



Hadspen

Growth Area Master Plan

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1.0 Introduction

1.1 Background and Purpose of the Master Plan

The historic township of Hadspen is located approximately 15km south- west of Launceston. It has a population of approximately 2000 people (refer to Figure 1). Forming part of the Greater Launceston region, the township offers a clear opportunity for urban expansion and population growth.

The Hadspen Outline Development Plan (ODP) was published in October 2011. This overarching plan outlined a 20 year blueprint for the sustainable development of Hadspen prior to the initiation of more detailed planning projects. To build on the vision and land use recommendations set out within the ODP, Meander Valley Council commissioned AECOM to prepare a Growth Area Master Plan for Hadspen to facilitate the township's expansion through the creation of a unique and high quality vision which will enable Hadspen to differentiate itself from other rural townships in the region.

The Hadspen Growth Area Master Plan (the Master Plan) provides a vision and strategy for the future development of Hadspen that will be used by the Council and land owners to guide and deliver Hadspen's growth. The Master Plan will develop an attractive proposition that responds to local market needs and creates a desirable urban environment for both residents and visitors alike. It provides Council, the community and potential investors' direction into how Hadspen will be developed in the future.

The Master Plan outlines a preferred development scenario for Hadspen, integrating land use, access and connectivity, open space, stormwater management and community infrastructure to achieve a liveable and sustainable Hadspen.

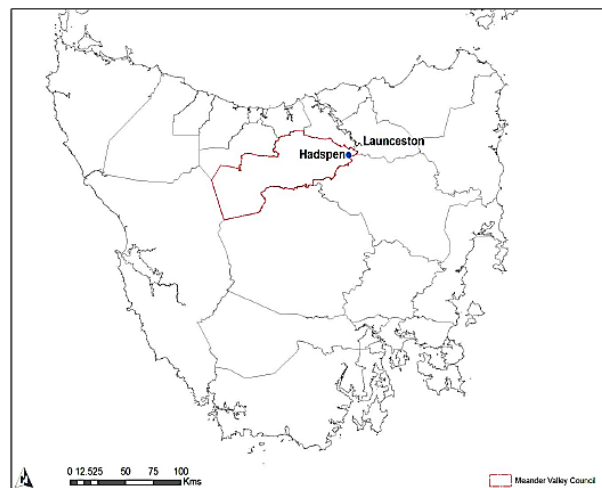


Figure 1 Hadspen Location Map (source: Hadspen ODP, 2011)

1.2 Study Area

Figure 2 defines the Master Plan study area which comprises the land between Meander Valley Road and the Bass Highway to the south-east of the existing township of Hadspen. The study area is approximately 232 hectares in size and is bounded by Meander Valley Road to the north-west, rural land to the north-east, the Bass Highway to the south-east and the South Esk River to the south-west.

The study area is under the ownership of a number of private landholders, with three key properties forming the majority of the site. A large proportion of the site has been cleared and it has been used for grazing for many years. There are a number of farm dwellings and buildings and portions of the site have been heavily mined for sand.

The study area is centred around the water reservoir that provides Hadspen's water supply, on the highest point at an altitude of approximately 220m AHD. This elevated area supports native forest although the native vegetation across the study area has been degraded by past clearing or cutting over, grazing, eucalypt dieback and weed infestation. The land decreases in elevation to become undulating grazing land as it approaches the South Esk River to the south and a drainage line to the north. This area is predominantly cleared and founded on areas of both rocky and sandy terrain. The study area also contains a number of dams and includes wetlands on the floodplain of the South Esk River. Appendix A and Figure 3 provide an overview of the study area's topography and vegetation cover.



AERIAL

HADSPEN GROWTH AREA

Figure 2 Study Area

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CONTOURS & ELEVATION

HADSPEN GROWTH AREA

Figure 3 Site topography and photograph key

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2.0 Planning Policy and Background Reports

2.1 Policy Context

Hadspen Outline Development Plan (ODP) 2011

The Hadspen ODP (Geografia, David Lock Associates, 2011) was developed to guide future development of the township, forming a basis upon which regulatory zoning could be applied and the development or subdivision process commenced. The ODP set out key exclusion zones and considered broader social, economic and environmental objectives. The Hadspen Outline Development Plan made provision for a doubling of the population and represents a blueprint for the sustainable development of Hadspen over the next 20 years.

As part of the assessment, constraints and opportunities within Hadspen were analysed, including the Master Plan study area. Appendix B provides excerpts from the ODP's constraints and opportunities mapping.

The most notable constraints within the study area include the:

- steep terrain on the hillside at the centre of the site and along the riverside;
- significant stormwater volumes which flow from the hilltop to a range of dams/drainage lines and the river requiring management of water quality and sediment entering the waterways;
- patches of threatened remnant vegetation on and around the hillside;
- low-lying flood prone land along the riverside and main drainage corridors;
- water supply constraints on the hillside (servicing can only occur to 20m below reservoir);
- water and sewerage infrastructure which is at capacity and which will require upgrading as part of any future development within Hadspen; and
- limited connectivity between the existing town and the Master Plan study area, which is exacerbated by the high speed limits in place along Meander Valley Road (100km/hr) which severs the Master Plan study area from the existing township.

The main opportunities within the study area include the:

- locational advantages of being close to Launceston;
- number of large landholdings making an integrated subdivision more viable;
- ability to extend the town centre and improve the provision of commercial, retail and community facilities and services;
- opportunity to utilise Meander Valley Road to create a central 'spine' to the expanded Hadspen township;
- development of parklands and tourism;
- potential to utilise the river foreshore for recreation and connectivity;
- potential to utilise Water Sensitive Urban Design techniques;
- opportunity create a passive recreation and bushland reserve around the hilltop;
- scenic vista's obtainable from many parts of the site.

The ODP presented a high level Outline Development Plan (refer to Figure 4 below), which set out some preliminary strategies for the future development of the Master Plan study area.

It proposes an extended town centre, adjacent to a new primary school, which would be centrally located within the expanded Hadspen township. It also identifies areas for public use and for residential development comprising village, urban and sensitive 'bush' lots, extensive parklands, green links and public transport corridors.

A preliminary staging plan was also proposed in the ODP. These principles will be drawn upon in the development of a more precise strategy for the Master Plan area.

