SITE BASED MANAGEMENT PLAN

POULTRY FARM DEVELOPMENT

PREPARED By:

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1 INTRODUCTION

Allans Creek Pty Ltd is proposing to extend their meat chicken farm located at 75 Tilley Road, within the Bromelton State Development Area. Figure 1 is a locality plan showing the proximity of the development to Beaudesert and Gleneagle. The development is located approximately 9 km north-west of Beaudesert and 7 km south-west of Gleneagle, in the Scenic Rim Council area.

Allans Creek Pty Ltd is proposing to build extent the current farm to twelve poultry sheds, each with a capacity of 52,125 birds. Following the development, the farm will have a total capacity of 625,500 birds. The farm will produce approximately 5.8 growing cycles per year.

Figure 2 is a site aerial layout plan showing the proposed meat chicken sheds. The sheds will be constructed to meet the applicable RSPCA Approved Farming Scheme Standards and the sheds.

The real property description of the poultry farm site is Lot 50 on SP179833. Figure 3 is a cadastral plan highlighting the lots of land that this site based management plan (SBMP) and environmental procedures manual (EPM) covers.

The proposed development is located within the Scenic Rim Regional Council Area, in the Transition Precinct of the Bromelton State Development Area Development Scheme. Access to the proposed site will be WD6203 from Tilley Road.

Figure 2 is a site aerial plan showing access from the Tilley Road.

This report covers all operations associated with the meat chicken farm including:

- management of meat chicken farm sheds and range areas;
- removal of litter from the farm;
- receival of poultry,
- feed and bedding;
- removal of poultry for processing;
- management of dead poultry;
- stormwater management;
- erosion control;
- chemical storage and use;
- vermin control and environmental monitoring.

This SBMP and EPM details the proposed management, monitoring and corrective actions that will be implemented to avoid undesirable environmental impacts of the meat chicken farm operations.

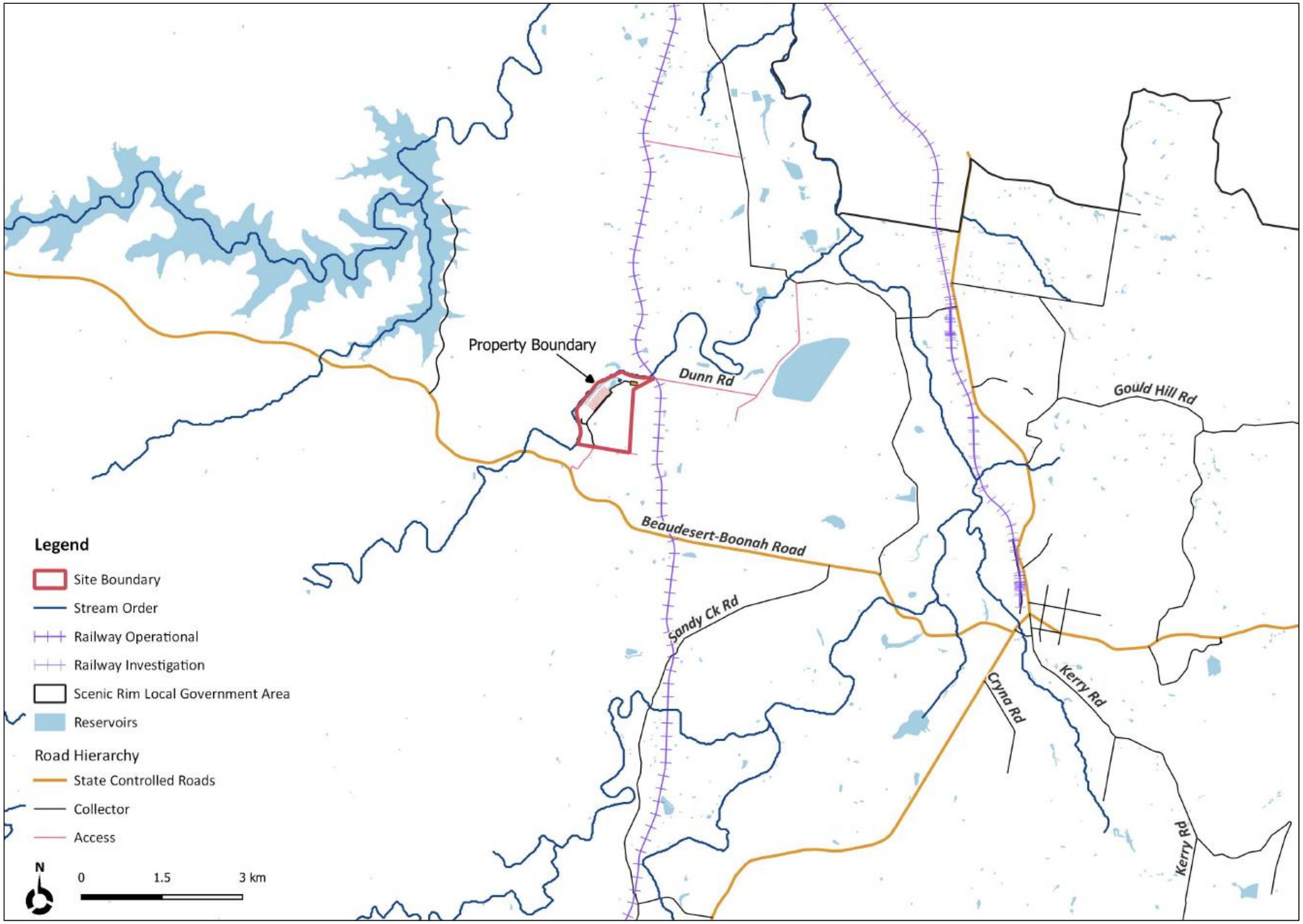

Figure 1: Site Location Plan

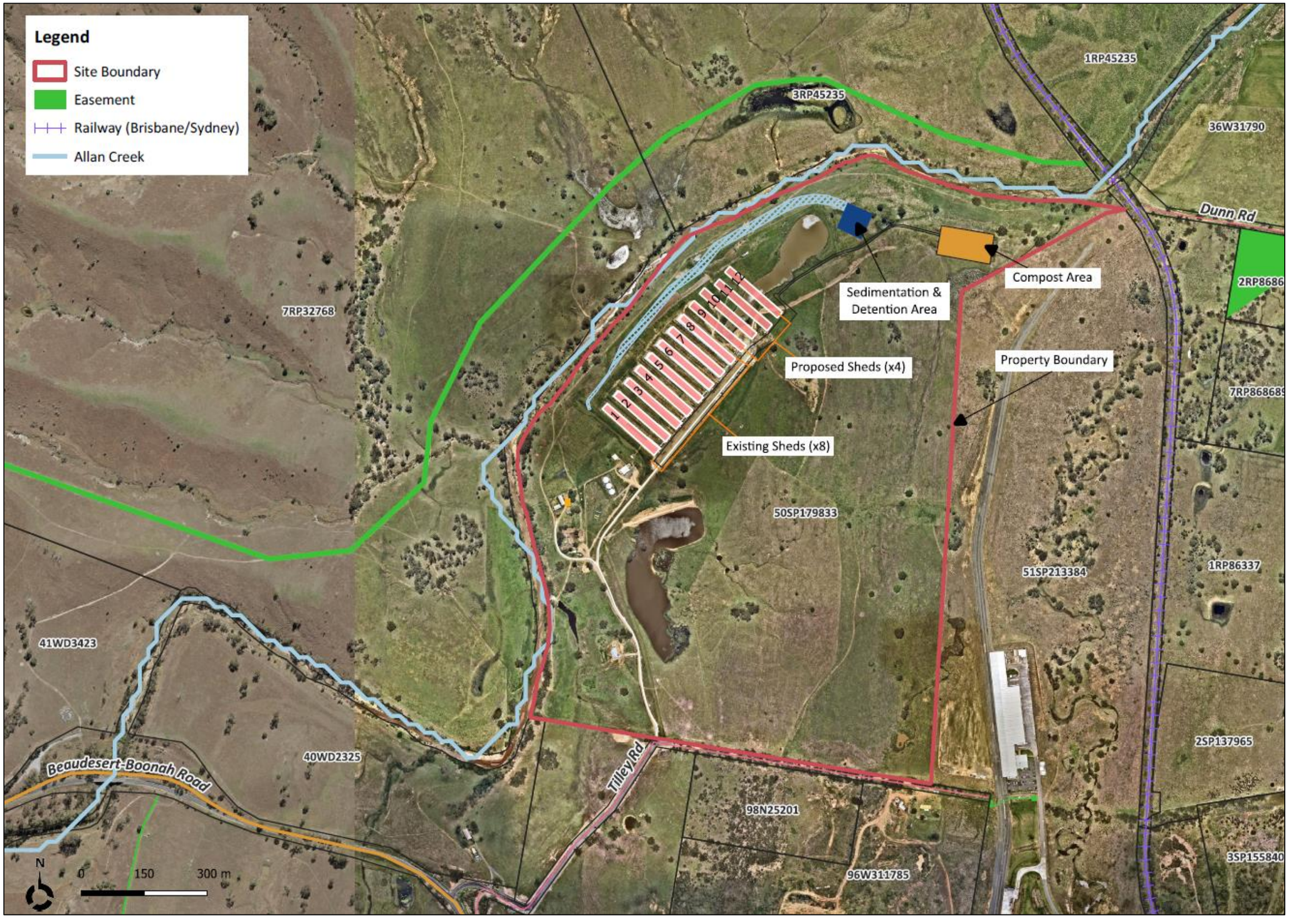

Figure 2: Site Aerial Layout Plan

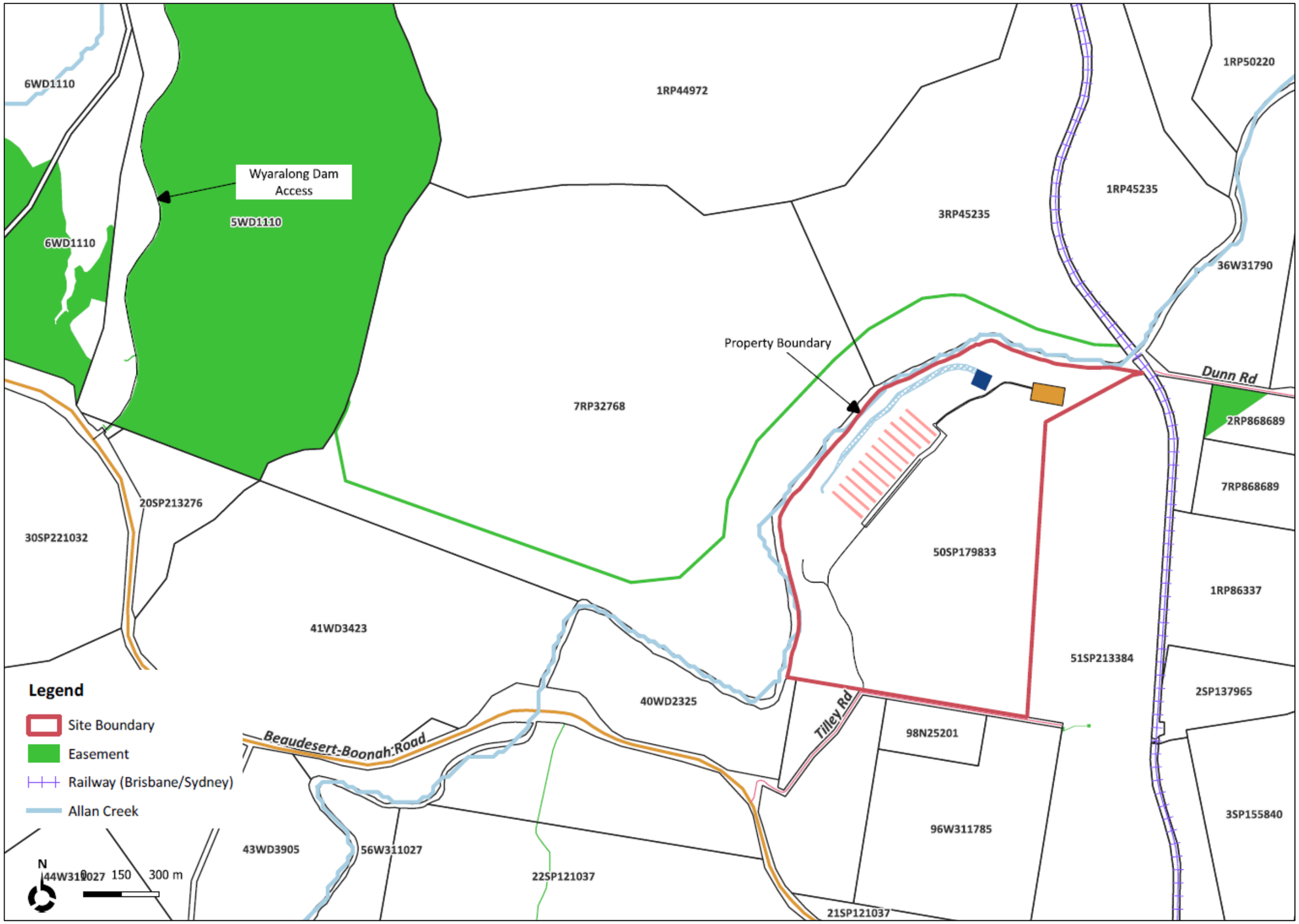

Figure 3: Site Cadastral Plans

2 DESCRIPTION OF THE EXISTING ENVIRONMENT

2.1 CLIMATE

Rainfall varies with time of year due to the latitude of the region with a highly seasonal weather pattern resulting in high summer rainfall and low winter rainfall. Rainfall data was obtained through Rainman from the closest meteorological record station to the proposed development site, Cryna, Beaudesert, approximately 9 km to the south east of the site.

The area has an average annual rainfall of about 917 mm with the heaviest falls usually occurring in December, January, February and March. The lowest rainfall totals are in August and September (Table 1).

The climatic influence on temperatures results in mild winters and higher summer temperatures. The mean maximum temperature is 31°C in December and the mean minimum is 5°C recorded for July.

Figure 4 shows average monthly rainfall for Beaudesert (closest source of rainfall data).

TABLE 1 – CLIMATIC DATA FOR CRYNA, BEAUDESERT

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Rainfal													
Mean (mm)	125	123	100	65	59	53	43	34	42	68	84	118	917
Median (mm)	104	90	94	45	39	30	31	30	37	60	72	98	909
Standard Deviation (mm)	93	109	76	70	64	63	45	28	32	49	55	73	255
Highest on Record (mm)	600	675	393	452	337	347	221	134	128	325	287	365	1,727
Lowest on Record (mm)	6	1	0	0	1	0	0	0	0	0	8	10	435
Mean Rain days (mm)	10	9	10	7	7	5	5	5	6	7	9	9	89
Temperature													
Av Max Temp (deg C)	30.8	30	29.2	27.6	23.8	21.5	21.2	22.4	24.6	27.1	29.4	31	26.5
Av Min Temp (deg C)	19.2	18.6	17.3	13.5	9.8	6.4	5.1	6.2	9.1	12.9	15.9	17.8	12.6

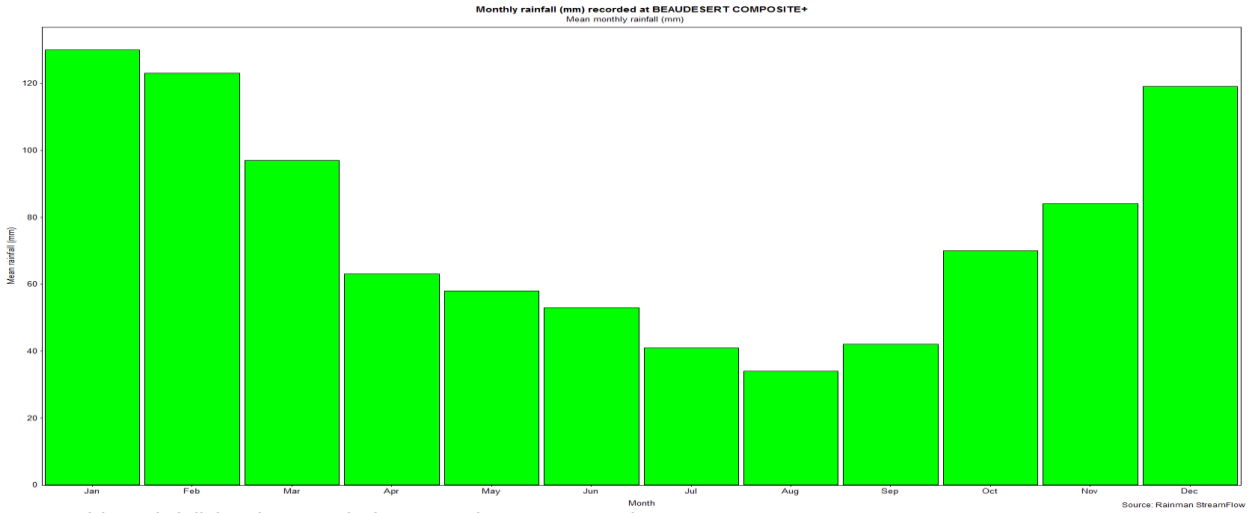

Figure 4: Monthly Rainfall (mm) Recorded at Beaudesert Composite

2.2 DESCRIPTION OF SENSITIVE RECEPTORS AND SURROUNDING LAND-USE

The Tilley Road farm is located in the Bromelton state development area, approximately 9 km north-west of Beaudesert (Figure 1). The farm is surrounded by rural properties, used for grazing, cultivation and intensive animal husbandry practices.

A plan showing the location of nearby residences and surrounding land uses is provided in Figure 5. There are five significant receptors within a 2 km radius of the proposed sheds. The closest receptor is located 870m to the south of the proposed sheds. The closest receptors are shown on Figure 5.

The proposed development is located within the Bromelton State Development Area, Transition Precinct of the Scenic Rim Regional Council. Development for uses other than residential or sensitive uses such as animal husbandry, aquaculture, cropping and rural industry may be supported where it is consistent with the purpose of the Transition Precinct.

The development site is bounded on the east by a Major Industry Precinct (high impact and difficult to locate industries), to the west by a Rural Uses Precinct (agricultural production, rural living and compatible tourism related uses) and to the south by a Rural Enterprise Precinct (established industry activities, rural industry, extractive industry and compatible rural activities).

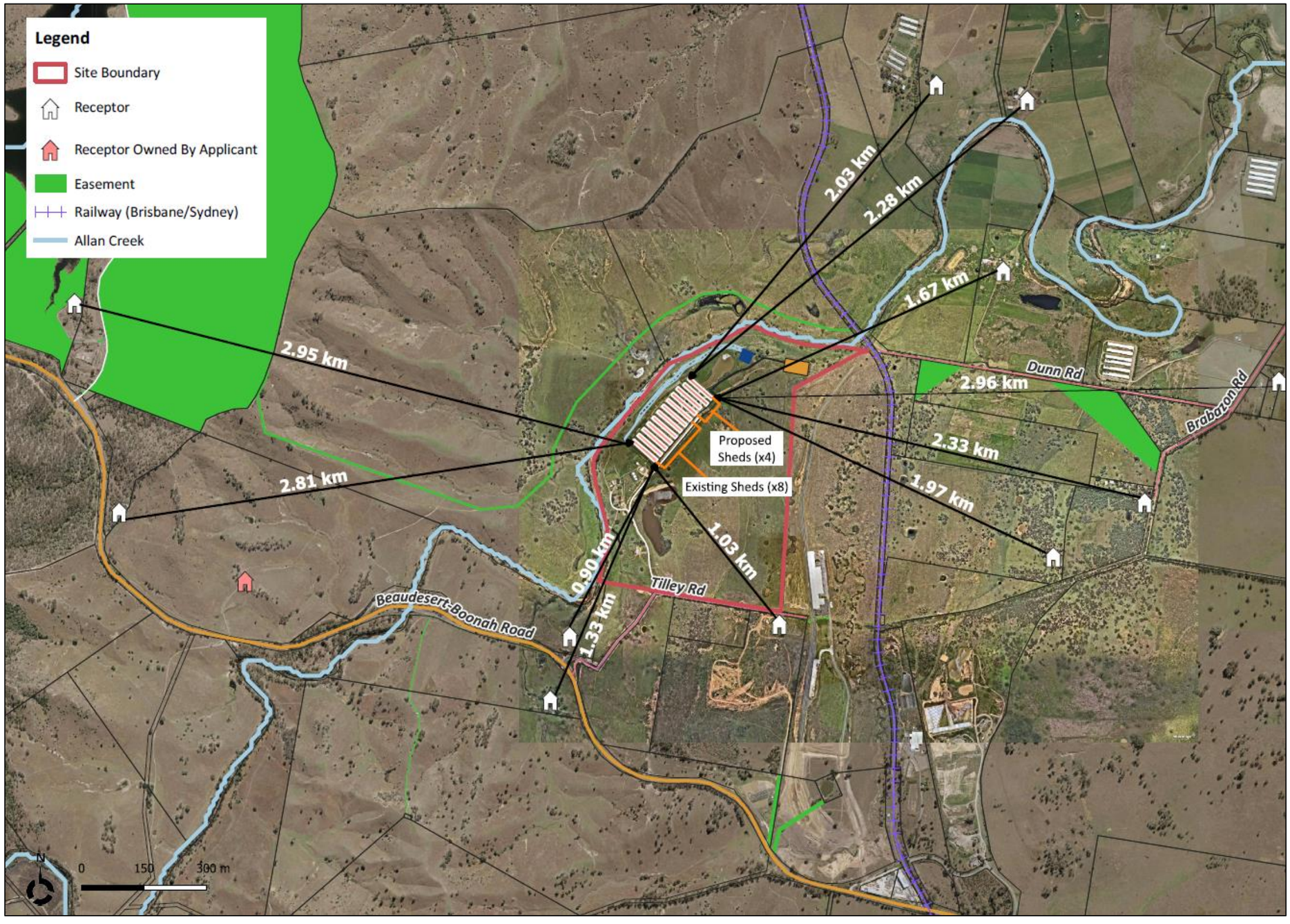

Figure 5: Sensitive Receptors

2.3 LAND RESOURCES INFORMATION

The property has been mapped to a land resource area (LRA) scale as part of the Moreton Region Land Management Manual (Harms 1996). The information in this publication is presented at a scale of 1:250,000. In this manual and corresponding map, three land resource areas, the Mixed Alluvial Plains (1c), Forest Walloons (6a) and Marbug Forest (7a) have been identified on the property (see Figure 6). The proposed development is located on the boundary of Mixed Alluvial Plains (1c) and Marbug Forest (7a).

