

SUPPLEMENTARY INFORMATION

1. Project Status

Tamala Park Project, marketed as Catalina Estate by development managers Satterley Property Group, is located in the north-west corridor of the Perth Metropolitan Region. The site is currently owned by seven different local government authorities that formed the Tamala Park Regional Council (TPRC) in 2006 to be responsible for the future planning of the area. The TPRC includes the Cities of Perth, Joondalup, Stirling, Wanneroo and Vincent and the Towns of Cambridge and Victoria Park.

Consisting a total of approximately 180 ha, the Project area is divided into three separate cells known as the 'western cell' located west of Marmion Avenue, and the 'central' and 'eastern' cells located east of Marmion Avenue (see attached Figure A).

The 'western' cell is proposed for residential development, in accordance with the current Metropolitan Region Scheme and District Planning Scheme zonings. The site has been zoned Urban under the MRS since 1993, and it was rezoned from Rural to Urban Development as a result of the final approval of the City of Wanneroo District Structure Plan No. 2 in 2001.

The first phase of works on Tamala Park Project commenced on the central and eastern cells in 2011 and to date civil works have been completed on Stages 1 - 12, comprising over 578 lots, with works well underway for a further 143 lots within Stages 13 - 14.

The Marmion Avenue/Aviator Boulevard intersection and associated service relocations have all been completed and commissioned by Main Roads. The intersection provides an easy and direct entry into the Catalina Project.

2. Previous Environmental Assessments

2.1 State and Local Governments

Since the Perth Corridor Plan was completed in 1977, the area around Tamala Park has been identified as a major residential and commercial node. In the late 1990's the Western Australian Planning Commission (WAPC) initiated a major Metropolitan Region Scheme Amendment (No. 992/33 Clarkson-Butler) in the north-west corridor including Tamala Park. This amendment rezoned the central and eastern cells of Tamala Park from 'Rural' to 'Urban Deferred'. The Environmental Protection Authority (EPA) concluded the rezoning was environmentally acceptable provided certain Ministerial conditions were met. The western cell was not included in this omnibus amendment as it already was zoned for urban development.

The western cell was identified in the Bush Forever documentation in December 2000 as part of Bush Forever Site no. 323 as a 'Negotiated Planning Solution' site. In the years following the release of Bush Forever, State Government agencies and the TPRC assessed biodiversity issues and the expectations for development of this land through the Negotiated Planning Solution (NPS) process. The original TPRC landholdings in the western cell totalled 121.5 ha. As a result of the extensive NPS

process the TPRC ceded 89 ha of land originally part of the Tamala Park landholding to the Government for reservation as Bush Forever conservation land (becoming Bush Forever Site No. 323). With this area excised from the Tamala Park landholding, only 32.5 ha remained within the western cell for urban development purposes.

In addition to the area ceded to Bush Forever *in situ*, TPRC also provided funds to the former Department of Environment and Conservation (DEC, now DPaW) for the purchase two areas of vegetated land offsite:

- Lot 20 Gillingarra Rd Yathroo (north of Gingin), being 484 ha of Carnaby's foraging habitat; and
- Portions of Lot 322 Jilyading Drive, Katrine (north-east of Clackline), being approximately 70 ha of Carnaby's breeding habitat.

These parcels of vegetation are to be protected in perpetuity, to compensate for clearing of vegetation within the overall Tamala Park development. These areas are in addition to the areas proposed to be protected within the central and eastern cells in accordance with the Federal approval (outlined below), which cover a further 14 ha.

Given these sizeable contributions to conservation, totaling 657 ha, no further conservation of vegetation was identified within the western cell through the approved Tamala Park Local Structure Plan (LSP). Approved in 2009, the LSP was developed following significant participation and input from the TPRC, City of Wanneroo, local community and relevant State and Federal Government agencies. The LSP covers the whole of the development area including the western cell.

The City of Wanneroo have since assessed and issued two Development Approvals over the western cell to allow for land clearing of vegetation (see copy of latest DA as Attachment 1).

2.2 Federal Government

The Tamala Park Project/Catalina residential development was referred for assessment under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) on 21 December 2010 (ref. EPBC 2010/5785). The proposal was determined a controlled action, and was assessed on preliminary documentation with listed Threatened Species and Communities (sections 18 and 18A) as the controlling provision, referring to both Carnaby's Black-Cockatoo and the now delisted Graceful Sun Moth. Following public exhibition of the preliminary documentation report no comments were received and the Project was subsequently approved with conditions on 10 August 2011.

It is noted that since this time three variations to the conditions of approval have also been approved by the Department of the Environment, particularly in relation to the delisting of the Graceful Sun Moth and subsequent removal of related conservation requirements (see latest version of EPBC approval as Attachment 2).

Key management documents which have also been prepared and approved in accordance with conditions of the EPBC Approval are as follows:

- *Clearing and Revegetation Management Plan, Catalina Residential Development* (Eco Logical, January 2013)
- *Catalina Residential Development Mitigation and Offsets Management Plan* (Eco Logical, December 2010)

Both of these documents are attached for your convenience.

