

environmental management



Annual Compliance Report
25 June 2016 to 24 June 2017
EPBC 2013/6866

Woodlinks Village – Master Planned Residential Community, Collingwood
Park, Queensland
Canberra Estates Consortium No. 36 Pty Ltd
7189 E
22 September 2017



Document control

Title	Annual Compliance Report, 25 June 2016 to 24 June 2017, EPBC 2013/6866
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Client	Canberra Estates Consortium No. 36 Pty Ltd
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Reports and/or Plans by Others

Reports and/or plans by others may be included within this Environmental Management report to support the document.



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I. Introduction

The Environmental Management Division of Saunders Havill Group was engaged by Canberra Estates Consortium No. 36 Pty Ltd to prepare an Annual Compliance Report for the Woodlink Project – Master Planned Residential Community granted under the Commonwealth *Environment Protection & Biodiversity Conservation Act 1999* (EPBC Act) (ref EPBC 2013/6866), and is specifically required by condition 8 of the approval granted on 4 March 2014. The project is referred to in this report as *Woodlinks Village* which is the residential estate name.

The project area covers approximately 78 hectares (ha) and is located approximately 12 kilometres by road east of Ipswich (refer to Figure 1).

This report delivers an annual overview of the project’s progression towards achieving the primary objective:

To create a self-sustaining system that provides habitat critical to the survival of the Koala while creating a locally significant corridor connecting habitat areas along Goodna Creek.

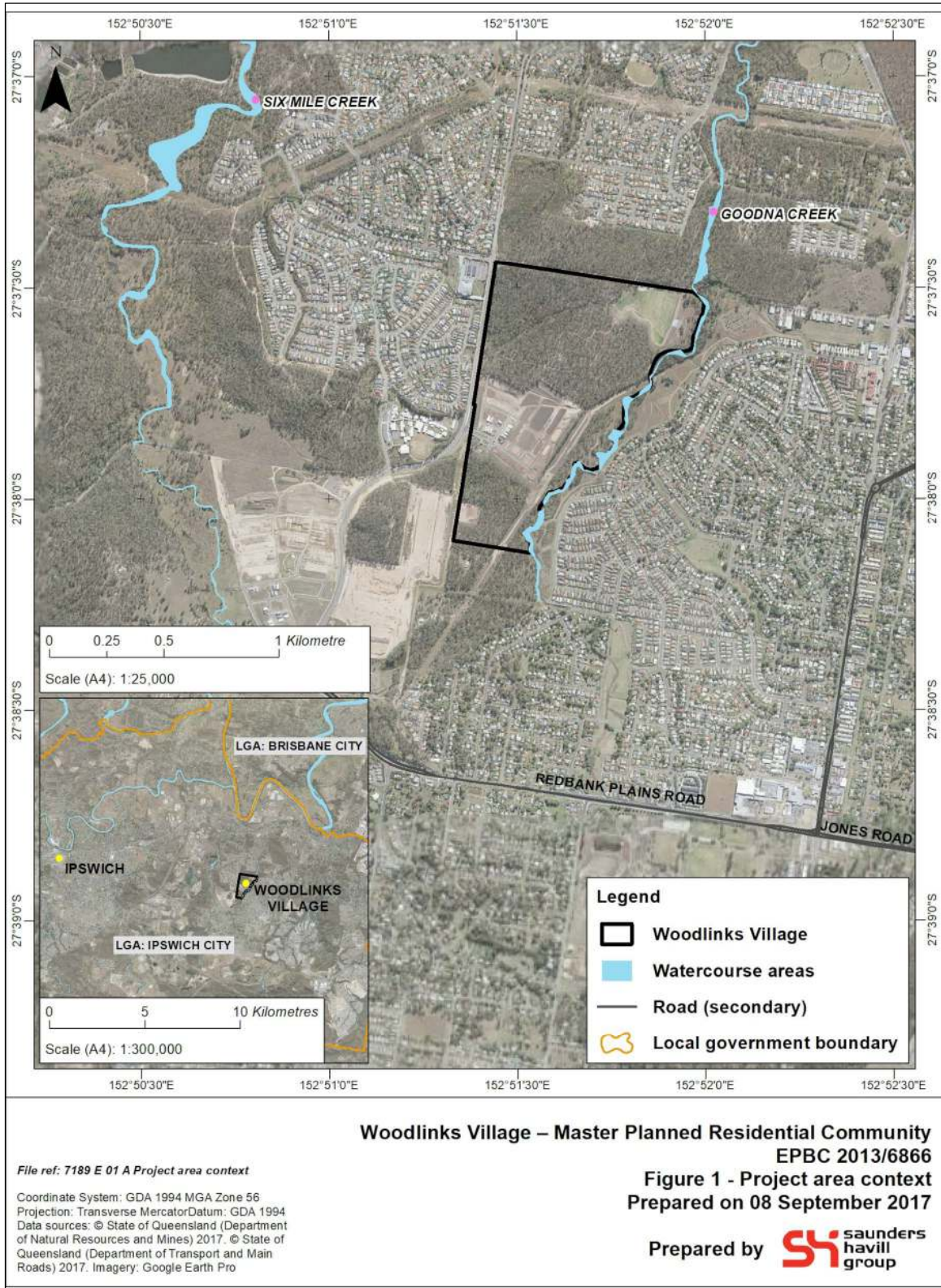
The project’s progress and notable events during the reporting period are detailed in Section 3. The assessment of compliance with the approval conditions is presented in Section 4. This report is the second Annual Compliance Report for the approved action. Correspondence from the Department of the Environment and Energy (the Department) dated 28 February 2017 confirmed the first report (2016) was satisfactory and the subsequent Annual Compliance Report was due no later than 24 September 2017.

I.I. Approval details

Commonwealth reference	EPBC 2013/6866
Approval holder	Canberra Estates Consortium No. 36 Pty Ltd
ACN	156 442 312
Approval date	4 March 2014
Expiry date of approval	31 January 2034
Approved action	To develop the Woodlink residential community in Collingwood Park, Queensland
Controlling provision	Approved - listed threatened species and communities (sections 18 & 18A)
Reporting period	25 June 2016 to 24 June 2017
Address	246-326 Collingwood Drive, Collingwood Park
Local government area	Ipswich City Council



Figure 1: Project area context





2. Declaration of accuracy

In making this declaration, I am aware that sections 490 and 491 of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) make it an offence in certain circumstances to knowingly provide false or misleading information or documents. The offence is punishable on conviction by imprisonment or a fine, or both. I declare that all the information and documentation supporting this Annual Compliance Report is true and correct in every particular. I am authorised to bind the approval holder to this declaration and that I have no knowledge of that authorisation being revoked at the time of making this declaration.

Signed

Full name Murray Saunders

Position Managing Director

Organisation Saunders Havill Group
 ABN 24 144 972 949

Date 22 September 2017



3. Development actions

Woodlinks Village is a residential community located in the suburb of Collingwood Park. The development of residential land parcels and open space areas is under establishment, with approximately 60 houses constructed since the commencement of the action in 2015. As residential development advances, the adjoining Goodna Creek open space area is rehabilitated with a focus on enhancing koala habitat. Other open space areas providing local park facilities and general amenities in the development area have also been established.

Clearing work associated with the residential development was undertaken during 2015 with the assistance of Queensland Fauna Consultancy (QFC). As part of this work, a fauna spotter was in attendance at all times during clearing activities. QFC reported on the clearing activities and this was subsequently provided to the Department in the 2016 Annual Compliance Report.

Since the 2016 Annual Compliance Report, development activities have included:

- road and infrastructure construction
- house construction
- landscape and drainage works
- offset improvement works

Additional clearing has not occurred since the 2016 Annual Compliance Report, with all works occurring within the previously established cleared zone. The current status of the project has seven small stages of housing ready for development with approximately four stages either under construction or near completion. The following table best summarises the current status of the project in conjunction with Images 1 to 4. Figure 2 illustrates the impacts to habitat critical to the survival of the Koala as defined in the approval and listed in the table.

3.1. Development details

Total dwellings (approved)	1,000
Dwellings under construction	60
Total defined critical habitat onsite	35.2 ha
Approved total clearing of defined critical habitat only	25.9 ha
Total current clearing of defined critical habitat only	15.4 ha
Total current clearing of non- critical habitat	4.7 ha
Total current clearing (critical and non-critical habitat)	20.1 ha



Image 1: Established local park facilities amongst existing vegetation



Image 2: Established local park facilities amongst existing vegetation



Image 3: Woodlinks Village entrance



Image 4: Newly established housing and street landscaping



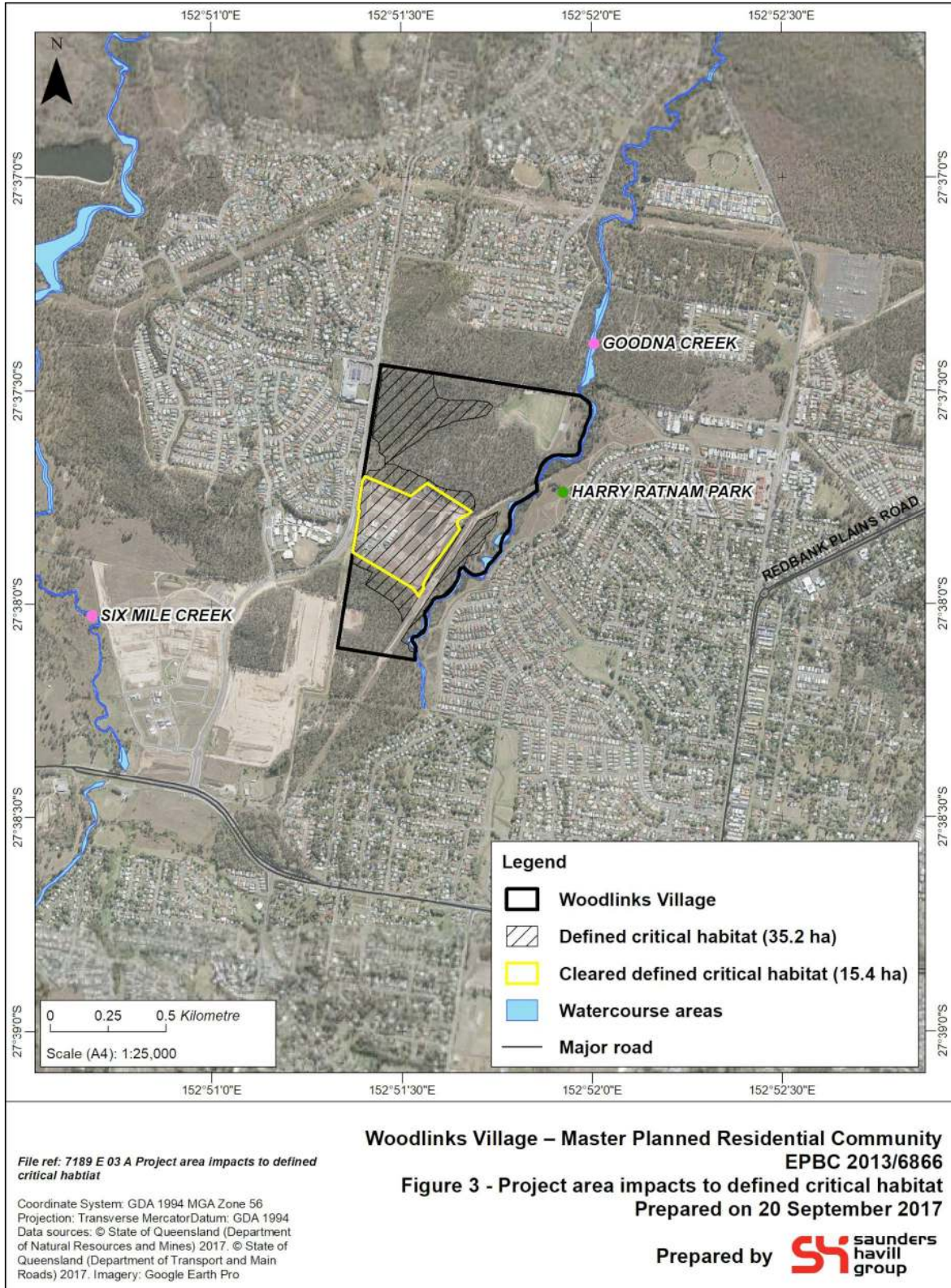
Image 5: Revegetated detention basin



Image 6: Detention basin interface with Goodna Creek corridor



Figure 2: Project area impacts to defined critical habitat





4. Offset actions

As per the detail preliminary documentation, the offset land is made up of two distinct areas:

1. Open space dedications

New land created and improved along the Goodna Creek conservation corridor.

2. Harry Ratnam Park

Improvement works for the establishment of new habitat within existing degraded Ipswich City Council parkland.

As part of the EPBC approval process, it was determined that offset areas adjacent to Goodna Creek would be created, rehabilitated and improved as Koala habitat. The purpose of the offset was to bolster and enhance the existing local Koala corridor movement along Goodna Creek.

The Offset Management Plan lodged under condition 4 of the approval, and approved by the Department on 15 October 2014, details the progressive works to occur throughout the area. Condition 3 of the approval outlines the need for the approval holder to implement “mechanisms” to provide enduring protection. For new offset land on the west of Goodna Creek this involves the creation of parkland allotments and the dedication of the land to Ipswich City Council for conservation purposes.

The process for completing this dedication and enduring protection includes the steps listed below.

1. The western parkland dedication area has been designated as three separate future allotments aligning to development staging:
 - i. Lot 7000
 - ii. Lot 7001
 - iii. Lot 7002
2. A detailed operational works drawing set must be completed and lodged for Ipswich City Council approval.
3. Once approved the works are tendered and commissioned.
4. Improvement/rehabilitation works completed including weed removal, revegetation with Koala trees, rubbish removal and fixing of erosion issues.
5. At the completion of works a thorough onsite inspection is completed by Ipswich City Council and once satisfactory the area is accepted as “on-maintenance”.
6. After 18 months, if the completed works continue to satisfy Ipswich City Council during the regular inspections, the works are considered “off-maintenance”.
7. Once the works are considered completed the created allotment can be registered with the Queensland Government titles office and dedicated to Ipswich City Council.

There are two constraints which limit the timeframe for dedications of offset land:

1. The offset allotment is created as the development allotments are reconfigured. This occurs post approval of the stage adjoining the Goodna Creek conservation corridor.



2. The improvement works must have occurred prior to Ipswich City Council accepting the dedicated land (Ipswich City Council will not accept the land title prior to the developer completing all weed management and revegetation works).

The Harry Ratnam Park offset area, which makes up approximately 13.5 ha of the offset area, is already under Ipswich City Council ownership and is therefore secured and protected. A land access agreement in favour of the approval holder is in place and facilitates the undertaking of improvement works.

Collectively, the 32.8 ha Koala offset area is made up of:

- created allotment 7000 (5.58 ha)
- created allotment 7001 (2.41 ha)
- created allotment 7002 (8.5 ha)
- Goodna Creek watercourse allotments (2.8 ha)
- Harry Ratnam Park allotments (13.5 ha)

4.1 Offset status

At the two years post commencement date, the approved offset has achieved the following status:

Lot 7000

- operational works permits achieved
- works tendered and complete
- allotment created and awaiting registration from the Queensland Government title's office

Lot 7001

- operational works permits achieved
- works tendered and complete
- allotment created and awaiting registration from the Queensland Government title's office

Lot 7002

- operational works permits pending (dependent on the reconfiguration of neighbouring development allotments)
- no works completed at this stage (i.e. during the reporting period)
- no allotment created as development has not progressed to this portion of the site

Harry Ratnam Park

- operational works documentation completed
- full land access agreement in place and executed between approval holder and Ipswich City Council
- no works commenced (beyond ongoing use and harvest of the Koala harvest area)

The following documents are provided as supporting documentation to the current offset area status:

Appendix A:	Lot 7000 operational works drawings
Appendix B:	Lot 7001 operational works drawings
Appendix C:	Lots 7000 and 7001 operational works approval
Appendix D:	Lots 7000 and 7001 photos of rehabilitation works
Appendix E:	Survey plan of created lot 7000
Appendix F:	Harry Ratnam Park operational works drawings
Appendix G:	Land access agreement



In summary, 8.0 ha of the 32.8 ha offset area has been completely rehabilitated for improved Koala habitat. This completed area and the Harry Ratnam Park have a protection mechanism in place. The remaining 8.5 ha does not yet exist as an allotment due to the project not progressing to that phase and therefore there is no title in which to dedicate and apply a mechanism.



5. Field survey offset area

As part of preparation for this Annual Compliance Report, two field ecologists from the Saunders Havill Group attended the site on 22 August 2017 and inspected the offset area. As part of this inspection, the following tasks were completed and/or reviewed:

- application of Koala SAT rapid assessment methodology technique (scat meander)
- Goodna Creek rehabilitation status
- bio-basin adjacent to the current development site
- accessibility to the Koala tree harvest facility
- Harry Ratnam Park usage and status

The field ecologists identified evidence of Koala usage throughout the corridor and the evidence indicated a higher usage in the southern aspect of the corridor compared to the north. Access to the Koala tree harvest facility was functional and via two access points from Eagle Street. Fencing between the residential and conservation areas was suitable to prevent Koala access to residential yards (Image 6).

The rehabilitation work had varying levels of success with revegetation and weed removal successes west of the powerline easement generally superior to the area east of the powerline (Image 7). Revegetation of the detention basin was also in good condition. While on-site, local residents were observed using the powerline easement and there is some evidence of vandalism and fence damage in the rehabilitation areas. The approval holder has repaired and reinstated these areas on several occasions.



Image 6: Koala exclusion fencing interface between residential development and the Goodna Creek open space area



Image 7: Rehabilitation along the powerline easement

5.1. Severe weather

During 28-30 March 2017, the region experienced thunderstorms and torrential rainfall as a consequence of former tropical cyclone Debbie moving south across Queensland. This destructive weather is detailed in the *Monthly Climate Summary for Brisbane* published by the Bureau of Meteorology (BOM) on 3 April 2017, and an extract is provided below.



Heavy rainfall and flooding from ex-tropical cyclone Debbie

- Rainfall was well above the March average at all metropolitan sites; record high at Amberley, Logan City Water Treatment Plant and Brisbane Aero
- Brisbane recorded between 300 mm and 400 for the month. The gauge at Brisbane City suffered equipment outages on the 30th; the true total is not known but is considerably higher than the reported 189.6 mm
- Ex-tropical cyclone Debbie tracked across the Brisbane area at the end of the month
- Heavy rainfall was recorded early on the 30th and overnight to the 31st across the metropolitan area, with flash-flooding in numerous suburbs during the 30th
- Amberley had its highest daily March rainfall on record on the 31st, with 143.6 mm, exceeding the site's March average in one day
- Major riverine flooding occurred in the Logan and Albert; Warrill Creek, Bremer River and Lockyer Creek

Extract from the Bureau of Meteorology's *Monthly Climate Summary for Brisbane* (3 April 2017).

For context, Amberley is located approximately 15 km west of the project, and Archerfield Airport 15 km east (Figure 3). Both of these sites received over 200 millimetres (mm) of rainfall during 30-31 March 2017 which is over 300% more than the average monthly rainfall (BOM 2017).

Inspections undertaken after this severe weather identified the localised flooding and erosion impacts in the Goodna Creek open space area as shown in Images 8 and 9 below. Remediation works were undertaken by the landscape contractor.



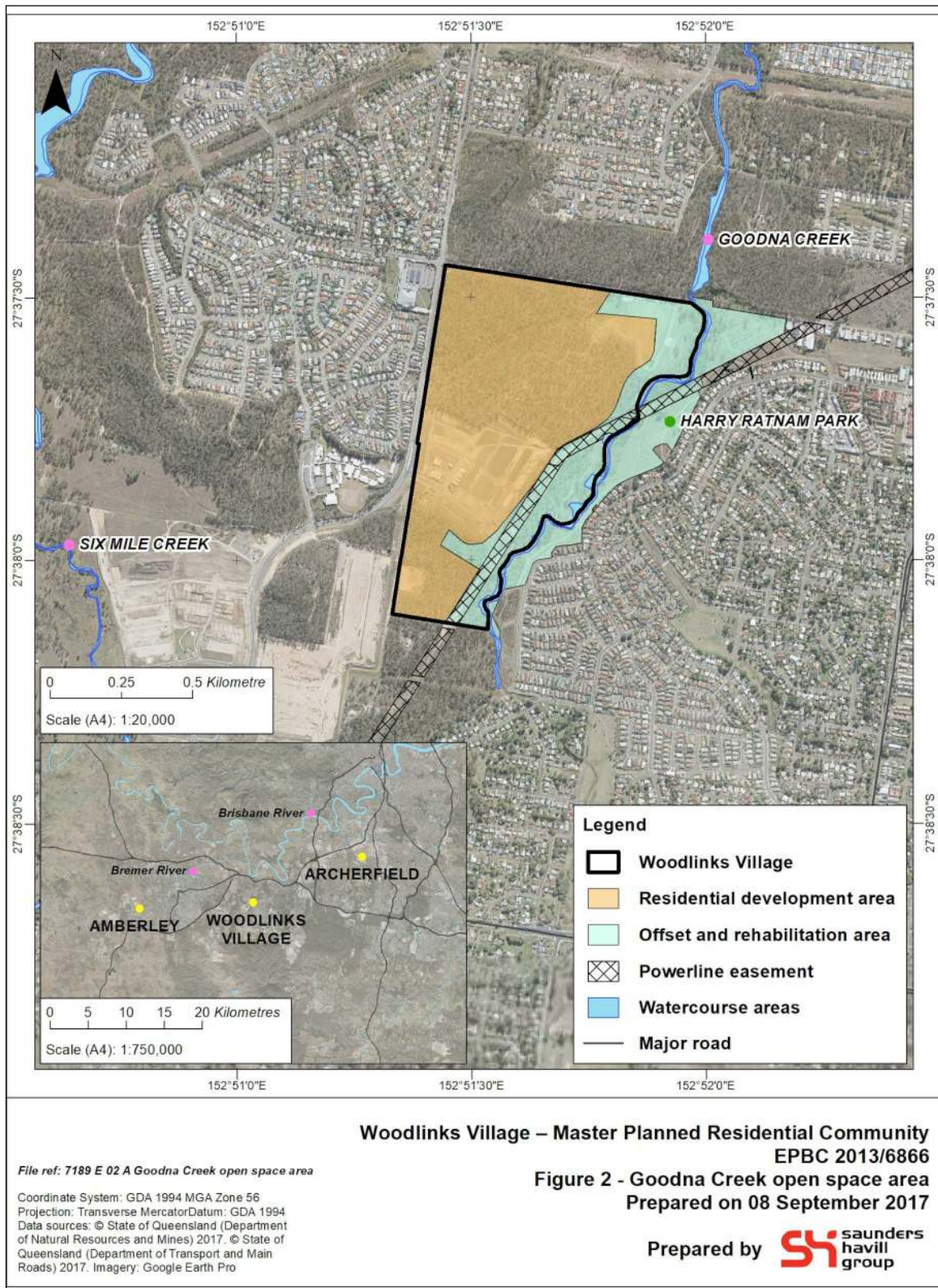
Image 8: Localised flooding after heavy rainfall and flooding from ex-tropical cyclone Debbie in the Goodna Creek open space area



Image 9: Powerline easement through the Goodna Creek open space area and erosion caused by heavy rainfall and flooding from ex-tropical cyclone Debbie



Figure 3: Goodna Creek open space area





6. EPBC approval conditions compliance table

The EPBC approval conditions for the project are replicated in Table 1 with a designation of compliance or non-compliance if the condition was applicable during the reporting period, and evidence and comments as required. A copy of the EPBC approval and conditions is provided in Appendix H.

Table 1: EPBC approval conditions compliance table

Condition number/reference	Condition	Is the project compliant with this condition?	Evidence/comments
1	The approval holder must not remove or fragment more than 25.9 hectares of habitat critical to the survival of the Koala. Impacts to habitat critical to the survival of the Koala must be limited to the project area shown in Attachment 1.	Compliant	<p>A total of approximately 15.4 ha of habitat critical to the survival of the koala has been cleared in the project area (refer to Figure 2 for the location).</p> <p>No clearing has occurred since the 2016 Annual Compliance Report.</p> <p>Note: at the time of assessment and approval, critical habitat was defined in accordance with the interim advice note. Under this advice, only portions of the site achieved the criteria. Current vegetation cleared on site equals 20.1 ha of which 15.4 ha is considered critical habitat in accordance with the approval.</p>
2	<p>The approval holder must prepare a Koala Management Plan to address management measures to avoid and mitigate impacts to Koalas.</p> <p>a) The Koala Management Plan must be submitted to the Minister for approval no less than three months prior to its intended implementation. Once approved the Koala Management Plan must</p>	Compliant	<p>On 15 October 2014 the Department approved the KMP and provided confirmation that the KMP met the requirements of condition 2.</p> <p>Implementation of the KMP is detailed in section 7 of this report and Table 2.</p>



Condition number/ reference	Condition	Is the project compliant with this condition?	Evidence/comments
	<p>be implemented.</p> <p>b) The Koala Management Plan must be implemented prior to commencement of the action, or as otherwise directed in writing by the Minister.</p> <p>c) The Koala Management Plan must include, but not be limited to:</p> <ul style="list-style-type: none"> i. details of pre-clearance survey methods for Koalas within the project area to be undertaken prior to the commencement of the action, ii. details of measures to mitigate impacts to Koalas within the project area, including, but not limited to: <ul style="list-style-type: none"> 1. provision for a qualified fauna spotter-catcher to undertake surveys and handling of Koalas prior to and during commencement of the action; 2. construction and permanent fauna exclusion fencing; 3. implementation of appropriate vehicle speed limits; 4. utilisation of plant species in the project area that will not attract Koalas to the project area; 5. implementation of traffic calming awareness signage; and 6. provision of off-leash dog facilities, on-leash areas and dog prohibited areas. iii. details of methods for Koala relocation activities, to be undertaken prior to and during the commencement of the action including the identification and description of suitable recipient Koala habitat. iv. process for reporting results from pre-clearance surveys and 		



Condition number/ reference	Condition	Is the project compliant with this condition?	Evidence/comments
	<p>relocation activities, including, but not be limited to:</p> <ol style="list-style-type: none"> 1. identification of a website in which information would be made available to the public, 2. timing and frequency for providing reporting information to the Department, 3. provision of the following details, at a minimum, to be recorded if any Koalas are captured during relocation activities: <ul style="list-style-type: none"> • sex • age class • time and date of capture • method of capture • location of capture (Global Positioning System (GPS)) • state of health • any veterinary intervention required • time held in captivity • location of release (GPS) and date 4. provision of the following details at a minimum to be recorded for incidents if any Koalas are injured or killed: <ul style="list-style-type: none"> • time, location (GPS) and nature of extent • details of Koalas (including sex and age class) • measures taken to address incident 		
3	To offset the residual impacts to Koala, the approval holder must	Compliant	As described in <i>Section 4 Offset Actions</i> , dedication and



Condition number/ reference	Condition	Is the project compliant with this condition?	Evidence/comments
	<p>implement mechanisms to provide enduring protection, over a minimum of 27 hectares, to the offset site, referred to as 'Goodna Creek Offset and Rehabilitation Area' as shown in Attachment 1.</p> <p>The protection mechanisms implemented by the approval holder, including but not limited to, land access agreements, dedication of land title and zoning under the Ipswich Planning Scheme must be consistent with the conditions of this approval and the principles of the EPBC Act Offsets Policy.</p> <p>Within three years of the date of the approval, the approval holder must provide written evidence to the Department demonstrating that the protection mechanisms have been implemented.</p>		<p>enduring protection of the offset area is a sequential process and 8 ha of rehabilitated land is awaiting registration from the Queensland Government title's office. Harry Ratnam Park is protected and has a full land access agreement in place and executed between approval holder and Ipswich City Council.</p> <p>In total, 24.3 ha is currently protected (including Goodna Creek) with only an 8.5 ha remaining which does not yet exist as an allotment due to the project not progressing to that phase and therefore there is no title in which to dedicate and apply a mechanism.</p> <p>At the two year mark post-commencement of the action, the development phases of the project, in line with weakening market conditions, have not progressed as quickly as forecast. A result of this may mean that the final tranche of offset land may not be created by the third year post approval. This will be monitored over the 2017-2018 reporting period and consulted with the Department. It is noted that project commencement occurred twelve months after the issuing of the approval.</p>
4	<p>The approval holder must prepare an Offset Management Plan to address significant residual impacts to Koalas as a result of the action:</p> <ul style="list-style-type: none"> a. impacts to Koalas that must be offset include: <ul style="list-style-type: none"> i. the loss of 25.9 hectares of habitat critical to the survival of the 	Compliant	<p>The Woodlinks Village Offset Management Plan (OMP) was approved by the Department on 15 October 2014 and the approval confirmed the OMP met the requirements of condition 4.</p>



Condition number/ reference	Condition	Is the project compliant with this condition?	Evidence/comments
	<p>Koala, and</p> <ul style="list-style-type: none"> ii. injury and mortality of Koalas. <p>b. the Offset Management Plan must include, but not be limited to:</p> <ul style="list-style-type: none"> i. a detailed description of all affected values and the extent and likely timing of the impact/s on each, ii. the offset delivery mechanism(s) comprising land offsets and management, and maintenance of Koala population offset within the 'Goodna Creek Corridor' as shown in Attachment 1, iii. detailed descriptions of how enhanced conservation outcomes for the affected Koalas will be achieved in accordance with the EPBC Act Offsets Policy, iv. contribution of funding to the management and maintenance of the Offset Management Plan, v. timeframes and key milestones for implementation of offsets including, but not limited to, beginning to implement the offset plan prior to commencement of the action, vi. discussion of the risks and uncertainties associated with proposed offsets, vii. mechanisms for monitoring and reporting viii. corrective actions and contingency measures to be implemented (including the timing of implementation of these) where monitoring of the offset area/s under the offset plan shows that offset strategies are not effectively achieving a net benefit or key milestones are not being or unlikely to be met, and ix. include textual descriptions and maps clearly defining the 		<p>Implementation of the OMP is described in section 8 of this report and Table 3.</p>



Condition number/ reference	Condition	Is the project compliant with this condition?	Evidence/comments
	<p>locations and boundaries of offset areas. These must be accompanied by a shapefile.</p> <p>c. The Offset Management Plan must be developed in consultation with the Department and other relevant stakeholders, including but not limited to, the Ipswich City Council and Ipswich Koala Protection Society.</p> <p>d. The approval holder must give consideration to how offsets will contribute to programs or incentives that align with the broader strategies and programs for the conservation and protection of Koalas.</p> <p>e. The Offset Management Plan must be submitted to the Minister for approval no less than three months prior to its intended implementation. Once approved the Offset Management Plan must be implemented.</p> <p>f. The Offset Management Plan must be implemented prior to the commencement of the action, or as otherwise directed in writing by the Minister.</p>		
5	The most recent approved version of the Koala Management Plan and Offset Management Plan must remain accessible to the public on the website of the approval holder for the duration of the action.	Compliant	The approved versions of the KMP and OMP are accessible to the public via the Woodlinks Village website.
6	Within ten days after the commencement of the action, the approval holder must advise the Department in writing of the actual date of commencement.	Compliant	The date of the commencement of the action was 24 June 2015 and the Department was notified on 25 June 2015.