(1c) Mixed Alluvial Plains
This LRA consists of mixed alluvial plains. The predominant soil type consists of coarse structured clays, alluvial soils, soloths, red-brown earths, earthy sands and red earths. The native vegetation is primarily blue gum, ironbarks, Moreton Bay ash, gum-topped box with some areas of swamp tea tree. The landform is predominantly alluvial plains.

(6a) Forest Walloons
In general, this area consists of grey and brown clays, loamy solodics, soloths, red podzolics, lithosols and rendzinas. The native vegetation is primarily eucalypt open forest to woodland. The landform consists of undulating hills and rises with steep hills in the far south west.

(7a) Marbug Forest
The soil in this area consists of sandy solodics, loamy solodics, soloths, yellow podzolics, red podzolics, non calcic brown soils and lithosols. The native vegetation is primarily eucalypt open forest with some areas of softwood scrub. The landform consists of undulatinghills and rises with steep hills and mountains.

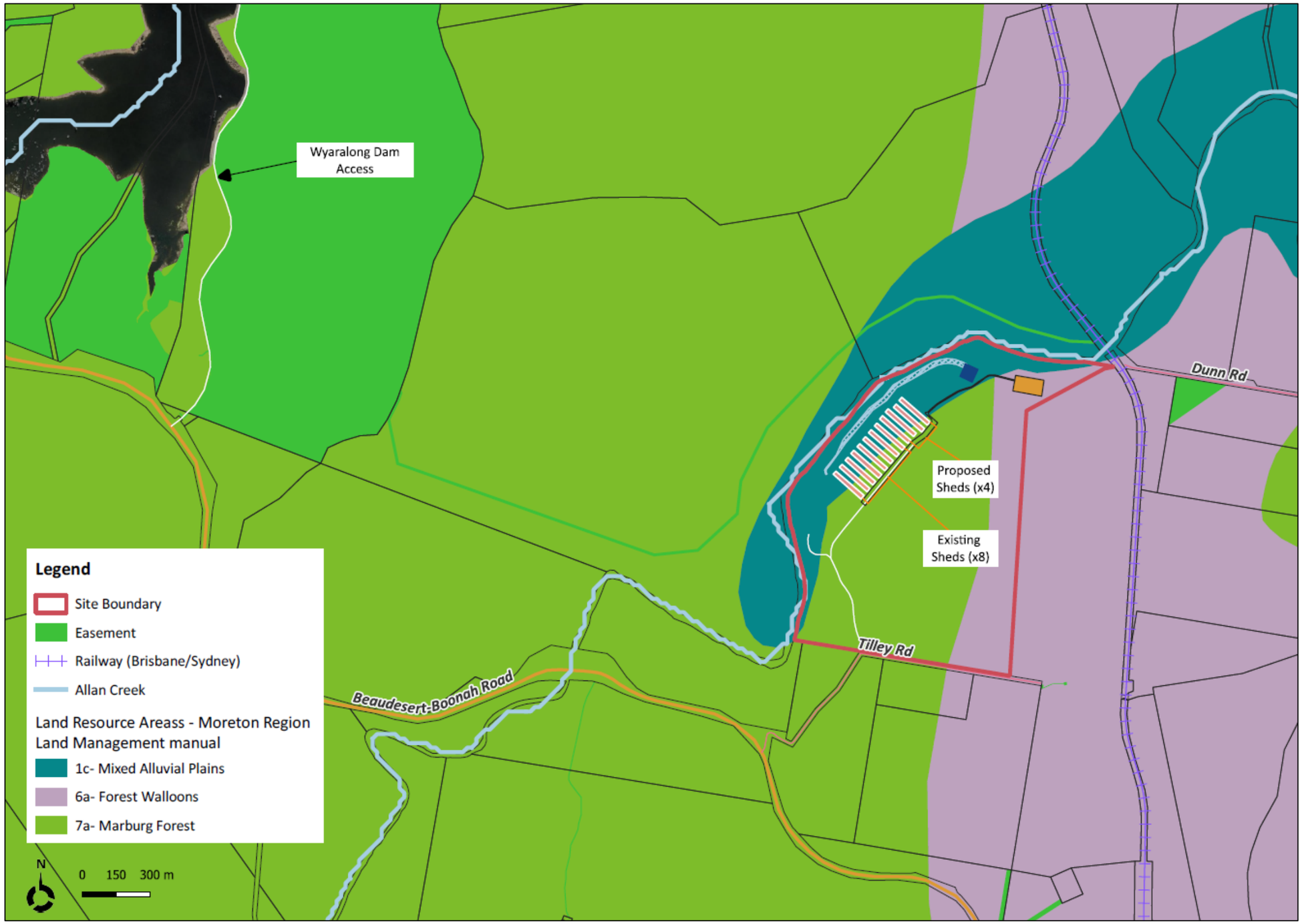

Figure 6: Land Resource Areas

2.4 ACID SULPHATE SOILS

Soils and sediments containing iron sulfides, most commonly pyrite, are called acid sulfate soils (ASS). When exposed to air due to drainage or disturbance, these soils produce sulfuric acid, often releasing toxic quantities of iron, aluminium and heavy metals.

Although some ASS were formed millions of years ago and occur in ancient marine rocks, those of most concern were formed after the last major sea level rise, within the past 10 000 years (the Holocene epoch). They commonly occur on coastal wetlands as layers ofHolocene marine muds and sands deposited in protected low-energy environments such as barrier estuaries and coastal lakes. In similar environments, they are still being formed.

ASS are formed when seawater or sulphate-rich water mixes with land sediments containing iron oxides and organic matter in a waterlogged situation, in the absence of oxygen.

When ASS are exposed to air (i.e. no longer in a waterlogged anaerobic state), the iron sulphides in the soil react with oxygen and water to produce a variety of iron compounds and sulphuric acid. Initially a chemical reaction, the process is accelerated by bacteria such as *Acidithiobacillus ferrooxidans*.

Deposits of ASS are commonly found at less than five metres above sea level, particularly in low-lying coastal areas. Mangroves, salt marshes, floodplains, swamps, wetlands, estuaries, and brackish or tidal lakes are ideal areas for ASS formation. The proposed development is located at 110-130 mAHD on land described as Basaltic Uplands. ASS are not expected to be located at or adjoining the property due to its elevation and geomorphic setting.

2.5 TOPOGRAPHY

Figure 7 is a site topographic plan at a scale of 1:16,000 with a contour interval of 5 m. The property is relatively flat around the proposed development site at an elevation of RL50 to RL60. To the east of the site, the land rises strongly from RL55 to RL90 in less than 200 m forming a low ridge that runs roughly through the middle of the property from which a number of Stream Order 1 drainage lines originate (refer Section 2.6).

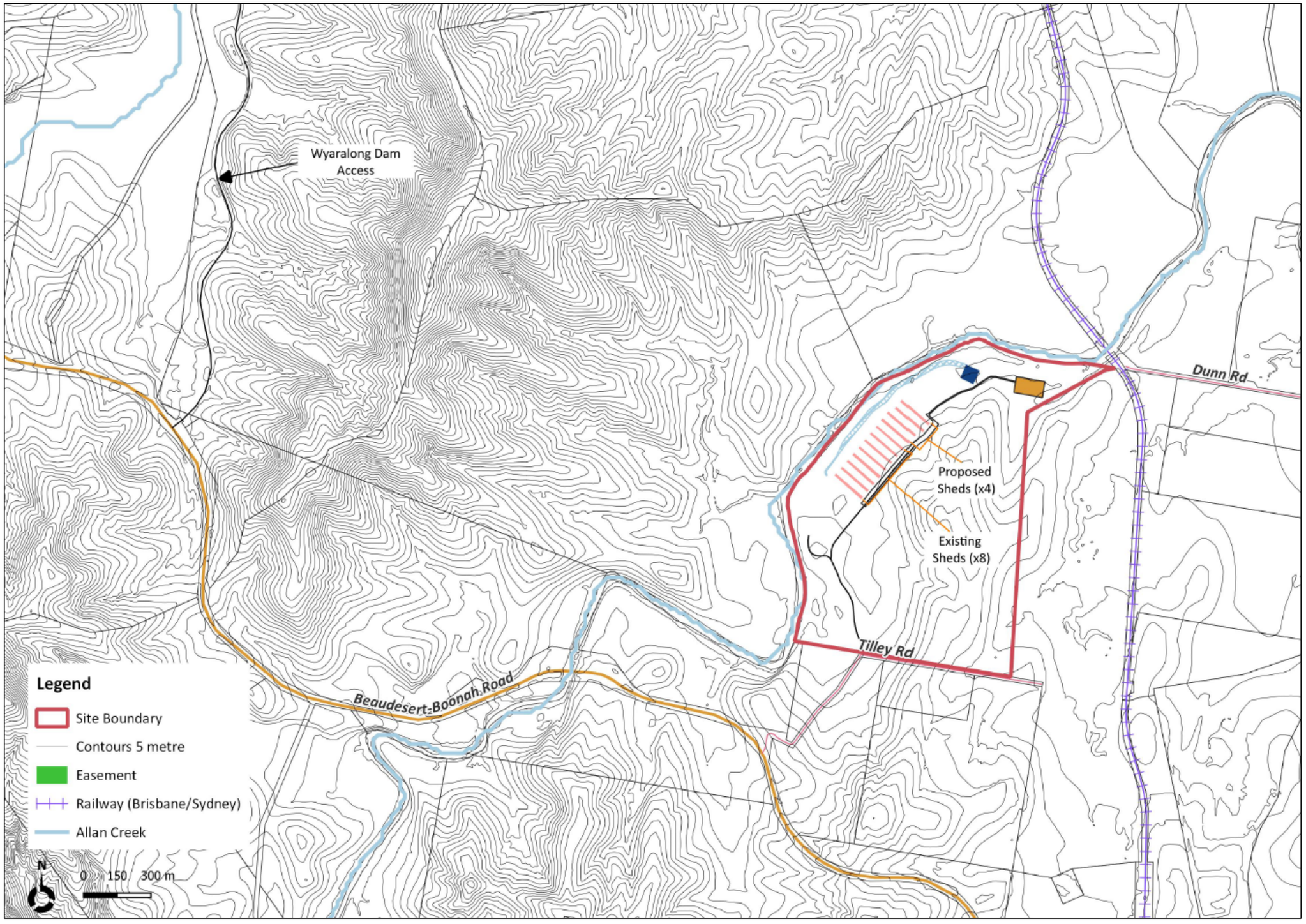

Figure 7: Topography

2.6 SURFACE WATER

There are no major rivers, creeks or waterways on the subject property. Allan Creek flows along the western edge of Lot 50 on SP179833. Allan Creek flows to the north east and discharges into the Logan River after flowing for approximately 7.8 km or 4.7 km as the crow flies. The proposed sheds will be at least 100 m from Allan Creek. Grass swales have been planted as required to minimise any impacts on Allan Creek.

There are a number of Stream Order 1 drainage lines on the property and two Stream Order 2 drainage lines. The Stream Order 1 drainage lines originate from the low ridge that runs through the middle of the property. They drain towards the north, northeast of the property where they join to form one of the Stream Order 2 drainage line, which ultimately discharges at the northern boundary of the property, into Allan Creek. These drainage lines are located within the area where the proposed sheds are to be sited. These drainage lines are "unnamed drainage lines" and form a branch of Allan Creek. These unnamed drainage lines are not defined as watercourses under the Water Act 2000. They do however appear as streams under the Vegetation Management Act 1999. For this reason, they have been identified as streams on Figure 8. It is anticipated that these unnamed drainage lines will be surveyed at the detailed design stage of the development and relocated as required at the operational works stage.

The second Stream Order 2 drainage line is located to the south east of the property, which is over 300 m away from the proposed development.

Figure 8 shows the drainage lines and associated stream order for the subject property and surroundings and the required buffer distance of 100m from a permanent waterway. Figure 8 also shows the option for the unnamed drainages line to be redirected. The redirection of these streams will allow appropriate stormwater, sediment and erosion control measures to be implemented to protect the downstream drainage. The redirection of these streams will be undertaken at the operational works phase of the development. It is anticipated that the stream areas will be fully vegetated at all times.

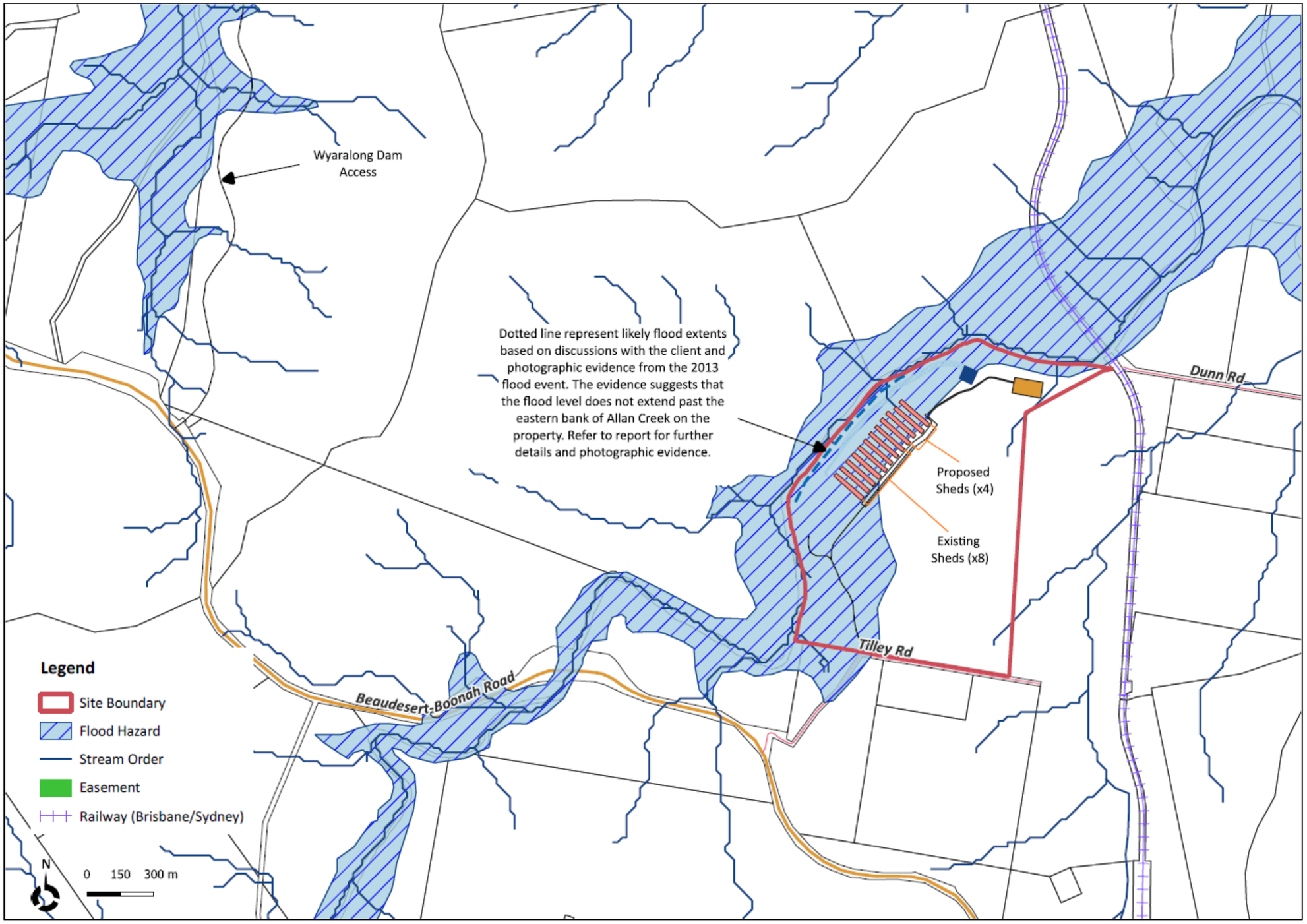

Figure 8: Steam Order and Flooding

2.7 GROUNDWATER

In Queensland, a number of sub-artesian areas have been declared under the *Water Act 2000*. Some have been declared within water resource plans, while most have beendeclared under the Water Regulation 2002, both of which are subordinate legislation to the Act.

A search of the Department of Natural Resources and Mines (DNRM) groundwater database was undertaken for data on the location, casing details, strata logs, aquifer details, water levels (by date) and water analysis (lab and field) for all registered water bores within a 2 km radius of the development site on the subject property.

Figure 9 shows the closest registered bores to the proposed poultry development, including one registered bore (RN 152550) on the subject property approximately 50 m from the proposed development. The next closest registered bores (RN 152869 and RN 152688) are located almost 700 m from the proposed development.

The bore located on the property is shallow (21 m). Artesian groundwater is very deep and would not be affected by this development. It is unlikely that there are any significant shallow aquifers.

A copy of the bore reports and associated water licenses have been included as an Appendix to this report (Appendix C).