3. Native Vegetation Clearing Permit Application

The enclosed application for an area clearing permit is for the clearing of 32.5 ha consisting of the western cell of Tamala Park Project (see attached Figure 1). This is the last remaining undeveloped portion of the estate, with development works well underway across the central and eastern cells.

Although the Local Structure Plan and corresponding Development Applications for clearing of vegetation in the western cell have previously been approved by the City of Wanneroo, a separate subdivision application has only just been lodged with the WAPC. Until this subdivision approval is gained, clearing cannot be initiated across the site without a clearing permit. For this reason Coterra Environment, on behalf of the Tamala Park Regional Council, are seeking a native vegetation clearing permit as an alternative means of preventing undue delays with clearing of a clearly defined future urban area. Should clearing be initiated now through an approved clearing permit, this will ensure the bulk earthworks will be able to start soon to ensure:

- All transplanting of the Grass trees and Macrozamia (including a Priority 2 moss) can be done in autumn when the success for transplantation is the highest due to most plants being the least active or dormant at this time; and
- Site works will be undertaken during the cool, wet months in accordance with the Dust Management Plan prepared for the site. Should earthworks encroach into the summer months dust could impact on nearby residential areas.

4. Site Characteristics

The site generally comprises sand dunes which are steep in places, with surface levels ranging between approximately 10 mAHD to 36 mAHD.

Six vegetation communities have been identified across the proposed clearing area:

- *Acacia rostellifera* Closed heath
- *Banksia sessilis* Closed Heath
- *Banksia attenuata/Banksia menziesii* Low Open Woodland
- *Banksia sessilis/Melaleuca cardiophyllia* Closed Heath to Low Scrub
- *Melaleuca systena/Lomandra maritime* Low Shrubland to Low Open Heath
- *Melaleuca cardiophyllia* Closed Scrub

Currently the land is vacant and unused with the exception of occasional four wheel driving and illegal refuse dumping. Accordingly vegetation condition across the site ranges from Completely Degraded to Very Good, according to the Keighery scale (Keighery, 1994).

Further details and mapping of the vegetation contained within the western cell is contained within the Clearing and Revegetation Management Plan contained within Attachment 3.

5. Existing Management Measures

Condition 3 of the approval for the proposed clearing within the Tamala Park (Catalina) Residential Development under the *Environment Protection and Biodiversity Conservation (EPBC) Act 1999* (EPBC 2010/5785) states:

To protect habitat for listed threatened species, the person taking the action must ensure that:

- a) No more than 72.5 ha of foraging habitat and 11 ha of potential breeding habitat for Carnaby's Black Cockatoo (*Calyptorhynchus latirostris*) is cleared;*
- b) No clearing of native vegetation is undertaken in the areas marked with the numbers '2' and '3' in Attachment A (see attached figure), and that these areas are maintained as natural bushland;*
- c) All previously cleared or disturbed land in areas marked with the numbers '2' and '3' in Attachment A, and at least 50% of the previously cleared land in the area marked with number '1' in Attachment A are revegetated;*
- d) No clearing of native vegetation that is potential foraging or breeding habitat for Carnaby's Black Cockatoo is undertaken within the areas marked in dark blue in Attachment B (see attached figure);*
- e) Within 2 years of the commencement of the action, the areas marked with the numbers '2' and '3' in Attachment A must be protected in perpetuity under an irrevocable conservation covenant; and*
- f) At least 50% of plantings of trees and shrubs in street-scaping and other public areas (excluding the areas already described in condition 3c) must consist of plant species known to be primary feeding plants for Carnaby's Black Cockatoo.*

The original EPBC approval granted in 2011 had a requirement within Condition 3 to protect the Graceful Sun Moth habitat within the Public Open Space in the western cell (marked with the number 4 on Attachment A). This requirement was later removed from Condition 3 as a result of the deletion of this species from the Endangered category on the EPBC Act list of threatened species.

Condition 5 of the approval, states:

The person taking the action must prepare and submit a Clearing and Revegetation Management Plan for the Minister's approval to demonstrate how the impact of clearing of habitat for listed threatened species will be minimised. The Plan must detail how:

- On-site revegetation will be undertaken;*
- Seed from native vegetation will be collected from the area contained within the red lines marked in Attachment D (see attached figure – area includes the whole western cell);*

- *Topsoil obtained from the clearing of native vegetation on the proposal site within the red lines marked in Attachment D will be used for revegetation on-site or stored and made available for the DEC or other conservation agencies for the purpose of revegetation elsewhere; and*
- *The DEC, or other conservation agencies, have been consulted in the development of the plan to determine the optimal time for clearing and provision of seed or soil for revegetation.*

If the Minister approves the Plan then the approved plan must be implemented.

