

City Projects Office

Flora and Fauna Management Plan

Fitzgibbon Priority Development Area

Telegraph Road Corridor Upgrade Stage 1B, Bracken Ridge



Prepared by:

Brisbane City Council
Brisbane Infrastructure – City Projects Office
Planning & Design – Planning & Environment

Prepared for:

CPO Project Management for submission to Department of Infrastructure,
Local Government and Planning

Date:

3 June 2015

Reference:

140499
TRIM [131/590/273/152](#)



Dedicated to a better Brisbane



City Projects Office
Level 1, Green Square South Tower
505 St Pauls Terrace
Fortitude Valley QLD 4006

Telephone (07) 3178 8428
Facsimile (07) 3334 0212

While every care is taken by Brisbane City Council (BCC) and the Department of Natural Resources and Mines (DNRM) to ensure the accuracy of this data supplied by BCC and DNRM, BCC and DNRM jointly and severally make no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and disclaim all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs which may be incurred as a result of data being inaccurate or incomplete in any way and for any reason.

Document Control: CA15/329773					
Revision	Date of Issue	Purpose	Prepared by	Reviewed by (ENV/PLN)	Authorised by
0	6 May 2015	DRAFT Report	N. Green	A. Dickinson/ J. Mackay-Ortiz	JMO/ AD
1	3 Jun 2015	Final with amendments	N. Green	J. Mackay-Ortiz	

Executive summary

Brisbane City Council proposes to upgrade Telegraph Road, Bracken Ridge, between Norris Road and Mustang Street from a 2 lane to 4 lane carriageway, including provisions for a centre median swale. The upgrade includes provisions to signalise the Mustang Street and Telegraph Road intersection and upgrade the existing drainage channel to the southern side of Telegraph Road. The works to the south of the road will be located within the Priority Development Area (PDA) for Fitzgibbon.

The '*Telegraph Road - Corridor Upgrade Stage 1B*' project necessitates the removal of some vegetation and diversion of the existing drainage channel on the south side of Telegraph Road adjacent Bill Brown Sports Reserve. A significant portion of the Bill Brown Sports Reserve is contaminated as it was a historic landfill.

There are two power transmission easements extending east-west immediately adjacent to the Telegraph Road corridor, these easements are contained within the properties bordering Telegraph Road to the south. The location of these easements constrains the site area and this limits the southern extent of works, including diversion of the existing drainage channel and rehabilitation.

Vegetation removal consists of a number of mature trees located within 15m of the current edge of pavement. They are defined as significant in accordance with the Fitzgibbon Bushland Management plan (ULDA, 2011), as the trunk diameter is greater than 60cm (at 1m above the ground) and their removal will require assessment through the development application process.

Unfortunately, the removal of these significant trees cannot be avoided in this instance, alternatives have been investigated, however due to the road geometry and drainage requirements the trees will be impacted. The removal of this vegetation will not further fragment the bushland within the Fitzgibbon area and the project works will have a net environmental benefit to the area. The benefits will be realised in the removal of weed species located within the area and the formation of an improved drainage system to an area regularly inundated during moderate rainfall events.

The trees to be removed will be offset through the planting of native species at a ratio of three replanted trees for every one tree removed. Trees will be planted in pockets throughout the project area, preferably adjoining bushland. In order to improve depauperate fauna habitat, two nest boxes will be installed in the adjoining bushland to improve local species access to breeding habitat and shelter.

This Flora and Fauna Management Plan (FFMP) has been developed for the development application for the removal of the trees onsite and to be inserted into the site documentation for construction.