Condition number/ reference	Condition	Is the project compliant with this condition?	Evidence/comments
7	The approval holder must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement the plans required by this approval, and make them available upon request to the Department or an independent auditor in accordance with section 458 of the EPBC Act, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the Department's website. The results of audits may also be publicised through the general media.	Compliant	The Saunders Havill Group records and holds all relevant information for this EPBC approval on behalf of the approval holder. Electronic records of all material are held collectively by the Saunders Havill Group and approval holder and will be made available upon request in accordance with section 458 of the EPBC Act, or if required to verify compliance with the conditions of approval.
8	Any potential or suspected non-compliance with these conditions of approval must be reported to the department in writing within 48 hours of the approval holder becoming aware of the potential or suspected non-compliance. Within three months of every 12 month anniversary of the commencement of the action, the approval holder must publish a report on their website addressing compliance with each of the conditions of this approval, including implementation of any plans as specified in the conditions. Documentary evidence providing proof of the date of publication must be provided to the Department at the same time as the compliance report is published.	Compliant	<p>The approval holder and Saunders Havill Group are not aware of a potential or suspected non-compliance with the conditions during the reporting period.</p> <p>The anniversary of the commencement of the action is 24 June. The annual deadline for publishing the report addressing compliance with each of the conditions of the approval (i.e. this Annual Compliance Report) is 24 September. Documentary evidence providing proof of the date of publication will be provided to the Department when the report is published.</p> <p>A letter from the Department, dated 7 March 2017, confirmed the previous Annual Compliance Report satisfied the requirements of the approval.</p>
9	Upon the direction of the Minister, the approval holder must ensure that an independent audit of compliance with conditions of approval is	Not applicable	The Minister has not directed the approval holder to conduct an independent audit of compliance with the



Condition number/reference	Condition	Is the project compliant with this condition?	Evidence/comments
	conducted and a report submitted to the Minister. The independent auditor must be approved by the Minister prior to the commencement of the audit. Audit criteria must be agreed to by the Minister and the audit report must address the criteria to the satisfaction of the Minister.		conditions of the approval.
10	If the approval holder wishes to carry out any activity otherwise than in accordance with a plan as specified in the conditions, the approval holder must submit to the Department for the Minister's written approval a revised version of that plan. The varied activity shall not commence until the Minister has approved the revised plan, that plan must be implemented in place of the plan originally approved.	Not applicable	The approval holder has not wished to carry out any activity that is not in accordance with the approved KMP and OMP.
11	If the Minister believes that it is necessary or convenient for the better protection of Koala to do so, the Minister may request that the approval holder make specified revisions to a plan specified in the conditions and submit the revised plan for the Minister's written approval. The approval holder must comply with any such request. The revised approved plan must be implemented. Unless the Minister has approved the revised plan, then the approval holder must continue to implement the plan originally approved, as specified in the conditions.	Not applicable	The Minister has not provided a direction to revise a plan specified in the conditions.
12	If, at any time after five years from the date of this approval, the approval holder has not commenced the action, then the approval holder must not connective without written agreement of the Minister.	Not applicable	The action commenced on 24 June 2015.



7. Koala Management Plan

A review of the KMP commitments and implementation is provided in Table 2.

Table 2: Koala Management Plan implementation

No.	Commitment	Evidence/comments/status
KMP-1	<p>Awareness</p> <p>To achieve the objectives of the KMP, it is important that site personnel (e.g. contractors and sub-contractors) are aware of the plan and the requirements pertaining to the protection of the Koala. As part of working on-site, the civil contractor is responsible for ensuring civil works personnel are aware of the KMP and impacts to the Koala are reported to the approval holder.</p>	<p>During the reporting period clearing activities were not undertaken however site personnel (e.g. contractors and sub-contractors) were made aware of the KMP requirements and could readily access a copy via the Woodlinks Village website at all times. While on-site, the temporary site office displayed a copy of the KMP. Induction material, daily meetings and reporting captured information pertaining to fauna management while the civil contractor's undertook work at Woodlinks Village.</p>
KMP-2	<p>Construction management - fauna</p> <p>Engage a registered fauna spotter/catcher to protect wildlife from the impacts of clearing. This includes the preparation of management plans (e.g. Wildlife Protection and Management Plan (WPMP) and Wildlife and Habitat Impact Mitigation Plan (WHIMP)), attendance at key project milestones such as the pre-start meeting, pre-clearance reporting and post-works reporting. The fauna spotter/catcher management plans incorporate methods for relocating fauna during clearing activities.</p>	<p>During the reporting period clearing activities were not undertaken and a fauna spotter/catcher was not required.</p> <p>For previous clearing activities (including pre-clearance and post-clearance), Queensland Fauna Consultancy (QFC) was engaged to provide fauna spotter/catcher services at Woodlinks Village. QFC reports include data on Koalas encountered during clearing and are published on the Woodlinks Village website. Reporting to the Department on clearing activities is undertaken in accordance with the approval conditions.</p>
KMP-3	<p>Construction management - vegetation clearing</p> <p>Clearing, rehabilitation and revegetation will occur in stages over the life of the project and pre-starts will be held with stakeholders.</p>	<p>Stage 1 of vegetation clearing was completed in a previous reporting period and future clearing will proceed in stages aligned with the planned development of residential land. Reporting associated with Stage 1 1 of</p>



No.	Commitment	Evidence/comments/status
	<p>Vegetation clearing activities are supervised by suitably qualified person/s that adhere to current industry practices that protect the welfare of animals. These activities require demarcating the vegetation clearing limit prior to commencing clearing work. Subsequent reporting is made available to stakeholders and the public.</p>	<p>clearing is available on the Woodlinks Village website.</p> <p>QFC supervised all vegetation clearing activities which included inspecting the demarcated boundary of the works area and ensuring clear paths for fauna to reach safe havens were provided. QFC's Standard Operating Procedure detailed in the pre-clearance report for Stage 1 details the processes employed to safely and effectively minimise the potential harm caused to fauna during vegetation clearance.</p>
KMP-4	<p>Construction management - vegetation clearing</p> <p>All site trees will be mulched for re-use in on-site erosion and sediment control and revegetation.</p>	<p>During the reporting period clearing activities were not undertaken however suitable trees are re-used on-site to meet erosion and sediment control and revegetation requirements wherever possible.</p>
KMP-5	<p>Construction management - vegetation clearing - fencing</p> <p>Prior to vegetation clearing, install a temporary fauna exclusion fence around the area of clearing works and maintain the fence until the completion of major civil works.</p>	<p>Stage 1 of vegetation clearing and major civil works were completed in a previous reporting period and QFC's reports detail the particulars of fencing installed.</p>
KMP-6	<p>Operational management – general</p> <p>Manage and protect the Goodna Creek open space area including:</p> <ul style="list-style-type: none"> • undertake weed management and revegetation activities • install landscape furniture and ecological feature signage • establish a cat and dog restriction zone • disallowing pet friendly areas (e.g. open grassed areas) • providing a dog off-leash area outside the corridor • inform new residents of the corridor values and importance. 	<p>Weed management and landscape (i.e. revegetation) works have been undertaken in the Goodna Creek open space area adjacent to the residential development area. These works were approved by Ipswich City Council and are currently under active management. The landscape works undertaken thus far have been successful with some areas requiring additional management as a result of the heavy rainfall and localised flooding in March 2017. The next phase of works will include the advancement of revegetation activities at Harry Ratnam Park.</p> <p>Future weed management and landscape activities in the corridor will be</p>



No.	Commitment	Evidence/comments/status
		<p>undertaken as residential development progresses north and south.</p> <p>Corridor signage has been installed to inform the local residents of the restrictions relating to dogs, however the powerline easement is used as a thoroughfare historically by non-residents walking dogs who do not access the area via the development. This issue is the result of prior trespassing on the land pre-development. As the development expands and the vacant land is transitioned to housing, the trespassing will diminish.</p> <p>Communication between the approval holder and residents is facilitated using the Woodlinks Village website, the on-site sales village and letterbox pamphlets. These provide current information on the commitments to protecting and improving the Goodna Creek open space area and how residents can contribute to protecting the Koala.</p>
KMP-7	<p>Operational management – fencing and planting</p> <p>Neighbourhood design will include road frontage between residential allotments and the Goodna Creek open space area. Additionally, landscape design will avoid planting known Koala food or shelter trees in areas outside of the Goodna Creek open space area to discourage Koalas from entering residential areas. Residents will be informed of the preference for planting non-Koala food and habitat trees on private land.</p>	<p>The residential layout constructed has provided road frontage to the open space area as an interface between the residential and open space land uses.</p> <p>Approved landscape works do not include Koala trees in the species mix. Community awareness of the Goodna Creek corridor and function is an ongoing campaign and the fencing requirements required are strongly emphasised.</p> <p>Residential buyers are informed of the Koala management measures as part of the land purchasing process. Additional information and guidelines are provided on the Woodlinks Village website and letterbox pamphlets (refer to the lifestyle guidelines for Woodlinks Village in Appendix I).</p>



No.	Commitment	Evidence/comments/status
		<p>At this stage no housing has been constructed adjoining the Goodna Creek offset area and therefore no exclusion fencing has been established. The sales contracts for the esplanade allotments include statutory fencing controls for new housing.</p>
KMP-8	<p>Operational management - traffic</p> <p>Install traffic calming measures and signage to alert drivers to the potential presence of fauna. Install fauna exclusion fencing in areas of high traffic volume.</p>	<p>Construction of roads within phase 1 was ongoing during the reporting period. Speed limits within the estate are a maximum of 50 km/h and the existing traffic volume has not necessitated the installation of fauna exclusion fencing along roads.</p> <p>No roads have been established along the Goodna Creek esplanade at this stage and thus traffic calming and awareness measures have not been implemented.</p>



8. Offset Management Plan

A review of the OMP commitments and implementation is provided in Table 3.

Table 3: Offset Management Plan implementation

No.	Commitment	Evidence/comments/status
OMP-1	Implement a vegetation clearing and management plan.	Vegetation clearing and management was coordinated between QFC, Ipswich City Council and the approval holder with guidance and reference to the approved OMP and KMP.
OMP-2	Engage a registered fauna spotter/catcher to protect wildlife from the impacts of clearing. Adhere to industry standards whereby construction activities work alongside, and under instruction from, fauna spotter/catcher personnel in order to avoid impacting wildlife.	<p>During the reporting period clearing activities were not undertaken and a fauna spotter/catcher was not required.</p> <p>For previous clearing activities (including pre-clearance and post-clearance), QFC was engaged to provide fauna spotter/catcher services at Woodlinks Village. The most recent post-clearing report (October 2015) is available on the Woodlinks Village website.</p> <p>Consultant QFC provides fauna spotter catcher services in line with current industry standards and in accordance with permit requirements administered by the Queensland Government.</p>
OMP-3	Rehabilitate (i.e. weed removal and revegetation) the Goodna Creek corridor offset area.	<p>As described in <i>Section 4 Offset Actions</i>, 8 ha of rehabilitated land is awaiting registration from the Queensland Government title's office. Harry Ratnam Park is protected and has a full land access agreement in place and executed between approval holder and Ipswich City Council.</p> <p>In total, 24.3 ha is currently protected (including Goodna Creek) with only an 8.5 ha remaining which does not yet exist as an allotment due to the</p>



No.	Commitment	Evidence/comments/status
		project not progressing to that phase and therefore there is no title in which to dedicate and apply a mechanism.
OMP-4	Improve access to the koala tree foliage harvest facility in Harry Ratnam Park.	The access upgrade infrastructure is proposed as part of the habitat improvement works to Harry Ratnam Park. These works have been documented, submitted to Council and approved. The approval holder has also executed a land access agreement with Ipswich City Council. At this stage the works are the farthest from the development front and thus have not commenced. They have been tendered and are proposed to commence in the 2017-2018 reporting period.
OMP-5	Commence offset area rehabilitation during stage 1 of the development with an on-maintenance period of 18 months. Each stage of rehabilitation is scheduled for completion within three years of stage commencement. After the completion of works, the proponent will maintain the offset area until it is ready for hand over and dedicated to Ipswich City Council.	Allotments 7000 and 7001 for rehabilitation met scheduling targets and are forecast to be handed over to Ipswich City Council. In total, 24.3 ha is currently protected (including Goodna Creek) with only an 8.5 ha (lot 7002) remaining which does not yet exist as an allotment due to the project not progressing to that phase and therefore there is no title in which to dedicate and apply a mechanism.
OMP-6	Publish the current OMP online.	The OMP was made available via the Woodlinks Village website.
OMP-7	Monitor landscape works until the relevant area is handed over to Ipswich City Council. Monitoring will include the identification of corrective actions required to progress the works towards the objective of handing over to Ipswich City Council.	<p>The approval holder engaged a landscaping contractor to undertake rehabilitation and regeneration works in phases 1 and 2 comprising 8 ha. These works were under active management by the contractor with periodic inspections by a registered landscape architect and Ipswich City Council identifying the corrective actions. Corrective actions are issued to the contractor for remedying.</p> <p>Additionally, field ecologists from Saunders Havill Group completed inspections on 22 August 2017 to confirm rehabilitation and other</p>



No.	Commitment	Evidence/comments/status
		improvement works.
OMP-8	All upfront costs associated with the weed management and revegetation of Goodna Creek will be the responsibility of the proponent.	Costs associated with the weed management and revegetation of the Goodna Creek open space area were, and will continue to be, met by the approval holder.
OMP-9	The offset area will be transferred to Ipswich City Council as part of their larger conservation land holdings.	As described in Section 4 Offset Actions, the offset area is made up of three newly created allotments, the Goodna Creek waterway and the existing Harry Ratnam Park (13.5 ha) managed by Ipswich City Council. At this stage lots 7000 and 7001 have been created and are awaiting registration with the Queensland Government title's office after which the registered title will be dedicated to Ipswich City Council. Lot 7002 is not yet created as the development has not advanced into this area.
OMP-10	Ongoing monitoring and reporting of works to assess the success of weed removal and control, natural regeneration and new threats that may arise. Progress the landscape works through the on-maintenance and off-maintenance periods in order to transfer ownership to Ipswich City Council.	<p>The protected Goodna Creek open space area where revegetation works are on-maintenance was regularly inspected by a registered landscape architect and Ipswich City Council to review the success of works completed. As part of this process, the both parties provided advice and directions to the contractor on additional works required to achieve the off-maintenance objective.</p> <p>The success of landscape works was hindered by the heavy rainfall and localised flooding in March 2017. This triggered remedial works to address the damage.</p>
OMP-11	Inform the public on the progress of weed removal and control and landscape works in the Goonda Creek open space area in a timely manner.	This Annual Compliance Report delivers an assessment of the progress of phases 1 and 2 of landscape works (weed control and rehabilitation) for the project and will be made available on the Woodlinks Village website.



Appendices

Appendix A

Lot 7000 operational works drawings

Appendix B

Lot 7001 operational works drawings

Appendix C

Lots 7000 and 7001 operational works approval

Appendix D

Lots 7000 and 7001 photos of rehabilitation works

Appendix E

Survey plan of created lot 7000

Appendix F

Harry Ratnam Park operational works drawings

Appendix G

Land access agreement

Appendix H

EPBC approval and conditions granted 4 March 2014

Appendix I

Lifestyle guidelines for Woodlinks Village

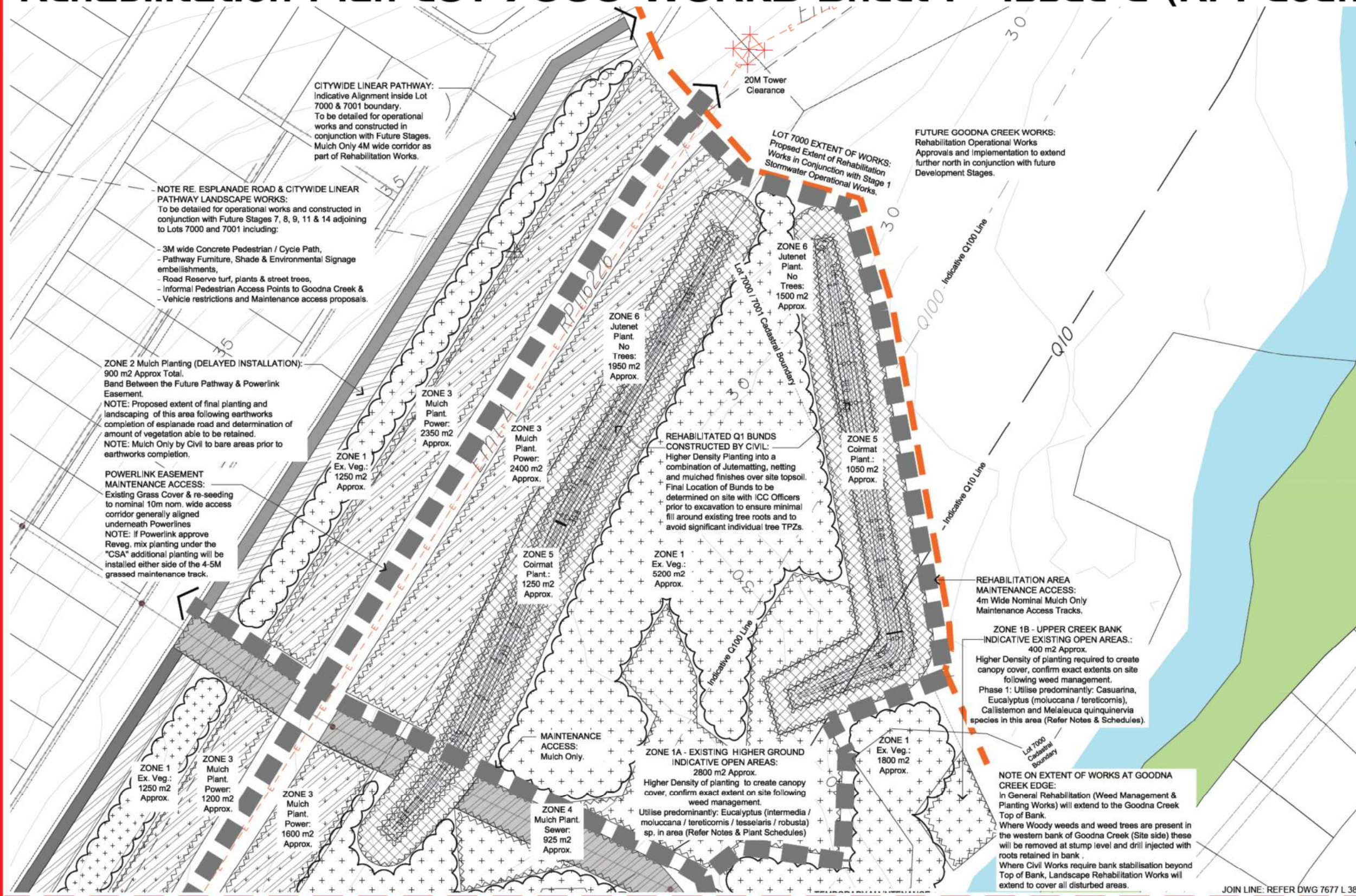


Appendix A

Lot 7000 operational works drawings

Woodlinks Village Estate - Onsite Goodna Creek Works

Rehabilitation Plan LOT 7000 WORKS Sheet I - Issue C (RFI Council)



LEGEND

LEGEND: to be read in conjunction with accompanying SHG & ICC Detail Drawings, Specifications and Schedules that form part of the detailed landscape documentation set.

REFER TO DWG 7677 L36 REHABILITATION NOTES FOR DETAILED DESCRIPTIONS

REFER TO DWGS 7677 L41-45 FOR DETAILED PLANT SCHEDULES

- ZONES 1, 1A & 1B**
Ex. Veg. (See Notes)
EXISTING VEGETATION COVER - INFILL OPEN AREAS WITH REINFORCEMENT PLANTING AS REQUIRED TO EXISTING BARE AREAS & BARE AREAS AFTER INITIAL WEED MANAGEMENT
- ZONE 2**
Mulch Plant.
DISTURBED AREAS EXISTING ON SITE & FOLLOWING EARTHWORKS - MULCHED PLANTING AREAS, TIERED PLANTING STRUCTURE
- ZONE 3**
Mulch Plant. Power.
POWERLINE EASEMENT - MULCHED PLANTING AREAS, NO TREES OR LARGE SHRUBS PLANTING STRUCTURE
- ZONE 4**
Mulch Plant. Sewer
SEWER PIPE DISTURBANCE - MULCHED PLANTING AREAS, NO TREES OR LARGE SHRUBS PLANTING STRUCTURE
- ZONE 5**
Coirmatting Plant.
COIRMATTING PLANTING AREAS - TIERED PLANTING STRUCTURE
- ZONE 6**
Jutenet Plant No Trees
JUTENETTING & MULCH - NO TREES OR LARGE SHRUBS PLANTING STRUCTURE
- CONCRETE PEDESTRIAN / CYCLE PATH - 3M WIDE INSIDE PARK ALONGSIDE ESPLANADE ROAD, REFER TO FUTURE DETAILS
- MAINTENANCE TRACKS - REHABILITATION AREAS FOR ONGOING MANAGEMENT - REFER TO NOTES ON PLANS.

Pursuant to Section 336(b) of the Sustainable Planning Act 2009, this plan forms part of Council's approval for

Approval No: 2248-2015
Signed: [Signature]
Decision Date: 13/08/2015

SH saunders havill group 40 YEARS 1975-2015
web www.saundershavill.com
phone (07) 3251 9444 fax (07) 3251 9455
address 9 Thompson St Bowen Hills Q 4006
surveying town planning urban design environmental management landscape architecture

amendments:

Issue	Date	Details	Approved
A	28/04/15	Council Lodgement	GC
B	01/05/15	Tender	GC
C	07/07/15	Council RFI	GC

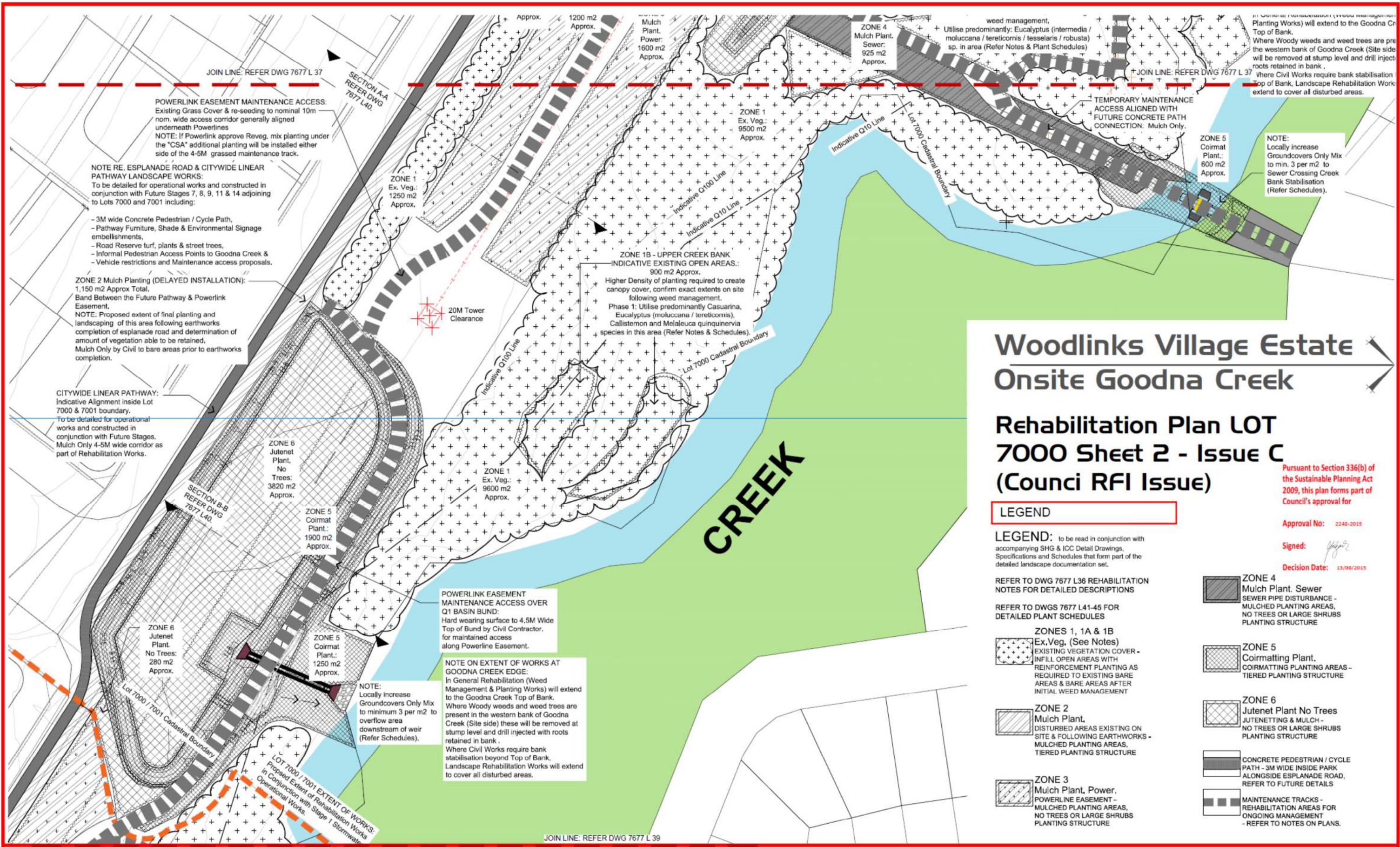
Date April 15

Plan of: Goodna Creek (Lots 7000 and 7001)
Rehabilitation Plan LOT 7000
Sheet 1
Drawn by: FW
Checked by: GC / MS
Project: Woodlinks Village Estate Stage 1A
Client: Canberra Estate Consortium No. 36

SCALE: 1:500 @ A1
1:1000 @ A3
0 5 10 25m



saunders havill group
Dwg No. 7677 L 37 C



Woodlinks Village Estate Onsite Goodna Creek

Rehabilitation Plan LOT 7000 Sheet 2 - Issue C (Council RFI Issue)

Pursuant to Section 336(b) of the Sustainable Planning Act 2009, this plan forms part of Council's approval for

Approval No: 2248-2015

Signed: *[Signature]*

Decision Date: 15/04/2015

LEGEND

LEGEND: to be read in conjunction with accompanying SHG & ICC Detail Drawings. Specifications and Schedules that form part of the detailed landscape documentation set.

