

OCEANA PHASE 2 MASTER PLAN

*Accompanies planning submissions for
Amendment to the Clarence Planning Scheme 2007
and integrated subdivision proposals*

*Applies to land on the Rokeby Hills at Howrah-Tranmere and Rokeby
owned by Malwood Pty Ltd*

As at 26 May 2011



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OCEANA PHASE 2 MASTER PLAN

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CONTENTS

| | | | | | | | | |
|----------|----------------------------------------------------|-----------|----------|--------------------------------------------------------|-----------|-----------------------------------------------------------------|----------------------------------------------------|-----------|
| 1 | INTRODUCTION | 5 | 4 | OPEN SPACE SYSTEM | 28 | 7 | INFRASTRUCTURE | 47 |
| 1.1 | Oceana Phase 2 Master Plan report | | 4.1 | Existing situation | | 7.1 | Transitional residential lots | |
| 1.2 | The Master Plan proposal | | 4.2 | Context | | 7.2 | Bushland lots Electricity - Telecommunications | |
| 1.3 | Background | | 4.3 | Strategic context | | 7.3 | Anticipated conditions | |
| 1.4 | Proposal Area | | 4.4 | Open Space System Concept | | | | |
| 1.5 | Legal constraints | | 4.5 | Open space proposal | | 8 | TRANSITIONAL RESIDENTIAL SUBDIVISION STAGES | 35 |
| 1.6 | Council Statutory, Strategic and Policy context | | 4.6 | Open Space Performance | | 8.1 | Common features of the stages | |
| 1.7 | Requirement to provide for safety. | | 4.7 | Commitments | | 8.2 | Tunah Street extension Stage | |
| 1.8 | Other Relevant Policies and standards | | 5 | FIRE HAZARD MANAGEMENT | 35 | 8.3 | Coventry Rise extension | |
| 2 | PROPOSAL OVERVIEW | 9 | 5.1 | Existing situation | | 8.4 | Peppermint Place | |
| 2.1 | Strategic objectives | | 5.2 | Planning Scheme context | | 9 | BUSHLAND LOTS AND POS STAGE | 55 |
| 2.2 | Consideration of the planning context | | 5.3 | Contemporary practice on the urban/ bushland interface | | 9.1 | Existing situation | |
| 2.3 | Preparation of the Master Plan | | 5.4 | Fire Management Concept | | 9.2 | Proposed land use | |
| 2.4 | Land use concept | | 5.5 | Proposal | | 10 | SUMMARY AND CONCLUSION | 59 |
| 2.5 | The land use proposal | | 5.6 | Performance | | 10.1 | Characteristics of the Proposal Area | |
| 2.6 | Proposed Scheme amendment | | 5.7 | Anticipated commitments and conditions | | 10.2 | Formulation of the land use strategy | |
| 2.7 | Stages | | 6 | VISUAL MANAGEMENT | 39 | 10.3 | Consistency with best practice | |
| 3 | NATURAL VALUES | 20 | 6.1 | Background | | APPENDIX 1 | | 63 |
| 3.1 | Existing situation | | 6.2 | The River Derwent cultural landscape | | - DPIIWE Correspondence | | |
| 3.2 | Conservation management history | | 6.3 | Views to the Proposal Area | | APPENDIX 2 | | 67 |
| 3.3 | Existing situation | | 6.4 | Sensitivity to Development | | - Visualisation | | |
| 3.4 | Statutory context for protection of natural values | | 6.5 | Visual management concept | | APPENDIX 3 | | 93 |
| 3.5 | Permits and approvals advice | | 6.6 | Proposed visual management | | - Setup Indicative Housing Sites for Oceana Phase 2 Master Plan | | |
| 3.6 | Conservation concept | | 6.7 | Visual management performance (impact) | | | | |
| 3.7 | Proposal - natural values protection | | 6.8 | Anticipated conditions | | | | |
| 3.8 | Commitments | | | | | | | |



1 INTRODUCTION

1.1 Oceana Phase 2 Master Plan report

The Oceana Phase 2 Master Plan (the Master Plan) describes a proposal for integrated conservation and development on // ha of land on the Rokeby Hills owned by Malwood P/L (Malwood).

The Master Plan report outlines objectives, principles, concept and detail of the proposed land use planning response and subdivision design.

It is anticipated that the Master Plan would accompany submissions for amendment of the Planning Scheme and for development of the various stages of the Proposal.

Structure of the report

This first section, briefly outlines the background to the preparation of the Master Plan proposal.

Section 2 provides an overview of the proposal's objectives and concepts.

The following Sections 3-7, describe the strategies that address key objectives, guiding the preparation of the Master Plan.

A detailed description of the application of those strategies to the Conservation Covenant Area and to the lower areas is outlined in Sections 8 and 9.

In Section 10 Conclusion, the main features of the proposal are summarised referring to the objectives outlined in Section 2.

1.2 The Master Plan proposal

The Master Plan was prepared following an extended planning exercise. The Project Team was comprised of a Land Use Planner, Landscape Planner, Ecologist, Surveyor/Client's representative, and Engineers.

The Proposal integrates development and conservation of the land on the Rokeby Hills, by addressing key outcomes:

- Nature Conservation
- Liveability and Open Space performance for residents and people in neighbouring areas
- Hazard Management
- Visual Management (Landscape or Scenic protection)
- Responsible use of available infrastructure

1.3 Background

Land currently owned by Malwood

Figure 2, p.4, illustrates the extent of land on the Rokeby Hills currently owned by Malwood, identifying:

- The Master Plan Proposal Area (the Proposal Area)
- Skillion Hill Proposal Area (aka Howrah Gardens) - this land is subject to a separate Section 43A application currently with Council, a joint proposal undertaken with owners of adjoining land.
The Skillion Hill area abuts the Master Plan Proposal Area to the north east along the ridgeline of the Rokeby Hills. An existing ridgeline track wanders across both Areas.
While recreation planning and consideration of water infrastructure between the current proposals and the Skillion Hill Proposal is complementary, the Master Plan Proposal does not rely on the Skillion Hill proposal proceeding first.
- Balance Areas - two areas remain for future investigation, an area to the north west and one to the south.

Recent planning by Malwood on the Rokeby Hills

Malwood Oceana Drive, Outline Development Plan

The Master Plan Proposal implements directions established in the Malwood Oceana Drive, Outline Development Plan (the ODP), prepared for Malwood in 2006, refer Figure 6, p.12. The ODP was prepared by GHD (Frazer Read and earlier Sandra Hogue) in consultation with Clarence Council and Neil Shephard and Associates (Neil Shephard).

For the Proposal Area, the ODP proposed:

- Conservation and Recreation Space along the ridgeline and on some slopes
- Open space and pedestrian links to a Skyline Walk
- Possible residential use subject to investigation and preparation of an application

The Master Plan proposal is the third development by Malwood undertaken consistent with the ODP. It follows an infill section of subdivision along Oceana Drive and the Skillion Hill proposal.

Earlier Malwood subdivision

Prior to the ODP Malwood has undertaken subdivision along Oceana Drive and at Howrah Gardens.

1.4 Proposal Area

The Land

The Proposal Area is essentially isolated and fringe bushland on the Rokeby Hills separating middle ring Eastern Shore Hobart suburbs. There is a small area of cleared land in the north east.

The bushland has significant natural value as evidenced by a Conservation Covenant created over much of the Proposal Area.

At present there is no clear access from surrounding streets, with some access through adjoining POS areas.

Existing land use

The limited surveillance of the Proposal Area and lack of clear access contribute to the following current use pattern:

- Limited recreation, walking and some mountain biking
- Anti-social activities, wood hooking, weed dumping, car dumping and lighting fires

Context

The Proposal Area is largely surrounded by the back fences of the adjacent suburbs or relict pasture or bushland above them:

- Tranmere and Howrah to the west
- Howrah Gardens to the North
- Rokeby to the East

Generally these neighbouring suburbs have a relatively high degree of established services, amenities and facilities.

If the Skillion Hill proposal goes ahead it would introduce areas of parkland and walking trails alongside the Master Plan Proposal Area.

On the south east the Proposal Area adjoins privately owned bushland above Rokeby.

A narrow corridor of bushland to the south leads into the southern Malwood balance.

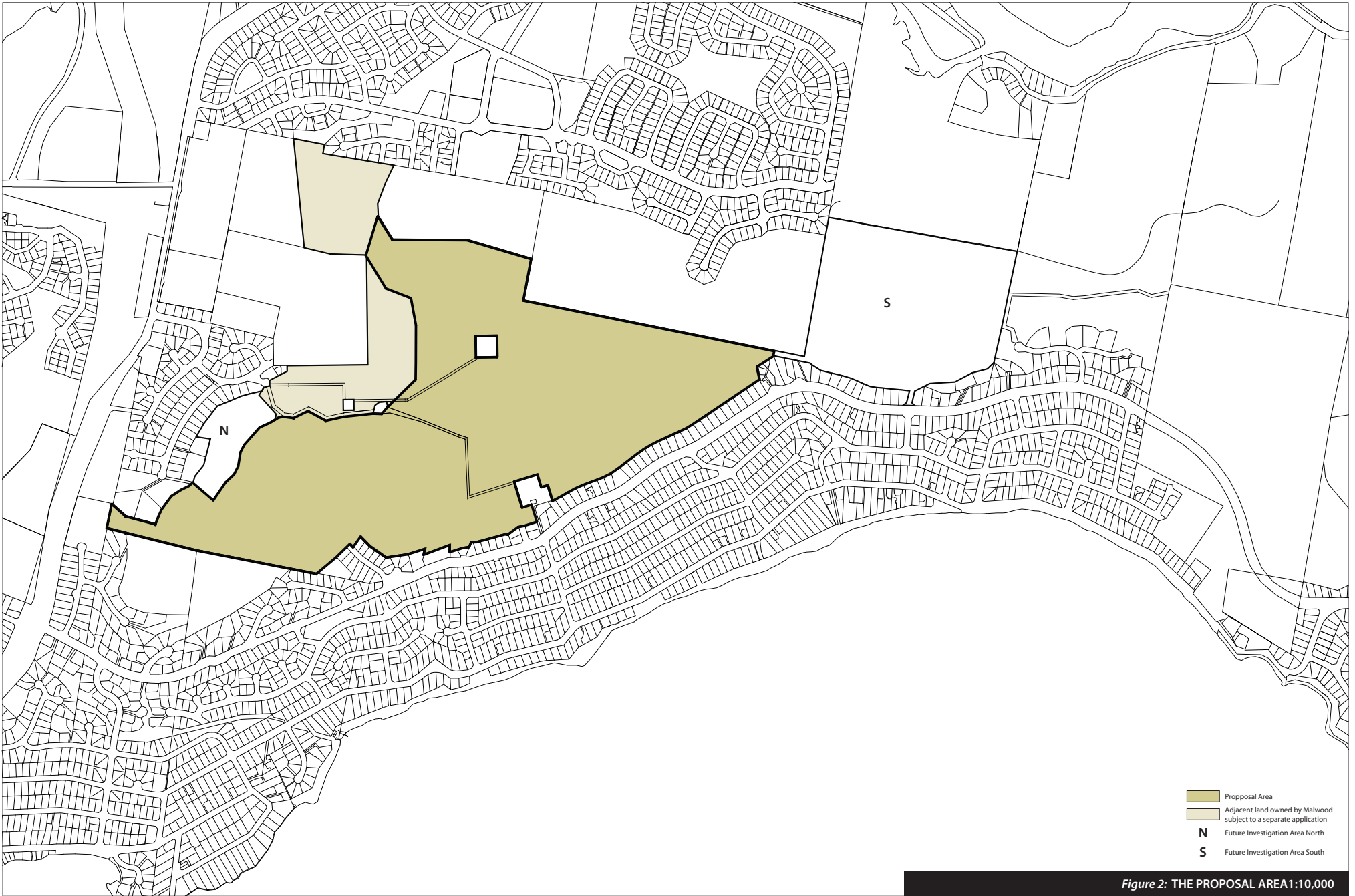


Figure 2: THE PROPOSAL AREA 1:10,000

1.5 Legal constraints

Conservation covenant

A condition of approval of the established Oceana Drive infill subdivision was that a Conservation Covenant would be created over elevated areas, the greater part of the Master Plan Proposal Area.

The finalisation of the Covenant overlapped the development of the Master Plan in addition to detailed analysis of natural values. As a consequence the extent of the Covenant Area is larger than originally required. The Covenant was executed July 2010, Figure 7, p. 12.

The evolving form of the Covenant was a key element to be considered in preparing the Master Plan.

The Covenant establishes a conservation framework for complementary public and private land stewardship, it:

- Requires - owners to undertake conservation management including fencing and weed management
- Restricts - land uses, the extent of clearing, locations for development, and the nature of fencing
- Allows some subdivision - permitting:
 - the creation of Public Open Space (POS) along mapped existing trails
 - up to 4 lots (implicitly any lots would be between the retained tracks)
- Allows for limited infrastructure and maintenance works associated with development and tracks

Any development, any change to land uses or any change to the Covenant requires Ministerial approval.

Fundamentally the Covenant addresses three key issues that have become problematic to the future sustainable management of this large piece of urban bushland, as finalised the Covenant:

- Securing and protecting natural values
- Provides potential for a site-specific system of considered, equitable and sustainable land ownership
- Facilitates realisation of Councils strategy for a network of tracks and trails

Rights of Way and pipeline easement

The Proposal Area is transected by 2 easements, Figure 2. p.6:

- A pipeline easement down the west face of the Proposal Area connects an existing ridgeline reservoir to reservoirs above Oceana Drive (Glamorgan Street reservoir).

- A Right of Way (ROW) and an easement along the ridgeline connects south to an existing lot owned by Southern Water (to accommodate a future second ridgeline reservoir)

1.6 Council Statutory, Strategic and Policy context

Clarence Planning Scheme 2007

The intent of Clarence Planning Scheme, 2007 (the Planning Scheme) is established in its 'Planning Policy Framework'.

Framework Plans apply to the Proposal Area. Framework directions relevant to the Proposal Area describe a clear differentiation of developed areas contained within an 'Urban Growth Boundary' refer Figure: 5a, p.11 and areas retained for their natural heritage and public recreation value, which is intended to:

- Establish and maintain firm edges between existing urban growth areas and natural heritage and recreation areas, preventing creeping encroachment of urbanisation
- Protect natural and scenic values
- Provide opportunities for recreation

These aspirations are reflected in the operation of the Scheme as it applies to the Proposal Area

- Much of the Proposal Area is zoned for 'Landscape and Skyline' or 'Recreation' protecting natural and scenic values
- A Vegetation Management Overlay applies

Clarence Residential Strategy

The Residential Strategy establishes that there is a mis-match between available land in Clarence and land suitable for some market segments including the 'Middle/Upper Segment' attracted to the Howrah-Tranmere area suggesting potential demand in this area.

The Strategy addresses issues associated with the nature of interfaces alongside residential use areas. While it considers the agricultural-urban interface, the Strategy fails to address issues that apply across the urban/bushland interface that is a key element of the nature of the Proposal Area.

Clarence Tracks and Trails Action Plan

The Action Plan proposes a 'Droughty Trail' along the Rokeby Hills close to an existing ridgeline trail. Linkages to the Trail shown as desirable, also apparently conform to existing connecting tracks.

Clarence Bike Plan

While the Plan's proposals suggests that a link may be desirable to Pass Road and Tollard Road bikeways, the nature of such linkage is not mentioned in text. The Plan graphic is not clear and may suggest a lower level link along the west Rokeby Hills.

Clarence Public Open Space Policy

The policy outlines a framework to balance benefits potentially provided by open space, intrinsic values (scenic, ecological) or contribution towards an open space system with minimizing costs Council incurs.

Clarence Tree Policy

The Clarence Tree Policy (2008) applies in residential areas and provides guidelines for size and types of trees relative to available space.

1.7 Requirement to provide for safety.

Under the Land Use Planning and Approvals Act, 1993 (LUPAA), preparing this Master Plan required addressing potential hazards:

- Fire hazard has been addressed referring to the Tasmanian Fire Service (TFS) Guidelines for Development in Bushfire Prone Areas in Tasmania and AS 3959-2009: Construction of buildings in bushfire-prone areas, and consultation with TFS officers.
- Social hazards have been addressed referring to various standards to minimise opportunities for crime

1.8 Other Relevant Policies and standards

Other policies and standards such as design standards are discussed in Sections 2-7.

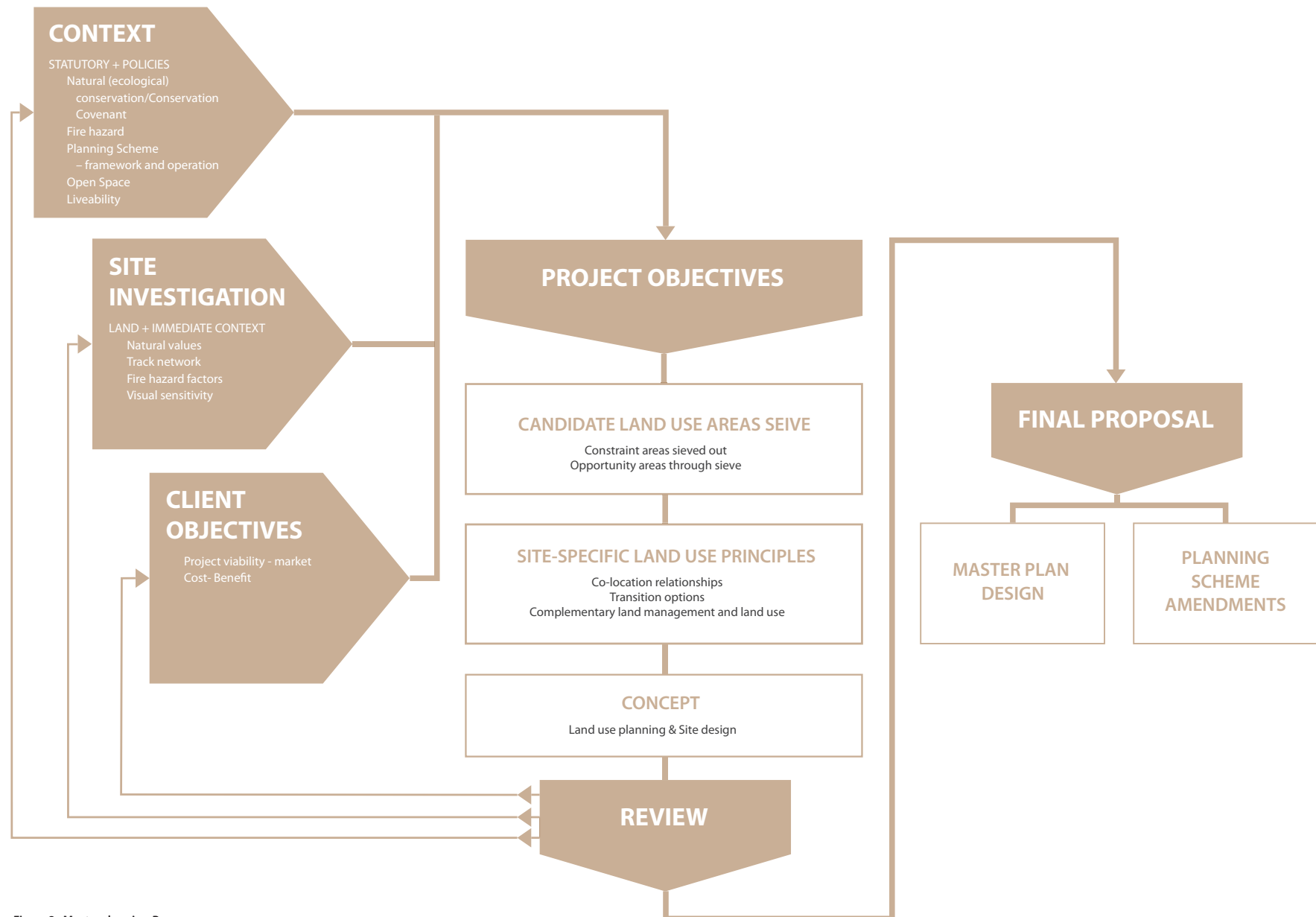


Figure 3: Masterplanning Process

2 PROPOSAL OVERVIEW

The Master Plan process was based on teasing out implications of the existing planning structure, the evolving content and extent of the Conservation Covenant and detailed site analysis.

The proposal was finalised after multiple iterations of consideration of site characteristics, project objectives, site-specific land-use principles, Master Plan concepts (planning and design). This was then tempered by input from the proposal project team and Malwood P/L review, often leading to more detailed assessment of proposed planning strategies and further refinement of the proposal.

To some extent the finalisation of the Master Plan and finalisation of the Conservation Covenant were in effect parallel processes, each informing the other. However, ultimately the Master Plan and subdivision design are deferential to the Conservation Covenant

2.1 Strategic objectives

The objectives for the proposal were continually reviewed and updated through the master planning process.

The final objectives are:

- A land use outcome consistent with the intent of the Clarence Planning Scheme, 2007 and other relevant Council objectives, policies and strategies
- Practical and achievable conservation of natural systems values that:
 - is consistent with the best practice use of bushland and conservation management of natural values including minimising potential detrimental impacts
 - complies with the intent and operation of the Conservation Covenant
- Fire hazard minimization:
 - providing a strong defendable edge for adjacent urban areas
 - hazard management of any residential use of conservation covenant bushland to best practice
 - reducing opportunities for antisocial activities and associated risk of arson
- Protection of the scenic values:
 - conserve the cultural landscape of layered tree-lined ridgetop skylines and the integrity of the wooded hill slopes setting of the lower urban settlement around the Derwent Estuary
 - suitable visual management of the interface between suburban areas and retained bushland
- Best practice open space planning including:
 - linking routes and destinations

- accessible choices of recreation opportunities with visibility to encourage use, as consistent with healthy living practice
- Responsible use of serviced urban land

2.2 Consideration of the planning context

Malwood ODP 2006

The *Malwood Oceana Drive, Outline Development Plan* diagram, (ODP) has no statutory force and is not part of the Planning Scheme. The ODP was suggested by Council to initiate Malwood's intent as part of consideration of an infill subdivision on Oceana Drive. However, because the development of the ODP and the detailed assessment of the values of the Subject Land were still being undertaken during the preparation of the Clarence Planning Scheme 2007, they were not able to influence the final resolution of zone boundaries, overlays and strategic future for the Subject Land.

One of the fundamental rationales for the master planning of the Subject Land has been therefore been to provide a more comprehensive basis for the planning scheme provisions that govern its future development and management.

Since preparation of the ODP, it and the Planning Scheme have formed the basis for Malwood's proposals for land on the Rokeby Hills land.

The ODP identified for the Proposal Area, Figure 6, p. 12:"

- 'Conservation and Recreation Space' to the north and along the ridgeline
- Strong links to adjacent suburbs, identified as 'Pedestrian links to Skyline Walk'
- 'Possible residential subject to investigation ...' on the lower west slopes

The Master Plan has followed the direction of the ODP, but within constraints established by the Conservation Covenant.

Malwood P/L Conservation Covenant, July 2010

The creation of the Conservation Covenant is a response to the conservation values of vegetation and habitat values on this part of the Proposal Area.

In the Covenant Area the Master Plan proposes:

- Changes to the Planning Scheme to support the protection of natural values
- Subdivision consistent with: good practice for conservation management and the requirements of the Coveant

DPIPWE has advised that the proposed subdivision would be likely to be granted Ministerial approval (letter Appendix 1).



Figure 4a: Conservation Covenant Area

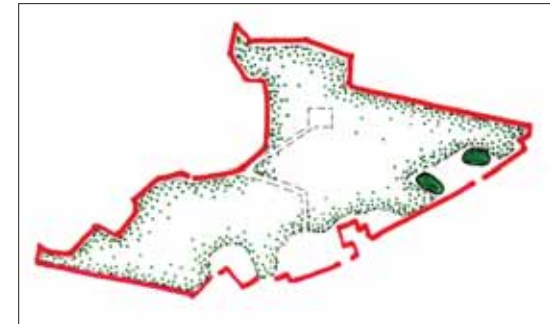


Figure 4b: Additional significant vegetation
Additional areas of significant vegetation are not within the Conservation Covenant Area.

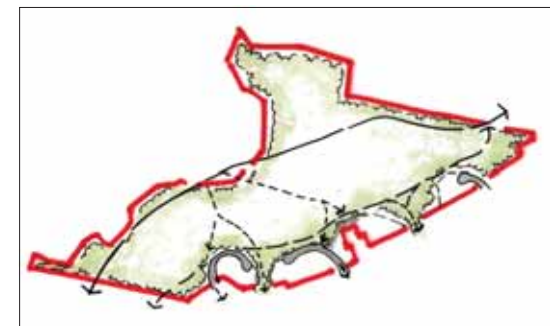


Figure 4c: Existing and potential walking trails
Existing ridgeline and upslope trails retained, as practical.
Lower trail combines existing nature strips to make loop walk options.

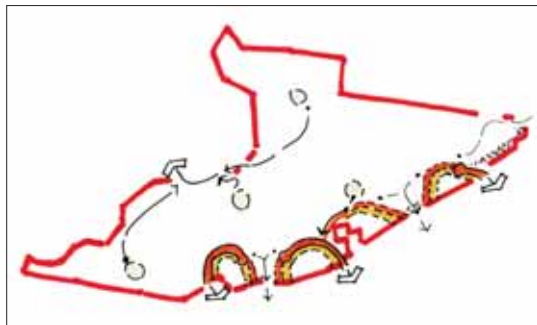


Figure 4d: Fire Management
Locations allowing small fire control clearings for houses in Conservation Area.
Fire management zones required around any potential lower subdivision.



Figure 4e: Visual management concept
Locations for screening of clearings and trails screened in Conservation Area.
Visually soft perimeter of lower subdivisions - large lots and treelined streets.



Figure 4f: Combined concept
Bushland lots between tracks to accommodate low impact houses locations.
Lower clusters - fire defensible edge, visually soft edge and lower walking trail.

Clarence Planning Scheme 2007

The Planning Policy Framework

The Framework underpins the Planning Scheme.

The 'Urban Growth Boundary' proposed in the Planning Framework (a defined edge between urban areas and bushland) generally corresponds to the west boundary of the Proposal Area, refer to Sketch Framework plans from the Scheme Figure: 5a, p.11.

Operation of the Scheme

The Planning Scheme map as it applies to the Proposal Area provides a broadbrush intention, but:

- Recreation zoned areas fail to connect and do not correspond to Council's *Tracks and Trails Action Plan*
- Residential areas are inadequate to attract development and as currently configured serve no purpose

While it is the nature of a Planning Scheme to provide the overall structure of land use, the Scheme does not reflect the detail of site characteristics or values of the Proposal Area as identified through the Conservation Covenant and Master Plan processes, which could mean that significant land use opportunities are not realised or more importantly that options for sustainable management are un-necessarily limited.

The Scheme does not provide direction regarding the nature of the Urban Growth Boundary or urban/bushland interface. While it could be regarded as implicit, there is no clear preference for an interface that reconciles conservation of natural and scenic values with fire hazard management at the interface, optimising land management and visual impact performance.

2.3 Preparation of the Master Plan

Site analysis entailed identification and mapping of the character and values of the Proposal Area. Then, the site implications of each design objective were explored using overlays and 'opportunity and constraint' mapping.

'First cut' candidate activity locations that optimised achieving multiple desired objectives were identified, seiving implications identified by the opportunity and constraint areas, by:

- Giving priority to options for activity locations that would be consistent with the intent, requirements and outcomes of the emerging content of the Conservation Covenant

- Excluding options that potentially had an adverse impact on significant vegetation communities or highest visibility locations
- Preferring options that potentially provided a defensible fire hazard edge

After firmer candidate activity locations were established, more detailed assessment was undertaken.