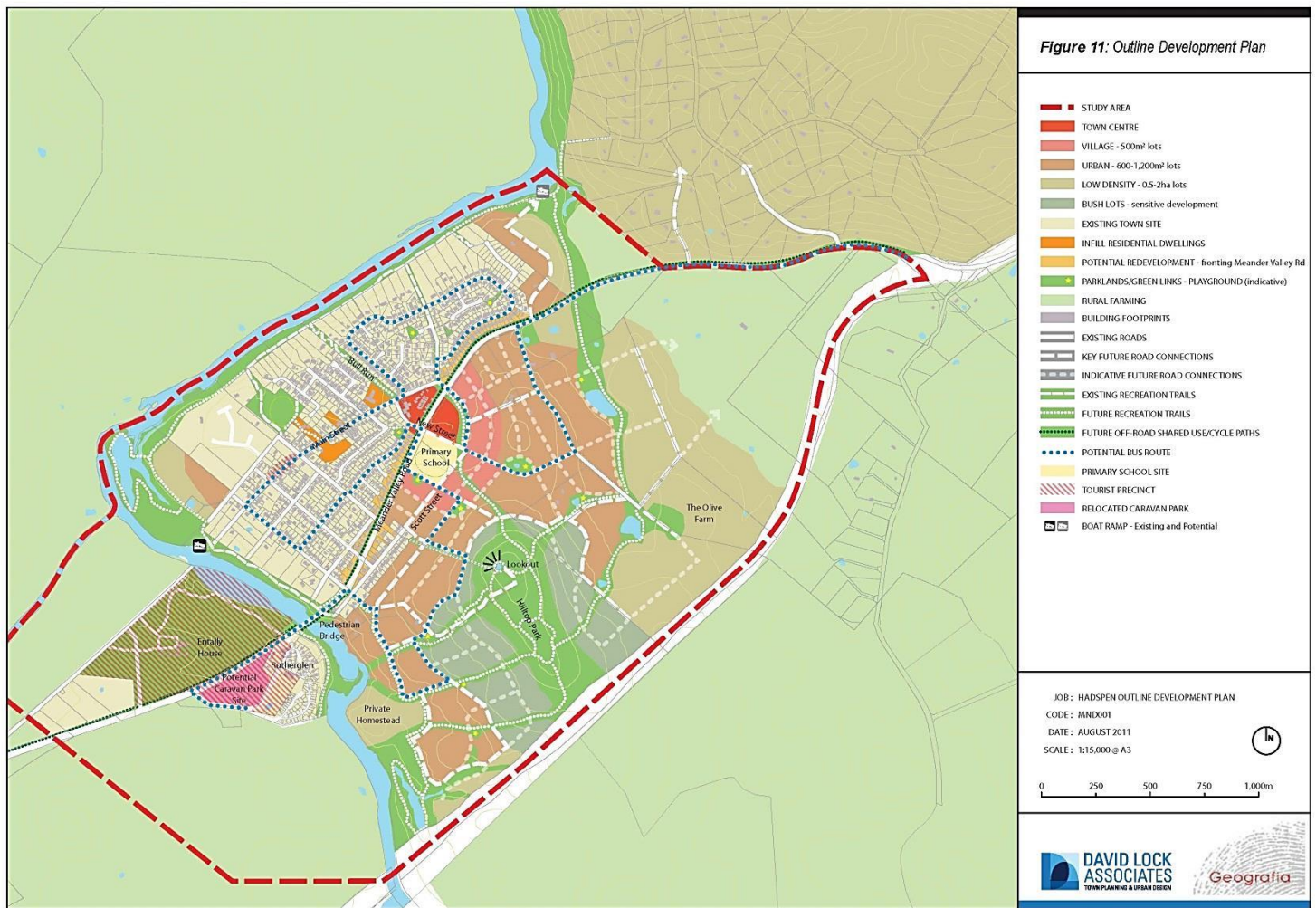


Figure 4 Hadspen Outline Development Plan

Meander Valley Interim Planning Scheme 2013

The Master Plan study area is primarily contained within the Rural Resource Zone under the Meander Valley Interim Planning Scheme (the Scheme), with a small portion to the north-east located within the Rural Living Zone.

Hadspen is recognised within the Scheme as being a key centre of urban expansion.

Flood risk constraints in certain areas are noted though future development is to provide an opportunity to maximise the amenity and recreational values offered by the proximity to the South Esk River. This may be achieved through improved connectivity and provision of good quality open space.

The Scheme states that the development of Hadspen's local business centre (contained within the Local Business Zone) is to be maintained at a low impact level until such time as a comprehensive development plan is undertaken. The Hadspen Growth Area Master Plan addresses this requirement. The Master Plan will be integrated into the Scheme as a 'Specific Area Plan', for which zoning and associated regulatory controls will be specified accordingly.

Within and adjacent to the extended town centre, an Urban Mixed Use zoning is envisaged due to its flexibility in allowing for the integration of residential, retail, community services and commercial activities. This would also enable the allocated school site to be utilised for a range of alternative or co-located uses without the need for zoning amendments.

The proposed higher density residential areas (urban and village lots) are expected to be contained within the General Residential Zone and lower density lots (bush and low density lots) within the Low Density Residential Zone.

Significant land holdings, such as the homestead site along the riverfront, may be more appropriately allocated to the Rural Living Zone, enabling a range of farming and rural enterprises to occur.

Newly created parkland and footpaths and linkages proposed within the Master Plan will be contained within the Open Space Zone to reflect the passive recreational use and the natural and landscape values.



Figure 5 Existing wetland area adjacent to riverside (AK Consultants, 2014))

2.2 Background Reports and Data

The Master Plan is supported by a number of detailed investigations that build upon documentation prepared by the Council and which should be considered in conjunction with the Master Plan.

Key elements of existing studies and strategies include:

- Natural Values Assessment;
- Bushfire Hazard Assessment;
- Aboriginal Heritage Assessment;
- Storm Water Management Assessment;
- Activity Centre Development Assessment;
- Topographical Surveys/ LIDAR elevation data; and
- Lot yield data.



Figure 6 View across the site towards bushland area and hillside (Bushways Environmental Services Tasmania, 2011)

Natural Values and Vegetation Condition Assessment Report 2014

A number of Natural Values Assessments have been undertaken for the study area (AK Consultants, 2014; Bushways Environmental Services Tasmania, 2011). Whilst the majority of native vegetation within the study area has been cleared and grazed, there are still substantial areas of native vegetation in good condition, with the largest remnant located on the highest elevation of the study area (220m above sea level) comprising Dry Eucalypt Forest and Woodland and Native Grassland. Riparian vegetation and a wetland also exist on the floodplain of the South Esk River.

The condition of native vegetation varies across the site due to disturbances such as sand mining, vegetation clearing and grazing by deer. Extensive infestation by Gorse, Blackberry and Willow are also evident. The report suggests that some Eucalypts appear to be dying on the hilltop, possibly due to drought stress.

The site contains two threatened vegetation communities, five threatened flora species (refer to Figure 7) and potential habitat for six threatened fauna species (refer to Appendix C). If clearing the habitat of these species were proposed, further surveys should be undertaken to establish the presence and size of any populations. Permits may be required for any development that may impact on these species. Offsets for protection of these values may be required.

No flora species listed under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 have been recorded on the site but potential habitat exists for listed fauna species.

The Master Plan provides the opportunity to address a number of identified issues across the study area, including:

- rehabilitation of some bushland areas and protection of threatened vegetation communities and threatened species habitat;
- establishment of reserves in the hilltop and wetland areas;
- management and control of declared and environmental weeds;
- creation of habitat and recreational places around dams and retention basins and drainage corridors;
- rehabilitation of the quarry area; and
- fire management.

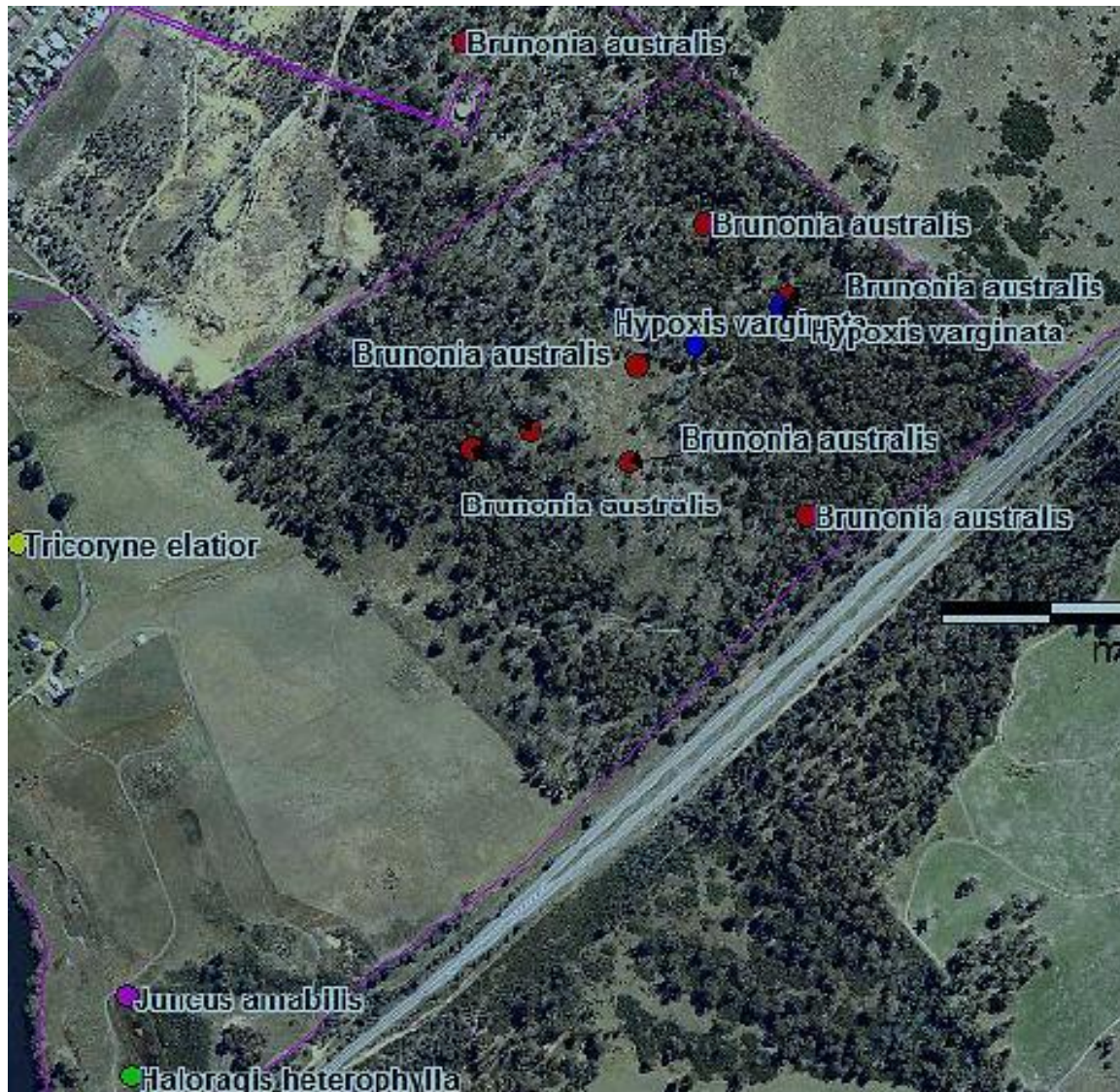


Figure 7 Threatened Species within Study Area (AK Consultants, 2014)

Bushfire Hazard - Strategic Level Assessment for the Hadspen Outline Development Plan Area

A Bushfire Hazard Assessment (Ground Proof Mapping, 2014) was undertaken to determine landscape bushfire hazard outcomes based on the implementation of the Hadspen ODP.