Table of contents

Executive summary	1
1 Introduction.....	1
2 Scope of works	2
2.1 Project proposal	2
2.2 Project locality	3
3 Project management responsibilities	4
3.1 Site environmental management	4
4 Vegetation	5
4.1 Significant vegetation	5
4.2 Site vegetation survey.....	5
4.3 Vegetation description	6
4.4 Vegetation avoidance	7
4.5 Vegetation protection	7
5 Assessment framework	9
5.1 <i>Economic Development Act 2012</i>	9
5.2 Development Scheme	9
5.2.1 Definition of works	9
5.2.2 Fitzgibbon bushland management plan	9
6 Rehabilitation	10
6.1 Street trees	10
6.2 Vegetation offset.....	10
6.3 Habitat features.....	11
7 Conclusion	13
Appendix A.....	A
Design drawings.....	A

1 Introduction

The proposed Telegraph Road Corridor Upgrade Stage 1B works include provisions to widen Telegraph Road and upgrade the existing drainage system, particularly to the southern side of Telegraph Road. These works will encroach into the Priority Development Area for Fitzgibbon and this will require assessment through development application process.

Additionally the project site is constrained by contaminated land and two power transmission easements that border the Telegraph Road Corridor to the south. A number of trees located on the southern side of Telegraph Road will be removed as part of the upgrade works, some of which are 'significant' trees. The significant trees are generally located within 15m of the current edge of pavement.

Significant trees have been identified within the Fitzgibbon bushland management plan (ULDA, 2011, p9.) as being trees with a trunk diameter equal to or greater than 60 cm at breast height (DBH)¹. Due to these trees being located within the PDA their removal will require assessment through the development application process.

This Flora and Fauna Management Plan (FFMP) has been developed to form part of the development application for the removal of significant trees and will be included in the construction tender and contract documentation.

¹ measured 1 m above natural ground level

2 Scope of works

2.1 Project proposal

The proposed '*Telegraph Road - Corridor Upgrade Stage 1B*' project makes provision to upgrade Telegraph Road from a two lane to four lane carriageway between Norris Road and Mustang Street. The proposed works will improve safety and reduce traffic congestion.

The works include provisions to widen Telegraph Road and upgrade the existing drainage systems, particularly to the southern side of Telegraph Road that encroach into the Priority Development Area (PDA) for Fitzgibbon and result in removal of some vegetation.

The works will be carried out within land identified below (see **Figure 1** and **Figure 2**).

2.2 Project locality



Figure 1 – Telegraph Rd 1b Site location (Source: Nearnmap – 26 February 2015)

3 Project management responsibilities

3.1 Site environmental management

The proposed works will be tendered and a contract awarded to a suitably experienced and qualified civil contractor in accordance with Brisbane City Council's procurement policy. The contract will be a construction only contract and the design is currently being completed by Council.

Due to status of the design documentation requests to tender have not been finalised and issued, however it is expected the selected contractor will be responsible for all environmental controls and management associated with the construction works. Further the contractor will be responsible for developing and implementing a Brisbane City Council approved Environmental Management Plan (EMP). This plan shall list the key personnel including their responsibilities and contain supporting documentation such as an Erosion and Sediment Control Plan (ESCP) and this Flora and Fauna Management Plan (FFMP). During construction, the contractor will be audited by Council to ensure compliance with approvals, the EMP, ESCP and FFMP.

4 Vegetation

4.1 Significant vegetation

Within Section 6, schedule 1 of the Fitzgibbon Development Scheme, clearing vegetation other than significant vegetation is considered exempt development. Significant vegetation is further defined (within section 6 schedule 2) as;

- vegetation (whether living or dead) that, maintains biodiversity, preserves natural landforms, contributes to the character of the landscape
- has cultural or historic value
- has amenity value
- all plants within the bed and banks of Cabbage Tree Creek
- all vegetation in precinct 1
- vegetation included in regional ecosystem 12.3.11, 12.3.6 or 12.3.7 either remnant or non-remnant
- all other vegetation with a diameter of equal to or greater than 60cm measured at one metre above the ground.

4.2 Site vegetation survey

A site inspection was conducted on 28 April 2015 to assess vegetation characteristics in the area and determine likely project impacts. Six (6) trees were identified within the works area meeting the definition of a significant tree (with a diameter of equal to or greater than 60cm measured at one metre above the ground) and all are to be removed as part of the project. Therefore the clearing of these trees is considered assessable and will require assessment through the development application process. All other vegetation within this proposed works area are not considered significant and only vegetation in direct conflict with the proposed works will be removed. Vegetation adjoining the works and to be retained will be protected in accordance with the *Australian Standard AS4970: Protection of Vegetation on Development Sites*.

