

Open Space Management Statement

84-160 Christensen Road South

Prepared for: MS Projects Pty Ltd



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STATEMENT OF LIMITATION

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GLOSSARY

Term	Description
DAMS	Development Assessment Mapping System
DNRME	Queensland Department of Natural Resources, Mines and Energy
DES	Queensland Department of Environment and Science
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
EO Act	<i>Environmental Offsets Act 2014</i>
EVNT	Endangered, Vulnerable and Near Threatened. Relates to the classification of species under the NC Act or EPBC Act.
GCCC	Gold Coast City Council
GPTs	Gross pollutant traps
MNES	Matters of National Environmental Significance. Listed under the EPBC Act.
MSES	Matters of State Environmental Significance. Listed under the EO Act.
MLES	Matters of Local Environmental Significance. Listed under the EO Act.
NC Act	<i>Nature Conservation Act 1992</i>
QFRS	Queensland Fire and Rescue Service
RE	Regional Ecosystem
VM Act	<i>Vegetation Management Act 1999</i>

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1 Introduction

This Open Space Management Statement (OSMS) has been prepared to identify and describe the management intent for future dedicated public open space areas within the proposed industrial subdivision at 84-160 Christensen Road South, Stapylton (the site). Stage One of the proposed development has been completed and Stage Two proposes an eight lot industrial subdivision in the north-eastern portion and rehabilitation of an existing detention basin adjacent to Sandy Creek.

This OSMS has been prepared in accordance with the Gold Coast City Plan policy – Landscape Work (SC6.12) and the *Activity Specifications for Generic Open Space Management Plan* (Gold Coast City Council, 2016).

The purpose of the OSMS is to support an Operational Works application (OPW/2019/1217) for Stage Two of the proposed development. The OSMS provides the broad management intent for the wetland system as well as the conservation buffer to Sandy Creek that was established during Stage One of the proposed development.

1.1 Site description

The site is bordered by the Stapylton Landfill & Recycling Centre to the north, Sandy Creek to the south and west and remnant vegetation to the east. Existing industrial buildings, constructed as part of Stage One, are currently located within the western portion of the site. Stage Two of the proposed development has been previously cleared of vegetation and currently exists as paddocks.

Sandy Creek is a first order watercourse that begins near Luscombe, approximately 5 km to the south-west of the site, and traverses industrial areas west of the Pacific Highway. Sandy Creek then flows to the west and south of the site before entering a channelised waterway within pasture and cropping land. The creek discharges into the Logan River mouth at Woongoolba.

1.2 Proposed development

Stage Two of the proposed development is the subdivision of a parcel of land within the north-eastern portion of the site into eight industrial lots and reconstruction of the existing detention basin in the south-eastern portion of the site. The existing basin requires reconstruction to satisfy the requirements of a wetlands system to adequately treat stormwater runoff produced from the upstream reconfiguration. The proposed development also includes the dedication of the conservation buffer along Sandy Creek to Gold Coast City Council (GCCC) as public open space (part of Stage One) and the wetland within an easement in favour of GCCC. For the purposes of this OSMS, the wetland is included as part of public open space. Areas of formal landscaping and streetscapes are not included in the OSMS.

1.3 Relationship to other plans

This OSMS should be read in conjunction with the following approved or submitted plans:

- Conceptual OSMS Schematic, Gassman Development Perspectives, ref: 1396 OSMP 01, 2014
- Subdivision Proposal Plan, AJS Surveys, ref: S0204-P4(B) & S0204-P5(B)(2017)
- Bushfire assessment for proposed development at 81-161 Christensen Road, Stapylton, Queensland, Land and Environment Consultants (2017)
- Erosion and Sediment Control Plan, i3 Consulting (2019), 17-209-C101-01-D & 17-209-C101-02-D Rehabilitation Management Plan, i3 Consulting (2019), 17-209-V100-E & 17-209-V101-C
- Vegetation Management Plan, i3 Consulting (2019), 17-209-V200-B
- Fauna Management Plan, i3 Consulting (2019), 17-209-V300-C.

1.4 Land to be dedicated as public open space

The land to be dedicated to GCCC as public open space and easement includes 5.8593 hectares of land as previously approved under Reconfiguring a Lot (RoL) application ROL201800026, including:

- Conservation buffer as shown on Plan S0204-P4(B) (AJ Surveys, 2017)
- Detention basin as shown on Plan S0204-P4(B) (AJ Surveys, 2017).