Bushfire threat is assessed by considering a number of components, including vegetation types and flammability, slope (which impacts on the rate of spread and fire behaviour where for every 10° the rate of spread is doubled for the same fuel type) and prevailing fire weather conditions.

The elevated hill located centrally within the study area contains a large, consolidated area of Dry Eucalypt Forest and Woodland, interspersed with areas of native grassland and large patches of weed infestation (primarily gorse). The vegetation adjoins the Bass Highway.

This area has very high to extreme fuel ratings as a result of previous woodcutting (with debris piles left in situ), high gorse infestation and areas of bracken, native grasses and general litter accumulation. The slopes in this area vary from 5° - 15°.

A number of specific recommendations are made within the report and these have been considered when developing the Master Plan.

The greatest impact relates to the proposed bush lots. The size of bush lots must enable a dwelling to incorporate a hazard management area (defendable space), which must correspond to the required distance for Bushfire Attack level (BAL) 12.5. The BAL rating is the minimum standard where construction can withstand ember attack and radiant heat below 12.5 kW/m². Examples of hazard management are shown in Figure 9 and Figure 10.

In addition, landscaped and vegetated areas such as those areas utilising Water Sensitive Urban Design (WSUD) techniques within proposed linear parklands must include bushfire management measures and defendable space.

Specific development processes exist under the *Meander Valley Interim Planning Scheme 2013* and any future subdivision will need to be considered in terms of Bushfire Risk Assessment.



Figure 8 Typical bushland within Study Area (Ground Proof Mapping , 2014)

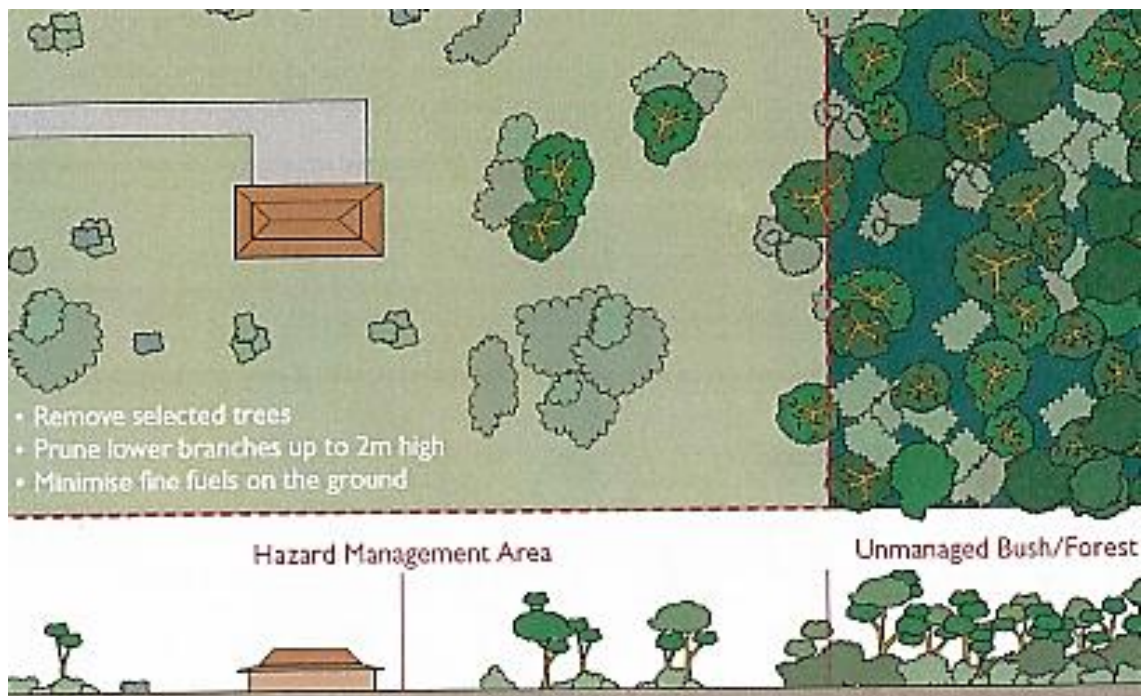


Figure 9 Hazard management for bush lots (AK Consultants, 2014)

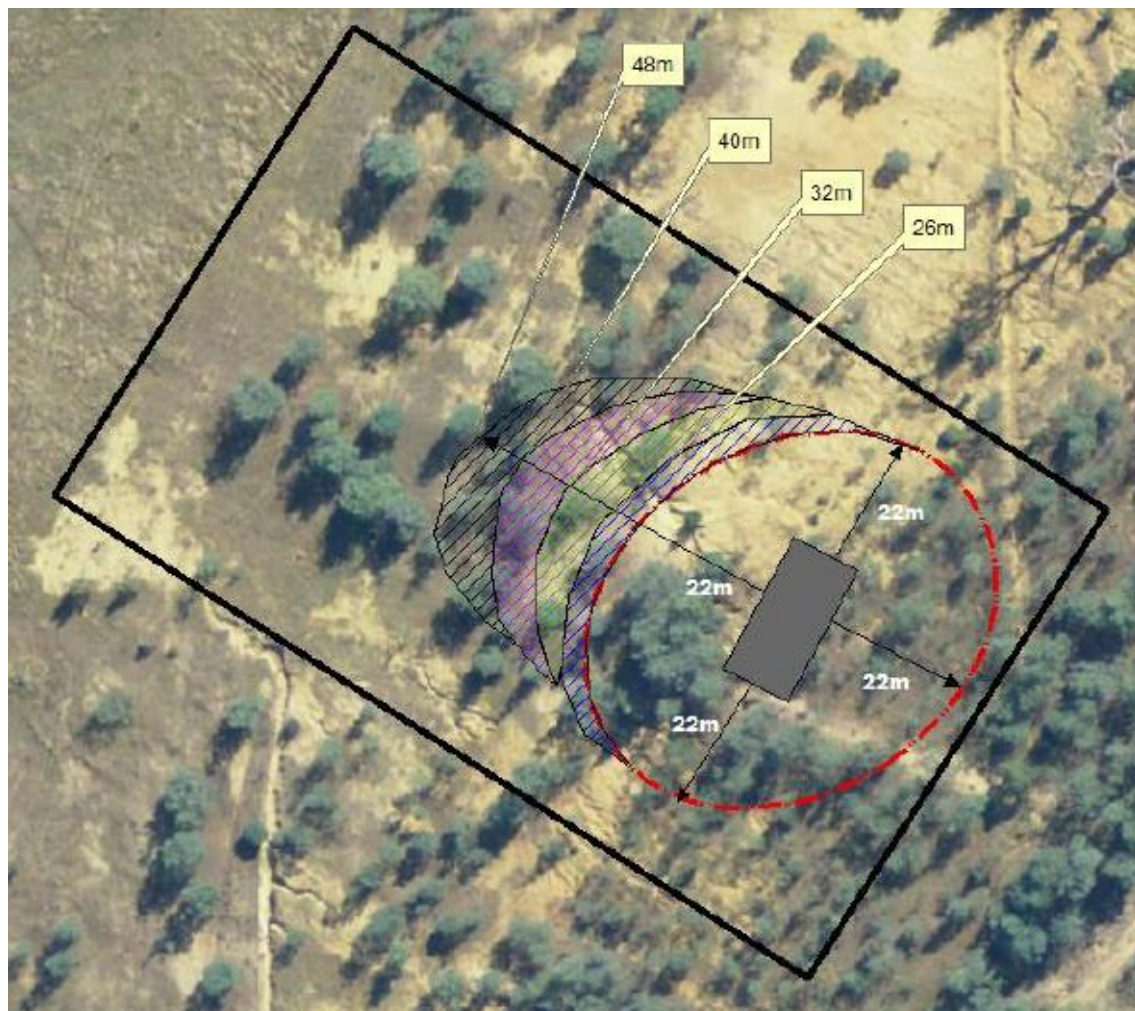


Figure 10 Hazard Management for dwellings to BAL 12.5, based on slope (Ground Proof Mapping, 2014)

Aboriginal Heritage Desktop Assessment 2014

Aboriginal Heritage Tasmania (AHT) completed a search of the Tasmanian Aboriginal Site Index and confirmed there were no Aboriginal heritage sites recorded within the ODP study area (Aboriginal Heritage Tasmania, 2014).