Prior to commencing any vegetation removal, the site will be inspected and 'cleared' by a suitably qualified spotter / catcher. Any fauna or habitat found will be assessed and encouraged to move on or be relocated by the spotter / catcher.

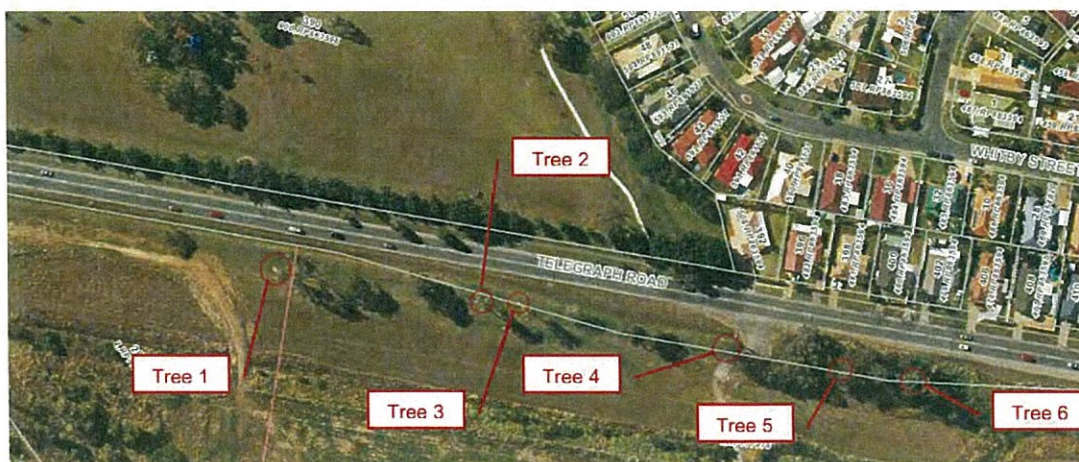


Figure 2 – Significant tree locations

4.3 Vegetation description

The significant trees to be removed (**Table 1 and Figure 2**) are located a maximum of 15 m from the current edge of the Telegraph Road pavement. Trees 1-4 are within an open grassed area adjacent to the existing road and within the existing drainage channel used to convey water from the road surface to the east. Trees 5 and 6 are on an elevated piece of land bound by a drainage channel either side. They also have an understory of predominately Council (and State – C3) declared weeds such as; Singapore daisy (*Sphagneticola trilobata*), and wattle (*Acacia* spp.) regrowth.

Table 1 – Significant vegetation to be removed

ID Number - Chainage	Scientific name	Common Name	Diameter at 100cm (cm)	Notes
1 – 960m	<i>Melaleuca quinquenervia</i>	Broad leaved paper bark	145	Significantly altered over time through the loping of the crown and removal of one of the three trunks
2 – 1050m	<i>Melaleuca quinquenervia</i>	Broad leaved paper bark	80	Bulbous trunk at the base of the tree where the two trunks join and there appears to be hollowing at the base of the tree.
3 – 1070m	<i>Melaleuca quinquenervia</i>	Broad leaved paper bark	100	Significant damage to the trunk, with an open hollow area from the base to the approximately 4 m tall. This could have been due to the splitting of two trunks some time ago.
4 – 1160m	<i>Eucalyptus tereticornis</i>	Queensland blue gum	60	Within open mown parkland area with no understory and appears to be of good health.
5 – 1200m	<i>Eucalyptus tereticornis</i>	Queensland blue gum	60	Located within a weedy vegetated drainage line, also containing wattles and she-oaks. The tree has some dead limbs and termite tracks up the trunk.
6 – 1240m	<i>Eucalyptus</i>	Queensland	80	Good health on the very edge of the

ID Number - Chainage	Scientific name	Common Name	Diameter at 100cm (cm)	Notes
	<i>tereticornis</i>	blue gum		drainage line and a culvert outlet from the residential area to the north of Telegraph Rd. The understory is predominately the Council (and State – C3) declared weed Singapore daisy (<i>Sphagneticola trilobata</i>), and wattle (<i>Acacia</i> spp.) regrowth.