REFER TO DWG 7677 L36 REHABILITATION NOTES FOR DETAILED DESCRIPTIONS

REFER TO DWGS 7677 L41-45 FOR DETAILED PLANT SCHEDULES

ZONES 1, 1A & 1B
Ex.Veg. (See Notes)
EXISTING VEGETATION COVER - INFILL OPEN AREAS WITH REINFORCEMENT PLANTING AS REQUIRED TO EXISTING BARE AREAS & BARE AREAS AFTER INITIAL WEED MANAGEMENT

ZONE 2
Mulch Plant.
DISTURBED AREAS EXISTING ON SITE & FOLLOWING EARTHWORKS - MULCHED PLANTING AREAS, TIERED PLANTING STRUCTURE

ZONE 3
Mulch Plant, Power.
POWERLINE EASEMENT - MULCHED PLANTING AREAS, NO TREES OR LARGE SHRUBS PLANTING STRUCTURE

ZONE 4
Mulch Plant. Sewer
SEWER PIPE DISTURBANCE - MULCHED PLANTING AREAS, NO TREES OR LARGE SHRUBS PLANTING STRUCTURE

ZONE 5
Coirmatting Plant.
COIRMATTING PLANTING AREAS - TIERED PLANTING STRUCTURE

ZONE 6
Jutenet Plant No Trees
JUTENETTING & MULCH - NO TREES OR LARGE SHRUBS PLANTING STRUCTURE

CONCRETE PEDESTRIAN / CYCLE PATH - 3M WIDE INSIDE PARK ALONGSIDE ESPLANADE ROAD, REFER TO FUTURE DETAILS

MAINTENANCE TRACKS - REHABILITATION AREAS FOR ONGOING MANAGEMENT - REFER TO NOTES ON PLANS.

saunders havill group 40 YEARS 1974-2014
 www.saundershavill.com
 phone (07) 3251 9444 fax (07) 3251 9455
 address 9 Thompson St Bowen Hills Q 4006
 surveying town planning urban design environmental management landscape architecture

amendments:

Issue	Date	Details	Approved
A	28/04/15	Council Lodgement	GC
B	01/05/15	Tender	GC
C	16/07/15	Council RFI Issue	GC

Date April 15

Plan of: Goodna Creek (Lots 7000 and 7001)
 Rehabilitation Plan lot 7000
 Sheet 2

Drawn by.	FW	Project:	Woodlinks Village Estate Stage 1A
Checked by:	GC / MS	Client:	Canberra Estate Consortium No. 36



saunders havill group

Dwg No. 7677 L 38 C

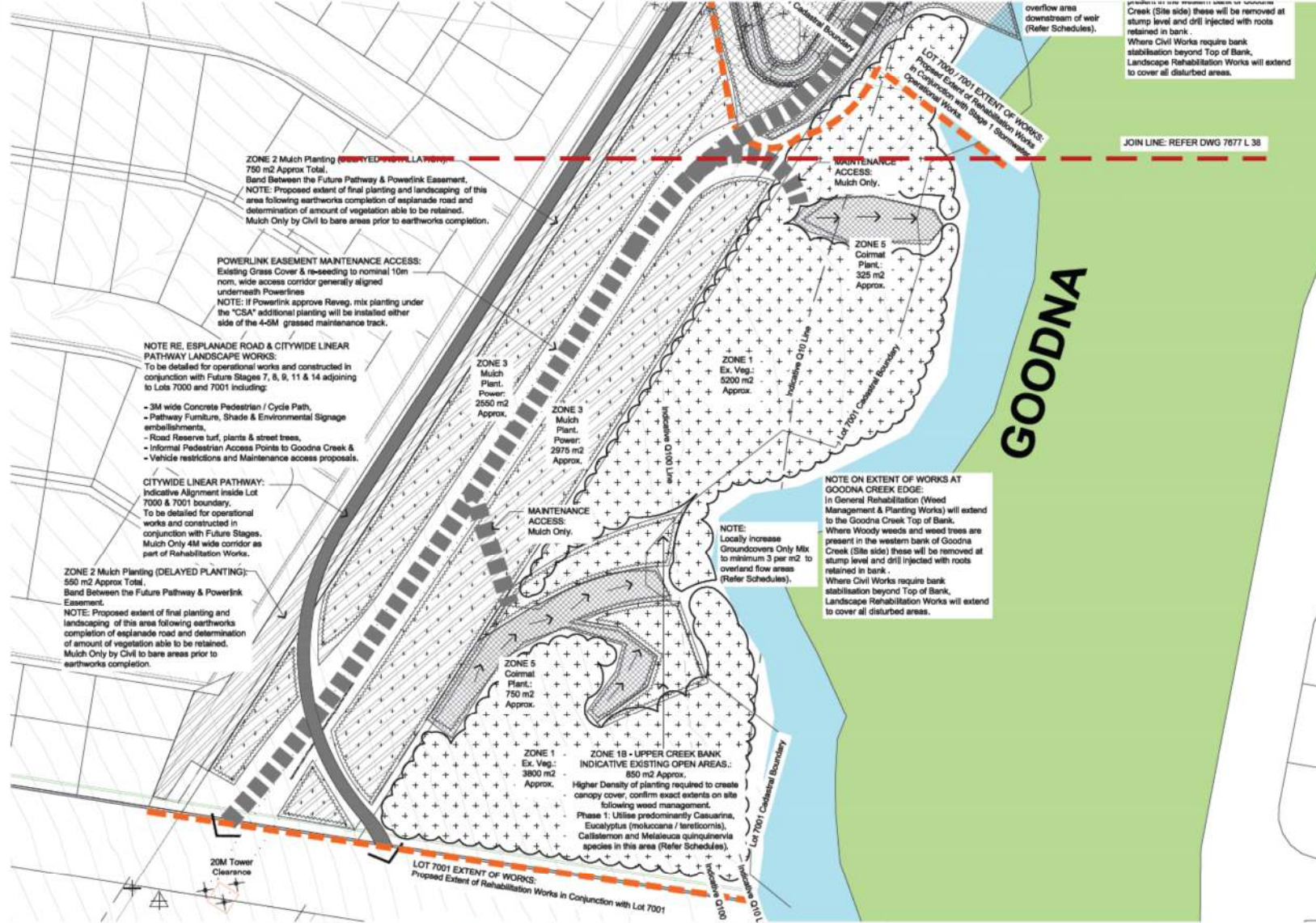


Appendix B

Lot 700I operational works drawings

Woodlinks Village Estate - Onsite Goodna Creek Works

Rehabilitation Plan LOT 7001 Sheet 3 - Issue C (Council RFI Issue)



LEGEND

- LEGEND:** to be read in conjunction with accompanying SHG & ICC Detail Drawings, Specifications and Schedules that form part of the detailed landscape documentation set.
- REFER TO DWG 7677 L41-45 FOR DETAILED PLANT SCHEDULES
- ZONES 1, 1A & 1B
Ex. Veg. (See Notes)
EXISTING VEGETATION COVER - INFILL OPEN AREAS WITH REINFORCEMENT PLANTING AS REQUIRED TO EXISTING BARE AREAS & BARE AREAS AFTER INITIAL WEED MANAGEMENT
 - ZONE 2
Mulch Plant.
DISTURBED AREAS EXISTING ON SITE & FOLLOWING EARTHWORKS - MULCHED PLANTING AREAS, TIERED PLANTING STRUCTURE
 - ZONE 3
Mulch Plant. Power.
POWERLINE EASEMENT - MULCHED PLANTING AREAS, NO TREES OR LARGE SHRUBS PLANTING STRUCTURE
 - ZONE 4
Mulch Plant. Sewer
SEWER PIPE DISTURBANCE - MULCHED PLANTING AREAS, NO TREES OR LARGE SHRUBS PLANTING STRUCTURE
 - ZONE 5
Coirmatting Plant. AREAS - TIERED PLANTING STRUCTURE
 - ZONE 6
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 - CONCRETE PEDESTRIAN / CYCLE PATH - 3M WIDE INSIDE PARK ALONGSIDE ESPLANADE ROAD, REFER TO FUTURE DETAILS
 - MAINTENANCE TRACKS - REHABILITATION AREAS FOR ONGOING MANAGEMENT - REFER TO NOTES ON PLANS.

Pursuant to Section 336(b) of the Sustainable Planning Act 2009, this plan forms part of Council's approval for

Approval No: 2340-2023

Signed: [Signature]

Decision Date: 15/06/2023

saunders havill group 40 YEARS 1973-2013

web www.saundershavill.com
phone (07) 3251 9444 fax (07) 3251 9455
address 9 Thompson St Bowen Hills Q 4006

■ surveying ■ town planning ■ urban design ■ environmental management ■ landscape architecture

Issue	Date	Details	Approved
A	29/04/18	Council Lajpegment	GC
B	01/05/18	Tender	GC
C	18/07/18	Council RFI Issue	GC

Date April 15

Plan of: Goodna Creek (Lots 7000 and 7001)
Rehabilitation Plan LOT 7001
Sheet 3 LOT 7001

Drawn by: FW Project: Woodlinks Village Estate Stage 1A
Checked by: GC / MS Client: Canberra Estate Consortium No. 36

SCALE: 1:500 @ A1
1:1000 @ A3



saunders havill group

Dwg No. 7677 L 39 C



Appendix C

Lots 7000 and 7001 operational works approval

Your reference
Our reference 2248/2015/OW:PC
Contact Officer Peter Clifton
Telephone (07) 3810 6828



Ipswich City Council

45 Roderick St
PO Box 191
Ipswich QLD 4305
Australia

Tel (07) 3810 6666
Fax (07) 3810 6731
Email council@ipswich.qld.gov.au
Web www.ipswich.qld.gov.au

Canberra Estates Consortium No. 36 Pty Ltd
C/- Saunders Havill Group
9 Thompson Street
BOWEN HILLS QLD 4006

14 August 2015

SUSTAINABLE PLANNING ACT 2009

DEVELOPMENT APPLICATION DECISION NOTICE

Application Details

Application No: 2248/2015/OW
Real Property Description: Lot 1 SP 266990 PAR GOODNA
Property Location: 246 Collingwood Drive, COLLINGWOOD PARK QLD 4301
Decision Date: 13 August 2015
Decision: This application is approved subject to the conditions listed below
Decision Authority: Team Coordinator (Environment)

1. Decision Details:

Development	Approval Type	Decision	Relevant Period
Operational Works Rehabilitation - Woodlinks Village Stage 1	Development Permit	Approved subject to the conditions set out in Attachment A – Assessment Manager Conditions	Two (2) years

2. Approved Documents

No additional supporting material has been submitted with this application.

3. Approved Plans

- (a) The approved plans for this development approval are:
- (i) the plans referred to in the table of approved plans (including any amendments that are required to be made to those plans); and
- (ii) where the amended versions of the plans referred to in the table of approved plans have been approved by the assessment manager, the amended versions of those plans.
- (b) The approved plans are attached to this decision notice at Attachment B.

APPROVED PLANS				
Plan No	Description & Revision No.	Prepared By	Date	Amendments Required
7677L30C	Weed Management & Rehabilitation Works Lots 7000 & 7001	Saunders Havill Group	16 July 2015	N/A
7677L31C	Weed Management Plan – Issue C	Saunders Havill Group	16 July 2015	N/A
7677L32C	Weed Management Notes – Issue C	Saunders Havill Group	16 July 2015	Amend in accordance with conditions 9 (a) & 10.
7677L33C	Weed Treatment & Removal Strategy – Issue C, Sheet 1	Saunders Havill Group	17 July 2015	N/A
7677L34C	Weed Treatment & Removal Strategy – Issue C, Sheet 2	Saunders Havill Group	17 July 2015	N/A
7677L35C	Weed Treatment & Removal Strategy – Issue C, Sheet 3	Saunders Havill Group	16 July 2015	N/A
7677L36C	Rehabilitation Notes 7000 and 7001– Issue C	Saunders Havill Group	16 July 2015	N/A
7677L37C	Goodna Creek (Lots 7000 & 7001) Rehabilitation Plan Lot 7001 Sheet 1	Saunders Havill Group	7 July 2015	N/A
7677L38C	Goodna Creek (Lots 7000 & 7001) Rehabilitation Plan Lot 7001 Sheet 2	Saunders Havill Group	16 July 2015	N/A
7677L39C	Goodna Creek (Lots 7000 & 7001) Rehabilitation Plan Lot 7001 Sheet 3	Saunders Havill Group	16 July 2015	N/A
7677L40C	Goodna Creek (Lots 7000 & 7001) Rehabilitation Sections	Saunders Havill Group	16 July 2015	N/A
7677L41C	Lot 7000 Rehabilitation Plants Sheets 1	Saunders Havill Group	16 July 2015	Amend in accordance with conditions 9 (b).
7677L42C	Lot 7000 Rehabilitation Plants Sheet 2 – Issue C	Saunders Havill Group	16 July 2015	Amend in accordance with conditions 9 (b).

7677L43C	Lot 7000 Rehabilitation Plants Sheet 3 – Issue C	Saunders Havill Group	16 July 2015	Amend in accordance with conditions 9 (b).
7677L44C	Lot 7001 Rehabilitation Plants Sheet 1 – Issue C	Saunders Havill Group	16 July 2015	Amend in accordance with conditions 9 (b).
7677L45C	Lot 7001 Rehabilitation Plants Sheet 2 – Issue C	Saunders Havill Group	16 July 2015	Amend in accordance with conditions 9 (b).
7677L46C	Rehabilitation Zone Notes Lots 7000 and 7001	Saunders Havill Group	16 July 2015	N/A

4. **Referral Agencies**

Not applicable to this decision.

5. **Conditions of Assessment Manager (Ipswich City Council)**

Refer Attachment A

6. **When Approval Lapses**

The relevant period for this approval is outlined above in “Decision Details” part 1 of this decision notice, starting the day the approval takes effect. This development approval lapses in accordance with section 341 of the *Sustainable Planning Act 2009*.

Should the assessment manager determine a new relevant period in writing, prior to the lapsing of this approval, then the use may continue for a further period of time, as specified in writing by the assessment manager.

7. **Appeal Rights**

Attachment C contains an extract from the *Sustainable Planning Act 2009* which details the applicant’s appeal rights and the appeal rights of any submitters regarding this decision.

Yours faithfully



for Jane Kilgour

TEAM COORDINATOR (ENVIRONMENT)

Encl:

- A. Assessment Manager Conditions and Advice (Attachment A)
- B. Approved Plans
- C. *Sustainable Planning Act 2009* extract on appeal rights (Attachment C)

Attachment A
Assessment Manager (Ipswich City Council) Conditions
Conditions applicable to this approval under Sustainable Planning Act:

Conditions of Approval

No.	Condition	The time by which the condition must be met, implemented or complied with
1.	Basis of Approval	
	<p>This approval incorporates as a condition, the applicant's common material (as defined in Schedule 3 – Definitions of the <i>Sustainable Planning Act 2009</i>) for the application and adherence to all relevant Council Local Laws and/or the <i>Ipswich Planning Scheme</i> (including Planning Scheme Policies) unless otherwise varied by this approval or varied by a condition of this approval.</p> <p>Note: Any variation in the development from that approved herein may constitute assessable development pursuant to the <i>Sustainable Planning Act 2009</i>.</p>	From the commencement of the construction of the development and at all times thereafter.
2.	Minor Alterations	
	Notwithstanding the requirements detailed in this approval, any other minor alterations accepted in writing by the assessment manager will suffice.	At all times after the approval is granted.
3.	Development Plans & Supporting Material	
	The applicant must undertake the development generally in accordance with the approved plans and supporting material outlined in parts 2 and 3 of this development permit.	From the commencement of the construction of the development and at all times thereafter.
4.	Hours of Construction	
	Unless otherwise approved in writing by the assessment manager construction works must only occur within the hours as defined in <i>Planning Scheme Policy 3 – General Works Part 5, Section 5.1.3</i> .	At all times during construction activities and until works are accepted off maintenance.
5.	Construction Standard and Requirements	
	The applicant must comply with the requirements of <i>Planning Scheme Policy 3 – General Works</i> of the <i>Ipswich Planning Scheme</i> when undertaking all public (municipal) works.	At all times during construction activities and until works are accepted off maintenance.

6.	Construction Pre-requisites	
(a)	The applicant must comply with pre-start meeting and construction pre-requisite requirements, including provision of relevant bonds and amended drawings, as detailed in Council's <i>Planning Scheme Policy 3 – General Works Part 5</i> .	Prior to commencement of any construction.
(b)	The applicant must take due regard of all existing services when undertaking works associated with this development.	At all times during construction activities and until works are accepted off maintenance.
(c)	The applicant must alter any services when the relevant authority or assessment manager determines that works associated with this development has an impact upon any existing services.	At all times during construction activities and until works are accepted off maintenance.
(d)	Any fauna exclusion fencing must be erected in accordance with the supervising spotter catcher recommendations.	Prior to commencement of any construction and until works are completed.
7.	Fauna Management	
	The applicant must engage a spotter catcher licensed under the <i>Nature Conservation Act 1992</i> by the Department of Environment and Heritage Protection, to assess the site, supervise any vegetation removal and ensure that all native fauna including native bees have been identified, relocated and discouraged from returning prior to habitat disturbance.	Prior to the commencement of any vegetation clearing works.
8.	Disposal of Cleared Vegetation	
	The applicant must dispose of cleared vegetation in accordance with <i>Planning Scheme Policy 3</i> .	From the commencement of works and at all times thereafter.
9.	Amendments & Further Submissions	
	The applicant must incorporate or comply with the following amendments and clarifications:	Prior to pre-start Meeting or as otherwise stated below.
(a)	The Schedule of Works Items and Sequencing must be amended in accordance with condition 10 of this approval.	
(b)	Species must be amended as shown in red on the approved plans.	
(c)	The applicant must seek the agreement with the assessment manager on site where dumped rock is to be used as an erosion mitigation measure.	
10.	Off maintenance	
	The following standards must be achieved: (i) A minimum 80% plant survival rate must be achieved;	Prior to acceptance of the works off maintenance

	<ul style="list-style-type: none"><li data-bbox="309 232 767 264">(ii) The works must be weed free;<li data-bbox="309 309 999 488">(iii) The site the subject of the works must be free of any signs of active erosion and be adequately stabilised through planting and successful establishment in accordance with the approved plans; and<li data-bbox="309 533 1011 678">(iv) The works must be maintained for a period of eighteen (18) months following acceptance of the works to ensure adequate vegetation establishment and stabilisation of the waterway.	
--	--	--

Advice

***The following advices are offered for your information only
and should not be viewed as mandatory conditions of this approval.***

Assessment Manager (Ipswich City Council)

SPECIAL ADVICES

1.	Bonds
	<p>In relation to any bonds required in accordance with <i>Planning Scheme Policy 3</i> the relevant Bond and Licence Deeds must be completed and submitted (as hard copies) to Council at the appropriate times. The Bond, Licence Deed and conditions of security payment can be found online at www.ipswichplanning.com.au/development-planning/development-planning-information.</p> <p>Council's preference is for bonds to be submitted by way of a Bank Guarantee.</p>
2.	Fire Ants
(a)	In accordance with the <i>Plant Protection Act 1989</i> and the <i>Plant Protection Regulation 2002</i> , a quarantine notice has been issued for the State of Queensland to prevent the spread of the Red Imported Fire Ant (ant species <i>solenopsis invicta</i>) and to eradicate it from the State.
(b)	<p>It is the legal obligation of the land owner or any consultant or contractor employed by the land owner to report the presence or suspicion of Fire Ants to Biosecurity Queensland on 13 25 23 within 24 hours of becoming aware of the presence or suspicion, and to advise in writing within seven days to:</p> <p>Biosecurity Queensland Department of Agriculture, Forestry and Fisheries GPO Box 46 BRISBANE QLD 4001</p>
(c)	It should be noted that the movement of Fire Ants is prohibited, unless under the conditions of an Inspectors Approval. More information can be obtained from the Department of Agriculture, Forestry and Fisheries website www.daff.qld.gov.au .
(d)	The land over which you have made a development application is within a suburb known to have Fire Ants and as such is within a "Restricted Area". The presence of Fire Ants on the site may affect the nature, form and extent of works permitted on the site. In view of this it will be necessary for you to contact the Department of Employment, Economic Development and Innovation to investigate the site and for you to implement any necessary matters required by that Department prior to the commencement of any works.

No referral agencies are applicable to this application.

Attachment C

Appeal Rights

The following is an extract from the *Sustainable Planning Act 2009*

Chapter 6, Part 8 Division 1

Division 1 Changing decision notices and approvals during applicant's appeal period

360 Application of div 1

This division applies only during the applicant's appeal period.

361 Applicant may make representations about decision

- (1) The applicant may make written representations to the assessment manager about—
 - (a) a matter stated in the decision notice, other than a refusal or a matter about which a concurrence agency told the assessment manager under section 287(1) or (5); or
 - (b) the standard conditions applying to a deemed approval.
- (2) However, the applicant cannot make representations under subsection (1)(a) about a condition attached to an approval under the direction of the Minister.

362 Assessment manager to consider representations

The assessment manager must consider any representations made to the assessment manager under section 361.

363 Decision about representations

- (1) If the assessment manager agrees with any of the representations about a decision notice or a deemed approval, the assessment manager must give a new decision notice (the *negotiated decision notice*) to—
 - (a) the applicant; and
 - (b) each principal submitter; and
 - (c) each referral agency; and
 - (d) if the assessment manager is not the local government and the development is in a local government area—the local government.
- (2) Before the assessment manager agrees to a change under this section, the assessment manager must consider the matters the assessment manager was required to consider in assessing the application, to the extent the matters are relevant.
- (3) Only 1 negotiated decision notice may be given.
- (4) The negotiated decision notice—
 - (a) must be given within 5 business days after the day the assessment manager agrees with the representations; and
 - (b) must comply with section 335; and
 - (c) must state the nature of the changes; and
 - (d) replaces—
 - (i) the decision notice previously given; or
 - (ii) if a decision notice was not previously given and the negotiated decision notice relates to a deemed approval—the standard conditions applying to the deemed approval.
- (5) If the assessment manager does not agree with any of the representations, the assessment manager must, within 5 business days after the day the assessment manager decides not to agree with any of the representations, give written notice to the applicant stating the decision about the representations.

366 Applicant may suspend applicant's appeal period

- (1) If the applicant needs more time to make the representations, the applicant may, by written notice given to the assessment manager, suspend the applicant's appeal period.
- (2) The applicant may act under subsection (1) only once.
- (3) If the representations are not made within 20 business days after the day written notice was given to the assessment manager, the balance of the applicant's appeal period restarts.
- (4) If the representations are made within 20 business days after the day written notice was given to the assessment manager—

- (a) if the applicant gives the assessment manager a notice withdrawing the notice under subsection (1)—the balance of the applicant's appeal period restarts the day after the assessment manager receives the notice of withdrawal; or
- (b) if the assessment manager gives the applicant a notice under section 363(5)—the balance of the applicant's appeal period restarts the day after the applicant receives the notice; or
- (c) if the assessment manager gives the applicant a negotiated decision notice—the applicant's appeal period starts again the day after the applicant receives the negotiated decision notice.

Chapter 7, Part 1, Division 8

Division 8 Appeals to court relating to development applications and approvals

461 Appeals by applicants

- (1) An applicant for a development application may appeal to the court against any of the following—
 - (a) the refusal, or the refusal in part, of the development application;
 - (b) any condition of a development approval, another matter stated in a development approval and the identification or inclusion of a code under section 242;
 - (c) the decision to give a preliminary approval when a development permit was applied for;
 - (d) the length of a period mentioned in section 341;
 - (e) a deemed refusal of the development application.
- (2) An appeal under subsection (1)(a), (b), (c) or (d) must be started within 20 business days (the **applicant's appeal period**) after—
 - (a) if a decision notice or negotiated decision notice is given—the day the decision notice or negotiated decision notice is given to the applicant; or
 - (b) otherwise—the day a decision notice was required to be given to the applicant.
- (3) An appeal under subsection (1)(e) may be started at any time after the last day a decision on the matter should have been made.

462 Appeals by submitters—general

- (1) A submitter for a development application may appeal to the court only against—
 - (a) the part of the approval relating to the assessment manager's decision about any part of the application requiring impact assessment under section 314; or
 - (b) the part of the approval relating to the assessment manager's decision under section 327.
- (2) To the extent an appeal may be made under subsection (1), the appeal may be against 1 or more of the following—
 - (a) the giving of a development approval;
 - (b) any provision of the approval including—
 - (i) a condition of, or lack of condition for, the approval; or
 - (ii) the length of a period mentioned in section 341 for the approval.
- (3) However, a submitter may not appeal if the submitter—
 - (a) withdraws the submission before the application is decided; or
 - (b) has given the assessment manager a notice under section 339(1)(b)(ii).
- (4) The appeal must be started within 20 business days (the **submitter's appeal period**) after the decision notice or negotiated decision notice is given to the submitter.

463 Additional and extended appeal rights for submitters for particular development applications

- (1) This section applies to a development application to which chapter 9, part 7 applies.
- (2) A submitter of a properly made submission for the application may appeal to the court about a referral agency's response made by a prescribed concurrence agency for the application.
- (3) However, the submitter may only appeal against a referral agency's response to the extent it relates to—
 - (a) if the prescribed concurrence agency is the chief executive (environment)—development for an aquacultural ERA; or
 - (b) if the prescribed concurrence agency is the chief executive (fisheries)—development that is—
 - (i) a material change of use of premises for aquaculture; or
 - (ii) operational work that is the removal, damage or destruction of a marine plant.
- (4) Despite section 462(1), the submitter may appeal against the following matters for the application even if the matters relate to code assessment—
 - (a) a decision about a matter mentioned in section 462(2) if it is a decision of the chief executive (fisheries);
 - (b) a referral agency's response mentioned in subsection (2).

464 Appeals by advice agency submitters

- (1) Subsection (2) applies if an advice agency, in its response for an application, told the assessment manager to treat the response as a properly made submission.
- (2) The advice agency may, within the limits of its jurisdiction, appeal to the court about—
 - (a) any part of the approval relating to the assessment manager's decision about any part of the application requiring impact assessment under section 314; or
 - (b) any part of the approval relating to the assessment manager's decision under section 327.
- (3) The appeal must be started within 20 business days after the day the decision notice or negotiated decision notice is given to the advice agency as a submitter.
- (4) However, if the advice agency has given the assessment manager a notice under section 339(1)(b)(ii), the advice agency may not appeal the decision.

465 Appeals about decisions relating to extensions for approvals

- (1) For a development approval given for a development application, a person to whom a notice is given under section 389, other than a notice for a decision under section 386(2), may appeal to the court against the decision in the notice.
- (2) The appeal must be started within 20 business days after the day the notice of the decision is given to the person.
- (3) Also, a person who has made a request under section 383 may appeal to the court against a deemed refusal of the request.
- (4) An appeal under subsection (3) may be started at any time after the last day the decision on the matter should have been made.

466 Appeals about decisions relating to permissible changes

- (1) For a development approval given for a development application, the following persons may appeal to the court against a decision on a request to make a permissible change to the approval—
 - (a) if the responsible entity for making the change is the assessment manager for the application—
 - (i) the person who made the request; or
 - (ii) an entity that gave a notice under section 373 or a pre-request response notice about the request;
 - (b) if the responsible entity for making the change is a concurrence agency for the application—the person who made the request.
- (2) The appeal must be started within 20 business days after the day the person is given notice of the decision on the request under section 376.
- (3) Also, a person who has made a request under section 369 may appeal to the court against a deemed refusal of the request.
- (4) An appeal under subsection (3) may be started at any time after the last day the decision on the matter should have been made.

467 Appeals about changing or cancelling conditions imposed by assessment manager or concurrence agency

- (1) A person to whom a notice under section 378(9)(b) giving a decision to change or cancel a condition of a development approval has been given may appeal to the court against the decision in the notice.
- (2) The appeal must be started within 20 business days after the day the notice of the decision is given to the person.



Appendix D

Lots 7000 and 7001 photos of rehabilitation works





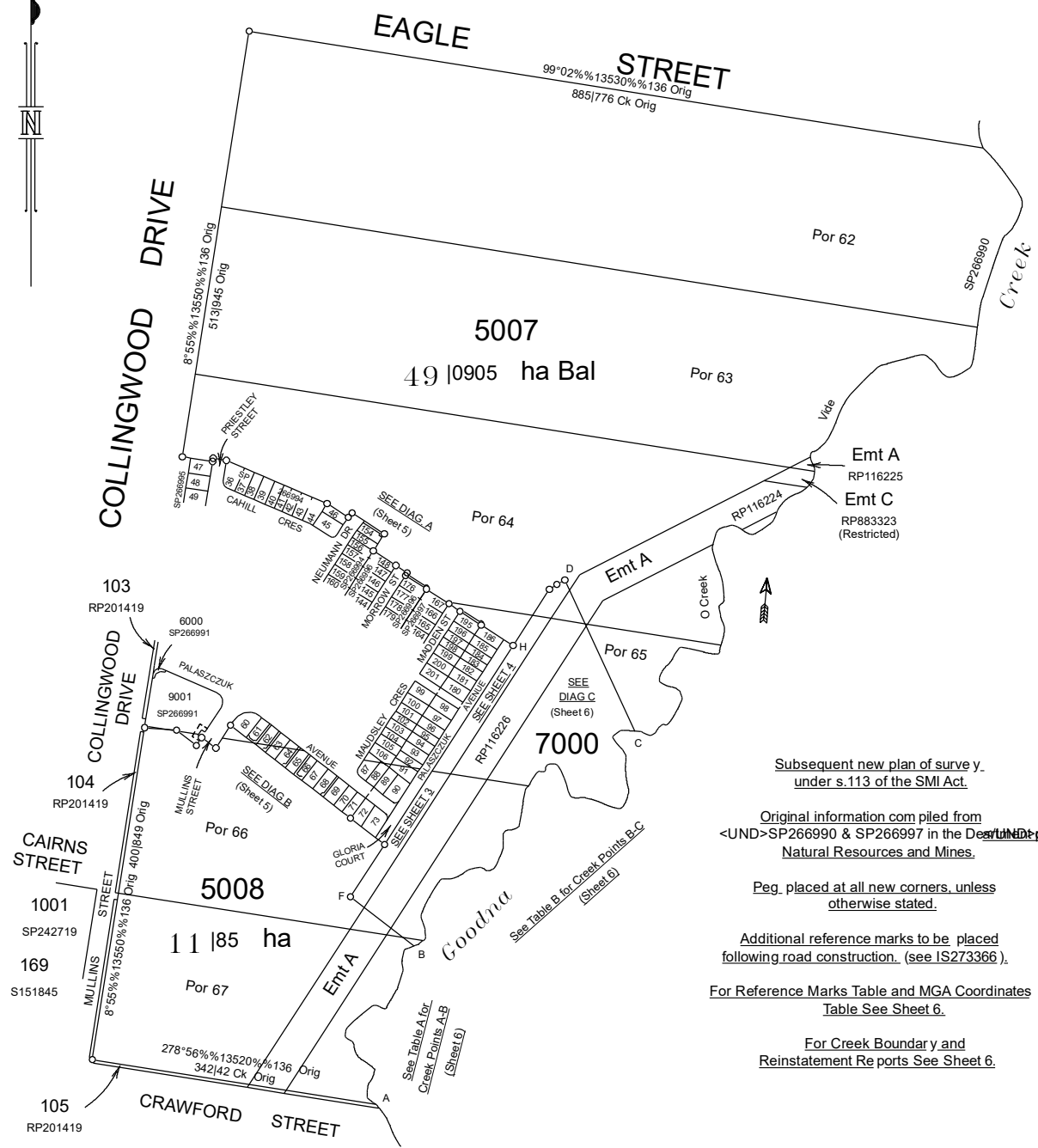




Appendix E

Survey plan of created lot 7000

PRELIMINARY



Subsequent new plan of survey y.
under s.113 of the SMI Act.

Original information com piled from
<UND>SP266990 & SP266997 in the Department of
Natural Resources and Mines.

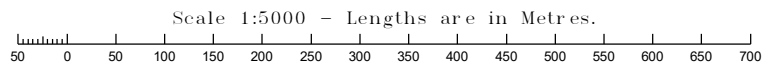
Peg. placed at all new corners, unless
otherwise stated.

Additional reference marks to be placed
following road construction. (see IS273366).

For Reference Marks Table and MGA Coordinates
Table See Sheet 6.

For Creek Boundary and
Reinstatement Reports See Sheet 6.