These public open space areas have been previously identified within the Conceptual OSMS Schematic (ref: 1396 E OSMS Schematic, Gassman Development Perspectives, 2014).

2 Significant Environmental Values

2.1 Description of environmental values

Sandy Creek contains significant environmental values, which are described within this section.

Native vegetation currently occurs along Sandy Creek and within the existing detention basin area. Vegetation along Sandy Creek is mapped as containing remnant regional ecosystem (RE) vegetation (Department of Natural Resources, Mines and Energy (DNRME), 2019) comprising:

- RE 12.3.11 – Queensland blue gum *Eucalyptus tereticornis* +/- grey ironbark *E. siderophloia*, pink bloodwood *Corymbia intermedia* open forest on alluvial plains usually near coast. Listed as of concern under the *Vegetation Management Act 1999* (VM Act)
- RE 12.11.5 / 12.11.24 – Spotted gum *Corymbia citriodora* subsp. *variegata* woodland to open forest +/- grey ironbark / narrow-leaved ironbark *Eucalyptus crebra*, white mahogany *E. carnea*, *E. acmenoides*, small-fruited grey gum *E. propinqua* on metamorphics +/- interbedded volcanics / White mahogany, Tindale's stringybark *E. tindaliae*, pink bloodwood +/- grey ironbark or narrow-leaved ironbark woodland on metamorphics +/- interbedded volcanics. Both REs are listed as least concern under the VM Act
- RE 12.3.6 – Broad-leaved paperbark *Melaleuca quinquenervia* +/- Queensland blue gum, swamp box *Lophostemon suaveolens*, pink bloodwood open forest on coastal alluvial plains.

An area of regrowth RE 12.11.5 / 12.11.24 & 12.3.6 is mapped within the existing detention basin and adjacent Sandy Creek. The basin was completely cleared in 2009 when the detention basin was created. The vegetation on the banks was then re-cleared in or around 2011-2012. Regrowth is evident from 2014 onwards on aerial photography (Google Earth) was confirmed during a site inspection in March 2019. The vegetation now comprises wattles *Acacia* species regrowth with weeping bottlebrush *Melaleuca viminalis*, brush box *Lophostemon confertus*, spotted gum and smooth-barked apple *Angophora leiocarpa* (Plate 1). The ground cover is sparse with occasional mat rush *Lomandra* spp and exotic grasses.

The existing detention basin contains a wetland community comprising predominantly exotic water primrose *Ludwigia peploides* with some native species including bulrush *Typha orientalis*, water chestnut *Eleocharis dulcis*, woolly frogmouth *Philydrum lanuginosum* and other sedges and rushes. Some areas have been invaded by the exotic groundsel bush *Baccharis halimifolia*, blue billy goat weed *Ageratum houstonianum*, whiskey grass *Andropogon virginicus* and vasey grass *Paspalum urvillei*. Occasional standing trees include broad-leaved paperbark and cheese tree *Glochidion ferdinandi* (Plate 2).



Plate 1 – existing vegetation on batters



Plate 2 – wetland vegetation

2.2 Matters of national environmental significance (MNES) values

Database searches were completed, including the Protected Matters Search Tool (Department of the Environment and Energy 2019) and Gold Coast Flora and Fauna database. The searches identified the following matters of national environmental significance (MNES), listed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), as occurring or potentially occurring within 5 km of the site:

- The site lies within the catchment of the Moreton Bay Ramsar wetlands
- Numerous koala *Phascolarctos cinereus* (listed vulnerable under EPBC Act) and wallum sedgefrog *Litoria olongburensis* (listed vulnerable under EPBC Act) records from Sandy Creek, west of the Pacific Highway and approximately 1.5 km from the site (GCCC Flora and Fauna Database).
- Sandy Creek is likely to provide habitat and corridor values for koala. The existing detention basin does not provide habitat value for wallum sedgefrog.

