Gainsborough Greens – Stage 3



ROB FRIEND & ASSOCIATES PTY. LTD.

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Gainsborough Greens – Stage 3

Bushfire Management Plan

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Introduction

The Bushfire Management Plan has been prepared to accompany a development application to Council for a Material Change of Use (MCU) and Reconfiguring a Lot (RaL) over Stage 3 of the Gainsborough Greens Masterplan.

The site was inspected on the 15th July 2016 and all necessary field data was collected at that time to enable the preparation of this Bushfire Management Plan.

Site description.

The subject site is located north of Yawalpah Road, Pimpama and is part of a larger lot, Lot 806 on SP283534 and abuts several fairways of the Gainsborough Greens Golf Course as well as the current Club House and associated car parking areas. The area has more or less been cleared of vegetation with the retention of a small stand of "remnant" forest in the south-eastern corner and an area which will be under a Body Corporate Community Title Scheme along the eastern boundary of the precinct (See Figures 1, 2 and 3).

Land form

The site is located on a low ridge on undulating lands which rises to an elevation of 10 metres. No defined drainage line is present within the property or bushland area however, low profile upper catchment drainage lines drain from the ridge to the north, west and south.

With the low profile ridge extending generally extending east-west the dominant aspects and therefore slopes are northerly and southerly.

Vegetation

As indicated above much of the precinct has been cleared of vegetation, however the Regulated Vegetation Management Map shows areas of Regulated vegetation over parts of the site. These include: -

12.3.5 – Melaleuca quinquenervia open forest to woodland. Understorey depends upon duration of water logging; sedges and ferns, especially Blechnum indicum, in wetter microhabitats and grasses and shrubs in drier microhabitats. Ground layer species include the grasses Leersia hexandra and Imperata cylindrica, the sedges/rushes, Baumea rubiginosa, Gahnia sieberiana, Lepironia articulata, Schoenus brevifolius and Schoenus scabripes and the fern Lygodium microphyllum. Other tree species that may be present as scattered individuals or clumps include Lophostemon suaveolens, Eucalyptus robusta, E. tereticornis, E. bancroftii, E. latisinensis, Corymbia intermedia, Melaleuca salicina, Livistona australis, Casuarina glauca, Endiandra sieberi. Melastoma malabathricum subsp. malabathricum, Glochidion sumatranum and Melicope elleryana are often in understorey. Occurs on Quaternary alluvium in coastal areas. (BVG1M: 22a). Listed as Least concern under the Vegetation Management Act (1999) and has a Biodiversity status of concern.

It is noted a small area of this has been retained abutting the south-eastern portion of the Precinct. This are being approximately 57 metres in width and covers an area of approximately 0.78 hectares in area.

The Regulated Vegetation Management Mapping also maps areas of 12.11.5a/12.11.5j -Corymbia citriodora subsp. variegata, Eucalyptus siderophloia, E. major open forest on metamorphics +/- interbedded volcanics, within two areas within the precinct. However, these areas have been cleared.

Adjacent land uses

The precinct abuts to the north, east and west the greens of the Gainsborough Greens Golf Course or area proposed to be made into open space. To the south is Yawalpah Road and further south is lands which have been recently developed or awaiting development in the near future or may be retained as open space or drainage reserve.

Legislation

The following Acts, regulation and sub-ordinate legislation from the State and Local Government that influence how bushfire and bushfire hazards are managed within the State are provided below in Table 1.

Table 1 – Relevant Legislation

Act / Regulation	Relevant Sections		
Old Fire and Emergency Service Act 1990	Provides the primary source of law dealing with bushfires in Queensland. The Crown in all its other capacities is bound by this legislation.		
	Part 7 of the Act deals with "Control and Prevention of Fires" and describes the powers of the Chief Commissioner relating to fires.		
	Section 61 - Defines "occupier of land" which includes		
	(a) Where there is no person in actual occupation of the land, the person charged by the owner or by law with the management of the land,		
	Section 62 - Offense to light unauthorised fire		
	A person who lights a fire that is not authorised by this division or by any notification, notice or permit given under this division commits an offence against this Act.		
	Maximum penalty—50 penalty units or 6 months' imprisonment.		
	Section 65 - Deals with the granting of permits to light a fire on any land. This section gives the Chief Commissioner the power to grant or refuse a permit application (orally or in writing) to light a fire on any land. The section also specifies that the applicant must take reasonable steps to notify every occupier of adjoining land of the making of the application.		
	The "occupier of adjoining land" is defined in Section 64 of the Act and means the occupier of land that:		
	 Touches some part of the land in question, or Would touch some part of that land but for the existence of a watercourse, road or firebreak, that is 10 m or less in width or, although wider than 10 m, is not clear of Vegetation or other flammable material for at least 10 m in every direction 		
	Section 67 - Requires the "Occupier" to take all reasonable steps to extinguish an unauthorised fire and also report the existence and location of the fire as soon as is practicable to a fire officer or other named officer. Section 69 - Provides the Chief Commissioner with the power to requisition an		
occupier to reduce fire risk.			
	The Chief Commissioner may require any occupier of premises to take measures for the purpose of reducing the risk of a fire occurring on the premises or reducing		