It was noted that the surrounding landscape (being close to the South Esk River, a known culturally rich area) is conducive to Aboriginal heritage.

Given the high probability of Aboriginal heritage, an Aboriginal heritage investigation will be required when more detailed development plans (i.e. subdivision proposals) are prepared.

Activity Centre Development in Hadspen 2014

An Activity Centre Development assessment was undertaken in relation to the Hadspen Town Centre (Tim Nott Economic Analysis + Strategy).

The development of the town centre's functions was analysed, reviewing average retail floorspace provision in order to forecast future retail demand. Considering the hierarchy of various retail centres in the region, it was possible to estimate how much of that demand might be satisfied in Hadspen.

Hadspen is considered a 'Neighbourhood Centre' within the activity centre hierarchy, where the typical population catchment is from 2000-5000 people. As it grows, the town could expect to capture up to 35% of the retail spending of its catchment population, with the remainder captured by nearby larger centres.

The report concludes that by 2031 the total floorspace provision within Hadspen's town centre could be up to 4,600m². This would comprise of a mixture of retail and non-retail space, plus an allowance for car parking.

The assessment estimates that 1 hectare of land would be required for the Hadspen town centre to expand over the next 20 years. This Master Plan reflects this requirement to ensure that the retail provision will meet the needs of the growth area population in the future.

Stormwater Assessment 2014

Meander Valley Council undertook a range of assessments based on the study area's topography, slope and drainage corridors in order to produce a Stormwater Flow Path and Indicative Stormwater Swale Sizing Schematics (refer to Figure 11). This is based upon an integrated water sensitive urban design approach that envisages a more sustainable approach to stormwater infrastructure.

These assessments provide a sound baseline for Master Plan development, particularly in relation to transport corridors and block orientation, drainage corridors and linear parkland.



Figure 11 Stormwater Flow Path Schematic

3.0 The Master Plan

3.1 Vision

The following vision statement has been developed:

The Hadspen Master Plan will guide and support its sustainable future growth, providing environmental benefits, economic development and positive outcomes for the Hadspen community as a whole. Hadspen will become a unique and sustainable community for its residents and visitors, building on the intrinsic natural beauty of its surroundings.

A number of key short-medium term project goals underpin this vision:

- **One Hadspen:** Connected Halves: The existing township is sited to the west of Meander Valley Road, which is a significant barrier between 'old' Hadspen and the future growth area. The Master Plan seeks to provide a number of connections between the two halves and thereby 'stitch' them together to create a single township with a centrally located town centre.
- **Hadspen Town Centre:** Develop an extended and enhanced Hadspen town centre to respond to and support the future growth of Hadspen, including enhanced shopping, medical and community facilities.
- **Sustainability:** Development across the study area will be designed, built and managed to ensure sustainable environmental, economic and social outcomes may be achieved. There will be a focus on the implementation of water sensitive urban design outcomes, safe streets that encourage sustainable transport modes and the delivery of a range of housing options in a high-quality urban environment.

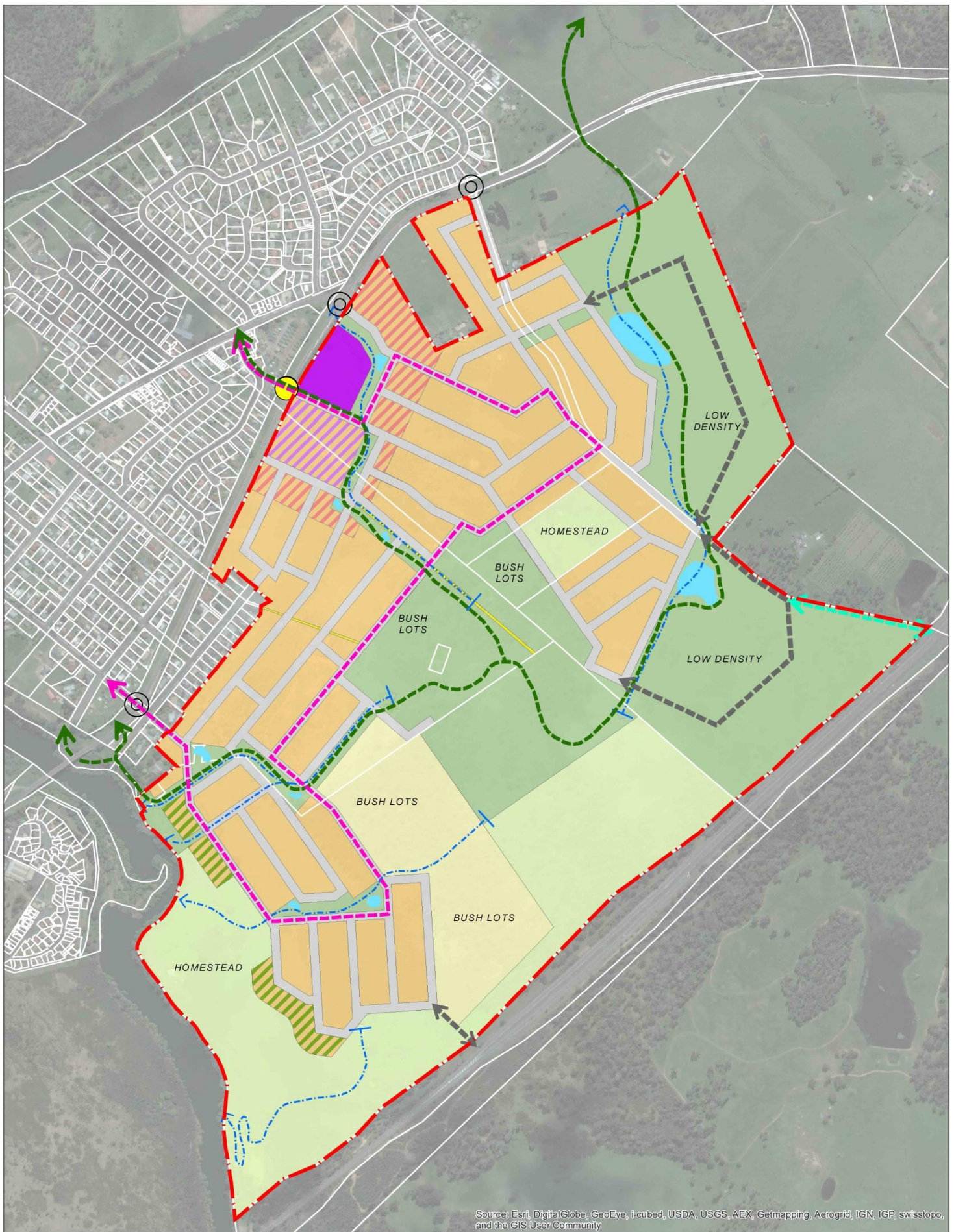
Through its implementation, the Master Plan will create greater certainty for residents and landowners regarding the future directions of the township over the next twenty years. The Hadspen Growth Area Master Plan is presented in Figure 12 and Appendix D.

3.2 Approach

Preparation of the Master Plan has involved a comprehensive review of previous studies and available information, site visits and investigations and consultation with key public and private stakeholders.

Some key considerations in developing the Master Plan included:

- the functionality of design including that it is safe and fit for purpose, and that it applies appropriate standards to the layout of roads, paths, infrastructure, and bushfire and stormwater management;
- future resident's and visitor's experience of the area in terms of their arrival, orientation and movement through the site whether on foot, bicycle or in a vehicle;
- the visual and sensory qualities of the neighbourhood and surrounding environment, maximising public amenity and aesthetic appeal;
- the attractiveness and spirit of the place and how the area can become a source of pride for the community;
- the protection of the natural values of the site and the creation of opportunities to buffer these through appropriate layout and the management of stormwater;
- the inclusion of bushfire management principles in terms of access, orientation and land use;
- the incorporation of environmentally sustainable principles, vital in the achievement of a 'future proof' site;
- transport and the opportunity to use and incorporate public transport options into the development and to increase bicycle and pedestrian access to and within the site;
- sustainable funding, capital expenditure and maintenance; and
- viable staging.