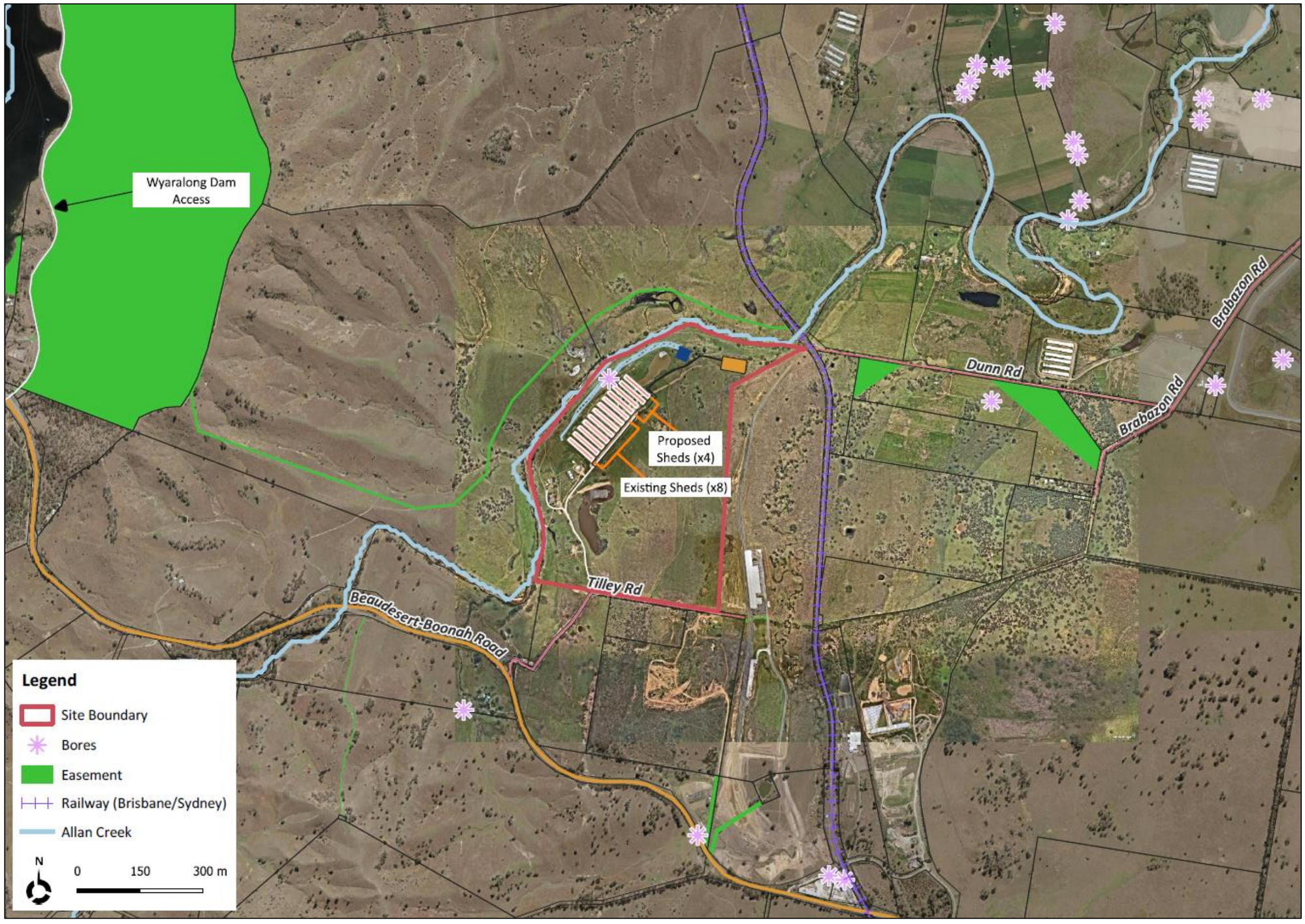

Figure 9: Groundwater and Bores

2.8 FLOODING

According to the Queensland State Planning Policy mapping, the property on which the proposed meat chicken farm is to be located is designated Flood hazard area, Level 1 for both the Queensland floodplain assessment overlay and Local Government flood mapping area. Figure 8 shows the interim flood assessment overlay using 2011 Landsat imagery. However, images provided by Mark Tilley of the site during the 2013 floods (see AppendixJ), shows that the highest level of flooding in Allan Creek did not break the banks and did notreach the area where the proposed sheds are to be located. This would suggest that although the property is in a flood hazard zone, it is not actually subject to flooding. In addition, the Queensland Government's Flood Check Maps is a broad-scale mapping tool; therefore, this may limit the accuracy of the results. It is reasonable, therefore, to assume that although the property may be mapped in a flood hazard area, from previous experience by the Tilleys, combined with photographic evidence, the property is not prone to flooding.

Landslide hazard investigation areas were identified in the centre and east of the property, using the Scenic Rim Regional Council planning scheme overlay, however these are away from the proposed sheds. A copy of the overlay map is included in Appendix B.

2.9 VEGETATION MANAGEMENT

On 2 December 2013, a range of reforms to Queensland's vegetation management laws were introduced. Key reforms included:

- 3 new clearing purposes;
- A range of self-assessable vegetation clearing codes;
- Simplified mapping; and
- The removal of high-value regrowth regulations from freehold and Indigenous land.

A vegetation clearing development application will continue to be assessed against Module 8 (native vegetation clearing) of the State Development Assessment Provisions.

Reformed vegetation management laws have introduced three new clearing purposes, high-value agriculture, irrigated high-value agriculture, and necessary environmental clearing. High-value agriculture and irrigated high-value agriculture allow application to be made for clearing associated with annual and perennial horticulture and broad acre cropping. Necessary environmental clearing refers to landholders applying to clear native vegetationfor purposes that provide social or environmental benefits. Self-assessable codes have been introduced for most clearing purposes permitted under the vegetation management laws.

Simplified vegetation mapping has been introduced to make it easier to identify the regulated vegetation on a subject property. Regulated vegetation management maps are used to determine whether clearing is regulated.

A regulated vegetation management map (Figure 10) for the site shows that there is no regulated vegetation where the proposed sheds are to be located. Therefore, no clearing of regulated vegetation will be required for the development. An area of regulated vegetation (Category B – Remnant Vegetation containing endangered regional ecosystems) is present on the southern property boundary, well away from the proposed development.

A vegetation management supporting map identifying regional ecosystems is provided in Figure 11.

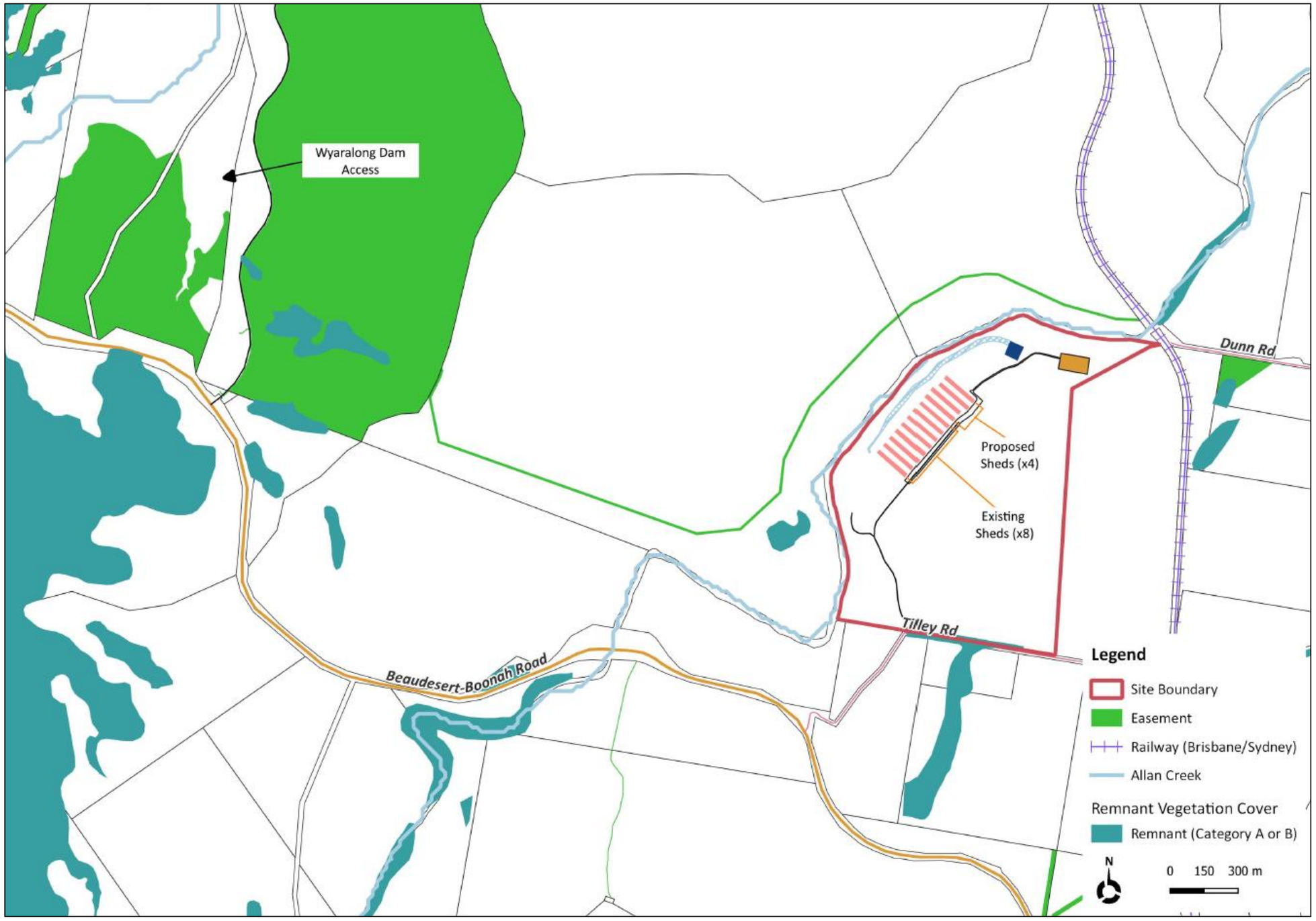

Figure 10: Remnant Vegetation

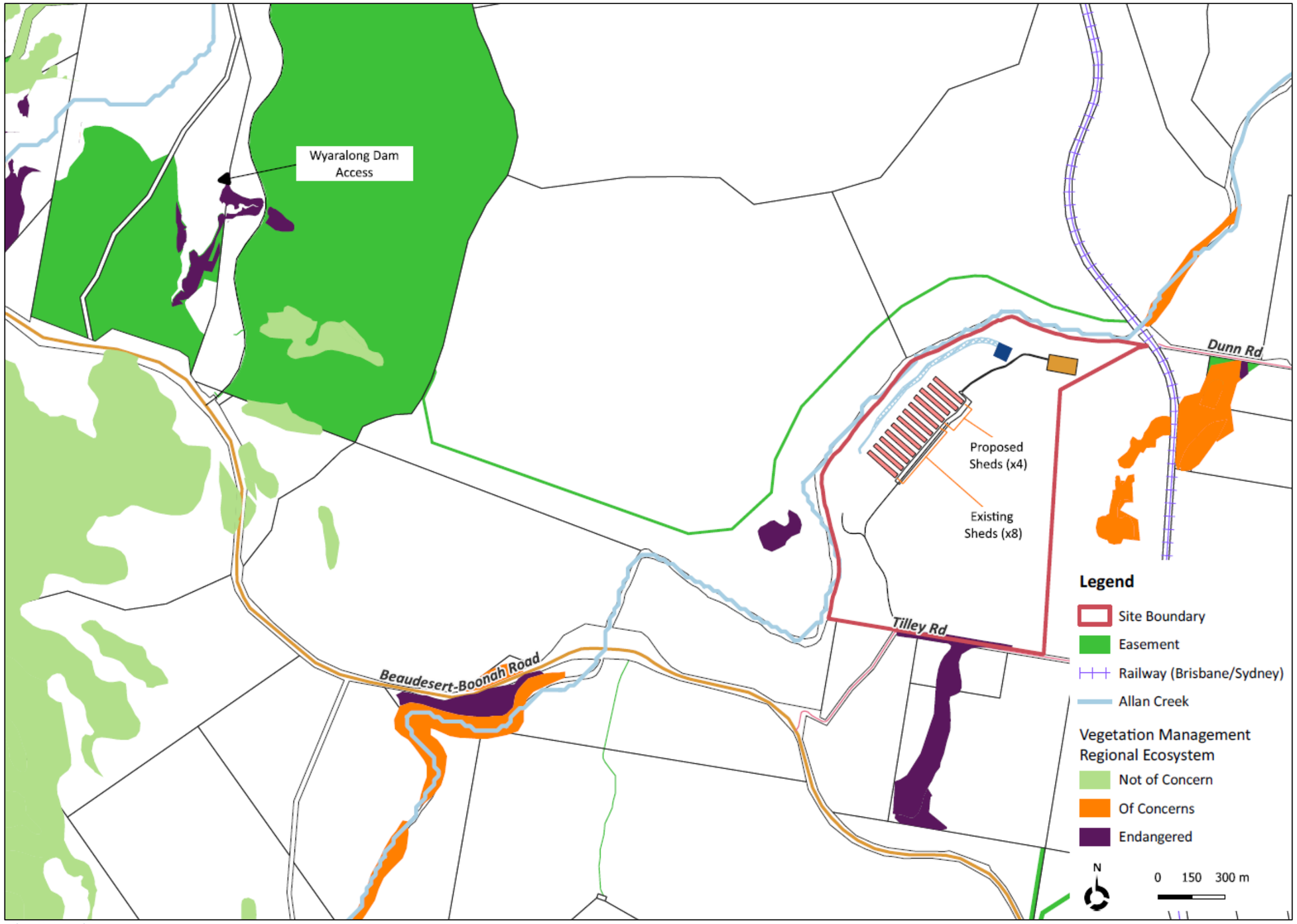

Figure 11: Remnant Vegetation Categories

2.10 SIGNIFICANT FLORA AND FAUNA

A search of the Department of Environment and Heritage (DEHP) protection protected plants flora survey was undertaken for the lots where development is proposed. The Protected Plants Flora Survey Trigger Map shows high risk areas for protected plants and is used to help determine flora survey and clearing permit requirements for a particular location. Areas shown on the map as high risk are subject to particular requirements under legislation. No high risk areas for protected plants were identified on the subject property.

As no protected plants have been identified on the site, the development will not involve the clearing or disturbance of habitat for significant flora and fauna. A copy of the search response is provided in Appendix D.

DEHP has established a program designed to develop and implement measures for the long-term conservation of wildlife. The DEHP wildlife database (Wildlife Online) contains recorded wildlife sightings and listings of plants, fungi, protists, mammals, birds, reptiles, amphibians, freshwater fish, marine and cartilaginous fish, butterflies and other priorityinvertebrates in Queensland.

Wildlife Online outputs contain kingdom, class, family, scientific name, common name, flag for introduced species, status under the *Nature Conservation Act 1992*, status under the *Environment Protection and Biodiversity Conservation Act 1999,* the number of records for the category selected and the number of specimens for each species recorded in thenominated area.

A search of the Wildlife Online Database flora and fauna species lists within a 2 km radius was undertaken for the site. A copy of the search is located in Appendix D. This search indicated that there was no record of critically endangered species but there was one incidence of a vulnerable species under the Queensland and Australian conservation status on the property – the *Phascolarctos cinereus* (koala). There are small areas of koala bushland habitat to the west, south and north of the property, however as the proposed development will be located away from these areas, the risk that koalas may be impacted by the farm operations is relatively small. A copy of the koala habitat in South East Queenslandmap is attached in Appendix D.

2.11 ENVIRONMENTALLY SENSITIVE AREA

Environmentally Sensitive Areas are selected for their environmental values at state or national levels. Environmentally sensitive areas are described in various codes of compliance, mining and petroleum tenures, towns and roads. There are three categories of areas being A, B and C. A full list of the areas can be found in Appendix A of the Code of environmental compliance for exploration and mineral development projects, Version 1.1. Mining and petroleum tenures include mining lease, mining claim, exploration permit coal, exploration permit mineral and mineral development licence.

A search of the DEHP Eco Access Database was undertaken to determine if there are any environmentally sensitive areas identified on the property. The search showed that the subject property is within an Authority To Prospect (ATP) and Exploration Permit for Coal. The resulting Queensland environmentally sensitive areas maps are provided in Appendix A.These include mining activity and non-mining resource activities maps.

2.12 WETLANDS

Chapter 4 of the Beaudesert Shire Planning Scheme (which is not applicable for this development) details requirements for catchment management, waterways and wetlands within the Beaudesert area. A supporting map, Overlay 6.1D, shows areas that are subject to the catchment management, waterways and wetlands overlay. A copy of this map is given in Appendix B. No wetlands have been identified on the property where the proposed development is to be located.

DNRM has established a program designed to develop and implement measures for the long-term conservation and management of wetlands in Queensland. There is not a clear definition of what wetlands actually are. They are neither just land, nor just water. They can actually be both at the same time, or seasonally aquatic, or terrestrial. Traditionally, wetlands can be defined as swamps, billabongs and mangrove areas. However, these areas represent only part of the landscape's features defined as wetlands.

Other areas included in this definition are:

- Rivers and creeks;
- Estuaries;
- Artificial wetlands for example ponds;
- Springs;
- Lakes, lagoons, billabongs;
- Swamps; and
- Bays and marine areas.

Wetlands may need to be managed for conservation purposes, while in other circumstances the condition of wetlands may require monitoring to pick up trends and adjust management strategies accordingly. Landholders may be interested in managing their wetlands for sustainable development or to conduct rehabilitation works (DERM 2011).

A search of the DEHP referable areas database was undertaken and the resulting map confirms no referable wetland areas on the property (Figure 12). The development is not expected to have any impact on surrounding wetlands.

FIGURE 12 – WETLANDS

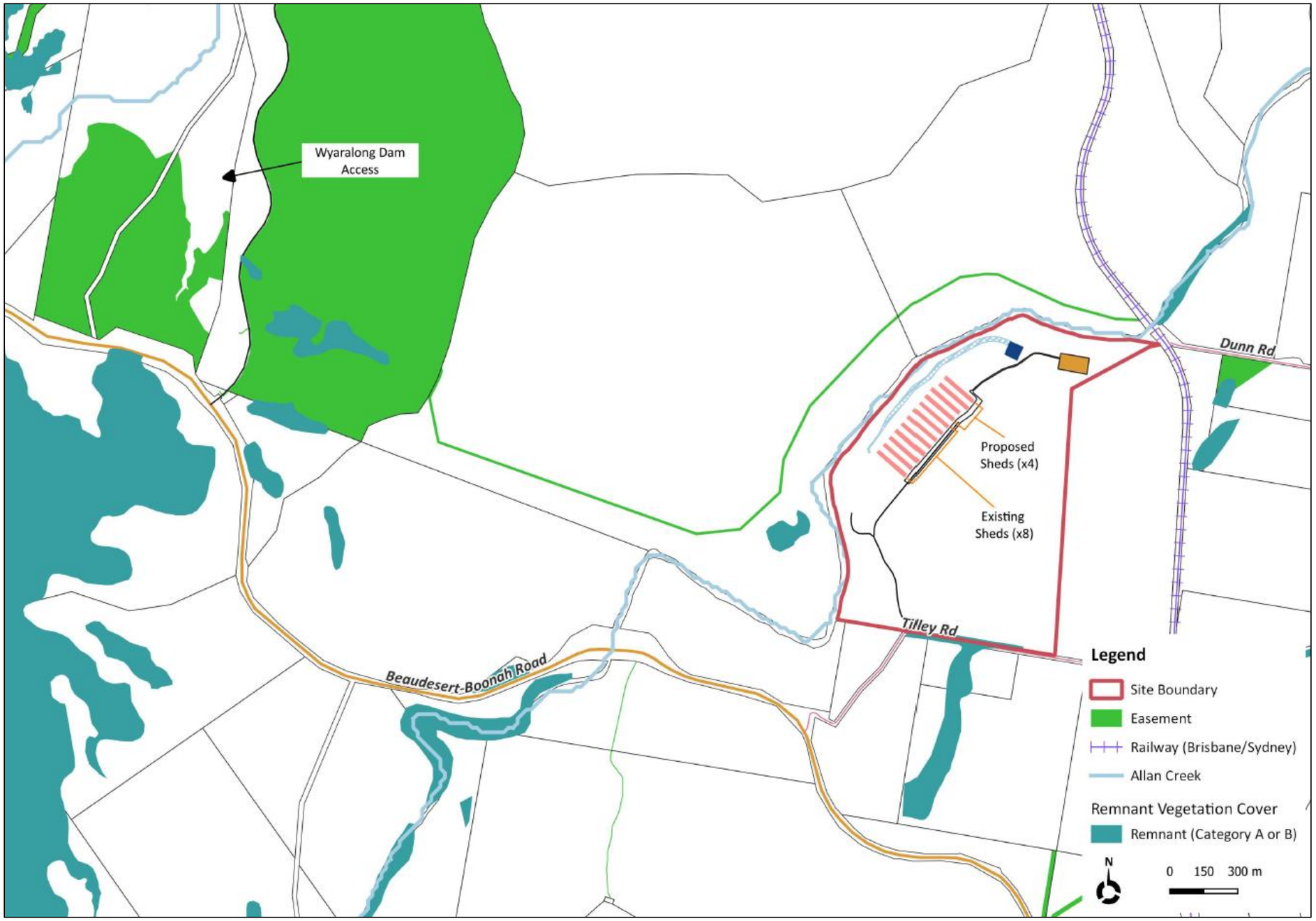

Figure 12: Wetlands Plan

2.13 BUSHFIRE

State Planning Policy mapping shows potential bushfire impact buffer areas, primarily associated with trees along the southern boundaries. Appropriate separation distances and fire breaks will be maintained between the buffer areas and the development. A copy of the State Planning Policy map is included in Appendix E.

Under the Scenic Rim Regional Council planning scheme, none of the development site is identified as being a bushfire hazard. A copy of the overlay map is provided in Appendix B.

2.14 ARCHAEOLOGY AND HERITAGE

Aboriginal Cultural Heritage

A search of the Aboriginal Cultural Heritage Database and Register was undertaken on 1 June 2015 to determine if there is any cultural heritage identified on the subject property. Christy Anderson, Policy Officer of the Department of Aboriginal and Torres Strait Islander and Multicultural Affairs advised that the site was not recorded on the Cultural Heritage Database and Register. The search response for the parcel of land is provided in Appendix F. Notwithstanding, all future development works will be required to be conducted with a cultural heritage duty of care in accordance with the Cultural Heritage Duty of Care Guidelines.

