Jumping Creek

Jumping Creek LPA Land Dedication Requirements

Peet Jumping Creek Pty Ltd

ABN 35 633 663 760

PEET | 125 YEARS

CONTENTS

1 INTRODUCTION

Peet Jumping Creek Pty Ltd ('PJC') and Queanbeyan Palerang Regional Council (QPRC) have entered into a Local Planning Agreement ('LPA') under Part 7 of the NSW *Environmental Planning & Assessment Act, 1979*, in order to document agreed development contributions relating to the development of land known as Jumping Creek in Queanbeyan.

The LPA includes a requirement for PJC to dedicate certain land to QPRC as a public reserve. The purpose of this Land Dedication Requirements Report ('the Report') is to provide the details in respect of the agreed improvements that will be undertaken to the land by PJC prior to its subsequent dedication to QPRC as a public reserve.

The LPA between PJC and QPRC was executed on 9 November 2021. The Report is an appendix to the formal LPA agreed by the parties.

Jumping Creek is a proposed subdivision creating 218 residential lots, including residue land to be dedicated as a public reserve and public roads. The development works will broadly comprise:

a) infrastructure works including external road works on Ellerton Drive, infrastructure works to connect to the existing, internal road network, and works to provide other essential utility services such as sewer and water;
b) works to the proposed active open space areas including bio-retention/wetlands, sedimentation basins, regrading of creek lines, construction of active recreational facilities and landscaping as set out in the supporting appendices; and
c) works to the proposed natural areas including weed removal/management, feral animal control, erosion repair, revegetation, contamination remediation and trail maintenance as set out in the supporting appendices.

Further details in respect of the works to be undertaken within items b) and c) above are listed at Sections 3.1 and 3.2 of the Report.

At that time the proposed improvement works have been completed, it is intended the public reserve land will be dedicated to QPRC consistent with the requirements of the executed LPA.

2 LAND TO BE DEDICATED

The public reserve land to be dedicated comprises two categories;

1. Recreation and Exotic Vegetation Area (approximately 8.7 hectares), and
2. Natural Vegetation Open Space Area (approximately 47.2 hectares).

These respective areas are shown below in the Figure 1.