MASTER PLAN

HADSPEN GROWTH AREA



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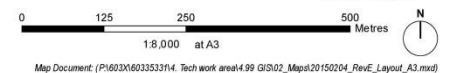


Figure 12 Hadspen Growth Area Master Plan

3.3 Key Master Plan Features

Access and Connectivity

The Master Plan identifies a road network throughout the study area indicating the general alignments and the principle areas that are to be connected whilst reflecting the site's topography and bushland areas.

The key elements of the road network are:

Better Meander Valley Road connections

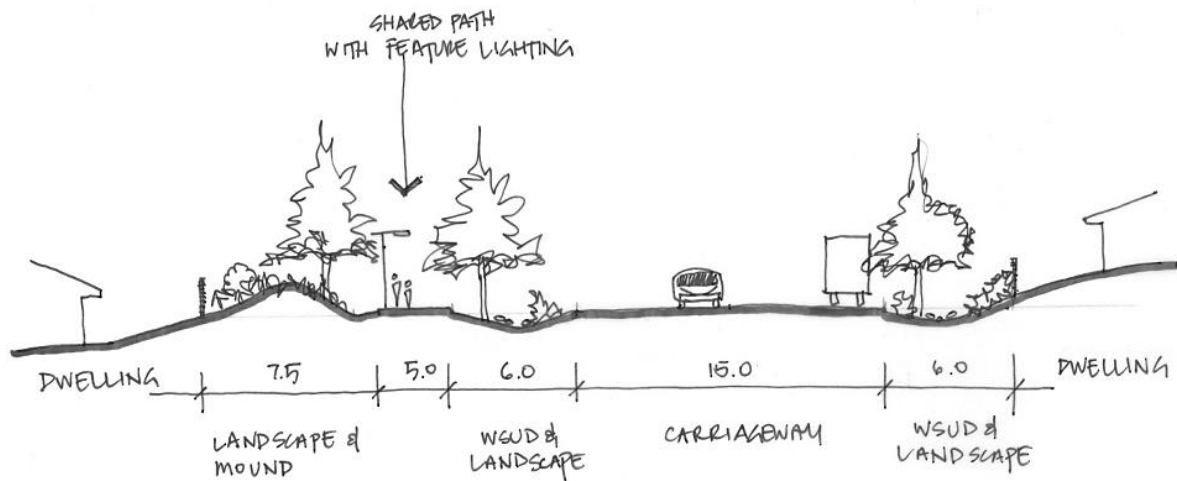
- Up to three 'cross town' link roads running east-west connecting the old and new residential and town centre areas. The existing intersection at Meander Valley Road/Scott Street and the study area will be maintained. Main Street will present a further major entry point and a new street running off Winifred Jane Crescent adjacent to the Caravan Park will provide a further linkage to the extended town centre area.
- Further direct accesses onto Meander Valley Road are proposed, including the existing Saunders Road access, though this road is realigned within the study area.
- All new access points are contingent on the speed reduction of Meander Valley Road and handover of the road's management to Meander Valley Council which will enable intersection treatments that reduce vehicle speeds and promote pedestrian crossings. In particular this would include:
 - Scott St – roundabout which can slow vehicle entry into the town also provide a landscape 'gateway' feature into Hadsphen,
 - Winifred-Jane Crescent (extension) – preferred signalised intersection that provides for safer and more convenient pedestrian crossing immediately next to the town centre and future school,
 - Main St– roundabout which provides for cross-town vehicle crossings as well as pedestrian and cycling movements, and
 - Saunders Rd – roundabout which can slow vehicle entry into the town also provide a landscape 'gateway' feature into Hadsphen.
- An enhanced streetscape within the Meander Valley Road road reservation with a high quality shared user path, improved lighting, enhanced streetscape planting and integrated water sensitive urban design (refer to Meander Valley Road Cross Section diagram opposite).

Interconnected local streets

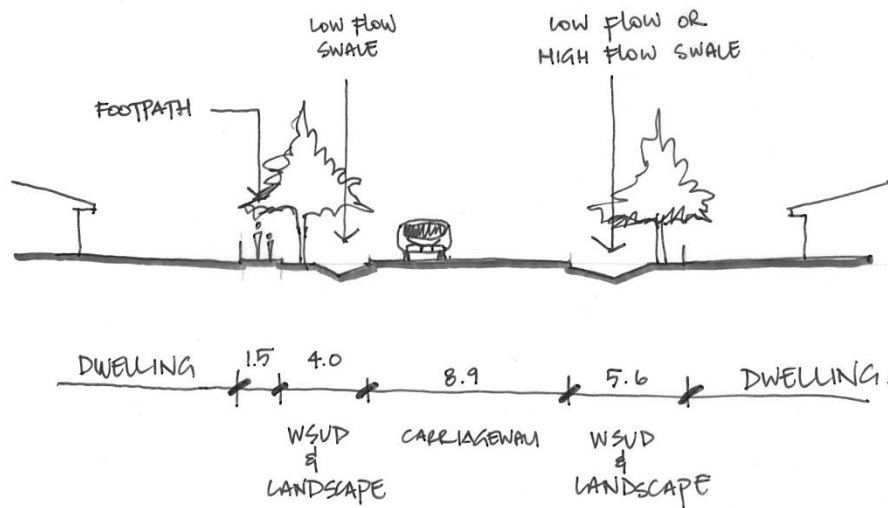
- Internal streets are designed to respond to site topography and enable solar orientation of blocks in future subdivision and lot layouts.
- The interconnected nature of the layout ensures that all lots have an alternative means of escape in the event of a bushfire and will promote and facilitate local walking trips.
- Street blocks are a maximum of 250 metres in length to allow for better community connections and easier access to local amenities.
- Generally streets incorporate 20 metre wide road reservations with an 8.9 metre wide carriageway, a 1.5 metre wide footpath and nature strips of 4.0 metres and 5.6 metres to accommodate low and high flow swales (refer to Local Street Cross Section diagram opposite).

Continuous bus route

- An indicative bus route provides proximity (within a 5 minute walk) to all urban areas of the Master Plan area.
- The route connects across to the existing Hadsphen township in two places, as well as providing access to the commercial centre and school site.
- The actual route and frequency of bus services will need to be reviewed on an ongoing basis to reflect the development of the study area, particularly denser urban lots, the extended town centre and opening of the school which will be largely dependent on population growth.



Meander Valley Road Cross Section – 40 metre wide



Local Street Cross Section – 20 metre wide



Figure 13 Example of local street road layout

Urban Development and Land Use

The Master Plan delineates land use and density boundaries for the future urban development of the site. Urban development has been limited in areas of higher environmental and landscape value containing remnant vegetation or drainage corridors, as well as in areas of steep slope, bushfire hazard and river flooding.

Three key residential land use types are incorporated within the Master Plan as follows:

Urban

- These lots will contain urban density development with lots generally in the range of 500 - 1000m².
- Village Lots – In the area immediately surrounding the multi-purpose town centre residential density may be increased further given the accessibility to services and public transport. This will encourage a greater diversity of housing types available and may include multiple dwellings and townhouse developments (refer to Figure 14).
- Urban lots with additional bushfire management requirements – Indicated in areas where there are direct interfaces with rural land or low density areas. These urban lots are reliant upon the inclusion of additional bushfire management measures on the adjoining homestead site which will need to be negotiated and agreed with the homestead landowner before the lots can be created.
- Wherever possible these lots have been orientated to within 20 degrees/30 degrees of north to allow for better passive solar orientation of future dwellings.

Low Density and Bush Lots:

- These lots are leafy and semi-rural in character with minimum lot sizes of over 1000m², though lot sizes will largely be dictated by topography and bushfire management requirements.
- Lots will need to incorporate bushfire management buffers within lot boundaries, which will reduce the developable area on site for a dwelling (as outlined under section 2.2.).

Rural

- These lots are lands retained by the existing landowner not to be further subdivided.
- One of these sites site incorporates a large portion of flood prone riverside land, and a wetland area and an area of remnant bushland on the hilltop are also to be retained within this rural landholding. This will require appropriate arrangements for bushfire and stormwater management.
-



Figure 14 Potential village lot integration with open space and streetscape

Development Schedule

The Master Plan delivers the potential for a range of residential development types. The schedule below indicates the potential yield for the Master Plan area when fully developed.