Even though no artefacts are registered on the property, where an activity is proposed under category 5 of the Cultural Heritage Duty of Care Guidelines, there is generally a high risk that it could harm Aboriginal cultural heritage. Category 5 activities are those that cause additional surface disturbance. Generally, category 5 activities involve a high risk of harm to cultural heritage. In these circumstances, the activity should not proceed without cultural heritage assessment. It is necessary for the applicant to notify the Aboriginal Party and seek advice as to whether the feature constitutes Aboriginal cultural heritage; and if it does, agreement as to how best the activity may be managed to avoid or minimise harm to any Aboriginal cultural heritage (Queensland Government, 2004).

A person who carries out an activity on land is deemed to have complied with the cultural heritage duty of care if the person acts in compliance with the Cultural Heritage Duty of Care Guidelines. These Guidelines are measures established by the Minister to ensure that activities are managed to avoid or minimise harm to cultural heritage. Compliance with these measures ensures that the protection provisions of the Cultural Heritage Acts are not contravened.

Development activities in many areas of the State will occur on lands where there has previously been significant ground disturbance, in which case it would seem that there would be minimum and reduced risk of harm to Indigenous cultural heritage. However, even in areas of significant disturbance it is possible that Indigenous cultural heritage could exist. In areas where there has been little or no ground disturbance (such as the proposed

development) then the risk of disturbing Indigenous cultural heritage will be considerable. It is necessary to notify the Aboriginal or Torres Strait Islander parties and seek their advice about how to manage the cultural heritage including advice as to whether any harm could potentially occur and any necessary procedures to be taken to avoid this. In addition, a cultural heritage assessment could be undertaken (Queensland Government, 2004).

There is currently no registered Cultural Heritage body for the 50SP179833 area.

There is currently no registered Aboriginal party for the 50SP179833 area.

For the 50SP179833 area without a registered Aboriginal party, an appropriate contact can be identified by:

Andrew Rutch
Southern Region CH Coordinator
Cultural Heritage
Ph: 3247 6220
Mob: 0459 840 294
Email: Andrew.Rutch@datsip.qld.gov.au

Non-Aboriginal Heritage

DEHP and the Queensland Heritage Council have jointly developed the Queensland Heritage Strategy (DERM 2009). The strategy establishes a framework for managingQueensland's heritage over the next 10 years. It allows for growth and development of the State while also conserving its valuable heritage places.

The Queensland Heritage Strategy manages and coordinates heritage issues that are central to community sustainability, ethos and identity.

The Queensland Heritage Register protects the past and the present for the future. The Queensland Heritage Register is a list of places, trees, natural formations and buildings of cultural heritage significance. Developed under the *Queensland Heritage Act 1992*, the Register recognises the value of Queensland's cultural heritage.

To ensure that any non-aboriginal heritage on the subject property is protected for the enjoyment of future generations, a search of the Queensland Heritage Register (QHR) database was undertaken. The search returned no heritage listed places on the land on which the proposed development will be sited. The certificate of affect for the property is in Appendix G.

The response certifies that the subject property is not entered on the QHR and is not affected by the provisions of the *Queensland Heritage Act 1992*.

2.15 CONTAMINATED LAND REGISTER

In Queensland, the Department of Environment and Heritage Protection (DEHP) administers the *Environmental Protection Act 1994* (EP Act). The EP Act's emphasis is on managing

Queensland's environment within the principles of ecologically sustainable development. Chapter 7, Part 8 of the EP Act deals with managing contaminated land. Managing potentially contaminating activities and known contaminated sites in Queensland helps prevent environmental and health risks.

'Contaminated land' refers to land contaminated by hazardous substances that may pose a risk to human health or the environment. Land contamination can occur as a result of poor environmental management and waste disposal practices or accidental spills. In the past, land has been contaminated by activities not known to be dangerous at the time, often involving chemicals that have since been banned or are now subject to much strictercontrols.

A search of the DEHP Environmental Management Register and the Contaminated Land Register was undertaken on the subject property. The parcel of land where the development is proposed is not included on either the Environmental Management Register or the Contaminated Land Register. A copy of this search document is included in Appendix H.

2.16 MATTERS OF STATE ENVIRONMENTAL SIGNIFICANCE (MSES)

There are a number of MSES mapped on the property, however none of these are located within the amended development footprint. The following MSES are located on the site

- Flood hazard area
- Bushfire hazard area (Bushfire prone area).

These matters have all been addressed in the preceding sections of the report. The proposed amendment to the development footprint is not likely to have any effect on any MSES. A copy of the state planning policy map is provided in Appendix E.

2.17 MATTERS OF NATIONAL ENVIRONMENTAL SIGNIFICANCE (MNES)

Appendix I summarises the MNES that may occur in, or may relate to, the area surrounding the feedlot development.

The summary lists two listed threatened ecological communities and 21 threatened species within 2 km of the development site.

There are three critically endangered resources or species located within or surrounding the property, the first is the Lowland Rainforest of Subtropical Australia. This is unlikely to occur on the property as the land has been previously cleared and there is no mapped regulated vegetation on the property. The second is the White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland. This is unlikely to occur on the property as the land has been previously cleared and there is no mapped regulated vegetation on the property. The third is a critically endangered bird species (regent honeyeater) which may occur within the area to forage or feed. The regent honeyeater is found in dry eucalypt woodland and open forest, rural and urban areas with mature eucalypts. It favours ironbark-

box associations, mugga ironbark Eucalyptus sideroxlyon, white box E. albens, yellow box E. melliodora. Other habitat includes swamp mahogany E. robusta, or spotted gum Corymbia maculata or river she-oak Casuarina cunninghamiana with associated needle-leaf mistletoe Amyena cambagei. As the areas where regional ecosystems on the site are, are unlikely to be affected by the proposed development, it is unlikely that the regent honeyeaterwill be affected by the development.

3 OVERVIEW OF OPERATIONS

The proposed poultry farm is located at 75 Tilley Road, within the Bromelton State Development Area. The site is formally described as Lot 50 on SP179833.

Allans Creek Pty Ltd is\proposing to develop a twelve shed meat chicken farm, for approximately 625,50 meat chickens. The development application is for Material Change of Use for "Poultry Farming" and Environmentally Relevant Activity ERA4 (2) – Farming more than 200,000 birds. The sheds will be constructed to meet the applicable RSPCA Approved Farming Scheme Standards and the farm will be run as a barn system. This site based management plan has been prepared to manage the potential impacts from the poultry operation.

The meat chicken farm will consist of:

- Twelve mechanically ventilated sheds;
- 1 managers residence
- Two water supply dams;
- Three water storage tanks;
- Car parking facilities;
- On-site composting

The location of the on-site facilities can be seen in Figure 2.

The twelve environmentally controlled, prefabricated sheds will be operated for meat chicken production (Figure 2). The proposed operations will consist of twelve sheds constructed to 168 m x 18.3 m, providing a total gross floor area of 36,892 m^2 across the twelve sheds.

The farm will raise day old chicks to approximately 38-51 days, depending on the size of birds required for market and other production requirements. These birds are then transferred from the site by truck to a processing facility.

During the growing cycle, the removal of daily mortalities or culls is an ongoing operation. These birds will be composted onsite and composting material will be sold and removed offsite.

The sheds will remain empty for up to 14 days between batches, allowing time for litter to be removed, sheds to be sanitised and general maintenance and repair to be undertaken before the introduction of new day old birds.

The main waste products from meat chicken facilities include spent litter and dead birds.

3.1 RSPCA APPROVED FARMING SCHEME

The sheds will be operated and managed in accordance with the RSCPA approved farming scheme standards - meat chickens (RSPCA 2013), RSPCA operational manual (RSPCA 2014) and the processer farming manual. These documents address such areas as environmental management including odour management, bird health, food, water, farm operation management including litter and waste management procedures and transport.

This SBMP and EPM has been written in accordance with the RSPCA standards and manuals, industry polices and applicable legislation and regulations. RSPCA Australia strives to improve animal welfare through the application of production practices that meet the animals' behavioural and physiological needs.

3.2 OPERATING HOURS

During construction operating hours will be from 7am to 6pm, Monday through Friday and 7am to 1pm Saturday. The majority of farm operations will be undertaken during daylight hours (6am - 6pm) Monday to Sunday. However, bird pick-up occurs mostly at night. This is to protect animal health and welfare. Night time pick-ups allow transport of birds during cooler times. Pick-ups will occur for two days at the first thin out and at final pick up during each batch.

3.3 DESCRIPTION OF SHEDS

All sheds are mechanically ventilated. All sheds can be closed and vermin proofed when required.

The bases of all sheds are cement stabilised clay floors. Proposed sheds will be constructed with a concrete rat-wall to aid in shed cleaning and minimise any possible leaching through the floor or sides of the sheds. The proposed sheds will be constructed ofa steel frame with metal sheeting as the roofing and panel walls. Appropriate insulation will be installed in the roofs and walls of the sheds.

The area surrounding the sheds will be maintained in a natural state with supplementary landscaping where required to assist in dust suppression and nutrient removal.

3.4 FEED REQUIREMENTS, PREPARATION AND STORAGE

Feed will be delivered to the site from a nearby feedmill. Silos on-farm hold sufficient feed to cover multiple days of feeding and to allow the procuring of an alternative feed source in the event of an emergency. To ensure continuity of feed supply, feed will be ordered well before the silos are empty.

3.5 WATER SUPPLY

Two surface water dams are proposed to be constructed to provide water for the proposed development. This water will be located on the same Lot as the sheds. The water will be treated with R/O. Chlorination, Ph control. and finally Chlorine Dioxide into the lines prior to entering each shed. Three water storage tanks will be constructed on the higher ground to the east of the proposed sheds to enable water to be gravity fed to the sheds. These water storages will be used as the temporary back-up water supply if the mainwater supply source fails.

As well as the two dams totalling approximately 100 megalitres Allans Creek has a bore tested to 10,000 gallons per hour.

Water use requirements for mechanically ventilated meat chicken production farms include:

- drinking water for birds,
- cooling (operation of cooling pads),
- shed cleaning and sanitationand cleaning and sanitation of machinery. Other ancillary requirements may include irrigationand staff amenities.

At present, there is little available published Australian data on the total water use requirements for meat chicken production under Australian conditions. The Queensland Guidelines for Meat Chicken farms (DAFF 2012) do not include any information on the water requirements for operating meat chicken farms.

The Best Practice Management for Meat Chicken Production in NSW (NSW DPI 2012) provides information on the drinking, shed cleaning and shed cooling requirements for meat chicken farms. These guidelines state that: *"Meat chickens require approximately 2 litres of drinking water for every kilogram of feed consumed."*..... *"As a rule of thumb, 1.2 litres of water per bird per day is required to service the evaporative cooling (water wall) when birds are at maximum feed consumption"*. ….. *"Dust on the walls, ceiling and equipment isremoved using high pressure (with low water volumes) at a standard rate of 6000 to 8,000 litres per shed".*

Eugene McGahan of FSA Consulting assessed the quantity of water required for a proposed poultry farm, including the methodology, use and results of the assessment. In the report McGahan (2013) concludes that the water requirement for a proposed tunnel ventilated meat chicken production farm would require 1ML/yr per 100,000 bird places. This conclusion was based following an assessment of Australian and US data.

Based on the McGahan (2013) conclusions, the farm will require 62 ML/year of water for the 625,500 birds on-site. This estimate does not include allowance for additional water to establish vegetated screens. However, there is an on-site bore, which could potentially be used for this. In addition, the three water storage tanks for the back-up water supply could be used for this purpose.

3.6 STORMWATER MANAGEMENT PLAN

There are no major rivers, creeks or waterways on the subject property. Overland flow from the site is directed northward towards Allan Creek which is adjacent to the western and northern boundaries of the property. Surface runoff from the low ridge on the property will drain away from the development site towards the north west corner of the property into Allan Creek.

The meat chicken sheds are located on raised pads, with stormwater draining away from the sheds.

Stormwater runoff from will be designed and managed in accordance with the Stormwater Management Plan (2022)

The location of the farm also decreases the level of possible risk, as proposed development is over 100 m away from an open watercourse (Allan Creek

3.7 CARCASS COMPOSTING

Composting is a viable alternative method for disposing of daily mortalities produced on Australian meat chicken farms. Under controlled systems, with the correct management, good results can be achieved, and a safe, nutrient-rich soil amendment material suitable used in agricultural production.

Birds must be composted fresh (daily) or temporarily stored in the on-site cold-room prior to composting to avoid a build-up of pathogens. Carcasses are transferred to the proposed compost pad to be constructed approximately 450m to the east of the extended farm. The composting area will consist of an elevated compacted pad (150 x 70m) surrounded by a vermin proof security fence. A cut off bund is to be constructed to redirect overland flows around the pad, and a detention basin to collect any run off during significant rainfall events.

Composting requires a good source of carbon such as sawdust, barn litter or chopped straw. Carcasses are to be adequately covered with material to reduce the likelihood of odour. All carcasses are to be covered with at least 150 mm of carbon co-composting material (i.e. sawdust). This will prevent odours escaping and pests/vermin from disturbing the carcasses / compost.

The top layer is them covered with at least 300 mm of co-composting material to ensure the is no scavenging of fly breeding. It is important that the compost piles are either turned or moved during the process to introduce new oxygen, stop purification and avoid the risk of odour generation.

Composted material is to be removed from site as soon as the process is complete, and stockpiling of composted material for extended periods of time is not to occur..

3.8 EROSION AND SEDIMENT CONTROL PLAN

This Erosion and Sediment Control Plan (ESCP) will address strategies and management practices to be employed during and after construction of the proposed site to ensure minimisation of detrimental effects on the adjacent streams and watercourses.

The overriding operational objectives for this ESCP are to:

1. Control and minimise erosion activity within the construction site; and
2. Implement preventative measures to minimise sediment movement from the construction site.

This ESCP will ensure:

- The construction and operation of the meat chicken farm does not have a detrimental impact on the surface water quality and quantity; and
- All runoff from the site must undergo sedimentation control prior to entering adjacent watercourses/streams to restrict silt access to the watercourses/streams.

This ESCP applies to all construction activities undertaken on the site, particularly where vegetation is removed or soil is exposed. Particular care will be taken in erosion sensitive areas, such as steep slopes.

Irrespective of the content of this ESCP, it is the responsibility of the Site Foreman to ensure that the construction and operation of the works does not have a detrimental impact on the surface water quality and quantity, and that all runoff from the site will undergo sedimentation control prior to entering adjacent watercourses/streams.

The potential impacts on the existing environment of the meat chicken farm construction may include:

- Impacts to the natural soil coverage and distribution; and
- Impacts to surface water quality and quantity.

These impacts may occur due to:

- Soil erosion of disturbed soil during the construction phase;
- The transport of sediment and organic matter from the construction site into adjacent watercourses and streams; and
- Erosion of exposed areas after construction has finished.

In order to minimise soil erosion of disturbed soil from the construction site during and after construction, the following management strategies are required to be implemented:

- Minimise stripping of vegetation to the smallest area required. Stockpile stripped topsoil and kikuyu for revegetation after construction is completed. Store stockpile within the sediment-controlled zone;

- Minimise unnecessary clearance of vegetation;
- Stabilisation of one entry/exit point;
- Program work activities to complete one road section before starting another section to minimise the area of disturbed ground that is exposed to erosion at any one time;
- Large established trees will not be removed (if possible);
- Divert clean runoff around the construction site using diversion channels;
- When construction is completed, revegetation of disturbed areas will be undertaken. Planting of fast growing grass species will be carried out to promote rapid establishment of ground cover. Re-laying of stockpiled topsoil and kikuyu will be undertaken to encourage quick re-establishment of vegetation;
- Erosion control measures will be retained until sufficient ground cover becomes established; and

Follow Procedures 1 - 5 in the EPM to ensure that the measures implemented to control erosion on site at all times. Erosion and sediment control will be undertaken in accordance with the International Erosion Control Association (IECA) Best Practice Sediment and Erosion Control Guidelines (2008).

Where non-conformity and failure of the erosion control system occurs due to the development, the following corrective action will be enforced:

- The Project Manager and Site Foreman will assess extent of erosion;
- Rainfall amount and duration will be recorded;
- Record Sheet 2 will be completed to record the non-conformity;
- The cause of the non-conformity will be assessed and recorded; and
- The corrective action taken to restore the area and minimise further damage will be recorded.

Corrective action after an erosion event may include:

- Stabilisation of areas that have been disturbed and eroded, via revegetation or erosion control matting;
- Re-stabilisation of the entry/exit point;
- Repair of diversion channels;
- Earthworks to reshape the land to prevent subsequent erosion; and
- Erosion activity will be controlled at the earliest stage possible, and erosion maintenance works will take priority over the construction to prevent erosional effects becoming worse.

To minimise the environmental harm or degradation of the adjacent watercourse/stream water quality, the following management strategies will be implemented during pre- construction, construction and post-construction stages:

Pre-Construction Control Measures

- Install sediment fences along the low side of the site and between the on-site the earthworks.
- Provide devices such as vegetation buffer zones, sediment fences, sandbags and catch drains to reduce flow, reduce scour and minimise sediment in runoff from the works site.
- Erosion and sediment control will be undertaken in accordance with the International Erosion Control Association (IECA) Best Practice Sediment and Erosion Control Guidelines (2008).

During Construction Control Measures

- Divert clean water around the construction site and stabilise any drainage channels.
- Outline temporary drainage control measures that will be implemented during construction.
- Maintain all control measures in good working order.
- Provide devices such as vegetation buffer zones, sediment fences, sandbags and catch drains to reduce flow, reduce scour and minimise sediment in runoff from the works site.
- Follow Procedure 1, Procedure 3, Procedure 5 of the EPM to ensure that themeasures implemented control sediment transport at all times.
- Soil and stormwater management during construction will be undertaken in accordance with the International Erosion Control Association (IECA) Best Practice Sediment and Erosion Control Guidelines (2008).

Post-Construction Control Measures

- Establish permanent vegetation and stabilisation of the site.
- Ensure permanent drainage systems are in working order and stabilised.
- Soil erosion control and revegetation will be undertaken in accordance with the International Erosion Control Association (IECA) Best Practice Sediment and Erosion Control Guidelines (2008).
- Follow Procedure 1, Procedure 4, and Procedure 5 of the EPM to ensure that the measures implemented to control sediment transport after construction ends.

Corrective action after a sediment transfer event may include:

- Repair and rehabilitation of sedimentation control devices such as vegetation buffer zones, sediment fences, and sandbags. Remove sediment and dispose away from the natural drainage lines;
- Repair of diversion channels, and remove excess sediment;

- Earthworks to reshape the land to prevent subsequent erosion and removal of accumulated sediment;
- Sedimentation activity will be controlled at the earliest stage possible, and maintenance works will take priority over the construction to prevent sediment transfer effects becoming worse.

3.9 WASTE MANAGEMENT

The majority of the waste associated with the operation is through spent litter. Other waste materials include mortalities and general refuse. Waste shall not be released to the environment, which will or may cause environmental harm, unless such release is authorisedby the Administering Authority.

Litter material used in the sheds must be of good quality, water-absorbing and provide forthe bird's behavioural need to dust bathe, scratch and forage. The floor of the shed must be completely and evenly covered in litter for each batch. The litter in the brooding area of the shed is removed at the end of each batch. The litter in the rest of the shed is removed on anas-required basis. This litter is removed from the sheds via a front-end loader and bobcat and transported off-site in appropriately covered trucks at the end of each batch of birds. For further information on the litter removal process, refer to Procedure 20 in the EPM.

Spent litter is not allowed to accumulate, be stored or otherwise used on site. Litter is not to be stockpiled on-site. All litter will be removed off-site by approved waste contractors following cleanout from the sheds. Spent litter is only stored outside the sheds in emergency situations, where it will be stored adjacent to the sheds, within the controlled drainage area, on a compacted surface, bunded and covered. If there is a delay in the pick-up of spent litter, the preferred response would be to stockpile the litter inside the shed until it can be appropriately removed.

Dead birds will be composted and the compost material removed .

All solid waste (general refuse) will be removed to an approved waste disposal facility by an approved transporter. Any possible contaminants (e.g. oil, waste oil, paint tins, acid drums etc) are to be stored on an impervious surface within a bunded covered area and disposed of appropriately.