The locations, extent and management or mitigation requirements of candidate locations were refined and re-assessed through a number of iterations, after considering:

- 3D modeling used to test the visual impact of locations, and then to refine location, shape and line of development and disturbance of potential impacts
- Several rounds of increasingly detailed and seasonally appropriate site-specific ecological investigation of potential natural systems impacts undertaken at candidate sites, and to assess proposed refinement of candidate activity locations
- Visual and natural systems impacts of alternative fire hazard strategies were compared, identifying highest benefit/least adverse impact options
- Any implications of the total impact of the patterns of land use being considered

Throughout this process there was an information flow between the Conservation Covenant finalisation process and Master Plan preparation process.

Malwood provided a final sieve within the master planning process by excluding from consideration of development options that were commercially not viable in the current economic conditions.

2.4 Land use concept

The concept reflects the structure implicit in the ODP concept with modification to reflect the content of the Conservation Covenant and site factors:

- A conservation, scenic and recreation core is retained (co-inciding with the Conservation Covenant Area), where limited recreation and residential use is permitted
- There is a defined and designed interface between the retained bushland in the Covenant Area and the lower suburbs. Residential use could occur in areas of least natural value or visual sensitivity, but configured to provide for:
 - fire management along the interface

- minimisation of ecological 'edge effects' at the interface
- a visual transition between bushland and urban areas

The design of the whole proposal would apply contemporary concepts of liveability and 'Healthy by Design' principles within constraints arising from the Proposal Area's topography, bushland and urban/bushland interface situations and limited extent of developable land.

The Conservation Covenant Area

The primary function is conservation management to retain current natural values.

- Retention of bushland within the Conservation Covenant to be undertaken primarily by private owners who bear the conservation management cost to obtain the benefit of a bushland setting
- A limited number of residences to be permitted in the Conservation Covenant area only in locations of lower order natural values and visual sensitivity
- POS areas primarily to provide for walking track and bike linkages to the Droughty Trail, but being limited to existing routes to limit additional disturbance, so the public benefit of retention and development of recreation opportunity is achieved with least detriment to natural values
- Private conservation to be complementary to public agency conservation

Immediately below the Conservation Area

These areas should be retained as bushland buffer as practical.

High conservation value areas not in the Covenant Area

Two areas are suitable to be included in a future extension to the Conservation Covenant, and would be designated as POS.

Urban/bushland interface

Areas lower on the slope of the Proposal Area are potentially suitable for development, being relatively cost effective to service and to access, and should be used for urban purposes.

The potentially developable interface areas are not suitable for a local activity centre or similar uses, being located on the periphery of urban development and limited in extent.

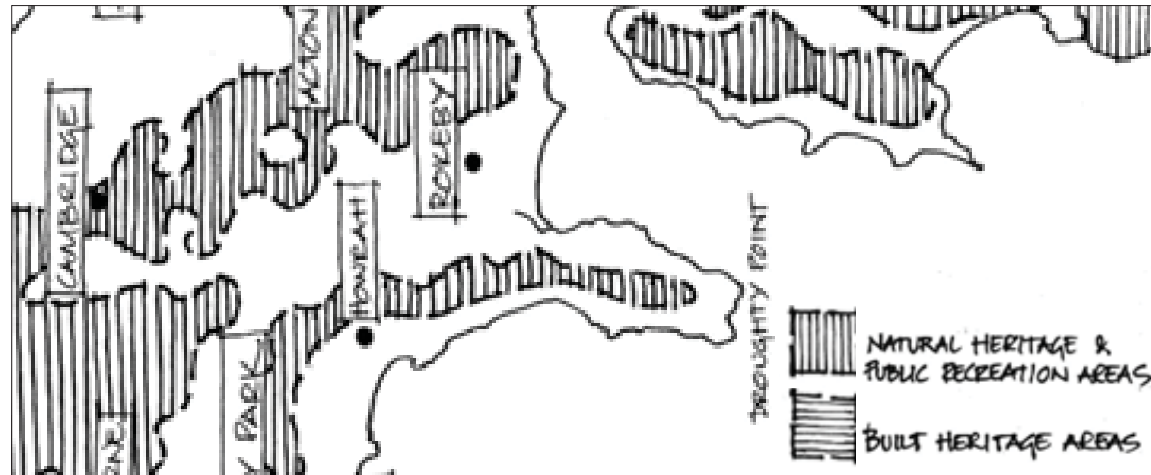


Figure 5a Excerpt 'Environment' Strategic Landuse Plan Clarence Planning Scheme 2007

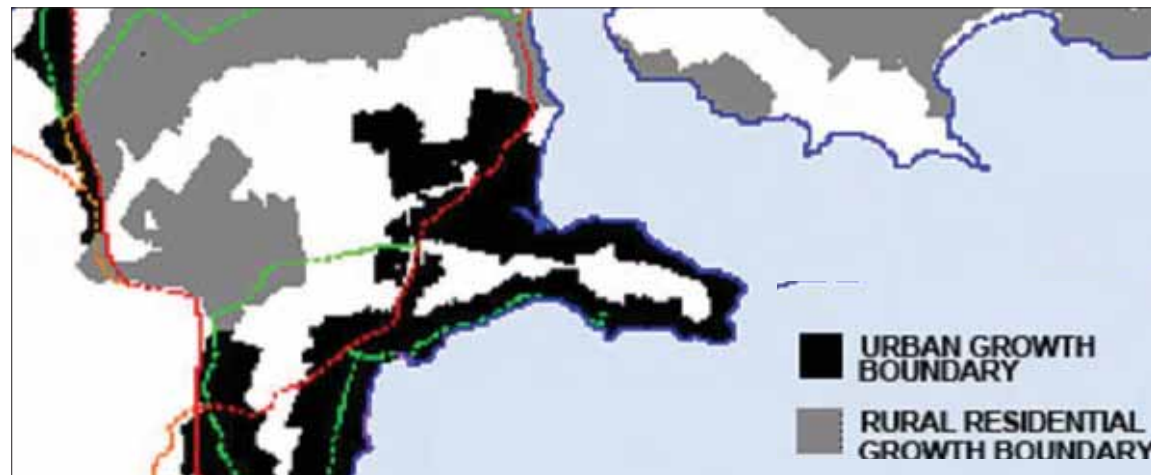
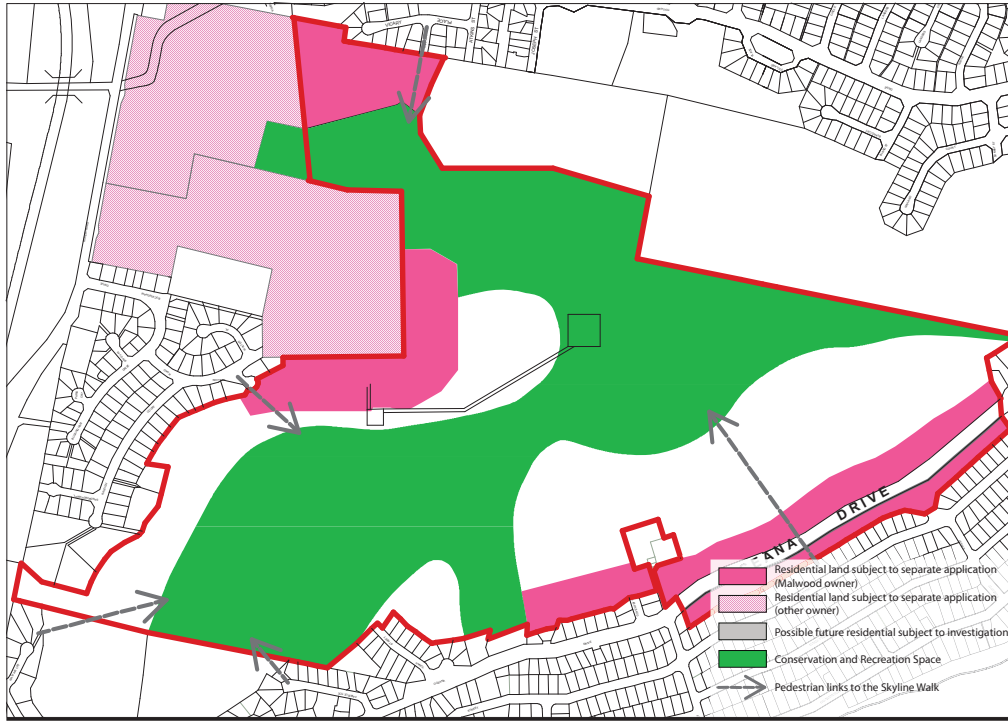


Figure 5b Excerpt 'Settlement' Strategic Landuse Plan Clarence Planning Scheme 2007



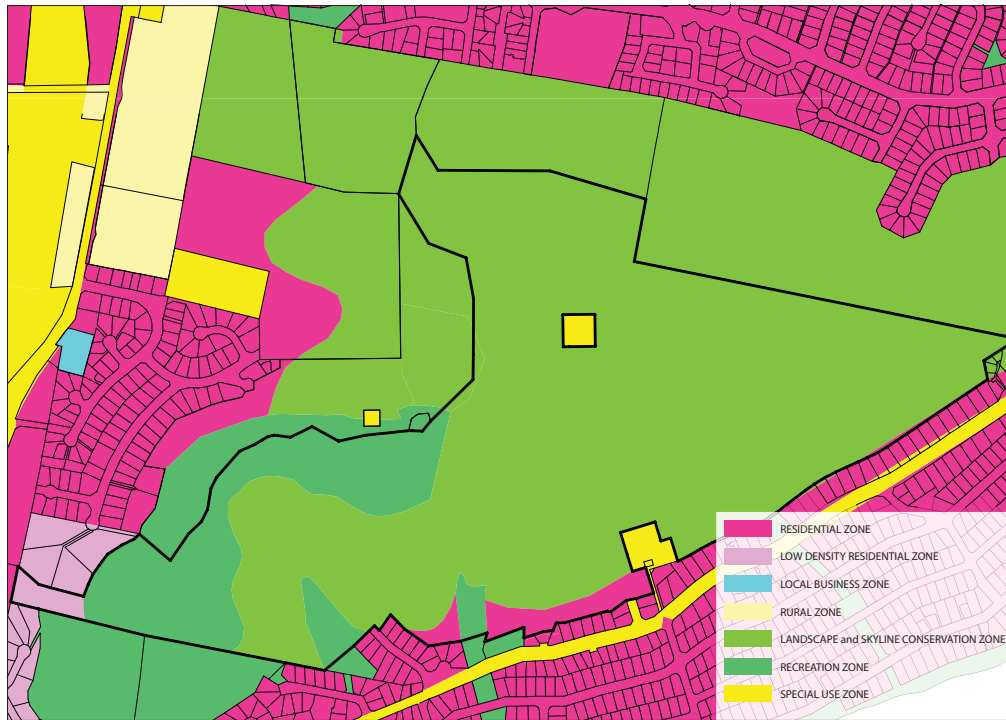


Figure 8: EXISTING ZONING MAP CLARENCE PLANNING SCHEME 2007 Zoning Map Sheet 16



Figure 9: PROPOSAL AND PROPOSED AMENDMENTS TO PLANNING SCHEME

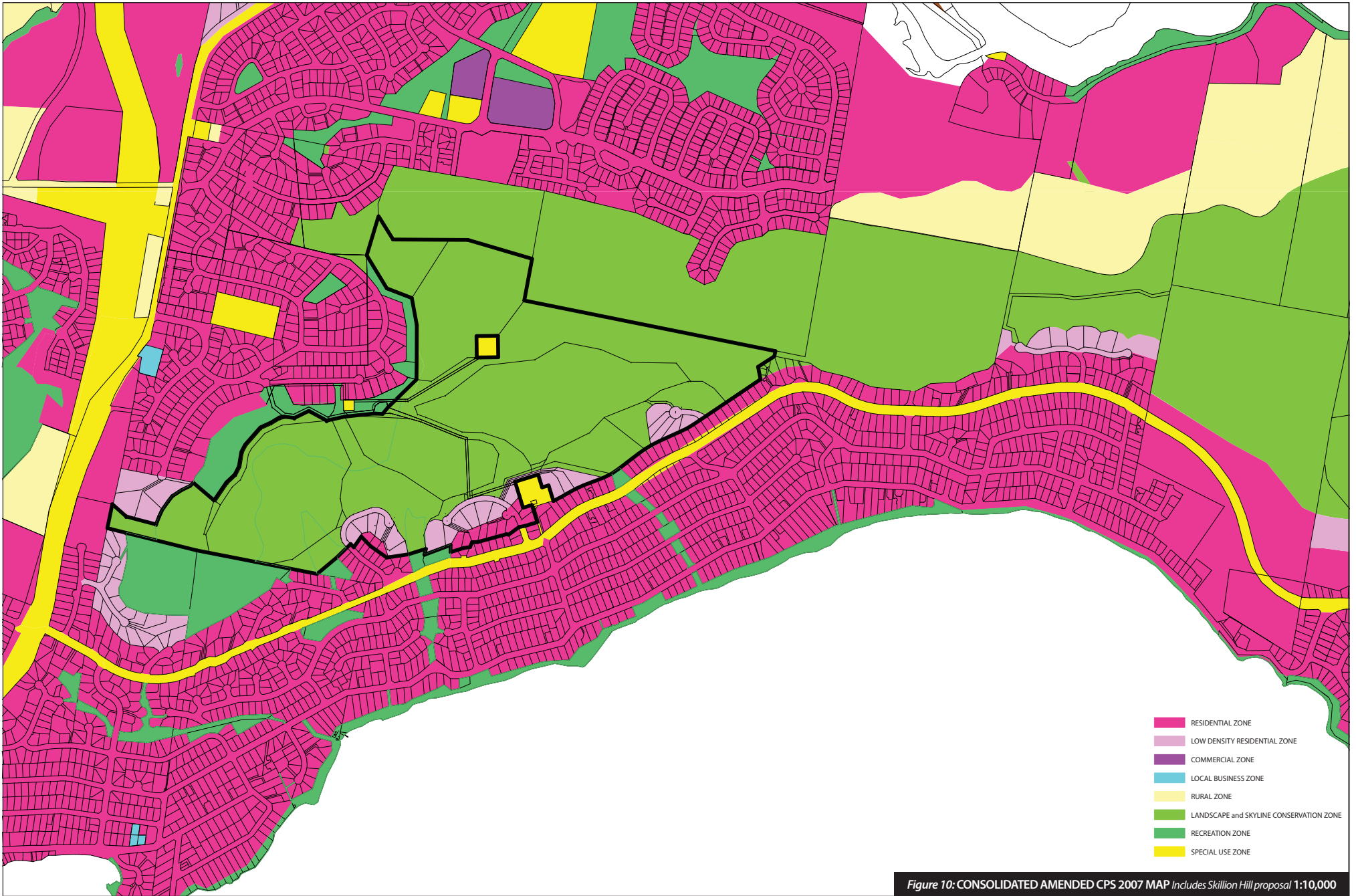


Figure 10: CONSOLIDATED AMENDED CPS 2007 MAP Includes Skillion Hill proposal 1:10,000

Development of these areas could add to the amenity of existing residential areas by:

- Providing better access to bushland recreation
- Introducing a managed transitional edge that would address and optimise fire hazard management while also reducing likelihood of ecological degradation, and visual transition edge effects by:
 - separating residential clusters lower on the slope (immediately above existing suburbs) and retained bushland
 - buffering the residential areas and bushland with an outer road and large lots with buildings set well back

In adjacent areas within Clarence City, low density residential zoned areas have been used to create an urban/bushland buffer.

Areas immediately above adjacent suburbs

To optimise use of serviced land, standard residential lots should be created along the perimeter of the Proposal Area where land was available after a transition buffer was created.

2.5 The land use proposal

Conservation Covenant Area bushland lots and POS

This area largely corresponds to the Conservation Covenant Area. It is proposed that all of this area would be zoned Landscape and Skyline Conservation. (At present while most of the area is zoned Landscape and Skyline, there are areas zoned for Recreation.)

The Nature Conservation Plan (NCP), referenced in the Covenant, anticipates subdivision by Public Open Space (POS) trails located largely consistent with existing trails. The land between the Trail/POS areas is proposed to be privately owned, in large titles, with allowance for only one residential location on each (consistent with the Covenant). These are termed 'bushland lots' for the sake of easy identification.

The Master Plan proposal outlines lot boundaries consistent with the NCP requirements, and identifies indicative House Sites that meet Planning Scheme and Conservation Covenant criteria.

It is anticipated that there may be some refinement of final boundaries between the Bushland Lots (and by implication final boundaries of POS areas) as part of the application process.

Bushland Lots

The Conservation Covenant requires owners to be responsible for conservation management of bushland on each lot. It is anticipated that the owners will also provide informal surveillance of POS areas.

Under the NCP, development including building can only take place within a designated Building Envelope, located within a 'Domestic Zone' which contains any gardens and waste water management. The location of any significant disturbance or development including clearings, residences and accesses requires Ministerial approval. (Note - A Building Envelope in the NCP is not defined in the same way as the Building Envelope in the Planning Scheme).

The proposed zoning, Landscape and Skyline Conservation, has a purpose consistent with conservation management required under the Covenant supported by design requirements that limit potential visual impacts.

As part of the master planning process, indicative House Sites were identified for each lot, to ensure that there is at least one location on each lot that can be largely consistent with the operation of the Conservation Covenant and the intent of the Planning Scheme. The indicative house sites show a house footprint and an associated clearing area.

Locations for Indicative House Sites were identified that:

- Avoid significant conservation areas as required under the Covenant
- Optimise minimising visual impact and fire hazard management, by selecting locations for house site with:
 - low gradient that requires smaller clearings for fire hazard management (referring to Australian Standard, AS 3959-2009: *Construction of buildings in bushfire-prone areas*)
 - locations where the integrity of the colour, tone and texture of the wooded slopes or line of the skyline would not be interrupted by buildings or clearings

The Droughty Trail trail network

The network of trails proposed in the Master Plan accommodates sections of the Droughty Trail (the primary trail along the ridgeline) and links trails connecting to adjacent suburbs, consistent with Councils *Tracks and Trails Action Plan*.

The areas set aside for the trail and linkways would accommodate existing trails within a bushland character corridor, allowing for walkers to enjoy the Rokeby Hills, and of a width with potential to provide a separate cycle way in the future.

Skillion Hill Park extension

The proposed park is on land that is currently mixed bushland and open pasture. It includes an existing informal link to Rokeby that could be formalised if land to the east owned by others were developed.

The area of parkland proposed in this stage would add to the extent of Skillion Hill Park (in the Skillion Hill proposal currently with Council).

Lower transitional urban/bushland interface

The Master Plan proposes that areas below the Conservation Covenant would provide for residential use (primarily low density with some standard lots) in a manner that achieves the preferred edge or transition performance.

Natural values

The boundary of residential areas adjacent to bushland should be as simply shaped as practical responding to assist weed management.

Fire management

The outer edge of residential areas should be accessible to vehicles, i.e. an outer road designed and maintained to facilitate defending residential areas during a fire event.

Fire management zones consistent with the Tasmanian Fire Service *Guidelines for Development in Bushfire Prone Areas in Tasmania*, are used, as they allow for a transition in vegetation structure and density (fuel load), creating a softer visual transition with different zones applying in road reserve and front gardens.

Safe and attractive recreation access

The interface should be configured to preclude vehicular access into the Conservation Covenant Areas while permitting recreational access. Some recreational use brings informal surveillance making the area safer for users and supporting conservation of natural values.

A Lower Trail above the outer edge roads would connect through lower level POS areas to link Kuynah Bushland Reserve to the southern section of the Droughty Trail. The Lower Trail affords a less arduous walking track for the less mobile and some lower level fire access.

Residential form and informal surveillance

Residential areas should be designed to provide informal surveillance of POS areas, with opportunities for residents to enjoy a bushland setting while also viewing POS entries and significant portions of the Conservation Area.

Visual transition

Residential use would be accommodated in clusters separated by areas of open space to provide a visual transition between urban development and retained bushland, with:

- The appearance of a relatively smooth but discontinuous line along the Howrah-Tranmere hillface separating built-up areas and retained bushland

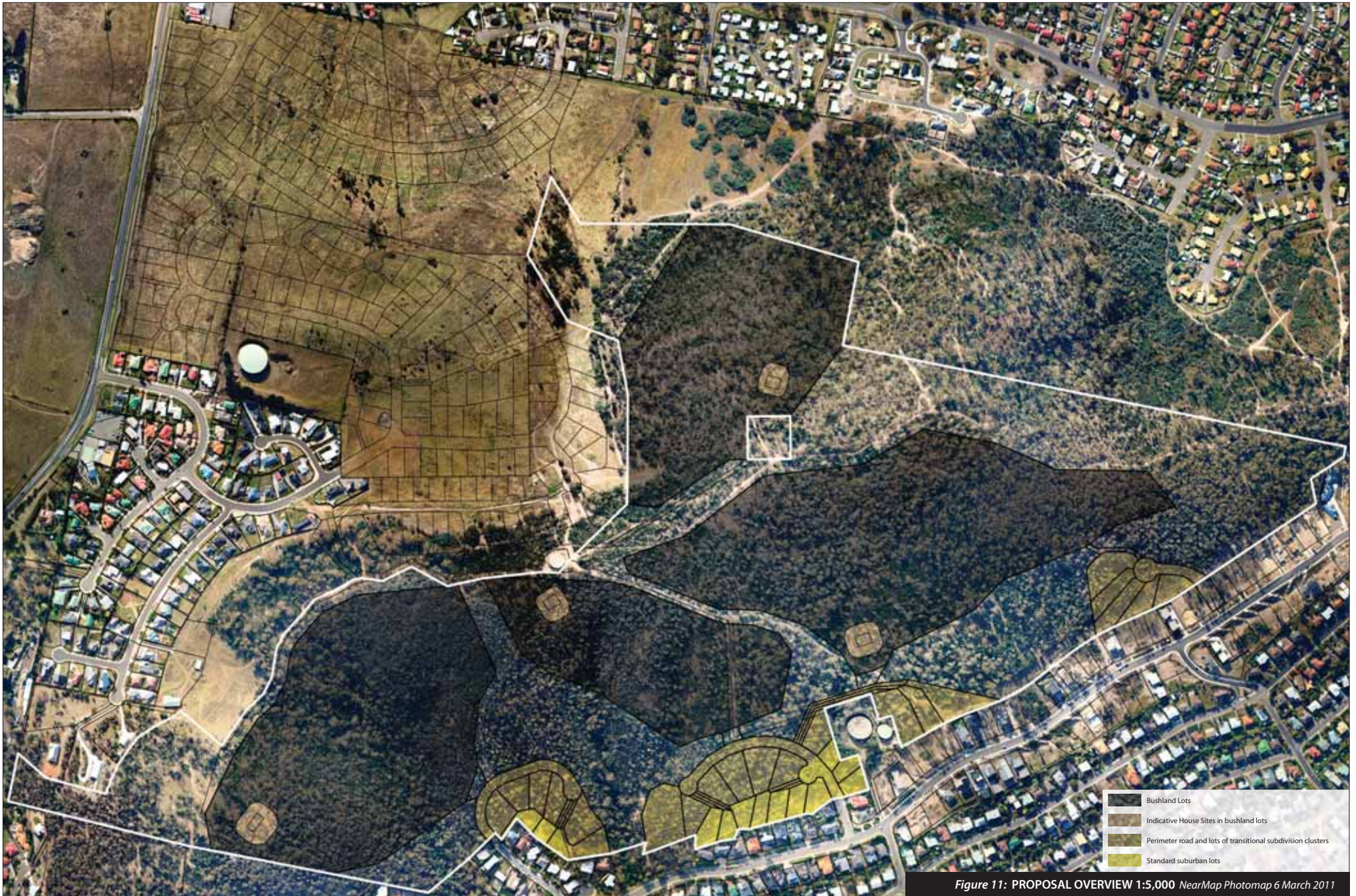


Figure 11: PROPOSAL OVERVIEW 1:5,000 NearMap Photomap 6 March 2011

- Streetscape trees and landscape treatment of cut banks on a road immediately alongside retained bushland, where practical introduce a local POS above the road reserve
- Within each residential cluster:
 - large low density lots closest to retained bushland
 - standard lots immediately above retained suburbs

2.6 Proposed Scheme amendment

The Master Plan proposes changes to the Planning Scheme maps.

The changes would facilitate the proposed layered transition between the adjacent urban suburbs to the west and the conservation bushland core (or spine) on the ridgeline and upper west slopes of the Proposal Area, in a manner consistent with:

- Planning Policy Framework of the Planning Scheme
- Operation of the Conservation Covenant
- Provision for a well defined urban/bushland interface or buffer in the existing structure and operation of Scheme

Where practical the proposed refinements to the Scheme rely on the routine operation of existing zones to effect Planning Policy Framework outcomes.

Proposed change to the Scheme map

The changes proposed are consistent with the subdivision proposed in the Master Plan:

- The entirety of the Conservation Covenant Area would be zoned 'Landscape and Skyline Conservation', the zone most consistent with conservation values and probable land use under the operation of the Conservation Covenant
- Areas below the Conservation Covenant proposed to be retained as bushland, either for their conservation values or as open space linkage, would also be zoned 'Landscape and Skyline Conservation'.
This zone reflects the likelihood that some of these areas may be added to the Conservation Covenant Area and that all of these areas support the intent of the Covenant Area by acting as buffers
- Areas adjacent to retained bushland would be zoned 'Low Density Residential' to effect an urban/bushland buffer facilitating fire hazard management, natural values buffer and visual transition, with potential to contribute towards management of ecological edge effects through providing informal surveillance

The Low Density Zone is consistent with Council's more recent practice for zones on the urban/bushland interface

- Where there is sufficient potential developable land, remaining land would be zoned 'Residential'

It is anticipated that boundaries of zones would be approved in principle and then finalised together with the final approval of each stage of subdivision.

Minor inconsistencies with zone provisions

There are some minor inconsistencies between provisions applying under the proposed zones and practical requirements to achieve optimum conservation outcomes, land management and other outcomes consistent with the intent of the Scheme.

In these instances, it is proposed that the operation of the Scheme to the Proposal Area would be refined or clarified by a specified departure or other mechanisms to ensure future land uses or development meets conservation requirements, but not to damage the integrity of the Scheme, refer Neil Shephard report.

2.7 Stages

Development in the Conservation Covenant Area is contained within a single stage, the 'Bushland Lots and POS Stage'. This simplifies administration of applications for the Covenant Area which will require multiple agency approvals. It also means that some areas of POS that are functionally most associated with adjacent residential stages are contained within the Covenant Stage.

There are 4 stages in total:

- 3 contained residential clusters above Oceana Drive that create the managed bushland/residential transition
- The separate bushland lots and POS stage applying over the Conservation Covenant area.

At this time (May 2011) the order of the staging has not been finalized so stages have been designated by name.

Each stage can be undertaken independent of the others and stages could be developed at the same time.

Residential subdivision cluster stages

The Tunah Street extension, Coventry Rise extension and Peppermint Place (provisional name) stages, each have distinct entries and have services connecting through existing urban development in Howrah and Tranmere.

Bushland lots and POS stage

The design of the 'Bushland Lots and POS Stage' was refined to ensure planning consideration and timing of subdivision and construction was not dependent on the approval of the Skillion Hill subdivision proposal.

Three bushland lots have legal access from Skillion Road at its current length, as well as individual frontage to the composite road and park entries proposed in the Skillion Hill subdivision.