It should be noted that if the school site is developed for residential lots in the event that a school is not required, the typical lot size expected would be comparable to the Urban - Village Lots.

Land	Net Developable Area (ha)	Typical Size (m2)	Total Yield
Urban	54.7 ha	750m2	729
Urban - School site	2.8 ha	See note	n/a
Urban - Bushfire management	2.6 ha	750m2	35
Urban – Village Lots	5.1 ha	450m2	113
Low Density and Bush Lots	58.4 ha	2,000m2	292
Homesteads	42.8 ha	n/s	2
Total			1171

Note: Net Developable Area excludes road space

Town Centre

The extended town centre will contain the retail, business and community services and facilities required to meet the needs of the local population.

Development of the town centre will be reliant on future population growth and investment in the area.

The Master Plan identifies a site directly adjacent to the town centre for the development of a primary school, however this site is also suitable for urban lots should a school not be required and is therefore not acquired for this purpose by the relevant authority.

The commercial site will also need to accommodate WSUD elements to appropriately manage stormwater from the Master Plan area. Detailed design of this element will inform the ultimate size of the developable land.

The town centre site will require an overall urban design framework to be developed at the time that subdivision and development of the site is considered to ensure the delivery of a town centre that provides for the community's social as well as retail and service needs. This should include:

- Pedestrian priority throughout the town centre and continuous and generous pedestrian paths,
- Incorporation of a public plaza space that is highly visible, universally accessible and provides opportunity for community interaction, possibly integrated with the adjacent WSUD elements,
- Active frontages of buildings to streets and public open spaces to improve safety and pedestrian amenity,
- An integrated approach to the design and detailing of buildings and the public realm (hard and soft landscape architecture) to deliver an cohesive design outcome, and
- Car parking integrated throughout the site to minimise its impact on the quality of streets and public spaces.



The town centre will need to create the type of place that the community of Hadspen is attracted to socialise and congregate in as they go about accessing services that are located there

Land	Area (ha)	Typical Size (m2)	Total Yield
Commercial Land	2.1 ha	See note	n/a

Note: One site which may be further subdivided to provide a series of building envelopes to accommodate a range of uses within an integrated town centre urban environment.

Water Sensitive Urban Design (WSUD)

Given the site's topography and surroundings, a key focus of the Master Plan is to manage stormwater in a safe and sustainable manner whilst maximising the opportunity to enhance the visual qualities of the site and improve amenity for future residents and visitors to Hadspen.

The future development of the study area will result in significant increases in roof cover and hard surfacing from roads which will compound issues of stormwater runoff across the land. Historic sand mining has resulted in areas of sediment movement and slope instability which needs to be addressed as part of any future subdivision.

The incorporation of Water Sensitive Urban Design (WSUD) techniques will reduce the impact of development, particularly in terms of water quality, sediment control and flooding.

In addition, waterway corridors and overland flow paths provide multiple benefits such as open space connections, active transport corridors and recreational or activity areas (refer to Figure 15 and Figure 16).



Figure 15 Potential WSUD design outcome



Figure 16 Potential swale design

The aim of WSUD is to capture water throughout the system so that it leaves the site in the same volume, at the same time and velocity and of the same quality as when it entered it.

This can be more difficult to achieve in areas where vegetation cover has been removed (predominantly the case across the study area) or where hard surfacing replaces vegetation and pollution occurs (e.g. roads or parking areas).

The study area contains three main catchment areas to the north, south and east running down from the highpoints around the water reservoir and hillside.

The Master Plan recommends that:

- all stormwater running to the south be redirected to and through an existing wetland system adjacent to the South Esk River in the south-east corner of the study area. Stormwater running south-west will be directed towards a further two WSUDs drainage corridors which will drain to the South Esk River, following existing drainage lines to the north of the existing homestead;
- stormwater running north will be redirected to an existing drainage route which is well established and incorporates a number of existing dams which will serve as detention basins;
- run-off towards the west will be redirected towards an existing low lying area and large dam with the establishment of a number of small storage basins as the site descends, and
- all WSUD swales and drainage line will need to incorporate appropriate bushfire management measures to ensure these features do not increase bushfire risk (refer to Figure 17).

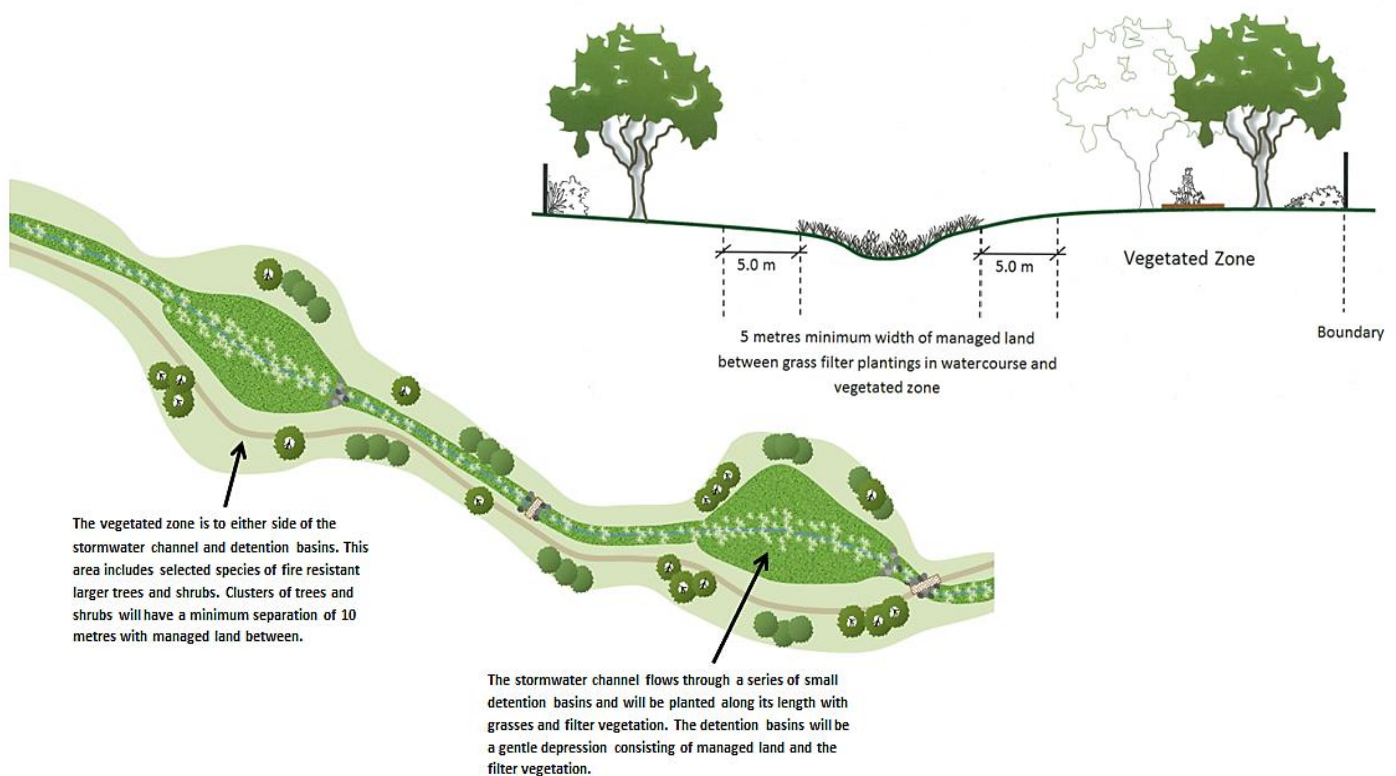


Figure 17 Hadspen WSUDs system reflecting bushfire management requirements (source Meander valley Council, 2014)

Open Space

The Master Plan defines a key recreational walking trail that enables movement across the site following the WSUD network and taking in key features such as the viewing area at the highest point of the site.

The key elements of the open space network are:

- development of hilltop parkland with trails, tracks and a lookout, generally in the area adjacent to the water reservoir, where steepest topography and remnant vegetation is located (refer Figure 18);
 - Key trail route
 - Connection to existing bridge
 - Incorporated with WSUD
- incorporation of Water Sensitive Urban Design (WSUD) techniques into the linear parklands. Open space areas adjacent to key WSUD drainage corridors incorporate swales and drainage basins. Adjoining landscaped and grassed areas with play equipment can also be integrated into the design to serve as local parks (refer to Figure 19);
- development of a parkland area (and recreation trail) adjacent to the riverside, potentially enabling a future linkage to existing riverside parkland within Hadspen where topography and environmental conditions permit;
- protection of an existing wetland area under ownership of the homestead site, where public access may be enabled in the future.