4.4 Vegetation avoidance

All vegetation removal is to be avoided in the first instance and where this is not possible the design is to be readdressed to minimise the number of trees to be disturbed. If this is not achievable or there are still trees to be removed, the vegetation is to be offset through addition planting within the area of works.

Unfortunately on this occasion alternatives alignments and options have been investigated and the design has been revisited but still the removal of these significant trees cannot be avoided. The road geometry, drainage requirements and constraints such as the power transmission easements and contaminated land will result in the removal of all trees within the work area. These trees will be offset during the landscaping of the project and additional habitat features will be installed adjacent the site.

4.5 Vegetation protection

Vegetation outside of the proposed area of works (illustrated within the design drawings – **Appendix A**) will not be directly impacted by the proposed road upgrade works, therefore negating the need for specific protection beyond the site boundary. All vegetation within the works area will be removed to accommodate road upgrade works. The vegetated area to the southern side of Telegraph Road generally consists of grassed parkland with individual trees adjacent the Bill Brown Sports Reserve. The majority of the vegetation are exotic species with some stands of natives located in sections of the existing drainage channel.

Trees that are to be retained are to be appropriately identified and protected to ensure their integrity is not compromised by any construction activities or machines. Generally controls such as those suggested within the Australian Standard 'AS4970: Protection of Vegetation on Development Sites' will be adopted. Such controls may include ones like that noted below in **Figure 3**.



LEGEND:

- 1 Chain wire mesh panels with shade cloth (if required) attached, held in place with concrete feet.
- 2 Alternative plywood or wooden paling fence panels. This fencing material also prevents building materials or soil entering the TPZ.
- 3 Mulch installation across surface of TPZ (at the discretion of the project arborist). No excavation, construction activity, grade changes, surface treatment or storage of materials of any kind is permitted within the TPZ.
- 4 Bracing is permissible within the TPZ. Installation of supports should avoid damaging roots.

Figure 3 – Tree protection fencing from AS4970: Protection of Vegetation on Development Sites

5 Assessment framework

5.1 *Economic Development Act 2012*

Pursuant to section 33 (2) of the *Economic Development Act 2012*, the proposed development is defined as:

- carrying out operational work.

The proposed works constitutes PDA assessable development that being development that a relevant development instrument is PDA assessable development.

5.2 Development Scheme

5.2.1 Definition of works

The proposed works are located within the Fitzgibbon PDA which is managed by the Fitzgibbon Urban Development Area Development Scheme - July 2009. Pursuant to section 6 - schedule 1 of this development scheme, the proposal involves the following components.

Operational works:

Clearing vegetation which is 'significant vegetation' (defined in schedule 2).

5.2.2 Fitzgibbon bushland management plan

The Fitzgibbon bushland management plan is referred to directly and indirectly throughout the Fitzgibbon Urban Development Area Development Scheme as a relevant consideration in development assessment for precincts 1 and 4. Although the works are within precinct 6, containing bushland & open space and civic & open space, the proposed vegetation removal has also considered this bushland management plan.

Within the Development and significant vegetation section of the Fitzgibbon bushland management plan, the significant vegetation definition, rehabilitation requirements and rehabilitation ratios (explored below in section 6) is outlined.

6 Rehabilitation

6.1 Street trees

In addition to the offset planting for the road upgrade the proposed works will likely include street tree planting subject to;

- local hydrology limitations
- contaminated land
- power transmission easements.

Council encourages street trees planting to maintain the local aesthetics and habitat corridors within the community.

6.2 Vegetation offset

The proposed works will require the removal of six (6) significant trees (as per the definition within section 6 schedule 2 of the Fitzgibbon Development Scheme) which are to be offset at a ratio of 3 for 1 by number (as per Table 1 – Rehabilitation Ratios within the Fitzgibbon Bushland Management Plan Version 2 October 2011). Therefore 18 trees will be planted to replace these six trees (see **Figure 4**). As no ground disturbing works will occur outside of the limit of works and the entire site will be utilised during construction, the offset planting will not take place prior to the commencement of construction.