Area of New Road
4634 m%134



Plan of Lots 72, 73, 89-98, 180-186, 5007, 5008 & 7000 Cancelling Lot 5006 on SP266997		1:5000
IPSWICH CITY		STANDARD
COLLINGWOOD PARK		SP266998
MGA (Zone 56) by Permanent Marks	No	



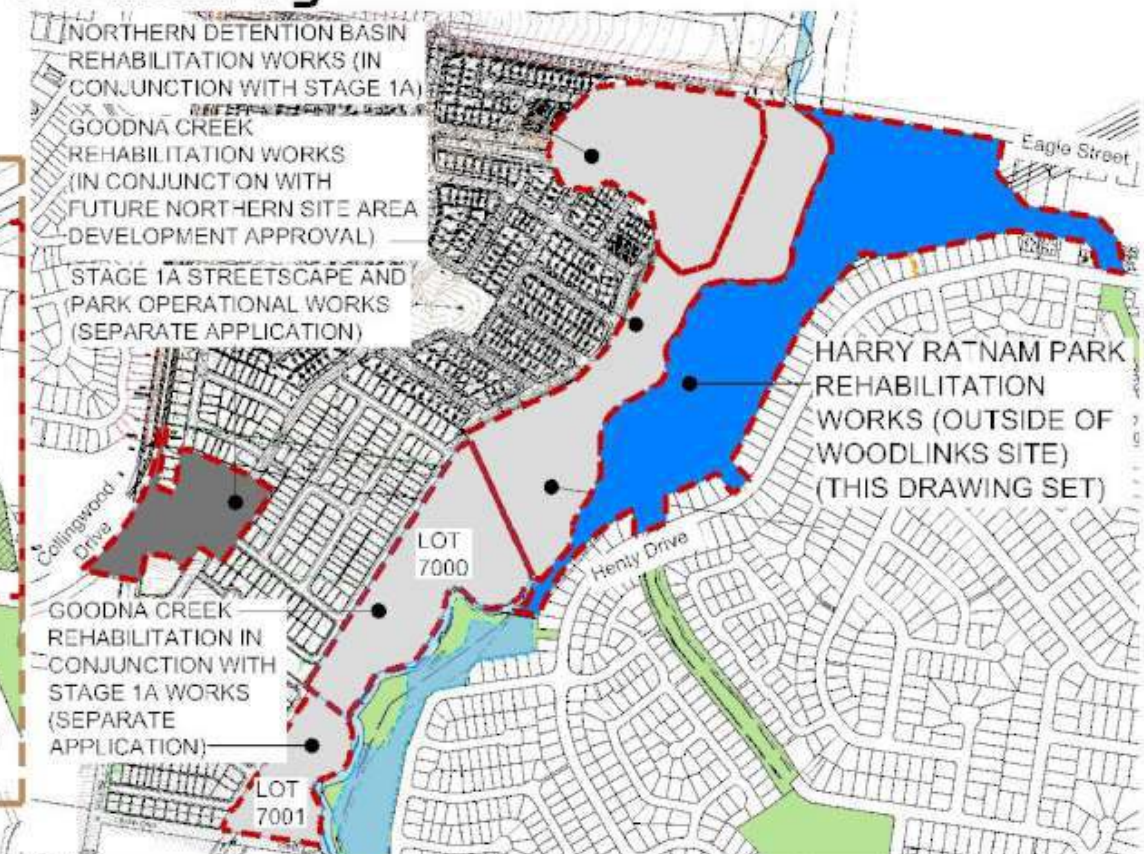
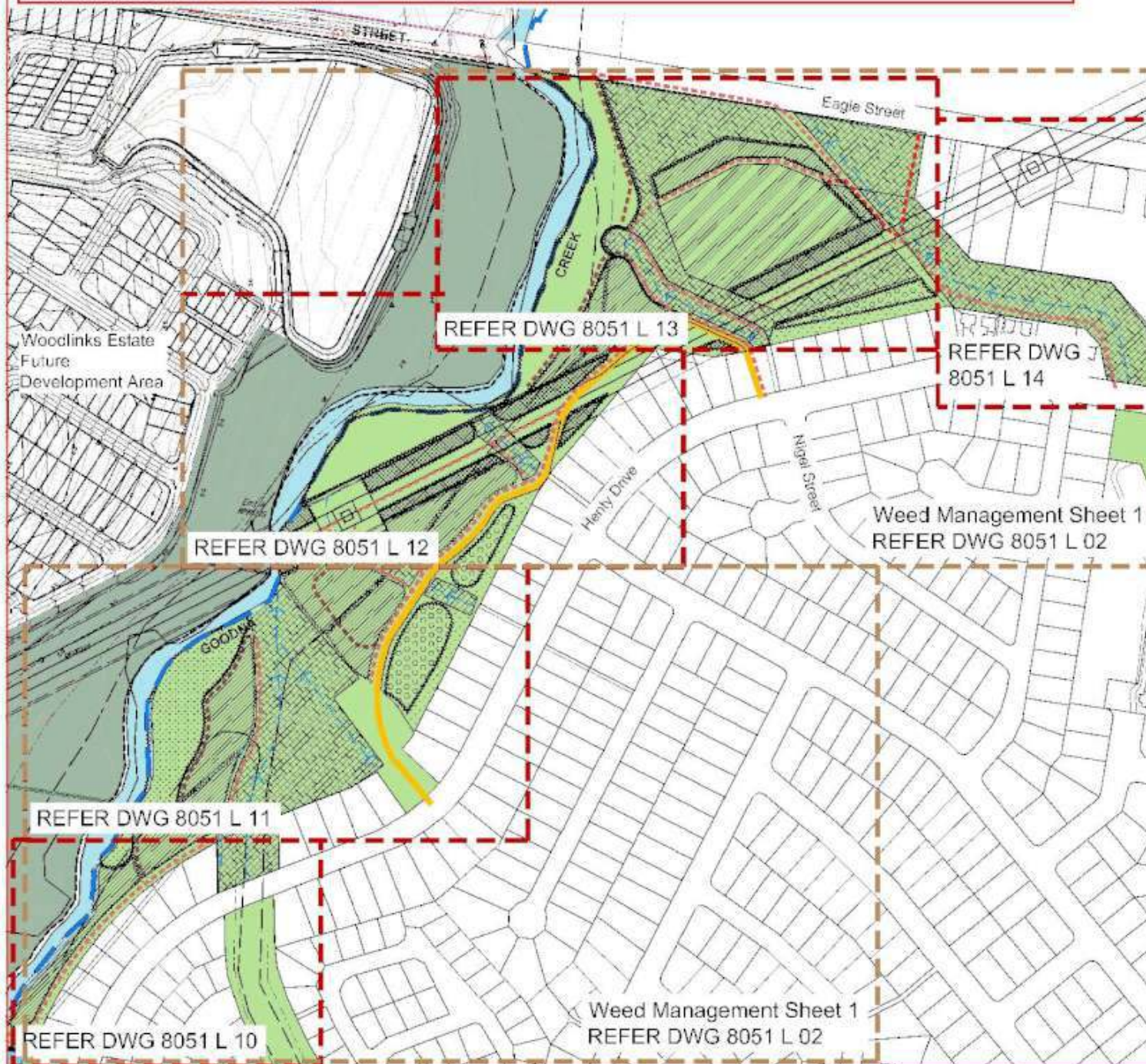
Appendix F

Harry Ratnam Park operational works drawings

Woodlinks Village Estate - Harry Ratnam Park

Weed Management & Rehabilitation Works - Preliminary

SITE LAYOUT: 1:2000 @ A1



DRAWING SCHEDULE

Dwg No.	Drawing Title	Issue	Date
8051 L 01	Cover Sheet	A	22.03.16
8051 L 02	Weed Management Plan - Sheet 1	A	22.03.16
8051 L 03	Weed Management Plan - Sheet 2	A	22.03.16
8051 L 04	Weed Management Notes	A	22.03.16
8051 L 05	Weed Treatment & Removal Strategy - Sheet 1	A	22.03.16
8051 L 06	Weed Treatment & Removal Strategy - Sheet 2	A	22.03.16
8051 L 07	Weed Treatment & Removal Strategy - Sheet 3	A	22.03.16
8051 L 08	Rehabilitation General Notes - Sheet 1	A	22.03.16
8051 L 09	Rehabilitation Zone Notes - Sheet 2	A	22.03.16
8051 L 10	Rehabilitation Plan - Sheet 1	A	22.03.16
8051 L 11	Rehabilitation Plan - Sheet 2	A	22.03.16
8051 L 12	Rehabilitation Plan - Sheet 3	A	22.03.16
8051 L 13	Rehabilitation Plan - Sheet 4	A	22.03.16
8051 L 14	Rehabilitation Plan - Sheet 5 & Plant Schedules	A	22.03.16
8051 L 15	Rehabilitation Plan - Plant Schedules - Sheet 1	A	22.03.16
8051 L 16	Rehabilitation Plan - Plant Schedules - Sheet 2	A	22.03.16
8051 L 17	Rehabilitation Sections	A	22.03.16

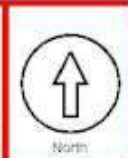
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 ■ surveying ■ town planning ■ urban design ■ environmental management ■ landscape architecture

Year	Date	Details	Approved
2016	22.03.2016	Preliminary	DC

Date Feb 16
 Scale N.T.S.

Plan of: Harry Ratnam Park
 Rehabilitation Works - Cover Sheet

Drawn by: FW Project: Woodlinks Village Estate H.R.Park
 Checked by: GC / MS Client: Canberra Estate Consortium No. 36

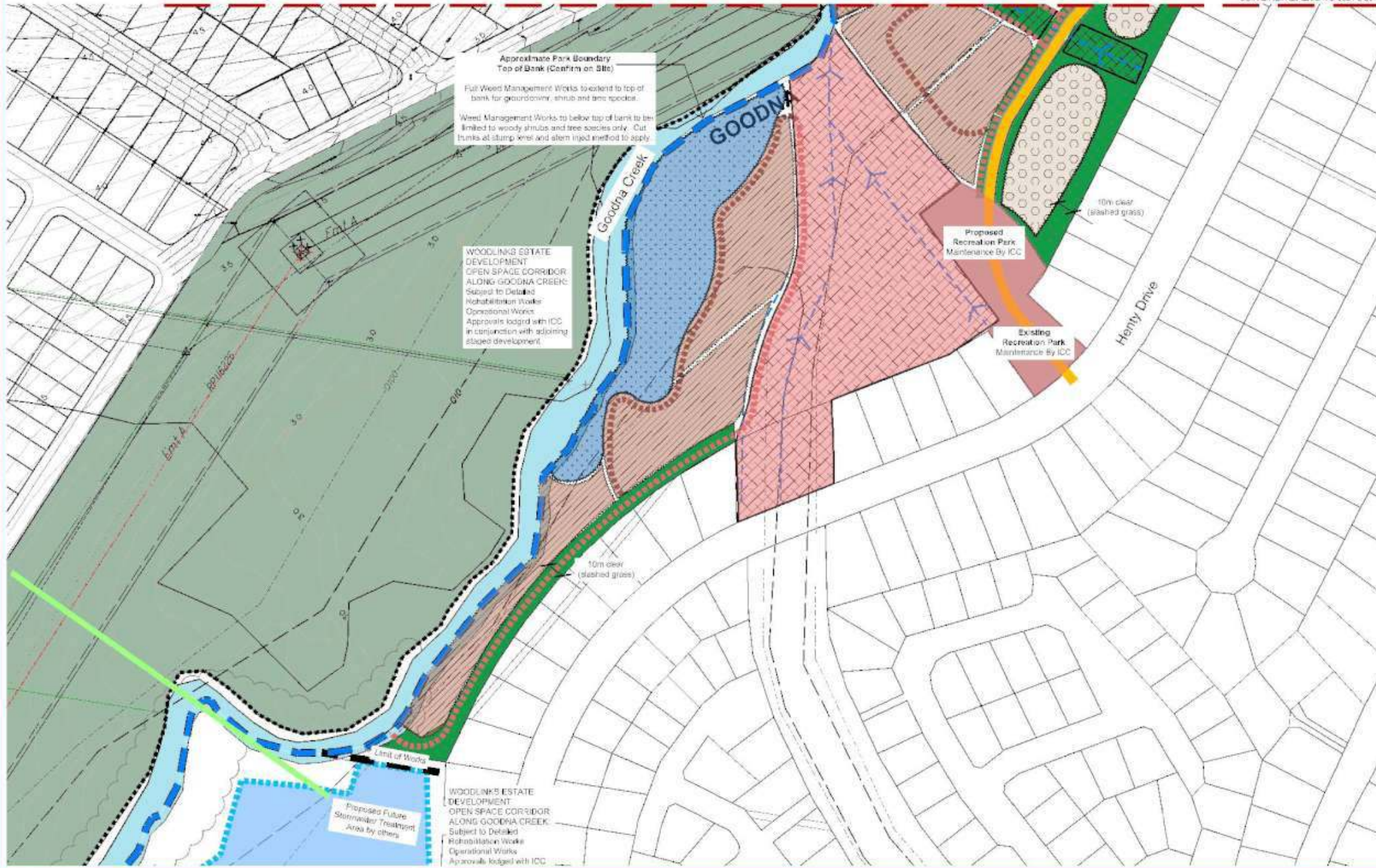


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 Dwg No. 8051 L 01 A

Woodlinks Village Estate - Harry Ratnam Park

Weed Management Plan - Sheet 1

JOIN LINE: REFER DWG 8051 L 03



LEGEND

- WOODLINKS ESTATE GOODNA CREEK REHABILITATION WORKS AREA: Subject to separate management plan & not part of scope for H. R. Park works package.
- FUTURE ICC WORKS AREAS: These areas to be managed by ICC & not part of scope for H. R. Park works package. No allowance for contractor to weed manage, mow or plain grass in these areas.
- OVERLAND FLOWS & GRABBED ACCESS AREAS (CONTRACTOR): These areas proposed to be managed by the Landscape Contractor as part of scope for H. R. Park works package. Contractor to make allowance to mow or slash grass in these areas.
- EXISTING VEGETATION MANAGEMENT AREA: Full weed management throughout involving manual removal, stock piling and disposal and usage of prescribed herbicide.
- PROPOSED BROAD-SCALE MULCHED PLANTED AREAS: Full conversion from grass to mulched planting areas. In these areas the Contractor is to allow for full eradication of existing sashed grass cover through usage of prescribed herbicide and methods.
- PROPOSED TREE PLANTING MULCHED PLANTED AREAS: In these areas the Contractor is to allow for selective individual and grouped tree plantings into existing sashed grass. Contractor to allow for eradication of grass cover through usage of prescribed herbicide and methods in locations confirmed on site with Superintendent.
- INDICATIVE INDIVIDUAL WEED LOCATIONS: Refer to Notes on Plan for Details.

NOTES

NOTE 1: Where indicative dominant weed locations are noted in approximate locations from site observations these do not represent all weeds on site.

All weeds listed on Drawings 8051 L 05, 06 & 07 "Weed Treatment and Removal Strategy Sheets 1 to 3" are to be removed.

NOTE 2: All works in accordance with Notes on Drawing 8051 L 04 "Weed Management Notes"

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Year	Date	Details	Approved
2015	22/02/2015	Preliminary	ICC

Date Feb 16

Plan of: Harry Ratnam Park Weed Management Plan - Sheet 1	
Drawn by: FW	Project: Woodlinks Village Estate H.R.Park
Checked by: GC / MS	Client: Canberra Estate Consortium No. 36

SCALE: 1:1000 @ A1
 1:2500 @ A3

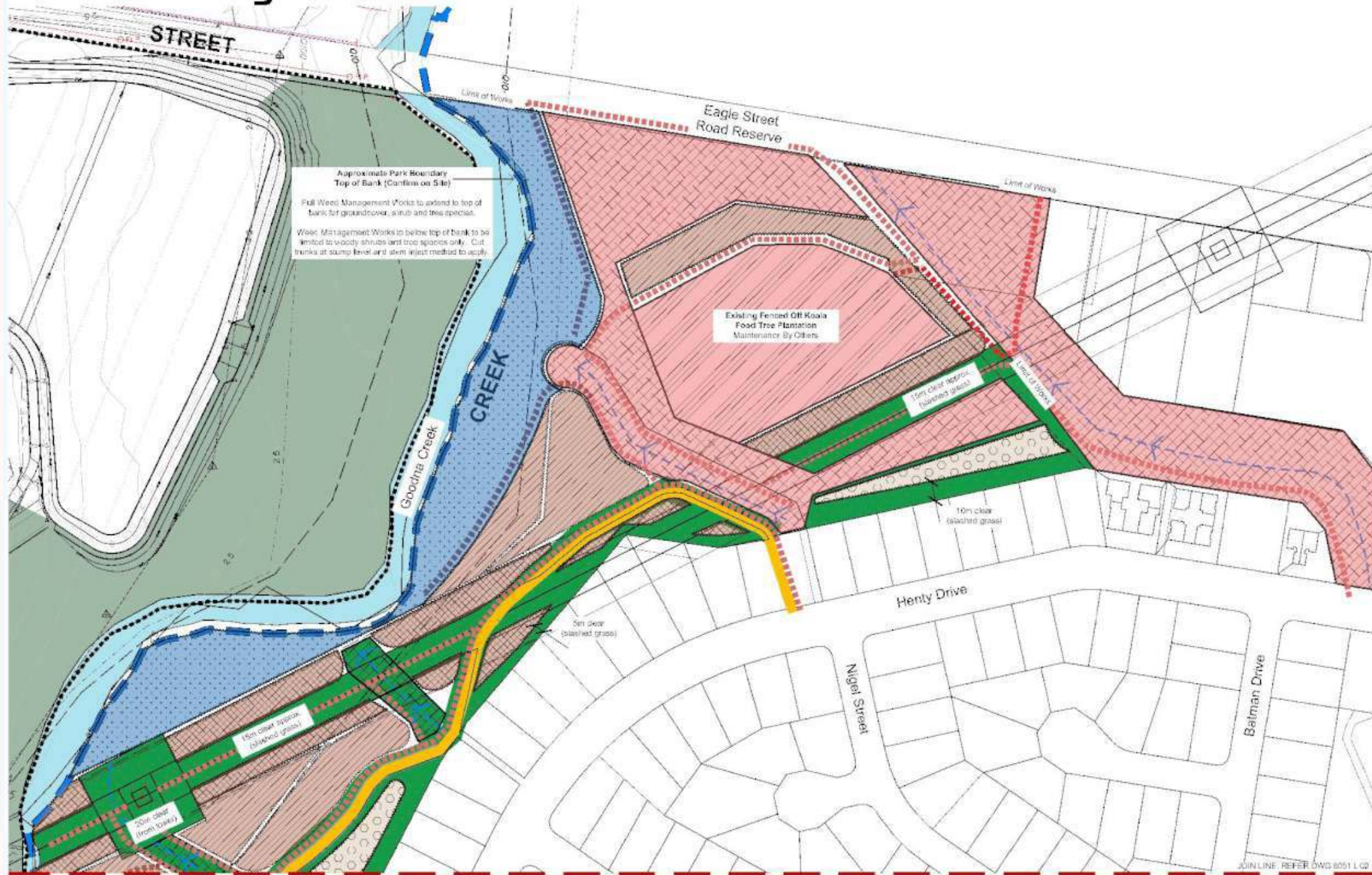
North

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Dwg No: 8051 L 02 A

Woodlinks Village Estate - Harry Ratnam Park

Weed Management Plan - Sheet 2



Approximate Park Boundary
Top of Bank (Confirm on Site)

Full Weed Management Works to extend to top of bank for groundcover, shrub and tree species.

Weed Management Works to below top of bank to be limited to woody shrubs and tree species only. Cut trunks at stump level and stem inject method to apply.

Existing Fenced Off Koala
Food Tree Plantation
Maintenance By Others

LEGEND

-  WOODLINKS ESTATE GOODNA CREEK REHABILITATION WORKS AREA: Subject to separate management plan & not part of scope for H. R. Park works package.
-  FUTURE ICC WORKS AREAS: These areas to be managed by ICC & not part of scope for H. R. Park works package. No allowance for contractor to weed manage, mow or plain grass in these areas.
-  OVERLAND FLOWS & GRABBED ACCESS AREAS (CONTRACTOR): These areas proposed to be managed by the Landscape Contractor as part of scope for H. R. Park works package. Contractor to make allowance to mow or slash grass in these areas.
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-  INDICATIVE INDIVIDUAL WEED LOCATIONS: Refer to Notes on Planter Details

NOTES

NOTE 1: Where indicative dominant weed locations are noted in approximate locations from site observations these do not represent all weeds on site.

All weeds listed on Drawings 8051 L 05, 06 & 07 'Weed Treatment and Removal Strategy Sheets 1 to 3' are to be removed.

NOTE 2: All works in accordance with Notes on Drawing 8051 L 04 'Weed Management Notes'

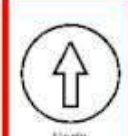
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amendments:			
Year	Date	Details	Approved
2	22.02.2025	Final sign	DC

Date Feb 16

Plan of: Harry Ratnam Park Weed Management Plan - Sheet 2	
Drawn by: FW	Project: Woodlinks Village Estate H.R.Park
Checked by: GC / MS	Client: Canberra Estate Consortium No. 36

SCALE
 1:1000 @ A1
 1:2500 @ A3

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Dwg No. 8051 L 03 A

Woodlinks Village Estate - Harry Ratnam Park

Weed Management Notes



NOTES

1. INTRODUCTION

The Saunders Havill Group was engaged by Canberra Estate Consortium No.36 Pty Ltd to prepare this Rehabilitation and Weed Management Plan covering the proposed Rehabilitation Works within Harry Ratnam Park, adjacent to "Woodlinks Village" residential estate.

This Rehabilitation Plan comprises of two main components:

- Weed Management
- Revegetation

This Rehabilitation and Weed Management Plan will aid to enhance the natural vegetation through extensive weed management, selective in-fill planting and natural regeneration.

2. WEED MANAGEMENT

Weed management will comprise a major part of the site works within the park areas. Weed management will provide the basis of aiding natural regeneration within the riparian corridor. Where significant disturbance occurs, in-fill tubestock planting will be utilized to aid stabilization and native vegetation succession.

Native species should be identified and tagged as required prior to weed removal and throughout the maintenance period. This is to ensure maximum regeneration and reducing likelihood of accidental weed spraying to native vegetation. Regenerating species to be treated and maintained in a similar manner to newly planted revegetation tubestock.

WEED CONTROL PROGRAM TIMING

The primary stage of manual weed removal, treatment and disposal for the parkland destination is programmed. A primary weed removal strategy over the initial months of commencement will remove most of the existing weeds and minimize erosion issues and impacts, whilst secondary removal over the following months will ensure very minimum weed regrowth. Ongoing maintenance weeding will occur for the remainder of the period until off maintenance.

Primary Weed Removal Stage - Consists of the initial weed removal / treatment of site weeds via the methods detailed in this Drawing Set. It essentially involves the manual removal, stock piling and disposal and initial usage of prescribed herbicides staged over a 2 month period - minimizing possible erosion issues. Additional notes below include:

- Implemented weed control method according to this Rehabilitation Plan.
- Program timing: primary weed removal phase is considered to be completed when all existing weeds within the designated Park have been removed initially. Both the secondary phase and the primary phase of weed removal can occur concurrently in different work areas over time. Primary weeding methods to minimize weed clearing and cause erosion issues.
- A key map is to be provided logging the progress of areas from primary to secondary phases of weed removal and areas of rehabilitation as part of the reporting progress.

Secondary or Follow-up Weeding - for parkland areas will involve the quarterly inspection of areas having undergone Primary Weed Removal and treatment of infestations or outbreak as required. Additional notes below include:

- Implemented weed control method according to this Rehabilitation Plan.
- Program timing: primary weed removal phase is considered to be completed when all existing weeds within the designated Park have been removed initially. Both the secondary phase and the primary phase of weed removal can occur concurrently in different work areas over time.
- A key map is to be provided logging the progress of areas from primary to secondary phases of weed removal and areas of rehabilitation as part of the reporting progress.

Maintenance Weeding Phase - final stage of weeding which occurs in areas where the majority of weeds have been removed and treated. Maintenance weeding continues to remove additional outbreaks but also allows for the fostering of natural regeneration and regrowth seedlings. Additional notes below include:

- Implemented weed control method according to this Rehabilitation Plan.
- Program timing: primary weed removal phase is considered to be completed when all existing weeds within the designated Park have been removed initially. Both the secondary phase and the primary phase of weed removal can occur concurrently in different work areas over time.
- A key map is to be provided logging the progress of areas from primary to secondary phases of weed removal and areas of rehabilitation as part of the reporting progress.

Method	Description
Dig	<ul style="list-style-type: none"> • Place in suitable container and remove from site • Dig and remove (where appropriate) soil tubestock • Remove roots or debris from on-site composted soils • Remove newly removed soil from site
Hand Pull	<ul style="list-style-type: none"> • Apply to small infestations of areas of environmental sensitivity • Including wetland areas, riparian areas, low-lying or protected riparian areas • Perform when soil is moist
Soil Bath	<ul style="list-style-type: none"> • Prepare application of herbicide solution (generally in a clean tub) to immerse tubestock immediately above ground level • Suitable for small tubestock and weed stems • Unavailable in sensitive areas (eg. riparian areas) due to dispersive nature of dyes
Cut/Stamp	<ul style="list-style-type: none"> • Cut weeds to 2-3m high as base and apply appropriate herbicide cut stump or spray to cut stems within 24-48 hours • Must be large infestations where grasses, ferns, sedges and other plants may be acting as a natural revegetation • Requires thorough application of target species (may be herbicide, or other cut stump product) • Involves cutting of herbicide in water or soil the latter is not recommended (watermark)
Herbicide Application	<ul style="list-style-type: none"> • Suitable for large areas that need extensive weed management including riparian areas and riparian corridors • In the same place, shall follow a 50m buffer around the riparian corridor and immediately apply appropriate herbicide into the riparian layer of the riparian corridor

NOTES

Scope and Aim	Notes
• "Thinning" facilitates a similar process but subjects the tree to consistent shade tolerance injury that may result in a tree that is structurally unable to sustain open space areas	<ul style="list-style-type: none"> • Herbicide spray back to reveal combustion layer and apply appropriate herbicide spray to soil • Applicable for trees with aerial roots (e.g. "Miconia myrtifolia")
Mechanical	<ul style="list-style-type: none"> • Prohibit removal of machinery (e.g. Excavator, Chainsaw, Sledge Hammer, etc.) • Suitable for large infestations and weed lines • Usually cost effective but requires immediate revegetation or site of mulch/mulch application or otherwise maintenance period • Generate excessive soil and vegetation disturbance

CLASS 2 PESTS

- Class 2 pests are established in Queensland and have, or could have, an adverse economic, environmental or social impact.

- The management of these pests requires coordination and they are subject to programs led by local government, community or landowners.

- Landowners must take reasonable steps to keep land free of Class 2 pests.

CLASS 3 PESTS

- Class 3 pests are established in Queensland and have, or could have, an adverse economic, environmental or social impact.

- The primary objective of Class 3 listing is to prevent sale, therefore preventing the spread of these pests into new areas.

- Landholders are not required to control Class 3 plants unless their land is adjacent to an environmentally significant area. (Extract from Department of Environment and Resource Management website)

Refer to Weed Management Techniques for detail and specifications on removal / treatment of all weed species in accordance with the Qld Herbarium List.

3. MONITORING AND REPORTING PROCEDURES

Monitoring of the park weed management and revegetation works allows for:

- Review of the pre-established performance indicators for measuring the success of the weed removal and control.
- Ensure level of protection for existing identified native vegetation inclusive of that which has naturally regenerated.
- Review the rate of spread or contraction of weed infestation within the control program.
- Monitor the rate of assisted regeneration and revegetation of desirable native species promoted in areas where weeds have been removed.
- Identification of new weed threats or other factors which may be affecting areas designated for rehabilitation.

Monitoring is required for weed eradication, revegetation and assisted regeneration.