Condition 6 of the approval states that:

The person taking the action must not undertake any clearing in the area within the red lines marked in Attachment D unless:

- *The Clearing and Revegetation Management Plan described in Condition 5 has been approved by the Minister; and*
- *Evidence has been provided to the Department confirming that the purchase(s) of the land parcels required for offsets under condition 4a or condition 4b has been completed.*

A Clearing and Revegetation Management Plan was prepared to address the above conditions by EcoLogical (2013). The Clearing and Revegetation Management Plan was approved by the Federal Minister for the Environment in February 2013. Please find attached an electronic copy of the approved plan for your records (Attachment C).

5.1 Fauna Management

The Clearing and Revegetation Management Plan discusses the significant fauna within the site and within the timing and methods for clearing (section 4.4.2) a number of legally binding commitments are made to minimise impacts on fauna as summarised in the following table.

In addition to these commitments, the proponent will also employ the same fauna protection and relocation strategies as detailed in the Environmental Management Plan for the Central and Eastern Cells of the Catalina development (Syrinx, 2011) which are also summarised in this table.

Table 1 Fauna Management Commitments

Location of commitment	Commitment	Timing
Section 4.4.2 of Clearing and Revegetation Management Plan Legally binding Condition 5 of EPBC approval	To minimise impacts on Carnaby's Black Cockatoos, a search of any identified hollows will be undertaken by a suitably qualified zoologist prior to clearing on site, to ensure no presence of nesting birds.	Just prior to clearing

Location of commitment	Commitment	Timing
Section 4.4.2 of Clearing and Revegetation Management Plan Legally binding Condition 5 of EPBC approval	While considered unlikely, should nesting birds be observed, TPRC will engage a qualified zoologist to provide advice on the expected duration of nesting and appropriate management responses. SEWPAC will be consulted during any required decision making.	Prior to clearing commencing
Section 4.4.2 of Clearing and Revegetation Management Plan Legally binding Condition 5 of EPBC approval	Should staging permit, clearing of Graceful Sun Moth habitat will be undertaken during the key weeks of activity (March through to early April) to ensure the greatest potential of adult survival.	Planning of staging/timing of clearing works
Section 4.6 of Clearing and Revegetation Management Plan Legally binding Condition 5 of EPBC approval	Clearing will be staged to allow for fauna movement into neighbouring native vegetation.	Planning of staging/timing of clearing works
Section 4.4.2 of Clearing and Revegetation Management Plan Legally binding Condition 5 of EPBC approval	Native Animal Rescue will be contacted immediately should any injured wildlife be discovered on site.	During clearing
Section 4.6 of Clearing and Revegetation Management Plan Legally binding Condition 5 of EPBC approval	All site workers will be inducted on the identification of Carnaby's Black Cockatoo.	Before site works commence
Section 13.3.1 of Tamala Park Environmental Management Plan Prepared for Ministerial Statement no 629, Condition 1.1	An appropriate fauna specialist is to be employed prior to vegetation clearance or works on site to assess the best ways to address disturbance to fauna. The recommendations may include trapping and or relocation and therefore these works need to be planned well in advance of works on site.	Planning of staging/timing of clearing works Any relocations to be undertaken just prior to clearing
Section 13.3.1 of Tamala Park Environmental Management Plan	Use of signage during initial clearing to alert community to possible scattering of animals across major roads surrounding the site may minimise impacts to fauna populations.	Prior to and during clearing

Location of commitment	Commitment	Timing
Section 13.3.1 of Tamala Park Environmental Management Plan	During construction all measures are to be taken to avoid impacts to fauna.	During clearing

5.2 Seed Collection

Seed collection from native vegetation is also addressed within the Clearing and Revegetation Management Plan as described in the following table.

Table 2 Seed Collection Commitments

Location of commitment	Commitment	Timing
Section 4.3.1 of Clearing and Revegetation Management Plan Legally binding Condition 5 of EPBC approval	Seed material from flora species suitable for use in rehabilitation and landscaping works will be collected. This will include: <ul style="list-style-type: none"> Collection of seed from Carnaby's Black Cockatoo foraging species, which will later be used for on-site revegetation (including landscaping of POS and streetscaping); Collection of seed from local natives of target floristic communities, which will later be used for production of seedlings for on-site revegetation. <p>A list of the targeted seed collection species (including the Carnaby's Black Cockatoo foraging species is provided in Appendix 1 of the plan).</p>	Seed collection has already been undertaken within the Western Cell
Section 4.3.2 of Clearing and Revegetation Management Plan Legally binding Condition 5 of EPBC approval	Seed collection will be undertaken in the prescribed areas at the time of clearing.	Seed collection has already been undertaken within the Western Cell
Section 4.3.2 of Clearing and Revegetation Management Plan Legally binding Condition 5 of EPBC approval	Seed will be collected by licensed seed collectors.	Seed collection was undertaken by Tranen (licensed seed collectors)
Section 4.3.2 of Clearing and Revegetation	Seed collection will be conducted in the period of optimal seed availability - that is in the peak seed setting season	Seed collection was undertaken