The creation of passive recreation opportunities throughout the study area will help to create a sense of community and engender ownership of public spaces.



Figure 18 Potential low impact path construction for hillside

Source: Queens Domain Master Plan, 2013)



Figure 19 Integrated WSUD and parkland

4.0 Conclusion

Meander Valley Council commissioned AECOM to prepare a Growth Area Master Plan for Hadspen to facilitate the township's expansion through the creation of a unique and high quality vision which will enable Hadspen to differentiate itself from other rural townships in the region.

The Master Plan builds on the vision and land use recommendations set out within the 2011 Hadspen Outline Development Plan which set out a 20 year plan for the sustainable development of Hadspen.

The Master Plan has been developed to respond to identified constraints and opportunities within the study area to ensure long term sustainable development is achieved.

Inevitably, development issues and opportunities will change as development progresses and new demands occur as more information becomes available. The Master Plan is therefore developed to be sufficiently flexible to respond to such future changes.

The Master Plan outlines a preferred development scenario for the key growth area in Hadspen, integrating land use, access and connectivity, open space and stormwater management and community infrastructure to achieve a liveable and sustainable Hadspen.



Figure 20 View south-west from Saunders Road to hillside (Bushways Environmental Services Tasmania, 2011)

References

Aboriginal Heritage Tasmania. (2014). Aboriginal Heritage Desktop Assessment Hadspen Outline Development Plan - Meander Valley Council. Hobart: Aboriginal Heritage Tasmania.

AK Consultants. (2014). Natural Values Assessment Report Proposed Residential Development in Hadspen. Launceston: AK Consultants.

Bushways Environmental Services Tasmania. (2011). Natural Values Assessment- Proposed Residential Development in Hadspen. Underwood: Bushways Environmental Services Tasmania.

Geografia, David Lock Associates. (2011). Hadspen Outline Development Plan. Westbury: Meander Valley Council.

Ground Proof Mapping . (2014). Bushfire Hazard - Strategic Level Assessment for the Hadspen Outline Development Plan. Westbury: Meander Valley Council.

Hobart City Council, Inspiring Place, Liminal Architecture. (2013). Queens Domain Master Plan 2013 - 2033. Hobart: Hobart City Council.

Tim Nott Economic Analysis + Strategy. (2014, 11 28). Activity Centre Development in Hadspen. West Preston, Victoria, Australia: Tom Nott Economic Analysis + Strategy.

Appendix A

Contour Plan



CONTOURS

HADSPEN GROWTH AREA

PROJECT ID 6035531
LAST MODIFIED GW 28 JAN 2015

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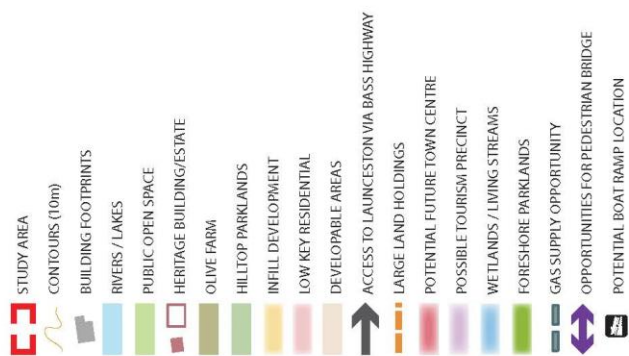


Map Document (P1603X\6035531\4 Tech work area\4 99 GIS\02_Map\0150128_RevC_Layout_A3.mxd)

Appendix B

Opportunities and Constraints Plans

Figure 8: Opportunities



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CODE: MND001

DATE: MAY 2011

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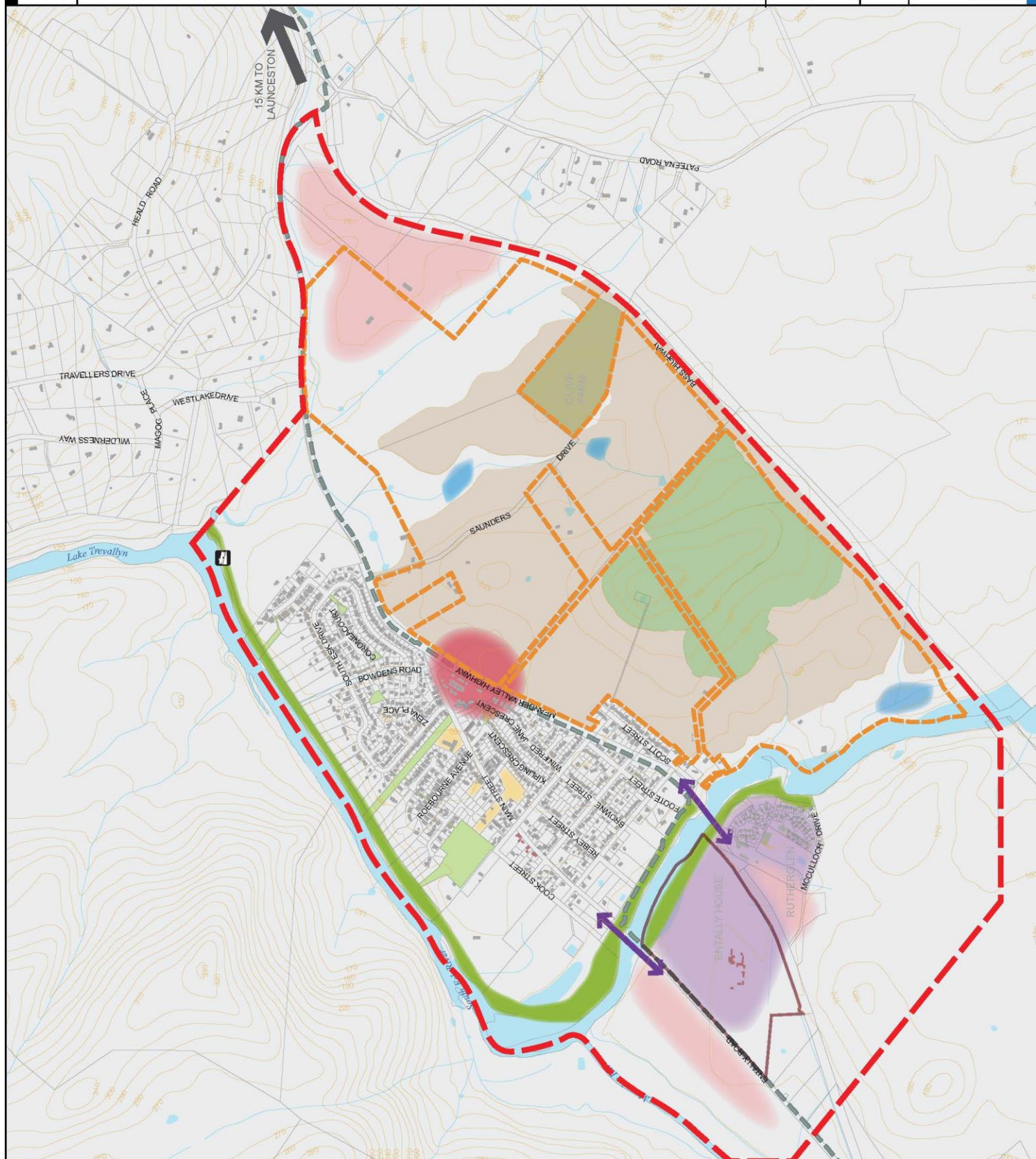
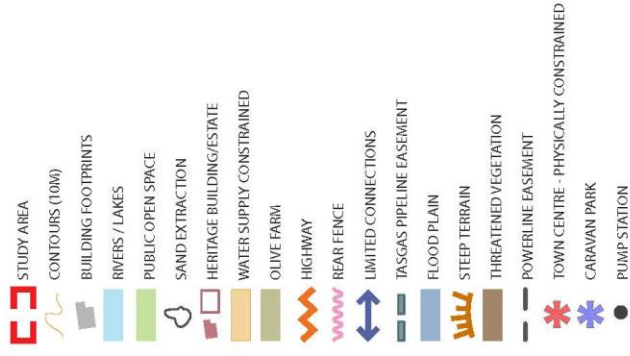