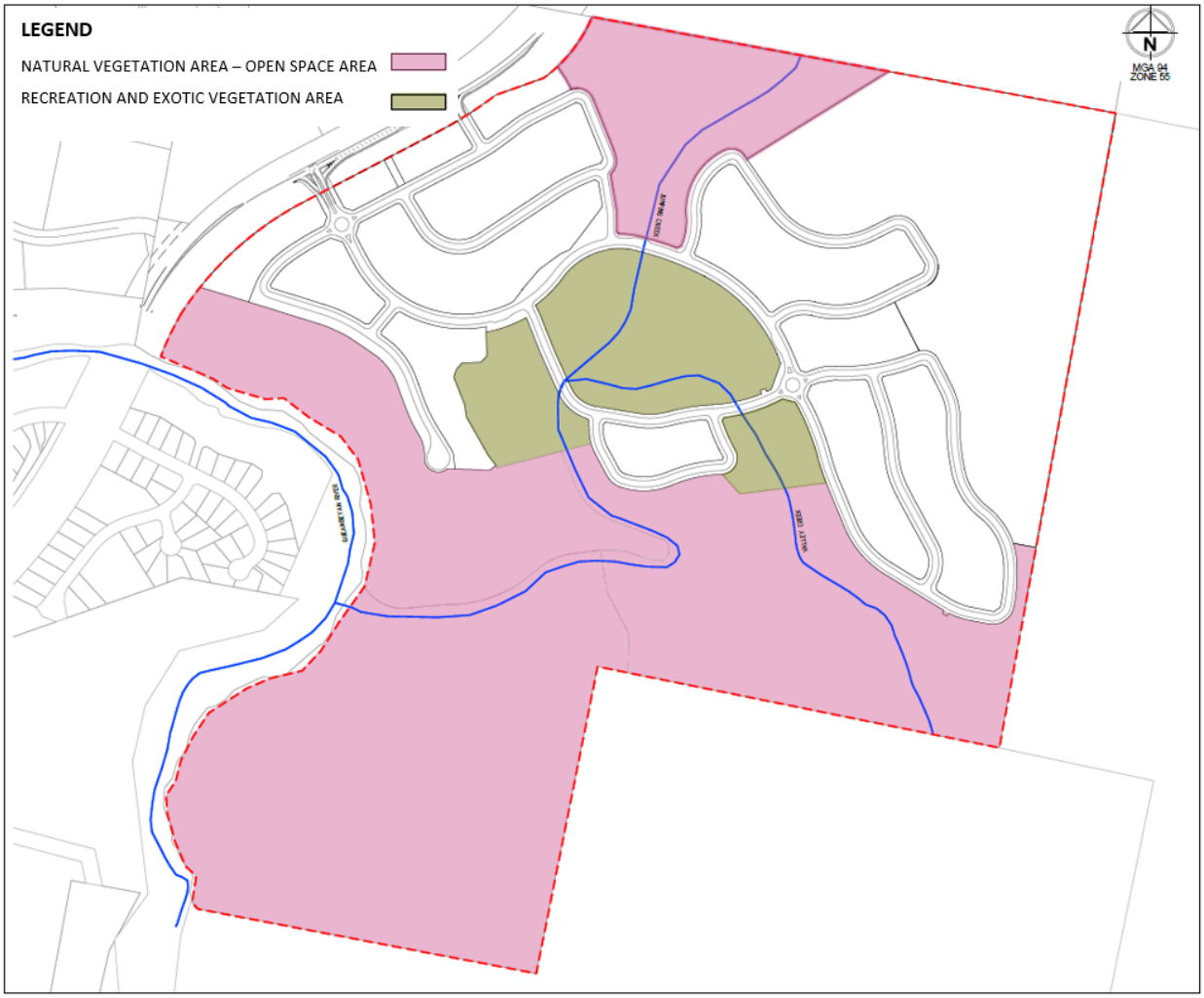

Figure 1: Land Dedication Plan

3 WORK REQUIRED ON LAND TO BE DEDICATED

An overview of the works required to be undertaken on the public reserve land are summarised graphically in Figure 2 below.