2.3 Matters of state environmental significance (MSES) values

Matters of state environmental significance (MSES) are listed under the *Environmental Offsets Act 2014* (EO Act) and the State Planning Policy and are mapped in the Development Assessment Mapping System (DAMS) (Department of State Development, Manufacturing, Infrastructure and Planning, 2019). MSES mapped or potentially occurring within the site includes:

- Category B (remnant) RE 12.3.11 is listed as of concern under the VM Act and is therefore a MSES
- Category B and Category C (high value regrowth) vegetation containing RE 12.11.5 / 12.11.24 & 12.3.6 within 10 m of Sandy Creek, being a stream order 1 watercourse, is a MSES
- All vegetation along Sandy Creek contains essential habitat for koala and wallum froglet *Crinia tinnula*. The existing detention basin does not provide any habitat for wallum froglet or other threatened species.
- Sandy Creek provides MSES Wildlife Habitat for threatened and special least concern animals.
- Sandy Creek provides connectivity values and is consistent with the definition of MSES connectivity.
- The site is not within a Priority Koala Assessable Development Area (PKADA) or Koala Assessable Development Area (KADA).

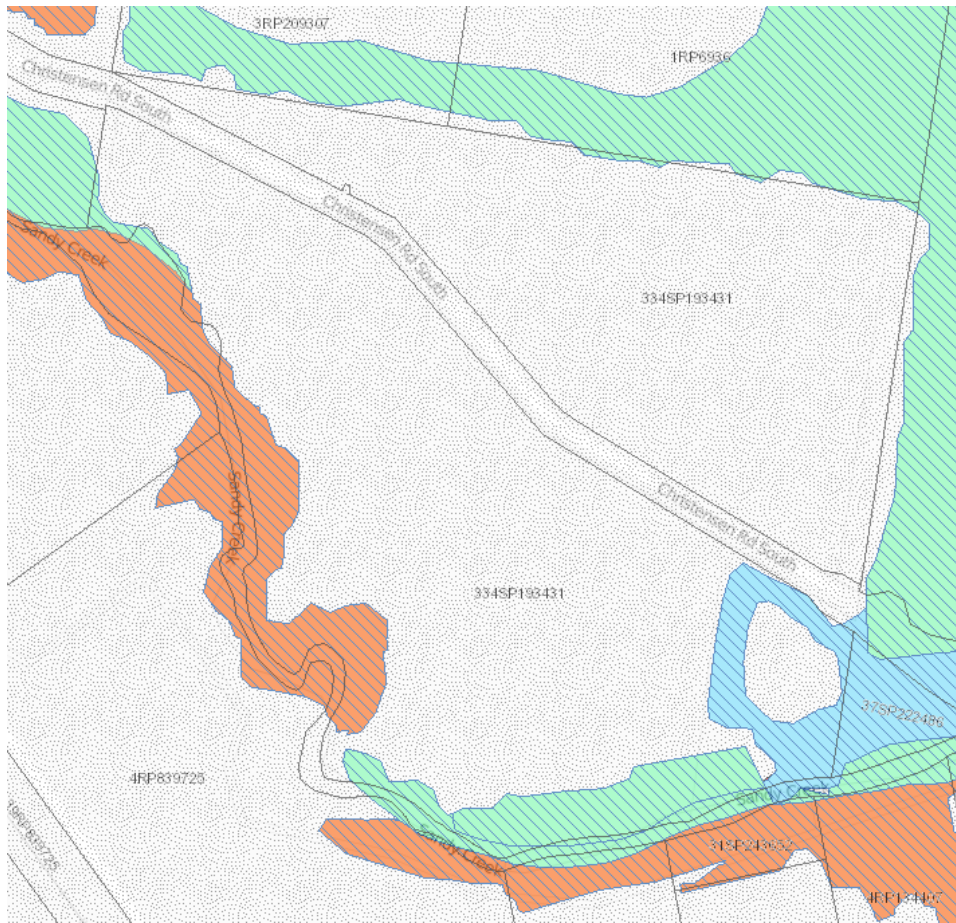


Figure 1 MSES mapped within the site



2.4 Matters of local environmental significance (MLES) values

Matters of local environmental significance (MLES) are identified within the Gold Coast City Plan and are shown below.



MSES – Priority Species

Vegetation along Sandy Creek and to the east of the site is mapped as koala habitat areas and Sandy Creek to the south of the site is mapped as habitat for state significant species.

☒	Matters of state environmental significance - priority species	
☒	State significant species	
☒	Koala habitat areas	
☒	Matters of local environmental significance - priority species	
☒	Local significant species	



MLES – Vegetation Management

Category B vegetation along Sandy Creek is mapped as vegetation regulated under the VM Act. Where vegetation along Sandy Creek is mapped as non-remnant under the VM Act, extant vegetation is mapped as medium priority vegetation (north-west of the site) and general priority vegetation (south and east of the site).

No high priority vegetation occurs within the site.