Lot 2 is dependent on the earlier approval of either the Coventry Rise extension or Peppermint Place subdivisions.

2.8 Subdivision works and infrastructure

Roads

Road construction associated with the 3 transitional residential clusters (Tunah, Coventry and Peppermint) will include landscape and streetscape works.

Driveways

Any construction of driveways to residential lots will be constructed by Malwood to a design and standard agreed with Council.

Driveways in residential clusters

Reciprocal ROWs in Tunah Street and Coventry Rise would be constructed by Malwood, including erecting side fences suitable for privacy for lots but discouraging views into adjacent lots (comparable to the fences erected alongside parks in Glebe Hill).

Shareway accesses and walking trails

The Droughty Trail through the Proposal Area will be a shareway with a rustic bushland character. It will accommodate:

- a walking trail
- continuing access to an existing reservoir
- access to some of the bushland lots

It may possibly accommodate access to a proposed reservoir (if the Skillion Hill proposal proceeds).

Water, stormwater and waste management

JMG have prepared a services report and established that the proposed subdivision can be serviced, in part relying on infrastructure connections put in place by Malwood during construction of the Oceana infill stage, refer Section 7 and also separate Engineers report.



Figure 12: STAGES 1:5,000

Water

The current reservoir on Rokeby Hills has sufficient capacity for the lots created in the Master Plan proposal.

The Indicative House Site proposed for the eastmost bushland lot, cannot be supplied from the existing reservoir and would rely on tank water until construction of the southern reservoir (this reservoir would be constructed if the Skillion Hill proposal proceeds). Residences at 2 of the other Indicative House Sites on bushland lots may need to make provision for an intermittent water supply.

Stormwater

Stormwater from proposed transitional residential clusters is readily collected using existing connections.

Waste

Sewerage waste in the residential clusters flows towards Oceana Drive utilising existing connections,

The Conservation Covenant anticipates on-site waste management for Bushland Lots, although, some lower residences may be able to link into the sewer.

Other services

All services to bushland lots will be located in driveways to limit disturbance of vegetation.

Establishment of POS areas

POS areas would be established to a standard agreed with Council.

Malwood understands that the land cost plus the costs of any establishment works would both count towards an open space contribution, and if that contribution exceeds what is required by statute that greater cost would be acknowledged in any relevant negotiations.

POS associated with the Coventry and Peppermint Stages would be established to an agreed standard as part of the construction works associated with stages.

Establishment of fire management zones

These will be established within perimeter lots consistent of the Tunah, Coventry and Peppermint stages, refer Figure 19, p.36.

3 NATURAL VALUES

In 2006, as a condition of approval for an infill development subdivision on Oceana Drive, Malwood was required to bring a significant portion of the Master Plan Proposal Area under a Conservation Covenant. The process of finalising the Covenant extended until June 2010.

The approach to conservation of natural values in the Master Plan was developed in parallel with the finalisation of the *Malwood Rokeby Hills Conservation Covenant* (the Conservation Covenant). In 2010, following more detailed assessment of natural values, the extent of the area of the Conservation Covenant was enlarged beyond that originally agreed.

The approach to the conservation of the natural values was developed in consultation with North Barker Ecosystem Services, (NBES). During the Master Plan preparation, NBES critiqued approaches, planning strategies, design concepts, final designs and kept the project team advised regarding implications of the emerging content of the Conservation Covenant.

The natural values section of the Master Plan should be read in conjunction with the following documents:

- *Oceana Phase 2: Residential Subdivision: Vegetation Survey and Fauna Habitat*, NBES report, 18 February 2011,
- *'Malwood', Rokeby Hills Conservation Covenant* July 2010 (and associated Nature Conservation Plan)
- *Land Management Throughout the Rokeby Hills*, February 2011 by Land Management and Rehabilitation Services Pty Ltd (LMRS).

3.1 Existing situation

The Proposal Area is located within a relatively isolated urban bushland. The woodland is comprised of a mix of communities that are generally in good condition.

Natural values

The following briefly outlines the conservation values of the Proposal Area identified by NBES.

Threatened vegetation communities

Approximately 24.6ha supports vegetation communities classified as having threatened conservation status under the *Tasmania Nature Conservation Act, 2002*, as follows:

- Risdon Peppermint *Eucalyptus risdonii* woodland which mostly occurs on the north west facing slopes often immediately below the ridgeline - occupies 16.5ha
- Blue Gum *Eucalyptus globulus* dry forest and woodland - 8.1ha occurs

in more sheltered locations, including gullies to east, south and south-west of the Proposal Area

Any development or disturbance associated with proposed land uses, would preferably not significantly alter or threaten the continuing occurrence of threatened communities in the Proposal Area.

Threatened species

NBES identified 5 species considered rare under the *Tasmania Threatened Species Act*, that occur within the Proposal Area.

Two species have localised occurrences. Any significant disturbance in should be excluded from those locations:

- Knotty speargrass, *Austrostipa nodosa* - Recorded at one site in small numbers

- Risdon Peppermint, *Eucalyptus risdonii* - On north west facing spurs

Three species are widespread with less impact on potential land uses:

- Chocolate lily, *Arthropodium strictum* - Locally abundant
- Tall wallabygrass, *Austrodanthona induta* - Widespread in low numbers
- Shade peppercress, *Lepidium psuedotasmanicum* - Widespread but infrequent

3.2 Conservation management history

Prior to the conservation covenant

When Malwood acquired their land on the Rokeby Hills it was primarily undeveloped woodland criss-crossed by informal tracks.

Fires

In the mid 1990s, shortly after the land was acquired, there was a significant bushfire on this section of the Rokeby Hills. The fire reduced vegetation density and structure and burnt out the soil, leaving looser depleted soils vulnerable to erosion and open to weed invasion.

Initial works and initiatives

As fires in this area are commonly associated with burning of dumped stolen vehicles, Malwood decided to act to stop uncontrolled access, while continuing to allow walker access to the tracks.

A civil contractor was engaged to undertake works to obstruct access, however, the difficulty of managing this land became more apparent through deliberate counter actions and vandalism, such as:

- Fences and gates across identified accesses were removed or damaged, and access re-established

- Trenches were bridged, and access re-established
- Rock barriers established at entry points were ramped over or new tracks established to the side

Malwood attempted to encourage a spirit of stewardship towards the land within the local and wider community through:

- Co-operating with community groups on removal of dumped car bodies
- Holding facilitated forums with interest groups to discuss developing planning and design directions
- Sign-posting to encourage public-spirited enjoyment of the land and acknowledge continuing public access

2007-2010 - Initial LMRS management program

While the Conservation Covenant was being finalised, Malwood commissioned Land Management and Rehabilitation Services Pty Ltd (LMRS) to prepare a structured land management program to address emerging problems.

LMRS's proposed program was reviewed by DPIPW (liaison undertaken by NBES). LMRS commenced land management works early 2007 and works consistent with that program extended through to mid 2010, when the program was superseded by the conservation requirements under the Conservation Covenant.

The LMRS program was intended to:

- Reverse degradation processes, particularly weed invasion and the spread of areas of disturbance on the Malwood property
- Address TFS requirements for fuel management and for emergency access
- Reflect Council officer comment to LMRS regarding proposed works

A variety of works were undertaken by LMRS 2007-2010 consistent with the initial program.

Weed control

Weed control commenced with immediate removal of materials in identified hotspots, followed by monitoring and continuing control works.

Closing (or decommissioning) tracks

Tracks were selected for closing where:

- Erosion was significant or expanding
- A number of tracks were located in close proximity, and could readily be reduced without compromising the pedestrian access to the Rokeby Hills



**Figure 4:
Distribution of
Vegetation Communities**

- There was evidence a particular track was associated with vehicular entry for anti-social activities

Tracks were blocked and entry sections ploughed or cultivated. The length of the track was rehabilitated, included resurfacing for water harvesting and to obstruct water flow that could cause erosion.

Fire hazard buffer

A fire hazard buffer was created along the west boundary of the Proposal Area, consistent with commitments that were part of the Oceana Drive infill development approval. This required establishing:

- A partial Building Protection Zone (BPZ) 10 m wide, upslope from the lots of the Oceana Drive infill subdivision
- A 15m Fuel Modified Buffer Zone upslope from the BPZ

The buffer was created by crushing vegetation, while retaining isolated trees to reduce visual impact, maintain species diversity and protect soils.

Annual audits

Annual audits were undertaken to monitor weed invasion and assess the efficacy of weed control and rehabilitation works, check fences and identify emerging issues.

Management of the Conservation Covenant Area

Operation of the Conservation Covenant commenced mid 2010, the covenant requirements are outlined in more detail later in this section.

Land management proposed for the first post-covenant year has been reviewed by the DPIPWSE stewardship officer administering *Malwood, Rokeby Hills Covenant*, and has been approved. Work is currently under way.

The Covenant requires that the Conservation Covenant Area will be sign-posted and fenced to separate it from adjacent residential areas.

3.3 Existing situation

The Proposal Area

While currently the land in the Proposal Area is well managed, it is in less than pristine condition as it is subject to urban edge pressures. The condition of the Proposal Area bushland reflects the recent history of the Area:

- Land management by Malwood, including some control of vehicular access and weed management
- Recovery of the density of vegetation following fire in the mid 1990s

- Continuing and changing degradation pressures in this locality including weed dumping, making tracks, and wood hooking (apparently controlled for several years but emerging again over winter 2010)

- Weeds brought in by walkers

The land requires active and constant conservation management to retain condition. The conservation values are sensitive to any real or perceived relaxation of management.

Considered as part of a wider natural system

Options for wildlife linkage are insubstantial or sub-optimum. The Proposal Area is contiguous with, or potentially linked to, other areas of limited extent bushland on the Rokeby Hills:

- Private land to the southeast, between the Proposal Area and Tollard Drive, Rokeby
- A narrow corridor of land owned by Malwood linking to Malwood's southern balance area and to other owner land identified in the Planning Scheme (North Droughty ODP) for conservation management
- A weakly defined wildlife corridor northwards across church land and Rokeby Road to Glebe Hill is potentially hazardous for animals with its current configuration

The Proposal Area has some potential for conservation-oriented uses but potential is limited by the requirement to resource on-going management responses to the continuing degradation pressure and by the limited scope for wildlife linkage:

3.4 Statutory context for protection of natural values

The Conservation Covenant

Conservation Covenants and comparable instruments are proving a useful tool to spread the costs of conservation management in a more equitable manner

The concept of a conservation covenant is that active conservation management is undertaken by private owner/managers and support is provided by a government authority or public interest benefactor.

Instruments of this type can enable a greater extent of land to come into conservation management or under state level oversight, without the state, council (or other authorities) bearing the greater part of the resourcing burden.

Generally a conservation covenant is created over land with significant conservation values, but with a relatively low priority for inclusion in a reserves system, considering:

- Conservation value relative to other candidate areas
- Associated public benefits potentially arising from reserving the land, i.e. recreation opportunities or water catchment protection
- Likelihood that the land would be resource-intensive to manage due to condition or degradation pressures

Conservation Covenant (Tasmania)

A Tasmanian Conservation Covenant allows only specified uses, or developments to occur in the Conservation Area. All land in the Conservation Area is subject to conservation management requirements.

Proposed development must be consistent with limitations on impacts outlined in a Nature Conservation Plan (NCP), including location, extent and detail of developments or activities.

The NCP also specifies continuing conservation management required to be undertaken by the land owner.

Final development proposals, for buildings, trails, infrastructure or any matter not specifically excluded, plus any change to a NCP require approval by the relevant Minister.

A DPIPWSE stewardship officer provides the owners with technical support to encourage compliance with the NCP. A standard 5 yearly review of the efficacy of the NCP allows for refining the NCP and updating the owner as best practice evolves, and re-enforces compliance.

Nature Conservation Plan for "Malwood", Rokeby Hills

The current NCP describes the conservation values of the land, using vegetation maps and descriptions.

Management requirements, use and disturbance limitations, and permitted and excluded activities include:

- Subdivision limited to a maximum of 4 residential lots, with or without POS, to be approved by the Minister
- Residential lots to include one fixed 'Domestic Zone' no greater than 2 ha and containing a Building Envelope not greater than 0.5 ha, plus:
 - the Building Envelope not to be located within an area where threatened communities or species occur
 - fire disturbance being limited to within the Domestic Zone
 - domestic gardens limited to within the Building Envelopes and being the only location where fertilisers can be used
 - the requirement to comply with all other statutory requirements



Figure 14 THREATENED SPECIES AND CRITICAL HABITAT 1: 5,000 North Barker Environmental Services Report 2011

- Landowners are responsible to remove dumped material including cars, at the landowner's cost
- Altering natural water flow is generally not permitted unless approval has been obtained from the Minister
- Use for POS is limited to tracks
- Retain tracks noted as Indicative Tracks in the plan within the NCP and close all other tracks, except those too narrow to close using earthwork equipment
- Non-deleterious recreational activities such as bushwalking and birdwatching are permitted while deleterious activities such as motor-bike riding are permitted only with approval from the Minister
- Limitations for fire management with authorisations required for planned burns or introduction of firebreaks
- Specific requirements for control of animals, control of plants, clearing of vegetation and any re-vegetation
- Fencing required in specific locations
- The Conservation Covenant Area to be identified by signs

While the Conservation Covenant provides protection for most of the significant vegetation in the Proposal Area, some significant areas of Blue Gum *Eucalyptus globulus* and Risdon Peppermint *Eucalyptus risdonii* occurring low on the west facing slope are not currently contained within the Covenant Area.

Clarence Planning Scheme 2007

Planning Policy Framework

The Framework makes a number of statements about retention of vegetation and natural values.

Statements about protection of scenic values, woodland and skyline and the setting of urban settlements implicitly require conservation of bushland areas.

Land use zones

The zones over the greater part of the Proposal Area apply over the areas of highest conservation value:

- 'Recreation' to the north
- 'Landscape and Skyline Conservation' in the centre and south

Both of these zones allow for conservation of vegetation and associated natural systems conservation, and for landscape conservation.

However, zone controls do not address the facilitation of an optimum conservation outcome, by balancing:

- Protection from competing land uses or from land uses or management that cause disturbance
- Encouraging land uses that introduce active conservation management.

Vegetation Management Overlay

The most explicit tool in the Planning Scheme to retain natural values is the Vegetation Management Overlay (VMO). The VMO applies over virtually all of the Proposal Area

The VMO Purpose (Section 7.1.1) specifies its conservation intentions:

- (b) To protect areas of significant vegetation and bushland habitat including forested skylines, prominent ridgelines and hills which contribute to important vistas and in particular those which create a natural backdrop to the urban setting for the City.
- (c) To protect and enhance areas of high, very high, and extremely high vegetation significance and bushland habitat
- (d) To ensure that development is sited to minimise the loss of native vegetation.
- (e) To maintain and enhance habitat and corridors for indigenous fauna.

City of Clarence Strategic Plan 2010-2015

The Strategic Plan addresses protection of natural values within 'Natural Area Management Strategies' outlined under the Goals for environment for the City.

Strategies to 'protect natural assets' include:

- Fire management planning
- Weed management planning
- Working with other agencies and with volunteer groups
- Maintaining the currency of Councils Natural Assets Inventory

Implicit in the wider scope of these strategies is a significant contribution by private owners.

Clarence Public Open Space Policy

The policy outlines a framework to consider benefits potentially provided by any open space that Council may acquire or retain.

The Policy establishes protection of environmental value as an item for consideration, along with consideration of likely costs to Council and other public benefits potentially accruing from Council's ownership of the land.

3.5 Permits and approvals advice

Malwood has obtained the following permits or advice of approval,

TSPA permits

Threatened Species Protection Act, 1995 (TSPA) permits allowing subdivision at Tunah Street and north Coventry Rise were obtained as part of negotiation associated with Malwood's 2006 infill development and associated offset conservation covenant.

Policy and Conservations Branch advice

The Section Head (Conservation Assessment), Policy and Conservation Assessment Branch, DPIPWE, advised in March 2011, that permits are likely to be granted for the south Coventry and Peppermint Place subdivisions and for the bushland lots, trails and house sites proposed in the Conservation Area, in recognition that the finalised Conservation Covenant brings into conservation management significant value areas, additional to the extent of areas agreed in 2007:

'PCAB can advise that after consideration of the detail provided ... and in the report (*Oceana Phase 2 Residential Subdivision, Vegetation Survey and Fauna Assessment 18th February 2011*) that a permit application under the *Threatened Species Protection Act 1995*, for impacts to species ... would be likely to be to be granted with conditions. In this instance, the improved conservation outcome that has been achieved by the enlarged Covenant that was executed on the Malwood property last year is seen as providing adequate offset to any additional impacts to those species likely to be impacted from the additional subdivision developments.'

3.6 Conservation concept

Within the Conservation Covenant Area

The concept within the Covenant Area is to undertake subdivision consistent with that allowable under the Covenant, but in a manner that is also consistent with the intent of the Planning Scheme's Planning Policy Framework, that utilises the Scheme's zones and associated controls and is also consistent with TFS requirements:

- Retaining the existing tracks, with trails and adjacent land to be offered to Council as POS
- Creating 4 residential bushland lots, providing privately funded conservation management on a limited number of appropriately sized lots between tracks
- Indicative House Sites to be established to test whether there are locations that meet visual impact, fire management and environmental performance requirements.

A transitional area below the conservation covenant area

The areas below the Covenant Area and above Howrah and Tranmere would act as a buffer between the bushland above and the suburbs. Potential edge effects on natural values would be mitigated or absorbed in this transitional area.

Ideally the transitional buffer areas would be configured to:

- Minimise edge effects such as weeds establishing by having as simple an edge as practical to assist maintenance and monitoring of the bushland condition along the interface
- Where practical provide a buffer of retained bushland below the Conservation Covenant Area. A layer of easily accessible POS could be introduced between the Conservation Covenant Area and lower residential areas provides an additional buffer where practical
- Protect areas of higher conservation value below the Covenant Area through land uses consistent with maintaining an option to add these areas to the Covenant Area. Designate significant Blue Gum and Risdon Peppermint outlier population areas as future parkland
- Provide a secure boundary to the Conservation Covenant Area that discourages access for antisocial activities and associated damage to conservation values:
 - provide limited access points into the Droughty Trail park system
 - ensure entrances are prominent, readily visible and have the appearance of being under informal surveillance
- Support the identity of the Conservation Covenant Area as valued retained bushland by:
 - interpretation
 - design cues in landscape works and at entry points
- Clearly define the extent of required fire management (to discourage the spread of fire hazard management activities into retained bushland), where practical identifying the boundary by the edge of an outer or upslope road reserve

3.7 Proposal - natural values protection

Trails through bushland and POS

The existing trail system is retained, with minimal of changes to routes in the Conservation Covenant Area or requirement for new tracks, so minimising disturbance.

It is anticipated that Council would be the owner of areas currently proposed as Public Open Space. As a land owner Council clearly has a natural values conservation capability.

Like the private owners Council would benefit from POS areas being handed over in relatively good condition, with a documented land management history of at least 5 years of management works.

On bushland lots

Private owners of bushland lots bear responsibility for conservation management of bushland lots.

The residents will act as de facto gatekeepers. It is anticipated that their presence and the likelihood of informal surveillance at all times, would discourage antisocial activities.

Design development

The proposed lot shapes and locations of indicative house sites are generally consistent with directions established in the NCP.

Lot boundaries

Proposed boundaries of the lots between open space trails have been drawn consistent with minimising areas of disturbance and providing for surveillance of trails.

Indicative house sites

Indicative house sites were identified to test whether sites exist that comply with requirements under the Conservation Covenant, the operation of the proposed Planning Scheme zones and anticipated interpretation of Planning Scheme provisions and fire hazard management standards.

The indicative house sites shown in the Master Plan have been selected following additional site-specific investigation of natural values impacts on provisional sites by ecological consultants NBES. Sites were refined until satisfactory sites were identified.

Supporting stewardship outcomes

The land would be relatively weed-free when it is sold, having benefitted from 5 years of conservation management.

Malwood has made the offer (subject to DPIPW approval) to engage LMRS to provide initial land management mentoring support to private owners for the first 2 years of ownership, to assist building owner's maintenance capacity.

The owners' stewardship role, including requirements for conservation management and limitations on use of the land would be:

- Supported by sign-posting of the extent of the Conservation Covenant and interpretation of the NCP (at entrances into the track system), meaning neighbours and people using the trails are aware

of the required performance

- Clearly identified in real estate marketing for potential owners, outlining the content of the Conservation Covenant and advising of regular review process
- Private owner responsibilities are re-inforced by
 - the availability of site-specific land management mentoring provided by Malwood
 - routine DPIPW stewardship officer contact and 5 yearly reviews of the operation of the Nature Conservation Plan

Transitional residential clusters

Interface with retained bushland

The subdivision design ensures entries into retained bushland are visible from roads and most probably from front addresses of residences of the lower subdivisions. Surveillance of park entries is incidental to normal views driving along roads and most likely from within houses.

The association of retained bushland and Droughty Trail system entries with the front address of residences establishes the conserved bushland is part of the landscape setting of those residences, valued as both a life setting and potentially for its real estate value contribution.

The sense that the bushland is something of value and the implicit stewardship responsibility of residents would be re-inforced by signposting of POS trails and links at entries - as agreed with Council and DPIPW. It will be further re-inforced by marketing of the bushland lots and in the subdivision clusters.

Threatened vegetation communities not in the Covenant

Outlier populations of Blue Gum and Risdon Peppermint adjacent to Peppermint Place are accommodated within POS areas between the residential clusters and Covenant Area.

Fire management

Fire management has generally been conceived as having clear management boundaries, to inhibit un-intended spread of management activity.

Fire management along the upslope boundary of residential clusters uses the fire management zones recommended in the TFS *Guidelines for Development in Bushfire Prone Areas in Tasmania*. The Fuel Modified Buffer Zone or outer fire hazard management zone is located in the upslope road reserve or outer edge of the cluster or within the boundary of private lots.

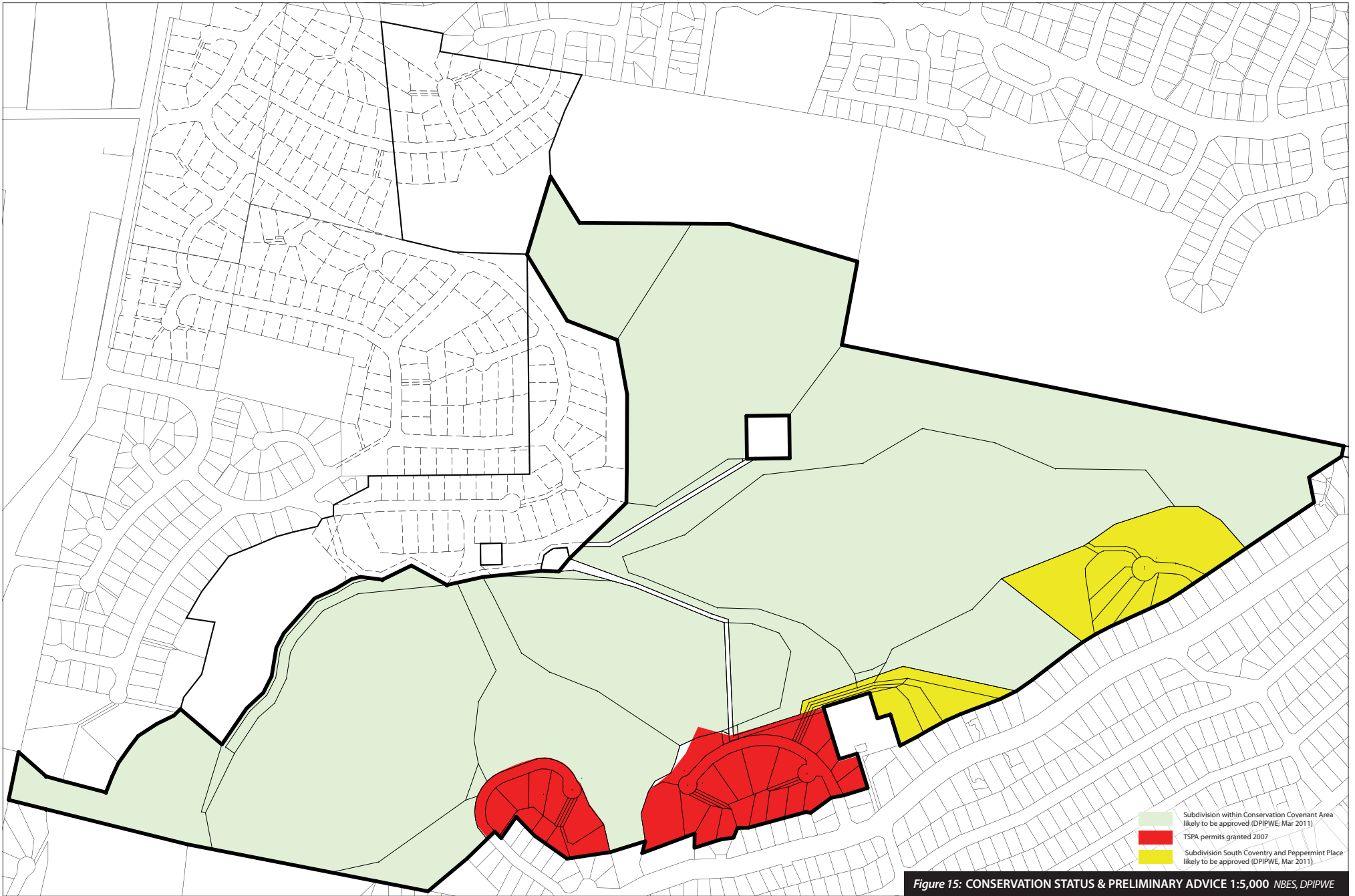


Figure 15: CONSERVATION STATUS & PRELIMINARY ADVICE 1:5,000 NBES, DPIPWE

Fire management within POS areas is anticipated to be generally consistent with Council's routine bushland management, except that it is anticipated that there would be a Part V agreement requiring maintenance of the 25m currently maintained above infill lots in Oceana Drive if an alternative had not been agreed with the TFS.

Encouraging a stewardship ethos

The area of bushland to be conserved consists of the bushland lots and POS along trails and parkland in the Covenant Area together with adjoining POS in the residential cluster stages of the Master Plan.

Ideally, legal requirements for conservation are re-inforced by supporting ecologically responsible behaviour by stakeholders responsible for the land management and by informing community members likely to be informally monitoring that land management:

The legal requirements that bushland lot owners provide conservation management would be supported by accurate and timely information about what is entailed, provided by Malwood's conservation management contractor and supported by DPIPW review processes.

Community members using trails would have access to information about the proposed development and conservation management with on-site signage.

Physical cues, such as entries into the trail system and signposting of trails and the Conservation Covenant Area, further suggest to residents of the subdivision clusters that the conserved Rokeby Hills bushland is a high value bushland, and a local asset deserving protection.

3.8 Commitments

Conservation Covenant Area

It is not anticipated that controls will be required additional to the operation of the Conservation Covenant.

Outside the Conservation Covenant Area

Commitment

Malwood consultants would undertake liaison with Council and DPIPW to finalise the design of bushland interface POS areas including consideration of:

- Signage of trails and POS areas
- Entries to trails and POS areas

From commencement of construction Malwood would secure each stage to preclude uncontrolled vehicular access into adjacent bushland.

On completion of each stage Malwood would ensure landscape and engineering works to preclude access were constructed consistent requirements agreed with Council, DPIPW. and the TFS.

Works to secure each construction area would be specified to be undertaken in a manner that had minimal visual and landscape impact.