Tree planting required to replace the six significant trees being removed by the project will coincided with landscaping works to be completed as part of the construction contract. The landscaping works will take place after the road construction works have been completed to avoid damage or disturbance by construction activities.

In lieu of delivering offsets planting prior to works commencing it is proposed Squirrel glider (*Petaurus norfolcensis*) nest boxes will be installed prior to works in the adjacent bushland to provide habitat for species in transit throughout construction, refer to **Figure 4** below. The nesting boxes will be installed prior to construction commencing and removal of vegetation.

To achieve the rehabilitation requirements noted within the Fitzgibbon bushland management plan the following will take place;

- All weeds will be removed from site during construction
- Suitable understorey (such as those noted below) will be planted in adjacent bushland to encourage Squirrel glider habitat and movement
- Placement of lopped tree trunks and branches in the adjoining bushland to create habitat, should hydraulic modelling confirm flooding will not be worsened.

Suggested flora species to be used during the landscaping works include winter and spring flowering forage species such as;

- Wattles - Hickory wattle (*Acacia disparrima*),
 - Brisbane wattle (*A. fimbriata*),

- Early flowering black wattle (*A. leiocarpa*),
- Late flowering black wattle (*A. concurrens*),
- Maidens wattle (*A. maidenii*),
- Coastal banksia (*Banksia integrifolia*)
- Melaleucas - Broad leaved paperbark (*Melaleuca quinquenervia*),
 - white paperbark (*M. saligna*)
 - Queensland blue gum (*Eucalyptus tereticornis*).



Figure 4 – Potential locations for offset planting and nest boxes

6.3 Habitat features

Tree hollows are an important part of the natural ecosystem and are a vulnerable resource to our native wildlife. Artificial nesting boxes can help species survive by providing artificial hollows for breeding and shelter. There are many different types of nest boxes with varying internal dimensions and entrance diameters to cater for the various species to use them.

It is unlikely any gliders will be displaced as part of the proposed works as the vegetation onsite is fragmented, consists of individual trees and one stand of vegetation disconnect from the bushland by an open mown grassland. All trees to be removed are thought to have limited habitat for feeding or shelter as they located over 200m from the adjoining bushland. However prior to the proposed works commencing, two (2) rear access nesting boxes suitable for the Squirrel glider (*Petaurus norfolcensis*) will be installed in the adjoin bushland to assist in the breeding, movement and potential displacement of any species from within the area of works.

Furthermore, prior to any clearing works a suitably qualified spotter / catcher will assess the site and provide a site clearance. During the clearing works the contractor will progress from one end of the site to the other (i.e. west to east) to allow any species sheltering and not discovered during the spotter / catcher clearance to move on.

The larger logs and coarse debris generated by the clearing works (felled trees and existing coarse woody debris) will be salvaged, stockpiled and later, placed in the adjoining bushland at the time of rehabilitation planting, should the hydraulic modelling show it will not worsen the local flooding. These structures will provide further habitat for mobile ground fauna within the area as over time, they degrade and can form natural hollows.

7 Conclusion

In conclusion, six (6) significant trees will be removed from the proposed area of works, which consists of open mown grassland and one stand of trees adjoining Telegraph Road, located approximately 200m from other bushland within the area. The removal of this vegetation will not further fragment the bushland within the Fitzgibbon area but it will assist in removing weeds species from the area and provide an opportunity to improve the drainage in an area which is regularly inundated during rainfall.

The six (6) trees will be offset through the planting of 18 trees of locally endemic species (flowering in winter) within pockets of the adjoining bushland and other open areas within the project area.

Furthermore two (2) nest boxes will be installed in the adjoining bushland to improve access to breeding habitat and shelter for the local occurrences of Squirrel glider (*Petaurus norfolcensis*). Further habitat will be provided through the placement of tree trunks and coarse debris from the clearing works into the adjoining bushland.

Appendix A

Design drawings