☒	Matters of state environmental significance - vegetation management	
☒	Regulated vegetation	
☒	Matters of local environmental significance - vegetation management	
☒	Vegetation protection order	
☒	Vegetation management	
	General priority vegetation	
	Medium priority vegetation	
	High priority vegetation	



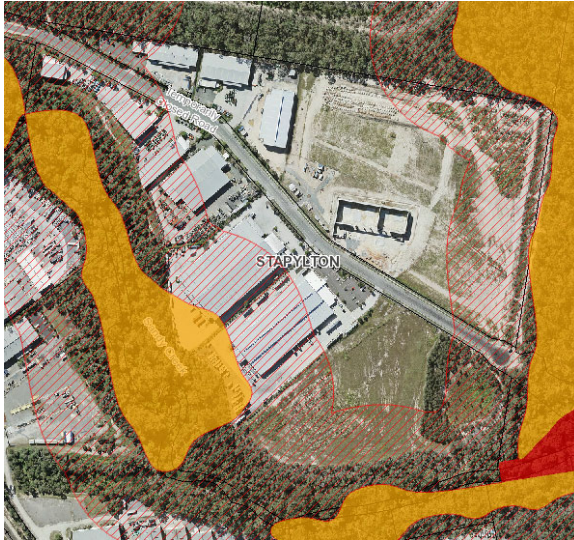
MLES – Wetlands and Waterways

Sandy Creek is mapped as a MLES Waterway. A small intrusion of the MSES wetland area occurs to the south-east of the site.

☒	State significant wetlands and aquatic systems	
	State significant wetlands	
	State significant aquatic systems	
	Matters of local environmental significance - wetlands and waterways	
☒	Local significant wetlands	
☒	Waterways	
	Major waterway	
	Waterway	

2.5 Development constraints

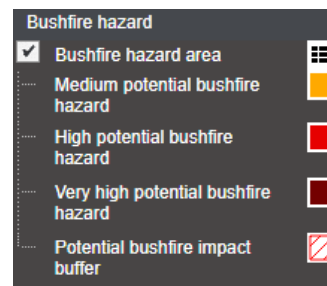
The site is encumbered by overlays under the City Plan that provide a constraint to development and are shown below.



Bushfire Hazard

Vegetation along Sandy Creek and to the east of the site are medium potential bushfire hazard areas and the potential bushfire impact buffer extends into the site. A small area of high potential bushfire hazard area occurs adjacent to the south-east corner of the site.

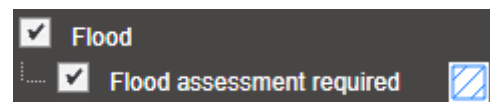
A bushfire hazard assessment has been completed for Stage Two of the proposed development, however an assessment was not required for Stage One when the public open space areas were approved. An access track will be constructed along Sandy Creek to provide access for firefighting vehicles.



Flood Hazard

Sandy Creek is identified as a waterway potentially subject to flooding and that encroaches into the site boundaries.

The approved Stage One development has been constructed above the flood overlay area.



3 Open Space Management Intent

Four management zones have been identified to manage environmental values within the conservation buffer and wetland and with regard to the desired ecological functioning of each zone. The zones are described below and their management intent described in this section:

- MGZ1 – Wetlands, comprising three sub-zones:
 - a) Pool sub-zone – permanently inundated areas that comprise an inlet pool, intermediate pool and outlet pool.
 - b) Macrophyte sub-zone – shallow heavily vegetated area to remove fine particulates and update soluble pollutants
 - c) Deep marsh sub-zone – heavily vegetated area connecting the pool and shallow marsh zones.
- MGZ2 – Regional ecosystem (RE) zone to rehabilitate disturbed land within the wetlands and conservation buffer with the intent to re-establish an ecological community
- MGZ3 – Maintenance track providing access for vehicles along public open space
- MGZ4 – Balance public open space to be managed for natural regeneration and conservation purposes.

