be retained, to form a buffer along the hume freeway would help mitigate development and the road as a visual intrusion.
17		Image and Character	Areas of significant or sensitive slope changes could possibly be incorporated into a conservation zone of open space

* Objectives as outlined by the Precinct Structure Planning Guidelines (2013)

REFERENCES

DOCUMENT TITLE	DOCUMENT AUTHOR
Beveridge North West Precinct Structure Plan Area, Site Suitability Assessment	Jacobs, Metropolitan Planning Authority (June 2014)
Beveridge North West Precinct Structure Plan Area, Groundwater Quality Assessment	Jacobs, Metropolitan Planning Authority (June 2014)
Growth Corridor Plans	Growth Area Authority (June 2012)
North Growth Corridor Plan	Growth Area Authority (August 2012)
Precinct Structure Plans Guidelines	Growth Area Authority (2013)
Beveridge North West PSP 1059, Beveridge. Aboriginal Heritage Impact Assessment (AHIA)	AHMS (February 2014)
Beveridge North West PSP 1059, Beveridge. Aboricultural Assessment	Treelogic (October 2013)
Scattered Tree Assessment, Beveridge North West	Ecology and Heritage Partners (November 2013)
Beveridge North West Precinct Structure Plan. Utilities Servicing and Infrastructure Assessment.	Cardno (March 2014)

Back Cover: High Value Trees On Site (South West)


planisphere
PLANNING & DESIGN