Location of commitment	Commitment	Timing
Management Plan Legally binding Condition 5 of EPBC approval	for each target species. Seed collection will be conducted during summer, with further confirmation from contractors sought prior to seed collection in order to determine detailed seed collection schedules.	by Tranen (licensed seed collectors) in March 2012
Section 4.3.3 of Clearing and Revegetation Management Plan Legally binding Condition 5 of EPBC approval	Treatment of collected seeds will be undertaken by a licensed seed collector.	Seeds have been treated and managed by Tranen
Section 4.3.3 of Clearing and Revegetation Management Plan Legally binding Condition 5 of EPBC approval	Seed will be stored in an air-conditioned room until required for direct seeding or seedling production.	Seeds have been treated and are managed by Tranen
Section 4.3.3 of Clearing and Revegetation Management Plan Legally binding Condition 5 of EPBC approval	Surplus seed may be used for other restoration or revegetation activities within the City of Wanneroo, or will be made available to the Department of Environment and Conservation or Perth NRM for use in revegetation or restoration works.	After revegetation is complete
Section 4.5 of Clearing and Revegetation Management Plan Legally binding Condition 5 of EPBC approval	The top 100 mm of soil will be collected from designated topsoil collection zones for direct relocation (also known as direct return) to revegetation areas. Surplus topsoil will be made available to third-parties for the purposes of revegetation. Topsoil collection and relocation will occur only between January and March.	Directly following clearing Planning for topsoil use underway, including the possible supply to Mindarie Regional Council for their revegetation works at Mindarie.

5.3 Transplanting

The Declared Rare and Priority Flora survey for the western cell of Tamala Park (Syrinx, 2009), identified that there were no Declared Rare Flora (DRF) in the area. However five populations of *Fabronia hampeana* were found, which is a Priority 2

species of moss. All of the populations found are in discrete locations as the moss was found growing on trunks of *Macrozamia riedlei*, as shown in the attached Figure 3.

Only two of these locations are within the urban zoned developable area, the remaining three populations are within the adjacent area ceded to Bush Forever as part of the Negotiated Planning Solution. The proponent accepted the following recommendation of Syrinx (2009) in the original survey report, and also commits to continuing the existing transplanting program of Grass Trees that is currently occurring within the Central and Eastern cells, to the Western cell as well.

Table 3 Transplanting Commitments

Location of commitment	Commitment	Timing
Section 5 of DRF and Priority Flora Survey (Western Cell) – Syrinx (2009)	Macrozamas with <i>Fabronia hampeana</i> found within the area zoned Urban should be translocated to the open Banksia woodland in the area ceded to Bush Forever to protect them and to add to the existing populations.	Prior to clearing
Section 5 of DRF and Priority Flora Survey (Western Cell) – Syrinx (2009)	Translocate plants from populations 4 and 5 under specific guidance of a qualified botanist.	During planning of staging of clearing
Section 5 of DRF and Priority Flora Survey (Western Cell) – Syrinx (2009)	To reduce the likelihood of the introduction of new and spread of existing weeds, machinery should be cleaned and washed free of soil before entering and leaving the area.	Before transplanting
Section 5 of DRF and Priority Flora Survey (Western Cell) – Syrinx (2009)	Retain current vegetation condition to maintain microclimate within a 50m buffer.	Before and after transplanting
Section 12.3.5 of Tamala Park Environmental Management Plan	Transplanting of vegetation such as grass trees (<i>Xanthorrhoea preissii</i>) and <i>Zamias (Macrozamia riedlei)</i> should be undertaken where clearing is unavoidable.	Prior to clearing
Section 12.3.5 of Tamala Park Environmental Management Plan	Plants should be relocated to in suitable green spaces, such as the POS or Greenway areas.	Prior to clearing
Section 12.3.5 of Tamala Park Environmental Management Plan	Contracting a Grass Tree salvage contractor such as Replants.com or Grasstrees Australia should be organized well in advance of vegetation clearing.	During planning of staging of clearing
Section 12.3.5 of Tamala Park Environmental	All transplanting will need to be done in autumn when the success for transplanted is the highest due to	During planning of staging of

Location of commitment	Commitment	Timing
Management Plan	most plants being the least active or dormant at this time.	clearing
Section 12.3.5 of Tamala Park Environmental Management Plan	The contractor can arrange for the resale of the Grass Trees to the general public allowing for the maximum and sustainable reuse of the plants within the site.	During transplanting

5.4 Retention of Native Vegetation

The Clearing and Revegetation Management Plan discusses the retention of native vegetation in the following sections:

Table 4 Vegetation Retention Commitments

Location of commitment	Commitment	Timing
Section 3, Table 3 of Clearing and Revegetation Plan	Objective – Area of clearing occurs only within approved clearing areas. Key performance measure – No reports of clearing outside of approved areas during site inspections and post clearing audits.	During site works
Section 3, Table 3	Compliance reporting will be conducted annually, and annual reports will be made available on the TPRC website and SEWPAC notified.	Annual reporting
Section 4.4.1 of Clearing and Revegetation Plan	Clearing areas will be clearly demarcated with flagging tape by the site surveyor prior to the commencement of clearing and must be located in accordance with Figure 6 of Clearing and Revegetation Plan.	Prior to any site works commencing
Section 4.4.1 of Clearing and Revegetation Plan	Clearing contractors will be shown via a site walkover which areas of vegetation are marked for retention (no-clearing).	Prior to clearing

In addition to the 89 ha area ceded to Bush Forever *in situ* adjacent to the western cell, the proponent has also provided funds to the Department of Environment and Conservation for the purchase two areas of vegetated land off-site:

1. Lot 20 Gillingarra Rd Yathroo (north of Gingin), being 484 ha of Carnaby's foraging habitat, and
2. Portions of Lot 322 Jilyading Drive, Katrine (north-east of Clackline), being approximately 70 ha of Carnaby's breeding habitat.