Where practical, barriers would be designed to incorporate engineering works required as part of site works such as cut-off drains and cut walls or banks. If engineering solutions such as large rocks were required these would be undertaken to a high standard of landscape design as part of an overall streetscape concept.

Anticipated content of approval condition

The subdivider would be required to secure each stage of the Master Plan to preclude uncontrolled vehicular access to bushland areas at the commencement of works and continuing through construction to handover. Works to be undertaken in a manner acceptable to Council, DPIPW and the TFS.

4 OPEN SPACE SYSTEM

4.1 Existing situation

The Proposal Area on the the Rokeby Hills is generally comprised of moderate to steep slopes to the west and east of a north-south ridgeline. The little low gradient land (flat or relatively flat) is limited to land on or close to the ridgeline.

The ridgeline is particularly suitable for bushwalking, with a good condition bushland and opportunities for views to the east over Rokeby and Ralphs Bay and west down the Derwent or across the Derwent to Hobart and the Wellington Range.

The Rokeby Hills bushland is a relatively open woodland which provides relatively good sightlines along tracks for walkers. It has a strong spring wildflower display, and moreso after a wet winter/spring.

Recreational use

Currently the Proposal Area attracts limited recreational use. At present recreational use is largely confined to existing tracks. During the course of this project, people have been observed walking the tracks, alone and in small groups, some walk dogs.

There is evidence on tracks of mountain bikeuse, particularly the steeper tracks on the west face.

Prima facie, track users appear to be mainly locals - the area is not very prominent, there is no clear entry, convenient parking or other amenities.

Malwood has been attempting to stop use of the land for joy riding, car dumping and woodhooking while allowing enjoyment for recreation with no adverse environmental impacts. They have obstructed or gated vehicular accesses and tracks associated with erosion, spreading of disturbance of bushland or anti-social activity. Recently (Spring 2010), some-one opened up new bike tracks, to south of the Glarmorgan Street reservoir (in the vicinity of trails previously closed by Malwood).

Existing management of recreational access

Although this is private land, Malwood has encouraged access for recreation, and signposted key entries accordingly..

Pedestrian (and bike) access on the west is through Kuynah Bushland Reserve, Toorittya Bushland Reserve and through unbuilt housing lots along Oceana Drive.

The east boundary is fenced and gated, but the fence has been repeated cut for access. There is informal access through other owner bushland to the south east and to the south.

4.2 Context

Existing track network

The current informal track network is comprised of:

- Main ridgeline track
- Link trails connecting to the main track (bush tracks upslope through the Proposal Area
- Discontinuous lower tracks that eventually connect less directly to the main track. These are lower gradient tracks suitable for a wider range of fitness of people.

The existing track network connects to the street network and to connected POS areas.

The ridgeline trail

The track along the ridge line, the most defined of the existing tracks, appears to be the most popular. The track through the Proposal Area continues north to Kuynah Bushland Reserve and south to connect to tracks above Vitesse subdivision and the Carr ridgeline track. This track allows stunning views over the Derwent and Ralph's Bay.

The track is a currently effectively a shareway, being of vehicle width and easily trafficable by 4WD vehicles. It loosely conforms to existing ROWs for pipeline easements and is used for vehicular access to an existing reservoir on the ridgeline. It is anticipated that the ridgeline track will provide access to a reservoir proposed to the south along the ridgeline (currently a vacant lot owned by Southern Water).

Howrah - Tranmere - River Derwent linkage

The existing ridgetop track is accessed from secondary connecting tracks through Howrah and Tranmere, some of which are identified in the Clarence *Tracks and Trails Action Plan* as 'trail links', and shown on Councils Trails register, refer Figure 16a, p.29:

- Kuynah Bushland Reserve access - tracks through the reserve link to the north end of the Proposal Area ridgeline track. The tracks connect the ridgeline track:
 - to Mayfair Court, along Oceana Drive, through Minerva Park to a lane to the foreshore
 - through Fairisle Terrace, to Carella Park and to the foreshore
- Toorittya Bushland Reserve linkway - an on-paper conection from a fairly steep track down the west face of the Proposal Area, through Toorittya Bushland Reserve (which straddles Oceana Drive), along Anulka Street to link to the foreshore at Anulka Park



View north along the ridgeline track



View east from link track



View upslope - chocolate lily rock plate with link track above existing POS, 560 Oceana Drive

- Elinga Linkway - a cascade of parks and open spaces extends from twin parks just south of Glamorgan Street, above and below Oceana Drive, through the Elinga Play Park to the foreshore
- Minor linkage at 638A Oceana Drive - connects to the ridgeline just south of the Proposal Area, and makes a less defined linkage along streets to the River Derwent foreshore access off Tranmere Road (opposite Eliza Way)

Skillion Hill - Rokeby linkage

The Skillion Hill subdivision proposal (currently with Council), would provide a parkway link to Rokeby and potentially east through Rokeby to Rokeby Beach.

Tracks east

There is a major track linking east to mid Rokeby through adjacent privately owned land.

Opportunities associated with the existing network

The pattern of parkland areas in adjacent suburbs appears to make provision for POS routes linking east through Howrah to the Derwent foreshore walk and west to Rokeby town centre (and potentially to Rokeby Beach). The network of tracks through the Proposal Area linking into a planned network of parks through adjoining suburbs, has the potential to be developed into a high quality trail network.

To be consistent with best practice would require stronger design of individual open space areas, enhanced informal surveillance, and resolved trail connections including prominent defined crossings at the roads.

Linking parks through suburbs are being promoted to encourage more active recreation and connection. Linear parks through suburbs can sometimes be hazardous, where there is poor surveillance potentially creating safety problems. However informal over-viewing of older linear parks can be improved by various combinations of design and management, including:

- Stronger presentation as useable open space, with park signage, prominent paths and park features such as seats, play areas or incidental play opportunities
- Explicitly promoting additional surveillance by adjacent owners and foster a sense of local stewardship, through:
 - continuing liaison with neighbours
 - controlled allowance for some direct access into parklands through back and side fences, typically associated with park upgrades

- encouraging front address presentation to the park areas through Planning Scheme provisions

At a minimum it is anticipated that the pattern of parkways through Howrah-Tranmere and Rokeby would be retained as a network with the potential to provide for increasing recreation demand. This is likely to be required if Howrah-Tranmere continues to attract infill development and residential density, (as is explicitly provided for in the Planning Scheme) and proposed for well located residential suburbs such as Howrah and Tranmere in the Draft Regional Strategy Plan).

Existing POS in the local area

Within easy and convenient walking distance

Easy walking distances are generally understood to be in the order of:

- 150-300m for young children and families and for older individuals
- 200m-400m for convenient and recurrent walks
- 400/800m - 2km for the older children, and fitter individuals

On this basis there is considerable parkland and reserve areas readily accessible within adjacent suburbs to the Proposal Area.

Developed activity areas

There are flatter open spaces suitable for active running and informal ball games in Carella and Carriage Parks, Howrah; Raleigh Reserve, Howrah Gardens; Nielsen Park, Rokeby; recently approved subdivision in Tranmere and proposed in the Skillion Hill subdivision.

Play grounds are provided at Elinga Play Park and Carella Park Howrah, Nielsen Park Rokeby and anticipated at the proposed lookout off Skillion Road in the proposed Skillion Hill subdivision. Nielsen Park has a skate park.

Passive recreation

Opportunities for walking and passive enjoyment of natural areas are available in the vicinity of the Proposal Area at Kuynah and Toorittya Bushland Reserves, plus the existing walk along the Rokeby Hills and the emerging Derwent foreshore walk and Rokeby Beach.

Reasonably local

Other more distant recreation opportunities in the vicinity include Tennis Courts at Howrah, and facilities at the Wentworth Park Sports Centre.

Implications of local open space opportunities

Given the reasonable access in the vicinity of the Proposal Area to opportunities for active recreation and enjoyment of natural areas, the most suitable recreation contribution in the Proposal Area is consolidation and formalisation of the existing walking trail network.

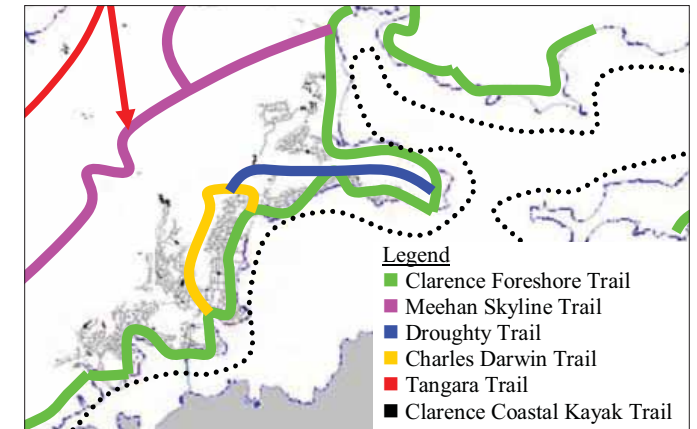


Figure 16a EXCERPT SIGNIFICANT TRAILS Tracks and Trails Action Plan 2008

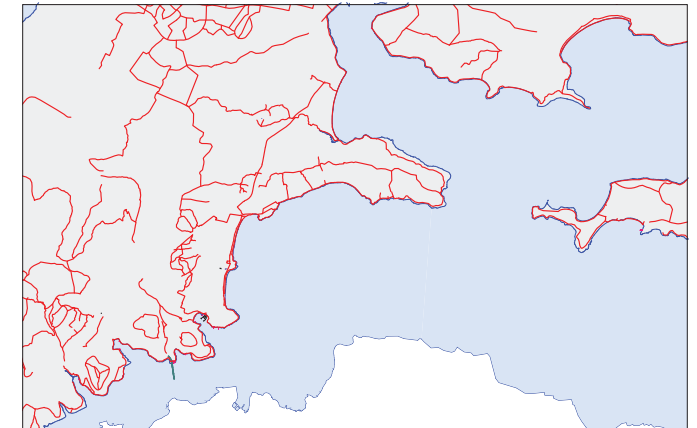


Figure 16b EXCERPT TRAILS REGISTER - potential secondary trails Tracks and Trails Action Plan 2008

Tracks Map

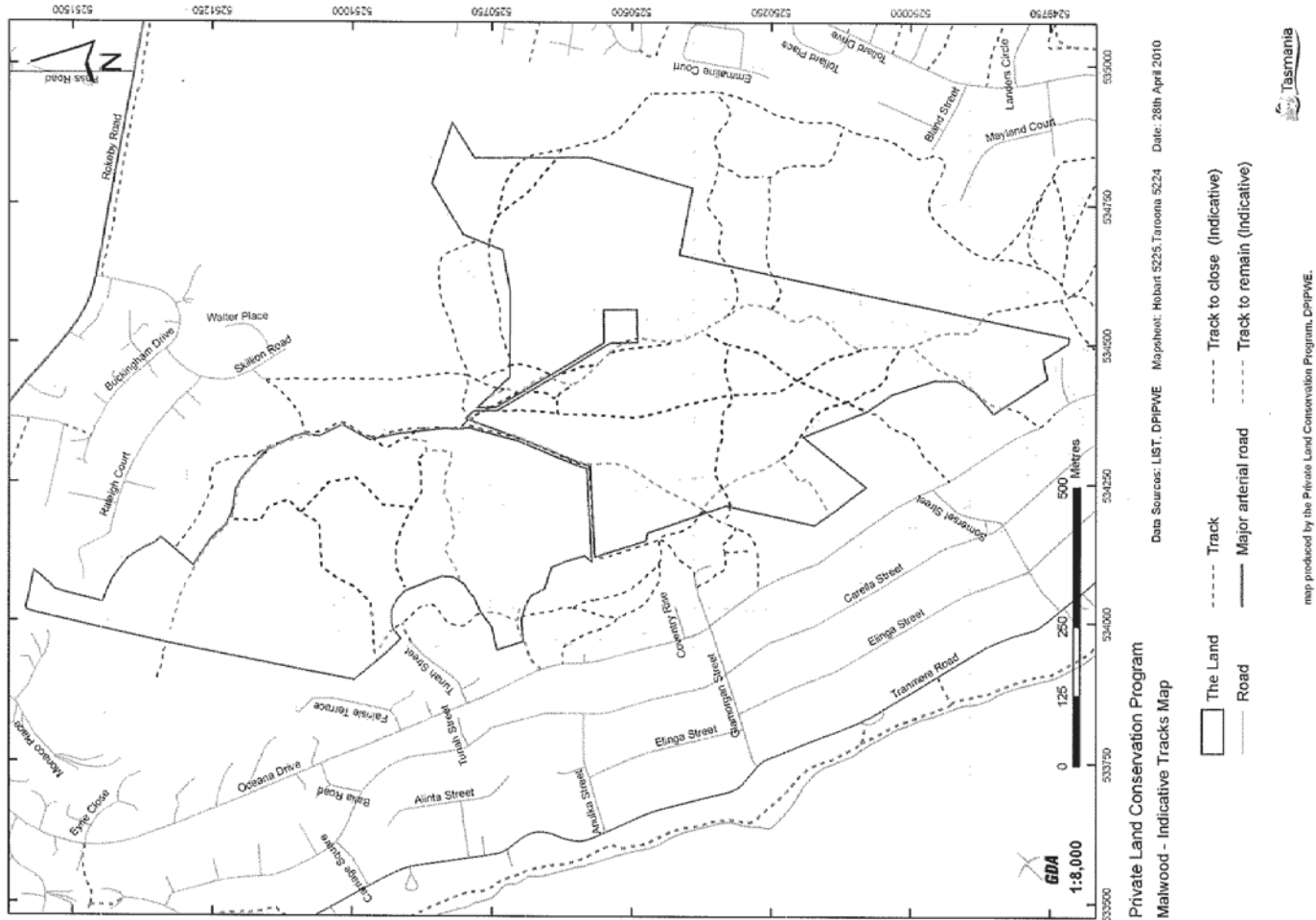


Figure 17: TRACKS MAP Malwood Nature Conservation Plan 2010

4.3 Strategic context

Conservation Covenant

The covenant permits limited recreation use, walking and enjoyment of natural values implicitly within areas defined by retention of existing tracks. Any other recreational uses would require Ministerial consent.

The Nature Conservation Plan includes an Indicative Trails plan showing those it is intended to retain.

Clarence Planning Scheme, 2007

The Planning Scheme zoning maps suggest a linear park system connecting existing POS areas in suburbs adjacent to the Proposal Area.

The map only implicitly suggests a future POS connection to the existing ridgeline track along the Rokeby Hills in the shape of recreation zoned areas, refer Figure:10, p.14. The map appears to show an intention to accommodate both nature conservation and recreation although how these uses would be balanced is not resolved.

Clarence Strategic Plan 2010 - 2015

Relevant strategies are outlined in the Social Inclusion Goal Area of Councils Strategic Plan are:

- Develop and implement Asset Management Plans that respond to the identified needs of local communities
- Develop plans to improve the amenity of public spaces, including:
 - future needs for public open space and recreation facilities
 - beautification and enhancement of streetscapes
 - implementation of Tracks and Trails Plan and Cycle Plan

Consistent with the Strategic Plan, Council is currently undertaking an overview review of open space provision and recreation. Emerging directions from that study were not available during preparation of this proposal.

Clarence City Council: Tracks and Trails Action Plan (2008)

Council's *Tracks and Trails Action Plan* proposes a hierarchy of trails through the municipality with the following in or adjacent to the Proposal Area

Significant Trails

The Action Plan identifies Significant Trails, refer diagram on p.6 of the *Tracks and Trails Action Plan*, the dominant trails within the proposed trail

system hierarchy. It gives priority to establishing the Significant Trails, scheduling their construction in a Works Program.

In the vicinity of the Master Plan, the Action Plan identifies:

- Droughty Trail - A Significant Trail - links from the hilltops parks above Howrah south to Droughty Point. In the Proposal Area the Trail would utilise the existing ridgeline track along the Rokeby Hills. It connects to the Charles Darwin Trail that runs along ridgelines connecting Bellerive via Mornington to Howrah
Implementation of the Droughty Trail is described in the Action Plan (2008) as low priority, and scheduled for 2011-2013
- Foreshore Trail - in the vicinity of the Oceana Phase 2 proposal, the Foreshore Trail will run around the Rokeby Hills-Droughty Point peninsula.
The Foreshore Trail is currently being implemented by Council.

Link Trails

The Action Plan identifies existing and future tracks as potential secondary trails or Link Trails, refer diagram p.10 of the Action Plan as Link Trails.

In the vicinity of the Proposal Area the Action Plan shows potential connections from the Droughty Trail to adjacent suburbs largely in locations consistent with existing link trails connecting to the ridgeline trail.

Link trails are not given a priority or identified as scheduled works in the Action Plan.

The composite trail system

Once implemented, the full Action Plan trail system will create opportunities for:

- Long and relatively testing walks along connecting ridgelines of the Rokeby Hills on Droughty Trail, connecting south to Droughty Point or north to Bellerive via a link to the Charles Darwin Trail
- A multitude of local loop walks to Droughty Trail and the Foreshore Trail via linear parks through suburbs and Link Trails on the Rokeby Hills

Clarence Bicycle Strategy Plan: Bikeplan - 2006

The relevant routes identified in the Bikeplan map include:

- Proposed foreshore shareway along the River Derwent – since partly implemented
- Acknowledged existing routes along Tranmere Road and Tollard Drive

Neighbourhood Parks Strategy (1997)

This report identified general trends in recreation, including trends towards linear parks and parks in a bushland setting.

The report did not address the Rokeby Hills, rather Howrah-Tranmere and Rokeby Hills on either side of the Rokeby Hills were considered as unconnected areas.

Public Open Space Asset Plan (2006)

This report establishes classes of Public Open Space (POS) and natural areas, attempting to establish different balances of recreational value and likely impact on natural values.

The Asset Plan proposes the creation of more multi-purpose neighbourhood parks, and, that specific targeted facilities would only be provided in larger regional parks or areas with an identifiable demand demographic (e.g. younger children).

Public Open Space Policy (2006)

The policy provides decision guidelines for Council assessing the value of POS areas as a guide to acquisition or release of POS areas.

Consideration identified in the Policy include:

- Connectivity
- Potential for contributing towards significant nature conservation or scenic values conservation
- Costs to Council including recurrent maintenance costs

Implicitly the policy favours areas of high value and with multiple values.

4.4 Open Space System Concept

The concept developed for the Proposal Area consolidates the existing walking trail system consistent with directions in the Conservation Covenant, Councils *Tracks and Trails Action Plan* and *Public Open Space policy*, and consistent with best practice.

The underlying concept is that the existing hierarchy of tracks could be consolidated or enriched consistent with emerging practice to contribute towards community health and enjoyment of this locality by:

- Variety of trail experiences to develop walking competency and fitness of local people and retain trail user interest
- Resolved entries and informative signposting to encourage use
- Opportunities for informal surveillance of entries into the trail system and along the trails



Figure 18: PROPOSED OPEN SPACE SYSTEM 1:5,000

Preliminary concepts were refined after receiving comments from DPIPW regarding track alignment and following a meeting between project Town Planner Neil Shephard and Councillor, Kay McFarlane, and Council's Tracks Planning Officer, Mary McParland.

The concept consists of:

- Droughty Trail and shareway formalised by subdivision, along the existing ridgeline track
- Side linking tracks consolidated by subdivision as link trails connecting to Drought Trail. In some instances link trails may also act as emergency fire egress routes and be built to that standard
- Lower level trail introduced
- Configuration of cluster subdivisions to facilitate informal surveillance of park entries
- House sites on bushland lots (defined by being between the retained trails) located to allow for additional surveillance of the trail system

The concept makes provision for long term development of this section of the Droughty Trail network to contribute to the trails future regional or sub-regional capability, providing opportunities for incidental parking and facilities at park entries while retaining opportunities for 'incidents' and 'destinations' along the trail.

This section of the Droughty Trail would continue to function as a shareway, providing access to 3 of the bushland lots in addition to the Southern Water ridgetop reservoirs.

4.5 Open space proposal

The proposed open space follows the concept, with little refinement required to accommodate other project objectives.

It is anticipated that as part of the application process, Malwood's consultants and Council would negotiate a reasonable amount of POS works to be undertaken by Malwood, contributing to realisation of the proposed open space system, (acknowledging that some refinements of the design of POS areas may occur) during the application process). Malwood would then undertake establishment and maintenance of POS works for an agreed period.

Landscape work associated with POS areas would include signposting trails and creating designated entries into the trail system.

The value of all work contributing towards the establishment of POS areas would be understood as an element of Malwood's openspace contribution.

Ideally the timing of any POS works would be staged to co-incide with occupation of adjacent lots by residents, who would then provide informal surveillance of trail entries.

Droughty Trail

The existing ridgeline trail, the main walking route along the Rokeby Hills will be established as a rustic bushland character shareway with a gravelled track contained in a relatively wide POS area.

There are 2 sections of the Droughty Trail in the Proposal Area, a north and south section. The central section is located within the Skillion Hill proposal (currently with Council). It is anticipated that the central section would be established as a walkway as part of subdivision and works associated with either the Oceana Phase 2 subdivision or the Skillion Hill subdivision, whichever first proceeds to subdivision alongside the existing ridgeline track.

The Trail will provide shareway access to reservoirs and up to 3 bushland lots, and emergency vehicle access. Vehicular access will be controlled.

The trail will be signposted as a section of the Droughty Trail.

Link Trails

Link trails through the Proposal Area connecting to the Droughty Trail are retained in situ wherever practical considering:

- Threatened species or communities - track to be re-aligned around significant vegetation boundaries
- Use of existing or potential connections to adjacent suburbs
- Gradient - lower grade where practical, (while retaining some steeper sections of trails suitable for fitness training)
- Opportunities for house sites that provide informal surveillance
- Multiple use requirements where trails connecting to Toorittya Bushland Reserve or the upper Elinga Parkway POS also function as emergency fire egress.

Lower level north-south trail

A new trail is introduced low on the west face to provide for less fit people to access the POS system from Howrah-Tranmere, and to allow flexibility for shorter loop walks.

The lower level trail along the interface (but not across ephemeral creek gullies) should complement proposed fire hazard minimization zones while retaining opportunities for trail incidents with any future development, i.e. , seats, interpretation, art. Latent demand for a trail of this nature has been demonstrated by locals walking and exercising

dogs along partly constructed sections of Oceana Drive wherever effective access existed.

The lower trail could provide a future commuter-cycle link or 'scenic route' un-interrupted by roads, access from Howrah or Rokeby Road via Holland and Mayfair Courts.

Sections of the lower trail not in the Conservation Covenant Area could provide for dog-walking in a more natural setting.

Defined entry points, and named trails

Trails should be identified as part of the Clarence trails system, while also informing visitors that the retained bushland is of high value and being actively managed.

Entries leading into the Conservation Covenant Area should be constructed to create access difficulties for mountain bikes and dogs, with limited obstruction for less fit people (using a 'shepherds gate' or comparable entry design).

4.6 Open Space Performance

The following assessment of the proposed subdivision design has been undertaken with reference to best practice and liveability guidelines and also Council's decision guidelines 'Section 4.1 Assessment for the Provision of Land potential Public Open Space', *Public Open Space Policy*, as well as good practice. (grouping some criteria to avoid repetition).

Optimum and convenient location

The proposed open space is in an optimum location for Council purposes as it accommodates:

- The existing ridgetop trail consistent with alignment proposed for 'Droughty Trail'
- Links to suburbs on the west generally consistent with the 'link trails' on the 'Map from Trails Register'
- Provision for future linkage on the east through associated Skillion Hill subdivision proposal and also through other owner land

Connectivity

The proposed open space retains existing tracks with established connections to residential areas.

The proposed system of trails improves convenience and choices for park visitors while retaining links to potential linkways through residential areas.

Gradient, shape and consideration of safety

Most of the Proposal Area has a significant gradient. Many tracks are not suitable for people with mobility difficulties, however under the Conservation Covenant it is preferred that the number of tracks to be moved or re-aligned is minimised.

The proposed additional lower level trail would provide lower gradient access to the Droughty Trail for walkers with lower fitness or mobility, and also more choice of routes and walk duration for all users of the Trail.

Steeper link trails such as that upslope from Tooritya Bushland Reserve could provide areas suitable for fitness training.

Within the practical limitations of retaining bushland, POS areas have been shaped to provide:

- Surveillance of POS entries
- Incidental surveillance of trails and good sightlines along trails through the relatively open woodland
- Minimal areas of potential entrapment and poor surveillance
- Relatively easy grade paths, considering the overall gradient

Diversity of recreation values

The proposed design provides for a variety of walking options:

- Contributes towards realising the 'Droughty Trail' as proposed in Councils Action Plan - a long trail suitable for fitter walkers
- The lower level trail for local walks - suitable for the less fit
- Flexibility of potential routes provided by the options provided by loop walks
- The proposed layout encourages use of the walking trails, by:
 - allowing for loop routes (trails can be more attractive where they do not require retracing the route when returning)
 - retaining the numerous locations that provide views (in addition some locations have potential to be developed as lookouts or other incidents should that become appropriate)
- The variety of trails supports opportunities for local people to build up fitness, with options for increasing walk length and the gradient with different walks

Protection of values

The trails are consistent with protection of scenic values and the visual management program outlined in Section 6 of this report.

There are no recorded sites of historic or cultural value in the Proposal Area. Nevertheless, existing trails have been retained in place, as much as was practical with consideration of vegetation values and gradient, and potentially protecting any values not evident at present.

Costs to Council

The extent of land proposed to be deeded to Council exceeds the required POS contribution. The land is of value to Council, as it contributes to achieving Council's recreation strategies, particularly in terms of being a significant contribution to the planned regional network of trails and open space.

A generous width has been provided to ensure there is a sense of a natural setting along the track, adding to the amenity value of the land to be deeded (compared to the relatively narrow walkways on adjacent subdivisions where the experience of the walkway could be compromised by fencing). It is anticipated that Malwood would undertake some minor works to set cues that this land is valued as POS and not just left over bushland. Those works contribute to the value of the land as POS suitable for recreation, and also to the monetary value of Malwood's contribution.

Additional to the land value of their contribution, Malwood would be handing over bushland following 5 or more years of active conservation management, i.e. the land would be relatively weed free, with a documented land management history, thus minimising initial and recurrent maintenance costs to Council commonly associated with land acquisition.

4.7 Commitments

Malwood consultants will undertake detailed liaison with Council during application processes.

It is anticipated that conditions would be applied consistent with final agreed extent of works on the maintenance or establishment of elements of the proposed open space system to be undertaken by Malwood.

5 FIRE HAZARD MANAGEMENT

5.1 Existing situation

There have been bushfires in the Proposal Area bushland, most recently a bushfire in the mid 1990s. The area remains a potential source of hazard to the established suburbs adjacent.

Surveillance

Potentially informal surveillance can discourage anti-social activities such as arson.

There is little informal surveillance of activities in the Proposal Area bushland as the area is essentially over the back fence and upslope from adjacent suburbs. There is some incidental overview of the Proposal Area by recreational visitors, Malwood contractors and consultants including continuing land management auditing.

As part of the Proposal Area land management works program Malwood has engaged Land Management and Rehabilitation Services Pty Ltd (LMRS) who report annually on emerging issues including any new illicit accesses and damage to bushland or tracks.

Works to reduce fire hazard

Works in the Proposal Area to reduce hazard are limited to blocking unplanned access and a limited length of fire hazard buffer (see below).

Earlier work by Malwood to secure the site and close tracks and entries was formalised in a program of works and now falls under the operation of the Conservation Covenant, refer Section 3. The reduced opportunities for access have also resulted in a redirection of antisocial activities, including no significant fires incidents.