Table 1 Management Intent for Management Zones

Management Zone	Management Intent
MGZ1	Wetlands
Purpose	A constructed wetland system to achieve the stormwater treatment objectives required for stormwater discharge from Stage 2 of the proposed development
Planting – Pool sub-zone	Achieve a planting density of 1 plant per 1 m ²
Planting – Macrophyte sub-zone	Achieve a planting density of 4-6 plants per 1 m ²
Planting – Deep marsh sub-zone	Achieve a planting density of 6-8 plant per 1 m ²
Weeds	Achieve an environmental weed cover of <10% All restricted and prohibited weeds, listed under the <i>Biosecurity Act 2014</i> removed
Erosion and sediment control	Planting densities within each sub-zone achieved and maintained
Bushfire management	Bushfire to be excluded as far as practical. Management of fuel loads within MGZ2 to provide a suitable buffer
Fencing	Not applicable
Proposed maintenance	As per Weed treatment HWS, Clear Drainage Culverts CDC and Litter collection CLC in <i>Activity Specifications for generic open space management plan</i> (GCCC 2018) - Removal of restricted weeds and control of environmental weeds to <10% cover - Clean GPTs and culverts - Remove litter
MGZ2	Re-establish vegetation community on batters
Purpose	Re-establish a similar RE community to surrounding bushland areas and be managed for conservation purposes
Planting	Achieve a planting density of 1 plant per 1 m ²
Weeds	Achieve an environmental weed cover of <10% All restricted and prohibited weeds removed, listed under the <i>Biosecurity Act 2014</i> removed
Erosion and sediment control	Batters stabilised by ground covers present

Bushfire management	SEASON: Summer to winter. INTENSITY: Low to moderate. INTERVAL: 4-25 years. STRATEGY: Aim for 40-60% mosaic burn. Burn with soil moisture and with a spot ignition strategy so that a patchwork of burnt/unburnt country is achieved. ISSUES: The fire regime should maintain a mosaic of grassy and shrubby understoreys. Control of weeds is a major focus of planned burning in most areas. Careful thought should be given to maintaining ground litter and fallen timber habitats by burning only with sufficient soil moisture. Burning should aim to produce fine scale mosaics of unburnt areas. Variability in season and fire intensity is important, as well as spot ignition in cooler or moister periods to encourage mosaics (Queensland Herbarium, 2019).
Fencing	Fencing will be installed on the western and northern boundaries of this zone.
Proposed maintenance	As per Native bushlands maintenance HNB, Fence and handrail maintenance BFH and Litter collection CLC in <i>Activity Specifications for generic open space management plan</i> (GCCC 2018) - Removal of restricted weeds and control of environmental weeds to <10% cover - Maintain boundary fence - Remove litter and vegetative debris to minimise bushfire fuels
MGZ3	Vehicle access track
Purpose	Maintain vehicle access to conservation buffer and wetlands
Weeds	Achieve an environmental weed cover of <10% All restricted and prohibited weeds removed
Proposed maintenance	As per Gravel footpath repairs BGF, Fence and handrail maintenance BFH and Litter collection CLC in <i>Activity Specifications for generic open space management plan</i> (GCCC 2018) - Ensure gravel path is suitable for vehicle maintenance and firefighting vehicle access. Queensland Fire and Emergency Service (QRES) vehicles require a minimum roadway clearance of 3.5m in width and 4.8m in height. - Maintenance boundary fence - Remove litter and vegetative debris
MGZ4	Native bushland
Purpose	Natural regeneration and conservation purposes
Rubbish	Large items of rubbish removed
Planting	Achieve a planting density of 1 plant per 1 m² where weed control has resulted in a density of less than 1 plant per 1m² Tubestock planting within canopy gaps of more than 5m²
Bushfire management	Southern portion as for MGZ2 Western portion: SEASON: Summer to late-autumn. INTENSITY: Low. INTERVAL: 3-6 years. STRATEGY: Aim to burn 40-60% of any given area. Spot ignition in cooler or moister periods encourages mosaics. ISSUES: Control of weeds is a major focus of planned burning in most areas. Maintain ground litter and fallen timber habitats by burning only with sufficient soil moisture. Burning should aim to produce fine scale mosaics of unburnt areas (Queensland Herbarium, 2019).
Fencing	Not applicable
Proposed maintenance	As per Native bushlands maintenance HNB and Litter collection CLC in <i>Activity Specifications for generic open space management plan</i> (GCCC 2018) - Removal of restricted weeds and control of environmental weeds to <10% cover - Remove litter

4 References

Gold Coast City Council. 2016. Activity Specifications for Generic Open Space Management Plan. City Development, GCCC, updated 2018

Queensland Fire and Rescue Service. 2019. Fire Hydrant and Vehicle Access Guidelines for Residential, Commercial and Industrial Lots. Queensland Fire and Emergency Services, Brisbane.

Queensland Herbarium. 2019. Regional Ecosystem Description Database. Department of Environment and Science, Queensland Government, Brisbane.