Act / Regulation	Relevant Sections				
Act / Regulation	potential danger to persons, property or the environment in the event of a fire occurring				
	on the premises.				
	A requisition may be given:				
	 In a particular case – by giving a notice to the occupier concerned, or By notification published in the gazette in which case each occupier of land to whom the notification applies must comply with the requisition. 				
	Without limiting the measures that may be required to be taken, an occupier may be required to do any of the following:				
	 Make and maintain firebreaks in accordance with any directions contained in the notification or notice Remove, dispose of or otherwise deal with any Vegetation or other flammable material in accordance with any directions contained in the notification or notice Obtain equipment and keep it available for use for firefighting purposes 				
	 Take measures to ensure an adequate supply of water or any other substance for firefighting purposes Ensure that the means of escape from the premises in the event of fire can be 				
	 safely and effectively used at all material times Suspend such operations as may be specified for the period specified 				
	Section 72 - Deals with offences regarding the lighting of fires. The section lists a number of things that if a person fails to do these things they have committed an offence against the Act				
	Section 73 - Deals with the liability of a person for a fire lit by an agent or employed				
	 (1) Notwithstanding the Criminal Code, sections 7 and 23 where any person commits an offence against this division in respect of the lighting of a fire as an agent or employee, the principal or employer of that person is taken to have committed the offence and may be prosecuted and punished for the offence unless it is proved that the agent or employee was acting contrary to instructions and that the principal or employer could not have prevented the commission of the offence by exercising reasonable supervision. (2) Subsection (1) applies without prejudicing any liability imposed under this division upon the person by whom an offence is actually committed. 				
	Section 74 - Deals with the liability for damage caused by certain fires. This section provides that a person, who lights a fire for the purpose of burning off Vegetation, does not contravene the Act or incur any liability at Common Law for any loss, injury or damage caused by the fire providing the person has complied with the requirements of the Act regarding notification and the obtaining of a permit. There is no protection offered if it can be shown that the person acted recklessly or maliciously.				
Old Building Regulation 2006	Section 12 of the Queensland Building Regulations 2006 under the Building Act 1975 provides for: -				
	(1) a Local Government to designate an area as a bushfire prone area for the BCA (Building Code of Australia) or QDC (Queensland Development Code).				

Act / Regulation	Relevant Sections
	(2) On the making of the designation, the provisions of the BCA or QDC that apply to a designated bushfire prone area apply for any building assessment work that relates to the area
	Under MP2.4 – Construction in Bushfire Prone Areas, Acceptable Solution A1 a class 1 and/or 10a building located in a bushfire prone area is deemed to comply if it complies with (a) AS3959; or (b) NASH Standard
	The current Australian Standard is AS3959-2009.

Other Legislation and State Planning Policies

Sustainable Planning Act 2009 and Regulation 2009 & Vegetation Management Act 1999

With regard to development within or where remnant vegetation will be impacted upon directly or as a natural consequence of a development approval the Sustainable Planning Act (SPA) 2009 and the Vegetation Management Act (VMA) 1999 work in consort.

The clearing of Of Concern and Least Concern Regulated vegetation which is for an Urban Purpose in an urban area can be cleared without approval from the Department of Natural Resources and Mines (DNRM). However, this exemption does not extend to areas of Endangered vegetation as mapped on a Vegetation Management Supporting Map or a Certified Property Map of Assessable Vegetation (PMAV) or if no PMAV exists, on an area mapped as Endangered by a certified regional ecosystem map.

An example may be the development of a firebreak within an area which is mapped as remnant vegetation or identified as Category B on a certified Property Map of Assessable Vegetation (PMAV).

While there are exemptions provided by SPA (2009) and the VMA (1999) for Essential Management and/or Routine Management, the clearing for firebreak would have to be deemed to be necessary.

Therefore, clearing a firebreak or fire trail which may be considered to be Operational Work, the presence of a fire management plan which specifies that clearing may be deemed to "necessary" and as such be considered to be exempt clearing for Essential or Routine management purposes.

SPA (2009) is only relevant when considering fire management freehold and leasehold land and its relevance is limited to Schedule 8 of the Sustainable Planning Regulations (2009). Schedule 8 Table 4 – Operational Works of SPA (2009) provides for the removal of Vegetation without the requirement for an operational works permit if the clearing of Vegetation is for essential management.

Essential Management is defined within Sustainable Planning Regulations (2009) in Schedule 26 as: -

Essential management means clearing native vegetation –

- a) For establishing or maintaining a necessary fire break to protect infrastructure other than a fence or road, if the maximum width of the fire break is equivalent to 1.5 times the height of the tallest vegetation adjacent to the infrastructure, or 20m, whichever is the greater; or
- For establishing a necessary fire management line if the maximum width of the clearing for the fire management line is 10 m; or

- c) Necessary to remove or reduce the imminent risk that the vegetation poses of serious personal injury or damage to infrastructure; or
- d) By fire under the Fire and Rescue Service Act 1990 to reduce hazardous fuel load; or
- e) Necessary to maintain infrastructure including airstrips, buildings, fences, helipads, roads, stock yards, watering facilities and constructed drains other than contour banks, other than to source construction material.

A number of other definitions are listed however these do not relate to land management and fire management.

Under the VMA (1999) the removal of vegetation outside of the exempt classifications would require an Operational Works application for approval to remove remnant vegetation.

The Act allows for a number of exemptions where approval is not required for the removal of remnant vegetation. The two primary exemptions include: -

Essential Management,

- for establishing or maintaining a <u>necessary</u> firebreak to protect infrastructure other than a fence, road or vehicular track, if the maximum width of the firebreak is equivalent to 1.5 times the height of the tallest vegetation adjacent to the infrastructure, or 20 m, whichever is the greater; or
- for establishing a <u>necessary</u> fire management line if the maximum width of the clearing for the fire management line is 10 m; or
- necessary to remove or reduce the imminent risk that the vegetation poses of serious personal injury or damage to infrastructure; or
- By fire under the Fire and Rescue Service Act 1990 to reduce hazardous fuel load.
- Necessary to maintain infrastructure including airstrips, buildings, fences, helipads, roads, stock yards, watering facilities and constructed drains other than contour banks, other than to source construction material.

Routine Management

In Category B remnant vegetation or where there is no Property Map of Assessable vegetation in remnant not of concern regional ecosystem.

The Act also refers to the State Planning Policy SPP1/03 (which should potentially be read as SPP December 2013), and permits the setback provisions contained in Schedule 8 of the Sustainable Planning Regulations 2009 and relating specifically to <u>Essential Management</u> can be reduced if the setbacks are permitted by the SPP1/03 and the Senior Fire Warden can verify that compliance.

The final issues which may have relevance under the VMA (1999) and SPA (2009) is the clearing of vegetation for a necessary fence. Should a fence be planned to be constructed around the Conservation Area/Open Space, the VMA exempts clearing along a fence line for a maximum width of 10 metres.

With regard to the Gainsborough Greens Masterplanning area, is noted the Chief executive administering the SPA (2009) has identified Gainsborough Greens in a Gazette notice (Vol. 356, No. 80, Wednesday 23 April 2014) as an urban area under schedule 26 of the SPR (2009), thus allowing the urban area—urban purpose exemption for vegetation clearing under schedule 24, part 2, item 2(e) of the SPR (2009).

Additionally, it is noted, the Vegetation Management Supporting Map does not map any areas of Endangered Regional ecosystems area mapped within Precinct 3 or within the Gainsborough Greens Masterplanning area.

State Planning Policy (SPP) of April 2016

The State Government's State Planning Policy (April 12016) which replaced a number of previous State Planning Policies and incorporated those into a single SPP. Issues relating to bushfire have been included into the new SPP under Natural Hazards – Bushfire.

The SPP purpose is to identify the State's interests in a number of planning areas including Bushfire and these areas described in the SPP (pg. 35). In addition, the State has developed Draft SPP Guideline for Natural Hazards (December 2013).

It is noted that the Natural Hazards Guideline, Appendix 7 refers to a Model Bushfire Overlay Code. The code has yet to be finalised at the time of preparation of this report.

The SPP's identification of the matters which are of State Interests (pg. 35) include: -

For all natural hazards:

- (1) identifying natural hazard areas for flood, bushfire, landslide and coastal hazards, and
- (2) including provisions¹¹ that seek to achieve an acceptable or tolerable level of risk, based on a fit for purpose natural hazards study and risk assessment, and
- (3) including provisions that require development to:
 - (a) avoid natural hazard areas or mitigate the risks of the natural hazard, and
 - (b) support, and not unduly burden, disaster management response or recovery capacity and capabilities, and
 - (c) directly, indirectly and cumulatively avoid an increase in the severity of the natural hazard and the potential for damage on the site or to other properties, and
 - (d) maintain or enhance natural processes and the protective function of landforms and vegetation that can mitigate risks associated with the natural hazard, and
- (4) facilitating the location and design of community infrastructure to maintain the required level of functionality during and immediately after a natural hazard event.
- 11. Land use planning provisions are one component of an integrated disaster management strategy. Land use planning provisions are required to work in conjunction with other risk management measures including building controls, mitigation infrastructure, early warning systems, community awareness and disaster management.

Concurrently with the release of the new SPP, the State also released an interactive web based mapping application¹ which enables a person to search for a particular property and then identify various SPP coverage's over that property including Natural Hazards – Bushfire Hazard Areas.

The SPP- Natural Hazards – Bushfire mapping indicates the majority of the area within which Stage 3.1 is located is mapped as medium bushfire hazard and this includes the majority of the Conservation area. Additionally, there are areas of Very high and high bushfire hazard mapped the proposed Stage 3.1 area to the north, north-east, west and southern portion. Ground assessment indicates the driver of this change from medium to very high and high bushfire hazard areas is topography and to a lesser extent a change from eucalyptus woodland/open forest to Paperbark teatree woodland.

-

¹ http://www.dsdip.qld.gov.au/about-planning/spp-mapping-online-system.html

Development proposal

In accordance with the approved Gainsborough Greens Masterplan, Precinct 3 is to be developed for residential allotments with a belt of medium density residential backing onto Yawalpah Road.

It is noted that the development of Precinct 3 is bound by the Modified Decision Notice dated 11 September 2015 with Part A conditions 36 to 39 being the relevant conditions. These state: -

BUSHFIRE MANAGEMENT

- The applicant is required to submit a Bushfire Management Plan for each precinct generally in accordance with the Conceptual Bushfire Risk Assessment and Mitigation Plan dated 2 May 2007 by Bushland Protection Systems Pty Ltd and in accordance with Council's Bushfire Management Areas Constraint Code. This plan shall be to the satisfaction of the Chief Executive Officer and approved prior to the endorsement of survey plans.
- A site plan showing roadways, fire trails and building areas shall be included in the Bushfire Management Plan/s submitted for each precinct.
- Any lot that will require the dwelling to be constructed to the standard AS3959:1999 must be identified in the bushfire management plan for the relevant precinct.
- 39 All roadways are to provide safe access for heavy 2wd fire fighting appliances.

As part of the development an area along the eastern boundary of the Precinct will be retained as Private open space and revegetated with local species. However, the rehabilitation will be such that it will not present a bushfire risk to adjacent residential areas within the Precinct.

Bushfire Hazard Mapping

A review of the mapping in the Gold Coast Planning Scheme (2003) indicates the subject area, is mapped as containing High and Medium Potential bushfire hazard areas (see Figure 5). However as much of this area has been cleared of vegetation the residual areas would not qualify as being a significant bushfire hazard. It is further noted the new bushfire hazard mapping model, Leonard et. al. (2014) provides two minimal criteria with respect to an area being mapped as a potential bushfire hazard class or an area which would be described as a Bushfire prone area, these are: -

- a. a linear corridor of vegetation which is less than 100 metres in width, and/or
- b. an area of vegetation less than 1 hectare in area.

Based on on-ground assessments, which has been supported by measurements using the latest aerial photography, the area of vegetation analogous with 12.3.5 is approximately 0.78 hectares in area. Additionally, this area is approximately 58 metres wide. Furthermore, the patch of vegetation is separated from other areas of vegetation by a distance greater than 100 metres.

Based on these factors it is reasonable to conclude that while the residual vegetated area may become involved in the bushfire, any vegetation fire involving this area would not become a significant threat to the adjacent structures within Precinct 3 as the area or distance is insufficient for the fire to grow to threaten any adjacent structures before it burns out that area and as such self extinguishes.

It is also noted a small area of proposed "Bushland" parkland between Yawalpah Road and Gainsborough Drive abutting lot 1414. While this area is outside of the Precinct 3 it is noted that a substantial portion of this area is encompassed by a revegetated drainage line where the vegetation is predominantly sedges and wetland species. There is therefore a small area of paperbark tea-tree and regrowth wattles and gum trees on the western side of this area abutting Lot 1414.

Based on the minimal area criteria as provided by Leonard et. al. (2014) this small area of vegetation will not present a significant bushfire issue to any structures within Lot 1414.

Given this assessment of the bushfire hazards around the Precinct, we believe there is no requirement to provide a response to the Bushfire Hazard Overlay Code as provided by the Gold Coast Plan.

Bushfire Management Plan

As stated above, the Precinct based Bushfire Management Plan is to be "generally in accordance with the approved Conceptual Bushfire Risk Assessment and Mitigation Plan (Bushland Protection Systems Pty. Ltd., 2 May 2007)". This plan provides some general management specifications with regard to bushfire mitigation (see underlined) and which includes: -

- <u>Clearing buffers between grassland areas and residential housing</u> (mostly relevant to Precincts 4 and 5)
- Undertaking a cool hazard reduction burn in the conservation area to the north-east. It is noted the area
 of residual vegetation abutting the south-eastern portion of Precinct 3 is not of a size where a controlled
 burn could be undertaken and that should the understorey become such that it is deemed to be a
 significant hazard then this ought to be reduced using physical control methods.
- Where dwelling structures have direct exposure to an approaching bushfire, it should have external hose cocks and hoses and residents should maintain good access around their homes to permit clear access for fire authorities. It is noted this is not required in Precinct 3.

However, the following recommendations have been made to ensure additional measures are put in place with respect to the residential area, the area of retained vegetation abutting the north-eastern corner of the Precinct and the proposed rehabilitation area along lots 1446 to 1462.

Vegetation management – Within the Gainsborough Greens Golf Course and adjacent residential area

- 1. The vegetation within the Residual area is managed to ensure:
 - a. No build-up of environmental weeds such as Lantana, Guinea grass, Pigeon grass or other weeds which can grow higher than 1 metre in height. The weeds are controlled and removed from within the area,
 - b. A yearly inspection is to be undertaken in September of each year to check the status of grassy and shrubby weed species within this area
 - An understorey of "less flammable" plant species be encouraged to grow under the existing canopy.
 This may consist of the following species;
 - Barbed-wire Vine Smilax australis
 - ♦ Blue Flax Lily Dianella longifolia
 - ♦ Blueberry flax lily Dianella caerulea var. caerulea
 - Buttonwood Glochidion sumatranum
 - ♦ Celerywood Polyscias elegans
 - ♦ Chain fruit Alyxia ruscifolia
 - ◆ Cheese Tree Glochidion ferdinandi

- ♦ Coffee bush Breynia oblongifolia
- Coogera Arytera divaricata
- ◆ Creek Mat Rush Lomandra hystrix
- ◆ Dune Flax Lily Dianella congesta
- ♦ Fine-leaved Mat Rush Lomandra filiformis
- Foam bark Jagera pseudorhus
- ◆ Green Kamala Mallotus claoxyloides
- ♦ Hairy Alectryon Alectryon tomentosus
- Hairy-leaved Psychotria Psychotria Ioniceroides
- Hard Quandong Elaeocarpus obovatus
- ◆ Long-leaved Mock-Olive Notelaea longifolia
- ♦ Narrow-leaved Mat Rush Lomandra confertifolia
- Native Bleeding Heart Homalanthus nutans
- ♦ Native Holly Alchornea ilicifolia
- Pitted Coogera Arytera foveolata
- ♦ Red ash Alphitonia excelsa,
- Red Kamala Mallotus philippensis
- ♦ Scrambling Lily Geitonoplesium cymosum
- ♦ Silver-leaved Astrotricha Astrotricha latifolia
- ♦ Small-leaved Psychotria Psychotria daphnoides
- ♦ Small-leaved Tuckeroo Cupaniopsis parvifolia
- ◆ Three-veined Laurel Cryptocarya triplinervis
- ♦ Tuckeroo Cupaniopsis anacardioides
- Veinless Mock-Olive Notelaea johnsonii
- ♦ Wild Quince Guioa semiglauca
- Wombat Berry Eustrephus latifolius
- ♦ Yellow Boxwood Planchoniana pohlmaniana.
- d. All areas which are not subject to rehabilitation are to continue to be maintained by mowing.

Vegetation management within the Community Title area

- 1. It is proposed the area below and to the east and north of Lots 1442 to 1462 is to be managed by a Body Corporate.
- 2. The proposal is to retain existing canopy trees and revegetated the groundcover while managing the understorey for visual amenity purposes. Currently this area is maintained as part of the golf course maintenance program.
- 3. Any plantings within the groundcover is to contain 75% of less flammable groundcovers and include: -
 - ♦ Barbed-wire Vine Smilax australis
 - Blue Flax Lily Dianella longifolia
 - Blueberry flax lily Dianella caerulea var. caerulea
 - Creek Mat Rush Lomandra hystrix
 - ◆ Dune Flax Lilv Dianella congesta
 - Fine-leaved Mat Rush Lomandra filiformis
 - Narrow-leaved Mat Rush Lomandra confertifolia
 - ♦ Scrambling Lily Geitonoplesium cymosum
 - Wombat Berry Eustrephus latifolius

New lot setbacks

Based on the proposed layout plans and the landform it is assumed a rock (sandstone) retaining wall will separate the retained vegetated areas to the east and north by a vertical height of 1.5 to 2 metres in height.

- 1. A 6-metre-wide setback from the eastern boundary be established for Lots 1414, 1415, 1441, 1442, 1443, 1444 and 1445. However, this may be reduced to 2 metres if a pedestrian pathway is to be located at the base of the retaining wall,
- 2. No significant setback is required for all other lots.

Appendices

Appendix I - Figures

Figure 1 -	 Approved 	Masterp	lan
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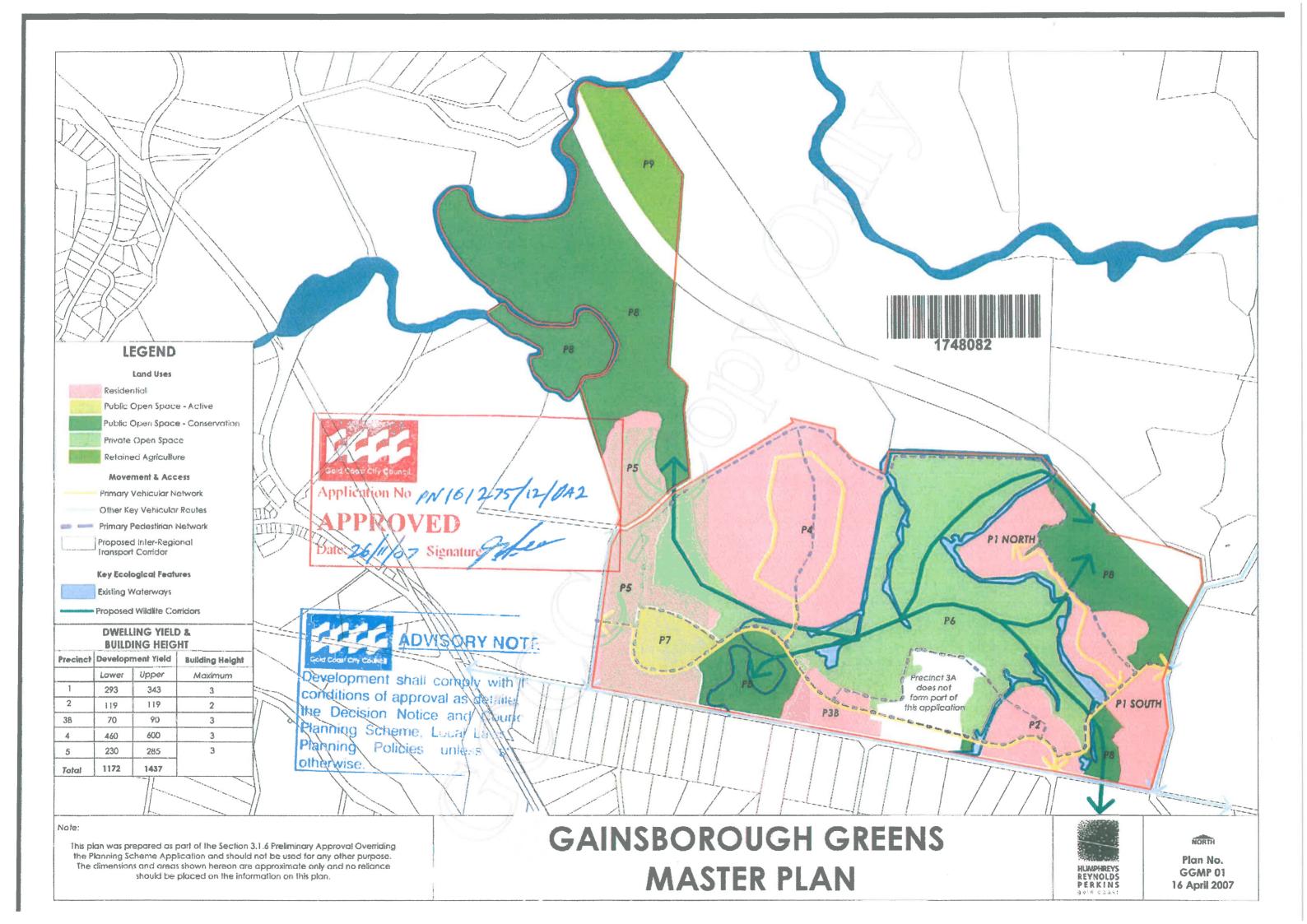


Fig	ure	2 -	Aerial	photoc	ıran	hν
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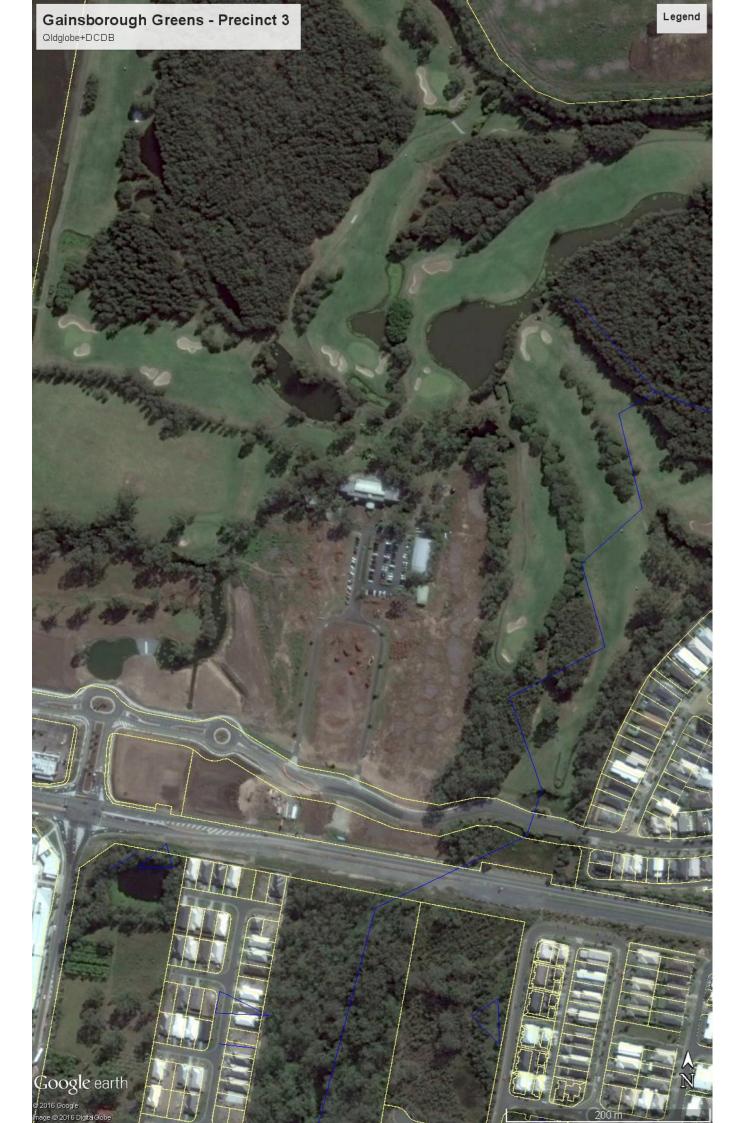
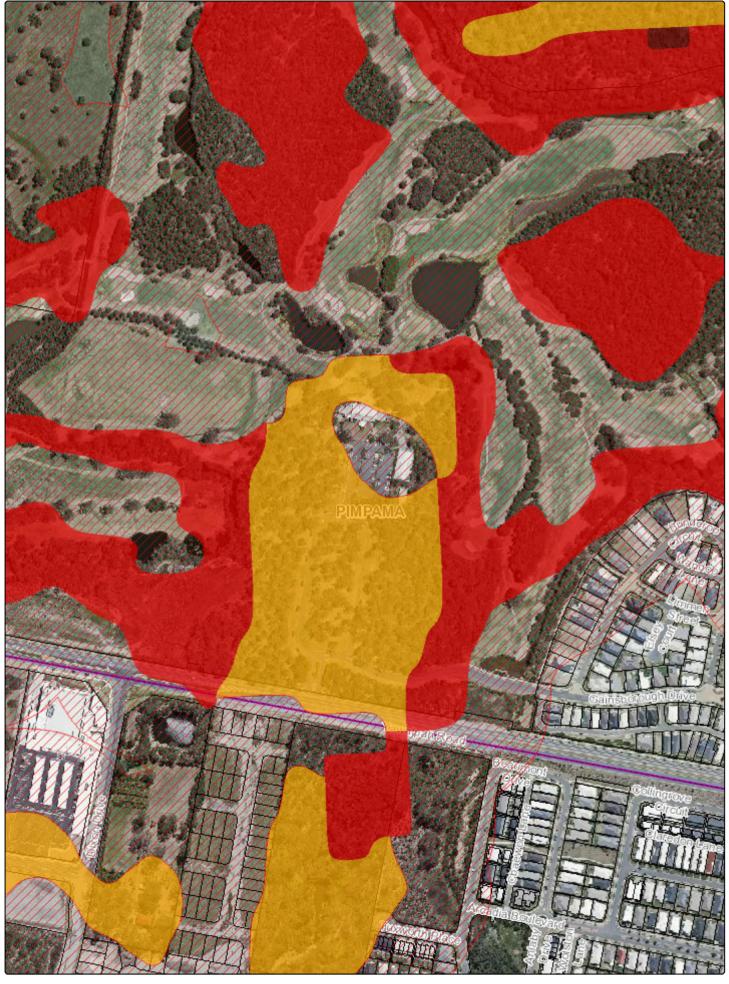


Figure 3 – Regulated Vegetation Management Map						

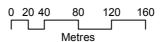






City Plan

Date: 25/07/2016



	Legend					
	GCCC Boundary					
	Surrounding Councils Labels					
Adjac	ent Councils					
	<all other="" values=""></all>					
	Brisbane; Ipswich; Logan; Redland; Scenic Rim					
	NSW; Tweed					
Bushf	fire hazard area					
	Medium potential bushfire hazard					
	High potential bushfire hazard					
	Very high potential bushfire hazard					
	Potential bushfire impact buffer					
	GCCC Boundary					
15	Suburb Boundary Lines					
	NSW Tweed					
	Suburbs Labels					
	Minor Roads					
	Waterway Labels					
ADJA	CENT_LGA					
	Brisbane City Council; Ipswich City Council; Logan City Council; Redland City Council; Scenic Rim Regional Council					
	Tweed Shire Council					
	Ocean Labels					
\rightarrow	Railway (Brisbane - Robina Line)					
	Latest property boundaries					
Funct	ional road hierarchy					
_	State strategic road (State)					
_	Regional road (State)					
_	District road (State)					
	Arterial road (CoGC)					
	Sub-arterial road (CoGC)					
	Distributor road (CoGC)					
\mathbb{Z}	Rural landscape and environment precinct					

City Plan

Date: 25/07/2016

Figure	5 -	Pro	posed	Lay	out/	Plan
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