These parcels of vegetation are to be protected in perpetuity, to compensate for clearing of vegetation within the overall Tamala Park development. These areas are in addition to the areas proposed to be protected within the developable area in accordance with the EPBC approval, which cover a further 14 ha.

Given these sizeable contributions to conservation, totaling 657 ha, it is considered that there should be no further need for conservation of vegetation on site.

6. Assessment against Clearing Principles

Table 5 provides assessment of the proposed clearing against the EPA's ten clearing principles, as provided in Schedule 5 of the *Environmental Protection Act 1986*.

Table 5 Assessment Against Clearing Principles

Native Vegetation Clearing Principles	Assessment of Proposed Clearing
<p>1. Native vegetation should not be cleared if it comprises a high level of biological diversity</p>	<p>The vegetation within the western cell of the Catalina development is mapped as Completely Degraded to Very Good condition (Keighery, 1994). Threats to vegetation condition were noted by Eco Logical (2013) as weed invasion, grazing by kangaroos and rabbits in cleared areas and presence of 4WD tracks and rubbish dumping.</p> <p>The western cell was identified in the Bush Forever documentation in December 2000 (WAPC, 2000) as part of a 'Negotiated Planning Solution' Bush Forever site. In the years following the release of Bush Forever, State Government agencies and the TPRC assessed biodiversity issues and the expectations for development of this land through the Negotiated Planning Solution (NPS) process. The original TPRC landholdings in the western cell totaled 121.5 ha. As a result of the extensive NPS process the TPRC ceded 89 ha of land originally part of the Tamala Park landholding to the Government for reservation as Bush Forever conservation land (becoming Bush Forever Site No. 322). With this area excised from the Tamala Park landholding, only 32.5 ha remained within the western cell for urban development purposes.</p> <p>Notwithstanding this process, the entire western cell area is still technically classified as an 'Environmentally Sensitive Area (ESA)' under Section 51B of the Environmental Protection Act. This anomaly is due to the ESAs only being declared intermittently by the Minister for the Environment, with the last declaration being published in the Government Gazette in 2005 prior to the Negotiated Planning Solution being finalised in 2006. As such, it is</p>

	<p>noted that the usual clearing permit exemptions under the Environmental Protection Regulations do not technically apply.</p> <p>An assessment of the biodiversity values of the entire Catalina project area was undertaken to advise the assessment under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (see following section) and the local structure planning processes. The process of assessing biodiversity values on site included collation and mapping of all available data for physical and biological elements of the Tamala Park proposed development area. After considering topography, drainage, soil types, and existing flora and fauna assemblages and their regional and local significance a set of layers was produced. The areas reserved for conservation were selected based on the following:</p> <ul style="list-style-type: none"> ▪ Good to excellent bushland condition (weed resistant) ▪ Several representations of each vegetation community ▪ Location of priority flora ▪ Presence of habitat for Carnaby's Cockatoo and possible Graceful Sun Moth habitat ▪ Lower points in the landscape - vegetation retained in these areas as a good stormwater management practice ▪ Opportunity for passive recreation, for example a network of walking tracks and cycling paths may be suitable offering good views and variety of landscapes including variable topography ▪ Noise and visual barrier from Marmion Avenue <p>As demonstrated, a large extent of work has been undertaken to determine the best areas for the retention of vegetation in conservation in the Catalina development. Also, of the original 121.5 ha of land owned by TPRC on the western side of Marmion Avenue, 89 ha has been ceded to Bush Forever as part of the NPS process, in addition to the areas conserved in the central and eastern cells of the development. It was a fundamental term of agreement of the NPS that in exchange for the TPRC forgoing development on a substantial portion of its land, the remaining 32.5 ha would be made available for the urban development of the western cell of the Catalina project.</p>
<p>2. Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the</p>	<p>The Tamala Park Project / Catalina residential development was referred for assessment under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act) on 21 December 2010 (ref. EPBC 2010/5785). The proposal was determined a controlled action, and was</p>