PROJECT 8051 HARRY RATNAM PARK		REVEGETATION AND REHABILITATION WORKS - INDICATIVE SCHEDULE OF WORK ITEMS AND MAINTENANCE SEQUENCING														
NOTE: Assumes planting at end of Winter to allow for establishment and maintenance over two growing seasons		WINTER			SPRING			SUMMER			AUTUMN			WINTER		
COLOUR KEY TO WORK ITEMS		WINTER			SPRING			SUMMER			AUTUMN			WINTER		
		ESTABLISHMENT PERIOD (3 months)			ESTABLISHMENT PERIOD (3 months)			ONGOING MAINTENANCE			ONGOING MAINTENANCE			ONGOING MAINTENANCE		
		Month 1	Month 2	Month 3	Month 1	Month 2	Month 3	Month 1	Month 2	Month 3	Month 1	Month 2	Month 3	Month 1	Month 2	Month 3
WEEK 1	Pre-Start Inspection, Council Approval and Site Preparation	Pre-Start Inspection	Pre-Start Inspection	Pre-Start Inspection	Pre-Start Inspection	Pre-Start Inspection	Pre-Start Inspection	Pre-Start Inspection	Pre-Start Inspection	Pre-Start Inspection	Pre-Start Inspection	Pre-Start Inspection	Pre-Start Inspection	Pre-Start Inspection	Pre-Start Inspection	Pre-Start Inspection
WEEK 2	Site Preparation and Weeding	Site Preparation	Site Preparation	Site Preparation	Site Preparation	Site Preparation	Site Preparation	Site Preparation	Site Preparation	Site Preparation	Site Preparation	Site Preparation	Site Preparation	Site Preparation	Site Preparation	Site Preparation
WEEK 3	Planting Works	Planting Works	Planting Works	Planting Works	Planting Works	Planting Works	Planting Works	Planting Works	Planting Works	Planting Works	Planting Works	Planting Works	Planting Works	Planting Works	Planting Works	Planting Works
WEEK 4	Watering, Weeding and Fertilising	Watering	Watering	Watering	Watering	Watering	Watering	Watering	Watering	Watering	Watering	Watering	Watering	Watering	Watering	Watering

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amendments:			
Date	Detail	Approved	
22.03.2016	Primary	GC	
Date	Feb 16		

Plan of: Harry Ratnam Park Weed Management Notes			
Drawn by:	FW	Project:	Woodlinks Village Estate H.R.Park
Checked by:	GC / MS	Client:	Canberra Estate Consortium No. 36

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Woodlinks Village Estate - Harry Ratnam Park

Weed Treatment & Removal Strategy - Sheet 1

QUEENSLAND HERBARIUM INVASIVE NATURALISED PLANTS IN SOUTH EAST QUEENSLAND									
Gen. Family	Common and scientific names	Distribution	Abundance	Stems	Life cycle & Repro	Seed/Chemical Control	Chemical Control		
1	Urticaceae	<i>Pilea cadierei</i> (Carruth) Steud.	45	5	SD	Hand pull	Hand pull		
2	Asteraceae	<i>Senecio jacobinensis</i> (Carruth) Steud.	10	10	SD	Hand pull	Hand pull		
3	Cruciferae	<i>Brassica tournefortii</i> (Carruth) Steud.	1	30	SD	Hand pull	Hand pull		
4	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
5	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
6	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
7	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
8	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
9	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
10	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
11	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
12	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
13	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
14	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
15	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
16	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
17	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
18	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
19	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
20	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		

21	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
22	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
23	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
24	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
25	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
26	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
27	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
28	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
29	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
30	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
31	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
32	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
33	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
34	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
35	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
36	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
37	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
38	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
39	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
40	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		

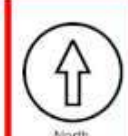
41	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
42	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
43	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
44	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
45	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
46	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
47	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
48	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
49	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
50	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
51	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
52	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
53	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
54	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
55	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
56	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		
57	Urticaceae	<i>Urtica dioica</i> (Carruth) Steud.	5	30	SD	Hand pull	Hand pull		

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amendments:	
Issue	Date
A	22.03.2018
Details	Approved
GC	GC
Date	Feb 16

Plan of: Harry Ratnam Park
 Weed Treatment & Removal Strategy
 Sheet 1
 Drawn by: FW Project: Woodlinks Village Estate H.R.Park
 Checked by: GC / MS Client: Canberra Estate Consortium No. 36

SCALE: AS NOTED



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Woodlinks Village Estate - Harry Ratnam Park

Weed Treatment & Removal Strategy - Sheet 2



59	Compositae	<i>Tridactylis ferruginea</i> (Old Use T. albiflora) (wandering jew)	5	9	4.1	H/O	NA	Spray F150 (as per label) or G200 or G200 + MM. Collect and bag or rot and take carefully. Dispose (ref 1).
60	Solanaceae	<i>Cleome spinosa</i> (green cleome)	6	36	3.9	SO	Seeds: Hand pull	Stems: CS&P (G1.5) or spray G200 + MM (ref 1).
61	Compositae	<i>Senecio jacobinensis</i> (senecio bush, was S. forlandii)	6	25	4	SO	Seeds: Hand pull	Stems: CS&P or F1 (G1.5); Seedlings: spray G200 or G200 + MM or MM, collect and bag seeds (ref 1).
62	Solanaceae	<i>Solanum mauritanicum</i> (wild tobacco tree)	8	30	4	SO	Seeds: Hand pull	Stems: CS&P (G1.5) or F1 (G1.5); Seedlings: spray G200 (ref 1).
63	Apiaceae	<i>Catharanthus roseus</i> (pink periwinkle)	5	22	4	SO	Hand pull	Spray G150 (ref 1).
64	Passifloraceae	<i>Passiflora subpeltata</i> (white passion flower)	10	60	3.3	VO	Stems: Hand pull	Stems: CS&P. Seedlings & Regrowth: spray G200 or G200 + MM (ref 1).
65	Fabaceae	<i>Desmodium uncinatum</i> (wheelbarrow desmodium)	5	14	4	H/A	Hand pull or crown and dispose	CS&P. Address roots (G1.5); spray G200 or G200 + MM or MM, collect and bag seeds (ref 1).
66	Passifloraceae	<i>Mahoea repens</i> (red heart grass)	10	154	4.1	H/A	Grazing or mowing	Spray: Fluorfen-P 212g/L @ 2L/ha, Glyphosate 360g/L @ 1L/100L water (ref 2).
67	Nymphaeaceae	<i>Nymphaea caerulea</i> (blue lotus)	4	17	4	Ha/OF	Hand pull small infestations.	Spray with or Dipnet Glyphosate. Occurs in waterways. If its EPA should be notified before any herbicide use (ref 1).
68	Onagraceae	<i>Oenothera biennis</i> (black evening primrose)	3	17	4	H/O	Hand pull	Spray G150 (ref 1).
69	Tiliaceae	<i>Triplaris rhomboides</i> (Chinese tree)	7	44	4	H/U	Hand pull	Spray G150 (ref 1).
70	Myrtaceae	<i>Myrtophyllum aquaticum</i> (pond's myrtle)	3	15	4	Ha/F	NA	Spray: glyphosate 360g/L @ 100mL/10L water (ref 1).
71	Passifloraceae	<i>Passiflora foetida</i> (striking passion flower)	7	50	3.3	VO	Hand pull	CS&P (G1.5); spray G200 or G200 + MM (ref 1).
72	Asteraceae	<i>Verbesina encaladensis</i> (crossbush)	7	34	4	H/U	Vines: Hand pull and remove; Runners: Roll up and hang to dry.	Stems: S&P (G1.5); Regrowth and seedlings: spray G200 or G200 + MM (ref 1).
73	Passifloraceae	<i>Passiflora ligularis</i> (broad leaf passion)	3	5	4	H/A	NA	Spray G200 - resistant to weaker strength (ref 1).
74	Passifloraceae	<i>Passiflora dilatata</i> (passiflora pink)	10	30	3.9	H/A	Hand pull or dig up	Spray G150 (ref 1).
75	Rubiaceae	<i>Rapanea hirsuta</i> (blue rapanea)	2	8	4	Ha/F	Hand pull or dig up	Spray G150 (ref 1).
76	Asteraceae	<i>Cyanus ramosissimus</i> (cane palm)	49	10	3.9	VO	Seeds: Hand pull or crown; Trees: cut below growing point	Stems: F1 (G1.5); Seedlings: spray G200 + MM (ref 1).
77	Passifloraceae	<i>Hymenocallis amplexicaulis</i> (C. Olive hymenocallis)	17	1	4	Ha/A	a combined approach of different control methods including mechanical, chemical and biological weed management practices is most effective.	250 g/L Glyphosate (includes Roundup Bioactive & Weedmaster Duo) - 1 L/100L water or 12L/ha delivered by boom
78	Asteraceae	<i>Senecio jacobinensis</i> (senecio bush)	3	9	4	VO	Vines: Hand pull and remove; Runners: Roll up and hang to dry.	Stems: S&P (G1.5); Regrowth and seedlings: spray G200 or G200 + MM (ref 1).
79	Passifloraceae	<i>Conchocarpus ciliatus</i> (bulb grass)	4	15	4.1	H/A	Hand or mechanical removal of young plants	Herbicide Control: Glyphosate 700g/L water; Dicamba 600g/100mL; Fluazifop 50-100mL/10L water (ref 2); CS&P (G1.5); spray G200 (ref 1).
80	Asteraceae	<i>Thysanotus grandiflorus</i> (thysanotus, blue thysanotus)	2	3	5.9	VO	NA	CS&P (G1.5); spray G200 (ref 1).
81	Cactaceae	<i>Opuntia stricta</i> (velvet tree pear)	8	45	3.9	SO	Biological controls available; castrolants; cactocidum successful; Mechanical control difficult. Fire can be used.	Spray: Basal Bark application; Injection: Triclopyr - SL/MDL; basal; Picloram - Triclopyr - Tr/MDL; basal; Amibrol - Tr/MDL (ref 3).
82	Euphorbiaceae	<i>Macaranga communis</i> (castor oil plant)	7	20	3.9	SO	Seeds: Hand pull	Stems: G CS&P or F1 (G1.5); Seedlings: spray G200 (ref 1).
83	Asteraceae	<i>Senecio madagascariensis</i> (big weed)	6	28	3.9	H/U	Vines: Hand pull and remove; Runners: Roll up and hang to dry.	Stems: S&P (G1.5); Regrowth and seedlings: spray G200 or G200 + MM (ref 1).
84	Cyperaceae	<i>Cyperus medeolifolius</i> (African sedge)	6	15	3.9	Ha/OF	Each here to be dug out with a spade and the extra plant turned over, exposing the root system while making sure all aerial parts of the plant are completely exposed.	Aquatic areas - Glyphosate - use Land-commercial/industrial; rights of way - Glyphosate - use, masonry

84	Asteraceae	<i>Helianthus divaricatus</i> (Mexican sunflower)	5	11	3.9	H/O	NA	Stems: CS&P (G1.5) or G200 or G200 + MM (ref 1).
85	Passifloraceae	<i>Passiflora ligularis</i> (broad leaf passion)	3	5	4	H/A	Hand pull or dig up	Spray G150 (ref 1).
86	Asteraceae	<i>Senecio jacobinensis</i> (senecio bush)	3	9	4	VO	Stems: Hand pull and remove; Runners: Roll up and hang to dry.	Stems: S&P (G1.5); Regrowth and seedlings: spray G200 or G200 + MM (ref 1).
87	Passifloraceae	<i>Passiflora ligularis</i> (broad leaf passion)	3	5	4	H/A	Hand pull or dig up	Spray G150 (ref 1).
88	Passifloraceae	<i>Passiflora ligularis</i> (broad leaf passion)	3	5	4	H/A	Hand pull or dig up	Spray G150 (ref 1).
89	Passifloraceae	<i>Passiflora ligularis</i> (broad leaf passion)	3	5	4	H/A	Hand pull or dig up	Spray G150 (ref 1).
90	Passifloraceae	<i>Passiflora ligularis</i> (broad leaf passion)	3	5	4	H/A	Hand pull or dig up	Spray G150 (ref 1).
91	Passifloraceae	<i>Passiflora ligularis</i> (broad leaf passion)	3	5	4	H/A	Hand pull or dig up	Spray G150 (ref 1).
92	Passifloraceae	<i>Passiflora ligularis</i> (broad leaf passion)	3	5	4	H/A	Hand pull or dig up	Spray G150 (ref 1).
93	Passifloraceae	<i>Passiflora ligularis</i> (broad leaf passion)	3	5	4	H/A	Hand pull or dig up	Spray G150 (ref 1).
94	Passifloraceae	<i>Passiflora ligularis</i> (broad leaf passion)	3	5	4	H/A	Hand pull or dig up	Spray G150 (ref 1).
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100	Passifloraceae	<i>Passiflora ligularis</i> (broad leaf passion)	3	5	4	H/A	Hand pull or dig up	Spray G150 (ref 1).
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102	Passifloraceae	<i>Passiflora ligularis</i> (broad leaf passion)	3	5	4	H/A	Hand pull or dig up	Spray G150 (ref 1).
103	Passifloraceae	<i>Passiflora ligularis</i> (broad leaf passion)	3	5	4	H/A	Hand pull or dig up	Spray G150 (ref 1).
104	Passifloraceae	<i>Passiflora ligularis</i> (broad leaf passion)	3	5	4	H/A	Hand pull or dig up	Spray G150 (ref 1).
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106	Passifloraceae	<i>Passiflora ligularis</i> (broad leaf passion)	3	5	4	H/A	Hand pull or dig up	Spray G150 (ref 1).
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114	Passifloraceae	<i>Passiflora ligularis</i> (broad leaf passion)	3	5	4	H/A	Hand pull or dig up	Spray G150 (ref 1).
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117	Passifloraceae	<i>Passiflora ligularis</i> (broad leaf passion)	3	5	4	H/A	Hand pull or dig up	Spray G150 (ref 1).
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138	Passifloraceae	<i>Passiflora ligularis</i> (broad leaf passion)	3	5	4	H/A	Hand pull or dig up	Spray G150 (ref 1).

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amendments:			
Issue	Date	Details	Approved
1	22.03.2018	Preliminary	GC
Date Feb 16			

Plan of: Harry Ratnam Park
 Weed Treatment & Removal Strategy
 Sheet 2
 Drawn by: FW Project: Woodlinks Village Estate H.R.Park
 Checked by: GC / MS Client: Canberra Estate Consortium No. 36

SCALE: AS NOTED
 North

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 Dwg No. 8051 L 06 A

Woodlinks Village Estate - Harry Ratnam Park

Weed Treatment & Removal Strategy - Sheet 3



139	Rubiaceae	Marattia paniculata ex Farfugium (marattia)	5	25	3.5	SAO	Seedlings - Hand pull	Stems, CSAP or FR (G1.5). Seeding: spray G200 (ref 1)
140	Rubiaceae	Rubia discolor (R. Indica) complex, a. (balsam)	4	10	3.7	SOA	Establishing (tender growth), plants can tolerate full sun and water. Plants are control before they seed	Stem: CSAP or FR (G1.5). Seeding: spray G200 (ref 1)
141	Asteraceae	Gnaphalium aureum (American pigweed)	4	25	3.7	SOA	Manually grub and destroy	Stem: CSAP or FR (G1.5). Seeding: spray G200 (ref 1)
142	Umbelliferae	Impatiens walleriana (balsam)	2	5	3.7	SO	Stem: CSAP or FR (G1.5). Seeding: spray G200 (ref 1)	Stem: CSAP or FR (G1.5). Seeding: spray G200 (ref 1)
143	Agrostaceae	Agrostis shirazii (grass)	3	4	3.7	SOA	Flag out or hand pull	Stem: CSAP or FR (G1.5). Seeding: spray G200 (ref 1)
144	Agrostaceae	Agrostis virginica (grass)	3	3	3.7	SOA	Flag out or hand pull	Stem: CSAP or FR (G1.5). Seeding: spray G200 (ref 1)
145	Rubiaceae	Fiend's thistle (balsam)	7	31	3.7	SOA	Seedlings - Hand pull	Stem: CSAP or FR (G1.5). Seeding: spray G200 (ref 1)
146	Poleaceae	Fraxinus racemosa (white gum)	5	36	3.7	SOA	Hand pull or dig out small infestations	Stem: CSAP or FR (G1.5). Seeding: spray G200 (ref 1)
147	Asteraceae	Solidago canadensis (American goldenrod)	7	15	4.1	SO	Hand pull and hand pull	Stem: CSAP or FR (G1.5). Seeding: spray G200 (ref 1)
148	Urticaceae	Humulus lupulus (hop)	3	4	3.8	V-SO	Stem: CSAP or FR (G1.5). Seeding: spray G200 (ref 1)	Stem: CSAP or FR (G1.5). Seeding: spray G200 (ref 1)
149	Asteraceae	Euphorbia polycarpa (cotton-top)	3	2	3.8	SOA	Physio removal of small infestations	Stem: CSAP or FR (G1.5). Seeding: spray G200 (ref 1)
150	Urticaceae	Urtica dioica (nettle)	2	4	3.7	SOA	Hand pull small infestations	Stem: CSAP or FR (G1.5). Seeding: spray G200 (ref 1)
151	Poleaceae	Phytolacca aurea (spiny cholla)	1	2	3.7	SO	Stem: CSAP or FR (G1.5). Seeding: spray G200 (ref 1)	Stem: CSAP or FR (G1.5). Seeding: spray G200 (ref 1)
152	Euphorbiaceae	Azadirachta indica (neem)	1	1	3.7	SO	Hand pull	Stem: CSAP or FR (G1.5). Seeding: spray G200 (ref 1)
153	Urticaceae	Urtica dioica (nettle)	3	6	3.8	SOA	Hand pull or dig out small infestations	Stem: CSAP or FR (G1.5). Seeding: spray G200 (ref 1)
154	Poleaceae	Thermopsis virginiana (spider grass)	5	25	3.8	SOA	Hand pull or dig out small infestations	Stem: CSAP or FR (G1.5). Seeding: spray G200 (ref 1)
155	Poleaceae	Andropogon virginicus (bushy grass)	6	51	3.8	SOA	Hand pull or dig out small infestations	Stem: CSAP or FR (G1.5). Seeding: spray G200 (ref 1)
156	Euphorbiaceae	Albizia julibrissin (silky tree)	4	12	3.4	SO	Seeding - Hand pull	Stem: CSAP or FR (G1.5). Seeding: spray G200 (ref 1)
157	Asteraceae	Amelanchier canadensis (shadbush)	2	4	4	SO	Hand pull small infestations. Can be controlled by planting competitive native species.	Stem: CSAP or FR (G1.5). Seeding: spray G200 (ref 1)
158	Urticaceae	Urtica dioica (nettle)	1	1	4	SO	Mechanical or hand pull	Stem: CSAP or FR (G1.5). Seeding: spray G200 (ref 1)
159	Asteraceae	Alopecurus pratensis (grass)	17	3	3.5	SO	Seeding - Hand pull	Stem: CSAP or FR (G1.5). Seeding: spray G200 (ref 1)
160	Poleaceae	Echinochloa polystachya (green)	9	41	3.5	SOA	Hand or mechanical removal of small infestations	Stem: CSAP or FR (G1.5). Seeding: spray G200 (ref 1)
161	Urticaceae	Euphorbia corollata (crown-of-thorns)	8	53	3.4	SO	Hand pull or dig out with a shovel and the entire plant. Hand pull: remove the root system while making sure all aerial parts of the plant are completely removed.	Stem: CSAP or FR (G1.5). Seeding: spray G200 (ref 1)
162	Urticaceae	Mimosa pudica (sensitive plant)	3	13	3.4	SO	Hand pull	Stem: CSAP or FR (G1.5). Seeding: spray G200 (ref 1)
163	Rubiaceae	Curtinia diffusa (bush)	3	4	3.4	SOA	Hand pull	Stem: CSAP or FR (G1.5). Seeding: spray G200 (ref 1)

164	Euphorbiaceae	Boerhaavia diffusa (bush)	3	5	3.1	SOA	Stem: CSAP or FR (G1.5). Seeding: spray G200 (ref 1)
165	Euphorbiaceae	Tecoma stans (Cape honey suckle)	3	5	4	SOA	Stem: CSAP or FR (G1.5). Seeding: spray G200 (ref 1)
166	Cactaceae	Harmelia melaleuca (cactus)	20	4	4	SO	The use of biological control agents is recommended
167	Asteraceae	Helianthus scaberrimus (black vine)	1	1	4	SO	Stem: CSAP or FR (G1.5). Seeding: spray G200 (ref 1)
168	Urticaceae	Lythrum hyssagifolium (blackberry)	27	4	3.0	SO	Stem: CSAP or FR (G1.5). Seeding: spray G200 (ref 1)
169	Euphorbiaceae	Acacia saligna (black wattle)	12	1	3.67	SO	Seeding - Hand pull
170	Euphorbiaceae	Hebecladia grandiflora (paperbark)	17	3	3.6	SO	Small plants: hand pull and dispose
171	Asteraceae	Hypochaeris glabra (chickweed)	3	5	3.6	SO	Hand pull or mechanical removal of small infestations
172	Caryophyllaceae	Hypochaeris glabra (chickweed)	3	7	3.4	SOA	Hand pull or mechanical removal of small infestations
173	Asteraceae	Conyza bonariensis (bull thistle)	9	45	3.3	SO	Hand or mechanical removal of small infestations
174	Poleaceae	Trifolium (grass)	3	5	3.4	SO	Seeding - Hand pull
175	Asteraceae	Ligula straminea (grass)	9	3	3.3	SO	Hand pull and hand pull
176	Dipsacaceae	Chamaecrista nuttalliana (bush)	6	14	3.3	SOA	Seeding - Hand pull
177	Poleaceae	Conyza bonariensis (bull thistle)	9	45	3.3	SO	Hand or mechanical removal of small infestations
178	Asteraceae	Conyza bonariensis (bull thistle)	10	50	3.3	SO	Hand or mechanical removal of small infestations
179	Euphorbiaceae	Euphorbia cyparissias (cypress spurge)	9	30	3.3	SO	Hand pull
180	Poleaceae	Sida poliflora (grass)	5	10	3.3	SO	Hand pull or dig out
181	Euphorbiaceae	Euphorbia polycarpa (cotton-top)	5	12	3.4	SO	Hand pull
182	Urticaceae	Urtica dioica (nettle)	5	11	3.2	SOA	Hand pull or dig out and dispose
183	Poleaceae	Penstemon setaceus (plantain)	3	11	3.0	SO	Hand pull
184	Asteraceae	Conyza bonariensis (bull thistle)	7	30	3.3	SO	Hand or mechanical removal of small infestations
185	Urticaceae	Urtica dioica (nettle)	7	10	3.7	SO	Hand pull
186	Poleaceae	Stachytarax (grass)	5	20	3.3	SO	Hand or mechanical removal of small infestations

187	Urticaceae	Urtica dioica (nettle)	3	7	3.2	SOA	Hand pull or dig out
188	Euphorbiaceae	Sida poliflora (grass)	5	1	3.4	SO	Hand pull or dig out
189	Urticaceae	Melicope (bush)	4	12	3.1	SOA	Hand pull or dig out
190	Urticaceae	Urtica dioica (nettle)	2	3	3.1	SO	Hand pull or dig out
191	Urticaceae	Melicope (bush)	5	12	3.2	SOA	Hand pull or dig out
192	Asteraceae	Conyza bonariensis (bull thistle)	6	33	3.1	SO	Hand pull or dig out
193	Urticaceae	Urtica dioica (nettle)	27	7	2.1	SO	Hand pull or dig out
194	Poleaceae	Conyza bonariensis (bull thistle)	3	8	3.1	SO	Hand pull or dig out
195	Cucurbitaceae	Acacia saligna (black wattle)	1	1	2.3	SO	Hand pull or dig out
196	Mimosaceae	Acacia saligna (black wattle)	3	3	1.47	SO	Mechanical or hand pull
197	Mimosaceae	Acacia saligna (black wattle)	6	18	2.1	SO	Mechanical or hand pull

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amendments:
Issue Date Details Approved
A 22/01/2016 Preliminary GC

Date Feb 16

Plan of: Harry Ratnam Park
Weed Treatment & Removal Strategy
Sheet 3

Drawn by: FW Project: Woodlinks Village Estate H.R.Park
Checked by: GC / MS Client: Canberra Estate Consortium No. 36

SCALE: AS NOTED

North

Dwg No. 8051 L 07 A

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Woodlinks Village Estate - Harry Ratnam Park Rehabilitation Notes

NOTE

- ALL WORKS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE ACCESS DEED FOR PARK REHABILITATION BETWEEN CANBERRA ESTATES CONSORTIUM NO. 36 PTY LTD & IPSWICH CITY COUNCIL.
- REFER TO SHG LANDSCAPE SPECIFICATIONS AND PRELIMINARIES DESCRIPTION FOR ADDITIONAL REQUIREMENTS FOR CONSTRUCTION AND SITE MANAGEMENT.

REHABILITATION DESIGN & LAYOUT

This Site Based Rehabilitation Plan has been prepared for Canberra Estate Consortium No. 36 Pty Ltd and is designed to enhance and expand the Goodna Creek existing native vegetation areas within the existing Harry Ratnam Park adjacent to the Woodlinks Village Estate.

This plan set has been produced by overlaying existing site data with proposed works to determine impacts and disturbance.

This Site Based Rehabilitation Plan is to identify and control necessary site disturbance as provided for the site plan layout. Where existing native vegetation is already established, low impact weed removal and rehabilitation techniques are required.

In patches that have undergone previous clearing and disturbance, a more aggressive approach to weed removal and revegetation will be applied.

LANDSCAPE WORKS TIMING

These works are proposed to be completed following the completion of the Woodlinks Village Stage 1 construction works.

These landscape works are intended to provide:

- Stabilisation to all disturbed areas,
- Maintain the opportunity for Council to install future stormwater devices and recreational park embellishments in nominated areas;
- Rehabilitation Outcomes for the Goodna Creek Corridor and
- Satisfy conditions of the EPBC Approval.

REHABILITATION INTENT

A combination of the following core rehabilitation methods will be employed throughout the site depending on the level of site disturbance, weed infiltration and existing native species vegetation present.

The planting densities and species selection for Rehabilitation Zones have been chosen to maximise habitat, linkage and movement opportunities.

Rehabilitation treatment is to generally include the following points:

- A number of weeds are recorded for removal within shrub & ground layer.
- Weed removal and management will utilise low impact methods preventing further degradation to the riparian corridor.
- Revegetation species will include a variety of ground, shrub and canopy species selected from pre-clear vegetation communities and specific species - Refer to rehabilitation plant schedules for detail.
- Planting densities to achieve a minimum of 1 per m2 throughout all rehabilitation areas.
- Low impact weed removal techniques will be applied within this zone. This method is used to eliminate, or greatly reduce, further degradation to the soil and "riparian" zone.
- Native trees will replace all woody weeds removed from vegetated zones.
- Ground layer and shrub layer weeds will be removed utilising low impact weed removal methods and replaced with locally occurring native species.

Ecologists from Saunders Havill Group assessed on-site waterways within the Woodlinks Estate providing information on locations of scouring, erosion and disturbances along the drainage lines. This data provides the base information required to compile the various rehabilitation approaches required within this Site Based Rehabilitation Plan. The various approaches are described below.

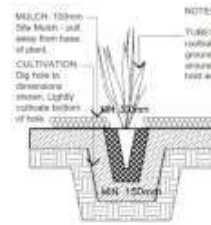
SITE PREPARATION

Areas designated for revegetation have undergone various stages of disturbance whether it be affected by introduced species or through the necessary development process.

Once planting locations have been determined each planting location is to be spot sprayed (1 square metre) prior to soil cultivation. (knockdown, non residual herbicide = Glyphosate or equivalent used at minimum rate of 2 litres per ha of spot spraying) Several herbicide applications may be required to ensure appropriate kill rates where long grass exists. Note: Weed spray to single plantings only at top of bank. However, if individual weeds have been identified throughout the existing established native vegetation, then manual removal should be applied and replaced with a native revegetation species as identified on this drawing sheet.

CULTIVATION AND PLANTING

Each individual planting location should be spot cultivated to at least 2 times the depth and twice the width of the plant stock size. Refer detail for more specifications:



WATERING: At the time of planting soak the root ball of each plant in a diluted solution of liquid seaweed according to the directions on product label to assist in establishment. Plants are to be watered deeply only once at the time of planting and then allowed to establish within the prevailing climatic conditions. If it is observed during the maintenance process that the plant is under stress then a subsequent watering is allowed to assist in establishment.

MULCHING & MATTING

Areas to be blanket mulched to a minimum depth of 100mm leaving a 50mm gap surrounding the trunk of planted stock. Areas which are deemed as too steep or not suitable for mulching due to frequent overland flows may utilise a combination of mulch and Jute mat and / or suitably anchored natural fibre weed mat installed to manufacturer's specifications have been specified.

PLANTING STOCK

All planting species to be selected in accordance with the species sizes and numbers setout on the species schedules. Refer to individual schedules for proposed proportions of groundcovers, shrubs and trees within planting areas. Revegetation planting locations shall be generally setout in accordance with a random grid pattern.

All stock shall be true scheduled nomenclature, well formed, hardened off to suit final revegetation location, nursery stock. The root system should be well formed without being tube bound or large roots extruding from the tube container. The landscape coordinator has the right to inspect and reject stock prior to planting.

INSTALLATION METHODOLOGY

To maximise plant establishment success rates and minimise plant failure, installation methodology for revegetation works within rehabilitation areas shall include:

- Revegetation works shall be either undertaken or directly supervised by an experienced and qualified contractor.
- All works shall be in accordance with the provisions of this Site Based Rehabilitation Plan & local government policies.
- Plants are to be vigorous, well established, hardened off, consistent with species or variety, free from disease and insect pests, with large root systems and no evidence of damage.
- Plants are to be planted immediately after delivery to the planting site. Otherwise, they shall be stored in shade and watered sufficiently.
- Excavate planting medium to a depth suitable for the installation of tube or pot specimens. In areas where planting substrate is deemed to be very poor (compacted, nutrient depauperate, hydrophobic etc.) and above areas of potential frequent inundation and water flow, topsoil may be used or the ground mechanically ripped where access is feasible.
- Pre-water plant hole to decrease root stress and assess infiltration through soil. Incorporate into plant hole, water crystals / hydrating product to manufacturer's recommendations (Hortex 'Rainsaver' / 'Moisturaid' or similar approved).
- Place plant into hole and backfill ensuring that the plant is upright and the stem is not covered in less than 10mm or any more than 20mm of planting medium.
- Plants are to be watered thoroughly immediately after planting (deep irrigation) and thereafter as required during establishment depending on climatic conditions. Creation of a concave hollow around the base of each plant will aid water infiltration to the plant roots.
- A complete, slow release fertiliser is to be applied during planting to manufacturer's recommendations (Nutricote or similar approved).
- To ensure successful establishment, all planting surfaces must be covered in:
 - a 100mm layer of high quality weed-free composted mulch (site mulch) - Note: avoid possible stem rot ensure mulch is 'dished' and not covering plant stem by more than 20mm.
 - suitable individual anchored natural fibre weed mat; or
 - Seedlings and saplings to be encouraged and maintained throughout the establishment period.

MAINTENANCE SCHEDULE

MAINTENANCE SCHEDULE	
<i>Maintenance schedule for revegetation areas of the proposed development as specified on the Landscape Plans</i>	
ESTABLISHMENT	<i>Establishment is to occur at the completion of the primary and secondary weed removal phases and any rehabilitation planting. During this period any failed stock are to be replaced and/ or defects identified, then reparations are to be made to site works.</i>
1. Watering	Watering shall be carried out to ensure establishment of revegetation. At the time of planting soak the root ball of each plant in a diluted solution of liquid seaweed according to the directions on product label to assist in establishment.
	Plants are to be watered deeply only once at the time of planting and then allowed to establish within the prevailing climatic conditions. If it is observed during the maintenance process that the plant is under stress then a subsequent watering is allowed.
2. Weed Removal	Weeds evident during the Establishment period but should be removed as part of a monthly weed management program. Best Practice weed management techniques should be employed for weed removal amongst revegetation areas.
	Where grass seeding or turf establishes within planted areas it should be treated with approved herbicide for waterways.
MAINTENANCE	
1. Watering	No specified watering regime is provided during the maintenance period. The intent is for the area to become self sufficient in utilising natural rain patterns and run off. Watering should occur during extended dry periods to ensure continued establishment.
2. Weed Removal	Weeds should be tended to on a monthly program. Treatment techniques vary within the landscape planted areas versus revegetation and retention areas.
3. Management	Throughout the establishment and maintenance periods areas where planting stock has not achieved a 90% success survival additional planting shall be installed.
4. Erosion Control	Prior to the commencement of works and to remain throughout the establishment and maintenance period an erosion and sediment control measures shall be employed over the rehabilitation area of the site.