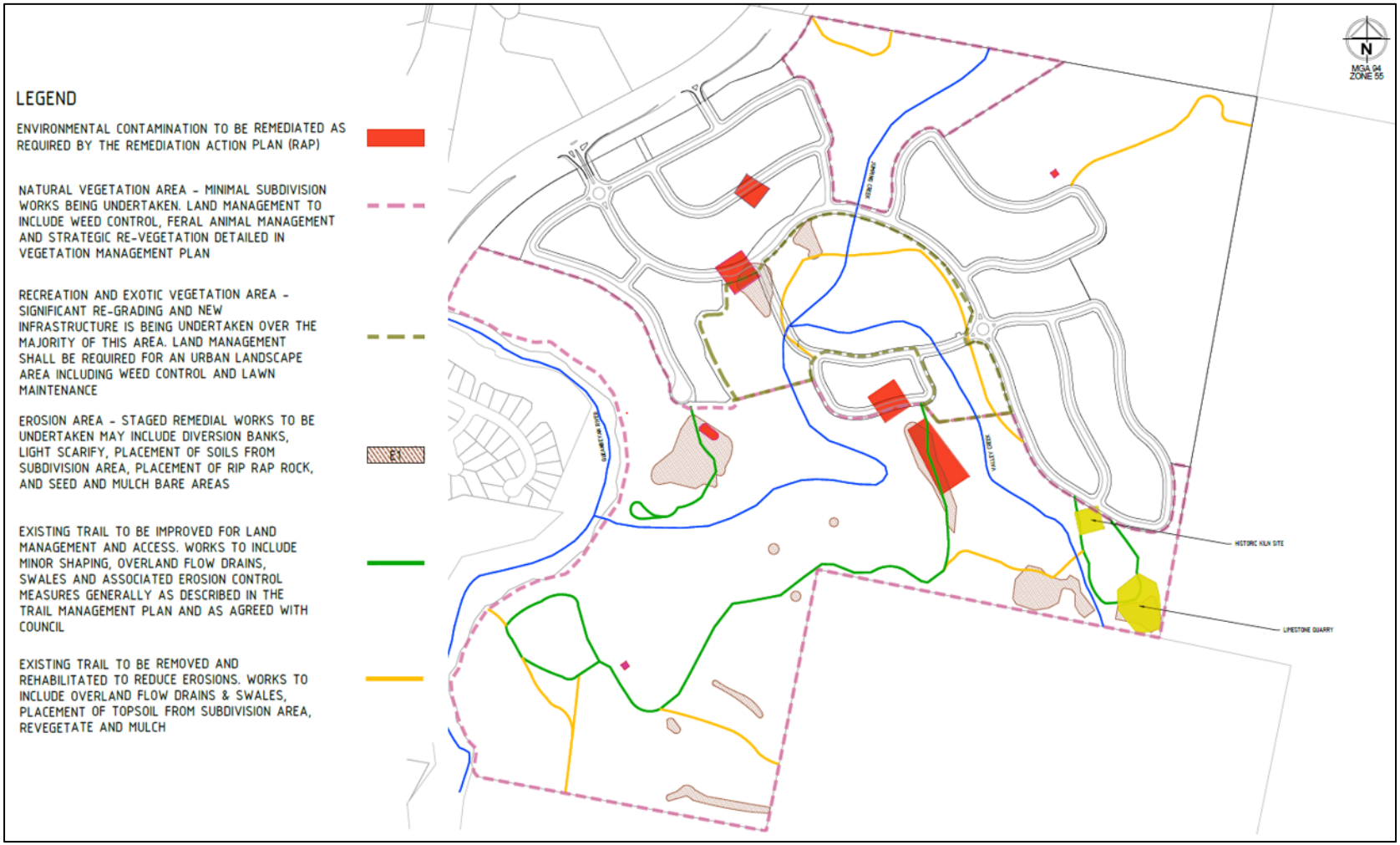

Figure 2: Environmental Remediation and Improvement Works

3.1 Recreation and Exotic Vegetation Area

This area is shown as 'green' in Figure 1 and is approximately 8.2ha in area. Embellishment works in respect of the proposed active park are to be undertaken generally consistent with the *Jumping Creek Public Recreation Space Plan* provided at Annexure A or as otherwise approved by Council.

Significant re-grading and new infrastructure will be undertaken over much of this area including the following:

- Water Sensitive Urban Design (WSUD) elements such as bio retention basins;
- Sewer pump station, sewer and stormwater pipes;
- Regrading of the creeks;
- Playground, community gathering space and footpaths; and
- Soft landscaping, trees and plants.

3.2 Natural Vegetation Area - Open Space

This area is shown as 'pink' in Figure 1 and is approximately 47.2ha in area. Vegetation management and related improvements on the site are to be carried out generally in accordance with the *Vegetation Management Plan* prepared by Franklin Consulting Australia PTY Limited dated 18 January 2021 as provided at Annexure B.

Works in this area will primarily involve rehabilitating the area to a more natural condition requiring weed removal, revegetation of bare areas and areas of erosion damage. It is considered the area shall be used for passive recreation for people to enjoy the open space. Works are broadly identified as:

- Access:
- Environmental contamination remediation;
- Weed removal and management;
- Feral animal management;
- Clumps of vegetation to provide fauna 'stepping stones';
- Erosion repair and revegetation; and
- Management trail maintenance.

Additional details in respect of each of these works is provided below and also in the accompanying annexures.

3.2.1 Access

To restrict unauthorised vehicle access to the open space, barriers will be provided within or close to the road verges. Authorised vehicle access points will generally coincide with maintenance tracks as shown in Figure 2. Additional points may be identified and agreed with QPRC through the detailed design phase of the roads. Barriers can involve large rocks/boulders, bollards, rock batters, rock cuttings, large diameter tree stumps or logs from site and farm style fencing. The treatment to be used shall be determined through

the detailed design phase of the roads. Ranger gates will be included at the point of entry from the edge road for QPRC to gain access.

3.2.2 Environmental Contamination Remediation

Areas of environmental contamination have been identified in the *Contamination Assessment Report* prepared by Douglas Partners Pty Ltd dated 10 September 2020 and as provided at Annexure C. These include:

- elevated heavy metals in soil/rock following historical mining operations;
- farming sheep dip site;
- building materials remaining from demolition of historical mining and farming activities potentially containing asbestos materials; and
- dumped car bodies.