3.10 BIOSECURITY

Stringent biosecurity measures will be in place at the poultry farm. Biosecurity is important for any successful poultry production system (ACMF 2010). For biosecurity purposes:

- The main entrance to the farm must be capable of being closed off to vehicle traffic and display appropriate signage including "Biosecure Area No Entry Unless Authorised", or similar wording;
- Trucks or visitors bound for Tilley Road poultry farm must not visit the neighbouring farms on the same day as visiting the Tilley Road poultry farm;
- Clear signage should to be erected at the entrance including contact details for the on-site farm manager;
- The sign must also direct visitors to contact the farm manager before proceeding i.e. provide a telephone number.
- A visitors' log must also be kept for all visitors to the Tilley Road farm sheds including contractors and company personnel (excluding pick-up crews who have signed appropriate Personnel Quarantine Declarations);
- Specific conditions of entry to poultry sheds must be displayed at the visitors log and all visitors must agree to comply with the entry conditions, which should include
    - All visitors must wear protective clothing provided.
    - All visitors must wear protective boots.
    - All visitors must sanitise boots in the footbath provided on entering production area/shed, or change into a separate pair of shed boots.
    - All visitors must sanitise hands before entering sheds.
    - Visitors who keep poultry, caged birds or pigs at home, must have had a full head-to-toe shower and must be wearing freshly laundered clothes.
    - Visitors who have been in contact with any avian species or untreated poultry manure on the same day, must have had a full head-to-toe shower and must be wearing freshly laundered clothes.

In the event of a suspected disease outbreak, the AUSVET Enterprise Manual (Animal Health Australia 2013) and supporting information should be consulted.

3.11 COMMUNITY CONSULTATION

Amenity issues can arise when the operation of a farm unreasonably interferes with the comfortable enjoyment of life of the surrounding sensitive receptors. A meat chicken farm can disrupt amenity through odour and noise generation. However, the meat chicken farm at Tilley Road has been appropriately sited within the Transition Precinct of the Bromelton state development area.

Allans Creek Pty Ltd is committed to having amicable relationships with the surrounding receptors. On-going two way communication, whether by telephone, letter drop or visits, provides a basis to detect and manage any impacts from the farm at an early stage and reduce the risk of nuisance from odour, dust, noise and light at neighbouring sensitive receptors.

3.12 ORGANISATIONAL STRUCTURE AND RESPONSIBILITY

All meat chickens grown on the property will be owned by the integrator/processor.

Allans Creek Poultry Farm Pty Ltd will be responsible for the overall operation of the farm. The company is committed to maintaining the farm to ensure it is environmentally sustainable and will focus on achieving continual environmental improvement.

The operation will employ a number of personnel to undertake various operations of the facility. Allans Creek will employ a farm manager and will operate the farm on a day-to-day basis.The farm manager will direct all staff and contractors in their duties and responsibilities.

The Farm manager will:

- Ensure a training needs analysis is done, that identifies all the relevant training required.
- Ensure all relevant training is undertaken by themselves and other staff.
- Ensure all new staff are inducted into the operation, including internal training on their responsibilities under this SBMP.

Figure 13 shows the organisational structure of the farm.

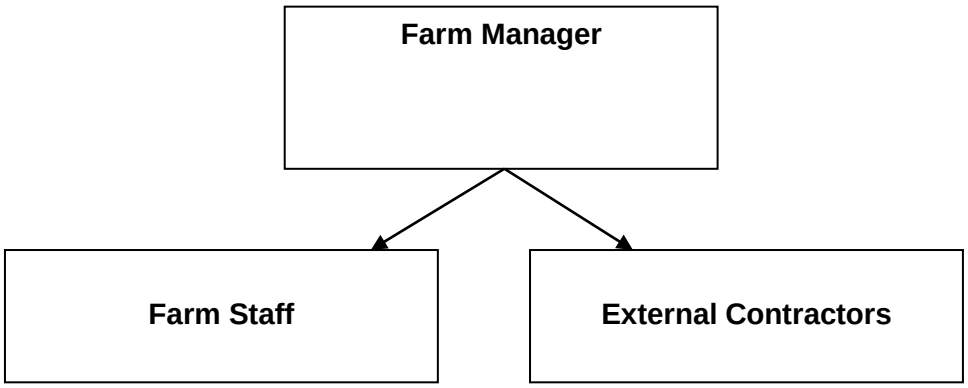

FIGURE 13 – ORGANISATIONAL CHART

3.13 CONTACT DETAILS

CEO/Farm Manager	David Kruger / Andre Van de westerhusien
Postal Address	75 Tilley Road Bromelton QLD 4285
Contact Phone Numbers	**0439 400 127 / 0434 342 085**
Email address	manager@allanscreek.com.au

4 RISK ASSESSMENT

Environmental risk analysis considers the risks to the environment, ecosystems and community amenity as a result of adverse developmental impacts on the natural environment.

A risk assessment has been undertaken to ensure environmental risks from the proposed meat chicken farm are identified and addressed up-front with management strategies inplace to mitigate the possible risks. The risk assessment approach has been used to identify the hazards that are not only industry-wide hazards but also the hazards posed due to the siting and operation of the proposed development. The risk assessment allows the proponents and farm manager to be aware of the highest risks and therefore manage these risks accordingly.

There are certain Environmental Values outlined in the Environmental Protection Act (EP Act) that are required to be met when constructing and operating a development. The object of the EP Act is to protect Queensland's environment while allowing for development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends (ecologically sustainable development).

4.1 RISK CHARACTERISATION

Risk characterisation describes the likelihood of exposure and consequences of exposure. Risk is described as the "hazard characterisation X the exposure characterisation". Risks are characterised as Low, Medium or High based on the risk assessment matrix in Table 2.

Hazard characterisation and exposure characterisation are explained below.

Hazard characterisation – "Consequence"
Hazard characterisation in this report is the qualitative and/or quantitative evaluation of the potential environmental harm associated with the hazard.

The scale of each potential adverse environmental effect has been evaluated in relation to specific performance objectives. The scale is expressed in quantitative or qualitative terms. Ordered descriptions of scale are:

- **Major – Serious or material environmental impacts, e.g., major pollution incident causing significant damage to the environment.**
- **Significant – Long term or serious environmental harm**
- **Moderate – Moderate Environmental Impact**
- **Minor – Minimal environmental impact**
- **Insignificant – Little or no environmental harm**

In order to be considered minor or insignificant hazard, the impact of the risk must achieve the specific performance objectives, as listed below. In the event a hazard does not meet the required specific performance objectives, risk management strategies have been outlined in Section 5 to aid in achieving the specific performance objectives (see Section4.2).

Exposure characterisation - "Likelihood"

Exposure characterisation is the estimation of the likelihood of occurrence of a hazard or an impact. The aim of the exposure characterisation is the quantitative estimation of the likely exposure of either the community or environment to the impact of the potential hazard.

Ordered descriptions of exposure are:

- **Almost certain – Expected to occur, quite common**
- **Likely – Will probably occur**
- **Possible – May occur at some time**
- **Unlikely – Could occur at some time although unlikely**
- **Rare – Might occur at some time in exceptional circumstances**

TABLE 2 – RISK ASSESSMENT MATRIX

	Likelihood					
Consequence		Major	Significant	Moderate	Minor	Insignificant
	Almost certain	H	H	H	M	M
	Likely	H	H	H	M	M
	Possible	H	M	M	M	L
	Unlikely	M	M	L	L	L
	Rare	M	L	L	L	L

4.2 SPECIFIC PERFORMANCE OBJECTIVES

The siting of the development or any activity undertaken at the development site that has the potential to cause environmental risk will have a number of possible impacts to the environment or community such as: noise impact; odour impact; dust impact; light impact; and impact to groundwater or surface water. The following specific performance objectives outline the "acceptable" level of impact.

Noise

The overall noise level generated by operation should comply with the requirements of the *Environmental Protection (Noise) Policy 2008*. This policy states that the environmental values to be enhanced or protected under this policy are the qualities of the acoustic environment that are conducive to:

(a) protecting the health and biodiversity of ecosystem; and

(b) human health and wellbeing, including by ensuring a suitable acoustic environment for individuals to do any of the following

(i) sleep;

(ii) study or learn;

(iii) be involved in recreation, including relaxation; and

(c) protecting the amenity of the community.

If a complaint (other than a frivolous or vexatious complaint) is made to the administering authority about noise from the poultry farm, the emission of noise must not exceed the levels specified in Table 3.

TABLE 3 – NOISE LIMITS AT NOISE SENSITIVE & COMMERCIAL PLACES

Noise limits at a sensitive place	
Period	**Noise level measured as the Adjusted Maximum Sound Pressure Level**
7 am to 6 pm	Background noise level + 5 dB(A)
6 pm to 10 pm	Background noise level + 5 dB(A)
10pm to 7 am	Background noise level + 3 dB(A)
Noise limits at a commercial place	
7 am to 6 pm	Background noise level + 10 dB(A)
6 pm to 10 pm	Background noise level + 10 dB(A)
10pm to 7 am	Background noise level + 8 dB(A)

Odour

In accordance with the Guideline for Odour Impact Assessment from Developments (EPA QLD 2004), the specific performance indicator is that “any release of noxious or offensive

odours will not cause a nuisance at any odour sensitive place". The sensitive places around the poultry farm are the significant receptors identified in Figure 5.

Dust

The poultry farm must comply with the *Environmental Protection Policy (Air) 2008* in that it protects "*the qualities of the air environment that are conducive to human health and well-being, protecting the aesthetics of the environment, including the appearance of buildings, structures and other property; and to protecting agricultural use of the environment".*

No particulate matter of visible contaminant, including dust, feathers, smoke, fumes and aerosols likely to cause environmental harm is to emanate beyond the boundaries of the poultry farm.

Therefore, the dust emissions from the poultry farm must not cause any dust exposure of a serious and persistent nature to any sensitive place located at or beyond the boundaries of the property.

In addition to complying with the above requirements for noise, odour and dust, the operation should comply with the general requirements for development in the Transition Precinct of the Bromelton State Development Area Development Scheme. This scheme states that "Effective separation is provided between uses where there are potential impacts or conflicts of use with regards to matters including (but not limited to) spray drift, **odour, noise, dust**, smoke or ash emissions". The development should provide sufficient setbacks to:

a) avoid nuisance to neighbours and manage conflicts between residential and non-residential uses;
b) protect the operation of existing non-residential uses;
c) protect residential amenity; and
d) maintain the rural landscape character and scenic amenity.

Light

Light generation at the poultry farm should try to meet the standards of AS4282 1997 – Control of Obtrusive Effects of Outdoor Lighting (Standards Australia 1997b) and lights must be positioned and shielded to prevent light spillage outside the boundaries of the poultry farm.

Light impacts should not cause an impact on community amenity.

Pests and Vermin

The poultry facility must not increase the number or variety of the following animals:

- flies;
- rats and mice;
- wild birds; and

- dogs, cats and foxes.

Groundwater & surface water

The poultry farm facility does not have an impact on groundwater or surface water quantity and quality. Contaminants or contaminated water must not be directly or indirectly released from the poultry farm on ground or groundwater at the poultry farm except for:

- uncontaminated overland stormwater flow;
- uncontaminated stormwater to the stormwater system; and
- contaminants released to sewer in accordance with a trade waste permit granted by the local government under the *Sewerage and Water Supply Act, 1949*;

In addition to complying with the above requirements for groundwater and surface water, the operation should comply with the stormwater management requirements for development in the Transition Precinct of the Bromelton State Development Area Development Scheme. This scheme states "the development maintains or enhances, and protects the water quality of the waterway corridors and wetlands". In order to do this, the "development occurs in accordance with a site based stormwater management plan which outlines the measures to be taken to reduce potential adverse impacts on water quality, prevent direct or indirect discharge of contaminants to surface or groundwater bodies, manage stormwater runoff, provide adequate treatment and distribution infrastructure, provide on-site disposal and treatment, and manage dangerous and/or hazardous substances."

The waterways, ecological corridors and nature conservation values requirements state that "the ecological functioning and integrity of waterways, wetlands and their associated nature conservation values are protected and enhanced". To comply, the development:

a) does not involve the clearing, disturbance or modification to a waterway or wetland; and
b) provides a dedicated buffer of suitable size and which is revegetated to (where possible) re-establish the pre-clearing regional ecosystem; and
c) does not involve the clearing or disturbance of vegetation communities associated with a waterway or wetland; and
d) rehabilitates a cleared or degraded waterway or wetland area using locally occurring native species complementary to the waterway or wetland community.

These requirements also state that:

Ecological corridors along the Logan River, Allan Creek and Sandy Creek are identified and protected from development with appropriate buffers that:

a) maximise connectivity between ecologically significant areas by consolidating native flora and providing for the movement of native fauna taking into account the habitat and nature conservation values of the land and waterway(s); and
b) include rehabilitation of land with locally occurring native plants where the ecological corridor includes a cleared or partially cleared area or weed infested area.

To comply, the development is setback the following minimum distance from a waterway:

- 50m to a minor or intermittent watercourse

- 100m to a major or permanent watercourse
- 800m to any major water storage facility (e.g. Bromelton Offstream Storage).

Soil

Appropriate erosion control measures to be implemented to ensure all sediment runoff from the site is contained during construction. Soil contamination must be avoided. Any contaminated soil needs to be managed in accordance with Queensland Government's suite of contaminated soil guidelines.

Waste and global warming

The poultry farm should conform to the management hierarchy outlined in the *Waste Reduction & Recycling Act (2011),* which states the following waste and resource management hierarchy:

"The *waste and resource management hierarchy* is the following precepts, listed in the preferred order in which waste and resource management options should be considered:

(a) AVOID unnecessary resource consumption;
(b) REDUCE waste generation and disposal;
(c) RE-USE waste resources without further manufacturing;
(d) RECYCLE waste resources to make the same or different products;
(e) RECOVER waste resources, including the recovery of energy;
(f) TREAT waste before disposal, including reducing the hazardous nature of waste;
(g) DISPOSE of waste only if there is no viable alternative."

Nothing is to be **burned or buried** at the premises.

4.3 RISK EVALUATION

Risk characterisation is the estimate of the likelihood of occurrence and magnitude of the consequences.

The risk evaluation indicates what the likely impacts are and hence, the farm manager can take this into account when managing the farm on a daily basis.

Table 4 summaries the performance outcomes and potential risks associated with the proposed meat chicken farm. The choice for the probability and consequence ratings are based on specific management strategies that will be undertaken at the farm to reduce the impacts and are also based on the siting of the proposed development.

4.4 SUMMARY OF RISK EVALUATION

Table 4 summarises the risks associated with the proposed Tilley Road poultry farm. Table 5 to Table 11 is a more detailed evaluation of the likelihood and consequence of each risk. The choice for the likelihood and consequence ratings (in Table 5 to Table 11) are based on the siting of the development and particular design features that will be used to reduce the impacts and are also based on the siting of the proposed development.

From Table 4 it is evident that the farm does not pose a high risk to the environment once management strategies are applied. These risks can be mitigated or reduced by following the management strategies outlined in this report. The largest risk from the proposed poultry development will be to the air (in particular from odour), risks to surface water and risks to the land. All feasible and practicable measure will be taken to minimise the risks from the proposed development. The shortest distance between the amended shed locations and the closest sensitive receptors is 0.87 km. The risk to surface water can be minimised by relocating the stream order 1 drainage lines and continuing to implement the managements strategies outlined in the SBMP.

TABLE 4 – SUMMARY OF RISK EVALUATION

Potential Risks	Initial Risk Evaluation	Residual Risk
Air (odour, dust)	High	Low
Surface water	Medium	Low
Wetlands	Low	Low
Groundwater	Medium	Low
Noise	Low	Low
Waste	Low	Low
Land	Medium	Low
Light	Low	Low
Global warming	Medium	Low

4.5 MANAGEMENT OF RISKS

A series of management strategies, monitoring protocols and corrective actions have been identified for each of the potential risks.

TABLE 5 – ASSESSING THE RISK TO "AIR" OF TILLEY ROAD POULTRY FARM

Environmental Objective: The activity will be operated in a way that protects the environmental values of air.
Overall risk to air: LOW

Performance Outcome to be achieved (Schedule 5, Part 3, Table 1 of the Environmental Protection Regulations 2008)	Adverse effect	Comments	Likeli-hood	Consequence	Risk	Management Strategy	Likeli-hood	Conse-quence	Residual Risk
There is no discharge to air of contaminants that may cause an adverse effect on the environment and sensitive receptors from the operation of the activity.	Detrimental impact on human health and/or amenity as a result of dust and odour. Poultry sheds – The litter in the poultry sheds is the predominate source of odour produced by the farm, if managed inappropriately could cause odour. Spent litter – Odour could be produced from stockpiling spent litter. Spent litter – Odour could be generated due to bad management practices on-site. Dead poultry – Odour could be produced by the uncontrolled decomposition of dead poultry. Construction – Dust may be generated when completing the earthworks stage of the construction of the additional sheds at the poultry farm.	RSPCA Australia places a strong emphasis on the need to maintain litter in a dry and friable condition. As the sheds will be managed as RSPCA, the farm will be subject to regular assessment by RSPCA auditors to ensure they are adhering to the Meat chickens RSPCA Approved Farming Scheme Standards. Dust and particulate matter will be released through the ventilation fans on a daily basis. A small quantity of dust will be released and it is not expected to have a major environmental effect. The closest sensitive receptor (that is not owned by the	Likely	Moderate	High	Farm will be managed in accordance with the Meat Chicken RSPCA Approved Farming Scheme standards which have strict litter management policies. This will includes managing shed conditions, ongoing maintenance of facilities (including drinker lines), nutrition management and appropriate space allowance (bird density) - all factors which affect litter quality Management strategies will be used to ensure the litter is actively maintained in a dry and friable condition. Litter will be visually assessed on a daily basis to ensure that it is not causing a problem (odour), in the event odour is detected at higher levels than usual - the litter will be tilled and wet patches of litter will be removed. . Mortalities will be collected on a daily Baisi and composted on onfarm facility A full set of management strategies and corrective actions to deal with odour are outlined in Section 5.1.	Unlikely	Moderate	Low

Performance Outcome to be achieved (Schedule 5, Part 3, Table 1 of the Environmental Protection Regulations 2008)	Adverse effect	Comments	Likeli-hood	Consequence	Risk	Management Strategy	Likeli-hood	Conse-quence	Residual Risk
	Traffic movements - Traffic movements along unsealed roads may generate dust. Mechanical ventilation system - The poultry sheds are mechanically ventilated and will produce some dust at the exhaust end of the sheds during normal operating conditions. Spent litter – Dust could be produced from spent litter.	applicant) is located approximately 0.87 km from sheds.				Water trucks will be used to suppress dust from earthworks and /or traffic if required. Ventilation will be managed to minimise dust. Vegetated screens will be maintained to aid dispersion and capture of dust. Vehicle speeds will be limited to 30 km/hour. Spent litter will be removed in covered vehicles. Spent litter will not be stockpiled on-site at anytime. A full set of management strategies and corrective actions to deal with dust are outlined in Section 5.2.			
Fugitive emissions of contaminants from storage, handling and processing of materials and transporting materials within the site are prevented or minimised.	Management and transport of materials will cause fugitive emissions for example, emissions from: Spent litter – Dust and odour could be produced from spent litter, both inside the shed and during transport. Traffic movements along unsealed roads could cause dust. Unsuitable management of mortalities.	The main potential contaminant that may cause fugitive emissions is the spent litter and mortalities.	Possible	Moderate	Medium	Litter will be stored in an enclosed shed and removed off-site in appropriately covered vehicles immediately following removal from the shed. No litter will be stockpiled on-site outside of the sheds. As the sheds are going to be run as RSPCA standard, litter will be actively maintained in a dry and friable condition. Litter condition will be monitored daily and prompt action taken where crusts and/or wet areas are identified. Irreparably wet or fouled litter must be removed and replaced with dry, friable litter. Sheds will be screened by a vegetated screen which will filter out any dust or	Unlikely	Moderate	Low

Performance Outcome to be achieved (Schedule 5, Part 3, Table 1 of the Environmental Protection Regulations 2008)	Adverse effect	Comments	Likeli-hood	Consequence	Risk	Management Strategy	Likeli-hood	Conse-quence	Residual Risk
						particulate matter and cause odour to disperse. Mortalities must be collected daily and composted fresh (daily) or temporarily stored in the on-site cold-room prior to composting to avoid a build-up of pathogens. Carcasses are transferred to the proposed compost pad and appropriately handled and covered to ensure not production of offensive odour. Daily subjective monitoring of litter will allow the farm manager to detect possible impacts early and rectify the problem before it impacts community amenity. A full set of management strategies and corrective actions to deal with odour and dust are outlined in Section 5.1 and 5.2.			
Contingency measures will prevent or minimise adverse impacts on the environment from unplanned emissions.	Inadequate contingency measures allow additional dust and/or odour emissions to air.	In the event that the management strategies are not adequately reducing the odour and dust, corrective actions have been identified to further prevent impacts on the environment. There are a number of management strategies in place to reduce impact of odour and dust These are detailed in Section 5.1.2.and 5.2.2. Corrective actions are	Possible	Moderate	Medium	Strategies to rectify moisture in litter have been given as odour is the most likely impact from the poultry farm (Section 5.1.6). Corrective actions include investigation of the use of litter additives, modification of diets, additional dust and odour barriers. RSPCA Australia places a strong emphasis on the need to maintain litter in a dry and friable condition. Managing shed conditions and ongoing maintenance of facilities (including drinker lines) combined with nutrition management and appropriate space allowance will affect litter quality and hence odour.	Unlikely	Moderate	Low