Figure 7: Constraints

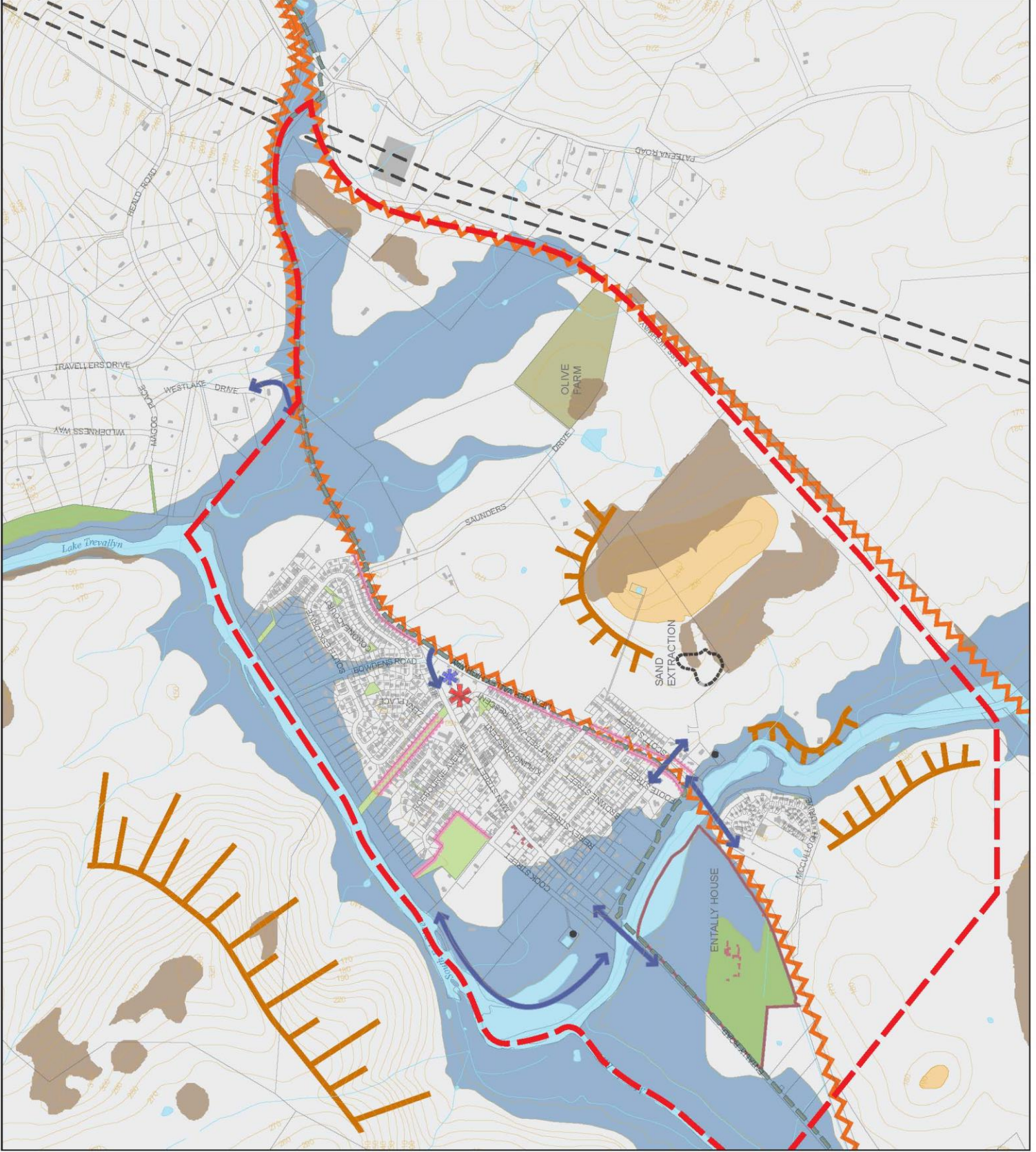


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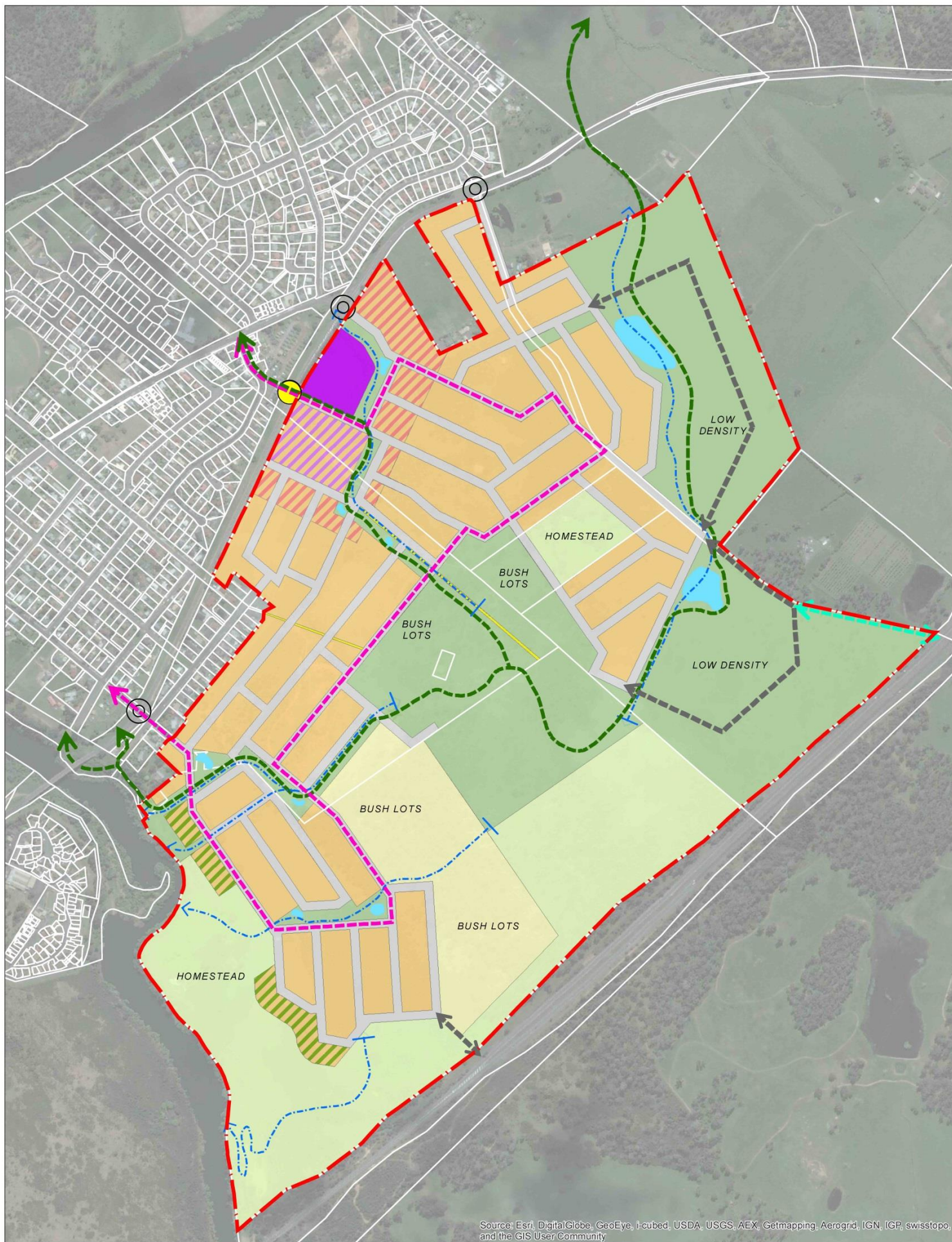


Appendix C

Natural Values Plan

Appendix D

Hadspen Growth Area Master Plan



MASTER PLAN

HADSPEN GROWTH AREA

KEY

- Study Area
- Potential Emergency Access Road
- Bus Route
- Key Walking Trail
- Key WSUD Lines
- Indicative Road to

- Roundabout
- Signalled Intersection
- Waterbodies

Landuse

- Urban
- Village Lots
- Low Density/ Bush Lots
- Homestead - Rural
- Urban Lots
- Potential School Site
- Commercial
- Existing Easement
- Open Space/WSUD
- Local Streets

PROJECT ID: 60335331
LAST MODIFIED: 05 MAR 2015

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Map Document: (P:\60335331\4_Tech work area\4.99 GIS\02_Maps\20150204_RevE_Layout_A3.mxd)

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