Remediation will be undertaken in accordance with all Remediation Action Plan's (RAP's) endorsed by the Environmental Auditor for the site. Existing RAP's had been prepared by Coffey Environments Pty Ltd ('Coffey') for the Sheep Dip Area and Mine Sites dated 21 October 2009 and 4 June 2010 respectively. These require updating to reflect regulatory changes as detailed at Annexure C and shall be endorsed by the Environmental Auditor prior to implementation.

The works within the RAP's will generally be consistent with those prepared by Coffey with a brief summary of each set out below:

- Ship Dip Area – excavation of contaminated soils and materials removal to a licensed waste facility, following this validation of the area will occur.
- Mine Sites and Mineral Processing Area RAP - mine shafts to be filled with soils adjacent to the shaft and area to be levelled if necessary then geofabric and 300mm of topsoil/ capping to be placed. Areas to be mapped in the prepared environmental management plan. Mineral processing area, removal of concrete and other materials to a licenced waste facility. Testing of underlying soils and removal to waste facility if any contaminates found followed by further validation.

Following remediation and validation PJC is required to obtain a Site Audit Report (SAR) and Site Audit Statement (SAS) to confirm that the land to be dedicated is suitable for use with an associated environmental management plan noting the minerals naturally occurring in the soils.

3.2.3 Weed Removal and Management

A significant amount of weeds will be removed through the subdivision works. Weed control is required across the proposed public reserve to varying extents as referred to in the *Vegetation Management Plan* provided at Annexure B. Aerial mapping of the heavier infestations of woody weeds (i.e. Sweet Briar and Blackberry) is provided at Annexure D. Following subdivision approval, more comprehensive mapping of weeds will be undertaken by PJC and used as the baseline for monitoring the effectiveness of proposed approaches to weed eradication (in conjunction with advice from QPRC staff).

All woody weed vegetation will be removed either by biological (animal grazing), mechanical (slashing/flail mowers) or chemical (herbicides) methods, or a combination of these. Where practicable animal grazing will initially take place in the areas of heavier infestation to reducing the

density of woody weeds and to minimise follow up mechanical and chemical methods. If animal grazing is not practical or successful, mechanical methods will take place – generally in the colder months to minimise the risk of rocks sparks causing grass fires.

Targeted chemical applications will be implemented to control isolated woody weeds and areas of herbaceous weeds with the Bradley method to follow. Particular attention will be made to weeds causing an impact to human health and amenity such as Tree of Heaven, Hemlock and various thorny weeds.

Chemical application for woody and herbaceous weeds will continue generally on a quarterly basis, depending on seasonal conditions and the growth habit of the target species.

Specific efforts to eradicate or substantially reduce other exotic grass and herbaceous species (pasture species and common rural species) which have a potential seed bank in the soil profile is unwarranted. These species are generally considered 'naturalised' throughout rural areas of the Southern Tablelands and, as such, efforts to eradicate them would be largely futile given their abundance throughout the wider locality. The re-establishment and appropriate natural grazing of sterile dryland grasses is likely to reduce the prominence of many of the exotic grasses within the area.

All weed removal works will be undertaken by a trained and competent personnel using weed management techniques that are targeted to the species with minimal impact upon no-target species.

Table 1 : Summary Approach to Weed Management

Weed Species	Woody weeds include, Blackberry, Briar Rose, African Boxthorn, Poplar & Crack Willow in creek lines, Tree of Heaven and Hawthorn. Herbaceous weeds include, Serrated Tussock, African lovegrass, Spear Saffron scotch thistles, St John's Wort and Horehound.	
Control Techniques	Chemical Methods	High-Volume low-pressure hand spray applications, boom and boom less jet broad acre spray applications, wick applications, aerial application using drones, Cut and Dab method, Frilling basal areas, Stem and tree injection.
	Mechanical Methods	Slashing, flail mower, brush cutting, excavation, chainsaw
	Biological Controls	Animal grazing, Bradley Method.
Measures of Success	Removal of all woody weeds and reduction of herbaceous weeds to a density of no more than 20% observed at the commencement of weed management.	

An annual weed monitoring/inspection program, to be undertaken over spring/summer, will be implemented within the first 6 months of subdivision approval to set the base condition and to identify any regrowth and variations in population densities. QPRC shall be invited to attend weed monitoring/inspections as they occur. Mapping and reporting will record the control techniques adopted and be used to measure success as outlined in Table 1. As noted, all weed monitoring and reporting will be undertaken by trained and competent personnel using weed management techniques. Copies of these reports shall be provided to Council annually after each monitoring/inspection. As part of the handover of each of the open space areas identified in Figure 4, copies of these weed management reports shall be provided to Council.