Performance Outcome to be achieved (Schedule 5, Part 3, Table 1 of the Environmental Protection Regulations 2008)	Adverse effect	Comments	Likeli-hood	Consequence	Risk	Management Strategy	Likeli-hood	Conse-quence	Residual Risk
		also listed in the event that odour and/or dust are detected (section 5.1.6 and 5.2.6).							
Release of contaminants to the atmosphere for dispersion will be managed to prevent or minimise adverse effects on environmental values.	Contaminants released to the air will not disperse.	Odour modelling has been undertaken to ensure the proposed development will have minimal impacts on the impacts to community amenity.	Unlikely	Moderate	Low	A vegetated screen will allow odour to disperse. A full set of management strategies and corrective actions to reduce the likelihood of odour and dust. These are outlined in Section 5.1 and 5.2.	Unlikely	Moderate	Low

TABLE 6 – ASSESSING THE RISK TO "SURFACE WATER" OF TILLEY ROAD POULTRY FARM

Environmental Objective: The activity will be operated in a way that protects environmental values of waters.
Overall risk to water: LOW

Performance Outcome to be achieved (Schedule 5, Part 3, Table 1 of the Environmental Protection Regulations 2008)	Adverse effect	Comments	Likeli-hood	Conseq-uence	Risk	Management Strategy	Likeli-hood	Conse-quence	Residual Risk
1 There is no actual or potential discharge to waters of contaminants that may cause an adverse effect on an environmental value from the operation of the activity.	Detrimental impact on aquatic ecosystem health	There are no major rivers, creeks or waterways on the subject property. Allan Creek flows along the western edge of Lot 50 on SP179833. There are a number of Stream Order 1 drainage lines on the property and two Stream Order 2 drainage lines. These drainage lines are located within the area where the proposed sheds are to be sited. These drainage lines are "unnamed drainage lines" and form a branch of Allan Creek. These unnamed drainage lines are not defined as a watercourses under the Water Act 2000. These drainage line will be relocated to ensure that a sufficient	Likely	Significant	High	SWMP Drainage lines near the proposed site to be relocated to ensure a 50 m separation distance is kept between the development and the drainage lines. Maintain a 50 m separation distance to drainage lines to protect riparian zones. . Some stormwater may be contaminated due to the particulate matter that is released from the ventilation fans. A full set of management strategies for reducing the impact to surface water is outlined in Section 5.3.2.	Unlikely	Significant	Medium

Performance Outcome to be achieved (Schedule 5, Part 3, Table 1 of the Environmental Protection Regulations 2008)	Adverse effect	Comments	Likeli-hood	Conseq-uence	Risk	Management Strategy	Likeli-hood	Conse-quence	Residual Risk
		separation distance can be maintained. Once the drainage lines are relocated, additional design features and management strategies will be implemented to reduce the impact to surface waters. No other drainage lines on the property should be impacted by the proposed development. If the drainage lines are not relocated, there will be impacts to surface water.							
2(a) The storage and handling of contaminants will include effective means of secondary containment to prevent or minimise releases to the environment from spillage or leaks.	Release of contaminants due to inadequate storage and handling of contaminants from. Spent litter. (nitrogen and phosphorous) Contamination from decomposing mortalities. Chemical and fuel spillages.	The main possible contaminant is spent litter - the nitrogen and phosphorous in the litter could cause contamination. Contaminants would also be present in decomposing carcasses, if not managed properly.	Unlikely	Minor	Low	The litter will be stored in enclosed sheds and will be removed off-site after each batch. The litter will be removed in appropriately covered vehicles. Mortalities must be collected daily and composted fresh (daily) or temporarily stored in the on-site cold-room prior to composting to avoid a build-up of pathogens. Carcasses are transferred to the proposed compost pad and appropriately handled and covered to ensure not production of offensive odour. Chemicals will be stored in a bunded area on an impermeable base. A full set of management strategies for reducing the impact to surface water is outlined in Section 5.3.2.	Unlikely	Minor	Low

Performance Outcome to be achieved (Schedule 5, Part 3, Table 1 of the Environmental Protection Regulations 2008)	Adverse effect	Comments	Likeli-hood	Conseq-uence	Risk	Management Strategy	Likeli-hood	Conse-quence	Residual Risk
2(b) Contingency measures will prevent or minimise adverse effects on the environment due to unplanned releases or discharges of contaminants to water;	Release of contaminants to the water due to inadequate contingency measures (from contaminants in spent litter, contaminants from decomposition of mortalities, chemical or fuel spills). .	In the event that the management strategies are not adequately minimising affects to surface waters, corrective actions have been identified to further prevent impacts on the environment. There are a number of management strategies in place to reduce impact to surface water. These are detailed in Section 5.3.2. Corrective actions are also listed in the event that there are impacts to surface water (section 5.3.6).	Unlikely	Minor	Low	Vegetation in the area surrounding the sheds will be used to filter the stormwater and will reduce nutrient load in the contaminated stormwater. No water will leave the development area without first going through a vegetated filter strip. Corrective actions include: Installing diversion banks upslope of the sheds to divert stormwater away from the sheds; Reducing the volume of water used during cleaning; Ensuring composting of mortalitie is performed in accordance with SBMP If litter is required to be stockpiled - stockpiling it inside the shed; If spent litter is required to be stored outside, it must be stored in a bunded area and must be covered. Check the bases of any chemical or fuel storage area and make repairs as necessary.	Unlikely	Minor	Low
2(c) The activity will be managed so that stormwater contaminated by the activity that may cause an adverse effect on an environmental value will not leave the site without prior treatment.	Stormwater contaminated due to the activity is released from the site untreated allowing the transport of organic matter, nutrients and chemicals to water bodies.	Stormwater is from the sheds surrounds, and from shed roofrunoff. Shed roof runoffis most likely uncontaminated clean water. Stormwater fromsurrounding the sheds may have dust and particulate matter entrained in it.	Unlikely	Insignific ant	Low	Any stormwater will also have to flow through the vegetated areas surrounding the sheds before leaving the property. Installation of silt traps and barriers will allow gravity to induce particle settlement, similar to those used during road construction during the construction phase. All disturbed areas during construction to be revegetated. Plantings of grass species will be undertaken to encourage rapid establishment of ground cover.	Unlikely	Insignific ant	Low

Performance Outcome to be achieved (Schedule 5, Part 3, Table 1 of the Environmental Protection Regulations 2008)	Adverse effect	Comments	Likeli-hood	Conseq-uence	Risk	Management Strategy	Likeli-hood	Conse-quence	Residual Risk
2(d) The disturbance of any acid sulphate soil (ASS), or potential acid sulphate soil, will be managed to prevent or minimise adverse effects on environmental values.	Acid sulphate soils (ASS) will be disturbed by the activity and cause contamination.	The proposed development is not located in an area where there as ASS. Refer to section 2.4.	N/A	N/A	N/A		N/A	N/A	N/A
2(e) Acid producing rock will be managed to ensure that the production and release of acidic waste is prevented or minimised, including impacts during operation and after the environmental authority has been surrendered.	Acidic waste is released from the site due to disturbance of acidic rocks.	There are no acid producing rocks in the area.	N/A	N/A	N/A		N/A	N/A	N/A
2 (f) Any discharge to water or a watercourse or wetland will be managed so that there will be no adverse effects due to the altering of existing flow regimes for water or a watercourse or wetland.	Existing flow regimes of water are altered due to discharges of waste water from the activity.	No waste water will be released due to the activity. Water used to clean down sheds will be minimised and will not exit the shed due to bunding. Water used for cleaning is high pressure, low volume water and any excess water will be evaporated.	N/A	N/A	N/A		N/A	N/A	N/A

Performance Outcome to be achieved (Schedule 5, Part 3, Table 1 of the Environmental Protection Regulations 2008)	Adverse effect	Comments	Likeli-hood	Conseq-uence	Risk	Management Strategy	Likeli-hood	Conse-quence	Residual Risk
2(g) For a petroleum activity, the activity will be managed in a way that is consistent with the coal seam gas water management policy, including the prioritisation hierarchy for managing and using coal seam gas water and the prioritisation hierarchy for managing saline waste.	Petroleum products are released to waters.	This is not a petroleum activity.	N/A	N/A	N/A	This is not a petroleum activity.	N/A	N/A	N/A
2 (h) The activity will be managed so that adverse effects on environmental values are prevented or minimised.	Environmental values of water are affected due to the operation of the activity.		Unlikely	Insignific ant	Low	Litter will be managed inside an enclosed shed hence impacts to surface water from litter is unlikely. Wash-down water will not leave the sheds - high pressure, low volume water will be used with the remaining water being evaporated, rather than removed from the sheds. Additional design and management strategieswill be used to minimise impacts to surface water - such as, chemicals stored in bunded areas,trucks leaving the site will be appropriately covered etc.. A full set of management strategies to reduce the impacts to surface water are outlined in Section 5.3.	Unlikely	Insignific ant	Low

TABLE 7 – ASSESSING THE RISK TO "WETLANDS" OF TILLEY ROAD POULTRY FARM

Environmental Objective: The activity will be operated in a way that protects the environmental values of wetlands.
Overall risk to wetlands: **LOW**

Performance Outcome to be achieved (Schedule 5, Part 3, Table 1 of the Environmental Protection Regulations 2008)	Adverse effect	Comments	Likeli-hood	Conseq -uence	Risk	Management Strategy	Likeli-hood	Conse-quence	Residual Risk
There will be no potential or actual adverse effect on a wetland as part of carrying out the activity.	Wetlands will be affected by carrying out the activity.	There are no wetlands on the site. No wetlands have been identified on the catchment management, waterways and wetlands overlay. Refer to Section 2.12 and Figure 12	Rare	Minor	Low	No management strategies required as there are no wetlands close to the development.	Rare	Minor	Low
The activity will be managed in a way that prevents or minimises adverse effects on wetlands.	Wetlands will be contaminated due to the management of the activity.	Vegetative filters will filter out any nutrient load in the stormwater before it leaves the site. As the closest wetlands are located over 4 km away, dilution of the stormwater runoff will mean there are minor impacts to any wetlands.	Unlikely	Minor	Low	No management strategies required as there are no wetlands close to the development.	Unlikely	Minor	Low

TABLE 8 – ASSESSING THE RISK TO "GROUNDWATER" OF TILLEY ROAD POULTRY FARM

Environmental Objective: The activity will be operated in a way that protects the environmental values of groundwater and any associated surface ecological systems.
Overall risk to groundwater: **LOW**

Performance Outcome to be achieved (Schedule 5, Part 3, Table 1 of the Environmental Protection Regulations 2008)	Adverse effect	Comments	Likeli-hood	Conseq-uence	Risk	Management Strategy	Likeli-hood	Conse-quence	Residual Risk
There will be no direct or indirect release of contaminants to groundwater from the operation of the activity;	There will be indirect or direct releases of contaminants to groundwater and potential impacts on irrigation, human consumption and environmental values. The following can impact on groundwater: Sheds and stormwater from leaching of nutrients and chemicals into groundwater supplies. Chemicals and fuel - Leaching of chemicals and fuel following spills. Vegetative filter interception areas – Leaching of contaminants through soils where stormwater runoff is dispersed.	The main contaminants will be located within the enclosed sheds - the litter. The litter contains organic matter and nutrients.	Unlikely	Moderate	Medium	The sheds will have cement Stabilised flooring which will stop any contaminants from leaching through the ground and contaminating groundwater. Sheds will be constructed with rat walls and a block wall on the base to prevent ingress or egress of water. Drinkers and reticulation systems will be checked daily to avoid shed floors being wet, keeping the floors dry will prevent leaching into the ground from the shed floor. Spent litter will not be stockpiled outside. If in an emergency situation, litter is required to be stockpiled outside in the short term, it is only to be stockpiled on an impermeable base, bunded and covered – if it is kept on an impermeable base, this will prevent leaching to groundwater. Other possible contaminants, including chemicals and contaminants from the	Rare	Moderate	Low

Performance Outcome to be achieved (Schedule 5, Part 3, Table 1 of the Environmental Protection Regulations 2008)	Adverse effect	Comments	Likeli-hood	Conseq-uence	Risk	Management Strategy	Likeli-hood	Conse-quence	Residual Risk
						A full set of management strategies to minimise the impacts to groundwater area outlined in Section 5.4.2.			
There will be no actual or potential adverse effect on groundwater from the operation of the activity.	Contaminants released to groundwater will adversely affect groundwater.	A small quantity of chemicals will be kept on-site for cleaning purposes. No water will be released from the sheds and litter will not be stored outside.	Unlikely	Moderate	Low	Chemicals will be contained in a area with an impermeable base and in a bunded area. All litter will be removed off-site by approved waste contractors following cleanout from the sheds. Litter will not be stockpiled outside the sheds at any time.	Unlikely	Moderate	Low
The activity will be managed to prevent or minimise adverse effects on groundwater or any associated surface ecological systems.	Groundwater or associated surface ecological systems are contaminated due to the management of the activity.	All of the litter is kept within the sheds and then removed off-site, so the risk to groundwater is low. The sheds have been designed to minimise the risks to ground and surface water. Limited water is used inside the sheds for cleaning and no other	Unlikely	Minor	Low	Sheds will have cement stabilised clay flooring and a concrete rat wall to prevent the ingress of water. Sheds will be on a built up pad which slopes away from the shed to stop the ingress of any water. All litter will be removed off-site by	Unlikely	Minor	Low

Performance Outcome to be achieved (Schedule 5, Part 3, Table 1 of the Environmental Protection Regulations 2008)	Adverse effect	Comments	Likeli-hood	Conseq-uence	Risk	Management Strategy	Likeli-hood	Conse-quence	Residual Risk
		water (apart from drinking water) is allowed to enter the sheds.				approved waste contractors following cleanout from the sheds. If litter is required to be stockpiled outside in emergency situations, this will only be done on an impermeable base. Chemical storage area will have an impermeable base. A full set of management strategies to minimise the impacts to groundwater area outlined in Section 5.4.2.			

TABLE 9 – ASSESSING THE RISK OF "NOISE" FROM TILLEY ROAD POULTRY FARM

Environmental Objective: The activity will be operated in a way that protects the environmental values of the acoustic environment.
Overall risk from noise: **LOW**

Performance Outcome to be achieved (Schedule 5, Part 3, Table 1 of the Environmental Protection Regulations 2008)	Adverse effect	Comments	Likeli-hood	Conseq-uence	Risk	Management Strategy	Likeli-hood	Conse-quence	Residual Risk
Sound from the activity is not audible at a sensitive receptor	Sound from the activity is audible at a sensitive receptor and will affect the amenity of the community, possibly impairing their ability to study, learn, sleep or relax. Impacts from noise may be due to: Construction machinery – During construction of the additional sheds and any additional farm infrastructure, some heavy machinery will be required. Without controls, this machinery can cause a noise nuisance; Traffic – Traffic on local roads and on the farm will generate noise as a result of the poultry farm operations; Mechanical ventilation system - The poultry sheds are fitted with a	The nearest sensitive receptor that is not owned by the applicant is located approximately 0.87 km from the sheds. The increase in noise due to the development is not likely to cause additional noise at sensitive receptors.	Unlikely	Minor	Low	Management strategies will be in place to reduce noise from vehicles and machinery used on-site. Contractors will be informed of noise nuisance concerns and requested to limit noise generation. On-site vehicles will have a modified beeper installed ("croaker"), with flashing lights. No alarm systems will be used on-site. Vegetated screening will be used to reduce noise impact. Site speed limit will be set. A full set of management strategies for noise are set out in Section 5.6.2.	Unlikely	Minor	Low

	mechanical ventilation system that generates noise when the fans are operating; and Machinery used in the general day-to-day activities of the farm for poultry delivery and removal, feed delivery and spent litter removal.								
The release of sound to the environment from the activity is managed so that adverse effects on environmental values including health and wellbeing and sensitive ecosystems are prevented or minimised	Noises from the activity cause a nuisance at sensitive receptors.	The nearest sensitive receptor that is not owned by the applicant is located approximately 0.87 km from the sheds.	Unlikely	Minor	Low	Management strategies will be in place to reduce noise from vehicles and machinery used on-site. A full set of management strategies for noise are set out in Section 5.6.2	Unlikely	Minor	Low

TABLE 10 – ASSESSING THE RISK FROM "WASTE" FROM TILLEY ROAD POULTRY FARM

Environmental Objective: Any waste generated, transported, or received as part of carrying out the activity is managed in a way that protects all environmental values.
Overall risk due to waste: **LOW**

Performance Outcome to be achieved (Schedule 5, Part 3, Table 1 of the Environmental Protection Regulations 2008)	Adverse effect	Comments	Likeli-hood	Conseq -uence	Risk	Management Strategy	Likeli-hood	Conse-quence	Residual Risk
Waste generated, transported or received is managed in accordance with the waste and resource management hierarchy in the Waste Reduction and Recycling Act 2011.	Waste generated, transported or received is not managed in accordance with the waste management hierarchy and causes harm to the environmental values. Poorly maintained poultry sheds can provide good conditions for pests and vermin to breed. Uncovered or inappropriately stored and treated dead poultry attract pests and vermin.		Rare	Moderate	Low	The applicants have committed to adhering to the Waste Reduction and Recycling Act. Spent litter from the site will be transported off site to a suitable receiving facility following removal from site. Mortalities will be removed Daily and composted onsite Waste products from the site are generally recycled, the amount of general waste required to be disposed of will be minimal.	Rare	Moderate	Low

Performance Outcome to be achieved (Schedule 5, Part 3, Table 1 of the Environmental Protection Regulations 2008)	Adverse effect	Comments	Likeli-hood	Conseq -uence	Risk	Management Strategy	Likeli-hood	Conse-quence	Residual Risk
If waste is disposed of, it is disposed of in a way that prevents or minimises adverse effects on environmental values.	Waste disposed of causes environmental harm including attracting pests and vermin, causing contamination of soil, groundwater, surface water due to inappropriate storage or disposal of wastes. .	No waste will be disposed of on-site	Rare	Moderate	Low	All waste will either be removed from the site to farms for use as an organic fertiliser (litter) or removed to an approved waste facility by an approved waste contractor. No waste will be burned or buried on-site.	Rare	Moderate	Low

TABLE 11 – ASSESSING THE RISK TO "LAND" FROM TILLEY ROAD POULTRY FARM

Environmental Objective: The activity is operated in a way that protects the environmental values of land including soils, subsoils, landforms and associated flora and fauna

Overall risk to land: **LOW**

Performance Outcome to be achieved (Schedule 5, Part 3, Table 1 of the Environmental Protection Regulations 2008)	Adverse effect	Comments	Likeli-hood	Conseq-uence	Risk	Management Strategy	Likeli-hood	Conse-quence	Residual Risk
There is no actual or potential disturbance or adverse effect to the environmental values of land as part of carrying out the activity.	Land that is disturbed is not managed or rehabilitated and causes erosion on-site. Land is contaminated due to the carrying out of the activity by contaminants in the litter. Soil is eroded during construction -soil loss due to erosion during the construction phase of the poultry farm, Soil is eroded from stormwater runoff due to the convergence of stormwater runoff from the sheds and shed surrounds; and Soil is contaminated with excessive nutrients and other metals during the irrigation of stormwater runoff water.	An erosion and sediment control plan has been provided to ensure that the development and during operation does not cause erosion. Impacts to land can be caused by: Soil erosion during construction - Soil loss due to erosion during the construction phase of the poultry farm; Soil erosion from stormwater runoff - Soil loss due to the convergence of stormwater runoff from the sheds and shed surrounds; and Soil contamination - Contamination of soil with excessive nutrients and other metals during the irrigation of stormwater runoff water.	Possible	Significant	Medium	No trees will be removed to put security fencing and a firebreak in place. An erosion and sediment control plan will be followed during and after construction of the proposed development to ensure minimisation of detrimental effects on the adjacent streams and watercourses Erosion prone areas will be covered with a non-erosive material. Birds will be allowed access to the range along the length of the shed, using pop-holes, as opposed to just in sections, this will mean that there will not be areas of increased activity that could lead to increased nutrient levels.	Rare	Significant	Low