NATURAL REGENERATION	RECONSTRUCTION
<p>Applies:</p> <ul style="list-style-type: none"> • To relatively large, intact and weed-free areas of native vegetation. • Where the native plants are healthy and capable of regenerating without human intervention. • When native plant seed is stored in the soil or will be able to reach the site from nearby natural areas, by birds or other animals, wind or water. • Where the plant community has a high potential for recovery after any short-lived disturbance, such as a fire or cyclonic winds. • When preventative action is all that is required to avert on-going disturbance, e.g. erection of fencing to prevent intrusion from cattle. <p>Planting in such sites can work against the aims of restoration by interfering with natural regeneration.</p> <p>The re-establishing plant community will be similar in structure, composition and diversity to the original vegetation.</p>	<p>Applies:</p> <ul style="list-style-type: none"> • Where the site is highly degraded or altered. • When the degree of disturbance has been so great and long-standing that the pre-existing native plant community cannot recover by natural means. • To sites such as areas of fill, sites affected by stormwater flow, and areas that have been drastically cleared, either mechanically or by stock even though there may be a few remaining native trees or shrubs. • When a greater degree of human intervention is required, such as weed removal, cessation of grazing and/or slashing, amelioration of soil conditions such as importation of soils, drainage works or reshaping of the landscape. • When a major component is the importation of native species through planting. <p>The re-establishing planted community should be similar to the original vegetation in structure, composition and diversity.</p>
ASSISTED NATURAL REGENERATION	FABRICATION (Type Conversion)
<p>Applies:</p> <ul style="list-style-type: none"> • To natural areas where the native plant community is largely healthy and functioning. • When native plant seed is still stored in the soil or will be able to reach the site from nearby natural areas, by birds or other animals, wind or water. • Where the natural regeneration processes (seedling germination, root suckering etc.) are being inhibited by external factors, such as weed invasion, soil compaction, cattle grazing, mechanical slashing etc. • When limited human intervention, such as weed removal, minor amelioration of soil conditions, erection of fencing, cessation of slashing, etc. will be enough to trigger the recovery processes through natural regeneration. • When major component is weed control. <p>Planting in such sites can work against the aims of restoration by interfering with natural regeneration.</p> <p>The re-establishing plant community will be similar in structure, composition and diversity to the original vegetation.</p>	<p>Applies:</p> <ul style="list-style-type: none"> • Where site conditions have been irreversibly changed. • When it is not possible to restore the original native plant community. • Where a better-adapted local plant community can be planted that will function within the changed conditions. • In situations such as the construction of a wetland plant community to mitigate increased urban stormwater run-off. • N.B Revegetation (planting) is the major component in a fabrication program. <p>The re-establishing planted community should be similar to the naturally occurring plant community of the same type e.g. freshwater wetlands in structure, composition and diversity.</p>

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amendments:			
Issue	Date	Details	Approved
A	22.03.2016	Primary	GC

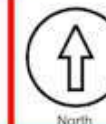
Date Feb 16

Plan of: Harry Ratnam Park
 Rehabilitation General Notes
 Sheet 1

Drawn by: FW Project: Woodlinks Village Estate H.R.Park

Checked by: GC / MS Client: Canberra Estate Consortium No. 36

SCALE: AS NOTED



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Dwg No. 8051 L 08 A

Woodlinks Village Estate - Harry Ratnam Park

Rehabilitation Zones Notes Sheet 2

ZONES DESCRIPTION

In keeping with the Core Rehabilitation Methods described above, 5 Distinct Zones are applied throughout the rehabilitation areas describing a range of work in Harry Ratnam Park. Refer to Drawing sheets 8051 L 10-17 for an associated full description of proposed plant species, sizes, densities and numbers.

ZONES 1, 1A & 1B Ex.Veg.

Existing Vegetation Areas with Infill Planting and Assisted Natural Regeneration

This large area of intact Vegetation is predominantly weed free with the exception of isolated occurrences of weed species (Lantana, Pepper Trees, Chinese Elms, Blue Billy Goats weed, Singapore Daisy etc) mainly along the creek banks. In the majority of the Zone 1 area the intent is for ongoing native species re-growth to be encouraged from the existing intact seed bank, through the elimination of competition from weed species.

A base Allowance of 10% of the Total ZONE 1 Area has been made to allocate reinforcement and re-planting tubestock for this zone. The exact revegetation area and number will be determined following weed management and detailed assessment on site following the initial weed management phase.

Re-planting in Zone 1 is to be undertaken in two (or possibly more) broad phases:

- Phase 1 - Tree Planting to increase canopy cover and
- Phase 2 - Shrubs Planting to introduce mid storey open forest structure.

Minor disturbances within Zone 1 will occur as a result of removal of larger areas of weed infestation. Weed treatment will be hand removal and follow up spot spraying. Where significant areas of weed removal occurs such as bare ground areas greater than 5m², Blanket mulching (or Coir matting in overland flow areas such as creek banks) and tubestock is to be installed.

It is noted that in the majority of locations, a generally continuous layer of existing groundcovers of native grasses such as Blady Grass is present, providing topsoil stability. Accordingly the intent is to install revegetation as single hole plantings amongst retained and protected existing groundcovers and to only install new groundcovers to replace removed weeds. The Planting Mixes for these zones are all weighted primarily towards tree species with some shrub layer species and minimal groundcovers.

Where larger sections of weeds such as Singapore Daisy are to be removed in overland flow areas, Coirmatting and high density tubestock planting to min. 3 per m² is proposed.

Within the broader Zone 1 area there are some sections where Canopy cover is more open. In these areas specific higher density revegetation planting mixes are proposed (Zones 1A and 1B as indicated on plan). The exact extent of areas requiring re-planting will be determined following the initial weed management phase.

ZONE 1A Ex.Veg. (Lower Creek Bank)

Mainly canopy planting is allowed in this zone to create upper level shade cover through individual plantings typically with 1M dia. mulch circles within existing native grass cover.

The species mix in these locations utilise a higher proportion of plants tolerant of frequent inundation.

ZONE 1B Ex.Veg. (Mid Creek Bank)

Mainly canopy planting is allowed in this zone to create upper level shade cover through individual plantings typically with 1M dia. mulch circles within existing native grass cover.

The species mix in these locations utilise a higher proportion of open Eucalypt forest species plants.

ZONES DESCRIPTION CONTINUED

ZONES 2 to 5 Revegetation Planting

As a result of previous land uses, clearing and weed treatments works, these areas are to be rehabilitated through reconstruction procedures. Areas to be rehabilitated include those that are denuded, disturbed and or where bare areas exist following the weed management. Any weed species regrowth is to be eradicated and the area mulched (or matted where nominated in overland flow zones) and revegetated with Koala food and habitat trees, and native shrubs and ground covers. Planting zones are to be dominated by trees, shrub and ground cover species with species selected from pre clear species at densities of min. 1 plant per square metre (with higher density in overland flow zones).

ZONE 2 Mulch Planting Areas

EXISTING CLEARED AREAS TO BE CONVERTED FROM GRASS TO TIERED PLANTING
The main location for this proposed planting treatment is a linear band between the existing Goodna Creek Vegetation & the existing pathway link. NOTE: Areas within the Powerlink Easement are not part of this zone.

MULCHED PLANTING AREAS, TIERED PLANTING STRUCTURE:

75mm Tubestock Rehabilitation species mix of Trees, Shrubs and Groundcovers.
100mm Site Mulch on 150mm Modified Site Topsoil to 1: 4 Max. batters.
Refer to Plant Schedules for species composition and density.

ZONE 2A (Mid Creek Bank)

These zones are located between the creek and the mapped Q100 high inundation line. The species mix in these locations utilise a higher proportion of plants tolerant of frequent inundation.

ZONE 2B (Upper Creek Bank)

These zones are located between the mapped Q100 high inundation line and the pathway edges to the east. The species mix in these locations utilise a higher proportion of open Eucalypt forest species plants.

ZONE 3 Mulch Plant. Power. POWERLINE EASEMENT - MULCHED DISTURBED AREAS FOLLOWING EARTHWORKS (OUTSIDE OF FLOW PATHS) PLANTING AREAS.

Current 40M electrical easement is highly disturbed over years of clearing and slashing:

- In general Blanket Mulching and revegetation with native species.
- Shrubs and groundcovers only are to be planted due to limitations for planting heights under powerlines.
- Maintenance access tracks of minimum 4.5 M wide are to be maintained and re-aligned as required through the easement.
- The Powerlink Guidelines require the Conductor Shadow Area (CSA) to be maintained as grassed and is indicated "agricultural use" are not permitted.
- The CSA is indicated in the Guidelines as the width of overhead wires plus 5m clear either side. For this reason it is proposed to realign the maintenance access track underneath the power lines where possible to maximise the areas available for revegetation planting in the rest of the easement.

NO TREES OR LARGE SHRUBS PLANTING STRUCTURE:

75mm Tubestock Rehabilitation species mix of Trees, Shrubs and Groundcovers.
100mm Site Mulch on 150mm Modified Site Topsoil to 1: 4 Max. batters.
Refer to Plant Schedules for species composition and density.

ZONE 4 Tree Planting

MULCHED SINGLE AND GROUPED TREES IN EXISTING GRASSED AREAS:
In areas between existing pathway and house lots, tree species are proposed into existing grassed areas with no understorey planting, trees will be set back from pathway edges and rear lot boundaries to allow for safe management and CPTED sightlines.

75mm Tubestock Rehabilitation species Trees planted in Tree Guards
100mm Site Mulch x 1.0M Dia. circles into Modified Site Topsoil planting holes.
Refer to Plant Schedules for species composition and density.

ZONES DESCRIPTION CONTINUED

ZONE 5 Future Works

STORMWATER REHABILITATION & SHARED USE AREAS BY ICC

These areas have been designated by ICC for future works to install stormwater devices and local recreational park outcomes. These areas will be maintained as slashed open grass to maintain flexibility for construction outcomes by ICC in the future.

NOTE: Coir Mat Plant.

COIR MATTING PLANTING AREAS IF REQUIRED ON SITE

If during site investigations following weed removal or during construction works it is considered by the Site Superintendent that site mulch should be substituted with a bio-degradable matting solution, Coir matting will be installed. Matting will be installed to manufacturer's recommendations to existing & disturbed ground in areas only where frequent overland flows are expected.

PLANTING DETAILS:

75mm Tubestock Rehabilitation species mix of Trees, Shrubs and Groundcovers.
"Coir Matting Polyfabrics Tecmat TMC9" (Thickest Version rated to cater for flow velocity of 4.8m/s).

amendments:			
Issue	Date	Details	Approved
A	22.03.2016	Preliminary	GC

Plan of: Harry Ratnam Park Rehabilitation Zone Notes Sheet 2			
Drawn by: FW	Project: Woodlinks Village Estate H.R.Park	SCALE: AS NOTED	
Checked by: GC / MS	Client: Canberra Estate Consortium No. 36	North	

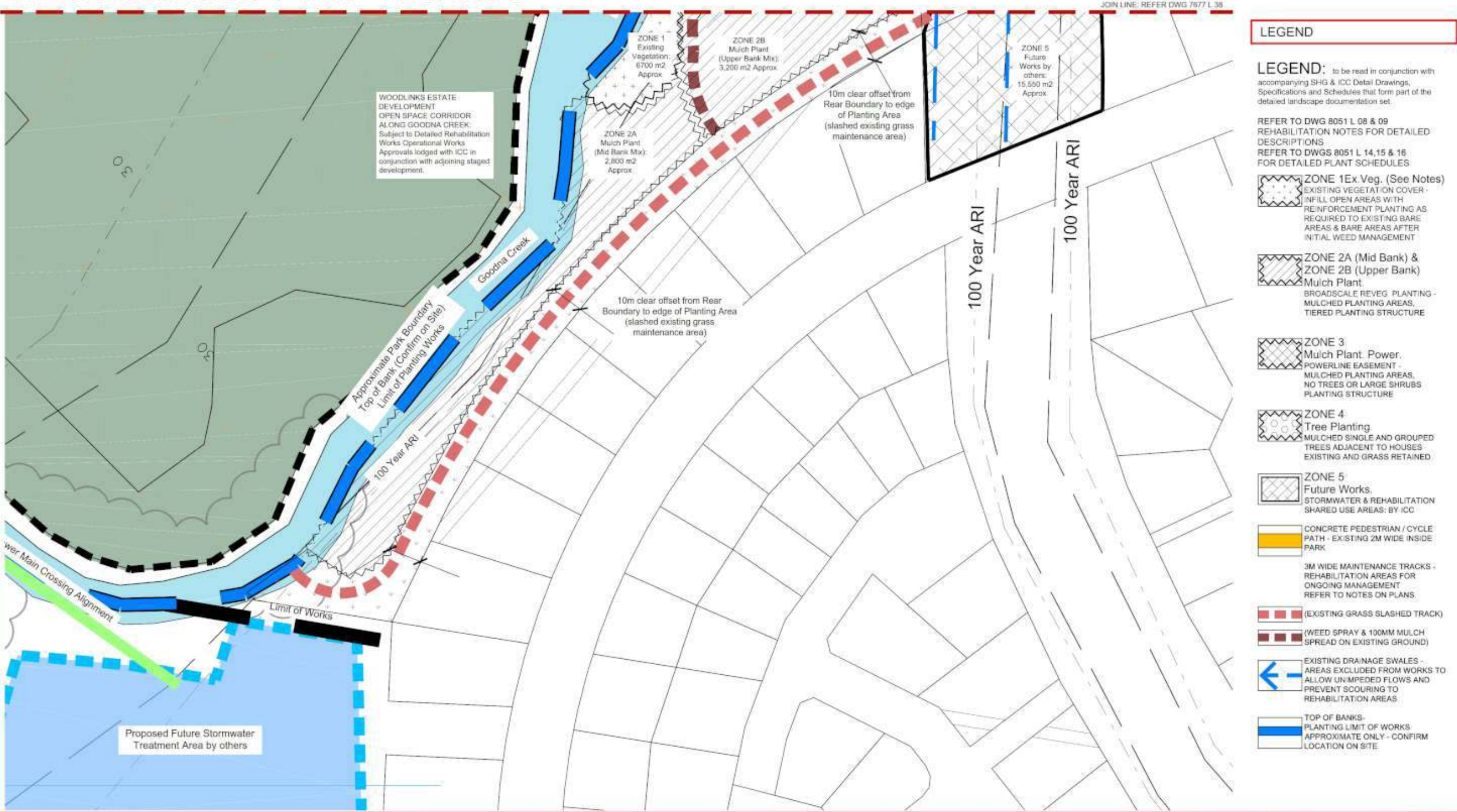
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Woodlinks Village Estate - Harry Ratnam Park

Rehabilitation Plan - Sheet 1



LEGEND

- LEGEND:** to be read in conjunction with accompanying SHG & ICC Detail Drawings, Specifications and Schedules that form part of the detailed landscape documentation set.
- REFER TO DWG 8051 L 08 & 09 REHABILITATION NOTES FOR DETAILED DESCRIPTIONS
- REFER TO DWGS 8051 L 14, 15 & 16 FOR DETAILED PLANT SCHEDULES
- ZONE 1 Ex. Veg. (See Notes) EXISTING VEGETATION COVER - INFILL OPEN AREAS WITH REINFORCEMENT PLANTING AS REQUIRED TO EXISTING BARE AREAS & BARE AREAS AFTER INITIAL WEED MANAGEMENT
 - ZONE 2A (Mid Bank) & ZONE 2B (Upper Bank) Mulch Plant. BROADSCALE REVEG. PLANTING - MULCHED PLANTING AREAS, TIERED PLANTING STRUCTURE
 - ZONE 3 Mulch Plant. Power. POWERLINE EASEMENT - MULCHED PLANTING AREAS, NO TREES OR LARGE SHRUBS PLANTING STRUCTURE
 - ZONE 4 Tree Planting. MULCHED SINGLE AND GROUPED TREES ADJACENT TO HOUSES EXISTING AND GRASS RETAINED.
 - ZONE 5 Future Works. STORMWATER & REHABILITATION SHARED USE AREAS: BY ICC
 - CONCRETE PEDESTRIAN / CYCLE PATH - EXISTING 2M WIDE INSIDE PARK
 - 3M WIDE MAINTENANCE TRACKS - REHABILITATION AREAS FOR ONGOING MANAGEMENT REFER TO NOTES ON PLANS.
 - (EXISTING GRASS SLASHED TRACK)
 - (WEED SPRAY & 100MM MULCH SPREAD ON EXISTING GROUND)
 - EXISTING DRAINAGE SWALES - AREAS EXCLUDED FROM WORKS TO ALLOW UNIMPEDED FLOWS AND PREVENT SCOURING TO REHABILITATION AREAS
 - TOP OF BANKS - PLANTING LIMIT OF WORKS APPROXIMATE ONLY - CONFIRM LOCATION ON SITE

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amendments:			
Date	Detail	Approved	
22.10.2016	Primary	GC	Date Feb 16

Plan of: Harry Ratnam Park
 Rehabilitation Plan LOT 7000
 Sheet 1

Drawn by: FW Project: Woodlinks Village Estate H.R.Park
 Checked by: GC / MS Client: Canberra Estate Consortium No. 38

SCALE
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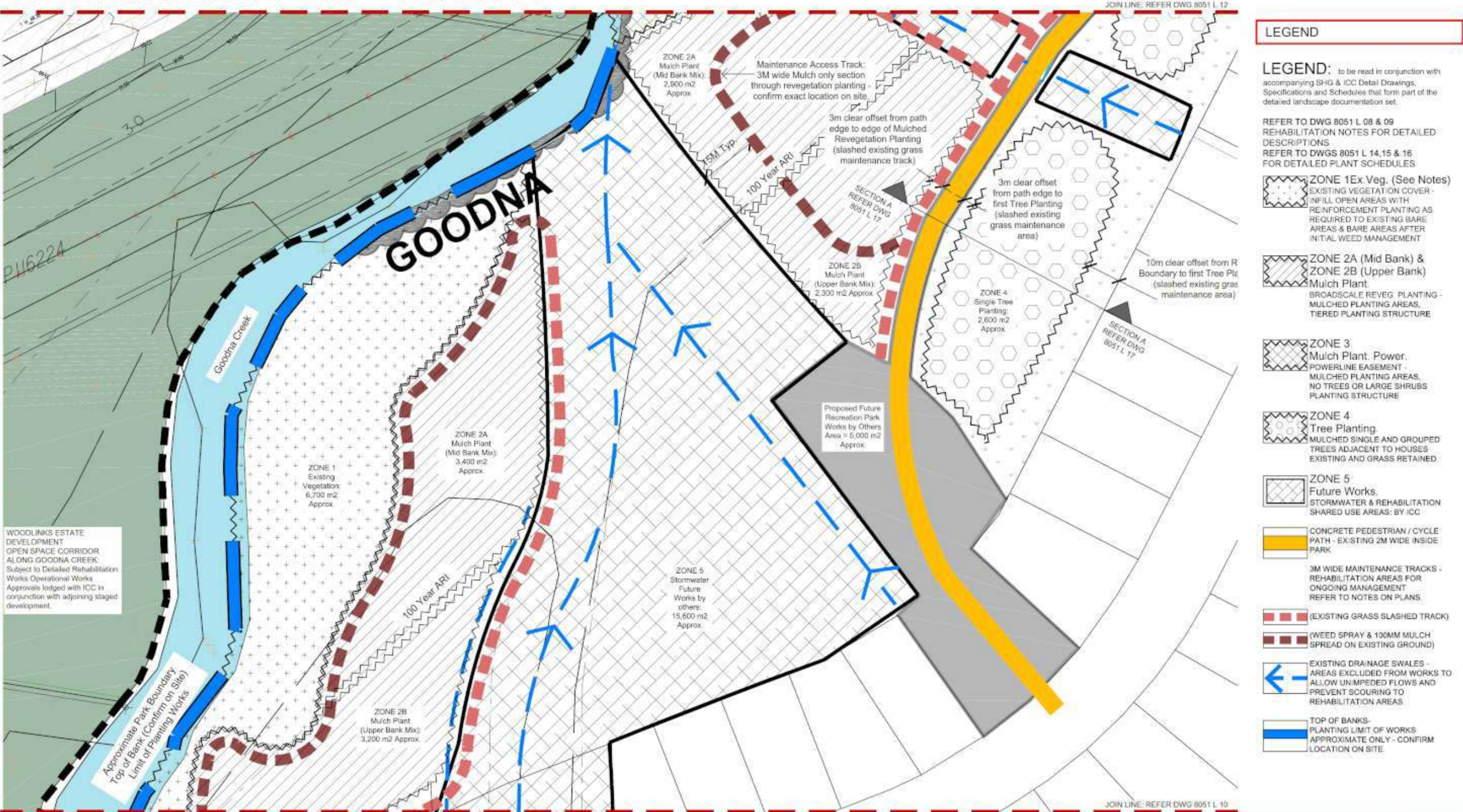


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Woodlinks Village Estate - Harry Ratnam Park

Rehabilitation Plan - Sheet 2



LEGEND

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 - ZONE 3 Mulch Plant. Power. POWERLINE EASEMENT - MULCHED PLANTING AREAS, NO TREES OR LARGE SHRUBS PLANTING STRUCTURE
 - ZONE 4 Tree Planting. MULCHED SINGLE AND GROUPED TREES ADJACENT TO HOUSES EXISTING AND GRASS RETAINED.
 - ZONE 5 Future Works. STORMWATER & REHABILITATION SHARED USE AREAS: BY ICC
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 - 3M WIDE MAINTENANCE TRACKS - REHABILITATION AREAS FOR ONGOING MANAGEMENT REFER TO NOTES ON PLANS.
 - (EXISTING GRASS SLASHED TRACK)
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 - TOP OF BANKS - PLANTING LIMIT OF WORKS APPROXIMATE ONLY - CONFIRM LOCATION ON SITE

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amendments:			
Issue	Date	Details	Approved
A	12.02.2016	Primary	GC

Date Feb 16

Plan of: Harry Ratnam Park
Rehabilitation Plan LOT 7000
Sheet 2

Drawn by: FW Project: Woodlinks Village Estate H.R.Park
Checked by: GC / MS Client: Canberra Estate Consortium No. 36

SCALE: 1:500@A1 1:1000@A3

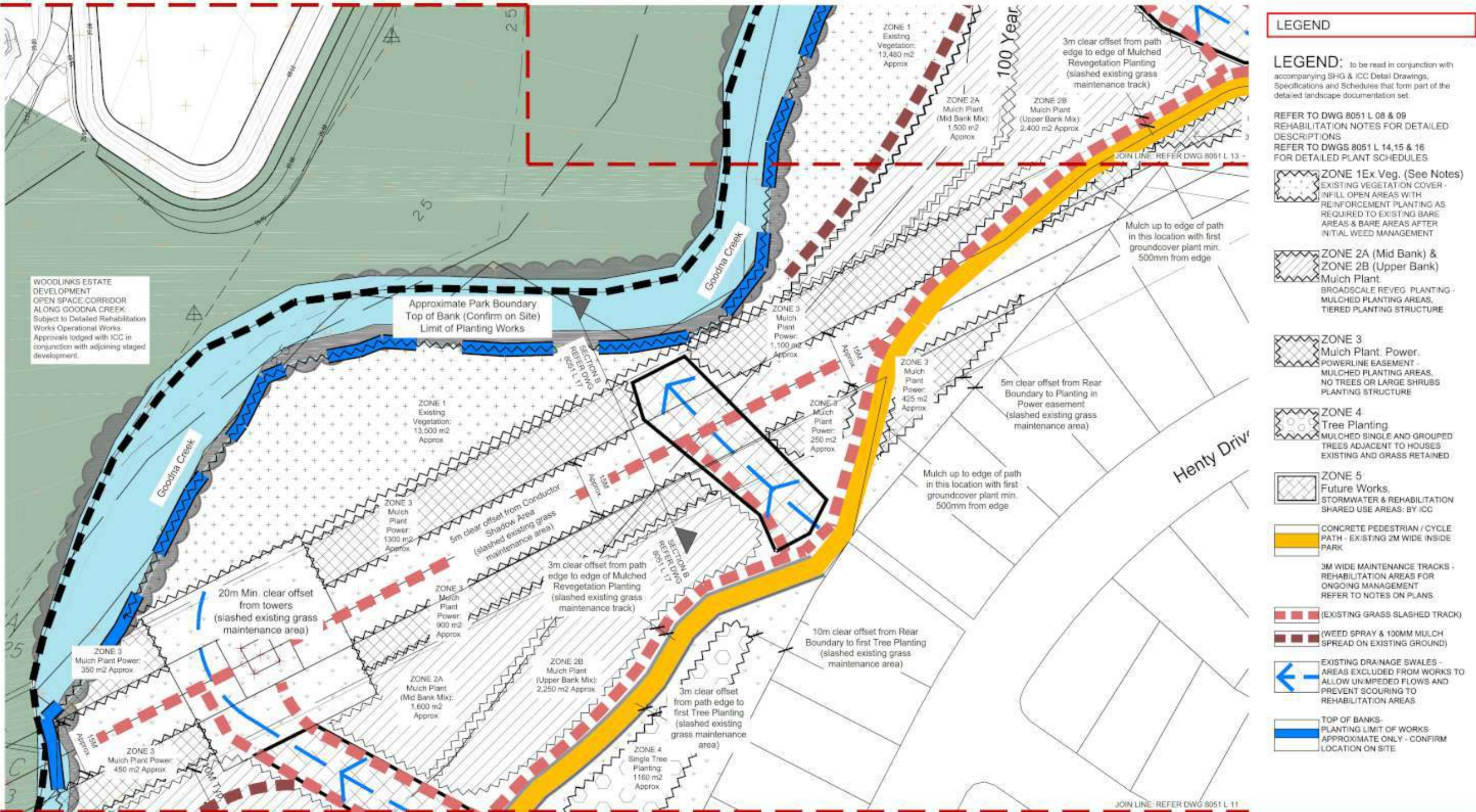


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Woodlinks Village Estate - Harry Ratnam Park

Rehabilitation Plan - Sheet 3



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amendments:

Issue	Date	Details	Approved
A	22.03.2016	Primary	GC

Date Feb 16

Plan of: Harry Ratnam Park
 Rehabilitation Plan LOT 7000
 Sheet 3

Drawn by: FW Project: Woodlinks Village Estate H.R.Park
 Checked by: GC / MS Client: Canberra Estate Consortium No. 36

SCALE
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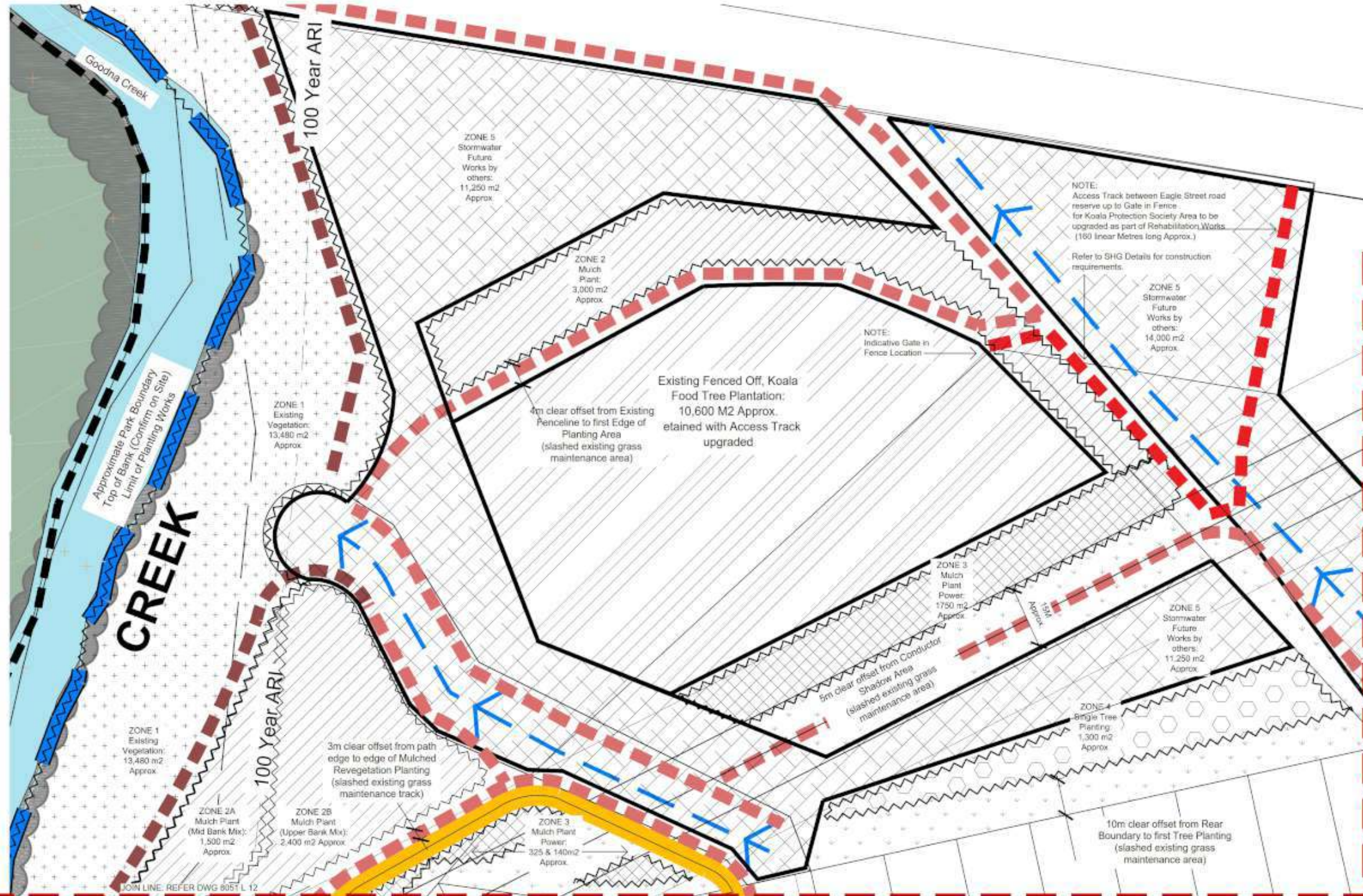


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Woodlinks Village Estate - Harry Ratnam Park