Fire protection status of adjacent residences

West boundaries

Generally fire protection along the west boundary is suboptimal, being informal or absent.

558 – 622 Oceana Drive

Consistent with commitments made during the application for infill development (Ocean Drive), Malwood has been undertaking annual fuel reduction to provide a fire hazard buffer at the rear of lots on the east side of Oceana Drive between No 558 and No 622.

The buffer is comprised of:

- 10m immediately adjacent to rear boundaries maintained with a vegetation structure consistent with a Building Protection Zone (or

BPZ, as defined by TFS Guidelines for Development in Bushfire Prone Areas in Tasmania)

- The 5m upslope maintained as a Fuel Modified Buffer Zone (FMBZ)

As part of the Master Plan proposal a more enduring form of protection could be provided along this edge.

Tunah Street and sections of Oceana Drive

In areas subdivided before TFS standards were routinely applied to residences abutting bushland, there is commonly no fire protection buffer, although standard Council fire hazard controls would apply.

This situation exists where early subdivisions abut the Proposal Area:

- Upslope lots on the south side of Tunah Street, Nos, 11,13, 17, 19, 21, 23, 25, 27
- Above (east side) Oceana Drive, 536, 538, 540, 542,545, 546, 548, 550
- Lots in the vicinity of 628 Oceana Drive. Units have been built quite close to the unprotected bushland edge at No 628.

North boundary

Raleigh Court lots abutting the Proposal Area are large low density lots of sufficient size to allow for fire hazard management within the lot.

East boundary

The Skillion Hill proposal currently with Council incorporates fire hazard management within the subdivision design.

5.2 Planning Scheme context

The urban/bushland interface

Along the west boundaries, the Planning Scheme map shows narrow areas zoned Residential to the south of Tunah Street and east of Oceana Drive. While this zoning could suggest an intention for fire protection, due to the limited extent of land where the zoning applies, either or both of the following apply:

- the zoned area is insufficient in width to allow for residences plus the area required for fire hazard management to current standards
- the area is unlikely to accommodate a configuration attractive to be implemented by private developers in the current economic climate

Recent response to the interface

Recently when subdivision has been undertaken along the bushland interface in the vicinity of the Proposal Area, the width of land required for fire hazard requirements have been accommodated by introducing a

Low Density Zone alongside the bushland with lots that are of a depth sufficient to accommodate fire hazard management.

- Lots along Monaco and Mayfair Courts, Howrah
- Lots at the end of Raleigh Court, Howrah Gardens
- Lots on the upslope sites of Vitesse Court and Pintoresca Place, Tranmere
- Upslope lots off Norla Street, Intrigue Place and Spinnacker Crescent, Tranmere

An alternative utilised in the Skillion Hill proposal is that the FMBZ, (the outer fire hazard management zone identified in the TFS *Guidelines for Development in Fire Prone Land*) has been located in POS alongside developed areas, i.e., it applies over the area routinely used for fire hazard management along the perimeter of managed urban bushland.

5.3 Contemporary practice on the urban/bushland interface

Two standards apply currently in Tasmania.

Guidelines for Development in Bushfire Prone Areas in Tasmania (TFS Guidelines)

In the TFS Guidelines, fire hazard is reduced by installing 2 zones, each with specified vegetation density (or potential fuel load) that separate assets (such as homes and workplaces) from adjacent land that could be a fire source:

- Building Protection Zone (BPZ) - the inner zone immediately alongside the asset. Little vegetation is allowed, only in isolated beds or trees and towards the periphery of the BPZ
- Fuel Modified Buffer Zone (FMBZ) - the outer zone closer to the potential fire source. Sparse trees and some groundcover are allowable in the FMBZ

The width of these zones is determined by referring to the gradient of the adjacent land that is potential fire source land, the vegetation structure of the land and the topographic relationship between the asset and the hazard source land.

The preferred layout of subdivision in the TFS Guidelines is that roads are on the interface perimeter, as part of the fire management zones.

Application of the Guidelines can provide a soft boundary appearance if looking into clearings in woodland.



Figure 19: PROPOSED FIRE MANAGEMENT 1:5,000

Australian Standard -3959-2009 Construction of buildings in bushfire prone areas (AS-3959)

In AS- 3959 fire hazard is reduced using a combination of:

- Only 1 external zone which is fully cleared
- Buildings constructed to a standard that provides protection from a specified Building Attack Level (BAL)

The clearing size and BAL combination is determined referring to the vegetation structure on the adjacent potential fire source land, the topographic relationship between the asset and the hazard source land. Relevant tables are identified for Tasmania.

While relative to the TFS guidelines, the area of clearing required using AS-3959 is smaller, however, the edge is sharply defined and can have a high contrast. In some circumstances AS-3959 can be more visually prominent.

Building Code of Australia

It is anticipated that the forthcoming changes would be tracked during the application stage and if practical may be incorporated into developer commitments or Council conditions.

5.4 Fire Management Concept

The fire management concept and final proposal were developed following consultation with TFS officers regarding specifics of the Proposal Area.

Options for fire hazard minimisation were preferred that supported achieving other Master Plan objectives:

- Were consistent with the operation of the Conservation Covenant
- Creating the least practical visual impact
- Realising opportunities to discourage arson by limiting vehicle access to bushland complemented by a high level of informal surveillance

Transitional subdivision clusters

The TFS Guidelines were selected for the fire management of the perimeter of the proposed residential cluster subdivisions above suburban Howrah - Trannmere. As the Guidelines utilise layered zones of fuel management, they potentially allow for a defensible edge with the appearance of a soft gradation from suburbs to bushland.

It is proposed that the subdivisions comply as closely as practical with a common template comprising:

- A perimeter road designed to be consistent with a FMBZ (allows for

sparse streetscape trees) and where a road is not suitable a FMBZ on perimeter boundary of the cluster

- Large lots on the perimeter of each subdivision cluster facing towards the bushland and any internal accesses to also face towards the bushland
- All the large perimeter lots to face towards the bushland with sufficient area for a front garden accommodating the full width of the BPZ identified by a building setback (or BPZ and FMBZ where necessary).

Gatekeeper residences on bushland lots

It is anticipated that private residences on bushland lots would provide cues that this is occupied bushland and may discourage arson.

House sites would be established considering potential to provide informal surveillance i.e, close to key trails, referring to contours on the subdivision plan November 2010.

The potential visual impact of residences in bushland would be minimised by reducing the impact of clearings required for fire management. This can be best effected by selecting low gradient locations (where smaller clearings are required and which provide better opportunities for screening), in combination with utilising AS 3959 for fire risk management (smaller clearings result from higher standards for building protection construction).

Existing buffer along Oceana Drive

The provision of a rear fence buffer should be formalised, at least to the standard currently being maintained.

5.5 Proposal

Transitional subdivision clusters

The three subdivision clusters have been laid out consistent with the fire management concept template, with upslope perimeter fire hazard management consistent with the TFS Guidelines.

An alternative pedestrian egress is provided through adjacent parkland and would be constructed by Malwood to a standard agreed with the TFS and Council.

Tunah Street extension

Hazard

The main potential sources of fire attack for this cluster are from Kuynah

Bushland Reserve to the north or fire burning downslope from Rokeby Hills (most probably a slower burn as burning downslope)

Response

A perimeter road and FMBZ is established to the north and east giving some topographic shielding and stronger setback from A northern and downslope fire run.

The main escape is along Tunah Street to the north where fill bank would provide a topographic buffer. The alternative escapes are through Toorittya Bushland Reserve by foot to Coventry Rise or to Oceana.

Coventry Rise extension

Hazard

The main potential sources of a fire run approaching Coventry Rise extension subdivision are:

- Run from north from Toorittya
- From the south from Malwood land
- Downslope from Rokeby Hills bushland Lot No 2 (slower burn)

Response

Outer road is provided as a defensible edge against downhill fire run and fuel management zones established in all perimeter lots. The Primary escape is along Coventry Rise. Alternative escapes are along link trails, through Toorittya Bushland Reserve to the north or the extension of Elinga linkway to the south.

Peppermint Place

Hazard

Potential fire attack sources are

- Downslope from Rokeby Hills bushland Lot No 2 slower burn
- Run from un-named parkland to the south

Response

The primary escape is south along Peppermint Place. Alternative escapes would be through Elinga Park linkway (north) and the No. 638 laneway to Oceana Drive (to the south).

Bushland lots

At this stage Indicative House Sites have been identified to test that potential sites existed on each lot using AS-3959 and selecting locations near but not too intrusive in their relationship to walking trails. These are not final proposals for house sites, although some may be used.

It is anticipated that the residences that are constructed and associated clearings will also use AS-3959 and would be in comparable locations and of comparable clearing size to the indicative locations used to test the concept.

Existing buffer

The TFS would prefer that the existing buffer be formalised through a Part V Planning Agreement with the current standard 25m (10m BPZ, 15m FMBZ) retained as the default standard. The Part V would preferably be phrased to encourage a co-operative approach with potential to changes in Council's risk management and bushland management practices or site specific considerations.

5.6 Performance

The proposal introduces a strong defensible edge on the perimeter of residential subdivision clusters above Howrah-Tranmere.

The proposal brings the existing less than satisfactory fire hazard preparedness along this urban/bushland interface to a higher standard and better performance than is likely to result from the existing Planning Scheme map.

Residences on bushland lots with controlled access together with formalised walking tracks are likely to suggest a sense of increased surveillance of the Rokeby Hills bushland, and reduced opportunities for arson.

5.7 Anticipated commitments and conditions

Transitional residential clusters

Low density residential lots

The low density lots are at the urban/bushland interface and it is anticipated that requirements would reflect the fuel management zones on the Fire Management Plan.

Anticipated content of condition of approval

A Part V agreement applying to perimeter lots would identify:

- Requirement for fire management zones on low density residential lots consistent with Oceana Phase 2 Fire Management Plan (copy attached to Part V for each title, or requirements documented in full as defined in *Guidelines for Development in Bushfire Prone Areas in Tasmania*).

- House construction required to conform to forthcoming changes to BCA if not already implemented

Road reserve and reciprocal ROWs

Design and specifying of roads and streetscape would be undertaken in consultation with Council and the TFS to ensure that they were consistent with FMBZ requirements.

Anticipated content of condition of approval

Road works, including streetscape to be undertaken to the satisfaction of Council and the TFS and generally consistent with requirements for a Fuel Modified Buffer Zone as defined in *Guidelines for Development in Bushfire Prone Areas in Tasmania*.

On Bushland Lots

TFS requirements for water supply and driveway width configuration and clearing routinely apply as part of the development assessment process. A Part V planning agreement on lots would alert future owners and assessing Council and TFS officers to other requirements for building construction to allow a smaller clearing consistent AS-3959 and continuing maintenance of that clearing.

Anticipated content of condition of approval

A Part V agreement applying to bushland lots would require:

- Building construction standard and size of clearings to conform to *Australian Standard -3959-2009 Construction of buildings in bushfire prone areas (AS-3959)*, while having consideration of potential visual impact of clearings to the satisfaction of Council and the TFS
- House construction required to conform to forthcoming changes to BCA, if not already implemented

In POS

The existing commitment for a fire buffer above Oceana Drive lots should be carried forward.

Specific requirements for egress will be resolved as part of the application process.

Anticipated content of condition of approval

As appropriate a Part V on different POS areas would identify:

- Default requirement for 10m of BPZ, plus 15m FMBZ along any rear fences to lots on Oceana Drive, unless an alternative agreed with TFS.
- Any requirements for track construction for access and egresses during emergencies

6 VISUAL MANAGEMENT

This section should be read in conjunction with Appendix 2, with additional photomontages.

6.1 Background

The Rokeby Hills comprise one element within the larger landscape of low level settlements and elevated wooded hills surrounding Hobart and the River Derwent estuary.

Locally, on the Derwent's eastern shore, the Hills act as a landscape separator, a relatively natural landscape break between Howrah/Tranmere to the west and Rokeby/Clarence Plains to the east, and as a backdrop to those settlements.

Visual management methodology

Establishing visibility

Computer modelling (25m DEM) and viewline analysis was used to identify a Theoretical Zone of Visual Influence (TZVI), establishing a theoretical view catchment, i.e., the extent of all locations from which views to the Proposal Area were not obstructed by topographic features.

Site inspections were undertaken to assess potential viewing points, based on the TZVI and consideration of key roads, residential areas and parkland. The assessment identified where local conditions allowed, focused or obstructed the theoretical views, refer Figure 20, p.40.

Considering visual sensitivity to change

The Derwent Estuary cultural landscape was described and assessed.

The relative sensitivity of the landscape value of parts of the Proposal Area was determined with reference to the distance of views to each part of the Proposal Area, closeness to the skyline or existing urban areas and the relative size of a change in the viewed Derwent Estuary cultural landscape.

Incorporation into project master planning

The preliminary concept design was developed reflecting the sensitivity analysis together with project strategic objectives and site land use principles for minimizing potential visual impacts.

3D analytic computer models were prepared and used for review of the developing designs guiding refinement and testing of proposals. Refinements were made to reduce potential visual impacts as well as potential impacts on other values.

The visual management thread of the development, modelling and

review process proceeded through a number of iterations as:

- Potential impacts were identified and then tested
- The match with objectives and principles was assessed, as well as the match between concepts and opportunities implicit in the planning scheme
- Changes made to locations or proposed planning strategies

When the process was complete:

- Optimum low visual impact subdivision configurations were identified below the Conservation Covenant Area
- Indicative House Sites were identified on Bushland Lots (provisional house sites and extents of clearing used to test the viability of bushland lots) that comply with Covenant requirements, directions implicit in the policy framework of the Clarence Planning Scheme, met an appropriate standard of fire management and, that had a low visual prominence.

6.2 The River Derwent cultural landscape

The Proposal Area is located within the wide panoramic landscape of the lower Derwent valley and characterised by lower urban development and woodland above. This landscape has been identified as having a high landscape or scenic value, considered within the Tasmania context.

The River Derwent landscape is a composite of various local landscapes within the wider cultural landscape pattern. The scenic quality and integrity of local landscapes also effects the scenic value of an areas and its resilience or sensitivity to visual change.

Details relevant in the vicinity of the Proposal Area are:

- The nature of the retained woodland
 - the integrity of retention of woodland areas
 - woodland and sky, woodland and urban texture
- Integrity of dominant pattern of land use
 - pattern of location of land uses on the hill-line topography
 - similarity or dis-similarity to adjacent areas of hill sides and of the Estuary landscape more generally

Bushland/urban edge

Within the dominant pattern of lower settlement and woodland above there is some variation. The line is broken by bushland that extends lower on the slope, often on linear parks.

On the eastern shore more recent developments have introduced a softer edge consistent with an outer layer of large lots accommodating

fire hazard management. The Vitesse Court subdivision used 'scallop' coupled lots along the contour separated by bushland areas to successfully soften potential edge effects.

Slopes

Generally on the Proposal Area and adjacent areas the bushland tree canopy of woodland slopes is largely intact.

Ridgelines and elevated areas

Elevated areas and skylines are largely natural-like, with some areas of pasture and isolated residences visible within a dominant woodland on uplands.

This is in effect an inhabited landscape element, with some residences discernible in the bushland, but not visually dominant in the landscape pattern.

6.3 Views to the Proposal Area

West face and shoulder

The Rokeby Hills Proposal Area is visible from the western shore, parts of the eastern shore, settlements in the Clarence Plains and some locations around Ralphs Bay. From the water it is viewed from River Derwent and Ralphs Bay.

Views across the Derwent

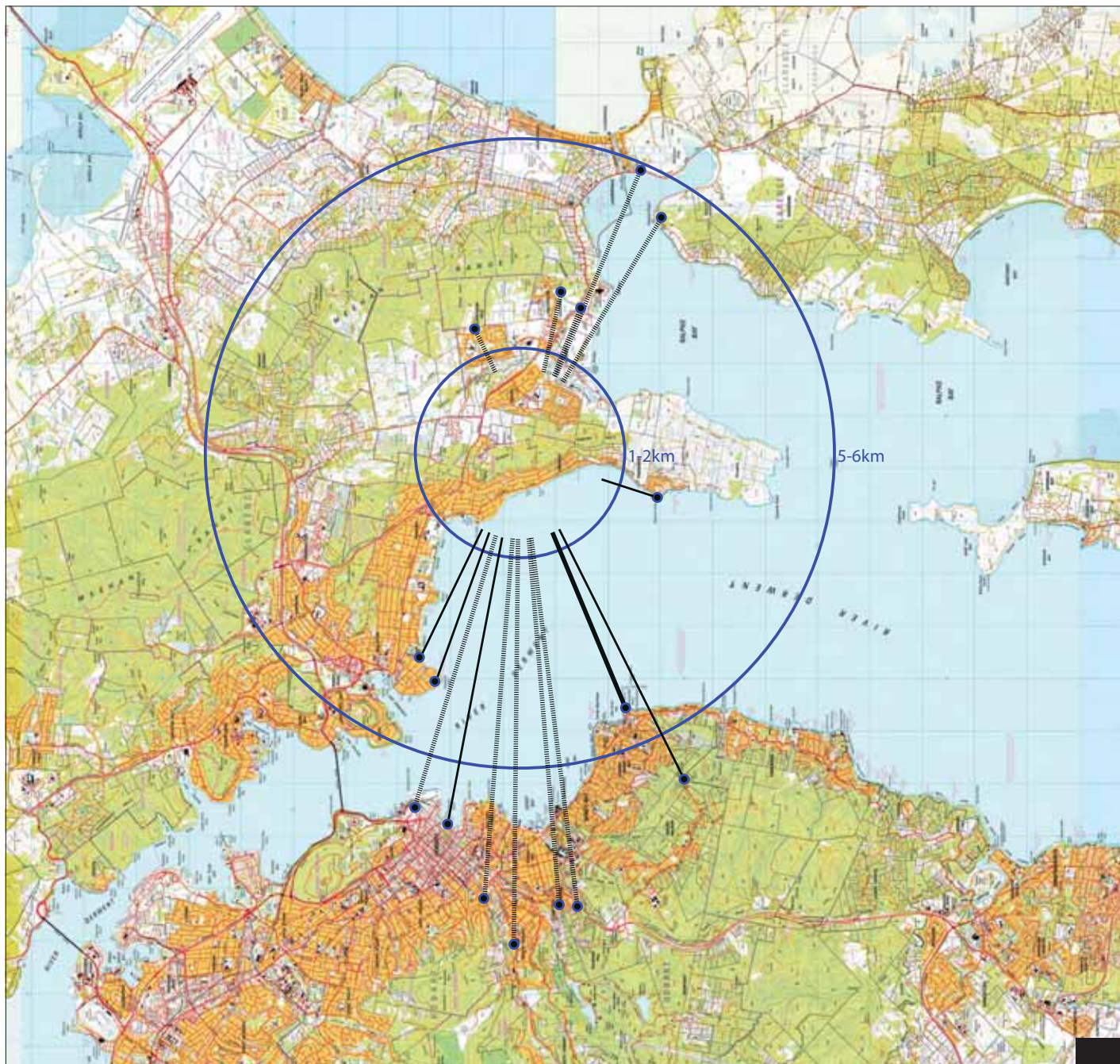
The west face of the Proposal Area is viewed from much of the west shore of the River Derwent, including unobstructed views from foreshore parks and views from traditional viewing points most notably Mt Wellington and Mt Nelson.

Typically the land is viewed within the wider panorama of views across the river.

Eastern Shore views

There are longer oblique views along the western face from Bellerive. In closer views from below the Proposal Area, the shoulder of the slope and ridgeline are obscured. In these views the hillface effectively frames and provides the setting for views down the River Derwent to the Estuary (the central view element in these views). Key viewing points are from north of Bellerive Beach a popular summer spot, or from Bellerive Fort where it is part of a 270 degree view. In longer oblique views the north east Kuynah spur obscures some areas of the hill face.

While there are closer views looking upwards from Howrah and



VIEWING POINTS AND LANDSCAPE SENSITIVITY

- HIGH - MODERATE SENSITIVITY**

Visibility of the Proposal Area

 - Viewed centrally in the midground of visible landscape; readily accessible with high viewer numbers; high likelihood of viewers with aesthetic/scenic expectations; opportunities for longer duration viewing

View locations - Lower Sandy Bay

Sensitivity - scenic values are sensitive to visual changes with moderate tone and colour, line, texture contrast with the wider landscape
- MODERATE SENSITIVITY**

Visibility of the Proposal Area - Viewed in the foreground to midground of the River Derwent landscape; moderate numbers of viewers; shorter duration views, or, main visual focus in a different direction or focused or central in more distant views

View locations - Bellerive Beach parklands; Bellerive Bluff and Foreshore Walk; Tranmere Point; Sullivans Cove; Mount Nelson

Sensitivity - Scenic values are sensitive to visual changes with coarse (larger) areas, distinctive shapes, textures, or silhouette character that contrast with the landscape setting
- LOW SENSITIVITY**

Visibility of the Proposal Area - Viewed in the midground to distance; limited numbers of potential viewers; short duration view; significant foreground distraction or distracting circumstances (driver attention, passenger attention etc)

View locations - South Rokeby elevated sections of Oakdowns and Rokeby Road; elevated sections of Clarendon Vale; south west Lauderdale; Haynes Point; Cenotaph and parts of Queens Domain; elevated South Hobart; elevated West Hobart; Southern Outlet section; Tolmans Hill north section east aspect; Mount Wellington

Sensitivity - Scenic values are sensitive to visual changes with high contrast, large, sudden change or significant changes on the silhouette

VIEWING DISTANCES

FOREGROUND LESS THAN 1-2 KM DISTANCE

Tone, colour, detail and textures are clear

MIDGROUND 1-2 to 5-6 KM

Viewed more strongly as part of the wider landscape. Less detail, some loss of colour and tone

BACKGROUND FURTHER THAN 5-6 KM DISTANCE

Tone, colour and texture are clear

Figure 20: VIEWS TO THE PROPOSAL AREA Tasmap 1:25,000 series

Tranmere, the River Derwent and Wellington Range are the visual focus in these areas.

Views to the east hill face and shoulder

The smaller area of the Proposal Area on the east face is visible from Rokeby, Lauderdale and Haynes Point and elevated locations on the Meehan Range and Oakdowns.

6.4 Sensitivity to Development

In general the sensitivity of scenic values to landscape change is influenced by:

- The visual prominence of the area of proposed change
- The difference between the existing and the proposed
- Suddenness of change, and duration of any strong visual contrast
- Viewer expectations

In the wider Derwent River landscape, the highest resilience to visual change occurs where the urban edge is uneven, and least in areas where the integrity of the skyline or the woodland could be compromised.

Relative visual prominence

The Proposal Area is not individually prominent, being subservient to the dominant pattern of the wider landscape.

Both faces are relatively well illuminated throughout the day:

- The east face receives full sun in the morning and is in shade later in the day
- The west face receives full sun from mid morning through to late afternoon

As contrasts attract attention, in most light conditions the waters edge and the skyline lines are visually dominant, however the line between urban roofs and woodland is prominent in some conditions.

The Rokeby Hills skyline can be relatively prominent in bright sun conditions, although its relative dominance is reduced in poor visibility conditions including shade. In views from more elevated locations such as Mount Nelson, the ridgeline is less prominent, one feature within a sub-regional landscape pattern of layered ridgelines.

In some conditions the line of contrast between the lighter coloured granulated urban development and the darker soft texture relatively undifferentiated bushland tree canopies attracts attention within the more dominant panorama landscapes.

Residences along upper Tunah Street are a little more prominent in

some views as the street cuts across the stronger almost horizontal lines along the contour separating urban development and retained bushland upslope.

Sensitivity to landscape change

The visual character of a proposed change, and its contrast with the immediate and wider landscape setting determine the potential prominence of the proposed change.

Key elements of a proposed change in the Proposal Area that would effect its visual prominence are:

- Contrast with the dark relatively constant texture of woodland, e.g.
 - lighter colours such as dry grass in summer, or buildings surfaces could contrast strongly with retained bushland. Less contrast would occur with a smaller or screened clearing where building surfaces are dark coloured non-reflective surfaces (shaded walls, or visual texture associated with a complex building shapes, surface treatments)
 - strongly defined lines contrast with the soft homogenous dark tree canopy texture of the woodland whereas a less defined line is less prominent, as for instance with the softer edge of the Vitesse Court subdivision where scalloped (coupled lots) are separated by bushland.
 - where light coloured cut and fill banks are potentially visible, landscape treatment of banks screened by streetscape or revegetation (as opposed to visible exposed soils or rock)
- Relative elevation or location in the west face:
 - as the silhouette of the ridgeline, trees and sky is more prominent on bright days. Changes closer to the skyline could potentially draw attention in the absence of care to keep the line and colour of the silhouette relatively unchanged
 - the west and east shoulders of the ridge through the proposal area are visible primarily in more distant views, where it is a smaller element of a panoramic views. It is only likely to be prominent if care is not taken to address potential visual contrast, refer to the relative visibility of various houses along the Mount Nelson ridge.

Foreseeable visual change

Clarence Planning Scheme 2007

The Planning Scheme Planning Policy Framework, the location of zones and the operation of zones suggest an intention to consolidate the pattern of woodland on the upper slopes of the City.

6.5 Visual management concept

The subdivision design concept and planning strategy addresses the apparent tensions between:

- The visual management objective to minimize visual impact on the overall Derwent River valley landscape and

- Land use objectives to facilitate residential use of serviced land located relatively centrally within Greater Hobart

The concept provides for different forms of residential opportunities responding to specific levels of sensitivity to change across the Proposal Area landscape:

- A number residences, at standard suburban or low densities, in the relatively low visual sensitivity band immediately above Howrah-Tranmere
- 4 isolated bushland residences developed in a manner consistent with minimal visual impact, located in the more visually sensitive mid and upper woodland slopes (corresponding to the Conservation Covenant Area)

Urban/bushland interface

On the areas immediately above existing residential suburbs provide a relatively smooth line following the contour as much as practical while ensuring the line is softly defined and low contrast to minimise prominence in the view. This is to be achieved by:

- Utilising the layered management zones for fire management as outlined in the TFS *Guidelines for Development in Bushfire Prone Areas in Tasmania* that provide a less sharply defined edge between woodland areas and residences, refer Section 5 for more detail
- Reducing contrast and definition along the interface line by alternating contained residential subdivisions (or clusters) and significant areas of retained bushland

In essence this scales up of the residential 'scallop' and woodland softer edge transition used at Vitesse Court

- Providing for a transition across each residential cluster, grading from an urban appearance to bushland appearance, through:
 - standard residential development, in existing suburbs and immediately above those suburbs within the proposed residential subdivision clusters
 - large low density perimeter lots with wide front gardens facing towards bushland (incorporating the fire hazard Building Protection Zone)

- a perimeter road upslope that functions as the outer Fuel Modified Buffer Zone, with isolated street trees and with vegetated/rehabilitated cut and fill landscape
- a bushland POS and walking track
- retained bushland in the Conservation Covenant Area

Bushland lots within the Conservation Covenant Area

The Conservation Covenant Area is located on either side of the Rokeby Hills ridgeline. Much of the area is in the visually sensitive skyline and upper wooded slopes area.

Some form of residential development is preferred within the Covenant Area to discourage antisocial behaviour with associated risk to natural and landscape values and to ensure management and monitoring. Available locations for development within the Conservation Covenant Area are limited due to requirements to:

- Avoid areas of threatened vegetation communities and species significance (refer Covenant, Planning Scheme)
- Comply with an accepted standard for reducing fire hazard (refer TFS Guidelines or AS-3959)
- Minimise landscape impacts (refer Planning Scheme)

The concept for introducing a limited number of residences into the Covenant Area is to select locations that could utilise Australian Standard AS-3959 Construction of buildings in bushfire-prone areas which allows for smaller clearings, (refer Section 5 for discussion of requirements) and where those locations also meet required environmental and visual outcomes.

Trails

The existing trails are not visually prominent. As it is proposed leave trails in their existing locations, little visual prominence associated with trails is anticipated.

Reservoirs

Reservoirs are necessarily constructed on potentially highly visible elevated point in local topography.

Existing reservoir

There is currently a 4.8m high reservoir on the Rokeby Hills ridgeline in the centre of the Proposal Area. The reservoir is screened by surrounding trees and partly painted a bronze colour. It is not visually prominent - although it is occasionally discernible in specific light conditions and views. The proposed visual management concept is to ensure that the

trees surrounding the reservoir are retained.

Proposed reservoir

Malwood anticipates constructing a second reservoir on the Southern Water ridgetop lot to the South of the Proposal Area as part of the proposed subdivision adjacent to the Master Plan proposal (Skillion Hills proposal currently with Council).

It is proposed that potential visual impacts associated with the proposed reservoir will be relatively low, as the proposed reservoir will be 2.4m height rather than 4.8m. However, as a precaution the reservoir would be painted to minimise tone and colour contrast (with a pattern if required to minimise line) and trees around the lot retained for screening.

6.6 Proposed visual management

Transitional residential clusters

Three residential subdivision clusters are proposed, being configured to provide a relatively smooth line along the contour that is interrupted by bushland reserves to give a transition or less defined line, from north to south:

- Tunah Street Residential - existing residential street extended, broadening the existing urban texture shape that runs upwards into the hillface, but 'round off' an otherwise abrupt termination
- Toorittya Bushland Reserve - Extension of Toorittya Bushland Reserve upslope into the Conservation Covenant Area
- Coventry Rise Residential - is extended north and south (around the Glamorgan Street reservoir). The effect is similar to Tunah Street, but is mitigated by the existing reservoir compound
- Elinga Linkway Bushland (in the Conservation Covenant Area) - extend existing linked POS area upslope
- Peppermint Place residential - A contained small cluster of lots, under the local skyline of a saddle in Rokeby Hills to the south of the Proposal Area

The design of each cluster of lots largely corresponds to the overall concept of:

- An outer tree lined street, with landscaped banks
- Generous lots with:
 - front area with sparse garden features complying with fire management requirements
 - lower houses set back 20m
- Standard houses where practical close to the adjacent residences

Low Density Zone - perimeter lots

The large lots around the perimeter of residential clusters will be zoned 'Low Density'. Controls applying in this zone include visual management criteria:

- Height of residential buildings is limited to 4.5m, so buildings in the residential clusters are likely to be split level, reflecting the slope of the land
- Section 6.2.5 'Specific Decision Requirements requires:
 - (a) The design, colours and materials should complement the higher visual and landscape values of the zone. ..."
 - (c) Buildings should be sited away from the skyline and prominent ridgelines to avoid being silhouetted against the sky when generally viewed ...'
 - (k) Dwellings are the preferred dominant built form in a low residential streetscape coupled with significant landscape elements. ...'

In this context (a) could be interpreted to reflect the character in the adjoining Landscape and Skyline Conservation Zone, with strong controls on building colours, should council desire.

Streetscape in subdivision clusters

As a routine part of completion of subdivision works streets and reciprocal ROWs will be landscaped with:

- Isolated street trees along roads and driveways through reciprocal Rights of Way
- Cut and fill banks will be landscaped for a quick cover and to minimise duration of any prominent light coloured banks using a combination of the following (as practical in each situation)
 - for cut bank: benching for growing shelves and pockets; hydromulching or comparable technique to address colour; screen planting and climbers planted in front of banks and prostrates planted above
 - mass planting of 'at grade' areas and any fill banks
- Trees will be retained as practical while compatible with fire management

This streetscape and presentation should re-inforce other marketing material for land buyers and residents, that articulates the landscape values of the proposal.

Bushland Transition Parkway

Above the Coventry Rise and Peppermint Place subdivisions, bushland parks linked along a lower level trail separate the residential clusters and bushland lots. These areas introduce a fine-tuned physical and visual transition/buffer between the residential development and the conservation area.

Upper slopes, Conservation Covenant Area

There are 4 bushland lots proposed on the upper slopes of the Rokeby Hills Conservation Covenant Area, which it is proposed would fully fall under the Landscape And Skyline Conservation Zone.

It is not anticipated that the trails that separate the lots would create any visual impact.

The strongest potential visual impact is associated with development of the lots. Controls within the Landscape and Skyline zone largely address potential visual impacts.

To test whether there were locations on each lot that complied with requirements under the Covenant, the Planning Scheme and fire hazard management standards, Indicative House Sites were established.

Candidate alternative locations for house sites were established consistent with low visual prominence, tested and then refined using analytical computer modeling. The testing was done using building heights consistent with zone requirements and clearings sizes consistent with AS-3959. Refer Appendix No //

Selecting Indicative House Sites

The Indicative House Sites locations were selected to:

- Be near entries into the Conservation Covenant Area (gate-keeper locations), without intruding on the character of the entry or trail
- Be separated from each other so the visual impact of each residence cannot be amplified by appearing to combine (or mass up) with another residence
- Avoid potential visual prominence associated with sites centrally located in the woodland of the hill face or with the potential to impact the line of the skyline (consistent with the intent of the Planning Scheme).

Lower (flatter) gradient locations on the shoulder of the hill were preferred, as a flatter gradient means that clearings required for fire management can be smaller. Also preferred were locations below the skyline, where there would be trees behind and above the residence on the skyline and potential for any clearing and residence to be partly screened by retained trees in key views.

House site locations were explored downslope from the existing ridgeline reservoir, or proposed reservoirs. Locations that would allow retaining the trees that screen the reservoir were preferred

Locations for house sites were preferred that offered opportunities for screening by local features, spurs or folds in the face of the Hills, e.g. the fold associated with the gully leading to the Fairview Terrace parkland and Kuynah Reserve spur.

Lower locations on the slope were explored with the least visual impact being associated with locations above or close to the soft edge of the residential transition subdivision clusters.

Landscape and Skyline Conservation Zone

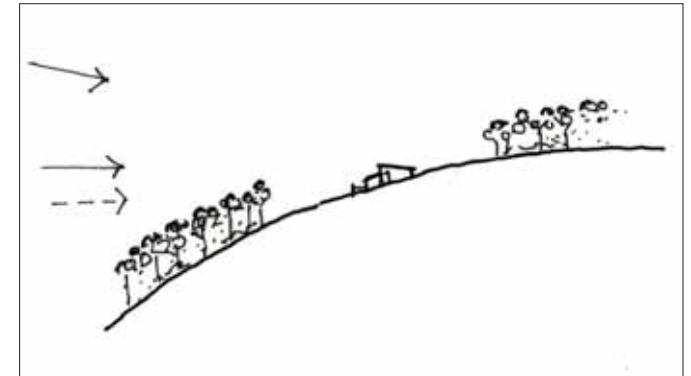
The Landscape and Skyline Conservation Zone provides strong direction regarding visual performance for development in more natural areas.

The intent of the zone is:

protect forested skylines, prominent ridgelines and hills to provide a natural backdrop and contrast to urban development in the Hobart Metropolitan Area

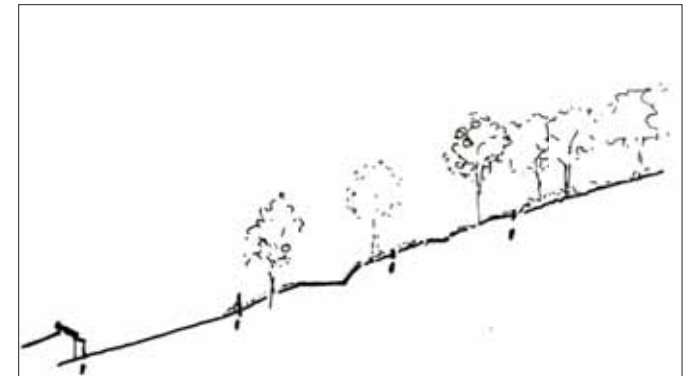
Section 6.10.5 'Specific Decision Requirements' outlines a framework for minimising visual impacts of buildings, earthworks, some landscape elements and hardstand surfaces in sensitive areas:

- The design, colours and materials of buildings, walls and fences should be of low light reflectivity and be of dark natural colours such as black, grey, brown and green so as to be unobtrusive, blend with a natural rural landscape and minimise visual intrusion.
- Buildings should be predominantly single storey, with a low profile featuring roof lines that reflect the natural form of the land and for the mass of buildings to be minimised by variations in wall and roof lines and by floor plans which complement the contours of the land.
- Retaining walls and fences should be designed to reduce their visual mass and bulk. Post and wire or other transparent fences are preferred.
- Buildings should be stepped down the slope reducing the need to excavate/fill the land to:
 - Minimise intrusion to preserve the natural form of the land and native vegetation.
 - Reduce the visual impact of the building on the land.
 - Result in stable slopes that are capable of being landscaped.
- Buildings should incorporate features such as large eaves,



Diagrammatic section - Clearing and house on shoulder of the slope

Smaller clearings required on lower gradient and some screening mean screened from below and visible but not prominent in long horizontal views and views down



Diagrammatic section - Transitional edge

Transitional edge through large perimeter lot to Conservation Covenant Area:

- BPZ in front garden area
- Street trees and landscaped ground surfaces in FMBZ road reserve
- POS parkway with lower level trail and retained bushland
- Retained bushland in the upslope Conservation Covenant Area

verandahs and pergolas that are incorporated into design so as to create shadowed areas which reduce the bulky appearance of the buildings.'

- (j) Driveways and access tracks should be all weather access and follow the contours of the land, reducing visual impact and erosion from water run-off and should be surfaced with dark materials.'

The bushland lots are technically not fully compliant with 6.10.5, subsection k which states:

- (k) Buildings should be located in unobtrusive locations and, in particular:
 - (i) be located well below the ridge line so as not to be prominent against the skyline when viewed from a public place;
 - (ii) setback from property boundaries and grouped together on the site;
 - (iii) set well back from roads, particularly when the land is on the high side of a road;
 - (iv) located where existing native vegetation can be retained to screen the Development

Point (1) requires that buildings are located well below the ridgeline so as to not be prominent, although if development is designed with care, locations on the shoulder of the ridgeline can have a low visual prominence. As such point (1) seems to counter the intent of the subsection (k) and to unnecessarily exclude from consideration suitable locations that meet or support the mix of project objectives.

In preparing the subdivision design sub-section k was interpreted with an emphasis on the general intent that development be undertaken in un-obtrusive locations. Shoulder locations were selected for indicative house sites where visual impact could be minimised by a combination of the use of smaller clearings and the height, volume and colour and tone controls applying to development in subsections e, f, g, h and i.

The Indicative House Sites

The preferred sites are nominal, producing pragmatic outcomes in terms of consideration of all project objectives with insignificant visual impact.

Lot 1

Two candidate sites were identified, with care regarding design resolution, low visibility designs could be prepared for either site.

The selected Indicative House Site is located just off the the shoulder of the east facing slope. It is located below the proposed south reservoir but

lower on the slope allowing for retaining trees screening the reservoir.

The alternative location on the north facing slope of the lot, could require a higher level of visual impact mitigation due to the contribution of this slope to the backdrop of the Skillion Hill subdivision currently with Council.

Lot 2

Two candidate sites were identified.

The preferred location is above Coventry subdivision cluster, immediately upslope from reciprocal ROWs access to the south Coventry lots. The site has good separation from the site proposed for Lot 3.

The TFS has advised that it is likely that the extent of clearing at this site could most probably be reduced by taking the site lower on the hill, with a reduced fuel management zone (as the site is immediately above the Glamorgan Street Reservoir, where vegetation management is undertaken by Southern Water.

Finetuning of this location around vegetation management, fire management and to reduce visual impact would be undertaken when the design was being assessed.

The alternative site is located above the soft transition boundary of the Peppermint subdivision cluster, i.e., located in a low prominence location. This location is less likely to be developed, as it would require detailed design and micro-siting around identified threatened species, however a convenient legal entry has been provided.

Lot 3

The preferred location is in a key gatekeeper location for informal surveillance of bushland areas. It is located below the central reservoir, on part of the slope, and located after consideration of existing threatened species, keeping separation screening trees around the reservoir and preferred routes for walking tracks.

Lot 4

The designated Indicative House Site is slightly tucked behind the local east/southwards spur to the south of Kuynah Bushland Reserve which provides some screening in the views from Bellerive. It is under the skyline or treeline of the skyline in views.

Implications of application of zone controls

The testing identified that the most suitable house sites to meet all project outcomes, including low visual impact associated with houses and clearings may not be consistent with Clause 6.10.k of the Planning Scheme, being relatively close to the skyline with a strict map-based

interpretation of that clause, although those sites were fully consistent with implicit intent of the clause, to allow development where there is little visual impact.

This suggests refining the Scheme to explicitly allow for consideration of locations on the shoulder of a ridgeline where low visual impact can be demonstrated.

6.7 Visual management performance (impact)

Transitional residential clusters

The 3D modeling has demonstrated that the 3 clustered residential subdivisions create a relatively smooth, but indistinct line running low on the hillface above the existing suburbs on the west. This configuration means the urban/bushland interface has softer transitional appearance as an line on the hillslope.

The line is further softened by the streetscape of the upslope road reserve, isolated trees along the road and landscaped road reserve. It is anticipated that the planting would be successful in achieving the intended visual performance as it would be undertaking integrating landscape design and rehabilitation techniques, as has been undertaken by Malwood previously in the twin parks at 560 Oceana Drive (part of the Elinga Linkway).

Planning Scheme controls for the Low Density perimeter blocks require that buildings and landscape are designed with low profile and long eaves and consistent with local low contrast character.

Streetscapes designed to provide for street trees and allow for treatment of cut surfaces by stepped banks and climbers and prostrates, provide for an initial mitigation of visual contrast followed by gradual transition as street trees grow.

This configuration means the urban/bushland interface will have a soft transitional appearance as a line merging into the retained woodland on the hillslope.

Bushland lots

Residences on the bushland lots will be discernible, but not prominent within the existing urban pattern. i.e. residences would not compromise the existing skyline character.

The isolated 'gatekeeper' sites on bushland conservation lots would be comparable to some of the development on the shoulder of Mount Nelson, and the better examples of visual performance shoulder location development in the Derwent estuary.



PHOTOMONTAGE, WIDE VIEW - ROKEBY ROUNDABOUT



PHOTOMONTAGE, EXCERPT PANORAMIC VIEW - BELLERIVE



PHOTOMONTAGE, PANORAMIC VIEW - SULLIVANS COVE

Photomontages refer Appendix 2

Bushland Trails, including the lower Bushland Parkway

Little visual prominence is anticipated associated with retaining trails.

There could be some short-term visual impacts associated with newly constructed trails. Any impacts would depend on the extent of cut and fill associated with new trails. Potential impacts can be addressed by timely rehabilitation of any banks created.

Conclusion

The dominant landscape element of the Master Plan proposal is the extent of retained woodland. Residences in the the conserved bushland areas may be discernible but not visually prominent.

The lower cluster subdivisions, will fit into the Derwent landscape pattern, of urban development on lower slopes below retained woodland. Development will be less prominent than is common in the wider landscape due to the graded transition from suburban development to bushland across the clusters, and the bushland separating the clusters,

6.8 Anticipated conditions

Bushland Lots

It is anticipated that additional controls are not required due to the combined operation of the Conservation Covenant and requirements under the Planning Scheme zones, other than requiring use of AS-3959 to allow for smaller clearing (with required fire protection construction) on bushland lots.

Residential clusters

The subdivider is responsible to ensure that streetscape is installed consistent with principles for street trees and treatment of banks and any walls, as outlined in the *Oceana Phase 2 Master Plan* and also consistent with requirements for a Fuel Modified Buffer Zone.

7 INFRASTRUCTURE

Potential water, sewer and stormwater servicing was investigated by JMG consulting engineers. It is anticipated that this section of the Master Plan will be read in conjunction with the April 2011 JMG report *Oceana Phase 2: Water, Sewerage & Stormwater Drainage Infrastructure Report* April 2011, which includes indicative plans for service designs.

As a general comment, it would be relatively easy to provide infrastructure services to potential house sites or lots lower on the west of the Proposal Area, immediately above suburban Howrah and Tranmere - in part because Malwood as the developer of the downslope areas has provided connections.

Some areas required specific consideration:

- Residences on more elevated locations - the proposed bushland lots
- Lots where services could not rely solely on gravity - proposed South Coventry lots to the immediate south of Tranmere Reservoirs' (reservoirs above Glamorgan Street)

Provision of other infrastructure is noted with general comments.

7.1 Transitional residential lots

Water supply

JMG established that the existing Rokeby High Level Reservoir, the reservoir on the Rokeby Hills ridgeline immediately to the east of the Proposal Area, has sufficient capacity to provide reticulated water to the lots proposed in this Master Plan. (They note that this would also facilitate better water pressure in Tunah Street and the higher side between Tunah Street and the Tranmere Reservoirs.)

Lots south of the Tranmere Reservoir

These lots will require a private water line and hydrant for fire fighting.

Sewer

Provision for future subdivision above Oceana Drive included connection points into the sewerage system.

JMG ascertained that the system has capacity to absorb waste from the proposed lots using the existing connections.

Storm Water

As with the situation with providing sewer, earlier connections to the existing system that anticipated future subdivision can be utilised for the collection of stormwater.

JMG propose some collection within road construction and limited use of open channels (consistent with other project requirements) connecting through existing pipes.

Electricity - Telecommunications

As the Proposal Area is adjacent to established suburbs, it is anticipated that electricity and telecommunications could be readily extended into the residential cluster subdivisions.

7.2 Bushland lots

Services would be extended along driveways or provided within the allowable disturbance areas (designated as 'Domestic Zone' or 'Building Envelope' in the Conservation Covenant - note a 'Building Envelope' under the Covenant is not entirely consistent with BE in the Clarence Planning Scheme).

Water supply

Although the House Sites are only indicative, JMG has explored water supply to the indicative sites.

JMG identified that the house sites shown on Bushland Lots 2, 3 and 4 can be supplied from the existing reservoir, however lots 3 and 4 may require arrangements for an intermittent supply.

Lot 1 is not readily serviced from the existing ridgeline reservoir although it could be serviced once the higher level southern reservoir required for the Skillion Hill subdivision is constructed. The proposed House Site for Bushland Lot 1 would rely on tank water until the adjacent subdivision proceeds which would allow for reticulated water.

Sewer

It is not anticipated that houses on bushland lots would connect to the Clarence sewer system, although due to gradients, this could be explored for Lot 3. Generally, houses on bushland lots would utilise septic systems (or alternatives acceptable to Council and DPIPW).

The Conservation Covenant requirements for weed management would address any potential impacts from nutrients or water associated with waste management.

Similarly any potential impacts associated with stormwater are required to be contained and addressed.

Electricity - Telecommunications

Electricity lines would be located within accessways and underground. Similarly any hardwired telecommunications infrastructure would also be located in accessway.

7.3 Anticipated conditions

It is anticipated that any relevant conditions would be established with reference to the existing engineers report, or subsequent more detailed documents.

8 TRANSITIONAL RESIDENTIAL SUBDIVISION STAGES

There are three transitional residential subdivisions, each based on a common concept Figure 4f, p.10:

- Tunah Street extension
- Coventry Rise extension
- Peppermint Place

There is some repetition in the section, as each stage is discussed in full, and stages are based on a common concept.

8.1 Common features of the stages

The transitional residential subdivision stages are located along the west slope of the Rokeby Hills between the Conservation Covenant Area upslope and existing residences along Oceana Drive downslope.

POS - Landscape and Skyline Conservation Zone

Within the Coventry Rise and Peppermint Place Stages, it has been possible to introduce a bushland POS upslope of the residential stage and below the Conservation Covenant Area.

These POS areas are effectively parkways, accommodating a lower level trail proposed along the west face of the Proposal Areas. It is anticipated that formalised entries into the Droughty Trail park system may be constructed off or along the lower level trail.

In the Tunah Street stage the lower level trail could be accommodated within the road reserve nature strip.

Areas of significant vegetation not in the Conservation Covenant Area have also been proposed as POS areas.

It is proposed to zone 'Landscape and Skyline Conservation' all POS areas under the *Clarence Planning Scheme, 2007* (the Planning Scheme) to reflect their function as parkway-like buffers to the Conservation Covenant Area or conservation areas.

Transitional edge - Low Density Zone

The transitional edge is comprised of:

- A perimeter (or upslope road) or in one instance a driveway through reciprocal ROWs to 3 lots
- A layer of perimeter large low density lots, that in 2 instances surround and protect proposed standard density lots

The perimeter road and larger lots would be zoned Low Density as the intent and function of this zone to provide a buffer between urban and non-urban areas. The operation of zone provisions is consistent with the required visual management outcomes.

Road reserve and reciprocal ROWs

A typical road reserve is 15m wide, located upslope, adjacent to retained bushland in the Conservation Covenant or upslope parkway to the east.

The road reserves and the reciprocal ROW access to South Coventry conform to the outer fuel management zone or Fuel Modified Buffer Zone (FMBZ), of the 2 layer fire management zones required under the *TFS Guidelines for Development in Bushfire Prone Areas in Tasmania*.

It is anticipated that roads or ROWs would be designed and constructed primarily by cutting into the hill face.

The landscape treatment (streetscape) would include widely spaced trees consistent with guidelines for isolated trees in a FMBZ. Tree species and cultivars would be selected for:

- Low flammability including having a clean trunk structure
- Tone and colour required at a visual transition edge

Depending on the engineering detail of each road, street trees would be planted on both sides or only the lower side (at Tunah Street the upper side of construction may abut retained bushland). Preferably trees would be planted within the road reserve, but if construction design did not provide adequate soil and subsoil for sufficient root development, streetscape amenity trees could be planted immediately inside private lots.

Any cut and fill banks in the road reserve or adjacent lots would be planted to provide a foliated bank, or an alternative landscape treatment used that ensured quick cover of exposed soils or rock faces. To assist planting any banks would preferably be laid back or gently benched. Where that was not practical, a combination of downslope screen planting, cover from climbers, ground covers and/or prostrates and hydromulching could be utilised.

Lots

The large low density lots have been configured and sized to allow for a 20m wide inner fuel management zone, the Building Protection Zone (BPZ), within the lot between a building and the outer Fuel Management Buffer Zone (FMBZ) established on the road area or in some instances within the lot. BPZ and FMBZ areas within lots would be effectively, front or side gardens.

Lots were designed using an 18m inscribed circle to ensure adequate space between residences.

It is anticipated that houses, drives and fences constructed on low density lots will have little visual prominence, due to zone requirements that the height of residences is less than 4.5m and that the design, colour and materials are complementary to landscape values of that area.

Standard density lots - Residential zone

Standard residential lots are located between existing residential development and the low density lots. These lots are consistent with the zone objective, and make responsible use of conveniently located and serviced land.

Internal accesses

The perimeter road configuration that is preferred for fire hazard and visual performance has been made viable for development, using a double layer of lots, with rear lots access through reciprocal ROWs. These have been located to provide views to parkways and entries into the Droughty Trail system.

Accessways will be constructed as a routine part of the works associated with each stage:

- A concrete drive (or common drive with reciprocal ROWs) will be constructed
- Balance areas will be landscaped to provide for low maintenance and to discourage any illicit viewing into adjacent residences
- Fences alongside the accessway would be constructed to a design that provides householder privacy and some informal surveillance of the accessway (a possible exception being the existing fence alongside 27 Tunah Street)

8.2 Tunah Street extension Stage

Current

Tunah Street extends directly up the slope of the west face of the Rokeby Hills, almost perpendicular to Oceana Drive, it has a short court to the south, immediately above Oceana Drive. The street as currently constructed terminates abruptly with no formalised turning head, apparently anticipating an extension.

There are houses established on all the existing lots. The lots on the south side and some in the court abut the Proposal Area.

The highest 3 existing lots to the north back onto a modest un-named area of Public Open Space off Fairweather Terrace and 6 lots on the south side back onto Malwood owned land.

The Conservation Covenant Area

The Conservation Covenant Area abuts the Tunah stage upslope on the east.

Application of planning strategy

The Tunah Street Extension Stage is located on the defined edge between urban and bushland, proposed in the Planning Policy Framework of the Clarence Planning Scheme.

The proposed layout reflects the long-standing intention of 'completion' of Tunah Street, which has been held in abeyance since the *Eastern Shore Planning Scheme 1963*, pending detailed site analysis and appropriate market conditions.

Existing Scheme map

The existing zoning does not encourage achieving the strategic objectives for fire management or visual management on the urban/bushland interface, as outlined in Section 2.2 of this report.

A narrow fillet of land zoned Residential scoops between Toorittya to the end of the Tunah Street. Upslope the land is zoned Landscape and Skyline Conservaton.

Proposed zoning

The proposed zoning would insert a Low Density Zone as a buffer between the Residential land downslope and the Landscape and Skyline zone upslope.

The proposed zone areas are consistent with the Master Plan subdivision layout for the Tunah Street extension:

- Low Density along the transitional edge to accommodate an outer road and large perimeter lots
- Residential zone applying to the area between the standard residential area and the proposed perimeter lots, sized to accommodate standard residential lots.

Tunah Street extension Proposal

The proposal is comprised of :

- A perimeter road reserve immediately adjacent to the Conservation Covenant Area that provides access to all lots as well as contributing to fire protection of the Tunah Street residential area and accommodating a walking trail along the nature strip
- 6 large residential lots n the area proposed to be zoned Low Density, located around the perimeter of the residential lots within this stage. The large lots also accommodate fire protection zones
- 3 standard residential lots between the perimeter lots and the existing Tunah Street lots

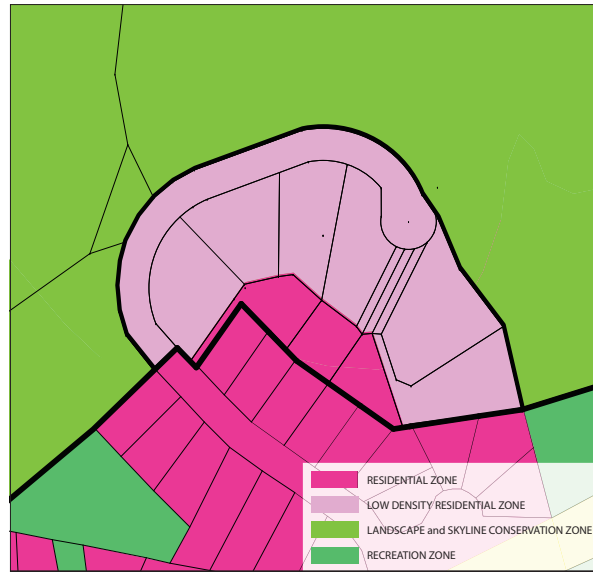


Figure 21a: TUNAH - PROPOSED LAND USE ZONES



Figure 21c: TUNAH - OPEN SPACE SYSTEM



Figure 21b: TUNAH - CONSERVATION STATUS



Figure 21d: TUNAH - FIRE MANAGEMENT ZONES

Perimeter road

The proposed road runs alongside the boundary of the Conservation Covenant Area..

It is anticipated that the road would be constructed primarily by cutting into the hill face. The cut wall (upslope) would be detailed to reduce potential visual impact by either or a combination of:

- Minor benching and planting into improved soils (possibly with netting) of appropriate plants: ground covers, prostrates and climbers
- If insufficient slope is possible, an alternative surface cover treatment to reduce potential visual contrast of the wall.

Any fill bank would be landscaped to balance reducing visual impact and meeting fire protection requirements.

Internal driveways

There are 2 internal accessways in the Tunah Street extension stage:

- A single driveway at the entrance to the stage opposite the lower Trail linkway connecting north to Kuynah Bushland Reserve
- A driveway constructed through 3 reciprocal ROWs provides access to 1 larger lot and 2 standard lots. The driveway faces outwards to bushland which will become part of the POS adjoining Tooritya Bushland Reserve

Perimeter low density lots

The 6 large lots form a smooth transitional edge to the Tunah Street residential cluster in the area proposed to be zoned Low Density.

An effective Buiding Envelope is created lower on these lots by fire management zones, where house construction is precluded.

Standard density residential lots

There are 3 standard density residential lots between the perimeter lots and existing suburban development.

Conservation management

State level

The North Barker Ecosystem Services (NBES) assessment of conservation values identified Risdon Peppermint, *Eucalyptus risdonnii* and Chocolate Lily, *Arthropodium strictum* outliers, within the Tunah Street area (refer figures 13, p.21 and 14, p.23).

The proposed stage largely co-incides with the extent of a Threatened Species Protection Act permit (TSPA permit) granted in 2007 as an offset for the original (smaller) extent of the Conservation Covenant Area - (Permit # TFL 07242 - Tunah St), refer Figure 21b, p. 49.

Liaison at the time of the finalisation of the 2007 permit included consideration of the anticipated Tunah Street urban development, including consideration of road geometry requirements.

Vegetation Management Overlay

The 'Vegetation Management Overlay' of the Planning Scheme applies over the whole of the Proposal Area including the Tunah Street Extension Stage area. The operation of the vegetation overlay requires minimizing disturbance of vegetation.

The intent of the overlay is realised, as disturbance associated with the Tunah Street Stage has been minimised by restricting it to within the established offset area of the 2007 permit, while the stage forms part of an integrated land use proposal that brings a larger area than originally envisioned into conservation management.

Complementary Master Plan strategies

While statutory requirements for conservation of values have largely been addressed with issuing of the TSPA permit, final detailing of streetscape of this stage could:

- Contribute to residents' and wider community appreciation of the conservation values of retained bushland
- Provide surveillance and discourage activities detrimental to conservation of natural values

Open space context

A number of existing tracks connect to the end of Tunah Street. These appear to be used primarily for walking and mountain-biking, they provide access to the ridgeline track identified as the future Droughty Trail.

The proposal, Figure 21c, p. 49, provides for future entry from the road reserve to POS trails on the Rokeby Hills, and allows for formalised entry points located to facilitate informal surveillance.

Fire hazard

The existing configuration along the south of Tunah Street with rear fences backing onto bushland and no fire hazard buffer is sub-optimal. Fire attack could come from the north at some speed burning up the slope or down slope (in the latter case more likely to be a slower burn).

Fire hazard risks are addressed by the configuration of the Tunah Street extension stage in a manner consistent with the TFS guidelines for developing in fire prone areas, refer Figure 12d, p.49, with:

- FMBZ -15m wide perimeter road and 15m within lots adjacent to a proposed extension of Tooritya Reserve

- BPZ in all 6 perimeter large lots

Landscape contribution – scenic value

The existing development is viewed as a stubby extension of urban development upslope, running against the line of Oceana Drive along the face of the Rokeby Hills.

The proposed subdivision layout gives smoother transitional shape, at an elevation close to that proposed for the adjacent Coventry Rise stage.

The perimeter street with street trees and ground covers alongside the large lots on the perimeter of subdivision cluster, give the edge between urban development and bushland a more subtle transitional appearance.

8.3 Coventry Rise extension

Current

Coventry Rise is currently a short section of constructed road that terminates abruptly with no turning circle. The unfinished condition of Coventry Rise reflects a long-held understanding that the road would be extended when conditions favoured development.

The road is located to the north of an existing services area above Glamorgan Street and leads into a belt of land along the slope between the Conservation Covenant Area upslope and lots along Oceana Drive downslope.

The area accessed from the road falls into 2 sections:

- North Coventry - extends north towards Tooritya Bushland Reserve
- South Coventry is potentially accessed through a strip above the services area. It is a smaller area located between the Glamorgan Street services reserve, the Covenant Area and lots above Oceana Drive.

Application of planning strategy

The Coventry Rise extension stage is located along the 'hard edge' between urban Howran and the Rokeby Hills bushland proposed in the Planning Policy Framework of the Planning Scheme.

The proposed subdivision layout reflects the long-standing intention to 'complete' Coventry Rise, that has been held in abeyance since the *Eastern Shore Planning Scheme 1963*, until detailed site analysis was undertaken and market conditions favoured development, similar to Tunah Street.

Current zoning

The existing zoning does not encourage achieving the Master Plan strategic objectives of fire management and visual management at the urban/bushland interface in current conditions.

A relatively narrow area is zoned Residential above Oceana Drive in the north Coventry area. The whole of the south Coventry area is zoned Landscape and Skyline Conservation.

Proposed zoning

Three zones are proposed, reflecting the proposed subdivision:

- Landscape and Skyline Conservation below the Conservation Covenant Area to accommodate a trail and POS and acting as additional buffer to the Covenant Area
- Low Density along the interface to accommodate a buffer on the edge, accommodating an outer road and perimeter lots (north Coventry), and reciprocal ROWs providing access to large lots (south Coventry)
- Residential zone the north Coventry larger low density lots.

Coventry Rise extension proposal

The proposal is comprised of:

- A narrow bushland parkway-like POS upslope
- A north section extending from the Glamorgan Street services area to Toorittya Bushland Reserve, with:
 - an upslope perimeter road running north
 - 7 large low density lots running off the perimeter road
 - 10 standard density residential lots
- A south section of 3 large low density lots accessed through reciprocal ROWs

Landscape and Skyline Conservation Zone POS

The POS areas below the Conservation Covenant Area allow for additional retention of bushland, with the woodland appearance extending lower on the hill slope.

The POS areas accommodate a section of the proposed lower level trail along the west face of the Proposal Area.

Low Density Zone

Perimeter road and perimeter reciprocal ROWs

The perimeter road and reciprocal ROWs are designed and streetscaped to provide a visual transition and to provide fire protection as a FMBZ.

Coventry Rise road reserve is extended northwards above Oceana Drive, in a low arc across the hillslope, providing the appearance of a smooth transitional edge below retained bushland. The construction and design of the road would be similar in concept to Tunah Street, although streetscape works may extend into the POS upslope with a cut bank laid back and landscaped laid-back rather than a steeper cut bank or wall.

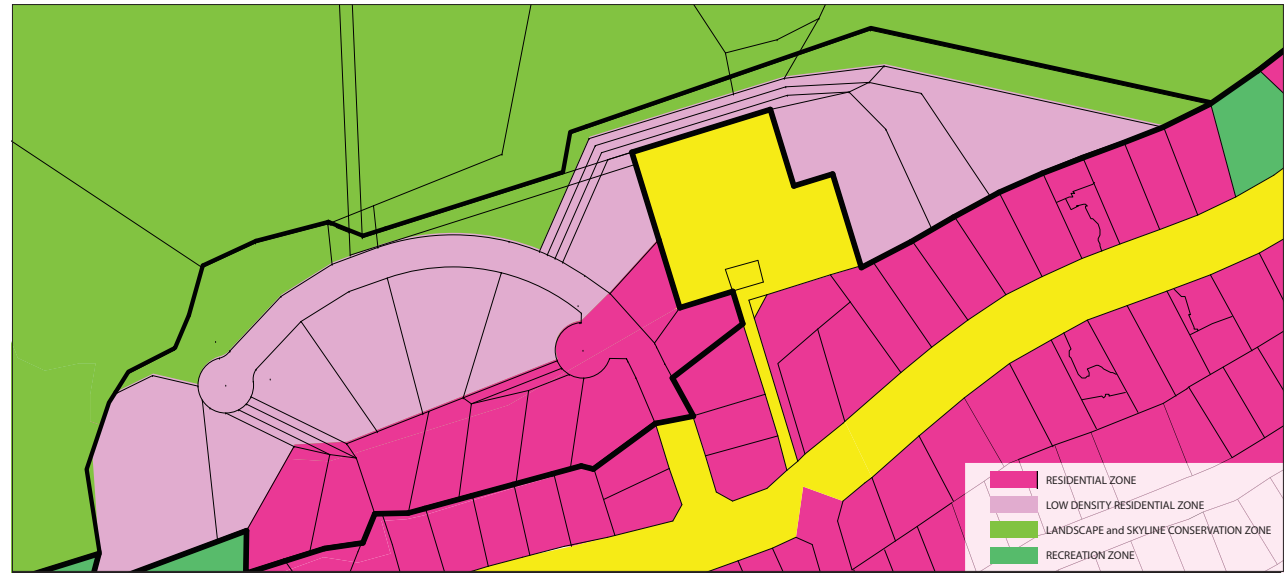


Figure 22a: COVENTRY - PROPOSED LAND USE ZONES

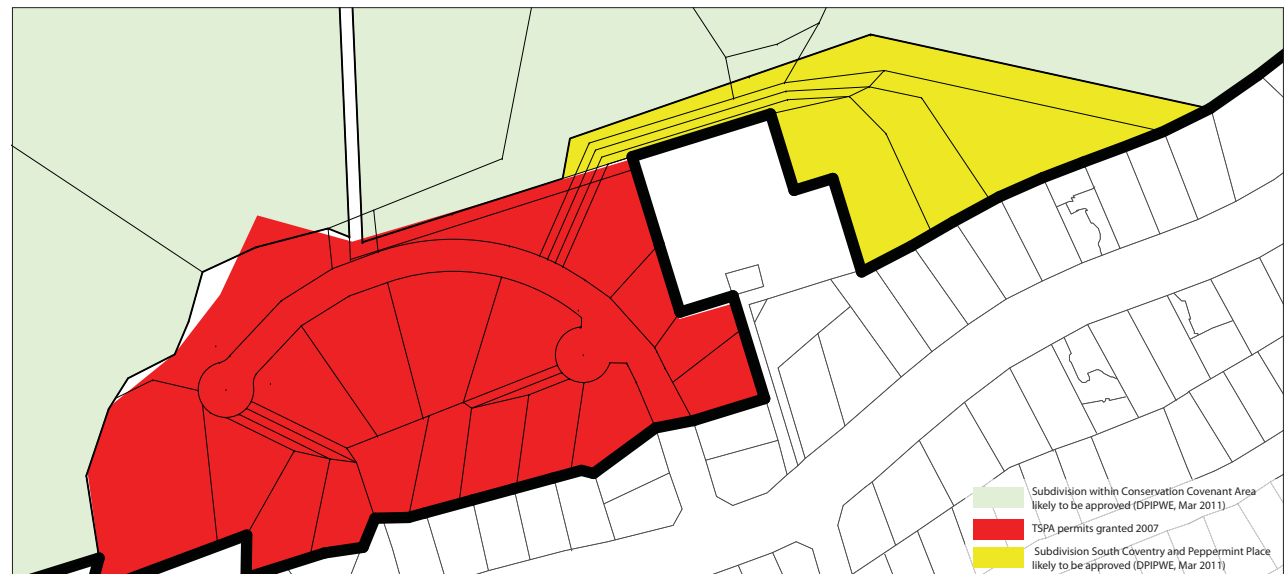


Figure 22b: COVENTRY - CONSERVATION STATUS



Figure 22c: COVENTRY - OPEN SPACE SYSTEM



Figure 22d: COVENTRY - FIRE MANAGEMENT

A composite driveway will be constructed off the Coventry Rise extension alongside the POS to access the 3 large lots south of the services area. It may also provide functional access to Bushland Lot 2.

Large low density lots

The 7 large low density lots below the perimeter road accommodate fire hazard protection in a building setback areas and contribute to the transitional appearance of the urban/bushland edge.

Standard density residential lots

There is a layer of standard residential lots between existing residences and Coventry Rise road reserve in the north section of this stage. Lots are accessed off 2 culs de sac.

Internal access

Access from the culs de sac is through 2 internal driveways constructed over reciprocal ROWs.

Conservation management

North Barker have identified the following in the Coventry Rise area, refer figures 13, p.21; 14, p.23:

- Outlier occurrences of significant species and communities of: Risdon Peppermint *Eucalyptus risdonnii*; Tall Wallaby Grass, *Austrodanthonia induta*
- Isolated marginal Blue Gums, *Eucalyptus globulus* and marginal Blue Gum woodland (in area currently slashed for fire management) with some associated outlier individuals
- an extension of the edge of a significant occurrence of Chocolate Lily, *Arthropodium strictum*

A TSPA permit was granted for the north Coventry area in 2007.

DPIPWE has considered the south Coventry proposal and provided preliminary advice that the development is likely to receive approval, possibly with conditions, refer Appendix 1, p.63.

The Vegetation Management Overlay of the Planning Scheme applies over all of the Coventry Rise Stage. The intent of the overlay has effectively been realised by the processes that lead to the enlargement of the Conservation Covenant Area to include additional significant vegetation.

Fire hazard

The existing situation has back fences to bushland which is not preferred practice.

25m of the Proposal Area alongside rear fences of neighbouring Oceana Drive is currently managed by Malwood, as a fire hazard buffer, consistent

with a commitment made by Malwood in the an earlier application (application for infill subdivision along Oceana Drive). This commitment would not necessarily apply to any future owner.

Fire attack could come from the north at some speed burning up the slope or down slope (the latter more likely to be a slower burn).

The proposed Coventry Rise design uses TFS Guidelines 2 layer fire hazard management.

- The FMBZ is accommodated in Coventry Rise road reserve, the reciprocal ROWs access to south lots and within low density lots (to the north abutting a proposed extension of Toorittya Reserve and lot to the south abutting the Conservation Covenant Area
- The 20m Building Protection Zone is located within all 7 large perimeter lots.

The main fire egress is along Coventry Rise (north Coventry) or along the reciprocal ROWs access to Coventry Rise (south Coventry). Alternate pedestrian egress is through Toorittya Bushland Reserve (north Coventry) and through the Conservation Covenant POS to the existing POS at 560 Oceana Drive.

Landscape contribution – scenic value

The proposed subdivision layout creates a smoother transitional edge above Oceana Drive subdivision, with a visual transition from standard density suburban development, through low density and streetscape, to the conserved bushland POS, and then to bushland of the Conservation Covenant Area.

8.4 Peppermint Place

Current

Peppermint Place is currently a vacant lot, leading into bushland.

A 25m wide fire buffer alongside the rear fences of adjacent lots on Oceana Drive is maintained by Malwood.

Application of planning strategy

In common with the other residential subdivisions, Peppermint Place is located on the 'hard edge' between urban and bushland, proposed in the Planning Policy Framework of the Planning Scheme.

Existing zoning

At present the Landscape and Skyline Conservation Zone applies over the whole of this area, so it is hard up behind the rear fences of existing residences along Oceana Drive.

The Scheme Map does not acknowledge contemporary requirements for fire hazard management and visual transitions along the urban/ bushland interface.

Proposed zoning

The proposed zoning introduces a Low Density Zone area to provide an explicit buffer between the urban area and bushland, with the zone mapped to be consistent with the Master Plan subdivision layout for Peppermint Place.

The proposed zoning is:

- Landscape and Skyline Conservation proposed for
 - the relatively narrow POS strip below the Conservation Covenant Area
 - areas beside the Conservation Covenant Area where copses of significant vegetation occur
- A Low Density zone applying on the perimeter road and large low density lots

Peppermint Place proposal

The proposal is comprised of a perimeter southern road with 5 large low density lots running off the road to the north and POS areas to the north, east and south.

POS

The proposed POS area is below the Conservation Covenant Area and around the proposed residential area. It would accommodate the lower level trail connection to the Droughty Trail.

The proposed POS area includes areas of significant vegetation that could potentially be added to the Conservation Covenant Area:

- To the north a Blue Gum outlier copse close to the Oceana Drive POS
- To the south an outlier copse of Risdon Peppermint

The POS accommodates a Fuel Modified Buffer Zone to the north and east of the low density lots.

Peppermint Place road reserve

The Peppermint Place road reserve runs obliquely across a lower gradient slope, so is likely to require less earthworks. Upslope streetscape works may extend into the POS area upslope with a landscaped laid-back bank.

The road reserve accommodates the Fuel Modified Buffer Zone.

Low density lots

The 5 low density lots are fully contained within fuel management zones.

An effective Building Envelope is created within these lots by a BPZ

which wraps around the outer boundary of the low density lots.

The BPZ precludes house construction and specifies landscape structure (vegetation and surfaces) in the perimeter and road frontage sections of the lots.

Conservation management

North Barker have identified significant outlier occurrences of Risdon Peppermint, *Eucalyptus risdonnii*, and Blue Gum *Eucalyptus globulus* meaning the potentially developable area in this area is relatively contained.

While no TSPA permits apply to this area, it is within the area where proposals were assessed in early 2011 and DPIWE advised that they would anticipate approval once the final applications were received.

The design allows for high value areas to be incorporated into the Conservation Covenant areas.

A number of individual threatened species trees are included in outer fire hazard management zones of lots and it is anticipated that those trees would be retained.

The Vegetation Management Overlay of the Planning Scheme applies over all of the Coventry Rise Stage. The intent of the overlay is realized by the limited extent of development.

Fire hazard

Currently Malwood maintains a fire hazard buffer between back fences of lots facing onto Oceana Drive, due to a commitment made during the 2006 development application, that is not necessarily binding on any future owner.

Fire attack could come from the north, down slope (likely to be a slower burn), or the south (also likely to be slower).

The design uses the TFS Guidelines 2 layer fire hazard management with:

- 5m wide Fuel Management Buffer Zone in the road or POS alongside lots
- 20 m Building Protection Zone along the bushland boundaries or frontage of large low density lots

The main fire egress is south through Peppermint Place with an alternative pedestrian access through the Conservation Covenant to the existing POS at 560 Oceana Drive park to the north.

Landscape contribution – scenic value

The proposed outline continues the relatively smooth transitional line above Oceana Drive with a visual transition from standard density residential on Oceana Drive through low density lots and streetscape to retained bushland.

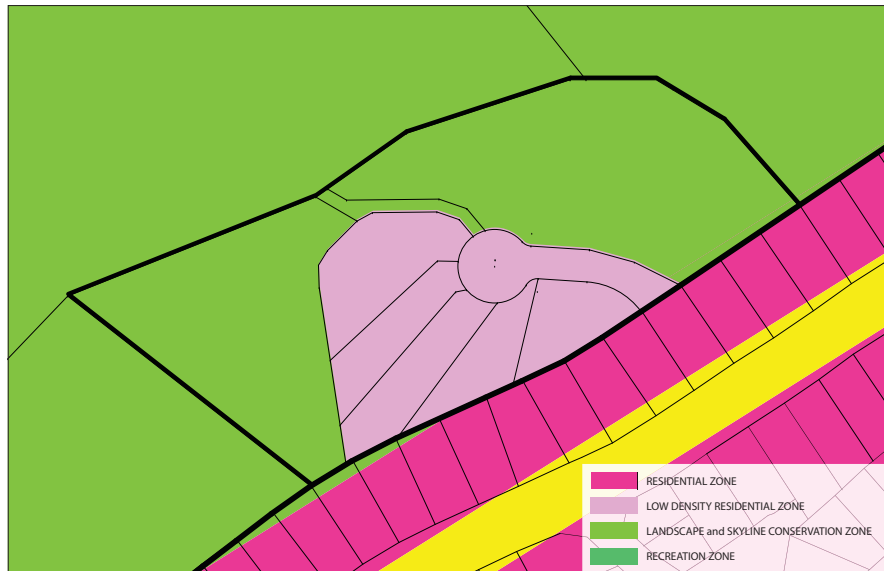


Figure 23a: PEPPERMINT - PROPOSED LAND USE ZONE



Figure 23c: PEPPERMINT - OPEN SPACE SYSTEM

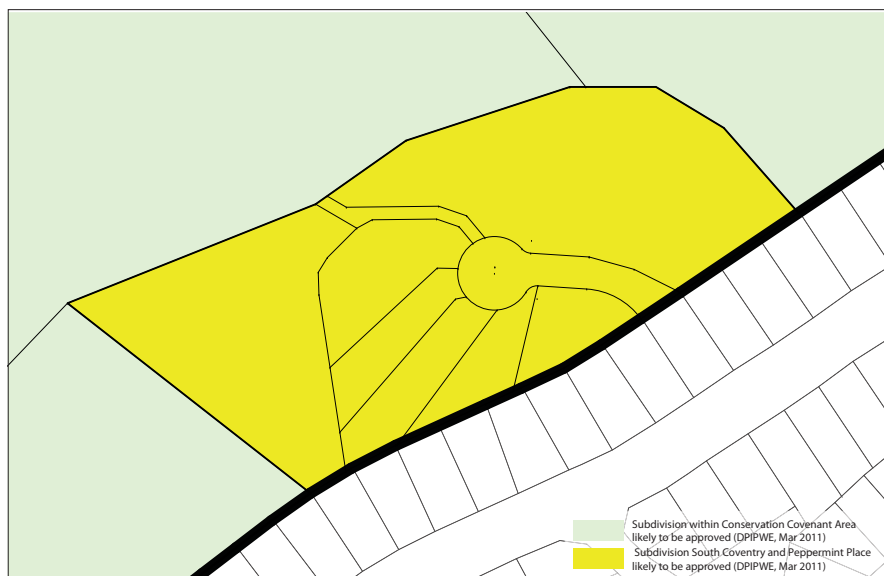


Figure 23b: PEPPERMINT - CONSERVATION STATUS

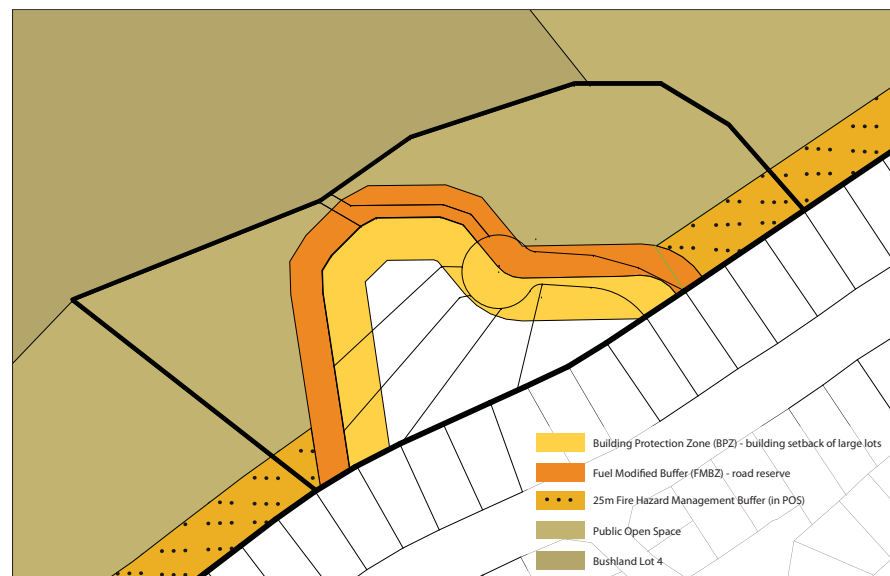


Figure 23d: PEPPERMINT - FIRE MANAGEMENT

9 BUSHLAND LOTS AND POS STAGE

9.1 Existing situation

To simplify administration of planning applications for the various stages, the Bushland Lots and POS Stage contains the full extent of the Conservation Covenant Area.

The Conservation Covenant protects areas of significant natural value in the Proposal Area including threatened vegetation communities and species, and habitat areas supporting threatened fauna. Noteworthy among areas with significant values in this Stage are areas of Risdon Peppermint and Blue Gum. Refer to Section 3 for more detail.

Application of the Conservation Covenant

Development and land management in this stage is required to be consistent with the operation of the Covenant, and the associated 'Malwood, Rokeby Hills, Nature Conservation Plan' (NCP). The NCP limits possible development and establishes conservation management requirements (refer Section 3 for more detail). Requirements under the NCP include:

- Fencing to exclude vehicles in designated locations
 - Land owners are required to undertake conservation management to keep areas weed free (this would also apply to land proposed as Council owned open space)
 - Recreation use to be restricted to the existing tracks with limited deviations generally consistent with the NCP 'Indicative Tracks Plan'
 - Development of residences is limited. Up to 4 private residential lots could be created. Development on those lots would be required to be designed and maintained so that:
 - any disturbance associated with residential occupation be contained within a Domestic Zone
 - any building be contained within a Building Envelope that cannot be situated in a location that could compromise threatened vegetation or habitat.
- Note - while the Building Envelope specified in the NCP is not exactly the same as the Building Envelope in the Clarence Scheme, the NCP requires that development is consistent with other statutory requirements, so both controls apply.

- Minor fire management is allowed

Any variation from the Terms of the Covenant or from the NCP requires ministerial approval as does all significant development or management.

Application of planning strategy

Clarence Planning Scheme, 2007 (The Planning Scheme)

Planning Policy Framework

The Bushland Lots and POS Stage appears to be fully located within the area on the Rokeby Hills designated as a 'natural heritage and public recreation' environment within the Policy Framework of the Scheme, refer figure: 5a, p.11.

Existing controls

Three land use zones apply over the Bushland Lots and POS Stage.

- The Landscape and Skyline Conservation Zone - applies over the greater part of the Stage. The objectives of this zone are largely consistent with the intent of the Conservation Covenant, with an emphasis on biodiversity protection and management, while also requiring conservation of scenic landscape values

The Zone allows residential use and trails as anticipated in the Conservation Covenant

Specific requirements applying in the zone limit potential detriment to conservation and scenic values, including those outlined in Section 6.10, requiring mitigation of potential visual impacts of any development

- The Recreation Zone - applies over a significant area of the Bushland Lots and POS Stage, primarily in the north west of the Proposal Area. There are 3 areas zoned residential, which while close to each other are not connected:
 - the largest area adjoins Kuynah Bushland Reserve. The main track along the Rokeby Hills runs from Kuynah Reserve into the zoned area
 - an area above Toorittya Bushland Reserve appears to anticipate a minor extension to the reserve
 - a small area is immediately alongside a minor un-named reserve off Fairfield Terrace
- The Residential Zone - applies over narrow slivers of land alongside the recreation-zoned extension of the Toorittya Bushland Reserve, on the Tunah Street side, and east (or upslope) of Oceana Drive and north of the Coventry Rise stage

Vegetation Management Overlay

The Scheme's Vegetation Management Overlay applies over all of the Bushland Lot and POS Stage.

It is considered that requirements under the Vegetation Management Overlay operation would be entirely satisfied by this proposal which is consistent with the Conservation Covenant.

Proposed amendments to the Planning Scheme

It is proposed that the whole of the Bushland Lots and POS Stage would be zoned 'Skyline and Landscape Conservation'. This is the zone most consistent with the protection of natural values that underpins the Conservation Covenant.