Performance Outcome to be achieved (Schedule 5, Part 3, Table 1 of the Environmental Protection Regulations 2008)	Adverse effect	Comments	Likeli-hood	Conseq-uence	Risk	Management Strategy	Likeli-hood	Conse-quence	Residual Risk
						Use moveable shade structures to ensure there is no build-up of nutrients in certain areas. Additional management strategies to reduce impacts to land area outlined in Section 5.5.2.			
Activities that disturb land, soils, subsoils, landforms and associated flora and fauna will be managed in a way that prevents or minimises adverse effects on the environmental values of land;	Disturbance of the lands, soils, subsoils, landforms and associated flora and fauna resulted in the environmental values of land being impacted. Soils may be contaminated with excessive nutrients and other metals if stormwater is irrigated. Soil erosion and loss due to the convergence of stormwater runoff from the sheds and shed surrounds. Soil loss during the construction phase. .	The particulate matter and dust that is released from the sheds is likely to have a very low nutrient content and is not likely to have an effect on the soils. There are no protected plants in the area.	Possible	Minor	Medium	An erosion and sediment control plan will be followed during construction and operation to minimise any erosion. During construction, upslope runoff will be diverted around the work site. During construction, silt trap and barriers will be installed to induce particle settlement. Grassed areas will be maintained around the poultry sheds to reduce likelihood of erosion. the operation of the poultry farm.	Unlikely	Minor	Low

Performance Outcome to be achieved (Schedule 5, Part 3, Table 1 of the Environmental Protection Regulations 2008)	Adverse effect	Comments	Likeli-hood	Conseq-uence	Risk	Management Strategy	Likeli-hood	Conse-quence	Residual Risk
Areas disturbed will be rehabilitated or restored to achieve sites that are— (i) safe to humans and wildlife; and (ii) non-polluting; and (iii) stable; and (iv) able to sustain an appropriate land use after rehabilitation or restoration;	Disturbed areas cannot be or are not rehabilitated or restored following cessation of the activity. Soils are eroded and the land cannot be reused. .	If the activity ceases to operate, there should be no effect to the land as the lands will have been rehabilitated after construction. Grassed areas will be maintained around the sheds. If the activity stops and the sheds are taken down, additional rehabilitation will be required to vegetate the areas where the sheds were built.	Rare	Moderate	Low		Rare	Moderate	Low
The activity will be managed to prevent or minimise adverse effects on the environmental values of land due to unplanned releases or discharges, including spills and leaks of contaminants;	The land is contaminated due to unplanned releasesor discharges. Chemical or fuel spills will cause soil contamination. Stockpiling spent litter will cause nutrients to leach into the soil. \	Spent litter is the main waste product from the sheds.	Rare	Moderate	Low	Litter is contained within the sheds on an impermeable base. It is removed directly from the sheds off-site in covered trucks following removal from sheds. No litter will be stockpiled on-site (if it is required in an emergency situation is will be on an impermeable base, covered and bunded. Chemical that are to be used on-site will be stored in containers in-side a shed and within a containment unit orbunded area. Daily mortalities will be	Rare	Moderate	Low

Performance Outcome to be achieved (Schedule 5, Part 3, Table 1 of the Environmental Protection Regulations 2008)	Adverse effect	Comments	Likeli-hood	Conseq-uence	Risk	Management Strategy	Likeli-hood	Conse-quence	Residual Risk
						composted			
The application of water or waste to the land is sustainable and is managed to prevent or minimise adverse effects on the composition or structure of soils and subsoils.	The composition and structure of the soils and subsoils are degraded as a result of applying water or waste to the land (from spent litter being spread on- site or from irrigation of contaminated stormwater).	Spent litter will not be spread onto land. No stormwater from the site will be irrigated onto surrounding pasture. Although the ventilation fans will be running constantly allowing dust and other particulate matter to be released from the sheds, the dust will have minimal impact on the soils.	Possible	Moderate	Medium	Spent litter will be taken off-site following removal from the sheds. Stormwater from thesheds and surroundingareas will not collected or irrigated on-site.	Rare	Moderate	Low

TABLE 12 – ASSESSING THE IMPACT OF "LIGHT" FROM TILLEY ROAD POULTRY FARM

Environmental Objective: The activity is operated in a way that protects the community amenity from the impacts of light from the development.

Overall risk to land: **LOW**

Performance Outcome to be achieved (Schedule 5, Part 3, Table 1 of the Environmental Protection Regulations 2008)	Adverse effect	Comments	Likeli-hood	Conseq-uence	Risk	Management Strategy	Likeli-hood	Conse-quence	Residual Risk
The activity, is carried out on the site in a way that prevents or minimises adverse effects on the use of surrounding land and allows for effective management of the environmental impacts of the activity.	Community amenity is impacted due to light from traffic and vehicles used on-site, security lights on-site and light from the farm managers residence. The light from the development impairs the receptors ability to relax, sleep, learn or study.	Light generated at the site is not likely to cause an impact on the surrounding sensitive receptors. The location of the sheds behind a vegetated screen will reduce the possible impacts of light to surrounding sensitive receptors.	Unlikely	Minor	Low	All roads will be located such that headlights are not directed towards significant receptors. Truck drivers will be advised to restrict the use of hi-beam lights on internals roads on the farm Security lights will be positioned and angled away from the nearest receptors. A full set of management strategies to reduce the impacts of light are outlined in Section 5.7.2.	Unlikely	Minor	Low

TABLE 13 – ASSESSING THE RISK OF "GLOBAL WARMING" FROM TILLEYROAD POULTRY FARM

Environmental Objective: The activity is operated in a way that minimises greenhouse gas emissions from the development.
Overall risk to land: **LOW**

Performance Outcome to be achieved	Adverse effect	Comments	Likeli-hood	Conseq-uence	Risk	Management Strategy	Likeli-hood	Conse-quence	Residual Risk
The poultry farm conforms to the management hierarchy outlined in the *Waste Reduction & Recycling Act (2011),* which states the following waste and resource management hierarchy: "The *waste and resource management hierarchy* is the following precepts, listed in the preferred order in which waste and resource management options should be considered: • AVOID; • REDUCE • RE-USE • RECYCLE • RECOVER • TREAT; • DISPOSE	There are increased greenhouse gas emissions from the facility due to inappropriate management and overuse of resources on-site.	There may be global warming impacts due to: greenhouse gas emissions from manure management systems (methane, nitrous oxide); There may be greenhouse gas emissions due to on-site energy consumption (electricity, gas, fuel); and Greenhouse gas emissions due to transport.	Possible	Moderate	Low	Formulating diets to ensure protein is not oversupplied and hence reducing nitrogen excretion. Maintaining birds in their thermo-neutral zone to minimise excessive feed intake. Ensuring litter in the sheds does not become excessively wet and generate conditions that are ideal for the generation of methane and nitrous oxide. Minimise greenhouse gas emissions from energy use by maintaining ventilation to ensure it is operating optimally. Running cooling pads continuously and cleaning regularly to improve their efficiency. Only using on-farm vehicles when required. Maintaining vehicles in sound operating order. Selling spent litter offsite to offset greenhouse	Rare	Moderate	Low

Performance Outcome to be achieved	Adverse effect	Comments	Likeli-hood	Conseq-uence	Risk	Management Strategy	Likeli-hood	Conse-quence	Residual Risk
						emissions generated from the production of nitrogenous fertilisers. A full set of management strategies can be found in Section 5.9.2.			

5 SITE BASED MANAGEMENT PLAN

A number of potential impacts on the existing environment can arise during site establishment, construction and operation. This site based management plan will address the management of the potential impacts in order to reduce their impact and likelihood of occurrence.

The potential impacts on the existing environment caused during the construction of the proposed development and during the normal operation period of the development include:

- Impacts to community amenity due to odour.
- Impacts to community amenity due to dust.
- Impacts to soils.
- Impacts to community amenity due to noise.
- Impacts to community amenity due to light.
- Impacts to community due to pests, wild birds and vermin.
- Impacts to groundwater.
- Impacts to surface waters.
- Impacts of climate change.

During the construction of the proposed development, there will be a higher than normal level of activity on-site while the site is surveyed, levelled, water supply, power supply and site drainage services are established, buildings are erected and roadways are formed. After the construction period is complete, the meat chicken farm is commissioned and normal operation begins, the level of site activity will be reduced to a lower level.

The factors likely to cause or contribute to the environmental impacts listed above are detailed in the sections that follow. Impacts to community amenity from odour and impacts to surface waters have been identified as the highest risks.

5.1 IMPACTS TO COMMUNITY AMENITY DUE TO ODOUR

Odour from the proposed development has a high risk of impacting community amenity but will have a low residual risk after managements strategies are implemented. The site chosen for the poultry farm is within the Scenic Rim Regional Council, located within the Transition Precinct of the Bromelton State Development Area. This surrounding area is ruralin character. Predominant land use in the surrounding areas include farming, and intensive animal husbandry uses. Management strategies will be implemented to further reduce the generation of odour from the meat chicken farm. Odour modelling has been undertaken to ensure that the proposed poultry sheds are appropriately sited. This development has been appropriately sited to minimise the impacts of odour on surrounding receptors. Management strategies will be implemented to further reduce the generation of odour from the meat chicken farm.

5.1.1 OBJECTIVES

Objective 1: To minimise odour emissions from the poultry sheds.

Objective 2: To minimise odour emissions from poultry mortalities.

Objective 3: To minimise odour emissions from the transport of spent litter off farm.

Objective 4: To minimise odour complaints.

5.1.2 MANAGEMENT STRATEGIES

Objective 1 – Shed odour emissions

- The use of mechanically ventilated sheds to maintain optimum moisture content of the litter.
- Variable control of ventilation rates on the sheds to maintain optimum temperature and humidity.
- Installation, inspection and maintenance of drinking watering systems that minimise spillage (See Procedure 8 – Drinkers and Procedure 19 – Drinkers – End of Batch).
- Insulation of shed roofs to minimise condensation.
- Maintenance of cooling system to ensure litter is not wet.
- Land sloped away from the poultry sheds and concrete rat walls on sheds to prevent stormwater entering the sheds.
- Create a bed of litter to a minimum depth of 50 mm prior to bird placement.
- Litter material used must be of good quality, water-absorbing material.
- Litter condition must be monitored daily and prompt action taken where crusts and/or wet areas are identified.
- Litter must be actively maintained in a dry and friable condition.

- Irreparably wet or fouled litter must be removed and replaced with dry, friable litter.
- Where litter is re-used at the end of a batch, it must be treated to address pathogen loads and ammonia concentrations and be dry and friable at bird placement
- Conduct odour observations in accordance with Procedure 6 – Odour Monitoring.

Objective 2 – Dead poultry odour emissions

- Dead poultry are collected daily from the sheds and moved directly to the on-site composting facility
- Composted of mortality does not create any noticeable odour.
- In the case of a disease outbreak, dead poultry will be disposed according to Section 5.10.8 and Procedure 30.

Objective 3 – Spent litter transport odour emissions

- Spent litter will be promptly removed offsite following removal from the sheds. See Procedure 20 – Litter Clean-out.
- Spent litter removed from the property in appropriately covered vehicles following shed cleanout unless required to be temporarily stored on-farm as a contingency. See Procedure 20 – Litter Clean-out and Procedure 29 – Equipment/Vehicles and Traffic.

Objective 4 – Complaints from odour

- Operate a telephone complaints line during business hours for the purpose of receiving complaints from members of the public. (See Procedure 32 – Community Consultation)
- Maintain Complaints Register. (See Procedure 33 – Complaint Investigation and Recording
- Instruct all staff on the appropriate handling of odour complaints (see Procedure 30 – Staff Training)
- Provide adequate notice to neighbours by letter box drop of any proposed unusual circumstance regarding the farm, e.g. approved grass burn-off.

5.1.3 SPECIFIC PERFORMANCE INDICATORS (INCLUDING RELEVANT POLICIES AND STANDARDS)

Odour Intensity Assessments

The odour intensity at each of the monitoring points shown in Figure 5 is to be assessed on a periodic basis after the development of the poultry farm has been completed. These assessments are to occur at the most likely time of each batch for maximum odour emissions, i.e. one or two days before the first thin-out. Further assessments will be carried out in response to validated odour complaints.

The assessments will be undertaken using the German Standard VDI 3940 Determination of Odorants in Ambient Air by Field Inspection as a guide ((VDI)-RICHTLINIEN 1993). The VDI scale and procedure are provided in the Odour Monitoring Record (Record Sheet 8) located in Section 8 of this SBMP. It is important to note that VDI scale and Odour Monitoring Record has been used as a guide and the format and procedure may change with management and research.

When the assessment is undertaken, the assessor must not be desensitised to the odour. Therefore, the assessor can only make the assessment if they have not been in or around the sheds for a minimum of three hours.

The poultry facility meets the objective of the Environmental Protection Act 1994:

> "to protect Queensland's environment while allowing for development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends (ecologically sustainable development)".

In accordance with the Guideline for Odour Impact Assessment from Developments (EPA QLD 2004), the specific performance indicator is that "any release of noxious or offensive odours will not cause a nuisance at any odour sensitive place". The sensitive places around the poultry farm are the significant receptors identified in Figure 5.

5.1.4 MONITORING AND RECORDING

Complaint Recording

A Complaints Register (Record Sheet 1) will be used to record all odour complaints made directly to the farm. Details will be logged immediately and the following recorded:

- Nature, time and date of complaint.
- Type of communication (telephone, letter, personal etc.)
- Name, contact address and contact telephone number of complainant (Note: if the complainant does not wish to be identified then "Not identified" is to be recorded).
- Response and investigation for investigating complaint.
- Name of person responsible for investigating complaint.
- Action taken as a result of the complaint investigation and signature of responsible person.

All odour monitoring records will be kept for at least 3 years.

5.1.5 REPORTING AND REVIEW

Ongoing Reporting and Reviewing

Where the odour intensity assessment indicates that odour levels are unacceptable (intensity levels A-D in the Odour Assessment Record), corrective action is required. This involves the farm manager recording the details of the problem and the proposed method of solving the problem in the Environmental Data Record (Record Sheet 2).

The Environmental Data Record and the Complaints Register will be monitored monthly by the farm manager to determine the effectiveness of the implemented tasks to meet the objectives. Any areas where deficiencies consistently and/or unnecessarily occur will be investigated further and appropriate corrective actions undertaken. Recorded complaints will be reviewed and the following information will be reported in the Complaints Register (Record Sheet 1):

- Management options available to reduce or solve the problem.
- Corrective action taken to eliminate the source of each complaint.
- Effectiveness of method used.
- Response of complainant/s about the level of impact after steps have been put into place to solve the problem.
- Details of further monitoring (through assessment by the farm manager and consultation with the complainants).

By the 30th September each year data will be provided to the National Pollutant Inventory for calculating estimated ammonia emissions for the previous financial year based on thecurrent formula.

5.1.6 CORRECTIVE ACTION

Objective 1 – Poultry shed odour emissions

- Adjustment or replacement of faulty equipment.
- Adjustment of shed ventilation.
- Modification of site drainage to stop any ingress of water.
- Liaise with providers of poultry and diets to reduce incidence of wet manure.
- Removal and replacement of wet litter with dry litter material during the batch.
- Investigate the use of litter additives should such product/s become available that are shown to be both cost effective and are able to reduce odour generation.
- Incorporate additional dust and odour barrier (tree and vegetation) at the end of the shed where the predominant number of fans exhaust.
- Incorporate additional dust and odour barrier (tree and vegetation on the side of the sheds towards the closest receptors.

- Use of odour neutralising or prohibiting agents which can be used as additives to feed, water or litter to help inhibit anaerobic degradation of shed litter.
- Investigate options to allow tilling to be undertaken on a daily basis.
- Investigate reducing stocking density.

Objective 3 - Spent litter transport emissions

- Modify the covering over the spent litter in trucks.
- Change the vehicle type removing the spent litter.

Objective 4 – Odour complaints

- Determine the specific source of odour.
- Analyse the cause of the complaint.
- Take appropriate remedial action (modify the design or operation accordingly).

5.2 IMPACTS TO COMMUNITY AMENITY DUE TO DUST

Dust from the proposed development has a high risk of impacting community amenity, but will have a low residual risk after managements strategies are implemented. The vegetated screen will reduce the overall impact of dust to community amenity. The poultry farm is also located towards the back of the lots (away from road frontage and closest receptors) which will reduce the impact of any dust emissions from the site. Management strategies will be implemented to further reduce the generation of dust from the farm.

5.2.1 OBJECTIVES

Objective 1:	To minimise dust emissions from construction earthworks.
Objective 2:	To minimise dust emissions from the poultry sheds.
Objective 3:	To minimise dust emissions from the transport of feed, bedding, birds and spent litter.
Objective 4:	To minimise dust complaints.

5.2.2 MANAGEMENT STRATEGIES

Objective 1 – Construction earthworks dust emissions

- If required, use water truck to suppress dust emissions.
- Manage the timing of earthworks when wind is blowing away from neighbouring receptors that may be affected.

Objective 2 – Shed dust emissions

- Management of litter moisture and removal (see Procedure 12 – Litter Monitoring Procedure 20 – Litter Clean-out and Procedure 30 – Staff Training).
- Variable ventilation rates on the sheds.

Objective 3 – Dust nuisance from transport of feed, bedding, birds and spent litter

- Maximum vehicle speeds limited on farm to 30 km/h (see Procedure 29 – Equipment/Vehicles and Traffic).
- Watering of internal roads during dry conditions when excessive dust is generated from vehicles.
- Immediate transfer of the spent litter off-site once removed from sheds.
- All spent litter removed from the property in appropriately covered vehicles.

- The internal roads on the property that provide access to the individual poultry sheds will be gravelled.
- Maintain internal roads in good condition.

Objective 4 – Complaints from dust

- Maintain good relations with neighbours to identify dust problems early.
- Maintain a Complaints Register (see Procedure 32 – Community Consultation and Procedure 33 – Complaint Investigation and Recording).
- Operate a telephone complaints line.
- Instruct all staff on the appropriate handling of dust complaints.

5.2.3 SPECIFIC PERFORMANCE INDICATORS

The poultry farm must comply with the *Environmental Protection Policy (Air) 2008* in that it protects "*the qualities of the air environment that are conducive to human health and well-being, protecting the aesthetics of the environment, including the appearance of buildings, structures and other property; and to protecting agricultural use of the environment".*

Therefore, the dust emissions from the poultry farm must not cause any dust exposure of a serious and persistent nature to any sensitive place located at or beyond the boundaries of the property. The sensitive places around the facility are the receptors identified in Figure 5.

5.2.4 MONITORING AND RECORDING

Dust Assessments

The farm manager will undertake visual assessments to monitor dust emissions. All assessments will be undertaken at the property boundary points located on Figure 5.

Assessments will be undertaken:

- At least once during each batch.
- One or two days before first thin-out.
- In response to validated dust complaints.
- More frequently during prolonged dry periods or after a validated complaint.
- When the wind speed is moderate to strong.
- When the wind is blowing from the poultry sheds towards the dust monitoring points.
- During daylight hours.

The results of the visual assessments will be placed in the Dust Assessment Record (Record Sheet 6) provided in Section 8.

Dust Monitoring

Dust monitoring will be undertaken if persistent and verified dust complaints are made to either the poultry farm or the Administering Authority. In this instance, a suitably qualified person will undertake a detailed dust analysis to determine whether the dust deposition exceeds goals specified in the *Environmental Protection Policy (Air) 2008*.

Complaint Recording

A Complaints Register (see Procedure 33 and Record Sheet 1) will be used to record all dust complaints. Details will be logged immediately and the following recorded:

- Nature, time and date of complaint.
- Type of communication (telephone, letter, personal etc.)
- Name, contact address and contact telephone number of complainant (Note: if the complainant does not wish to be identified then "Not identified" is to be recorded).
- Response and investigation for investigating complaint.
- Name of person responsible for investigating complaint.
- Action taken as a result of the complaint investigation and signature of responsible person.

All complaints records will be kept for 3 years.

5.2.5 Reporting and Review

Where the visual assessment indicates that dust levels are unacceptable, corrective action is required. The details of the problem and the proposed method of solving the problem will be recorded in the Environmental Data Record (Record Sheet 2) by the farm manager.

On a periodic basis, dust monitoring results will be reviewed by the farm manager (or their consultants) to determine the effectiveness of the implemented tasks to meet the objectives. Any areas where deficiencies consistently, and/or unnecessarily occur will be investigated further and appropriate corrective actions undertaken.