Rehabilitation Plan - Sheet 4



LEGEND

- LEGEND:** to be read in conjunction with accompanying SHG & ICC Detail Drawings, Specifications and Schedules that form part of the detailed landscape documentation set.
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REFER TO DWGS 8051 L 14, 15 & 16 FOR DETAILED PLANT SCHEDULES
- ZONE 1 Ex. Veg. (See Notes)
EXISTING VEGETATION COVER - INFILL OPEN AREAS WITH REINFORCEMENT PLANTING AS REQUIRED TO EXISTING BARE AREAS & BARE AREAS AFTER INITIAL WEED MANAGEMENT
 - ZONE 2A (Mid Bank) & ZONE 2B (Upper Bank) Mulch Plant
BROADSCALE REVEG PLANTING - MULCHED PLANTING AREAS, TIERED PLANTING STRUCTURE
 - ZONE 3 Mulch Plant. Power.
POWERLINE EASEMENT - MULCHED PLANTING AREAS, NO TREES OR LARGE SHRUBS PLANTING STRUCTURE
 - ZONE 4 Tree Planting.
MULCHED SINGLE AND GROUPED TREES ADJACENT TO HOUSES EXISTING AND GRASS RETAINED.
 - ZONE 5 Future Works.
STORMWATER & REHABILITATION SHARED USE AREAS: BY ICC
 - CONCRETE PEDESTRIAN / CYCLE PATH - EXISTING 2M WIDE INSIDE PARK
 - 3M WIDE MAINTENANCE TRACKS - REHABILITATION AREAS FOR ONGOING MANAGEMENT REFER TO NOTES ON PLANS.
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 - TOP OF BANKS - PLANTING LIMIT OF WORKS APPROXIMATE ONLY - CONFIRM LOCATION ON SITE

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amendments:			
Issue	Date	Details	Approved
A	22.03.2016	Primary	GC
Date Feb 16			

Plan of: Harry Ratnam Park
 Rehabilitation Plan LOT 7000
 Sheet 4

Drawn by: FW Project: Woodlinks Village Estate H.R.Park
 Checked by: GC / MS Client: Canberra Estate Consortium No. 36

SCALE: 1:500@A1
 1:1000@A3



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Dwg No. 8051 L 13 A

Woodlinks Village Estate - Harry Ratnam Park

Rehabilitation Plan - Sheet 5



7677 - WOODLINKS VLLAGE STAGE 1A GOODNA CK LOT 7000 REHABILITATION WORK
ZONE 1A PLANT SCHEDULES
"EX. VEG" INFILL MULCHED PLANTING OPEN AREAS TO LOWER BANK
ALLOWANCE AMONGST EXISTING VEGETATION REHABILITATION PLANTING AREAS
 Recommended Species List Total. Approx. Area = 2,200m²
 (10% Approx. OUT OF OVERALL AREA OF 20,200 M²)

SPECIES	COMMON NAME	PLANT FORM	POT SIZE	PLANTING DENSITY APPROX. OVERALL @ 1.0 PER M ²	QUANTITY
TREES (SETBACK MIN. 3M FROM PATH EDGE)					
1 per 6m ²					
<i>ALPHITONIA excelsa</i>	Red Ash	Tree	Tube	1/100m ²	22
<i>ALLOCASUARINA littoralis</i>	Black She-Oak	Tree	Tube	1/60m ²	36
<i>CORYMBIA intermedia</i>	Pink Bloodwood	Tree	Tube	1/60m ²	36
<i>CORYMBIA inaequalis</i>	Moreton Bay Ash	Tree	Tube	1/100m ²	22
<i>EUCALYPTUS acuminata</i>	White Mahogany	Tree	Tube	1/100m ²	22
<i>EUCALYPTUS crebra</i>	Narrow Leaved Ironbark	Tree	Tube	1/150m ²	15
<i>EUCALYPTUS moluccana</i>	Grey Box	Tree	Tube	1/100m ²	22
<i>EUCALYPTUS siderophloia</i>	Northern Grey Ironbark	Tree	Tube	1/100m ²	22
<i>EUCALYPTUS tereticornis</i>	Old Blue Gum	Tree	Tube	1/40m ²	55
<i>FICUS obliqua</i>	Small Leaved Moreton Bay Fig	Tree	Tube	1/100m ²	22
<i>GLOCHIDION mantrum</i>	Cheese Tree	Tree	Tube	1/100m ²	22
<i>LOPHOSTEMON saccolobus</i>	Swamp Bush Flot	Tree	Tube	1/60m ²	36
<i>MELALEUCA sparguereria</i>	Uxval Leaved Paperbark	Tree	Tube	1/60m ²	36
SUBTOTAL					368
SHRUBS (SETBACK MIN. 6M FROM PATH FOR OPTED VISIBILITY)					
1 per 6m ²					
<i>ACACIA teretifolia</i>	Early Luck Wattle	Small Tree	Tube	1/40m ²	55
<i>BANKSIA integrifolia</i>	Coastal Banksia	Small Tree	Tube	1/75m ²	29
<i>CALLISTEMON viminalis</i>	"Bottlebrush Red"	Shrub	Tube	1/40m ²	55
<i>DAVIDSONIA villosa</i>	Prickly Pea	Shrub	Tube	1/75m ²	29
<i>DODONAEA triquetra</i>	Forced Hep Bush	Shrub	Tube	1/75m ²	29
<i>HOPSEA acutifolia</i>	Purple Pea Bush	Shrub	Tube	1/40m ²	55
<i>JACKSONIA scoparia</i>	Dogwood	Shrub	Tube	1/75m ²	29
<i>LEPTOSPERMUM polyphyllum</i>	Wet May	Shrub	Tube	1/40m ²	55
<i>PYLAEOSTEMUM uncinatum</i>	"Sweet Ptilosporum"	Shrub	Tube	1/75m ²	29
SUBTOTAL					367
GROUNDCOVERS					
1 per 1.5m ²					
<i>BOTRIOCILIUM sp.</i>	"Beardgrass"	Ground	Tube	1/80m ²	28
<i>DIANTHA caerulea</i>	Flax Lily	Ground	Tube	1/10m ²	220
<i>GOODENIA rotundifolia</i>	Star Goodenia	Ground	Tube	1/80m ²	28
<i>IMPERATA cylindrica</i>	Birdy Grass	Ground	Tube	1/8m ²	275
<i>LOMANERA hirta</i>	Creek Matrush	Ground	Tube	1/7m ²	314
<i>LOMANERA longifolia</i>	Matrush	Ground	Tube	1/6m ²	367
<i>MYOPORUM ellipticum</i>	Boxbush	Ground	Tube	1/20m ²	110
<i>THEMPTA grandis</i>	Kangaroo Grass	Ground	Tube	1/20m ²	110
SUBTOTAL					1451
TOTAL					2186

LEGEND

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- ZONE 1 Ex. Veg. (See Notes)
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BROADSCALE REVEG. PLANTING - MULCHED PLANTING AREAS, TIERED PLANTING STRUCTURE
 - ZONE 3
Mulch Plant. Power. POWERLINE EASEMENT - MULCHED PLANTING AREAS, NO TREES OR LARGE SHRUBS PLANTING STRUCTURE
 - ZONE 4
Tree Planting.
MULCHED SINGLE AND GROUPED TREES ADJACENT TO HOUSES EXISTING AND GRASS RETAINED.
 - ZONE 5
Future Works.
STORMWATER & REHABILITATION SHARED USE AREAS: BY ICC
 - CONCRETE PEDESTRIAN / CYCLE PATH - EXISTING 2M WIDE INSIDE PARK
 - 3M WIDE MAINTENANCE TRACKS - REHABILITATION AREAS FOR ONGOING MANAGEMENT REFER TO NOTES ON PLANS.
 - (EXISTING GRASS SLASHED TRACK)
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 - TOP OF BANKS - PLANTING LIMIT OF WORKS APPROXIMATE ONLY - CONFIRM LOCATION ON SITE

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amendments:

Issue	Date	Details	Approved
A	22.03.2016	Primary	GC

Date Feb 16

Plan of: Harry Ratnam Park
 Rehabilitation Plan LOT 7000
 Sheet 5

Drawn by: FW Project: Woodlinks Village Estate H.R.Park
 Checked by: GC / MS Client: Canberra Estate Consortium No. 36



saunders havill group

Dwg No. 8051 L 14 A

Zone 1B

**7677 - WOODLINKS VILLAGE STAGE 1A GOODNA CK LOT 7000 REHABILITATION WORK
ZONE 1B PLANT SCHEDULES
"EX. VEG" INFILL MULCHED PLANTING OPEN AREAS TO MID CREEK BANK
ALLOWANCE AMONGST EXISTING VEGETATION REHABILITATION PLANTING AREAS
Recommended Species List Total. Approx. Area = 1300m2 (10% OUT OF OVERALL AREA OF 20,200 M2)**

SPECIES	COMMON NAME	PLANT FORM	POT SIZE	PLANTING DENSITY APPROX. OVERALL @ 1.0 PER 1M ²	QUANTITY
TREES (SETBACK MIN. 3M FROM PATH EDGE)					1 per 6m²
<i>ALPHITONIA excelsa</i>	Red Ash	Tree	Tube	1/100m ²	22
<i>ALLOCASUARINA littoralis</i>	Black She-Oak	Tree	Tube	1/60m ²	36
<i>CORYMBIA intermedia</i>	Pink Bloodwood	Tree	Tube	1/60m ²	36
<i>CORYMBIA tessellaris</i>	Moreton Bay Ash	Tree	Tube	1/100m ²	22
<i>EUCALYPTUS acuminoides</i>	White Mahogany	Tree	Tube	1/100m ²	22
<i>EUCALYPTUS crebra</i>	Narrow Leaved Ironbark	Tree	Tube	1/150m ²	15
<i>EUCALYPTUS moluccana</i>	Grey Box	Tree	Tube	1/100m ²	22
<i>EUCALYPTUS siderophloia</i>	Northern Grey Ironbark	Tree	Tube	1/100m ²	22
<i>EUCALYPTUS tereticornis</i>	Old Blue Gum	Tree	Tube	1/40m ²	55
<i>FICUS obliqua</i>	Small Leaved Moreton Bay Fig	Tree	Tube	1/100m ²	22
<i>GLOCHIDION samatrum</i>	Cheese Tree	Tree	Tube	1/100m ²	22
<i>LOPHOSTEMON suaveolens</i>	Swamp Brush Box	Tree	Tube	1/60m ²	36
<i>MELALEUCA quinquenervia</i>	Broad Leaved Paperbark	Tree	Tube	1/60m ²	36
SUBTOTAL					368
SHRUBS (SETBACK MIN. 6M FROM PATH FOR CPTED VISIBILITY)					1 per 6m²
<i>ACACIA leiocalyx</i>	Early Luck Wattle	Small Tree	Tube	1/40m ²	55
<i>BANKSIA integrifolia</i>	Coastal Banksia	Small Tree	Tube	1/75m ²	29
<i>CALLISTEMON viminalis</i>	"Bottlebrush Red"	Shrub	Tube	1/40m ²	55
<i>DAVIESIA villosa</i>	Prickly Pea	Shrub	Tube	1/75m ²	29
<i>DODONAEA triquetra</i>	Forest Hop Bush	Shrub	Tube	1/75m ²	29
<i>HOVEA acutifolia</i>	Purple Pea Bush	Shrub	Tube	1/40m ²	55
<i>JACKSONIA scoparia</i>	Dogwood	Shrub	Tube	1/75m ²	29
<i>LEPTOSPERMUM polygajolium</i>	Wid May	Shrub	Tube	1/40m ²	55
<i>PITTOSPORUM undulatum</i>	"Sweet Pittosporum"	Shrub	Tube	1/75m ²	29
SUBTOTAL					367
GROUNDCOVERS					1 per 1.5m²
<i>BOHRIOCHLOA sp.</i>	"Beardgrass"	Ground	Tube	1/80m ²	28
<i>DIANELLA caerulea</i>	Flax Lily	Ground	Tube	1/10m ²	220
<i>GOODENIA rotundifolia</i>	Star Goodenia	Ground	Tube	1/80m ²	28
<i>IMPERATA cylindrica</i>	Blady Grass	Ground	Tube	1/8m ²	275
<i>LOMANDRA hysterix</i>	Creek Matrush	Ground	Tube	1/7m ²	314
<i>LOMANDRA longifolia</i>	Matrush	Ground	Tube	1/6m ²	367
<i>MYOPORUM ellipticum</i>	Boobiala	Ground	Tube	1/10m ²	220
<i>THEMEDA triandra</i>	Kangaroo Grass	Ground	Tube	1/10m ²	220
SUBTOTAL					1671
TOTAL					2406

Zone 2A

**8051 - HARRY RATNAM PARK, GOODNA CK REHABILITATION WORK
ZONE 2A (MID BANK - BELOW Q100) PLANT SCHEDULES
"MULCH PLANT" MULCHED REHABILITATION PLANTING AREAS
Recommended Species List Total. Approximate Area = 12,200m2**

SPECIES	COMMON NAME	PLANT FORM	POT SIZE	PLANTING DENSITY APPROX. OVERALL @ 1.0 PER 1M ²	QUANTITY
TREES (SETBACK MIN. 3M FROM PATH EDGE)					1 per 6m²
<i>ALPHITONIA excelsa</i>	Red Ash	Tree	Tube	1/100m ²	122
<i>ALLOCASUARINA littoralis</i>	Black She-Oak	Tree	Tube	1/60m ²	200
<i>CORYMBIA intermedia</i>	Pink Bloodwood	Tree	Tube	1/60m ²	200
<i>CORYMBIA tessellaris</i>	Moreton Bay Ash	Tree	Tube	1/100m ²	122
<i>EUCALYPTUS acuminoides</i>	White Mahogany	Tree	Tube	1/100m ²	122
<i>EUCALYPTUS crebra</i>	Narrow Leaved Ironbark	Tree	Tube	1/150m ²	81
<i>EUCALYPTUS moluccana</i>	Grey Box	Tree	Tube	1/100m ²	122
<i>EUCALYPTUS siderophloia</i>	Northern Grey Ironbark	Tree	Tube	1/100m ²	122
<i>EUCALYPTUS tereticornis</i>	Old Blue Gum	Tree	Tube	1/40m ²	305
<i>FICUS obliqua</i>	Small Leaved Moreton Bay Fig	Tree	Tube	1/100m ²	122
<i>GLOCHIDION samatrum</i>	Cheese Tree	Tree	Tube	1/100m ²	122
<i>LOPHOSTEMON suaveolens</i>	Swamp Brush Box	Tree	Tube	1/60m ²	200
<i>MELALEUCA quinquenervia</i>	Broad Leaved Paperbark	Tree	Tube	1/60m ²	200
SUBTOTAL					2040
SHRUBS (SETBACK MIN. 6M FROM PATH FOR CPTED VISIBILITY)					1 per 6m²
<i>ACACIA leiocalyx</i>	Early Luck Wattle	Small Tree	Tube	1/40m ²	305
<i>BANKSIA integrifolia</i>	Coastal Banksia	Small Tree	Tube	1/75m ²	163
<i>CALLISTEMON viminalis</i>	"Bottlebrush Red"	Shrub	Tube	1/40m ²	305
<i>DAVIESIA villosa</i>	Prickly Pea	Shrub	Tube	1/75m ²	163
<i>DODONAEA triquetra</i>	Forest Hop Bush	Shrub	Tube	1/75m ²	163
<i>HOVEA acutifolia</i>	Purple Pea Bush	Shrub	Tube	1/40m ²	305
<i>JACKSONIA scoparia</i>	Dogwood	Shrub	Tube	1/75m ²	163
<i>LEPTOSPERMUM polygajolium</i>	Wid May	Shrub	Tube	1/40m ²	305
<i>PITTOSPORUM undulatum</i>	"Sweet Pittosporum"	Shrub	Tube	1/75m ²	163
SUBTOTAL					2033
GROUNDCOVERS					1 per 1.5m²
<i>BOHRIOCHLOA sp.</i>	"Beardgrass"	Ground	Tube	1/80m ²	153
<i>DIANELLA caerulea</i>	Flax Lily	Ground	Tube	1/10m ²	130
<i>GOODENIA rotundifolia</i>	Star Goodenia	Ground	Tube	1/80m ²	153
<i>IMPERATA cylindrica</i>	Blady Grass	Ground	Tube	1/8m ²	1525
<i>LOMANDRA hysterix</i>	Creek Matrush	Ground	Tube	1/7m ²	1743
<i>LOMANDRA longifolia</i>	Matrush	Ground	Tube	1/6m ²	2033
<i>MYOPORUM ellipticum</i>	Boobiala	Ground	Tube	1/10m ²	1220
<i>THEMEDA triandra</i>	Kangaroo Grass	Ground	Tube	1/10m ²	1220
SUBTOTAL					8176
TOTAL					12250

**Woodlinks Village Estate -
Harry Ratnam Park
Rehabilitation Plants Sheet 1**



<p>40 YEARS 1975-2015</p> <p>web www.saundershavill.com phone (07) 3251 9444 fax (07) 3251 9455 address 9 Thompson St Bowen Hills Q 4006</p> <p>■ surveying ■ town planning ■ urban design ■ environmental management ■ landscape architecture</p>	<p>amendments:</p> <table border="1"> <tr> <th>Date</th> <th>Detail</th> <th>Approved</th> </tr> <tr> <td>22.10.2016</td> <td>Primary</td> <td>GC</td> </tr> </table>	Date	Detail	Approved	22.10.2016	Primary	GC	<p>Plan of: Harry Ratnam Rehabilitation Plan Plants Sheet 1</p>	<p>SCALE: AS NOTED</p>	<p>North</p>	<p>saunders havill group</p> <p>Dwg No. 8051 L 15 A</p>
	Date	Detail	Approved								
22.10.2016	Primary	GC									
<p>Date Feb 16</p>	<p>Drawn by: FW Project: Woodlinks Village Estate H.R.Park</p> <p>Checked by: GC / MS Client: Canberra Estate Consortium No. 36</p>										

Zone 2B

8051 - HARRY RATNAM PARK, GOODNA CK REHABILITATION WORK ZONE 2B (UPPER BANK - ABOVE Q100 LINE) PLANT SCHEDULES "MULCH PLANT" MULCHED REHABILITATION PLANTING AREAS Recommended Species List Total. Approximate Area = 10,150m ²						
SPECIES	COMMON NAME	PLANT FORM	POT SIZE	PLANTING DENSITY APPROX. OVERALL @ 1.0 PER 1M ²	QUANTITY	
TREES (SETBACK MIN. 4M FROM PATH EDGE)				1 per 7m²		
<i>ALPHITONIA excelsa</i>	Red Ash	Tree	Tube	1/60m ²	166	
<i>CORYMBIA intermedia</i>	Pink Bloodwood	Tree	Tube	1/40m ²	254	
<i>CORYMBIA tessellata</i>	Moreton Bay Ash	Tree	Tube	1/50m ²	203	
<i>EUCALYPTUS acuminoides</i>	White Mahogany	Tree	Tube	1/100m ²	102	
<i>EUCALYPTUS crebra</i>	Narrow Leaved Ironbark	Tree	Tube	1/100m ²	102	
<i>EUCALYPTUS moluccana</i>	Grey Box	Tree	Tube	1/50m ²	203	
<i>EUCALYPTUS siderophloia</i>	Northern Grey Ironbark	Tree	Tube	1/100m ²	102	
<i>EUCALYPTUS tereticornis</i>	Old Blue Gum	Tree	Tube	1/30m ²	338	
<i>LOPHOSTEMON confertus</i>	Brush Box	Tree	Tube	1/75m ²	135	
				SUBTOTAL	1604	
SHRUBS (SETBACK MIN. 4M FROM PATH - LOW DENSITY FOR OPTED VISIBILITY)				1 per 6m²		
<i>ACACIA leiocalyx</i>	Early Tack Wattle	Small Tree	Tube	1/40m ²	254	
<i>BANKSIA integrifolia</i>	Coastal Banksia	Small Tree	Tube	1/75m ²	135	
<i>CALLISTEMON viminalis</i>	"Bottlebrush Red"	Shrub	Tube	1/40m ²	254	
<i>CRYPTOCARYA triplinervis</i>	"Three-veined Cryptocarya"	Shrub	Tube	1/75m ²	135	
<i>DAVIESIA villosa</i>	Prickly Pea	Shrub	Tube	1/75m ²	135	
<i>DODONAEA triquetra</i>	Forest Hop Bush	Shrub	Tube	1/75m ²	135	
<i>HOVEA acutifolia</i>	Purple Pea Bush	Shrub	Tube	1/50m ²	203	
<i>JACKSONIA scoparia</i>	Dogwood	Shrub	Tube	1/75m ²	135	
<i>LEPTOSPERMUM polygajulum</i>	Wid May	Shrub	Tube	1/50m ²	203	
<i>PITIOSPORUM undulatum</i>	"Sweet Pittosporum"	Shrub	Tube	1/75m ²	135	
				SUBTOTAL	1726	
GROUNDCOVERS				1 per 1.5m²		
<i>BOTRIOCHLOA sp.</i>	"Beardgrass"	Ground	Tube	1/25m ²	290	
<i>CYMOBOPOGON refractus</i>	Barb-wire Grass	Ground	Tube	1/20m ²	508	
<i>IMPERATA cylindrica</i>	Blady Grass	Ground	Tube	1/7m ²	1450	
<i>LOMANDRA longifolia</i>	Matrush	Ground	Tube	1/4m ²	2538	
<i>THEMEDA triandra</i>	Kangaroo Grass	Ground	Tube	1/5m ²	2030	
				SUBTOTAL	6815	
					TOTAL	10145

Zone 4

8051 - HARRY RATNAM PARK, GOODNA CK REHABILITATION WORK ZONE 4 PLANT SCHEDULES SINGLE TREE PLANTING IN OPEN GRASSED AREAS BETWEEN PATH & HOUSE LOTS Recommended Species List Total. Approximate Area = 5,060m ²						
SPECIES	COMMON NAME	PLANT FORM	POT SIZE	DENSITY OVERALL @ 1.0 PER 18M ²	QTY.	
TREES (PHASE 1)						
<i>CORYMBIA intermedia</i>	Pink Bloodwood	Tree	Tube	1/100m ²	51	
<i>CORYMBIA tessellata</i>	Moreton Bay Ash	Tree	Tube	1/100m ²	51	
<i>EUCALYPTUS crebra</i>	Narrow Leaved Ironbark	Tree	Tube	1/200m ²	25	
<i>EUCALYPTUS moluccana</i>	Grey Box	Tree	Tube	1/200m ²	25	
<i>EUCALYPTUS siderophloia</i>	Northern Grey Ironbark	Tree	Tube	1/200m ²	25	
<i>EUCALYPTUS tereticornis</i>	Old Blue Gum	Tree	Tube	1/200m ²	25	
<i>LOPHOSTEMON confertus</i>	Brush Box	Tree	Tube	1/100m ²	51	
<i>MILLEBUCIA quinquecervia</i>	Broad Leaved Paperbark	Tree	Tube	1/200m ²	25	
					TOTAL	278

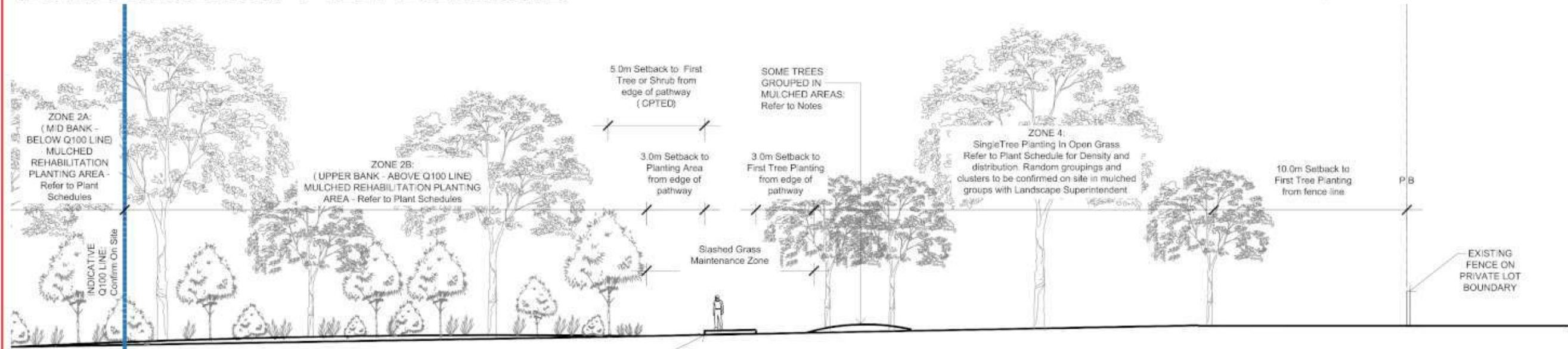
Zone 3

8051 - HARRY RATNAM PARK, GOODNA CK REHABILITATION WORK ZONE 3 PLANT SCHEDULES "MULCH PLANT POWER" MULCHED REHABILITATION PLANTING AREAS, NO TREES OR LARGE SHRUBS - REHABILITATION PLANTING AREAS Recommended Species List Total. Approximate Area = 6990m ²						
SPECIES	COMMON NAME	PLANT FORM	POT SIZE	PLANTING DENSITY APPROX. OVERALL @ 1.0 PER 1M ²	QUANTITY	
SMALLER SHRUBS				1 per 3.5m²		
<i>BACKHOUSIA myrtifolia</i>	"Backhausia"	Shrub	Tube	1/50m ²	140	
<i>BANKSIA robur</i>	Giant Candles	Shrub	Tube	1/50m ²	140	
<i>CASSINIA subrotunda</i>	"Cough bush"	Shrub	Tube	1/50m ²	140	
<i>CRYPTOCARYA triplinervis</i>	"Three-veined Cryptocarya"	Shrub	Tube	1/50m ²	140	
<i>DAVIESIA villosa</i>	Prickly Pea	Shrub	Tube	1/50m ²	140	
<i>DODONAEA triquetra</i>	Forest Hop Bush	Shrub	Tube	1/50m ²	140	
<i>HOVEA acutifolia</i>	Purple Pea Bush	Shrub	Tube	1/30m ²	233	
<i>JACKSONIA scoparia</i>	Dogwood	Shrub	Tube	1/40m ²	175	
<i>LEPTOSPERMUM polygajulum</i>	Wid May	Shrub	Tube	1/40m ²	175	
<i>LOMATIA alatafolia</i>	Crickle Bush	Shrub	Tube	1/50m ²	140	
<i>NEOLITSEA dealbata</i>	"White Dolly Gum"	Shrub	Tube	1/50m ²	140	
<i>PILIDIOSYMA glabrum</i>	Plum Myrtle	Shrub	Tube	1/50m ²	140	
<i>PITIOSPORUM undulatum</i>	"Sweet Pittosporum"	Shrub	Tube	1/50m ²	140	
				SUBTOTAL	1981	
GROUNDCOVERS				1 per 1.4m²		
<i>BOTRIOCHLOA sp.</i>	"Beardgrass"	Ground	Tube	1/15m ²	466	
<i>CAREX sp.</i>	"Carex"	Sedge	Tube	1/100m ²	70	
<i>CYMOBOPOGON refractus</i>	Barb-wire Grass	Ground	Tube	1/10m ²	699	
<i>CYPERUS sp.</i>	"Sedges"	Sedge	Tube	1/100m ²	70	
<i>DIANELLA caerulea</i>	"Blue Lily"	Ground	Tube	1/100m ²	70	
<i>EUSTREPHUS latifolius</i>	Wambat Berry	Ground	Tube	1/100m ²	70	
<i>GAHNIJA aspera</i>	Red Fruited Sinesedge	Ground	Tube	1/40m ²	175	
<i>GOODENIA rotundifolia</i>	Star Goodenia	Ground	Tube	1/100m ²	70	
<i>IMPERATA cylindrica</i>	Blady Grass	Ground	Tube	1/8m ²	874	
<i>JUNCUS acutatus</i>	"Common Rush"	Sedge	Tube	1/100m ²	70	
<i>LOMANDRA lysirix</i>	Creek Matrush	Ground	Tube	1/15m ²	466	
<i>LOMANDRA longifolia</i>	Matrush	Ground	Tube	1/15m ²	466	
<i>MYOPORUM ellipticum</i>	Beebitala	Ground	Tube	1/100m ²	70	
<i>THEMEDA triandra</i>	Kangaroo Grass	Ground	Tube	1/4m ²	1398	
				SUBTOTAL	5033	
					TOTAL	7013

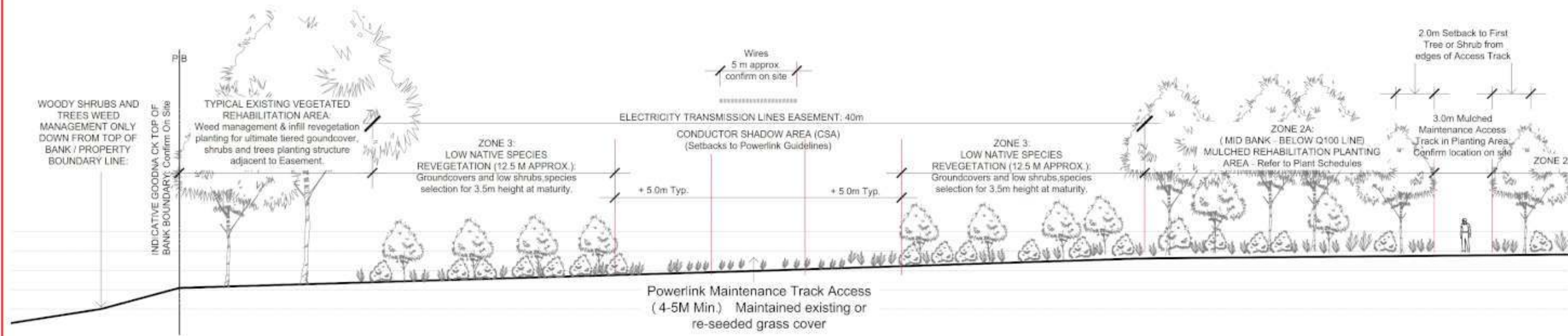
Woodlinks Village Estate - Harry Ratnam Park Rehabilitation Plants Sheet 2

Woodlinks Village Estate - Harry Ratnam Park

Rehabilitation Plan Sections



MULCHED REVEGETATION TO PATHWAY TO EXISTING PRIVATE LOTS - TYPICAL SECTION A-A
Approximate Scales 1:100 @A1 / 1:200 @ A3



GOODNA CREEK TO POWERLINK EASEMENT TO MULCHED REVEGETATION - TYPICAL SECTION B-B
Approximate Scales 1:100 @A1 / 1:200 @ A3

<p>saunders havill group 40 YEARS 1974-2014</p> <p>web www.saundershavill.com phone (07) 3251 9444 fax (07) 3251 9455 address 9 Thompson St Bowen Hills Q 4006</p> <p>■ surveying ■ town planning ■ urban design ■ environmental management ■ landscape architecture</p>	amendments: <table border="1"> <thead> <tr> <th>Date</th> <th>Detail</th> <th>Approved</th> </tr> </thead> <tbody> <tr> <td>12.02.2016</td> <td>Preliminary</td> <td>GC</td> </tr> </tbody> </table>		Date	Detail	Approved	12.02.2016	Preliminary	GC	Plan of: Harry Ratnam Park Rehabilitation Sections		<p>North</p>	saunders havill group Dwg No. 8051 L 17 A	
	Date	Detail	Approved										
12.02.2016	Preliminary	GC											
<table border="1"> <tr> <td>Date</td> <td>Feb 16</td> </tr> </table>	Date	Feb 16	<table border="1"> <tr> <td>Drawn by:</td> <td>FW</td> <td>Project:</td> <td>Woodlinks Village Estate H.R.Park</td> </tr> <tr> <td>Checked by:</td> <td>GC / MS</td> <td>Client:</td> <td>Canberra Estate Consortium No. 36</td> </tr> </table>	Drawn by:	FW	Project:	Woodlinks Village Estate H.R.Park	Checked by:	GC / MS	Client:	Canberra Estate Consortium No. 36	SCALE AS SHOWN	
Date	Feb 16												
Drawn by:	FW	Project:	Woodlinks Village Estate H.R.Park										
Checked by:	GC / MS	Client:	Canberra Estate Consortium No. 36										



Appendix G

Land access agreement

CANBERRA ESTATES CONSORTIUM NO. 36 PTY LTD

And:

IPSWICH CITY COUNCIL

Access Deed for Park Rehabilitation

Mullins Lawyers
Level 22, Central Plaza One
345 Queen Street
BRISBANE QLD 4001

Tel: (07) 3224 0222

Fax: (07) 3224 0333

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THIS DEED is made on 17 NOVEMBER

2015

PARTIES

CANBERRA ESTATES CONSORTIUM NO. 36 PTY LTD ABN 90 156 442 312

of 2 Calvert Close, MURRUMBA DOWNS in the State of Queensland 4503

("Canberra Estates")

and

IPSWICH CITY COUNCIL

of 143 Brisbane Street, Ipswich in the State of Queensland 4305

("Council")

INTRODUCTION

- A. Canberra Estates is the owner the Land situated at Collingwood Drive, Collingwood Park described as Lot 1 on SP185145 and Lots 65, 66 and 67 on RP225349 (the "**Land**") which it intends to develop into a residential community.
- B. Canberra Estates has obtained an approval under the Environment Protection and Biodiversity Conservation Act to develop the Woodlink Residential Community in Collingwood Park, Queensland, on the Land pursuant to a decision dated the 4th March 2014 ("**EPBC Approval**").
- C. The EPBC Approval required Canberra Estates to prepare a Koala Management Plan to address management issues to avoid and mitigate impacts to koalas and to prepare an offset management plan to address significant residual impacts to koalas as a result of the proposed development of the Land.
- D. Canberra Estates has prepared and obtained approval of a Koala Management Plan dated 16 September 2014 and an Offset Management Plan dated 24 September 2014 from the Australian Government pursuant to a letter dated 15 October 2014 ("**Approved Plans**").
- E. Canberra Estates now wishes to implement the Approved Plans.