<p>maintenance of, a significant habitat for fauna indigenous to Western Australia</p>	<p>assessed on preliminary documentation with listed Threatened Species and Communities (sections 18 and 18A) as the controlling provision, referring to both Carnaby's black cockatoo and the now delisted graceful sun moth. Following public exhibition of the preliminary documentation report no comments were received and the Project was subsequently approved with conditions on 10 August 2011.</p> <p>Whilst the clearing is considered a controlled action due to the clearing of potential Carnaby's cockatoo habitat, sufficient management measures and conditions of EPBC approval have been and continue to be met in association with this development, to minimise impacts to the population. These items are discussed in Section 5.1.</p>
<p>3. Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora</p>	<p>Syrinx Environmental conducted a Declared Rare and Priority Flora survey for the western cell of the Catalina development area (Syrinx, 2009). No Declared Rare Flora (DRF) were identified within the area. Two populations of <i>Fabronia hampeana</i>, a Priority 2 moss, were found on site, all associated with large <i>Macrozamia reidlei</i>. Each population had 1 - 3 <i>Macrozamia</i> plants on which the moss was growing.</p> <p>It is the intention of TPRC to commit to the recommendations of Syrinx Environmental (2009) to translocate the <i>Macrozamia</i> plants on which <i>Fabronia hampeana</i> is growing to the location of three similar populations of the moss growing in the Banksia woodland within Bush Forever Site 322. Negotiations with WAPC and DPaW are currently underway in this regard.</p>
<p>4. Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a threatened ecological community</p>	<p>Of the flora communities surveyed on site, none are listed as threatened ecological communities and therefore this criteria does not apply in this case.</p>
<p>5. Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared</p>	<p>The vegetation of the site proposed for clearing forms part of the regional Cottesloe Complex - Central and South. This vegetation complex is considered well-represented across the Swan Coastal Plain, with 35.22% of the original extent remaining. Of the remaining extent determined in 2013 (15,816 ha), 5,725 ha (approximately 36% of remaining) remains in formal reserve protection. More than 50% of the remnant is under either formal or informal protection in federal, state or local reserves (Local</p>

	<p>Biodiversity Program, 2013).</p> <p>Further to this, under the NPS process, 89 ha of the original TPRC landholdings in the western cell (originally totaling 121.5 ha) were ceded to the Government for reservation as Bush Forever conservation land (becoming Bush Forever Site No. 322). With this area excised from the Tamala Park landholding, only 32.5 ha remained within the western cell for urban development purposes.</p> <p>In addition to the area ceded to Bush Forever <i>in situ</i>, TPRC also provided funds to the former DEC (now DPaW) for the purchase of two areas of vegetated land offsite, as discussed in Section 2.1. These parcels of vegetation are to be protected in perpetuity, to compensate for clearing of vegetation within the overall Tamala Park development.</p> <p>Given the protection status of the remnant vegetation in this complex, and the extent of offsets and contributions of land the TPRC have provided in reservation, the proposed clearing is not considered to be at variance with this principle.</p>
<p>6. Native vegetation should not be cleared if it is growing in, or in association with, and environment associated with a watercourse or a wetland</p>	<p>There are no watercourses or wetlands within, or adjoining the site, therefore this criteria does not apply in this case.</p>
<p>7. Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation</p>	<p>It is unlikely that the clearing of the native vegetation in the western cell will result in land degradation, due to the future residential land use. A Clearing and Revegetation Management Plan has been prepared, which details the clearing requirements where clearing is unavoidable (discussed in Section 5.0). In addition it is condition of the City of Wanneroo's Development Application that a Dust Management Plan be prepared and implemented for the site.</p>
<p>8. Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation areas</p>	<p>The site lies to the immediate north of the Bush Forever Site 322 (Burns Beach Bushland). The western cell was identified in the Bush Forever documentation in December 2000 as part of Bush Forever Site No. 323 as a 'Negotiated Planning Solution' (NPS) site. As a result of the extensive NPS process involving State Government agencies and the TPRC, the TPRC ceded 89 ha of land originally part of the Tamala Park landholding to the WAPC for reservation as Bush Forever conservation land (becoming Bush Forever</p>

	<p>Site No. 322).</p> <p>A Clearing and Revegetation Management Plan has been prepared by Eco Logical, which addresses interface management treatment and demarcation of clearing areas. The LSP states that appropriate measures will be taken to create an adequate barrier to reduce impact to the adjoining bushland. During clearing and construction TPRC will be erecting a 1.8 m boundary fence to prevent unauthorised access. Visitor access will be controlled through formalised openings leading to designated tracks through the bush as well as to the beach. Liaison is currently occurring with the City of Wanneroo and the WAPC in regards to the best locations and design for these controlled pathways. Given that the area is within an ESA, a separate clearing permit will be applied for should any clearing of vegetation be required within the Bush Forever site.</p>
<p>9. Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of the surface or underground water</p>	<p>There are no natural surface water features (wetlands or watercourses) within or in close proximity to the site. As such there are no potential impacts to natural surface water features.</p> <p>To address water management issues, a Local Water Management Strategy (LWMS) has been prepared by MWH consultants to provide objectives and solutions for the sustainable disposal and reuse of water. Stormwater infiltration through soakwells or detention basins is unlikely to impact groundwater quality as stormwater quality is expected to be relatively fresh and the depth to groundwater across the entire development area is 15 - 45 metres, allowing sufficient sub-surface filtration. CoW groundwater management criteria recommend management of groundwater at predevelopment levels and if possible improvement of the quality of water leaving the development area to maintain and restore the ecological systems in the catchment.</p>
<p>10. Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding</p>	<p>The site is underlain by the Cottesloe and Karrakatta units of the Spearwood Dune System (Churchward and McArthur, 1980).</p> <ul style="list-style-type: none"> • Karrakatta soils: deep yellow brown, highly leached sands • Cottesloe soils: shallow brown or bright yellow sand-loam over limestone with some limestone outcropping. <p>Both of these soil types are expected to drain well. The presence of Tamala limestone, which underlies</p>

	<p>approximately 90% of the site, may pose problems in drainage where the remnant bushland is removed. Stormwater disposal using infiltration structures such as swales, soakwells and infiltration basins is considered to be suitable for this site due to the permeable sandy soils of significant depth overlying limestone. There are a few areas where limestone is less than one metre below the surface (Douglas Partners, 2009). In these areas it is suggested that ripping the area to one metre below the base of infiltration structures should provide adequate drainage.</p> <p>To address water management issues, a Local Water Management Strategy (LWMS) has been prepared by MWH consultants to provide objectives and solutions for the sustainable disposal and reuse of water.</p>
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7. Conclusion

As described above, the proponent currently has an approved Clearing and Revegetation Plan by the Federal Minister for the Environment, which is legally binding on the proponent to implement as part of the development of Tamala Park. The compliance with this plan is reported to the Federal Department of the Environment on an annual basis.

In addition, the proponent is committed to continuing on the relevant environmental management measures outlined within the Environmental Management Plan for the Central and Eastern Cells, to the Western cell as well. The environmental management for the proposed clearing and subdivisions within the western cell can therefore be addressed within the current management plans for the site.

It is noted that the entire Project area has an extensive history of planning and environmental approvals, at Local, State and Federal levels and consequently urban development is now a foregone conclusion. On this basis we respectfully request that the standard public consultation process generally applied to clearing permit applications is waived in this instance, acknowledging the significant amount of previous Federal, State and Local government assessments, consultation and approvals that have already been completed for the Project site.

8. References

Churchward, H.M. and McArthur, W.M. (1980). *Landforms and soils of the Darling System, Western Australia*. In 'Atlas of Natural Resources, Darling System, Western Australia'. Department of Conservation and Environment, WA.

Douglas Partners (2009). *Report on Geotechnical Investigation Proposed Tamala Park Residential Subdivision Mindarie, WA*. Report for TPG on behalf of Tamala Park Regional Council.

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Hedde, E.M. Loneragan, O.W, Havel, J.J (1980). *Vegetation Complexes of the Darling System Western Australia*, In. Atlas of Natural Resources, Darling System, Western Australia.

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Local Biodiversity Program (2013). 2013 *Native Vegetation extent by Vegetation complexes on the Swan Coastal Plain south of Moore River*. Perth Biodiversity Project, WALGA.

Syrinx (2009). *Syrinx Declared Rare and Priority Flora Survey for the Western Cell*. Prepared for Tamala Park Regional Council.

Western Australian Planning Commission (2000) *Bush Forever – Volume 1 Policies, Principles and Processes*. Published December 2000 by the State of Western Australia.

Figures

Figure 1 – Tamala Park Development

Figure 2 – Western Cell Area Proposed for Clearing

Attachments

A – Latest City of Wanneroo Development Approval

B – Latest EPBC Approval

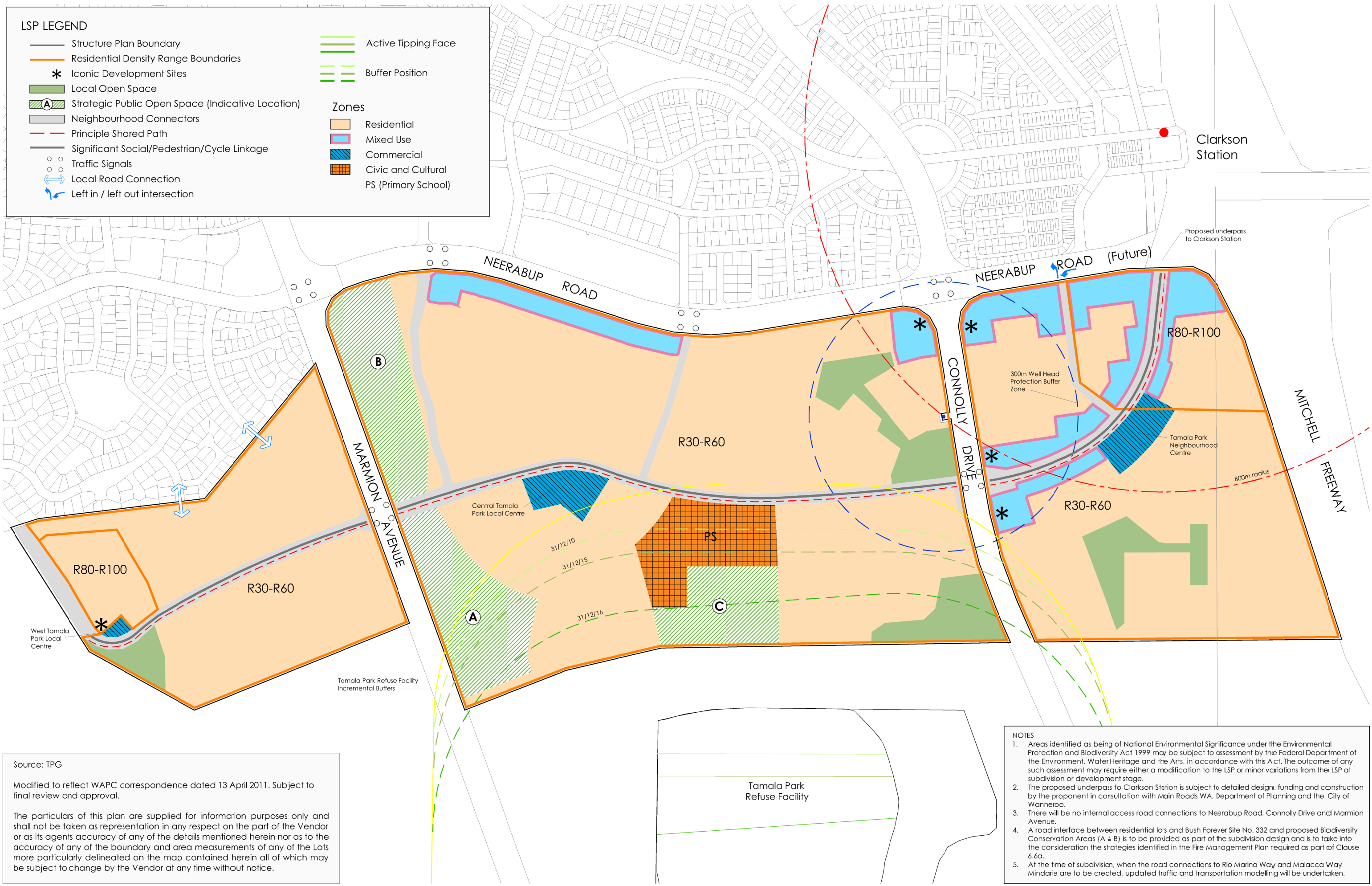
C – Clearing and Revegetation Plan (on CD)

D – Mitigation and Offsets Management Plan (on CD)

FIGURES

LSP LEGEND

- Structure Plan Boundary
 - Residential Density Range Boundaries
 - * Iconic Development Sites
 - Local Open Space
 - Ⓐ Strategic Public Open Space (Indicative Location)
 - Neighbourhood Connectors
 - Principle Shared Path
 - Significant Social/Pedestrian/Cycle Linkage
 - Traffic Signals
 - ↔ Local Road Connection
 - ↔ Left in / left out intersection
 - Active Tipping Face
 - Buffer Position
- Zones**
- Residential
 - Mixed Use
 - Commercial
 - Civic and Cultural
 - PS (Primary School)



Source: TPG

Modified to reflect WAPC correspondence dated 13 April 2011. Subject to final review and approval.

The particulars of this plan are supplied for information purposes only and shall not be taken as representation in any respect on the part of the Vendor or as its agents accuracy of any of the details mentioned herein nor as to the accuracy of any of the boundary and area measurements of any of the Lots more particularly delineated on the map contained herein all of which may be subject to change by the Vendor at any time without notice.

NOTES

1. Areas identified as being of National Environmental Significance under the Environmental Protection and Biodiversity Act 1999 may be subject to assessment by the Federal Department of the Environment, Water Heritage and the Arts, in accordance with this Act. The outcome of any such assessment may require either a modification to the LSP or minor variations from the LSP at subdivision or development stage.
2. The proposed underpass to Clarkson Station is subject to detailed design, funding and construction by the proponent in consultation with Main Roads WA, Department of Planning and the City of Wanneroo.
3. There will be no internal access road connections to Neerabup Road, Connolly Drive and Marmion Avenue.
4. A road interface between residential lots and Bush Forever Site No. 332 and proposed Biodiversity Conservation Areas (A & B) is to be provided as part of the subdivision design and is to take into the consideration the strategies identified in the Fire Management Plan required as part of Clause 6.6a.
5. At the time of subdivision, when the road connections to Rio Marina Way and Malacca Way Mindarie are to be created, updated traffic and transportation modelling will be undertaken.


PROPOSED TAMALA PARK LOCAL STRUCTURE PLAN MAP





LEGEND

- Site Boundary
- Cadastre
- Proposed Clearing Area (32.5 ha)



 0 30 60 120 180 240 m

 Scale: 1:5,000 @ A3 GDA 1994 MGA Zone 50

 Source: Cadastre - Landgate, 2015 Orthophoto - Landgate, 2014



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Tamala Park Regional Council

 TAMALA PARK CLEARING

 TAMALA PARK

PROPOSED CLEARING AREA

Figure 2