3.2.4 Feral Animal Management

The feral herbivore European rabbit was detected within the development predominately in the flatter area adjacent the creeks in the Recreational and Exotic Vegetation Area and less so in the Natural Vegetation Area. Methods of control to be undertaken include poisonous baits and habitat destruction as referred to in the Vegetation Management Plan provided at Annexure B. By undertaking the earthworks within the Recreational and Exotic Vegetation Area and removing the woody weeds in the Natural Vegetation Area (as noted in the weed removal and management above) most of the warrens will be destroyed and rabbits terminated. The baiting control measure needs to be implemented early (year 1 or 2) before residents move in, but after the large earthmoving equipment has undertaken work. By waiting until after the construction equipment has been removed, there will be a true indication of whether feral animals have migrated back and pose a threat to native vegetation and soil displacement.

Table 2: Summary Approach to Feral Animal Management

Feral Species	Rabbits and foxes
Control Techniques	Habitat destruction; Baiting/trapping.
Measures of Success	Reduced pressure on native plants is observed.

3.2.5 Erosion Areas

Erosion control and related improvements on the site are to be carried out generally in accordance with the *Erosion Control Plan* prepared by Franklin Consulting Australia PTY Limited dated 29 January 2019 provided at Annexure E. Remedial works are required to be undertaken across the areas of erosion identified in the open space areas shown in Figure 2.

Table 3 below summarises the proposed methods and how success will be measured. Steeper and watercourse areas will require physical barriers such as coir logs, jute matting, rocks and logs to be put in place to stabilise the soil profile while the method in the below table can be established. These barriers will be put in place immediately to protect the waterways and will stay in place permanently with minor maintenance work carried out quarterly and after heavy rainfall. Coir logs and jute matting are 100% biodegradable and will breakdown in approximately 3 – 4 years.

Table 3: Summary Approach to Erosion Control

Method	Diversion banks, light scarify, placement of soils from subdivision area, placement of rip rap rock and seed and mulch bare areas. To revegetate hand plant 0.5m to 1m apart.
Measures of Success	Remedial works to the erosion areas.

3.2.6 Revegetation

Revegetation and related improvements on the site are to be carried out following removal of weed cover and disturbance of soils associated with the works generally in accordance with the:

- *Vegetation Management Plan* provided at Annexure B;
- *Erosion Control Plan* provided at Annexure E; and
- *Trail Management Plan* provided at Annexure F.

A combination of native grasses and sterile dryland grass re-establishment and encouragement program will be implemented throughout the area. Additionally, clumps of trees and shrubs will be planted to create fauna stepping stones between the Queanbeyan River and the existing heavily treed land to the east and south. These clumps will be a maximum of 50m diameter, contain 4 to 8 trees (tubestock) and be approximately 100m apart as shown in the Open Space and Landscape Plan at Figure 3. The clumps are located to utilise existing native vegetation and augment this vegetation as necessary to achieve the desired area.

It will be important to revegetate in line with weed management practices in order to minimise the displacement of the soil profile. Sterile dryland grass seed shall be used to provide an initial coverage whilst the native plants are becoming established. Repair of erosion and barren soiled areas is required to stabilise the soil profile and discourage ongoing weed infestations.

The program will involve the reestablishment of species outlined in Table 4 below. These plants will be re-established or boosted via the spreading of fertile seed and/or planting of tube stock across the area where disturbance to the soil surface has occurred either naturally or during the removal of weed species.

Table 4: Summary Approach to Revegetation

Method	In non-eroded bare areas hand planting of mixed species of tubestock in clumps 1m apart allowing plants to self-germinate over time and fill in the gaps between planting. In eroded areas hand plant of mixed species of tubestock 0.5m to 1m apart. Revegetation of existing open areas will be predominantly with grasses and scattered clumps of trees/shrubs. Revegetation of the creek line will include a combination of grass and tree/shrub plantings.
Recommended Species	Acacia, Hardenbergia, Callistemon, Chrysocephalum, Eucalyptus, Casuarina, Lomandra, Poa, Themeda, Austrodanthonia, Austrostipa, Microleana.
Measures of Success	Replanting of native tree/shrub species and re-vegetation with natives and non-invasive grasses to a coverage no less than 40% vegetation.

The success of the grass reestablishment and encouragement program will be determined through the conducting of monitoring events by appropriately qualified and experienced personnel (botanist, ecologist, bush regenerator, etc) accompanied by Council (if available) and undertaken twice annually (spring and autumn) following the spreading of the seed. The annual monitoring events will continue until the seed comprise a minimum of 25% of the groundstorey cover within the reestablishment areas.

At each monitoring event, one (1) $4m^2$ (i.e. 2m x 2m) sampling plot per $1,000m^2$ will be randomly located within each reestablishment area. The groundstorey biomass percentage of native plants within each sampling plot will be estimated and used to produce an average biomass percentage for the species within the polygon. If the biomass percentage is insufficient, further seed spreading or infill planting with these species will be undertaken to achieve the desired coverage

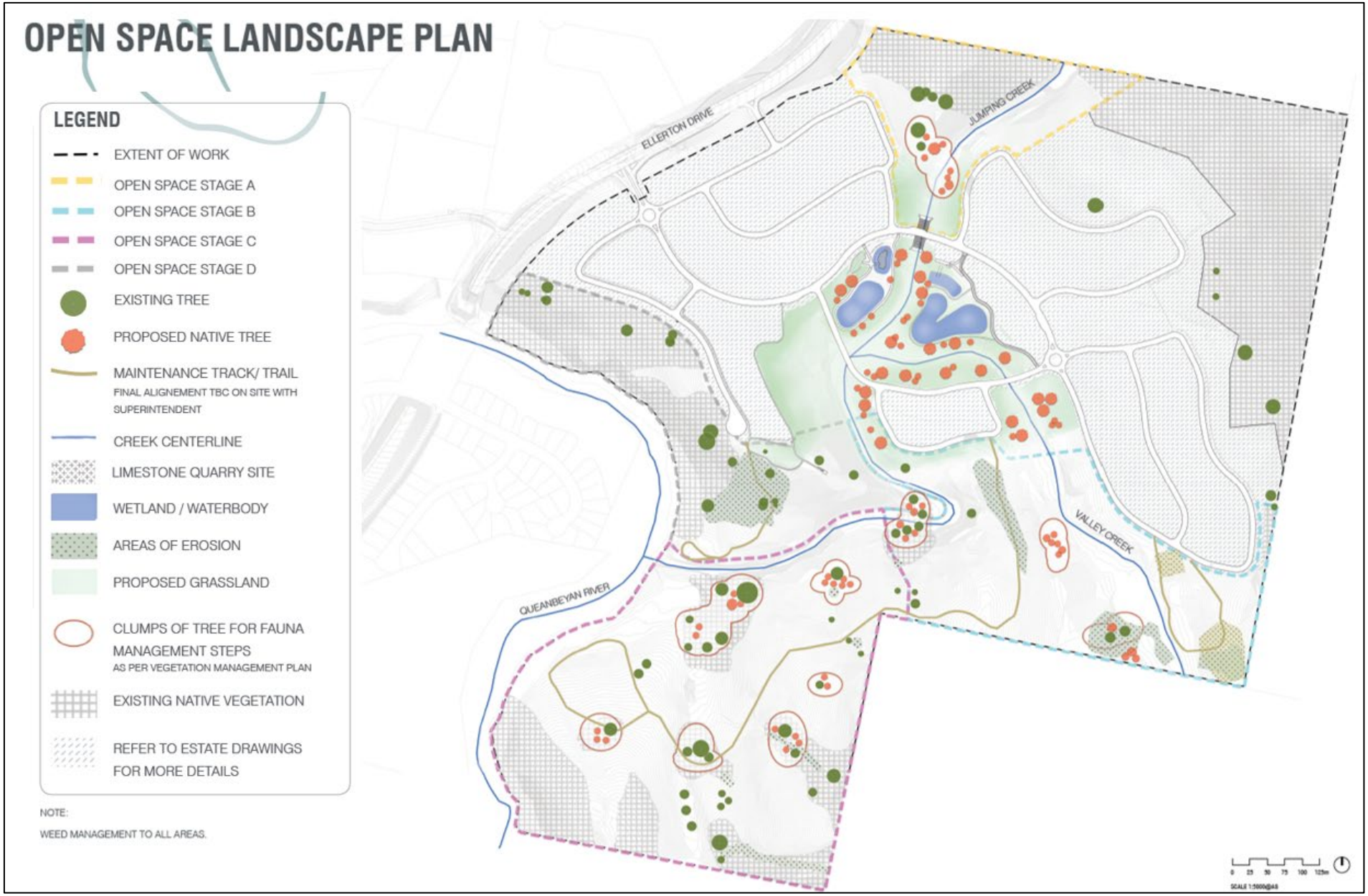

Figure 3: Open Space Landscape Plan

3.2.7 Trails

Trail management and related improvements on the site are to be carried out generally in accordance with the *Trail Management Plan* prepared by Franklin Consulting Australia PTY Limited dated 30 May 2019 and provided at Annexure F.

It is intended that a number of existing tracks on the site will be closed as a part of the improvement works, however a series of identified trails will remain open to provide future Council access to the land and for passive recreational use by the community.

Table 5 below summarises the proposed method and how success will be measured.

Table 5: Summary Approach to Trail Management

Method	Existing trails will be improved by minor shaping, overland flow drains, swales and associated erosion control measures. Existing trails will be removed by overland flow drains and swales, placement of topsoil from subdivision area, revegetate (as per section 3.2.5)
Measures of Success	Removal and/or improvement of Existing Trails.

3.2.8 Heritage

i) Aboriginal Heritage

There are a number of known Aboriginal heritage values on the site. Any impacts on Aboriginal heritage will be managed via the subdivision application process, and where required, an Aboriginal Heritage Impact Permit (AHIP) will need to be issued by the NSW Department of Planning Industry & Environment (Biodiversity and Conservation Division) under section 90 of the NSW *National Parks and Wildlife Act 1974*.

Aboriginal objects may be present on the proposed public reserve following completion of works under the LPA.

ii) European Heritage

Any impacts on European heritage will be managed via the subdivision application process and in accordance with the applicable local environmental plan (LEP). It is proposed to restore the face brickwork on the Marchiori limestone kiln and undertake improvements to the two existing quarry sites to provide pedestrian access and ensure public safety measures are in place prior to the area being opened for use by the community.

3.3 Perpetual Monitoring and Management by Council

As noted in Section 4, PJC will work collaboratively with QPRC to manage the handover of all measures outlined above. Following handover to QPRC, monitoring and management of native vegetation and weeds will be conducted on an ongoing basis as required by QPRC policy.

4 STAGING AND TIMING FOR HANDOVER

The majority of the land to be dedicated has a minimum lot size of 40ha within the Queanbeyan LEP. To permit public access to areas of the land it will be necessary to gift the lot to Council as public reserve. Under Exempt and Complying SEPP (Subdivision) it is allowable to have a lot size less than the LEP minimum if that lot is being created for Public Reserve. As such, public reserve lots will be created as works are sufficiently completed and considered safe for public access..

The LPA requires each area of works to be progressively completed with the adjoining Stage of subdivision. It is PJC's intention to complete each area of the works as soon as practicable recognising that weed removal & management and revegetation works are largely dependent on seasonal conditions. The LPA makes allowance for the provision of security for incomplete works at the time of applications for subdivision certificate.

Works will generally be completed and handed over to Council for ongoing management in stages as shown in Figure 4.

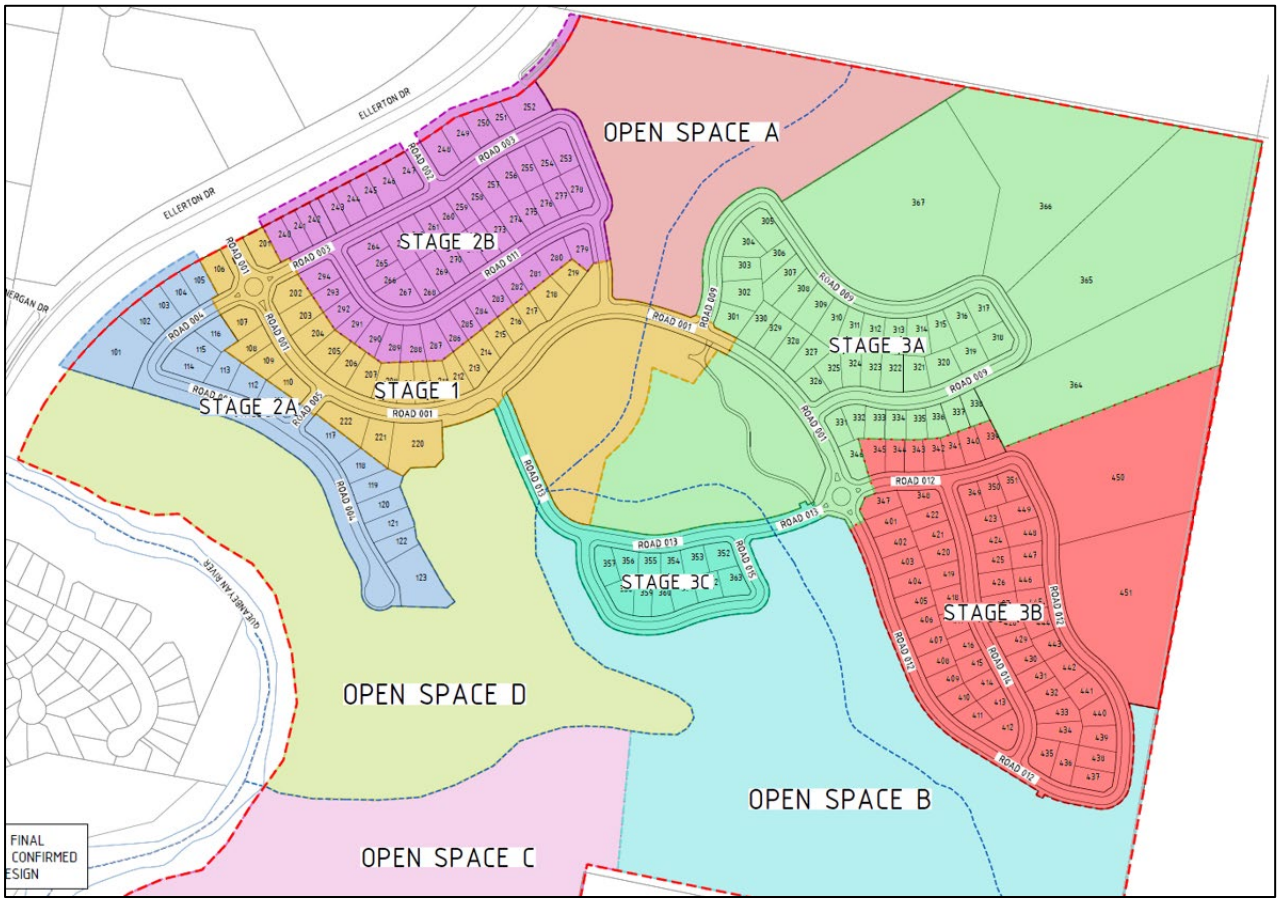

Figure 4: Staging Plan

4.1 Recreation and Exotic Vegetation Area

As the works are predominantly new infrastructure and recreational facilities associated with the subdivision the works in this area will be completed in 2 stages and be delivered with the adjacent

stage of subdivision works. Handover of these works would be the same as a normal subdivision certificate process with any incomplete works being valued and bonded until complete and accepted by Council.

4.2 Natural Vegetation Area - Open Space Areas A to D

It is anticipated that the works in the Natural Vegetation Area will be completed in 4 areas. Each area is sufficiently geographically separated to permit easy identification. By creating these 4 areas it is considered that works can be concentrated to aid in handing over areas to Council. As an example the extent of works required in Area A are reasonably minor and could be completed in a much shorter time period than works in Area C where there is extensive woody weeds and erosion stabilisation necessary.

In addition to the annual inspections noted in Section 3, as an area is complete, final inspection shall be arranged with the relevant QPRC Staff to formalise the handover of that area. All areas shall be completed before the completion of the last stage of the subdivision works.

ANNEXURE A JUMPING CREEK PUBLIC RECREATION SPACE

ANNEXURE B VEGETATION MANAGEMENT PLAN

ANNEXURE C CONTAMINATION ASSESSMENT REPORT

ANNEXURE D WOODY WEED HEAVY INFESTATIONS

ANNEXURE E EROSION CONTROL PLAN

ANNEXURE F TRAIL MANAGEMENT PLAN