- F. Council owns and controls the park adjacent to the Land known as Harry Ratnam Park containing Lot 5 on RP221982 and Lot 519 on CPSL10400 ("the Park"). The Koala Management Plan and Offset Management Plan contemplate the doing of works in the nature of rehabilitation of vegetation and associated works within the Park along with the ongoing management of the works.
- G. Council agrees with and supports the proposal contemplated by the Approved Plans.
- H. The Council agrees to permit Canberra Estates to enter upon the Park and use the Park for the purposes of implementing the Approved Plans in accordance with the terms set out in this Deed.

OPERATIVE PROVISIONS

It is agreed as follows:

1 DEFINITIONS AND INTERPRETATION

1.1 Definitions

In this Deed:

"Deed" means this document, including any schedule or annexure to it;

"Business Day" means a day that is not a Saturday, or Sunday or any other day which is a public holiday or a bank holiday in the place where an act is to be performed or a payment is to be made;

"Cost" includes loss, liability or damage;

"Council" means Ipswich City Council;

"Term" means the period commencing on the date of this Deed and expiring on 31 January 2034.

1.2 Interpretation

1.2.1 Reference to:

1.2.1.1 One gender includes the other;

1.2.1.2 The singular includes the plural and the plural includes the singular;

1.2.1.3 A person includes a body corporate;

1.2.1.4 A party includes the party's executors, administrators, successors and permitted assigns;

- 1.2.1.5 A status, regulations or provision of a statute or regulation ("**Statutory Provision**") includes:
- (a) That Statutory Provision as amended or re-enacted from time to time; and
 - (b) A statute, regulation or provision enacted in replacement of that Statutory Provision; and
- 1.2.1.6 Money is Australian dollars, unless otherwise stated.
- 1.2.2 "Including" and similar expressions are not words of limitation.
- 1.2.3 Where a word or expression is given a particular meaning, other parts of speech and grammatical forms of that word or expressions have corresponding meaning.
- 1.2.4 Headings and any table of contents or index are for convenience only and do not form part of this Deed or affect its interpretation.
- 1.2.5 A provision of this Deed must not be construed to the disadvantage of a party merely because that party was responsible for the preparation of the Deed or the inclusion of the provision in the Deed.
- 1.2.6 If an act must be done on a specified date which is not a Business Day, it must be done instead on the next Business Day.

2 **PERIOD OF ACCESS**

- 2.1 Unless sooner terminated in accordance with this Deed, the period during which Canberra Estates may exercise its rights pursuant to this Deed will commence on the date of this Deed and continue for the whole of the Term.

3 **THE PARTIES COVENANT**

- 3.1 In consideration of Council's covenant hereby given to maintain the Park as public parkland for the duration of the Term and in consideration of the Council allowing Canberra Estates to enter onto the Park and use the Park for the purpose of implementing and otherwise carrying out the provisions of the Approved Plans, Canberra Estates covenants with the Council as follows:
- 3.1.1 Canberra Estates will bear its own costs of implementing and carrying out the provisions of the Approved Plans;

- 3.1.2 Canberra Estates will perform all works contemplated by the Approved Plans in a proper workmanlike manner and ensure that the Park is left in a neat and tidy state having regard to its use as a Park;
- 3.1.3 Canberra Estates will comply with all of the terms and conditions of the Approved Plans;
- 3.1.4 Canberra Estates will make good any damage (both structural and cosmetic), arising out of Canberra Estates access to and works undertaken in the Park; and
- 3.1.5 Canberra Estates will use reasonable endeavours to ensure that any area in which work is conducted is maintained in a safe condition at all times in accordance with relevant workplace health and safety laws.

4 RIGHT AND PURPOSE OF ACCESS

- 4.1 Council grants to Canberra Estates the right to access the Park on foot and with vehicles and other machinery, plant and equipment during the Term to do all things reasonably necessary to implement and comply with the Approved Plans subject to compliance with all reasonable Council requirements (provided that the Approved Plans will take precedence in the case of any conflict) and to make good any damage in accordance with the provisions of this Deed.
- 4.2 Canberra Estates will only use the Park for purposes and activities directly associated with the implementation of and compliance with the Approved Plans. Without limiting the effect of this clause, Canberra Estates will be entitled to access the Park during the Term to carry out the following tasks:
 - 4.2.1 To carry out all necessary surveys of the Park;
 - 4.2.2 To inspect and prepare the Park for works associated with the Approved Plans;
 - 4.2.3 To carry out the rehabilitation and reinstatement of vegetation along Goodna Creek and areas adjacent to Goodna Creek including the Park;
 - 4.2.4 To construct access facilities (road) to the koala harvest plantation to be established in the Park;
 - 4.2.5 To manage the Park in accordance with the Approved Plans following completion of the initial works; and
 - 4.2.6 To carry out inspections of the Park.

4.3 Canberra Estates acknowledges and agrees that any rights conferred by this clause will be in contract only and will not infer an intention to create or confer upon Canberra Estates any tenancy, estate or interest in the Park.

4.4 This clause does not confer upon Canberra Estates any right of exclusive possession of the Park. Council and its agents, servants and invitees may at any time in its absolute discretion, exercise all their rights including, without limitation, their right to enter upon and use the whole or any part of the Park. If Council or any other authorised persons enter the Park while works are taking place, Council must comply with all relevant workplace health and safety laws.

5 **INSURANCE**

5.1 Canberra Estates must maintain at their Cost a public liability policy of insurance jointly in the names of Council and Canberra Estates for an amount not less than \$10,000,000 per occurrence with an insurer approved in writing by Council and in terms approved in writing by Council, which approvals will not be unreasonably withheld. The policy will be maintained by Canberra Estates during the Term.

5.2 On execution of this Deed by Canberra Estates and whenever required in writing from time to time thereafter by Council and Canberra Estates will produce evidence to the satisfaction of Council of the insurances effected and maintained by Canberra Estates for the purposes of this clause.

6 **INDEMNITY**

6.1 Canberra Estates indemnifies and holds harmless Council, its servants, employees, invitees and agents against all expenses, costs, claims, demands, actions, suits, judgement and liabilities in any way whatsoever arising directly or indirectly out of this Deed, Canberra Estates' use or occupation of this the Park or the fulfilment or non-fulfilment of Canberra Estates' obligations and responsibilities imposed by this Deed, or the Approved Plans whether in respect of any deliberate act or omission, negligence or otherwise and whether in respect of personal injury to, or any kind of other loss suffered by any person whomsoever (including any party to this Deed and their servants and agents), except for in the following circumstances:

6.1.1 Where the loss or damage was caused through any act or omission by Council or its servants, employees, invitees and agents; or

6.1.2 Where Council or its servants, employees, invitees and agents have failed to comply with relevant workplace health and safety laws when entering the Park during the works.

7 **RISK**

7.1 Canberra Estates uses the Park at its own risk and Council is not responsible for any loss, damage or theft.

8 **TERMINATION ON DEFAULT**

8.1 Canberra Estates default under this Deed if it:

8.1.1 Fails to comply with, observe or perform any of its obligations under this Deed; or

8.1.2 Becomes an externally-administered body corporate within the meaning of the *Corporations Act 2001*.

8.2 If Canberra Estates defaults under this Deed and does not remedy the default after reasonable notice to do so from Council, Council may:

8.2.1 Terminate this Deed immediately by notice in writing to Canberra Estates;
Recover from Canberra Estates any loss suffered by the Council due to Canberra Estates' default; and

8.2.2 Exercise any of its other legal rights.

9 **USE**

9.1 Canberra Estates will not use the Park for any activity inconsistent with the purpose of complying with the Approved Plans.

9.2 Canberra Estates will use its best endeavours to ensure that its use does not cause any damage to the Park including erosion or contamination.

10 **FURTHER ASSURANCE**

10.1 Each party must promptly at its own Cost do all things (including executing all documents) necessary or desirable to give full effect to this Deed.

11 **SEVERABILITY**

11.1 If any provision in this Deed is unenforceable, illegal or void, then it is severed and the rest of this Deed remains in force.

12 **ENTIRE UNDERSTANDING**

12.1 This Deed:

12.1.1 Is the entire Deed and understanding between the parties on everything connected with the subject matter of this Deed; and

12.1.2 Supersedes any prior Deed or understanding on anything connected with that subject matter.

12.2 Each party has entered into this Deed without relying upon any representation by any other party or any person purporting to represent that party.

13 **VARIATION**

13.1 An amendment or variation to this Deed is not effective unless it is in writing and signed by the parties.

14 **WAIVER**

14.1 A party's failure or delay to exercise a power or right does not operate as a waiver of that power or right.

14.2 The exercise of a power or right does not preclude either its exercise in the future or the exercise of any other power or right.

14.3 A waiver is not effective unless it is in writing.

14.4 Waiver of a power or right is effective only in respect of the specific instance to which it relates and for the specific purpose for which it is given.

15 **COST AND OUTLAYS**

15.1 Each party will bear its own costs connected with the negotiation, preparation and execution of this Deed.

15.2 Canberra Estates must pay all stamp duty and other government imposts payable in connection with this Deed and all other documents and matters referred to in this Deed when due or earlier if requested in writing.

16 **NOTICES**

16.1 A notice or other communication connected with this Deed ("**Notice**") has no legal effect unless it is in writing.

16.2 In addition to any other method of service provided by law, the Notice may be:

16.2.1 Sent by prepaid post to the addressee at the address set out in this Deed or subsequently notified;

16.2.2 Sent by facsimile to the facsimile number of the addressee; or

16.2.3 Delivered at the address of the addressee set out in this Deed or subsequently notified.

16.3 A Notice must be treated as given and received:

16.3.1 If sent by post, on the 2nd Business Day (at the address to which it is posted) after posting;

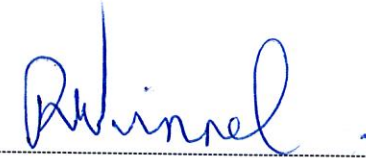
16.3.2 If sent by facsimile before 5:00pm on a Business Day at the place of receipt, on the day it was sent or otherwise on the next Business Day at the place of receipt; or

- 16.3.3 If otherwise delivered before 5:00pm on a Business Day at the place of delivery, upon delivery, or otherwise on the next Business Day at the place of delivery.
- 16.4 Despite clause 6.3.2 a facsimile is not treated as given or received unless at the end of transmission the sender's facsimile machine issues a report confirming the transmission of the number of pages in the Notice.
- 16.5 A Notice sent or delivered in a manner provided by clause 18.2 must be treated as validly given to and received by the party to which it is addressed event if:
- 16.5.1 The addressee has been wound up or deregistered or is absent from the place at which the Notice is delivered or to which it is sent; or
- 16.5.2 The Notice is returned unclaimed.
- 16.6 Any Notice by a party may be given and may be signed by its solicitor.
- 16.7 Any Notice to a party may be given to its solicitor by any of the means listed in clause 18.2 to the solicitor's business address or facsimile number.
- 17 **GOVERNING LAW AND JURISDICTION**
- 17.1 The law of Queensland governs this Deed.
- 17.2 The parties submit to the non-exclusive jurisdiction of the courts of Queensland and of the Commonwealth of Australia.
- 18 **DEALING IN RESPECT OF LAND**
- 18.1 **Dealing with the Land**
- 18.1.1 Council is not during the Term to transfer or otherwise dispose of to the Park unless the Council gives to the person the subject of such a dealing a Notice which states the following:
- (a) that the Park is subject to this document; and
- (b) that there may be obligations on the part of the Council which are unperformed and unfulfilled.
- 18.1.2 Council is not to sell the Park to another person ("**Transferee**") without the Council and the Transferee executing a document in which the Transferee covenants and agrees with the Council and Canberra Estates to the following and executes a document in which the Transferee covenants and agreed with the Council and Canberra Estates to the following:
- (i) that the Park is subject to this document; and
- (ii) upon the Transferee becoming the owner of the Park the Transferee becomes contractually bound to the

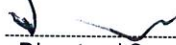
Council and Canberra Estates to perform and fulfil Council's obligations under this Deed as if the Transferee was originally named in the document as the Council.

EXECUTED as a Deed.

Executed by **Canberra Estates Consortium No.36 Pty Ltd** ABN 90 156 442 312 in accordance with section 127 of the Corporations Act 2001

)
)


Director



Director / Secretary



IPSWICH CITY COUNCIL
Signed by Craig Maudsley on
as duly authorised Council delegate under
section 238 of the *Local Government
Regulation 2012*



Witness



Name of Witness (Print)



Appendix H

EPBC approval and conditions granted 4 March 2014



Approval

**Woodlink Project – Master Planned Residential Community, Collingwood Park, QLD,
(EPBC 2013/6866)**

This decision is made under sections 130(1) and 133 of the *Environment Protection and Biodiversity Conservation Act 1999*.

Proposed action

person to whom the approval is granted Canberra Estates Consortium No. 36 Pty Ltd

proponent's ACN (if applicable) ACN: 156 442 312

proposed action To develop the Woodlink residential community in Collingwood Park, Queensland [See EPBC Act referral 2013/6866].

Approval decision

Controlling Provision	Decision
Listed threatened species and communities (sections 18 & 18A)	Approve

conditions of approval

This approval is subject to the conditions specified below.

expiry date of approval

This approval has effect until 31 January 2034.

Decision-maker

name and position Chris Murphy
Acting Assistant Secretary
Queensland and Sea Dumping Assessment Branch

signature

date of decision 4. March 2014

Conditions attached to the approval

1. The **approval holder** must not remove or fragment more than 25.9 hectares of **habitat critical to the survival of the Koala**. Impacts to **habitat critical to the survival of the Koala** must be limited to the **project area** shown in Attachment 1.
2. The **approval holder** must prepare a Koala Management Plan to address management measures to avoid and mitigate impacts to Koalas.
 - a. The Koala Management Plan must be submitted to the **Minister** for approval no less than three months prior to its intended implementation. Once approved the Koala Management Plan must be implemented.
 - b. The Koala Management Plan must be implemented prior to **commencement of the action**, or as otherwise directed in writing by the **Minister**.
 - c. The Koala Management Plan must include, but not be limited to:
 - i. details of pre-clearance survey methods for Koalas within the **project area** to be undertaken prior to **commencement of the action**.
 - ii. details of measures to mitigate impacts to Koalas within the **project area**, including, but not limited to:
 1. provision for a **qualified fauna spotter-catcher** to undertake surveys and handling of Koalas prior to and during **commencement of the action**;
 2. construction of temporary and permanent fauna exclusion fencing;
 3. implementation of appropriate vehicle speed limits;
 4. utilisation of plant species in the **project area** that will not attract Koalas to the **project area**;
 5. implementation of traffic calming and awareness signage; and
 6. provision of off-leash dog facilities, on-leash areas and dog prohibited areas.
 - iii. details of methods for Koala **relocation activities**, to be undertaken prior to and during **commencement of the action** including the identification and description of suitable recipient Koala habitat.
 - iv. process for reporting results from pre-clearance surveys and **relocation activities**, including, but not be limited to:
 1. identification of a website in which information would be made available to the public;
 2. timing and frequency for providing reporting information to the **Department**;
 3. provision of the following details, at a minimum, to be recorded if any Koalas are captured during **relocation activities**:
 - sex
 - age class
 - time and date of capture
 - method of capture

- location of capture (Global Positioning System (GPS))
- state of health
- any veterinary intervention required
- time held in captivity
- location of release (GPS) and date

4. provision of the following details, at a minimum, to be recorded for incidents if any Koalas are injured or killed:

- time, location (GPS) and nature of incident
- details of Koalas (including sex and age class)
- measures taken to address incident.

3. To offset the residual impacts to Koala, the **approval holder** must implement mechanisms to provide enduring protection, over a minimum of 27 hectares, to the offset site referred to as 'Goodna Creek Offset and Rehabilitation Area' as shown at Attachment 1.

The protection mechanisms implemented by the **approval holder**, including but not limited to, land access agreements, dedication of land title and zoning under the Ipswich Planning Scheme must be consistent with the conditions of this approval and the principles of the **EPBC Act Offsets Policy**.

Within three years of the date of the approval, the approval holder must provide written evidence to the **Department** demonstrating that the protection mechanisms have been implemented.

4. The **approval holder** must prepare an Offset Management Plan to address significant residual impacts to Koalas as a result of the action.

a. Impacts to Koalas that must be offset include:

- i. the loss of 25.9 hectares of **habitat critical to the survival of the Koala**, and
- ii. injury and mortality of Koalas.

b. The Offset Management Plan must include, but not be limited to:

- i. a detailed description of all affected values and the extent and likely timing of the impact/s on each;
- ii. the offset delivery mechanism(s) comprising land offsets and management, and maintenance of Koala population offset within the 'Goodna Creek Corridor' as shown at Attachment 1;
- iii. detailed descriptions of how enhanced conservation outcomes for the affected Koalas will be achieved in accordance with the **EPBC Act Offsets Policy**;
- iv. contribution of funding to the management and maintenance of the Offset Management Plan;
- v. timeframes and key milestones for implementation of offsets including, but not limited to, beginning to implement the offset plan prior to **commencement of the action**;
- vi. discussion of the risks and uncertainties associated with proposed offsets;
- vii. mechanisms for monitoring and reporting of offset milestones and

outcomes, including timing and frequency of monitoring and reporting;

viii. corrective actions and contingency measures to be implemented (including the timing of implementation of these) where monitoring of the offset area/s under the offset plan shows that offset strategies are not effectively achieving a net benefit or key milestones are not being or are unlikely to be met; and

ix. include textual descriptions and maps clearly defining the locations and boundaries of offset areas. These must be accompanied by a **Shapefile**.

c. The Offset Management Plan must be developed in consultation with the **Department** and other relevant stakeholders, including but not limited to, the Ipswich City Council and the Ipswich Koala Protection Society.

d. The **approval holder** must give consideration to how offsets will contribute to programs or incentives that align with the broader strategies and programs for the conservation and protection of Koalas.

e. The Offset Management Plan must be submitted to the **Minister** for approval no less than three months prior to its intended implementation. Once approved the Offset Management Plan must be implemented.

f. The Offset Management Plan must be implemented prior to **commencement of the action**, or as otherwise directed in writing by the **Minister**.

5. The most recent approved version of the Koala Management Plan and Offset Management Plan must remain accessible to the public on the website of the **approval holder** for the duration of the action.

6. Within ten days after the **commencement of the action**, the **approval holder** must advise the **Department** in writing of the actual date of commencement.

7. The **approval holder** must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement the plans required by this approval, and make them available upon request to the **Department**. Such records may be subject to audit by the **Department** or an independent auditor in accordance with section 458 of the **EPBC Act**, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the **Department's** website. The results of audits may also be publicised through the general media.

8. Any potential or suspected non-compliance with these conditions of approval must be reported to the department in writing within 48 hours of the **approval holder** becoming aware of the potential or suspected non-compliance. Within three months of every 12 month anniversary of the **commencement of the action**, the **approval holder** must publish a report on their website addressing compliance with each of the conditions of this approval, including implementation of any plans as specified in the conditions. Documentary evidence providing proof of the date of publication must be provided to the **Department** at the same time as the compliance report is published.

9. Upon the direction of the **Minister**, the **approval holder** must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the **Minister**. The independent auditor must be approved by the **Minister** prior to the commencement of the audit. Audit criteria must be agreed to by the **Minister** and the audit report must address the criteria to the satisfaction of the **Minister**.

10. If the **approval holder** wishes to carry out any activity otherwise than in accordance with a plan as specified in the conditions, the **approval holder** must submit to the **Department** for the **Minister's** written approval a revised version of that plan. The varied activity shall not commence until the **Minister** has approved the varied plan in writing. If the **Minister** approves the revised plan, that plan must be implemented in place of the plan originally approved.

11. If the **Minister** believes that it is necessary or convenient for the better protection of Koala to do so, the **Minister** may request that the **approval holder** make specified revisions to a plan specified in the conditions and submit the revised plan for the **Minister's** written approval. The **approval holder** must comply with any such request. The revised approved plan must be implemented. Unless the **Minister** has approved the revised plan, then the **approval holder** must continue to implement the plan originally approved, as specified in the conditions.

12. If, at any time after five years from the date of this approval, the **approval holder** has not **commenced the action**, then the **approval holder** must not **commence the action** without the written agreement of the **Minister**.

Definitions:

Approval holder: means the person to whom the approval is granted.

Commencement of the action/commence(d) the action: means any works involved in the construction phase of the project, including clearing vegetation, the erection of any onsite temporary structures and the use of heavy duty equipment for the purpose of breaking the ground for buildings or infrastructure. This excludes the erection of signage, fences, barriers or bunting for the purposes of excluding areas containing listed threatened species.

Department: the Australian Government Department responsible for the *Environment Protection and Biodiversity Conservation Act 1999*.

EPBC Act: means the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999*.

EPBC Act Offsets Policy: means the *Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy* (October 2012) or any subsequent revisions.

Habitat critical to the survival of the Koala: Koala habitat that is considered to be important for the species' long-term survival and recovery. An impact area that scores five or more using the habitat assessment tool for the Koala in Table 3 of the *Draft EPBC Act referral guidelines for the vulnerable koala (combined populations of Queensland, New South Wales and the Australian Capital Territory)* contains habitat critical to the survival of the Koala.

Minister: The Minister responsible for administering the *Environment Protection and Biodiversity Conservation Act 1999* (Cth).

Offset attributes: means an '.xls' file capturing relevant attributes of the offset site, including the EPBC Act reference ID number, the physical address of the offset site, coordinates of the boundary points in decimal degrees, the EPBC Act protected matters that the offset compensates for, any additional EPBC Act protected matters that are benefitting from the offset, and the size of the offset site in hectares.

Project area: refer to 'Woodlink development / works area incl. parks & vegetation corridor areas' at Attachment 1: Development and Offset / Rehabilitation Areas.

Qualified fauna spotter-catcher: must be licensed under relevant state legislation, and have demonstrated experience in surveying for and identifying listed threatened species, including Koala.

Shapefile: means an ESRI Shape file containing '.shp', '.shx' and '.dbf' files and other files capturing attributes of the offset site, including the shape, EPBC reference ID number and EPBC protected matters present at the relevant site. Attributes should also be captured in '.xls' format.

Suitable recipient Koala habitat: means an area that:

- is known to contain, or has historically contained Koalas;
- contains **Koala habitat** which is the same in type to the habitat in the project area, or is known to be able to support Koalas proposed to be translocated and contains appropriate and sufficient sources of food;
- is of sufficient size to allow for dispersal of individuals from the point of release, and
- is not at maximum carrying capacity for Koalas and translocated individuals are not considered likely to have significant impacts on resident Koalas.

Relocation activities: means any human-mediated activity involved in the capture and release of Koalas from the project area into suitable recipient **Koala habitat** within the offset area, including trapping, handling, holding in captivity, veterinary treatment, transportation and release.





Appendix I

Lifestyle guidelines for Woodlinks Village

Protecting and supporting

the local koala population at Woodlinks Village



Did you know...

koalas have a relatively well-defined home range and regularly visit the same trees?

As a new resident to Woodlinks Village you also form part of the future custodians of the Goodna Creek Environmental Corridor. You may not have seen them yet, however from time to time you will hear or glimpse the local koala population living side by side with residents of Woodlinks. The vegetated land on Goodna Creek has been purposely set aside, protected and rehabilitated to ensure the existing local koala usage of the site continues as the village is constructed and ultimately completed. To ensure Goodna Creek continues to function for koala movement all residents need to play a role in making sure this vulnerable species is able to coexist as the estate evolves into a full community.

Despite the retention of the corridor and trees along Goodna Creek, as a resident there are a simple ways you can help reduce the dangers koalas face when traversing urban environments.

Legislation

The koala is listed as a Vulnerable Fauna Species under the Commonwealth Government's Environment Protection and Biodiversity Conservation Act 1999 and the Queensland Government's Nature Conservation Act 1992. Along with specific controls put in place by Ipswich City Council all of these levels of government have had a role in the assessment and approval of the Woodlinks Village estate. The Goodna Creek Corridor is one of the first environmental offsets approved by the Commonwealth Government since the listing of the Koala in 2012.



Koala Trees in Landscaping

Did you know an adult koala can eat up to 1 kilo of gum leaves each night?

Any tree can provide shelter or refuge for a koala when avoiding predators or adverse weather, however a number of the large Eucalypt and Corymbia species along Goodna Creek are preferred for food and habitat. These trees have been protected and are currently being bolstered for this purpose. Importantly none of the street trees or fresh landscaping away from the Goodna Creek includes new koala food tree plantings. These have been deliberately excluded from the estate to avoid attracting koalas outside of the corridor to where housing occurs and the risk of dog attack vehicle strike is amplified.

You can support this outcome by ensuring you don't plant large gum trees around your own house and gardens (these species are not that suitable for these areas regardless of the koala).

Road Etiquette & Koala Safety

Did you know koalas are mostly asleep during the day and are actively moving around and feeding at night?

A common cause of koala deaths in urbanised parts of Queensland is being run over by a motor vehicle. When complete you will see signage and traffic calming devices along the Goodna Creek Esplanade Road as a constant reminder for drivers to be aware of the potential for a koala to wander through this area. Residents are encouraged to adhere to the reduced speed limits applied to this road, particularly at night.



Responsible Pet Ownership

Dog attacks on koalas result in death or very serious injuries. All dogs have the ability to cause stress to koalas with medium and large dogs more responsible for physical attacks. The Goodna Creek Corridor Parkland should only be utilised by dogs on a lead in constant control of the pet owner. Once the esplanade road is completed signage explaining these requirements will be installed at all entry and exit points to the parkland.

A dog off-leash facility is planned for the next local park to be constructed in the Woodlinks Village. Please utilise this area when letting your pet roam freely.

Dogs can behave differently when their owner is not present, particularly if a strange person or animal enters their territory. You can minimise the potential for your dog to attack a koala by ensuring it's contained to your property when not on a lead, particularly at night.

If You Find a Sick, Injured or Orphaned Koala

Don't try to handle a sick or injured koala, as you may put yourself or the animal in a situation where there is a risk of further injury. Koalas can also become easily stressed. Leave the koala undisturbed and ensure it is safe from further threats then contact either of the following groups for assistance:

*The Ipswich Koala Protection Society –
Koala Rescue*

Phone: (07) 5464 6274 or
(07) 3832 5035

Daisy Hill Koala Centre
Daisy Hill Road, Daisy Hill Qld 4127
Phone: (07) 3299 1032

Prepared by:

