



# Reserve Activity Plan 2016 – 2020

## ROKEBY HILLS BUSHLAND RESERVES



ADVICE PREPARED BY  
WELLING CONSULTING  
FOR THE  
CLARENCE CITY COUNCIL  
JUNE 2016

# Rokeby Hills Reserve Activity Plan 2016-2020

including Kuynah, Toorittya and Carella Bushland Reserves, Elinga Greenway and Public Open Space across the Rokeby Hills.



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## 1. BACKGROUND

The Clarence City Council (CCC) municipal area incorporates a significant number of remnant bushland areas that form part of the open space network, provide refuge for native plant and animal species, provide recreational opportunities for residents and visitors and contribute to the scenic skyline of the developed areas. The bushland areas range in size from the extensive Meehan Range Conservation Area to smaller suburban bushland remnants.

Kuynah, Toorittya and Carella Bushland Reserves and Elinga Greenway are four non-contiguous reserves adjacent to Oceana Road on the western side of the Rokeby Hills (Figure 1). These reserves have had some maintenance and upgrades to improve their amenity and accessibility but degrading processes have also had an impact on them.

Since the Draft Kuynah, Toorittya, and Carella Bushland Reserves Activity Plan (RAP) was made public for comment in March 2016, the Oceana development (Malwood Pty Ltd) on the Rokeby Hills has been approved and with it, the establishment of 28.6 ha of public open space (POS) has been confirmed. This revised RAP integrates information, from reports already advertised in association with the Oceana development. This was done in order to address all management issues related to the reserves (and management actions that Malwood Pty Ltd are responsible for) into one plan and the RAP has been renamed the **Rokeby Hills Reserve Activity Plan**.

This RAP has been developed to document the environmental, recreational and social values of the reserves, and provide a practical guide for the management into the future. The RAP has an emphasis on community input, and the development of good working partnerships to ensure that values within the reserves are protected, and that the reserves can be developed to provide sustainable opportunities for the community.

The RAP follows the basic structure of equivalent plans for other bushland reserves within CCC municipal area.

The main issues affecting the reserves are: improved public access and amenity, management of the natural values, improving recreational opportunities, weed management and fire management.

### Aim of the Reserve Activity Plan

The aim of the Rokeby Hills Bushland RAP is to:

- ensure the reserves are sustainably managed to protect and enhance the natural, cultural and social values;
- identify priority on-ground management activities to be undertaken within the reserves by Council, community groups and/or volunteers; and
- encourage community involvement through raising awareness of the reserves' values and encourage participation in activities to minimise threats to these values.

### 1.1. REVIEW OF RESERVE ACTIVITY PLAN

This plan has been prepared for a period of 5 years from 2016 - 2020. An informal review of actions and priorities should be undertaken annually and a complete review of the plan undertaken at the end of the 5 year period.

## **1.2 SUPPORTING DOCUMENTATION TO RAP**

A significant amount of documentation that relates to the reserves (and in particular to the Malwood Development across the Rokeby Hills) has been produced over the past 5 – 10 years. Whilst this documentation is relevant to the RAP, due to its volume much of the supporting data has been compiled in a separate 'Companion Document' to the RAP to reduce its size.

The Companion Document (referred to as CD in this RAP) can be referred too for more detailed information on the natural values however the RAP can be read as a stand-alone document.

## 2. SITE DESCRIPTION

The Reserve Activity Plan relates to four (4) bushland reserves (Kuynah, Toorittya and Carella Bushland Reserves; and Elinga Greenway) and an area of Public Open Space across the Rokeby Hills skyline which are to be collectively known as the Rokeby Hills Bushland Reserve. The 4 smaller reserves are linked by their association with the large intact bushland along the Rokeby Hills ridgeline which includes the POS.

Kuynah Bushland Reserve includes a larger land parcel of 11 ha accessed from 6 Mayfair Court and 23, 23a Fairisle Terrace and a smaller lot of 0.37 ha accessed from 9 Fairisle Terrace (Figure 1). The larger lot is the most northerly and elevated (50 to 110 m) of the 4 reserves and is in the most natural state. Facing west towards the Derwent River, the Kuynah Bushland Reserve supports intact woodland vegetation with a number of fire trails and walking tracks. The smaller lot contains an area of managed land and gardens accessed from Fairisle Terrace and intact vegetation to the east where it widens. Both portions of the reserve join intact bushland to the east, part of which has become POS and as such it now provide links to Toorittya and Carella Reserves and the Elinga Greenway.

Toorittya Bushland Reserve is a small (0.46 ha) reserve covering two lots accessed from Oceana Drive (526 and 534 Oceana Drive) (Figure 1). It contains a combination of Eucalypt and sheoak woodland and a cleared area dominated by exotics adjacent to the road. There are existing informal tracks into the bushland behind the reserve.

Carella Bushland Reserve is comprised of 2 small linear areas (combined area approx. 0.63 ha) which are divided by Carella Street. The eastern most remnant is also nominally joined to the Toorittya Reserve which is across Oceana Drive (Figure 1). The Carella Bushland Reserve provides potential connectivity between the Toorittya Reserve (and the broader POS) and the Tranmere Foreshore Reserve (by crossing Oceana Drive and Carella Street and linking Anulka and Alinta Streets). The vegetation is remnant *E. viminalis* forest with a weedy understorey.

The Elinga Greenway (or Play Park) is the furthest south reserve owned by CCC to be considered in this RAP. The Greenway consists of numerous small linear parcels that provide a walkway link between the intact bushland above Oceana Drive (and recently acquired POS) to the foreshore reserve across Oceana Drive, Carella Street, Elinga Street and Tranmere Road (Figure 1). The parcels generally contain a combination of landscaped native species and cleared understorey with some weeds. There are scattered mature white gums, blue gums and wattle within these small areas or reserves which are likely to be remnants from the area prior to residential development.

The Rokeby Hills POS includes a number of linear areas across the south western slope and along the ridgeline of the Rokeby Hills with a combined area of 28.6ha (Figure 1). It forms part of a larger area of vegetation (64ha) which is protected under a Conservation Covenant and subject to management as per a Nature Conservation Plan for the land. The POS backs onto existing and future residential areas above Oceana Drive and also includes a separate area on the Rokeby side of the hills (2.7ha in area) (Figure 1). The POS contains remnant native vegetation (refer to vegetation section and Figures 2 and 3) with a number of existing tracks and trails.

The geology of the northern reserves (Kuynah and Toorittya) is characterised by Dolerite (tholeiitic) with locally developed granophyre of the Mesozoic Era, Jurassic Period and Jurassic igneous rocks Supergroup.

The geology of the southern Reserves (Carella and Elinga) is characterised as upper glacio-marine sequences of pebbly mudstone, pebbly sandstone and limestone of the Paleozoic Era, Permian Period and Lower Permian Supergroup.



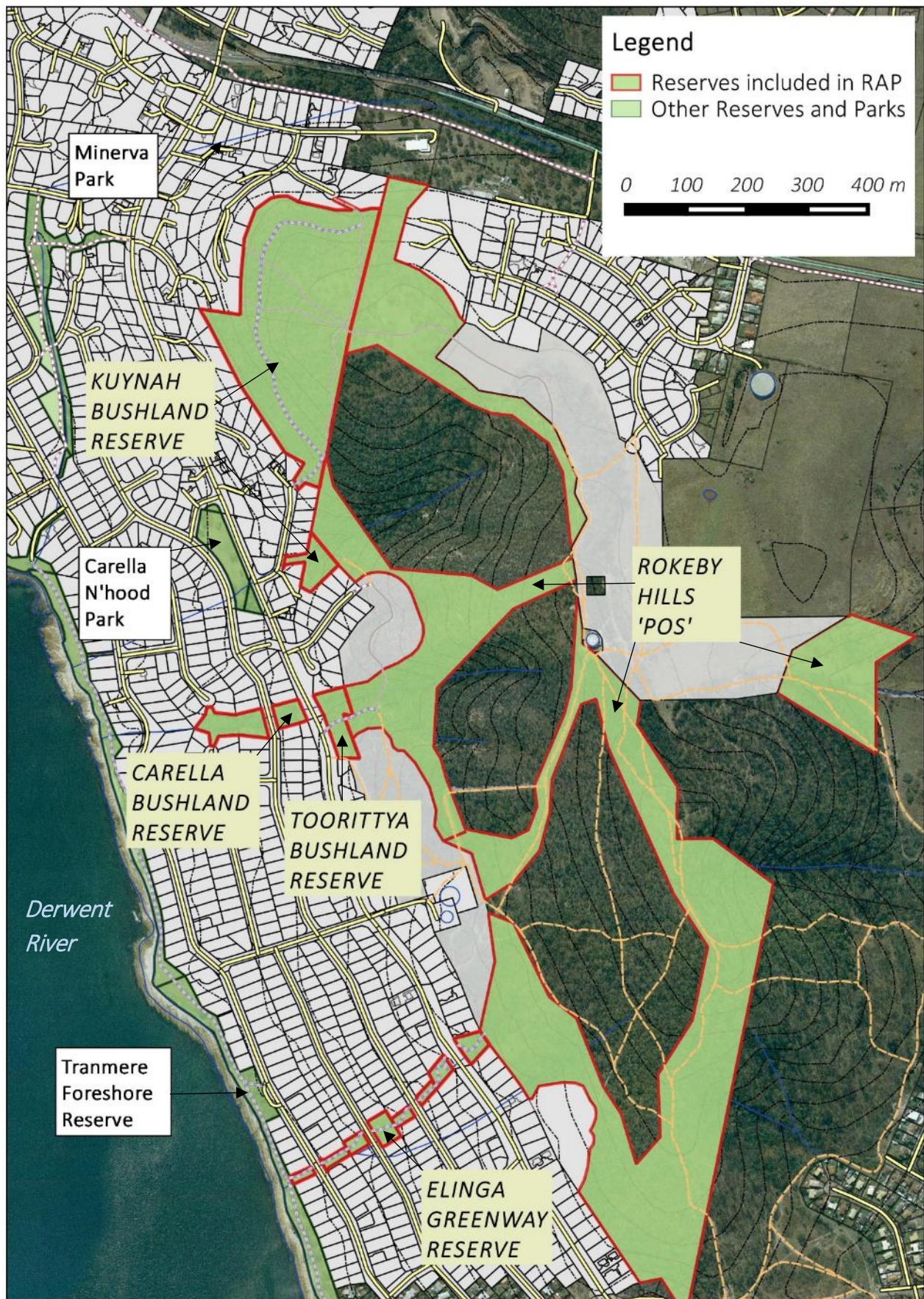


Figure 1 – Location Plan indicating reserves along Rokeby Hills and extending to the foreshore.



### 3. NATURAL VALUES OF SITE

#### 3.1 NATIVE VEGETATION COMMUNITIES

There are five (5) forest or woodland vegetation communities; two (2) grassland communities and one (1) disturbance induced vegetation community occurring within the reserves (refer to Figures 2 & 3).

- *Eucalyptus amygdalina* forest and woodland on mudstone (DAM) - this community is associated with the POS on the Rokeby Hills. For a complete description of this community and its distribution please refer to Companion Documents (CD) - Appendix 10.
- *Eucalyptus globulus* dry forest and woodland (DGL) this community is associated with the POS on the Rokeby Hills. For a complete description of this community and its distribution please refer to CD - Appendix 10.
- *Eucalyptus risdonii* forest and woodland (DRI) – this community is associated with the POS on the Rokeby Hills. For a complete description of this community and its distribution please refer to CD - Appendix 10.
- *Eucalyptus viminalis* forest and woodland (DVG) – this community occurs around and on top of the hill in Kuynah Reserve and at the northern end of the adjacent POS. The top of the hill is likely to have been dominated by this community prior to historic clearing (wood cutting). This community also occurs as remnant within the Carella Reserve and Elinga Greenway although the understorey is more exotic and disturbed in these linear reserves.
- *Allocasuarina verticillata* forest (NAV) – this community occurs around the steeper west facing slopes of Kuynah Reserve and a small portion within the adjacent POS. It is a regrowth community dominated by sheoak with some white gums saplings present (likely to have been DVG prior to disturbance).
- Lowland *Poa labillardierei* grassland (GPL) this community is associated with the separate POS parcel to the west of the hilltop. For a description of this community and its distribution please refer to CD - Appendix 10.
- Rockplate grassland (GRP) - a small remnant of this community occurs at the southern end of the POS adjacent to the Elinga Greenway Reserve. For a complete description of this community and its distribution please refer to CD - Appendix 10.
- Urban Areas (FUR) – this classification pertains to portions of the linear reserves where there is no intact native vegetation community and the public open spaces are dominated by exotic grasses and shrubs and or playgrounds, tracks and plantings. Firebreaks established between the bushland and the rear of residential properties has also been classified as FUR.

Descriptions of these communities are provided in the Companion Documents - Appendices 1 and 10 and their distribution is indicated in Figures 2 and 3.

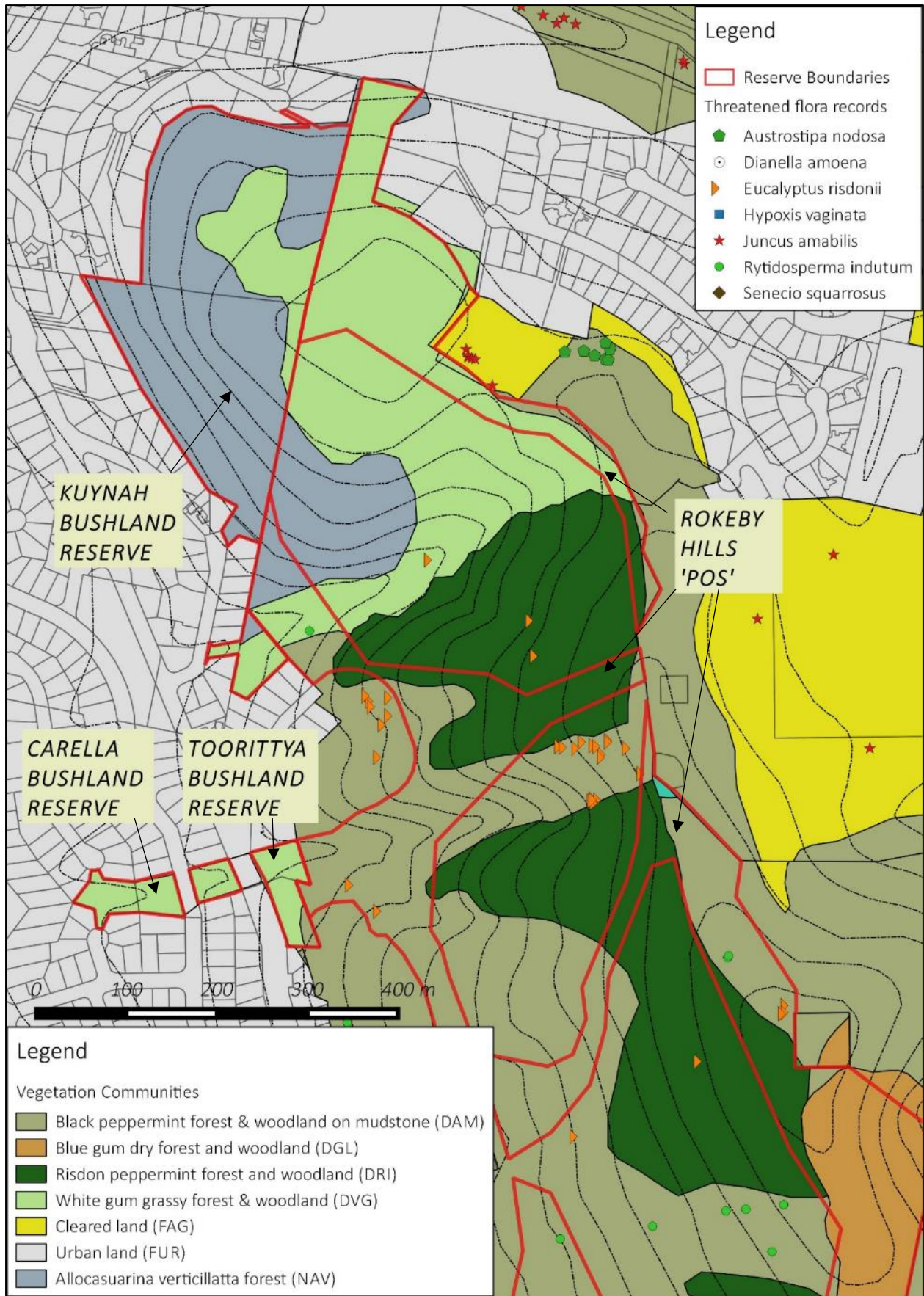


Figure 2 – Vegetation communities and recorded natural values in Kuynah, Carella and Toorittya Bushland Reserves and northern portion of POS.



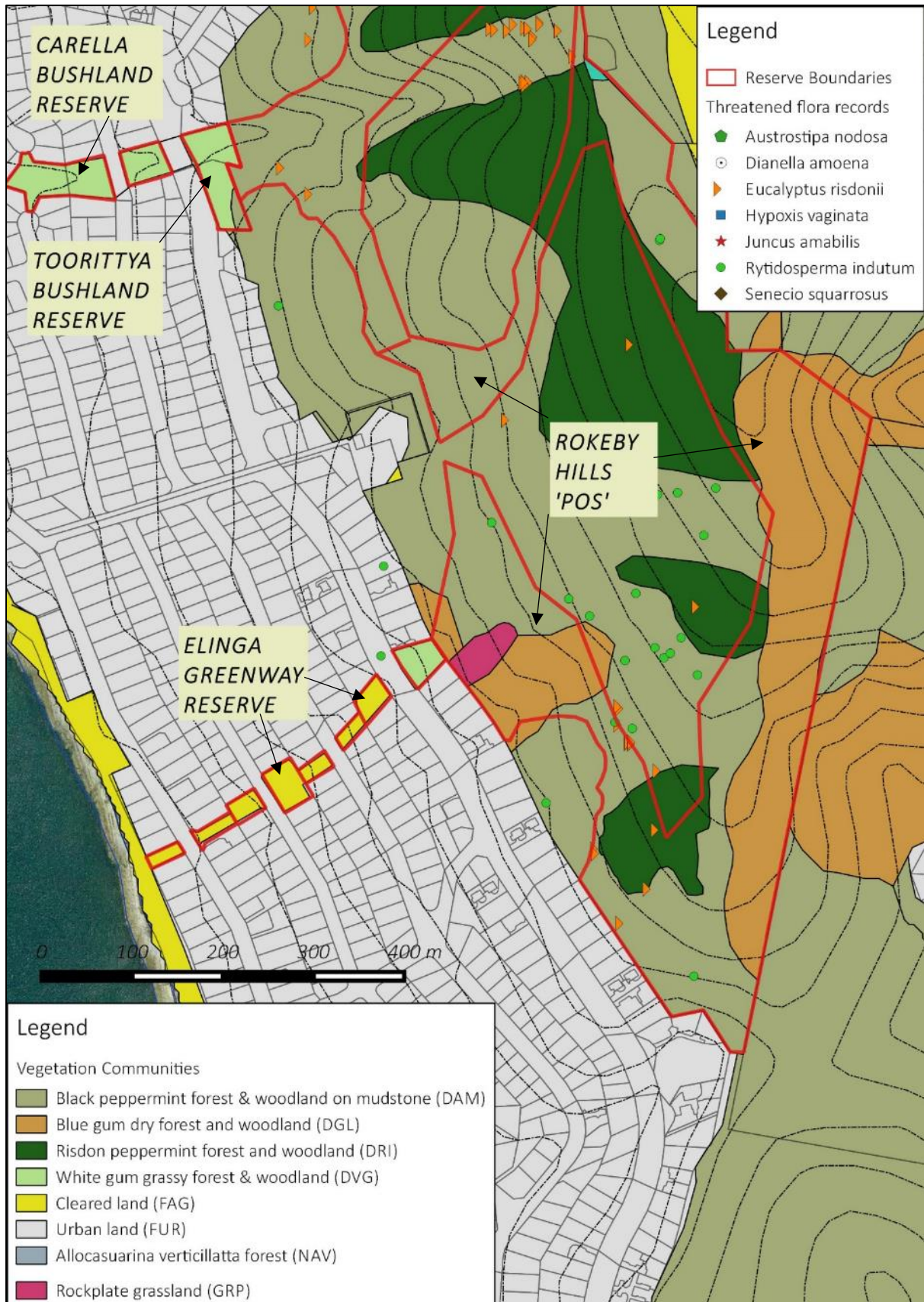


Figure 3 – Vegetation communities and natural values in southern portion of POS and Elinga Greenway Reserve.

### **3.2 NATIVE FLORA VALUES**

The bushland reserves were surveyed for flora species in August and November 2015. The intact white gum forest and sheoak remnant contained a range of native grasses and herb species. However due to seasonal factors and timing of the survey most native grass species were not actively growing and contained no seed material to allow for identification to species level. In addition, the number of ephemeral species recorded was low which is likely to be due to the dry spring conditions. Additional surveys carried out in late spring and summer following a season with good rainfalls are likely to locate additional species.

The degraded or disturbed land (largely restricted to the linear reserves) contains a range of exotic grasses and herbs with isolated native trees, grasses and herbs also present.

A list of all flora species recorded during surveys of the reserves is provided in the Companion Documents - Appendix 2.

One previously listed threatened flora species has been recorded within the Kuynah Reserve (now delisted) although no additional plants were found during the recent surveys.

The Rokeby Hills POS have been surveyed multiple times between 1993 and 2011 by North Barker Ecosystems Services. Six threatened flora species were recorded across the site however two of these species have since been delisted (refer to Figures 2 and 3). Refer to CD - Appendix 10 for flora values for these areas.

For a complete list of threatened flora species recorded within 500 and 1000 m of the linear reserves, refer to CD - Appendix 3.

### **3.3 INTRODUCED FLORA SPECIES**

A wide range of introduced species were recorded in the reserves with the majority of species recorded within the linear reserves or at the rear of the residential properties backing onto Kuynah Reserve.

Nine declared weeds were recorded in the reserves (three of which are also Weeds of National Significance - WoNS) – African boxthorn, blackberry, boneseed, bridal creeper, canary broom, Chilean needle grass, fennel, pampas grass and slender thistle (Figure 5, 6 & 7). The majority of these weeds occur in isolated, minor populations in the more disturbed areas of the reserves.

An additional eight species considered to be environmental weeds were recorded in the reserves. These include arum lily, bluebell creeper, briar rose, cotoneaster, English ivy, periwinkle, sweet pittosporum (CD - Appendix 2). A range of garden escapees such as grevilleas and kunzea (mainland natives or nursery hybrids), passion vine, honeysuckle, various succulent species, jasmine and nasturtium occur within the reserves. These species pose only minimal threat to the natural values of the reserves however their control will contribute to the rehabilitation of the reserves to a more natural state.

The Kuynah Reserve is relatively free of significant weed infestations with only isolated species recorded. Scattered boneseed plants occur in the firebreaks at the northern end of the reserve; a



single pampas grass was recorded in the southwest corner; a small population of slender thistle occurs at the Mayfair Court Entrance and an African boxthorn plant was recorded at the edge of the fire trail along the eastern boundary (Figure 5) (additional large controlled plants were also recorded). Scattered blackberry, boneseed, canary broom and fennel plants occur in the small remnant off the lower end of Fairisle Terrace (Figure 5).

Environmental weed and/or garden escapees are restricted to open areas adjacent to residential properties along the western side of the reserve (Figure 4).



*Figure 4 - Environmental weeds along Kuynah's western property boundary with adjacent residential properties*

The linear reserves between roadways are dominated by exotic grasses and herbs, and garden escapees. The majority of the exotic species are not considered to be significant weed species in the suburban context however, where these species become established they can outcompete native species, increase fire risk and reduce habitat for native avifauna.

The Carella and Toorittya Bushland Reserves contain small infestations of blackberry, boneseed, African boxthorn, fennel and bridal creeper with a treated infestation of Chilean Needle grass recorded on the verge on the eastern side of Carella Street (Figure 6). Environmental weeds including arum lily, cotoneaster, English ivy, periwinkle, false cleavers and sweet pittosporum are common in the lower sections of Carella Reserve as well as garden escapees such as jasmine, passion vine, nasturtium, honeysuckle and red apple weed. A list of plant species recorded by site is provided in the CD - Appendix 2.

The Elinga Greenway is dominated by exotic grasses and is more disturbed and park-like than the other reserves. The upper section of the greenway either side of Oceana Drive has been revegetated and, whilst these areas are growing well, there are small infestations of blackberry and canary broom present (Figure 7) and isolated blue bell creeper and sweet pittosporum plants.



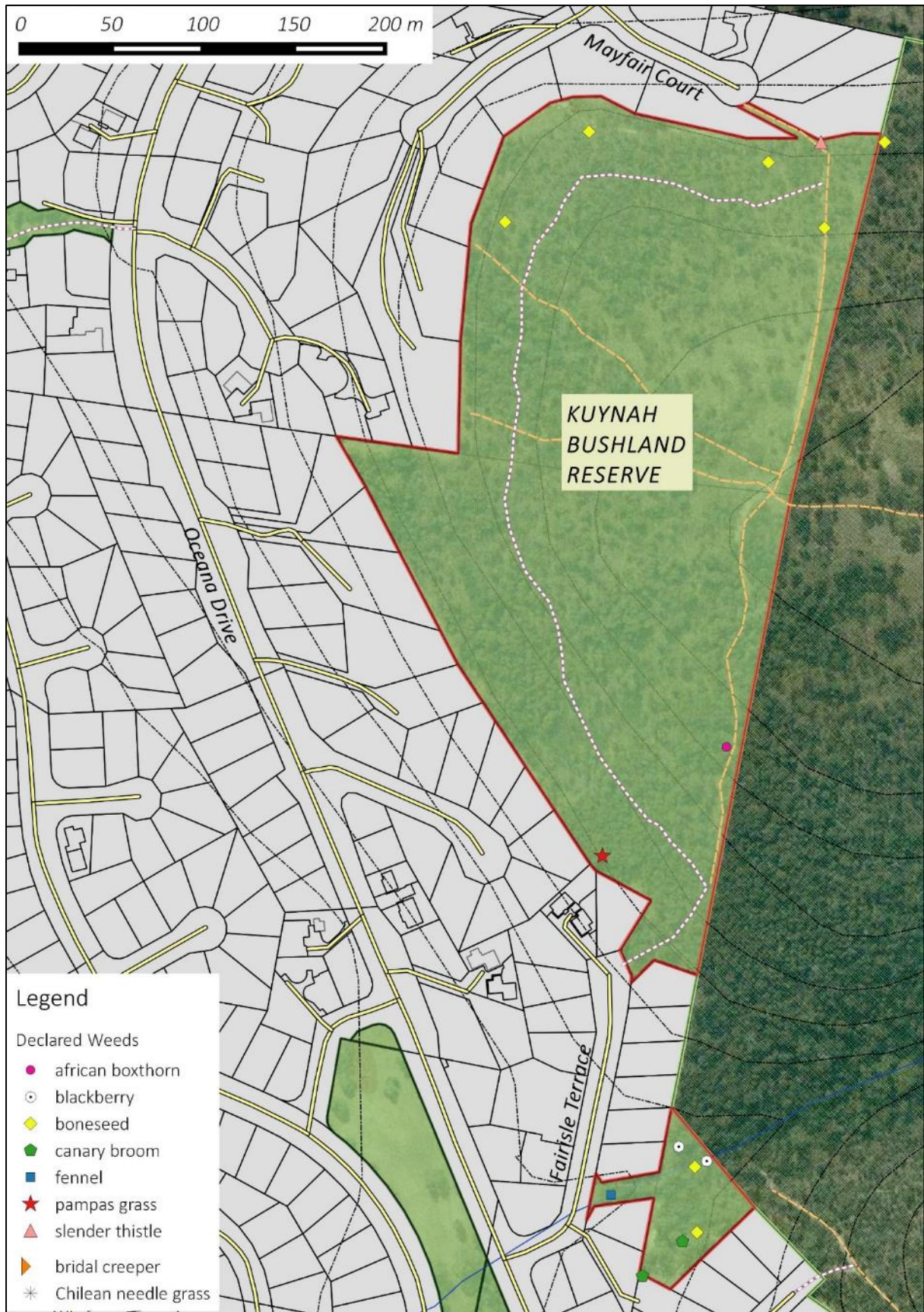


Figure 5 - Declared weeds recorded in Kuynah Reserve and access.





Figure 6 - Declared weeds recorded in Toorittya and Carella Bushland Reserves and Elinga Greenway; and access.



Figure 7 - Declared weeds recorded in Elinga Greenway and access

There are a range of garden plants and exotic grasses and herbs within the remainder of the greenway however these plants require general maintenance only (such as slashing, mowing or pruning) rather than specific weed control actions.

The native vegetation within the Rokeby Hills POS is relatively intact and as such there are only isolated patches of weeds which have colonised along the bushland margins, particularly close to long established residences due to run-off and garden waste dumping. In addition, areas converted to pasture support many non-native species. Over 50 introduced plant species have been recorded across the Rokeby Hills including five declared weed species and three environmental weed species. Two of these species are also listed as weeds of national significance (WONS) (NBES 2011). An indicative distribution of weeds in the POS and further details are provided in the CD - Appendix 10.

The control of environmental weeds within the POS (and associated areas approved for subdivision) is subject to a separate weed management plan. This plan has been partially implemented over the past 2 years with follow-up to be carried out for a further 3 years as per the Weed Management Plan (CD - Appendix 11).

### 3.4 NATIVE FAUNA VALUES

The larger Kuynah Reserve and adjoining intact bushland on private land and newly formed POS provides habitat for a range of native mammal, bird, reptile and invertebrate species. These large areas also provide shelter for species that forage in urban areas such as possums, wallabies and bandicoots as well as nesting habitat for bird species that also use the urban areas.

The smaller reserves provide limited habitat due to the linear nature, limited intact native vegetation, weed infestations, the proximity to urban land and their disconnection (due to roads) from other larger remnants. Some bird species and some mammals such as wallabies and possums may however utilise the reserves to move between the gullies and the large intact areas of vegetation to the north whilst the mature white gums in the Carella Reserve provide an important habitat resource. The reserves also provide a corridor or stepping stone to the limited habitat along the coastal reserve to the west of Tranmere Road which can be enhanced by the rehabilitation of the linear reserves.

The fauna habitat provided within the POS a (and associated private land protected under conservation covenant) was assessed by North Barker Ecosystem Services (NBES) during surveys in 2011. The following broad assessment of the habitat was provided in a subsequent report *'The site comprises an extensive area of dry forest that would provide a range of habitat opportunities for smaller mammals, birds, reptiles and invertebrates. Birds recorded at the site show a fairly typical range of dry forest species. There is plenty of dead wood and fallen timber and some trees contain hollows providing suitable habitat for hollow nesting birds and mammals. Patches of dense cover occur throughout the site, particularly in the recently burnt areas, gullies or damper areas which would provide shelter to mammals. There is little access to water in the form of creeks or standing water and no dens or rocky outcrops have been observed during surveys. Open areas, agricultural land and disturbed patches of forest provide opportunities for grazing, hunting and foraging'*.

#### Mammals

No specific mammal surveys were undertaken as part of the development of the RAP. The habitat provided within the reserves was assessed and evidence of use by mammal species was recorded on an opportunistic basis. Scats, tracks and diggings located in the Kuynah Reserve indicate use by possums (brush tailed and ring tailed), wallabies (Bennett's and pademelons) and bandicoots (scats and diggings). Residents also report seeing echidnas and bettongs in the reserve or in the adjacent bushland.

Micro bats are also likely to utilise the reserves although no specific surveys have been undertaken. Large trees with thick bark or crevices are important for these mammal.

The reserves provide habitat for the nationally listed Eastern barred bandicoot (*Perameles gunnii*).

#### Birds

The bird fauna within the linear reserves and Kuynah was assessed during bird surveys carried out by Denis Abbott of Birdlife Tasmania in October 2015 and a bird list from the Carella Reserve (and surrounds) was supplied by local resident Wendy Andrew (CD - Appendix 4). Twenty six (26) native species were recorded and an additional five introduced species. No bird surveys were undertaken in the POS however a similar list of bird species is likely to occur in this area.



The larger remnant contains native woodland with an intact shrub layer. This provides good habitat for woodland bird species such as wrens, pardalotes and smaller honeyeaters with the shrub layer providing protection from more aggressive native and introduced birds such as wattlebirds and black birds.

There are few large trees with hollows present although some of the trees within the linear and riparian Carella Reserve are large and are more likely to develop hollows in the near future (dependant on management).

Blue gums that occur within the POS provide foraging habitat for the endangered swift parrot (*Lathamus discolor*).

#### Reptiles

A number of skink species were recorded in the reserves during the surveys. Metallic skink and blue tongue lizards were recorded with other small skinks also sighted but not identified to species level. The Kuynah Reserve and adjacent intact bushland provides habitat for the mountain dragon and there are records of this species from the Howrah and Rokeby Hills. As such, it may also occur in the reserves although this species seems to have been impacted significantly by cat predation in urban bushland.

The community consultation also indicated that snakes species have been sighted in the bushland with tiger snakes and white lipped whip snakes the most likely species to occur.

#### Invertebrates

No invertebrate surveys were carried out in the reserves.

For a complete list of threatened fauna species recorded within 500 and 1000 m of the area, refer to the CD – Appendix 3.

### 3.5 CULTURAL HERITAGE

The original owners and occupiers of the land, where the reserves are located, are the Moomairemener people of the greater Oyster Bay Nation. Their homeland comprised the eastern shore of the River Derwent from Jordan River to South Arm and eastwards to Pitt Water and Coal River. No specific references to the 'use' of these reserves by the Moomairemener people was found (refer to Appendix 7 for TASI search results) however they were likely traversed by the Moomairemener people.

Some aboriginal cultural heritage is maintained in the names of the reserves. Kuynah (eagle) pronounced ku-ee-nah, and Toorittya (wattle bird) are both aboriginal words. Permission for the use of these names was received from the aboriginal body concerned and the names were applied by Council to these two reserves.

### 3.6 EUROPEAN HISTORY

The original land grant that covered Kuynah, Toorittya and Carella Reserves and likely Elinga Greenway was given to John Parrott (Figure 8). The land grants are associated with the early history of Clarence Municipality pre 1860 and after the Rural Municipality was formed.

The bushland reserves have been part of the CCC land tenure since council establishment and were designated reserves to ensure public open space requirements for subdivisions were achieved.



Figure 8 - Original grant locations superimposed on modern Rokeby (Extract from Andrew 2008).

## 4 RECREATIONAL VALUES & RESERVE ACCESS

The main recreational uses in the existing reserves and on existing tracks across the Rokeby Hills (only some of these tracks are within the newly designated POS) include walking and dog walking. The Kuynah Reserve and Rokeby Hills POS also provide views of the River Derwent, Hobart and Mount Wellington. All of the reserves provide connectivity within the Howrah community, opportunities for bird watching and potential wildlife refuges.

Mountain bike usage also occurs in the Kuynah Reserve and more broadly within the adjacent bushland along the Rokeby Hills ridgeline. There are a series of wooden ramps and jumps (no signs of obvious recent use) within Kuynah Reserve.

### Access to Reserves

Existing access to the Kuynah Reserve is via Mayfair Court from the north and two locations off Fairisle Terrace from the south (Figure 5). The entrance from the end of Fairisle Terrace is via a set of steps, whilst the entrance from the lower end of Fairisle not formalised and appears as though it is through a private garden. No formal parking for the reserve exists although the reserve entrances are associated with cul-de-sacs. Pedestrian access is largely via steps up from Fairisle Terrace and an unsurfaced track off Mayfair Court. Fenced private properties border on a fire break around the edge of the reserve. Narrow walking or bike riding tracks exist through Kuynah Reserve including several vehicle tracks (Figure 5) which provide access for fire fighting vehicles including a recently installed turning area above the pedestrian entrance off Fairisle Terrace. These tracks are maintained by the Council.

Access to Toorittya Reserve is from Oceana Drive (Figure 6). There are informal tracks that lead up the hill into the adjacent private land from this reserve.

Access to Carella Reserve is presently possible from:

- Carella Street upslope and downslope but no formal trails exist through this portion of the reserve; and
- Anulka Street and a steep access from Alinta Street.

Elinga Greenway can be accessed from both sides of:

- Oceana Drive, Carella Street, Elinga Street and Tranmere Road (Figure 7).

The newly acquired Rokeby Hills POS can be accessed from all the above listed reserves and from Raleigh Court and Skillion Road in the north. Additional access to the POS will be created from Tunah Street, Eucalypt Rise (aka Peppermint Place) and North and South Coventry Rise as the subdivision development progresses in the future.

There is no access to the Rokeby Hills POS from the east side of the hills at this stage but future links will be considered if and when land is developed along the eastern boundaries.

Linkages to the POS and a new track network is to be developed as per the Track Audit Plan (2016) and Sections 6.1 and 6.2 of this RAP and Appendix 12 of the Companion Documents.

## 5. COMMUNITY CONSULTATION

Community consultation was undertaken as part of the development of this Reserve Activity Plan. This included consultation with the local community through a community 'walk and talk' event; and feedback through forms posted out/made available to all Howrah residents. In addition, the local community Landcare group was consulted, as well as Council staff in regard to the management of the reserves and possible future uses and connections to the reserves.

The aim of the consultation was to capture local knowledge and determine issues of importance from interested community members.

Following the initial community consultation process, further consultation was sought after the release of the 'Draft Kuynah, Toorittya and Carella Bushland Reserve Activity Plan'. The results of this consultation is incorporated into this final plan and a summary is provided in Appendix 1.

During the initial consultation process the future POS on the hilltop was discussed (at walk and talk event and with council staff) but was not included as a formal part of the consultation or included formally within the draft RAP. Additional consultation about specific issues such as: developing new walking/riding trails, enhancement of reserve access points, and the management of the new areas may be required in the future.

### 5.1 STAKEHOLDER CONSULTATION

The following stakeholders were consulted regarding the use and management of the reserves.

- Tranmere-Clarence Plains Land & Coastcare Inc. (TACPLACI).
- Council NRM Staff and Council Fire and Bush Regeneration Team (Robert Whittle).

### 5.2 COMMUNITY CONSULTATION

One 'walk and talk' event was held on the 6<sup>th</sup> August 2015 and feedback forms were mailed to local residents as part of the community consultation. Fourteen (14) adults and one (1) child attended the Kuynah, Toorittya and Carella Bushland Reserves 'walk and talk' event. Their verbal comments were recorded. Further comments were received through returned feedback forms (17 forms/responses were returned via email or post). It is noted that some local residents did not receive feedback forms which indicates that the distribution process for the forms may have been patchy. The distribution of the 'Report Card' for the draft plan should include all local residents in the Tranmere - Howrah area.

The following is a brief summary of the main points from both the community 'walk and talk' and written community feedback.

#### Identified opportunities, issues and impacts

The opportunities identified include:

- Improve connectivity between Alinta and Anulka Streets and Oceana Drive by natural pathways through the Carella Reserve.

- Improve access to Metro bus route/stops by providing access from Alinta and Anulka Streets through to Oceana Drive.
- Opportunity to replace the timber fence, which blocks view from Oceana Drive into Carella Bushland Reserve, with post and rail mesh fence to allow open vista into the greenway.
- Opportunity to provide a track entrance leading from Oceana Drive to Carella Street.
- Develop reserves to best serve community groups that use them.
- Public open space is extremely important and all residents in CCC should have access to the wonderful amenities the city possesses.
- Consider ecological fire requirements of habitats and bushfire risk reduction.
- 'Removal of dead trees and undergrowth management' for bushfire hazard reduction.
- Control weeds and revegetation with natives.
- Consider bush walkers and bike riders when tracks are established as their requirements can differ e.g. camber of bike tracks can be difficult for walkers.
- Benches could be installed but development should be minimal to preserve nature.
- Provision of safe walking trails with directional and interpretive signs (flora, fauna and history).
- Provision of multi-use trails.
- Provision of dog walking areas and an off-lead area for dogs along with bins for dog waste.
- Provide car parking at entrances for 4 or 5 vehicles.
- Interest expressed in providing voluntary capacity to develop and/or maintain the reserves.

The issues and impacts identified include:

- Potential for spread of significant weed infestations within and outside the reserves – including weeds of national significance (WONS) such as African boxthorn, blackberry and Chilean needle grass which already exist in the reserves.
- Antisocial behaviour is a major concern. Minimising antisocial behaviour by:
  - Providing, for example, barriers at strategic locations to prevent trail bikes access; and
  - Removing trees where they provide a screen for antisocial behaviour in reserves (generally comments received on this issue related more to Carella Neighbourhood Park rather than other reserves).
- Better control of illegal dumping is needed;
- Concern about the number of cats seen stalking and killing native animals, and dog refuse;
- Concern about track building in sensitive areas e.g. chocolate lily and orchids;
- Concern about reduced home security and privacy if new tracks are developed adjacent to private residences in the linear reserves;
- Concern about public safety in regard to a new track across steep banks near stormwater retention area in Carella Reserve.
- Concern about loss of tree line and visual amenity (predominantly associated with new development/s on hilltop).

A more detailed summary of feedback gathered during the community consultation phase is provided in the Companion Document - Appendix 5.



#### Feedback Following Release of Draft RAP

Further feedback was received during a comment period following the release of the draft RAP. This feedback has been incorporated into the final version of this plan (a summary of the revised actions is provided in Appendix 1).

This feedback included a petition of 73 signatures in support of creating access and trails through the Carella Reserve between Oceana Drive and Carella Street; and between Carella Street and Alinta and Anulka Streets.

Feedback on the formal incorporation of the POS on Rokeby Hills into the RAP has not been carried out. Additional feedback on access, amenities and trails in the POS should be sought in the future.

## 6 MANAGEMENT ISSUES AND THREATS

As a result of the on-site survey and public consultation process, the following primary management issues have been identified in relation to the reserves. The management issues have been divided into those relating to public amenity and maintenance and those relating to natural values.

Actions for the management of natural values within the conservation covenant are on the Rokeby Hills (which includes the POS) is also provided in the Nature Conservation Plan and Conservation Covenant for this land). All management actions are summarised in Table 1, Section 8 of this report.

### Public Amenity/Management Issues

- Access to reserves including walking linkages between the reserves (and other reserves) and parking at the entrances;
- Development/improvement of walking tracks;
- Reserves amenities;
- Reserves signage;
- Community input to manage reserves; and
- Stormwater Management in Carella Bushland Reserve.

### Natural Values Management Issues

- Weed management;
- Biodiversity corridors;
- Revegetation;
- Fire management; and
- Management of Fauna habitat.

### Public Amenity/Management Issues

#### 6.1 ACCESS TO RESERVES

There is currently limited access to the **Carella Reserve** and there are no formal tracks within the two parcels that make up the reserve. Access from Oceana Drive is blocked due to a high paling fence (Figure 9), whilst access from Carella Street and Alinta and Anulka Streets is not formalised in any way.

Providing access through the Carella Reserve from Oceana Drive through to Alinta and Anulka Streets was strongly supported by a number of community members during the initial consultation process and further endorsed during the draft comment period.

Access through the reserve was identified as an important link to the local Metro bus routes and also to utilise the reserve being used as part of a loop for recreational walkers. Broad support for access and a track through the Carella Reserve was gained by a local members through a petition to the council which gathered 73 signatures.

It should be noted that there were some objections raised by local residents (generally those adjoining the reserve) who had concerns about security and privacy, as well as safety issues

in regard to access off Oceana Drive and the steep sided stormwater retention area between Carella Street and Oceana Drive.



*Figure 9 – Carella Reserve on lower side of Oceana Drive. No access from Oceana Drive due to paling fence.*

The safety issues with access can be resolved by the construction of steps, or similar, whilst the stormwater area will need to be fenced off to prevent access. Safety and privacy concerns will need to be addressed with the affected neighbours and additional fencing or plantings may be required.

It is envisaged however that an increase in usage of the reserve may increase security in the area and discourage anti-social behaviour as has been found in other situations in the municipality where public access has been provided.

As such the major action for the Carella Reserve is to provide improved access.

- **Action A1 – Provide access to the upper section of Carella Reserve from Oceana Drive. This will require: investigation of most suitable access point into the reserve; requirement for steps or ramps into reserve from footpath; fencing to prevent access to the stormwater retention basin; additional fencing/plantings between reserves and adjoining residences; and consultation with immediate neighbours to find suitable solutions to the security and privacy concerns. Consider formalisation of walking track and signage (refer to Sections 6.2 and 6.4) - PRIORITY ACTION.**
- **Action A2 - Remove high paling fence and replace with a mesh fence of similar height that provides a safety barrier to the steep bank but does not create a visual barrier into the reserve - PRIORITY ACTION.**
- **Action A3 - Enhance access into Carella Reserve from Oceana Drive, Carella Street and Anulka and Alinta Streets. Includes providing pedestrian crossings at each street crossing (Oceana Drive and Carella Street) between the reserve sections; improvements to entrances; and installation of barriers to restrict access by vehicles (Figure 20).**

Access to **Toorittya Reserve** is via Oceana Drive where there is current signage (Figure 10). There is no formal track through this reserve although there is a connection to informal trails which are to be upgraded as part of trail upgrades within the Rokeby Hills POS.



Figure 10 – Existing entrance to Toorittya Reserve on top side of Oceana Drive.

This entrance will become one of the primary access points into the Rokeby Hills Reserve. As such an upgrade of this entrance and trail linkage to Rokeby Hills should be undertaken. The formalisation of the link through Carella Reserve to Alinta and Anulka Streets and ultimately to the foreshore reserve (via Alinta and Anulka Streets) will also be a priority.



Figure 11 – Toorittya Reserve Entrance Plan (off Oceana Drive).



One additional issue identified during the site surveys and through community consultation was provision of car parking spaces. Street parking is permitted adjacent to all access points to the reserves and as such there is no significant demand for street parking. If, however future increased usage requires car parking 2 – 3 spaces could be established at the Toorittya Entrance (refer to Figure 11) and other entrances could be assessed. The provision of 2 – 3 car parking spaces may also be incorporated into the entrance enhancement if deemed to be required in the future.

- ***Action A4 – Enhance entrance to Toorittya Reserve (and Rokeby Hills POS) from Oceana Drive. May include parking space for 2 – 3 cars (Figures 11 and 20).***

The **Kuynah Reserve** is currently accessed from two formal entrance points (Figure 5); Mayfair Court (Figure 12) and Fairisle Terrace (Figure 14). There may also be a number of private accesses from the rear of adjoining properties. Informal access through the POS (previously private land) from the eastern side of the Rokeby Hills also occurs.



*Figure 12 - Mayfair Terrace entrance to Kuynah Reserve and Rokeby Hills.*

Mayfair Court entrance – this entrance provides pedestrian access (Class 3 walking trail) to the reserve and is the main access track for Council or TFS vehicles for vegetation and fire management activities. Whilst this entrance provides an access for pedestrians and is sign posted, it is relatively steep and requires some upgrading and/or enhancement to improve the access and aesthetics of the entrance. Any upgrading to the trail must ensure that Class 5 standards for fire trail access are maintained and as such changes should be approved by the Fire and Bushland Vegetation Management Works Officer, CCC.

An Entrance Landscape Plan for this entrance is provided in Figure 13.

- ***Action A5 – Enhance access to Kuynah Reserve and Rokeby Hills from Mayfair Terrace through landscaping and formalisation of the walking track into the reserve. Entrance enhancement is to include barriers to restrict vehicle access (Refer to Figures 13 and 19).***





Figure 13 – Kuynah Reserve Entrance Plan – off Mayfair Terrace).

Fairisle Terrace Entrance – the entrance off the end of Fairisle Terrace is via a set of steps (Figure 14) which leads onto a steep track into the reserve. Whilst this track provides the only entrance to the southern end of the reserve it is not recommended to upgrade this entrance due to the steep nature of the access. Future upgraded access to the Rokeby Hills POS will be through the separate small area of the Kuynah Reserve via the lower Fairisle Terrace entrance (Figure 19).



Figure 14 – Entrance to Kuynah Reserve off Fairisle Terrace.

There is an informal access to the small portion of Kuynah Reserve off the lower end of Fairisle Terrace. This entrance, at present, appears to be private gardens (Figure 15) and as such is not a prominent entrance point. Now that the POS has been created this entrance should be upgraded to provide an access point into the larger reserve.

- **Action A6 – Provide entrance at southern end of Fairisle Terrace to access POS on hilltop.**



*Figure 15 – Current informal entrance to southern portion of the Kuynah Reserve and the POS.*

**Elinga Greenway** is accessed from Oceana Drive (which also provides informal access to POS bushland above the reserve) Carella Street, Elinga Way and Tranmere Road. The existing walking track through the reserve extends from the newly formed POS on the hilltop to the foreshore reserve with signage at each entrance (Figures 16 and 20).



*Figure 16 – Example of signage and existing walking trail in Elinga Greenway.*

The Elinga Greenway off Oceana Drive will provide another primary entrance point to the new POS on the hilltop. New signage should be installed at this location (refer to Signage Section of RAP).

**Rokeby Hills POS** access to the POS on the hilltop will be via the existing reserves as outlined previously, however additional access from the western side of the reserve will also be available from Coventry Rise and Eucalyptus Drive. These additional entrances will require some signage (refer to Signage Section 6.4) however formalised entrances will not be developed. Upgrading of trails to these access points will be undertaken as per Section 6.2.

Entrance to the POS from the eastern side of Rokeby Hills will be possible from up to three locations (including Raleigh Court and Skillion Road) when further subdivision development is carried out. At this stage however, no formal access from this side of the hill is planned.

|                                                                                            |
|--------------------------------------------------------------------------------------------|
| - <b><i>Action A7 – Provide access to POS from Coventry Rise and Eucalyptus Drive.</i></b> |
|--------------------------------------------------------------------------------------------|



## 6.2 TRACKS, TRAILS AND FUTURE LINKAGES

### Existing Trails

There is an existing walking track in Kuynah Reserve between the fire trail close to the Mayfair Court entrance and the fire trail above the Fairisle Terrace Entrance (Figures 5 and 17). This trail is well formed and does not require modifications, however maintenance of the trail will be required.



*Figure 17 – existing walking track through Kuynah Reserve*

There is an established fire trail from the Mayfair Court entrance of the reserve up to the hilltop (Figure 18) and then down to a turning area above the Fairisle Terrace entrance. This fire trail also serves as a walking trail and will be maintained. This fire trail also provides access to the fire trail/track across the top of the Rokeby Hill within the newly acquired POS (refer to Section 6.10).



*Figure 18 - Fire trail through Kuynah Reserve from Mayfair Court to Fairisle Terrace.*

The Elinga Greenway provides a link between the bushland above Oceana Drive and the foreshore reserve. There is an existing trail (which is narrow and steep in sections and contains some steps) which is in good condition however ongoing maintenance will be required.

- |                                                                                                                                                                                         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"><li>- <b>Action TL1 – Include maintenance of existing tracks in Kuynah Reserve and Elinga Greenway in maintenance program for reserves.</b></li></ul> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## New Trails

There are currently no formal trails through the Carella and Toorittya Reserves. There is an informal track from Oceana Drive through Toorittya Reserve into the newly acquired POS (and private bushland). Similarly, there is some evidence of an informal walking track between Carella Street and Alinta and Anulka Streets.

A new trail through the Carella Reserve to link Carella Street and Alinta and Anulka Streets to Oceana Drive (and the Toorittya Reserve and POS up the hill) was strongly supported by the community feedback and is considered to be a priority action. The development of a new trail must however take into account privacy and security concerns of adjoining residences and safety considerations associated with the steep sides to the stormwater retention are in Carella Reserve.

- ***Action TL2 – Develop trails through Carella Reserve to access Alinta and Anulka Streets and to join with Toorittya Reserve. Consult with adjacent residents and TasWater to determine most suitable route for trails and consider safety (steep banks) and security concerns in design. PRIORITY ACTION***

The formation of a trail to link Carella Reserve with Oceana Drive and Toorittya Reserve is likely to lead to an increase in pedestrians crossing Oceana Drive. As such the installation of traffic calming measures to improve pedestrian safety should be considered at this location.

- ***Action TL3 –Investigate traffic calming measures at Oceana Drive between Carella and Toorittya Reserves.***

The recently acquired POS on Rokeby Hills directly adjoins and provides for formal linkages between the Kuynah, Carella and Toorittya Bushland Reserves and the Elinga Greenway. There are a range of informal trails in varying condition across the Rokeby Hills however some of these trails (or portions of them) traverse private land and as such may require realignment or upgrading so they are located entirely within the new POS.

The new trail network proposal across the POS has been developed (Refer to Companion Document – Appendix 13). The trail network (for walking and/or mountain biking) will link all existing reserves from Kuynah in the north down to Elinga Greenway and Eucalyptus Rise in the south. Entrances will be upgraded as per Section 6.1.

- ***Action TL4 – Implement trail network plan for multi-use i.e. walking and mountain bike access to connect proposed walking trails in the new POS on hilltop, with all other reserves.***
- ***Action TL5 – Rehabilitate any existing tracks that will not be part of the POS track network.***





Figure 19 – Trail linkage plan and indicative signage plan for Kuynah Reserve.





Figure 20 - Trail linkage plan and indicative signage plan for Carella, Toorittya Bushland Reserves, Elinga Greenway and POS.

### 6.3 AMENITIES

The community feedback identified a desire to have some seating installed in the reserves and the requirement for dog waste bag dispensers and bins. These amenities are also likely to be required within the new POS.

#### Seating

The access to Kuynah Reserve from Mayfair Court and Fairisle Terrace are steeply inclined so it is suggested that a bench or inviting rock or log for sitting could be installed up the access track from the entrance to provide a rest place.

- ***Action AM1 – Provide seating part way up steep incline above Mayfair Court and Fairisle Terrace entrances. Suggested location is at either end of the existing walking track. The seating must be in a position that does not prevent Class 5 vehicle access. An additional seating/resting place may be provided along track in location which afford a view towards the Derwent River.***
- ***Action AM2 – Once the walking track is established, locate 1 or 2 benches in Carella Bushland Reserve to enable people to stop and enjoy the local environment including bird watching. Location of seats to consider privacy of adjoining residences.***

Additional seating within the POS on the hilltop will be required with locations to be determined in the future once trails are established and following additional community input.

- ***Action AM3 – Install seating within POS once trails have been established and following community input.***

#### Dog Waste Dispensers and Bins

The installation of dog waste dispensers and bins was identified during community consultation as a requirement within the reserves. The reserves are subject to an 'off lead – under effective control' policy. As such the most suitable location for dog waste dispensers and bins is at the main entrances to the reserves.

- ***Action AM4 – Provide dog refuse dispensers and bins at the main entrances to all reserves where dog walking is allowed.***

## 6.4 RESERVE SIGNAGE

There is currently reserve signage at either entrance to the Kuynah Reserve; at Toorittya Reserve on the top side of Oceana Drive and at Carella Reserve on the eastern side of Carella Street. Elinga Greenway has signage at each street junction down to the foreshore reserve (Figures 19 and 20).

Additional signage to highlight access to the newly acquired POS will be required at the existing entrances at Toorittya Reserve and off Elinga Greenway and additional entrance name signs will also be required at Coventry Rise and Eucalypt Rise.

- ***Action S1 – Locate Entrance Name Signs ‘Rokeby Hills Bushland Reserve’ at 3 access points off Oceania Drive (Toorittya, Elinga Greenway and one off Fairisle Court).***

Additional direction signage will be required at the Oceana Drive side of the Carella Reserve, once an entrance is provided, and also on the western side of Carella Street. Simple direction signage is also suggested at the end of Alinta and Anulka Streets.

- ***Action S2 – Install reserve directional signage at entrances to Carella Reserve off Oceana Drive, Carella, Alinta, and Anulka Streets once access is finalised.***

The addition of the POS into the reserve area will also require additional signage. A new track network is to be developed/upgraded (refer to Track Plan – Companion Documents - Appendix 12) and as such directional signage will need to be installed.

Some track network signage should be installed initially at the main entrances to the Rokeby Hills. The main entry points are likely to be through Toorittya Reserve off Oceania Drive; through Kuynah Reserve off Mayfair Drive; and through the upper end of the Elinga Greenway.

A broader directional and interpretative sign plan will need to be developed in the future to include the broader POS trail network. The plan will consider signs location and content.

- ***Action S3 – Develop detailed directional and interpretation Track Signage Plan for reserves.***

Figures 19 and 20 provide suggested locations for entrance and directional signs into the reserves.

## 6.5 COMMUNITY INPUT INTO RESERVE MANAGEMENT

The ongoing management and maintenance of the reserves will require a coordinated and cooperative approach between the CCC and the local community. Given the limited resources of the CCC, the community's input will be vital. This may include the formation of a 'Rokeby Hills Landcare Group'. Activities that such a Landcare group may take on include: improvements to the track network, design of interpretative signage, weed monitoring and follow-up control and management of naturally regenerating areas.

The formation of a Landcare group can be supported with assistance from the CCC Natural Areas Volunteer Coordinator and Landcare groups can apply for funding to assist with management and



amenity improvements through funding programs run by the CCC (grants (up to \$5000 Council Landcare grants) or NRM South and Tasmanian Landcare (or similar organisations). These grants can be used to fund weed control and rehabilitation and undertake follow-up.

- ***Action C1 – Actively support the formation of a Rokeby Hills Landcare Group to manage and maintain the reserves and in particular tracks, weed control and rehabilitation projects.***

Any future Landcare group or subcommittee volunteer workers that undertake work within the reserves are entitled to work under safe conditions under the *Tasmanian Work Health and Safety Act 2012*. As such the following applies to any future volunteer workers within the reserves:

- \* All volunteers are considered 'workers' when working for Council on Council owned land. Council therefore has a duty of care to provide a safe workplace for volunteer workers.
- \* All volunteers have rights and responsibilities. Volunteers have the right to a safe work environment, to be treated fairly and with respect, to public liability insurance, to safe equipment, tools and personal protective equipment (PPE), to adequate instruction to perform tasks, to contribute their suggestions and to receive acknowledgement for their contributions.
- \* Volunteers have the right to refuse work if they consider it unsafe.
- \* Volunteers have the responsibility to care for the health and safety of others, to respect others, to follow policies, procedures and instructions, and to care for their own health and safety.
- \* With this in mind, all future volunteers need to refer to the relevant Council Safe Work Method Statements (SWMSs) before undertaking works in Council reserves, including cut and paste work, brush-cutting and spreading of mulch. These are available from Council's Natural Areas Volunteer Coordinator (Phone 6245 8773). All spot spraying should be undertaken by certified operators (e.g. Council staff, contractors).

## **6.6 STORMWATER CONSIDERATIONS**

As part of the RAP development the management of stormwater flow through the Carella Bushland Reserve has been considered.

The following summary of the stormwater issues associated with the Carella Reserve were provided by the Consultant Hydraulics Engineer, Clarence City Council.

"The Carella Bushland Reserve forms an important natural corridor for the conveyance of stormwater from the upstream urban and bushland catchments. It is important that any development within the Carella Bushland Reserve takes this into account and does not impede flows. At a minimum, the 1 in 100 year Average Recurrence Interval (ARI) storm event should be conveyed safely through the reserve. It may also be possible to use the corridor to convey flows from adjacent bushland catchments should diversion works be implemented uphill of the existing development. This would minimise the upgrades required to the existing adjacent urban catchment pipework in order to meet the current standards for the piped stormwater system to convey the 1 in 20 year ARI storm event. The reserve also offers some potential for water quality improvement to be incorporated



during low flow events. These should be considered during any development to minimise the sediment, nutrients, and gross pollutants entering the Derwent River at the outfall."

The following actions were provided with regard to stormwater management:

- ***Action SW1 - Install warning signage to alert reserve users of the steep gully just upstream of Carella Street. Installation of fencing is required.***
- ***Action SW2 – Ensure any on-ground management works do not impede the conveyance of stormwater through the length of the reserve and the deep gully above Carella Street (e.g. 550 mm pipe outlet must remain clear of litter and other debris including weeds).***
- ***Action SW3 - Development of a Water Sensitive Urban Design (WSUD) Management Study for the conveyance of stormwater through the Carella Bushland Reserve which includes investigation of its role as a retention basin under peak flows from the surrounding catchment and its role in water quality improvement.***

### Natural Values Management Issues

The RAP includes management actions for Kuynah, Toorittya and Carella Bushland Reserves and Elinga Greenway as well as the newly transferred POS on Rokeby Hills. It should be noted that the POS is however subject to a Conservation Covenant (CC) and must be managed as per this document and as per the Nature Conservation Plan (NCP) for 'Malwood', Rokeby Hills (June 2010). In the event of any conflict between the RAP and the CC and NCP the latter documents are to be followed as the primary management document.

### 6.7 WEED MANAGEMENT

The overall weed management strategy for Kuynah Bushland and the linear reserves is to prioritise the control of declared weeds, WONS and environmental weeds which have the potential to spread rapidly, out-compete native species for water nutrients and light, and increase fire hazards. Small isolated infestations are to be targeted initially, followed by targeting more widespread species. Other less invasive species will be targeted once the declared weeds are controlled and as funding and labour allows.

The management of weeds in the POS will be carried out as per the existing 'Weed Management Plan' (LMRS – CD Appendix 11) and the CC and NCP. The period of this plan expires prior to the RAP period and as such some review of weed management actions will need to be undertaken at the end of 2018/19.

Currently, active management of weed species within the reserves is limited to: some maintenance of the Elinga Greenway trails, plants and open space by Council; and some weed management in the Carella Reserve carried out by local residents and members of 'care' groups or members. Additional coordinated input from the local community will be important for the ongoing maintenance and management of weeds in the reserves (Refer to Section 6.5).

A maintenance program for follow-up control of exotic species will also be implemented and a community education campaign undertaken.

### Weed Management Actions

The following section outlines general weed management actions for all areas and includes more specific measures for the Rokeby Hills POS.

#### Weed Management Actions for All Bushland Reserves (and POS)

- Control of declared weeds in reserve – small populations of African boxthorn, boneseed, blackberry, canary broom, fennel, pampas grass and slender thistle occur in the reserves. These populations should be eradicated to prevent further spread.

|                                                                     |
|---------------------------------------------------------------------|
| - <b>Action WC1 – Control all declared weeds from each reserve.</b> |
|---------------------------------------------------------------------|

- Control of environmental weeds in reserve – Environmental weeds including: bluebell creeper, blue periwinkle, briar rose, cotoneaster, English ivy, fuchsia, grevillea, jasmine,

nasturtium, oxalis, red apple weed, sweet pittosporum, succulent spp. and tree lucerne were recorded in isolated populations within the reserves. Ideally the control of the environmental weed species should be undertaken in conjunction with the control of the declared weeds species. If there are limited funds available, environmental weeds should be controlled following control of the declared weeds.

- ***Action WC2 - Control environmental weeds species in the reserves in conjunction with the control of declared weeds. If insufficient funds are available, control isolated environmental weed species following control of declared weeds as funds become available.***

- Monitor Carella Reserve for Chilean needle grass. Chilean needle grass recorded and treated on the northeast side of Carella Street at the entrance to Carella Reserve. Continue to monitor area for any regrowth and treat as required.

- ***Action WC3 – Annual monitoring for Chilean needle grass as follow-up of treatment in the upper section of the Carella Reserve.***

- Control of non-priority weeds – Exotic grasses and broadleaf weeds are widespread within the reserves. The control of these weeds is only a priority in areas that are to be re-vegetated and to reduce fuel loads for fire protection. As such, slashing along the drainage line and along properties adjoining the reserves, brush-cutting and foliage spraying of grasses and other broadleaf weeds around re-vegetated areas should occur on an annual basis.

- ***Action WC4 - Control grasses and broadleaf weeds around re-vegetated areas and along pathways on an annual basis.***

- Community Education – A number of the weed infestations and weed species, present in the reserves, have been introduced as a result of inappropriate garden waste dumping which degrades the natural values of the reserves. Educational material that highlights the impacts of introduced garden species into bushland areas and provides suggestions for more appropriate plantings should be circulated to residents that border the reserves.

- ***Action WC5 - Mail out NRM South brochures: 'Creeping Back Yards' to local residents.***

- Monitoring and Maintenance – The successful eradication of declared and environmental weeds from the various reserves will require ongoing monitoring and follow-up weed control. There is likely to be seedling regrowth from seed stored in the soil, re-sprouting of treated plants and reintroduction of weeds from seed sources outside the reserves (through wind, bird droppings and mammal movements) which will require treatment.

- ***Action WC6 - Conduct an annual survey of the reserves and remove seedlings and retreat any re-sprouted declared and environmental weeds.***
- ***Action WC7 – Conduct follow-up weed control on annual basis.***

### Specific Weed Management Actions for the Rokeby Hills POS

A weed management plan has been developed and implemented over the Malwood development area (which includes the POS) since 2005 and extensive flora and fauna surveys have been undertaken by North Barker Ecosystems Services (NBES) between 1992 and 2011. The most recent weed management plan was written by LMRS Pty Ltd (LMRS) in 2014 and addresses weed management during construction and management of the POS for up to 3 years after development or when the POS is transferred to Council. In the two years since the WMP was written it is expected that on-ground weeds will have been reduced across some areas due to treatment and expanded into other areas due to seed banks and seed spread by birds. The following list summarises weeds as noted by LMRS in the POS in 2014. LMRS refers to: POS A (north), POS B (south) and POS C (east). In addition, a map annotated by LMRS is included in the CD - Appendix 11.

- African boxthorn in POS A and POS C
- Boneseed in POS B
- Canary broom in POS A
- Hawthorn in POS A
- Serrated tussock in POS B and POS C
- Sweet briar rose in POS A
- Exotic trees in POS A.

Following the completion of the Weed Management responsibilities of the developer and the transfer of weed management to the council, the Weed Management Plan that relates to the POS should be reviewed and updated. This should be undertaken prior to new trail work or as a component of the Track Development Plan, and may be based on the LMRS Weed Management Plan 2014. General hygiene and hygiene as it relates to specific species e.g. serrated tussock and African boxthorn must be incorporated.

- |                                                                                                                                                                                                                                                                                                                                                                                                    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"><li>- <b><i>Action WC8 – Ongoing annual weed monitoring and control (spring for most species) should be conducted on the POS as per the LMRS Pty Ltd Weed Plan.</i></b></li><li>- <b><i>Action WC9 – Review and update the Weed Management Plan for the POS. To be carried out prior to trail development and rehabilitation works within POS.</i></b></li></ul> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|



## 6.8 BIODIVERSITY CORRIDOR LINK

Biodiversity corridors provide a connection between the intact bushland on Rokeby Hills, the linear reserves, the coastal reserves and other areas of intact bushland on private land.

Following the handover of the POS on Rokeby Hills the smaller linear reserves including Kuynah Bushland Reserve are now formally connected to the intact bushland to the east and south. The vegetation to the south of Kuynah is continuous along the ridge (Figure 21).

The maintenance of these native vegetation corridors is important to: allow for the movement of native species between these areas; and act to prevent the reserves or the adjacent bushland from becoming isolated islands surrounded by housing developments. The maintenance of the links to adjoining bushland also maintains amenity, sense of place, and a scenic framework for quality suburban lifestyle and wellbeing.

- ***Action BL1 - Any future development of land adjoining the reserves or in the local area should continue to require the maintenance of biodiversity and greenway corridors in the landscape.***
- ***Action BL2 – Revegetation works within the reserves should strongly consider the need to maintain or improve the biodiversity corridors between reserves and areas of POS.***



Figure 21 – Biodiversity Corridor map



## 6.9 SUPPORTED REGENERATION & REVEGETATION

There is no requirement for active revegetation within the Kuynah or Toorittya Reserves or within the POS along Rokeby Hills as they are largely intact and contain existing native vegetation. Most weed infestations occur around the fire breaks or at entrances where revegetation is not appropriate (some planting of low plants as part of entrance enhancements may occur – refer to Section 6.1).

Vegetation management in these reserves is restricted to the maintenance of fire breaks around the margins of the residential properties and not for any revegetation.

There is some scope for revegetation within the Carella Reserve to replace exotic species and to establish an understorey layer where it is currently absent. This will provide additional habitat for fauna species and enhance the aesthetic values of the reserve.

The Elinga Greenway has been partially revegetated in the past, however it has not been adequately maintained. Revegetation projects require long term follow-up maintenance to be successful, particularly in an exposed and dry site. Therefore it is recommended that revegetation works are only carried out if there is a commitment from the local community in conjunction with the Council to provide this maintenance. Many future revegetation projects within the reserves needs to consider the safety of users and neighbours in terms of the potential to create areas that are seen as unsafe due to screening.

An alternative to active revegetation in the reserves is to support natural regeneration. As a general rule, encouraging natural regeneration is a more successful and cost effective method of regenerating an area than active planting because the regenerating plants are more suitable to the local environment than nursery grown species. Supporting natural regeneration at these sites should include the control of exotic species (WC4) and protecting naturally germinating trees and shrubs from browsing until established.

Some revegetation using groundcover species is also suggested to enhance the entrance to the reserves and to out compete the exotic species. Refer to Section 6.1 and the CD – Appendix 6.

- ***Action RV1 – Undertake revegetation works using native groundcover species as part of enhancement of access points to the reserves.***
- ***Action RV2 – Encourage naturally germinating trees and shrubs by protecting them from browsing.***

The following broad recommendations are provided for future revegetation works in each of the reserves.

- Only local native species should be planted in the reserves. Where possible, plants should be grown from local provenance seed (refer to CD - Appendix 6 for suggested species list).
- Revegetation should not be considered in the reserves unless there is a commitment to maintain the plantings.
- Revegetate small manageable areas planted progressively rather than planting large widespread areas.
- Supporting natural regeneration in the reserves is an effective way to increase the woodland habitat in the reserves.

## 6.10 FIRE MANAGEMENT

Fire management was identified as a concern for some nearby residents during the consultation phase. Fire management is an issue for the reserves in terms of vegetation management and the protection of infrastructure and fauna habitat.

The Rokeby Hills Bushland is surrounded by residential properties. Due to the fuel loads within the reserved areas the vegetation does present a threat to property in the event of a wild fire. Whilst its location on a ridge reduces the threat to surrounding properties (i.e. fire will need to travel down the slope to impact houses) an uncontrolled fire within the Bushland Reserve may increase the speed and intensity of a fire. In addition, any amenities that are installed in the reserve would come under threat in a bushfire.

The *Draft Rokeby Hills Reserve Bushfire Management Plan* (RHR BMP 2016) has recently been released to update the *Kuynah Reserve Bushfire Management Plan* (2011) and to include the POS. The RHR BMP should be implemented and it is recommended that the following aspects be adopted more broadly by property owners adjacent to the smaller reserves of Carella Bushland Reserve and the Elinga Greenway.

- ***Action BF1 – Coordinate responsibility for application of the Draft Rokeby Hills Bushland Reserve Bushfire Management Plan. Engage with adjoining landowners in order to ensure adoption of the plan by fire prone properties in close proximity to the Bushland Reserves.***
- ***Action BF2 – Coordinate landowners with properties adjacent to all reserves: ensure they are informed of preventative measures being taken; and they can take action as described in the RHR-BFMP 2016 e.g. encourage neighbouring residents to maintain defendable spaces between bushland and dwellings.***

In addition, and as recommended in the RHR-BFMP 2016, CCC must continue to:

- Reduce ignitions through prosecution of arsonists, and prompt reporting of fires.
- Maintain access points and hazard reduced areas to enable the TFS to rapidly contain fires that start in the reserves and ensure the TFS are familiar with the location and condition of fire trails in the reserves.
- Maintain existing fuel modified zones along the reserves' boundaries that are wide enough to meet TFS requirements for an outer zone, to compliment defendable spaces on adjoining properties; and
- Carry out strategic planned burning to reduce bushfire hazards in the reserves.



## 6.11 MANAGEMENT OF FAUNA HABITAT

The consultation process and site surveys identified the following broad issues in regard to fauna habitat.

Retention of Dead Trees – there are a number of dead white gums throughout the reserves. The retention of dead trees is important as they have the potential to provide hollow habitat for native birds and mammals as they senesce. There was some community concern in regard to fire safety within the reserves associated with dead trees. Dead trees do not contribute significantly to the bushfire risk from the reserves, and the bushfire management plan for the Kuynah Reserve includes the establishment of fire breaks which provide safety for adjacent residences.

The retention of any large dead trees close to a trail requires an assessment of stability/health to determine if it poses a danger to walkers. Depending on safety and risk factors, large dead trees may be pruned and access deterred to prevent close access if deemed unsafe.

- ***Action FH1 – Retain large dead gums in reserves for habitat where possible. Assess stability of trees to determine public safety issues.***

Retention of Blue gums – mature blue gums within the reserves provide foraging habitat for the endangered swift parrot. The retention of all blue gums is important for this species and as such future trails should avoid large trees.

- ***Action FH2 – Retain all large blue gums in reserves for swift parrot habitat. Any new trails to be routed to avoid blue gums.***

Road kill – The reserves aim to maintain habitat for wildlife however there are a number of road crossings between reserves where wildlife and vehicles have the potential to interact. The number of dead animals along the roadside could be significantly reduced by reducing the speed limit in the vicinity of reserves at dawn and dusk.

- ***Action FH3 – Locate dawn and dusk speed reduction signs in the vicinity of bushland reserves, particularly on Oceana Drive, Carella Street and Tranmere Road.***

Dog access to reserves – All of the reserves are popular dog walking areas. Dogs are currently allowed in the reserves and as indicated on signage dogs must be ‘under effective control’ at all times to minimise interactions with native fauna species using the reserves (in particular bandicoots).

There was some feedback during the consultation process that an off-lead dog walking area in Carella Reserve between Alinta and Carella Streets be provided. This is currently permitted under the CCC dog policy provided they are under effective control. Concerns about the impacts of dogs on native wildlife will need to be considered when the dog policy is next formally reviewed.

The provision of dog litter bags dispensers and bins should also be considered - refer to Section 6.3.

Cat Control (domestic and feral cats) – feral cats are known to have significant impacts on native fauna through the predation of small mammals, birds and lizards and the spread of disease such as toxoplasmosis. Domestic cats that are allowed to roam bushland can have similar impacts to feral cats. The CCC supports the *Cat Management Act 2012* which recommends de-sexing, micro chipping and keeping cats under control and inside at night.

Specific cat management measures within the reserve in the future should only be undertaken following a cat monitoring program to gain an understanding of cat numbers and types (domestic, stray or feral).

- ***Action FH4 - The CCC supports the Cat Management Act 2012 which recommends de-sexing, micro chipping and keeping cats under control and inside at night.***
- ***Action FH5 - establish a cat monitoring program, initially using hair traps to gain an understanding of the numbers and locations of stray and feral cats in area, prior to considering further cat management measures.***

## 7 MONITORING AND EVALUATION

An informal review of the actions and outcomes of the Rokeby Hills Bushland RAP should be undertaken annually and a complete review of the plan undertaken at the end 5 years.

Ongoing monitoring and maintenance of areas where weed control actions (and revegetation actions) occur should be undertaken on an annual basis. In addition, the remaining areas of the sites (such as the intact remnants) that do not currently contain weeds should be monitored on an annual basis to ensure new weed infestations do not become established.

The separate Weed Management Plan that outlines control actions within the POS (and covenanted areas) on the Rokeby Hills will need to be updated. All weed infestations within the POS are to be monitored annually and controlled as required.

In addition to monitoring the reserves for new weed infestations or regrowth of treated infestations, the condition of the vegetation should also be monitored. This should be achieved through the establishment of a Vegetation Condition Assessment (VCA) program.

### 7.1 VEGETATION CONDITION ASSESSMENT AND PHOTO POINTS MONITORING

It is recommended that vegetation condition assessment (VCA) and photo monitoring points are set up to record the current condition of the site and future achievements in weed control and revegetation within the Reserve.

A standardised baseline VCA to be used as a RAP performance indicator for the conservation values of the vegetation communities should be carried out in the first year of implementation and repeated at the end of 5 years for a comparison. Photo points can form part of the VCA or can be set up separately in other areas of the reserve. A VCA has been conducted for the southeast portion of the Rokeby Hills POS and is included in the CD - Appendix 8.

- |                                                                                                                                                                                                                                                                           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"><li>- <b><i>Action M1 – Conduct VCA in reserves to monitor current condition and to assess the performance of the RAP implementation. Assessment to be carried out as a baseline survey and then at 5 year intervals.</i></b></li></ul> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## 8 IMPLEMENTATION PLAN

The following provides a plan for the implementation of all actions identified in the plan for a 5-year period from 2016 to 2020.

The implementation plan outlines:

- the actions to be undertaken and their location,
- treatment methods,
- desired outcomes,
- timing, and
- priorities for each action.

Actions are prioritised into three categories based on their strategic importance, achievability, timing, and the availability of funds.

1. **High** priority – to be implemented within years 1-2.
2. **Medium** priority – to be implemented as required years 3-5.
3. **Low** priority – to be implemented as funding permits.

Many of the actions are dependent on the availability of funding and as such priorities may change over the course of the plan period. Other actions will be carried out by means of a collaborative approach between Council, the Landcare group and adjacent property owners to achieve implementation.

A review of action priorities should be undertaken on an annual basis and changes made as required.

The actions outlined in this plan should form the basis for future funding applications through internal Council grant sources and external grants from State and Federal programs.



Table 1 – Implementation Plan for Kuynah, Toorittya and Carella Bushland Reserves and Elinga Greenway.

| Action #                  | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Outcome                                  | Timing    | Responsibility  | Cost     | Priority |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|-----------|-----------------|----------|----------|
| <u>ACCESS TO RESERVES</u> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                          |           |                 |          |          |
| A1                        | Provide access to the upper section of Carella Reserve from Oceana Drive. This will require: investigation of most suitable access point into the reserve; requirement for steps or ramps into reserve from footpath; fencing to prevent access to the stormwater retention basin; additional fencing/plantings between reserves and adjoining residences; and additional consultation with immediate neighbours to find suitable solutions to the security and privacy concerns. Consider formalisation of walking track and signage (refer to Sections 6.2 and 6.4). | Enhance amenity and safety               | 2016-2017 | CCC, Contractor | \$30,000 | 2        |
| A2                        | Remove high paling fence and replace with a mesh fence of similar height that provides a safety barrier to the steep bank but does not create a visual barrier into the reserve.                                                                                                                                                                                                                                                                                                                                                                                       | Enhance visual amenity from Oceana Drive | 2016      | CCC, Contractor | \$8,000  | 1        |
| A3                        | Enhance access into Carella Reserve from Oceana Drive, Carella Street and Anulka and Alinta Streets. Includes providing pedestrian crossing at each street crossing (Oceana Drive and Carella Street) between reserve sections; landscaping at the entrances; and installation of barriers to restrict access by vehicles.                                                                                                                                                                                                                                             | Enhance amenity and public safety.       | 2016-2017 | CCC             | \$10,000 | 2        |

| Action #                                  | Action                                                                                                                                                                                                                                                                     | Outcome                                               | Timing    | Responsibility             | Cost      | Priority |
|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|-----------|----------------------------|-----------|----------|
| A4                                        | Enhance entrance to Toorittya Reserve (and Rokeby Hills POS) from Oceana Drive. May include parking space for 2 – 3 cars.                                                                                                                                                  | Enhance amenity and improve access                    | 2017-2018 | CCC                        | \$5,000   | 2        |
| A5                                        | Enhance access to Kuynah Reserve and Rokeby Hills from Mayfair Terrace through landscaping and formalisation of the walking track into the reserve. Entrance enhancement is to include barriers to restrict vehicle access.                                                | Enhance amenity and safety                            | 2016-2017 | CCC, Contractor            | \$5,000   | 2        |
| A6                                        | Provide entrance at southern end of Fairisle Terrace to access POS on hilltop.                                                                                                                                                                                             | Enhance amenity and improve access                    | 2017-2019 | CCC, Contractor            | \$3,000   | 2        |
| A7                                        | Provide access to POS from Coventry Rise and Eucalyptus Drive.                                                                                                                                                                                                             | Improve access to POS                                 | 2016-17   | CCC                        | \$3,000   | 1        |
| <u>WALKING TRACKS AND FUTURE LINKAGES</u> |                                                                                                                                                                                                                                                                            |                                                       |           |                            |           |          |
| TL1                                       | Include maintenance of existing tracks in Kuynah Reserve and Elinga Greenway in maintenance program for reserves.                                                                                                                                                          | Maintain existing trails                              | 2017-2018 | CCC, Community, Contractor | \$2,000   | 2        |
| TL2                                       | Develop trails through Carella Reserve to access Alinta and Anulka Streets and to join with Toorittya Reserve. Consult with adjacent residents and TasWater to determine most suitable route for tracks and consider safety (steep banks) and security concerns in design. | Improved public safety and connectivity               | 2016-2017 | CCC                        | \$6,000   | 1        |
| TL3                                       | Investigate traffic calming measures at Oceana Drive between Carella and Toorittya Reserves.                                                                                                                                                                               | Ensure public safety                                  | 2017-2018 | CCC                        | NA        | 2        |
| TL4                                       | Implement trail network plan for multi-use i.e. walking and mountain bike access to connect                                                                                                                                                                                | Enhance trail network and increase recreational usage | 2016-2017 | CCC, Contractors           | \$135,000 | 1-3      |

| Action #               | Action                                                                                                                                                                                                                                                                                                                                                                    | Outcome                                                     | Timing    | Responsibility  | Cost     | Priority |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|-----------|-----------------|----------|----------|
|                        | proposed walking trails in the new POS on hilltop, with all other reserves.                                                                                                                                                                                                                                                                                               |                                                             |           |                 |          |          |
| TL5                    | Rehabilitate any existing tracks that will not be part of the POS track network.                                                                                                                                                                                                                                                                                          | Degraded/unused trails rehabilitated                        | 2018-20   | CCC, Contractor | \$30,000 | 2-3      |
| <u>AMENITIES</u>       |                                                                                                                                                                                                                                                                                                                                                                           |                                                             |           |                 |          |          |
| AM1                    | Provide seating part way up steep incline above Mayfair Court and Fairisle Terrace entrances. Suggested location is at either end of the existing walking track. The seating must be in a position that does not prevent Class 5 vehicle access. Additional seating/resting place may be provided along track in location which affords a view towards the Derwent River. | Improved amenity to enjoy surroundings and/or take a break. | 2016-2017 | CCC, Contractor | \$500    | 1        |
| AM2                    | Once the walking track is established, locate 1 or 2 benches in Carella Bushland Reserve to enable people to stop and enjoy the local environment including bird watching. Location of seats to consider privacy of adjoining residences.                                                                                                                                 | Improved amenity to enjoy surroundings and/or take a break. | 2017-2018 | CCC, Contractor | \$1000   | 2        |
| AM3                    | Install seating within POS once trails have been established and following community input.                                                                                                                                                                                                                                                                               | Improved amenity to enjoy surroundings and/or take a break  | 2017-2018 | CCC, Contractor | \$3000   | 2-3      |
| AM4                    | Provide dog refuse dispensers and bins at the main entrances to all reserves where dog walking is allowed.                                                                                                                                                                                                                                                                | Proper disposal and less waste in reserves                  | 2016-17   | CCC, Contractor | \$3000   | 1        |
| <u>RESERVE SIGNAGE</u> |                                                                                                                                                                                                                                                                                                                                                                           |                                                             |           |                 |          |          |
| S1                     | Locate Entrance Name Signs "Rokeby Hills Bushland Reserve" at 3 access points off Oceania                                                                                                                                                                                                                                                                                 | Encourage access to new POS                                 | 2016-2017 | CCC, Contractor | \$7,500  | 1        |

| Action #                         | Action                                                                                                                                                                                                                                             | Outcome                                                                                           | Timing    | Responsibility  | Cost     | Priority |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|-----------|-----------------|----------|----------|
|                                  | Drive (Toorittya, Elinga Greenway and one off Fairisle Court).                                                                                                                                                                                     |                                                                                                   |           |                 |          |          |
| S2                               | Install reserve directional signage at entrances to Carella Reserve off Oceana Drive, Carella, Alinta, and Anulka Streets once access is finalised.                                                                                                | Improved public access to public land                                                             | 2016-2017 | CCC, Contractor | \$2500   | 1        |
| S3                               | Develop detailed directional and interpretation Track Signage Plan for reserves.                                                                                                                                                                   | Improved public access to public land and raise awareness of reserve values. Provide trails maps. | 2018-2019 | CCC, Contractor | \$5000   | 3        |
| <u>COMMUNITY INPUT</u>           |                                                                                                                                                                                                                                                    |                                                                                                   |           |                 |          |          |
| C1                               | Actively support formation of a Rokeby Hills Landcare Group to manage and maintain the reserves and in particular tracks, weed control and rehabilitation projects.                                                                                | Ensure maintenance of reserves and greenways.                                                     | 2015-2019 | CCC, Community  | NA       | 1        |
| <u>STORMWATER CONSIDERATIONS</u> |                                                                                                                                                                                                                                                    |                                                                                                   |           |                 |          |          |
| SW1                              | Install warning signage to alert reserve users of the steep gully just upstream of Carella Street. Installation of fencing as required.                                                                                                            | Improve safety                                                                                    | 2017-2018 | CCC, Contractor | \$500    | 2        |
| SW2                              | Ensure any on-ground management works do not impede the conveyance of stormwater through the length of the reserve and the deep gully above Carella Street (e.g. 550 mm pipe outlet must remain clear of litter and other debris including weeds). | Stormwater management                                                                             | Ongoing   | CCC             | NA       | 1        |
| SW3                              | Development of a Water Sensitive Urban Design (WSUD) Management Study for the conveyance of stormwater through the Carella Bushland                                                                                                                | Stormwater management                                                                             | Ongoing   | CCC             | CCC Cost | 1        |



| Action #            | Action                                                                                                                                                                                                                                                 | Outcome                                                                                                                                            | Timing                         | Responsibility | Cost    | Priority |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|----------------|---------|----------|
|                     | Reserve which includes investigation of its role as a retention basin under peak flows from the surrounding catchment and its role in water quality improvement.                                                                                       |                                                                                                                                                    |                                |                |         |          |
| <u>WEED CONTROL</u> |                                                                                                                                                                                                                                                        |                                                                                                                                                    |                                |                |         |          |
| WC1                 | Control declared weeds from the reserves                                                                                                                                                                                                               | Eradicated from all reserves                                                                                                                       | Summer-autumn 2016/17, 2017/18 | CCC, Community | \$5,000 | 1        |
| WC2                 | Control environmental weeds species in the reserves in conjunction with the control of declared weeds. If insufficient funds are available, control isolated environmental weed species following control of declared weeds as funds become available. | Controlled in all reserves so weeds do not outcompete native species, increase fire risk and reduce habitat for native avifauna.                   | Summer-autumn 2016 - 19        | CCC, Community | \$6,000 | 3        |
| WC3                 | Annual monitoring for Chilean needle grass as follow-up of treatment in the upper section of the Carella Reserve.                                                                                                                                      | Chilean needle grass eradicated from Carella Reserve                                                                                               | Summer-autumn 2016/17 Ongoing  | CCC, Community | \$2,500 | 1        |
| WC4                 | Control grasses and broadleaf weeds around re-vegetated areas and along pathways on an annual basis.                                                                                                                                                   | Revegetation areas are not competing with vigorous grass species.                                                                                  | Annually for duration of plan. | CCC, Community | \$5,000 | 2        |
| WC5                 | Mail out NRM South brochures: 'Creeping Back Yards' to local residents.                                                                                                                                                                                | Reduce re-infestation of reserves from populations outside reserves. Garden dumping eliminated and inappropriate planting of weed species reduced. | 2016-17                        | CCC, Community | \$300   | 2        |
| WC6                 | Conduct an annual survey of the reserves and remove seedlings and retreat any re-sprouted declared and environmental weeds.                                                                                                                            | Weeds species do not re-establish and no new infestation establish.                                                                                | Annually for duration of plan. | CCC, Community | \$4,000 | 2        |

| Action #                                       | Action                                                                                                                                                        | Outcome                                                                                          | Timing              | Responsibility    | Cost    | Priority |
|------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|---------------------|-------------------|---------|----------|
| WC7                                            | Conduct follow-up weed control on annual basis.                                                                                                               | Ensure controlled weeds do not re-establish nor new weeds do not become established in reserves. | Annually – Spring   | CCC,<br>Community | \$4,000 | 3        |
| WC8                                            | Ongoing annual weed control and monitoring should be conducted on the POS as per the LMRS Pty Ltd Weed Plan.                                                  | Primary Weed Control in POS undertaken a per subdivision approval                                | As per LMRS Plan    | Developer         | NA      | 1        |
| WC9                                            | Review and update the Weed Management Plan for the POS. To be carried out prior to trail development and rehabilitation works within POS.                     | Ongoing control of weeds within the POS carried out. Weeds controlled prior to trail development | 2018                | CCC, Consultant   | \$2,000 | 2        |
| <u>BIODIVERSITY CORRIDOR LINK</u>              |                                                                                                                                                               |                                                                                                  |                     |                   |         |          |
| BL1                                            | Any future development of land adjoining the reserves, or in the local area, are reviewed for potential impacts on biodiversity and greenway corridors.       | Maintenance of biodiversity reserves and greenway corridors in the landscape.                    | Annually – review   | CCC               | NA      | 1        |
| BL2                                            | Revegetation works within the reserves should strongly consider the need to maintain or improve the biodiversity corridors between reserves and areas of POS. | Maintain or improve biodiversity corridors between reserves and areas of POS.                    | Annually – review   | CCC               | NA      | 1        |
| <u>SUPPORTED REGENERATION and REVEGETATION</u> |                                                                                                                                                               |                                                                                                  |                     |                   |         |          |
| RV1                                            | Undertake revegetation works using native groundcover species as part of enhancement of access points to the reserves.                                        | Improve habitat and amenity                                                                      | Spring 2016 or 2017 | CCC,<br>Community | \$500   | 2        |
| RV2                                            | Encourage naturally germinating trees and shrubs by protecting naturally germinating trees and shrubs from browsing. Coordinate with WC1.                     | Improve habitat                                                                                  | Spring 2016/2017    | Community         | \$500   | 1        |

| Action #                | Action                                                                                                                                                                                                                                                                                      | Outcome                                                                                   | Timing         | Responsibility                             | Cost    | Priority |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|----------------|--------------------------------------------|---------|----------|
| <u>FIRE MANAGEMENT</u>  |                                                                                                                                                                                                                                                                                             |                                                                                           |                |                                            |         |          |
| BF1                     | Coordinate responsibility for application of the Draft Rokeby Hills Bushland Reserve Bushfire Management Plan. Engage with adjoining landowners in order to ensure adoption of the plan by fire prone properties in close proximity to the Bushland Reserves.                               | Implement the RHR - Bushfire Fire Management Plan. Reduce risks associated with bushfire. | 2016 – ongoing | CCC – Fire & Bushland Management/Community | NA      | 1        |
| BF2                     | Coordinate with landowners with properties adjacent to all reserves: they are informed of preventative measures being taken; and they can take action as described in the RHR-BFMP 2016 e.g. encourage neighbouring residents to maintain defensible spaces between bushland and dwellings. | Implement the RHR - Bushfire Management Plan. Reduce risks associated with bushfire.      | 2016 – ongoing | CCC – Fire & Bushland Management/Community | NA      | 1        |
| <u>FAUNA MANAGEMENT</u> |                                                                                                                                                                                                                                                                                             |                                                                                           |                |                                            |         |          |
| FH1                     | Retain large dead gums in reserves for habitat where possible. Assess stability of trees to determine public safety issues.                                                                                                                                                                 | Maintain or improve habitat and public safety.                                            | Annual review  | CCC                                        | NA      | 2        |
| FH2                     | Retain all large blue gums in reserves for swift parrot habitat. Any new trails to be routed to avoid blue gums.                                                                                                                                                                            | Preserve swift parrot habitat within reserves                                             |                | CCC                                        | NA      | 1-3      |
| FH3                     | Locate dawn and dusk speed reduction signs in the vicinity of bushland reserves, particularly on Oceana Drive, Carella Street and Tranmere Road.                                                                                                                                            | Improve wildlife and public safety                                                        | 2016 – 2017    | CCC, Contractor                            | \$1,000 | 2        |

| Action #                           | Action                                                                                                                                                                                                  | Outcome                                                                          | Timing                             | Responsibility    | Cost    | Priority |
|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|------------------------------------|-------------------|---------|----------|
| FH4                                | Provide regular public education about the CCC's support of the <i>Cat Management Act 2012</i> which recommends de-sexing, micro chipping and keeping cats under control and inside at night.           | Reduce harm to wildlife by direct contact and disease carried by cat faeces.     | Ongoing                            | CCC               | \$1,000 | 2-3      |
| FH5                                | Establish a cat monitoring program, initially using hair traps to gain an understanding of the numbers and locations stray and feral cats in area, prior to considering further cat management measures | Allow for targeted and effective cat management measures to be adopted in future | 2017-2020                          | CCC               | \$2,000 | 2-3      |
| <u>MONITORING &amp; EVALUATION</u> |                                                                                                                                                                                                         |                                                                                  |                                    |                   |         |          |
| M1                                 | Conduct VCA in reserves to monitor current condition and to assess the performance of the RAP implementation.                                                                                           | Better understand achievements and management issues                             | Baseline in 2016<br>Follow-up 2020 | CCC,<br>Community | \$1,500 | 1        |



## **REFERENCES**

Andrew, W. (2008). *Footprints - The People and Places of Early Clarence Plains and Rokeby*.  
Tranmere-Clarence Plains Land & CoastCare Inc.

Baker ML, Duretto MF (2014). *A Census of the Vascular Plants of Tasmania & Index to The Student's Flora of Tasmania & Flora of Tasmania Online* (Tas. Herbarium, Tas. Museum & Art Gallery: Hobart)  
[www.tmag.tas.gov.au](http://www.tmag.tas.gov.au)

Dirt Art (2016). *Track Audit Report – Rokeby Hills*.

*Draft Rokeby Hills Bushfire Management Plan*, 2016. Clarence City Council, Rosny.

Harris, S and Kitchener, A. (2005). *From Forest to Fjaeldmark: Descriptions of Tasmania's Vegetation*.  
Department of Primary Industries Water and Environment. Printing Authority of Tasmania. Hobart.

*Kuynah Bushland Reserve Bushfire Management Plan*, 2011. Clarence City Council, Rosny.

LMRS Pty Ltd (2011). *Malwood Pty Ltd: Oceana Phase 2: Weed Management Plan and Hygiene Management Prescriptions*.

Michaels, K. (2006). *A Manual for Assessing Vegetation Condition in Tasmania, Version 1.0*. Resource Management and Conservation, Department of Primary Industries, Water and Environment, Hobart.

North Barker Ecosystem Services (2011). *Oceana phase 2, Residential subdivision - Vegetation Survey and Fauna Habitat Assessment*.

North Barker Ecosystem Services (2003). *Rokeby Hills – Botanical Survey and Fauna Habitat Assessment, March 2003*.

North Barker Ecosystem Services (2006). *Proposed Subdivision – Coventry Rise, Howrah – Botanical Survey and Fauna Habitat Assessment, March 2006*.

*Threatened Species Protection Act 1995*. Tasmanian State Government, No 83 of 1995. Government Printer, Hobart, Tasmania.

DPIPWE 2015. *Natural Values Atlas*. Department of Primary Industries, Parks, Water and Environment.

## APPENDIX 1 – SUMMARY OF COMMUNITY CONSULTATION

The following provides a summary of the community consultation period for the Draft RAP and an indication of how future community consultation for the Draft RAP will progress.

A summary of the initial community consultation at the ‘walk and talk’ and subsequent written submissions; consultation with major stakeholders and the Council Fire and Bushland Vegetation Management Works Officer is provided in the Companion Documents – Appendix 5);

### Community Consultation Period for Draft Reserve Activity Plan

The Draft Kuynah, Toorittya and Carella Bushland Reserves Activity Plan was released for public comment in early 2016 and the comments were reviewed and integrated into the final RAP prior to Council endorsement.

Incorporation of management measures for the Rokeby Hills POS on the hilltop are included in this final RAP and, as a consequence, the RAP has been renamed to emphasize the links between all the Howrah and Tranmere bushland reserves and greenways.

Thanks to all who read the Draft and keenly noted any typos which have been addressed but not noted in the following comments summary. In addition, comments that were not specific to the bushland reserves identified in the Draft RAP have not been included but a separate response to address concerns was provided from Council.

### Community feedback on the Draft RAP

Table 2: Community Consultation Comments Summary

|   | Management Issues/Comments from written responses                                                                                                                                                        | Number of written responses   | Response/ Action Number                             |
|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----------------------------------------------------|
| 1 | Support for pedestrian access through Carella Bushland Reserve to enable access for bus users and the general Howrah walking public of all ages. Consult neighbours regarding privacy and security (A3). | 9 + 73 signatures on Petition | No additional action                                |
| 2 | Suggest ongoing fauna monitoring in and around the reserves to monitor use and change.                                                                                                                   | 1                             | Not a priority. Action to monitor cats included FH5 |
| 3 | Support dog walking in Carella Bushland Reserve and dog litter bins and normal rubbish bins at the entrances (AM4).                                                                                      | 4                             | No additional action                                |
| 4 | Support for keeping reserves as natural as possible and question whether more walking and biking tracks are needed. Reserves are good but keep them natural.                                             | 1                             | TL6                                                 |
| 5 | <b>Noted:</b> Support greater control of feral cats by CCC and compulsory de-sexing, microchipping and compulsory overnight confinement (FH3).                                                           | 2                             | No additional action                                |

|    | Management Issues/Comments from written responses                                                                                                                                                                             | Number of written responses | Response/ Action Number     |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-----------------------------|
| 6  | Consider a speed limit reduction along Oceana Drive - especially near to the reserves. It is noted greater Hobart has adjusted to 50 km/h as standard residential speed limit.                                                | 1                           | FH2                         |
| 7  | Support for signage and seats in Kuynah and Carella Bushland Reserves (AM1 and AM2).                                                                                                                                          | 2                           | No additional action        |
| 8  | <b>Noted:</b> Concerns regarding bushfire hazards from POS were forwarded for integration in Bushfire Management Plan.                                                                                                        | 1                           | Draft RHR BHMP developed    |
| 9  | Support for removal of invasive and non-native species from within the POS and bushland reserves (WC1-WC6).                                                                                                                   | 1                           | As per Weed Control Section |
| 10 | <b>Noted:</b> Concerns re goals and timeline. The aims (goals) of the RAP are provided in Section 1. Recommended timing for actions; and objectives (outcomes) of each recommended action are provided in Table 1, Section 8. | 1                           | No additional action        |
| 11 | <b>Noted:</b> Concern that reserves do not support the wide range of flora once common in the area. Refer to response 32, Table 2: <i>Any new tracks will be subject to flora survey to avoid sensitive values</i> and TL6.   | 1                           | No additional action        |
| 12 | Support upgrade of Mayfair Court access track (A1) and safe walking tracks throughout the POS and bushland reserves; and support prevention of trail bike access and rubbish dumping in reserves (A1-A5).                     | 2                           | No additional action        |
| 13 | Do not support benches within Carella Reserve (AM2). In conflict with AM2 and 1 of the 2 support responses in 7 above.                                                                                                        | 1                           | No additional action        |
| 14 | Support for SW1-SW3 in particular to prevent spread of weeds.                                                                                                                                                                 | 1                           | No additional action        |
| 15 | Support revegetation in upper Carella Reserve with native cherry and white gum ( <i>E. viminalis</i> ).                                                                                                                       | 1                           | Revised Appendix 6          |
| 16 | <b>Noted:</b> Include Elinga Greenway in the title. The name has changed to Rokeby Hills RAP however all of the bushland reserves and greenway are identified as being included in the subtitle in this final version.        | 1                           | No additional action        |