An ability to depart from some design requirements of the Landscape and Skyline Conservation Zone, is required for a best practice land use response to the specific character of the bushland in the Bushland Lot and POS Stage:

- Zone maximum lot sizes are not suitable in this instance

A limited number of residences are desirable at 'gatekeeper' locations, to provide informal surveillance of the Covenant Area in this bushland which is subject to significant degradation pressures

There is potentially least ecological impact if residential lots are located between existing tracks (to minimise disturbance of vegetation), meaning lot sizes smaller than 20ha. Refer also to the 'Indicative Tracks Plan' of the Conservation Covenant

- The requirement for locations of residences within the 'Landscape and Skyline Zone' are not consistent with the low visual impact locations in this Stage
 - Section 6.10 provisions of the Planning Scheme discourage buildings at locations close to the skyline, whereas lower gradient areas such as those close to the ridgeline on the roll of the shoulder of the ridgeline require a smaller clearing for fire hazard management and so are more readily screened by topography and surrounding trees, while potentially being of low visual prominence located under the skyline trees
- While residences in these elevated locations would be visible in longer views, they would have little visual prominence, being relatively inevident (due to their relatively small size and wide panorama context). There would be no significant impact to the broad Derwent River cultural landscape pattern that currently includes other more prominent clearings along wooded ridgelines
- Section 6.10 requirements encourage clustering development. On the elevated Rokeby Hills, clustering of development would potentially makes resulting larger clearings more difficult to screen

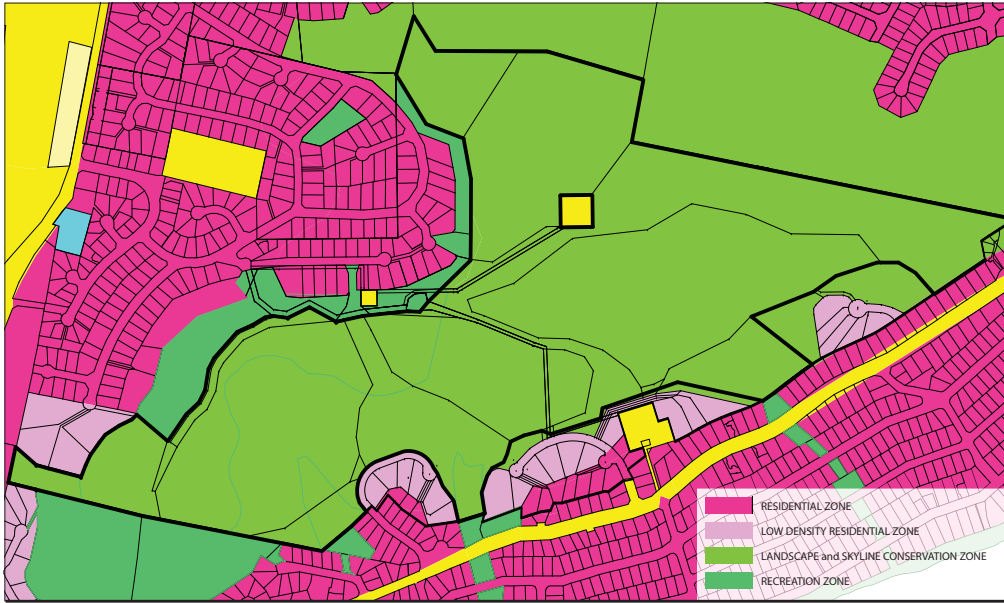


Figure 24a: BUSHLAND LOTS AND POS - LAND USE ZONES



Figure 24c: BUSHLAND LOTS AND POS - OPEN SPACE SYSTEM

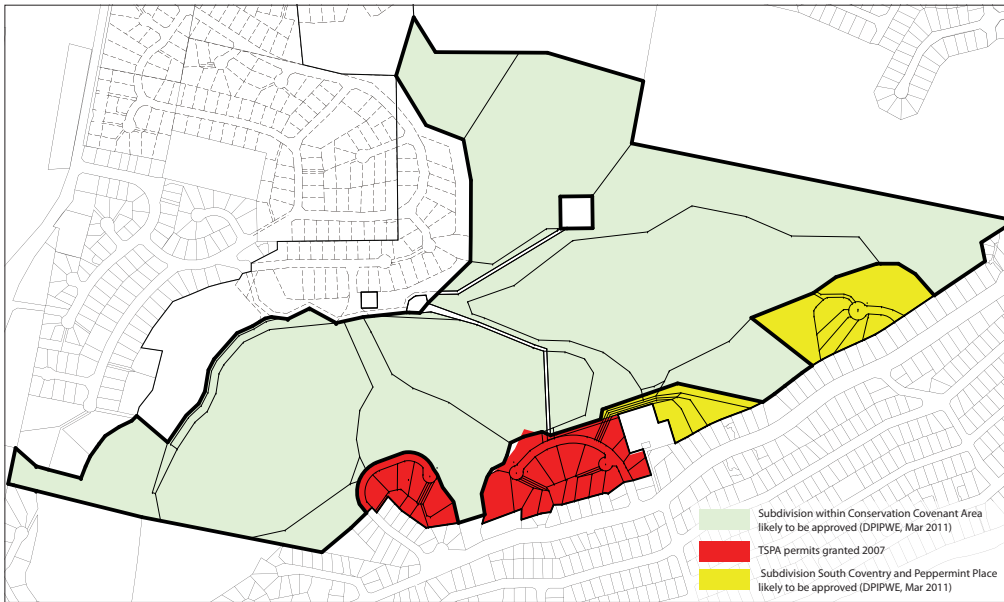


Figure 24b: BUSHLAND LOTS AND POS - CONSERVATION STATUS



Figure 24d: BUSHLAND LOTS AND POS - FIRE MANAGEMENT

Conservation management history

The land in this stage has been affected by the degradation pressures that apply within the whole of the Proposal Area, meaning that this area has proven difficult and relatively costly for Malwood to manage due to adverse impacts associated with illicit access, for:

- Joy riding in cars and motorbikes
- Wood cutting (wood hooking)
- Dumping of domestic refuse including garden cuttings (fly tipping)
- Dumping and burning of cars

The spread of weeds on the property has been associated with the distribution of weeds along the Rokeby Hills and elsewhere on the Eastern Shore.

Weeds are brought in by walkers, mountain bikes, motor bikes and other vehicles, and with the dumping of garden refuse.

9.2 Proposed land use

The 2 land uses proposed for this Stage, bushland residences and POS, are consistent with the Covenant requirements, but, achieved in a manner that meets the requirements of the Policy Framework of the Planning Scheme, if not the quantitative criteria.

The land use concept, configuration and management requirements, realise opportunities for each use to complement the other:

- Bushland residences - owners are responsible for conservation management. Residences are to be located to optimise providing informal surveillance of adjacent bushland including POS areas and trails while the location is also consistent with retaining the dominant character of ridgetop bushland along trails
- Recreation - walking and possibly cycle trails also provide service access, emergency access for recreation and access to the bushland residences. As shareways, trails would have controlled access to discourage un-wanted vehicles.

Each lot has a number of options for entry:

- Lots 1 and 3 access may also be available to be accessed from the composite 'Park Entries and Road Reserves' which provide access into the Droughty Hill Park system if the proposed Skillion Hill subdivision adjacent proceeds
- Lot 2 has ROW accesses from Peppermint Place and Coventry Rise
- Lot 3 has a ROW access from Coventry Rise
- Lot 4 has ROW access from Tunah Street

Bushland residential lots

The bushland lots are in essence the areas between those existing tracks which are to be retained under the Malwood Rokeby Hills NCP.

For each lot an Indicative House Site has been established to test whether there would be at least one residential location on each bushland lot that complied with the Conservation Covenant and NCP while also complying with the Planning Policy Framework and general operation of the Planning Scheme. As the house sites are indicative, a future owner could build at an alternative location provided they receive Ministerial approval under the Covenant in addition to planning approval.

The Indicative House Sites have been located to optimise outcomes, considering both potential advantageous and detrimental impacts:

- Avoid threatened communities and species or minimise potential impacts:
 - Lots 1 and 4 fully avoid impacts
 - Lot 2 fire management would occur over an area of Chocolate Lily, however the proposed land management keeps the area open which is consistent with the light requirements for Chocolate Lilies
 - Lot 3 Fire Management zone impacts a number of small stem Risdon Peppermints
- Provide informal surveillance - 'gatekeeper' locations have been selected to balance surveillance of entry points into the park system (Lots 2 and 3), or to provide some surveillance across the Conservation Area (Lots 1 and 4)
- Minimise visual impact considering both the likely house volume and likely visual impact of required fire hazard management clearings around the house while achieving required fire hazard minimisation by utilising *Australian Standard AS 3959-2009: Construction of buildings in bushfire-prone areas*. AS 3959 allows for smaller clearings (providing that buildings are designed to protect against attack by fire).

House site locations were selected where:

- lower gradient locations potentially have less visual impact as clearings required for fire hazard management are smaller and easier to screen. If the locations are elevated they are likely to be viewed in a more horizontal angle, or if viewed from below are more readily screened. Locations are below the skyline where silhouette woodland is retained (Lot 1, Lot 2 and Lot 4 sites)
- locations take advantage of local topographic features such as folds in slopes for additional screening (Lot 4 site)
- where clearings for fire management would not reveal reservoirs closeby on the ridgeline (Lot 1 and 3 sites)

- any location lower on the slope was less prominent by being relatively close urban development below (Lot 2 site)

Where locations are closer to the skyline a more sensitive Building Attack level has been used to allow a smaller clearing. Refer Section 7 for fuller discussion.

Recreation - Trails and POS

The bushland trails and POS in this stage are comprised of:

- Trails that contribute towards achieving the Droughty Trail park system
- POS on the east face of Skillion Hill

Bushland trails

The designation of land as Public Open Space (POS) anticipates creation of a Droughty Trail system as outlined in Council's *Tracks and Trails Action Plan*, comprised of:

- The Droughty Trail along the Rokeby Hills ridgeline
- Link trails connecting to linear or linked POS through Howrah-Tranmere and Rokeby, and, ultimately connecting to the Clarence Foreshore Trail

Refer Section 4, for more detail of the Oceana Phase 2 open space system).

With finalisation of the Trail system there would be a variety of bushland trails, with different settings, characteristics and fitness-level requirements. Trails would be readily available to the bushland lot residents, to residents of the proposed residential subdivision clusters lower on the slope, as well as adjacent established suburbs and the proposed Skillion Hill subdivision.

The subdivision design has wider trail corridors which allow for future upgrade of the trail system, potentially providing for a wide range of trail types including a touring cycle trail and mountain bike trails.

Droughty Trail

The main trail through the Bushland Lots and POS Stage will be the Droughty Trail, proposed along the ridgeline.

On its current alignment, the ridgeline track is located with segments within both the Oceana Phase 2 area and the Skillion Hill proposal area adjacent. The trail would be created by subdivision, associated with whichever of the relevant stages of those 2 proposals, incorporating this length of trail, was approved first.

The existing alignment of the track is not consistent with the existing

ROW to the proposed south reservoir (ROW to Southern Water). It is anticipated that the track may be re-aligned when the reservoir is constructed, as part of formalising the Droughty Trail (the existing route would be rehabilitated).

Link trails

The existing trails upslope through the Bushland Lot and POS Stage to link to existing ridgeline will be retained. Better linkage is anticipated with the connection to the proposed lower trail as the residential cluster subdivision stages are completed.

Skillion Hill Park (South)

The park proposed on the east face of Skillion Hill brings an interesting woodland and rock configuration into the POS system and allows for future linkage through other owner land to Rokeby.

This park area potentially extends the Skillion Hill park proposed in the Skillion Hill subdivision proposal.

10 SUMMARY AND CONCLUSION

10.1 Characteristics of the Proposal Area

The Proposal Area is a relatively isolated urban bushland of significant natural and scenic value located on the Rokeby Hills between Howrah-Tranmere and Rokeby. The Area connects southwards to limited areas of remnant and re-establishing bushland. There is a potential connection north to bushland on Glebe Hill and ultimately to the Meehan Range.

The natural values of the Area are protected by a recent DPIWE Conservation Covenant and the Vegetation Management Overlay of the Clarence Planning Scheme, 2007 (the Planning Scheme).

The woodland slopes and ridgelines within the Proposal Area fall within the pattern of skylines and hillfaces identified in the Planning Scheme as being of scenic landscape value, warranting protection.

While currently some people visit the Proposal Area to walk along the ridgeline trail through the Rokeby Hills, the Area has potential to make a more significant recreational contribution. It would accommodate the section of Council's proposed 'Droughty Trail', that runs North-South along the Rokeby Hills (*Tracks and Trails Action Plan*).

However the area is fraught with on-going management issues that require consideration of a systematic and equitable approach, vis-a-vis:

- Hazard to residential areas adjacent to fire-prone bushland
- Potential damage to natural values, through woodhooking, spreading of weeds and arson
- Lack of surveillance that would potentially discourage anti-social activity

10.2 Formulation of the land use strategy

The Oceana Phase 2 Master Plan was finalised following integrated formulation and review of land use planning, conservation management and design options.

Three key outcomes emerged from parallel processes or streams with the evolving outcomes of each informing the other:

- Refining the land use strategy for the Proposal Area and implications for adjustments to the *Clarence Planning Scheme, 2007*
- Providing information to DPIWE relevant to the finalisation of the Conservation Covenant and its Nature Conservation Plan
- Formulation and refinement of a workable land management system resulting in the subdivision proposal

The finalisation of the proposal required multiple iterations of assessment of areas of highest and least sensitivity, consideration of candidate uses, matching of activities to the most suitable areas, assessment of the

implications of provisional candidate uses, proposed management and locations, then multiple cycles of review and refinement.

A simplified outline of this process follows:

- 1 Identification of site characteristics and values, opportunities and constraints and relevant strategic context for each process stream
The Conservation Covenant Area was set aside for uses consistent with conservation
- 2 Over time the Covenant boundary was refined to reflect more detailed natural values information. Candidate land uses were reduced to retaining tracks with options for recreational use, and allowing limited residential subdivision between tracks in a manner that provided conservation management and surveillance. Broad Master Plan objectives were distilled into site-specific land use principles
- 3 In the Conservation Covenant Area, proposed lot boundaries were finalized as the Conservation Covenant boundary became clearer and after testing alternative building locations and trail configurations
- 4 In the remaining areas below the Covenant boundary, where good servicing is readily available:
 - high natural values areas were identified for least disturbance land uses that retained an option for a future extension of the Conservation Covenant Area
 - along the urban/bushland interface, a route for potential recreational linkage was identified
 - locations with least natural values sensitivity and not naturally part of potential recreational linkage were identified as suitable for residential use
 - subsequent more detailed design aimed to:
 - create an edge that was defensible in terms of fire hazard while also being visually soft or transitional, This was achieved by using residential clusters of subdivision along the urban/bushland interface separated by bushland open spaces, with each cluster having low density outer lots and streetscaped road immediately alongside the bushland
 - each lot was configured to have a relationship to the bushland POS system with either views to the bushland from the lot, or lots configured so the POS would be prominent when arriving or leaving lots
 - options were provided for attractive entries into the Droughty Trail System and that could support later upgrading to sub-regional or regional status

- 5 Design resolution involved consideration of linkage between the

Droughty Trail and:

- proposed residential clusters
 - connection to the larger recreation networks of trails through adjacent suburbs, ultimately connecting through suburbs to the Clarence Foreshore Trail
- 6 Continuing review and refinement of emerging planning, land management and design strategies

10.3 Consistency with best practice

Residential land use planning

Advancing Council Strategy

The Oceana Phase 2 proposal addresses the practical detail of how to achieve the defined urban/bushland interface edge proposed in the policy framework of the Planning Scheme, and provisionally accepted into the *Southern Tasmania Regional Land Use Strategy* (February 2011), while addressing ecological edge effects and opportunities associated with the urban/bushland interface:

- Edge impacts on natural values
- Potential fire hazard to adjacent areas
- Providing recreational access to bushland while deterring anti-social access and processes
- Potential visual impact

Australian reference standards

The proposal is generally consistent with site analysis processes outlined in the *Tasmanian Code for Residential Development* (TasCORD) Guidelines and other standards as relevant to the modest amount of developable land or opportunities afforded by the Proposal Area.

Subdivision design in natural areas

The sieving process used for the Oceana Phase 2 proposal is generally consistent with best practice for 'Open Space Residential Design' (OSRD, also known as conservation subdivision design) used in some parts of the USA - although modified to meet requirements for a defensible edge in terms of fire hazard and to address visual sensitivity.

The Master Plan design is generally consistent with outcomes implicit in the OSRD four-step planning process:

- Designate open spaces areas of ecological or cultural value, significant habitat, historic places, routes that are used or valued by the local community. The remainder is the available for use as buildable area

- Position house sites within the buildable area
- Allow for linkage, roads and trails for access and links to local open space destinations
- Establish lot boundaries around house sites

Design to prevent crime

Cluster subdivisions

The cluster subdivisions are designed primarily with simple frontages to the street and street-like reciprocal ROWs with limited side boundaries. The configuration of the land and the desirability of an outer road for fire hazard management together with an intent to make good (viable) use of serviced urban land relatively close to local centres and the CBD has meant double loading of lots along one side of the road driveway accesses.

The double loaded configuration has been interpreted in a way that reduces opportunities for crime:

- Large lots provide overlooking of adjacent accessways, fire hazard setbacks providing defined front areas over-viewed from the house with secure rear yards
- Second layer lots have potential for a street-like relationship to the landscaped reciprocal ROWs. Driveways in reciprocal ROWs would be constructed by the developer with fences and landscape designed to facilitate views into the driveway from private lots and plantings to make over-viewing into residences and private open spaces difficult
- There are formal entries into an adjacent lower level walkway and opportunities for surveillance of people on the walkway and entering the Droughty Trail system through entries

Conservation Covenant Area

Bushland lots in the Conservation Covenant Area will provide for informal surveillance of walking trails. Shareways will have vehicular access controlled.

Healthy by Design, Recreation and Open Space values

The Oceana Phase 2 proposal is generally consistent with objectives to facilitate community health by encouraging exercise, within limitations of the available developable land, site topography and natural values.

The proposal enriches the evolving trails system in Clarence, providing choices for users consistent with directions for encouraging community health for future residents of the development and for residents of the adjacent suburbs.

Prominent and attractive recreation choices

The lower level incidental POS and trail are highly prominent from roads, houses and drives, visible as families and individuals arrive home, and will be identified and detailed to encourage use (to a standard agreed with Council as part of the finalising of the application).

The width of linkways provided, potentially allows for a separate cycleway to be created should Council ever decide that sufficient demand (or latent demand) exists.

The design provides convenient locations that could be used for parking and other facilities should Droughty Trail be upgraded as a sub-regional or regional recreation feature.

Good linkage to destinations

The proposed design of the Bushland Residential and Open Space area sets aside POS for the Droughty Trail consistent with Council's strategy. It provides for a bushland setting to the walking track with linkage to existing linear parks running through Howrah -Tranmere and those proposed in the Skillion Hill subdivision which would link to Rokeby.

In all, the proposed trails potentially connect the Droughty Trail to Rokeby, Howrah-Tranmere, Howrah Gardens and Glebe Hill, connecting to existing recreation destinations and linkages, to the Foreshore Trail and north Droughty Trail, and from there along the Charles Darwin Trail to Bellerive.

Choices

There are a variety of types of walks available suitable for people with different levels of fitness, and different preferences:

- The lower level walk has a character more like conventional parkland with residential areas nearby and with a relatively open vegetation structure, and so may feel safer to some potential users. The walk would have defined entries into the parkland
- There are a number of link trails running upslope, connecting to the Droughty Trail. These vary in gradient suitable for different users
- The upper level Droughty Trail along the ridgeline is relatively level. It can be accessed from Kuynah Bushland Reserve, the link trails, and if the Skillion Hill proposal proceeds from convenient park entries
- Droughty Trail and link trails passing through a relatively open woodland, managed as retained bushland, provide for a more natural bush walk with views over the Derwent Estuary and Ralphs Bay
- The proposed trail layout creates loop trails, providing a number of alternatives for walking experiences and walks of different duration. This variety makes tracks more attractive. It provides effective access

and encourages community health by allowing for individuals to enjoy the park system while building up of fitness

There are opportunities for facilities, resting points, parking, amenities to be provided to upgrade the trail system to sub-regional or regional status. Options exist for the trail system to contribute as part of a touring bike trails or mountain bike routes at some later stage.

Natural values

The pattern of conservation management, development and recreation proposed in the Oceana Phase 2 Master Plan reflects a long process of additional assessment of natural values undertaken with liaison with DPIW to establish the extent and operation of the Conservation Covenant required under an earlier Malwood proposal and evolving to establish:

- The full extent of areas suitable for conservation in this section of the Rokeby Hills
- A responsible balance between developable land and offset private conservation areas (the Conservation Covenant Area and proposed POS areas in lower subdivision stages)

As a consequence of formulating the Master Plan through this process, the proposal is also consistent with requirements of the Vegetation Management Overlay of the Planning Scheme which requires that any development occurs in areas of least impact on natural values.

Residential development, clusters of subdivision and indicative house sites in the Bushland Lots, are proposed in areas where one of the following applies:

- There is relatively low conservation value, considered relative to Tasmania and Federal legislation, site and regional occurrences
- There would be relatively little impact on significant communities or species
- It would be practical to manage the area in a way that maintains natural values

Residential subdivision stages

The three proposed residential subdivision clusters would be located along the urban/bushland interface which potentially bears most of the ecological 'edge effects' impacts on natural areas.

The clusters are designed to mitigate potential edge impacts such as fly-dumping of weeds and discourage anti-social activities such as joy-riding and arson in the retained bushland.

Conservation covenants and private bushland stewardship

The use of composite public and private conservation is emerging best practice in the US and Australia, as communities aspire to levels of natural values conservation beyond what will be resourced from the public purse.

Private land stewardship is being encouraged in Australia to resource conservation management of natural areas including interface bushland. In Australia different forms of private land stewardship are currently promoted by various private land conservancies and government authorities including Federal Government, Tasmanian, Victorian and West Australian state governments. Structures used include land conservancies, land trusts, and land banks.

The private owner/resident is a key component of this form of conservation management, enjoying the benefits of their bushland setting while being responsible for the care of that bushland.

The private land conservation process proposed for Oceana Phase 2 is consistent with the typical process for establishing private conservation:

- A legally binding requirement for the owner to be responsible for conservation management is attached to the land title outlining conservation responsibilities and limitations on use (the Conservation Covenant)
- Capacity within the land use planning constraints for a modest amount of residential occupation or other use of the land
- Ensuring the condition of the land is at a reasonable standard with respect to weeds, and other management variables at handover
- On-selling into the private market, in some instances (as proposed with the Oceana Phase 2 bushland lots), the sales strategy is aimed at buyers who would regard the conservation stewardship role as an part of the attraction of the land

Owners undertaking conservation management on Oceana Phase 2 lots would be supported by:

- Regular monitoring and technical support from a DPIPW Stewardship Officer (Private Land Conservation Program) assigned to the property
- Access to additional complementary conservation management mentoring for each lot for the first 12 months of ownership to be made available by Malwood, and provided by LMRS

Permits

Threatened Species Protection Act (TSPA) permits were granted for development in the Tunah Street extension stage and north Coventry Rise subdivision areas in 2007. These permits were based on the extent

of a proposed conservation covenant identified as an offset associated with the earlier Oceana infill subdivision approval.

Subsequent to the 2007 application, as part of the Oceana Phase 2 masterplan process, other areas of high conservation value were identified and included in the area of operation for the Covenant which was finalised in mid 2010.

The Policy and Conservation Assessment Branch, DPIPW, has advised (March 2011), that permits are likely to be granted for south Coventry Rise, Peppermint Place subdivision areas and for the Bushland Lots, Trails and House Sites, recognising that the Conservation Covenant Area has been enlarged to include the significant value areas additional to the area agreed in 2007.

Fire hazard management

The existing situation is sub-optimal for an urban/bushland interface.

The Planning Scheme does not explicitly identify requirements for providing a suitable interface or practical management. In some locations Scheme maps do not encourage development that would provide for a defensible edge.

Cluster subdivisions

The Master Plan introduces a strongly defined defensible edge consistent with TFS *Guidelines for Development in Bushfire Prone Areas in Tasmania*, and defined by a Low Density Zone on Planning Scheme maps.

Design detailing addresses fire management on the interface:

- A 15m Fuel Modified Buffer Zone (FMBZ) applies over an upslope or perimeter road, with streetscape vegetation structure (street trees and some ground covers) consistent with requirements or a FMBZ or established on the perimeter of lots
- All lots on the perimeter of the residential clusters are large, consistent with requirements for low density zone and all contain a 20m Building Protection Zone upslope of an area that would be available for building. Within these lots a Part V Planning Agreement effectively defines a building envelope lower on the lot within the 20m perimeter Building Protection Zone downslope of within the FMBZ
- Alternative escape routes

Bushland residential lots

In the bushland lots indicative house site locations have been identified that optimise addressing fire hazard and minimising visual impact. These will not necessarily be the final house sites but were used to establish

that at least 1 suitable location, meeting all criteria, existed on each lot.

The potentially discernible extent of disturbance for residences was minimised by using the Australian Standard S-3959-2009 *Construction of buildings in bushfire prone areas*, which permits relatively small clearings.

Visual management

Lower level transitional residential subdivision clusters

The proposed development addresses the nature of the existing urban-bushland edge on the west face of the Rokeby Hills.

Currently the west face of the Proposal Area is visible but not a focus of attention in views along the Derwent Eastern Shore. The hill face is more central, but only as one component within the view, in the panoramic Western Shore views from West Hobart to Lower Sandy Bay.

The proposed development retains the greater part of upslope woodland.

The proposed residential clusters would become a transitional edge above the existing urban areas blending into the retained bush. The transition between the urban area and retained woodland is created by:

- Division of the residential area into 3 residential clusters separated by 2 retained bushland Public Open Spaces
- A transition within each cluster from standard residential through a large lots perimeter layer of development with large gardens and low darker coloured buildings to outer road construction with isolated street trees and ground covers

This proposed structure is re-inforced by introducing a Low Density Zone along the large lots and outer roads of the urban/bushland interface.

Bushland lots

The Bushland Lots are proposed within the Conservation Covenant Area, where it is recommended that the Landscape and Skyline Conservation Zone would apply.

In the bushland lots, indicative house site locations have been established, using AS-3959 to balance requirements for fire protective construction which allows for clearings to be relatively small.

The provisional locations have been selected for relatively flatter gradient locations near or on the shoulder of the ridgeline or immediately above the residential clusters, and separated from each other so as not to mass up, so minimising potential visual impacts.

The development will have little visual contrast with surrounding dark toned woodland on the west or east face of the Rokeby Hills due to:

- Elevated locations - smaller clearings in a location where closer views are screened by vegetation
- Low locations - close to the transitional residential cluster edge
- Clauses applying within the Landscape and Skyline Conservation Zone, which require that development will have little visual contrast with the immediate surrounds.

Reservoir

The proposed reservoir is relatively low in height (2.4m), which with painting will allow it to be effectively screened.

Optimisation of outcomes

The final design is consistent with emerging best practice and explicit optimising of outcomes.

While priority is given to natural values conservation and areas being brought into active conservation management, other optimised outcomes have been achieved:

- Costs of conservation management are shared between the developer, Council and private owners, in a manner consistent with the Conservation Covenant applying over the area and the Vegetation Management Overlay in the Planning Scheme and LUPAA objectives
- The proposal advances Councils strategic planning for recreation in this area, for an integrated network of trails including the Droughty Trail, implemented in a manner consistent with Australian and Tasmanian guidelines for design of residential areas to encourage greater community health
- The proposal introduces a best practice form of fire hazard management along an existing sub-optimal urban/bushland interface
- Residents of the proposed residential cluster subdivision would provide informal surveillance of adjacent parkland and entries into the parkland trail system and enjoy the adjacent bushland, which is presented in a manner that cues appreciation of natural values of the bushland
- Residents of the bushland lots provide informal surveillance of the Conservation Covenant Area, discouraging anti-social activity and reducing potential risk to conservation values and for people enjoying the tracks and trails of the Rokeby Hills