The Complaints Register will be monitored monthly. Recorded complaints will be reviewed and the following information will be reported in the Complaints Register:

- Management options available to reduce or solve the problem.
- Corrective action taken to eliminate the source of each complaint.
- Effectiveness of method used.
- Response of complainant/s about the level of impact after steps have been put into place to solve the problem.
- Details of further monitoring (through assessment by the farm manager and consultation with the complainants).

5.2.6 CORRECTIVE ACTION

Objective 1 – Construction earthworks dust emissions

- Use of watering to dampen construction material.
- Reschedule the earthworks if significant dust is being generated towards neighbouring receptors.

Objective 2 – Poultry shed dust emissions

- Adjustment or replacement of faulty equipment.
- Adjustment of shed ventilation.
- Investigate the installation of external sprinkler system.
- Change to the type of bedding used in sheds.

Objective 3 – Dust nuisance from transport of feed, bedding, birds and spent litter

- Reduce speed limits on unsealed farm roads.
- Increase water applications to unsealed farm roads.
- Modify the covering used over the spent litter in trucks.

Objective 4 – Dust complaints

- Determine the specific source of dust.
- Analyse the cause of the complaint.
- Take appropriae remedial action (modify the design or operation accordingly).

5.3 IMPACTS TO SURFACE WATERS

There is a high risk of impacting surface water from the development, as the sheds will be 100 m from an open watercourse (Allan Creek), but will have a low-medium residual riskafter managements strategies are implemented. Stormwater that leaves the shed and rangeareas will be managed in accordance with the Sedimentation & Erosion Control management Plan (2016) and the Stormwater Management Plan (2016)

5.3.1 OBJECTIVES

Objective 1: Minimise surface water contamination from poultry sheds and range areas.

Objective 2: Minimise surface water contamination from poultry shed cleaning.

Objective 3: Minimise surface water contamination from dead poultry storage.

Objective 4: Minimise surface water contamination from spent litter.

Objective 5: Minimise surface water contamination from chemical and fuel storage.

Objective 6: Minimise surface water contamination from stormwater runoff.

5.3.2 MANAGEMENT STRATEGIES

Objective 1 – Surface water contamination from sheds and range areas

- All stormwater runoff from around the meat chicken sheds and surrounding grassed areas is directed to flow through vegetated areas.
- Appropriately designed vegetated filter strips will be constructed in each vegetated area around the meat chicken sheds. These will be planted with stoloniferous (runner developing), non-clump forming grass (McGahan et al. 2008).
- Floor of sheds raised above natural surface to prevent the ingress of water.
- The base of the sheds will be constructed of cement stabilised clay flooring, with concrete rat walls to prevent the ingress of water.
- Land sloped away from the sheds to prevent the ingress of stormwater.
- Protect riparian zones around watercourses with appropriate buffers zones (50m)
- Litter stockpiled inside sheds before removal.
- Litter will be loaded directly onto trucks before removal off-site.

Objective 2 – Surface water contamination from shed cleaning

- Minimal water usage during shed cleaning to maximise adsorption and evaporation while minimising runoff (see Procedure 21 – Poultry Shed Cleaning).
- Maintenance of grassed areas around the poultry sheds.

Objective 3 – Surface water contamination from dead poultry storage

Dead poultry are managed oin the on site composting facility

Objective 4 – Surface water contamination from spent litter

- Spent litter stockpiled inside sheds before removal. Spent litter only stored outside the sheds in emergencies, where it will be stored adjacent to the sheds, within the controlled drainage area, on a compacted surface, bunded and covered.
- All spent litter will be loaded directly onto trucks before removal off-site.
- When loaded onto trucks, the spent litter will be promptly removed from the farm (see Procedure 20 – Litter Clean-out).

Objective 5 – Surface water contamination from chemical and fuel storage

- The bunding of chemical and fuel storage areas will be impervious to prevent releases to the environment (see Procedure 25 – Chemical and Fuel Storage Area).
- Chemicals will be stored in a storage unit, on elevated shelving to prevent chemicals from leaching into groundwater.

Objective 6 – Surface water contamination from stormwater runoff

- Installation of silt traps and barriers to allow gravity to induce particle settlement, similar to those used during road construction during the construction phase.
- All disturbed areas during construction to be revegetated. Plantings of grass species will be undertaken to encourage rapid establishment of ground cover.
- Unnamed drainage line areas to be fenced off if erosion or denudation occurs, to allow revegetation.
- Vegetated filter strips to be maintained at the boundary of the unnamed drainage lines.
- All diversion banks and bunds to be maintained and repaired as required.

5.3.3 SPECIFIC PERFORMANCE INDICATORS

The poultry farm facility does not have an impact on surface water quantity and quality.

5.3.4 MONITORING AND RECORDING

Check all diversion banks and other stormwater management features following heavy rainfall, record any maintenance or repairs in the Environmental Data Record.

5.3.5 REPORTING AND REVIEW

Any storm events that cause damage to bunding or sediment control structures should be recorded in the Environmental Data Record (Record Sheet 2).

5.3.6 CORRECTIVE ACTIONS

Objective 1 – Surface water contamination from sheds

- If necessary, install diversion banks upslope of the sheds to divert stormwater away from the sheds.

Objective 2 – Surface water contamination from shed cleaning

- Reduce the volume of water during cleaning.

Objective 3 – Surface water contamination from dead poultry storage

- Replace impermeable containers.
- Ensure water cannot enter the cold room.

Objective 4 – Surface water contamination from spent litter

- Modify or increase bunding around short-term spent litter stockpiles (if used during an emergency).
- Modify covering of short-term spent litter stockpiles.

Objective 5 – Surface water contamination from chemical and fuel storage

- Repair base and sides of chemical and fuel storage area if damaged.
- Repair any bunds around chemical storage and fuel storage areas.

Objective 6 – Surface water contamination from stormwater runoff

- Installation of silt traps and barriers to allow gravity to induce particle settlement, similar to those used during road construction during the development phase.

5.4 IMPACTS TO GROUNDWATER

There is a moderate risk of impacts to groundwater at the proposed development site. There is one groundwater bore (RN 152550) on the site. The standing water level at this bore is 21 m below surface level. The design of the meat chicken farm and proposed management will reduce the likelihood of impacts to groundwater.

5.4.1 OBJECTIVES

Objective 1	Minimise groundwater contamination from poultry sheds
Objective 2	Minimise groundwater contamination from storing dead poultry.
Objective 3	Minimise groundwater contamination from spent litter.
Objective 5	Minimise groundwater contamination from stormwater runoff.
Objective 6	Minimise groundwater contamination from the chemical and fuel storage area.

5.4.2 MANAGEMENT STRATEGIES

Objective 1 – Groundwater contamination from poultry sheds

- Shed bases will be constructed in accordance with industry best practice to maximise their impermeability to water. The shed floors are to be constructed of cement stabilised clay flooring.
- Sheds will be constructed with concrete rat walls and a block wall on the base of the sheds to prevent the ingress of water.
- Sheds constructed on built-up pad (so that land slopes away from the sheds to prevent the ingress of stormwater.
- Drinkers and water reticulation system checked daily to avoid shed floors being wet (see Procedure 8 – Drinkers)

Objective 3 – Groundwater contamination from spent litter

- Spent litter stockpiled inside sheds before removal. Spent litter only stored outside the sheds in emergencies, where it will be stored adjacent to the sheds, on acompacted surface, bunded and covered.
- All spent litter will be loaded directly onto trucks before removal off-site.

- When loaded onto trucks, the spent litter will be promptly removed from the farm, see Procedure 20 – Litter Clean-out.

Objective 5 – Groundwater contamination from storm water runoff

- Stormwater runoff from within the range areas will be directed to flow through vegetation to minimise contaminant entry to watercourses by reducing the concentrations in the runoff.

Objective 6 – Groundwater contamination from chemical and fuel storage

- The bunding of chemical and fuel storage areas will be impervious to prevent releases to the environment (see Procedure 25 – Chemical and Fuel Storage Area).
- Chemicals will be stored in the on-site shed) in a fully enclosed unit with a raised concrete/impermeable floor to prevent water entering the storage unit and to prevent chemicals from leaching into groundwater. The chemicals shall all be stored on elevated shelving.

5.4.3 Specific performance indicators

The poultry farm facility does not have an impact on groundwater quantity and quality.

5.4.4 Monitoring and recording

After a period of significant rain, the farm manager will check the integrity of the following infrastructure:

- Shed floors.
- Chemical and fuel storage areas.

5.4.5 Reporting and review

The details of any likely groundwater contamination and the proposed method of solving the problem will be recorded in the Environmental Data Record (Record Sheet 2).

5.4.6 CORRECTIVE ACTION

Objective 1 – Groundwater contamination from sheds

- Repair cement stabilised clay flooring.
- Repair shed rat walls to ensure no ingress of water into sheds.
- Repair shed roofs to ensure no ingress of water into sheds.
- Repair water lines (and drinkers) immediately upon discovery of leakage.

Objective 2 – Groundwater contamination from storing dead poultry

- Replace storage containers.
- Repair any faults with the on-site cold room.
- Change management practices for dead poultry – remove off-site on a more regular basis.

Objective 3 – Groundwater contamination from spent litter application

- None required – all spent litter removed from the farm.

Objective 5 – Groundwater contamination from stormwater runoff

- Adjust shed litter moisture to minimise dust emissions from sheds. This is to reduce dust contamination through stormwater transportation of dust.
- Maintain grassed areas around shed pad.

Objective 6 – Groundwater contamination from chemical and fuel storage area

- Repair base and sides of fuel storage area if damaged.
- Increase maintenance of any bunds.

5.5 IMPACT TO SOILS

There is a small risk of impacting soils at the meat chicken farm site. Management strategies will be implemented to further reduce the impact to soils,

5.5.1 OBJECTIVES

To ensure that soils are not degraded as a result of the meat chicken farm with respect to the following objectives:

Objective 1: Minimise soil erosion during construction.

Objective 2: Minimise soil erosion around the sheds Objective 3:

Minimise soil contamination from stormwater runoff.

5.5.2 MANAGEMENT STRATEGIES

Objective 1 – Soil erosion during construction

- Diverting upslope runoff around the work site.
- Installation of silt traps and barriers to allow gravity to induce particle settlement, similar to those used during road construction.
- Erosion and sediment control will be undertaken in accordance with the International Erosion Control Association (IECA) Best Practice Sediment and Erosion Control Guidelines (IECA 2008) and/or the Model erosion and sediment control plans provided in the Urban Stormwater Quality Planning Guidelines 2010 (DERM 2010).

Objective 2 – Soil erosion around the sheds in the free-ranges area

- Silt traps and barriers will remain in place until sufficient ground cover is established.
- Cut and cart grass in

Objective 3 – Minimise soil contamination from stormwater runoff.

- Maintaining concrete rat walls around shed to prevent nutrients leaching into shed surrounds.
- Maintenance of grassed areas in the area and surrounding poultry sheds.
- Maintenance or vegetated filter strips.

5.5.3 Specific performance indicators

Appropriate erosion control measures to be implemented to ensure all sediment runoff from the site is contained during construction. For further information refer to the procedures on erosion and sediment control, Procedure 1 - Procedure 5 and Section 3.8.

5.5.4 Monitoring and recording

The effectiveness of the proposed stormwater management, site drainage and erosion control methods to be implemented at the site will be monitored by the farm manager (particularly after rain events of > 20 mm in a 24 hour period). Where it indicates that performance is unacceptable, current methods are to be reviewed and new arrangements made.

The effectiveness of the erosion control methods implemented at the site during construction will be monitored by site inspections by the farm manager. Where it indicates that performance is unacceptable, current erosion methods are to be reviewed and new arrangements made.

5.5.5 Reporting and review

The farm manager will monitor soil erosion on an ongoing basis. If areas surrounding the site experience significant amounts of erosion, detailed investigation will be undertaken to establish the cause of the erosion and appropriate remedial action taken.

5.5.6 Corrective action

Objective 1 – Soil erosion during construction

- Increase the number of silt traps and barriers.
- Ensure silt traps and barriers are placed correctly and maintained.
- Implement additional diversion banks directing runoff away from erosion prone areas.

Objective 2 – Soil erosion around the shed areas and range area

- Install silt traps and barriers around shed pads.
- Cover erosion prone areas with a non-erosive material.

  Use moveable shade structures to ensure there is no build-up of nutrients in certain areas.

Objective 3 – Minimise soil contamination from stormwater

- Repair concrete rat walls if necessary.
- Cover temporary stockpiles of spent litter with tarpaulins, increase maintenance on bunds around storage area and repair any holes in compacted pad.

5.6 IMPACTS TO COMMUNITY AMENITY DUE TO NOISE

Noise generated at the site could have an impact of the surrounding sensitive receptors. The location of the sheds in a rural area and behind a vegetated screen will reduce the possible impacts of noise to surrounding sensitive receptors. Additional management strategies will be used to further reduce the impact to community amenity from noise.

5.6.1 OBJECTIVES

Objective 1: To minimise noise generation during construction and ongoing operations, and subsequent noise complaints.

5.6.2 MANAGEMENT STRATEGIES

- During shed construction, best available control technology and practices will be employed to limit noise emissions.
- During shed construction, any work that is likely to generate noise nuisance will be carried out in accordance with the Environmental Protection (Noise) Policy 2008 (see Procedure 26).
- Noise generation will be controlled by limiting traffic movements and work hours to daylight hours (generally 7:00 am to 6:00 pm) as much as is practical. However, bird pickups will likely occur at night for animal welfare reasons.
- Site speed limit will be 30 km/hr.
- Noise generation will be controlled by regular maintenance of farm machinery and vehicles. If a vehicle/machine is creating excessive noise, maintenance will be undertaken to correct the problem (Procedure 29 – Equipment/Vehicles and Traffic).
- Contractors will be informed of noise nuisance concerns and requested to limit noise generation (e.g. Engine braking, limiting airbrakes, horns, excessive revving of motors, avoidance of impact with solid objects during litter clean-out, feed delivery, chick delivery and poultry pick-up, see Procedure 17 – Poultry Movements).
- On-site vehicles have a modified beeper installed (“croaker”), with flashing lights.
- No alarm bells or paging systems to be used.
- All on-site driveways / roads be well maintained (no potholes) and levelled as required to minimise truck bounce as they move on-site.
- Maintain a noise complaints register and operate a telephone complaints line. (See Procedure 32 – Community Consultation and Procedure 33 – Complaint Investigation and Recording.)
- Instruct all staff on the appropriate handling of noise complaints.

5.6.3 SPECIFIC PERFORMANCE INDICATORS

The overall noise level generated by the farm must comply with the requirements of the *Environmental Protection (Noise) Policy 2008*. This policy states that the environmental values to be enhanced or protected under this policy are the qualities of the acoustic environment that are conducive to:

(a) protecting the health and biodiversity of ecosystem; and

(b) human health and wellbeing, including by ensuring a suitable acoustic environment for individuals to do any of the following

(i) sleep;

(ii) study or learn;

(iii) be involved in recreation, including relaxation; and

(c) protecting the amenity of the community.

Noise in respect to the operation of the meat chicken farm must not cause environmental harm or environmental nuisance and night time noise shall not exceed 40dB(A) at noise sensitive premises identified in Figure 5.

5.6.4 MONITORING AND RECORDING

<u>Noise Assessments</u>

During the construction and after commissioning of the meat chicken farm, the farm manager or a designated staff member will undertake assessments of potential noise emissions on a periodic basis. Assessments will be undertaken as close as practical to the significant receptors identified in Figure 5. The noise monitoring points are also shown on Figure 5.

The Noise Assessment Record (Record Sheet 5) provided in Section 8 is used to assess nuisance. Any noise monitoring should occur:

- After 6:30 pm.
- When the wind is light to moderate.
- During a period of high activity (e.g. time of poultry removal/litter removal).
- At least once per winter.

<u>Noise Monitoring</u>

Monitoring of noise must be taken by the farm manager to investigate any complaint of environmental nuisance upon receipt of a request, in writing, from the administering authority to carry out such monitoring.

Appropriate noise monitoring will be undertaken by a suitably qualified consultant if persistent and verified noise complaints are made to either the poultry farm and/or the Administering

Authority. This will be done in accordance with the *Environmental Protection (Noise) Policy 2008*.

Procedures for assessing, measuring and reporting on noise levels must have regard to, and comply with, in so far as they are relevant, Part 6 Noise Assessment of the *Environmental Protection (Noise) Policy 2008*, the Noise Measurement Manual (third edition, March 2000 - EPA QLD 2000 or more recent versions) and AS1055-1997 (Standards Australia 1997a). If these documents contradict, the *Environmental Protection (Noise) Policy 2008* will take precedence.

Complaint Recording

Signage at the main entrance to the farm will be erected that provides a contact number for complaint issues. A complaints register will be used to record all noise complaints. Details will be logged immediately and the following recorded:

- Nature, time and date of complaint;
- Type of communication (telephone, letter, personal etc.)
- Name, contact address and contact telephone number of complainant (Note: if the complainant does not wish to be identified then "Not identified" is to be recorded);
- Response and investigation for investigating complaint;
- Name of person responsible for investigating complaint; and
- Action taken as a result of the complaint investigation and signature of responsible person.

All noise monitoring records will be kept for at least 3 years.

5.6.5 Reporting and Review

Where noise assessments indicate that noise levels are unacceptable, details of the problem and the proposed method of solving the problem will be recorded in the Environmental Data Record (Record Sheet 2).

Periodically, noise monitoring results will be reviewed by the farm manager (or their consultants) to determine the effectiveness of the implemented tasks to meet the objectives. Any areas where deficiencies consistently, and/or unnecessarily occur will be investigated further and appropriate corrective actions undertaken.

The Complaints Register will be updated monthly. Recorded complaints will be reviewed and the following information will be reported in the Complaints Register:

- Management options available to reduce or solve the problem.
- Corrective action taken to eliminate the source of each complaint.
- Effectiveness of method used.
- Response of complainant/s about the level of impact after steps have been put into place to solve the problem.

- Details of further monitoring (through assessment by the farm manager and consultation with the complainants).

In the event of a noise investigation being required upon request from the Administering Authority, the results of the investigation will be reported to the Administering Authority.

5.6.6 CORRECTIVE ACTIONS

After determining the specific source of noise, and analysing the cause of the noise, the following actions will be undertaken:

- Adjustment or replacement of faulty equipment, and/or
- Reschedule noisy activities if practical, and/or
- Relocate noisy activities, and/or
- Investigation of additional actions to reduce noise generation.

5.7 IMPACTS TO COMMUNITY AMENITY DUE TO LIGHT

Light generated at the site is not likely to cause an impact on the surrounding sensitive receptors. The location of the sheds behind a vegetated screen and the distance to sensitive receptors will reduce the possible impacts of light to these sensitive receptors. Additional management strategies will be used to further reduce the possibility of any impact to community amenity from light.

5.7.1 OBJECTIVES

Objective 1: Minimise light impacts on neighbouring houses.

5.7.2 MANAGEMENT STRATEGIES

- All roads on the property will be located such that head lights are not directed towards significant receptors (neighbouring residences).
- Truck drivers are advised to restrict the use of hi-beam lights on internal roads on the farm (see Procedure 29 – Equipment/Vehicles and Traffic).
- Security lights will be positioned and angled away from significant receptors.
- The sheds are to be constructed of non-reflective colour bond.
- Maintenance of a Complaints Register.
- Operate during work hours a telephone complaints line (see Procedure 33 – Complaint Investigation and Recording).
- Instruct all staff on the appropriate handling of light complaints (see Procedure 32 – Community Consultation and Procedure 33 – Complaint Investigation and Recording).

5.7.3 SPECIFIC PERFORMANCE INDICATORS

Light generation at the poultry farm must meet the standards of AS4282 1997 – Control of Unobtrusive Effects of Outdoor Lighting (Standards Australia 1997b).

5.7.4 MONITORING AND RECORDING

The farm manager or a designated staff member will undertake subjective checks of light nuisance on a periodic basis at the monitoring points identified on Figure 5. The subjective checks will be undertaken by viewing the poultry farm from the property boundary. Checks are to be done at night and strong lights shall be noted.

The frequency of the monitoring will be dependent upon environmental and management conditions. The assessment is to be recorded in the Light Assessment Record (Record Sheet

7). Monitoring will also be undertaken if changes to the potential light impact
A Complaints Register will be used to record all complaints. Details should be logged immediately and the following recorded:

- Management options available to reduce or solve the problem.
- Corrective action taken to eliminate the source of each complaint.
- Effectiveness of method used.
- Response of complainant/s about the level of impact after steps have been put into place to solve the problem.
- Details of further monitoring (through assessment by the farm manager and consultation with the complainants).

All complaints records are to be kept for 3 years.

5.7.5 Reporting and Review

Light Intensity Assessments

Where the light intensity assessment indicates that lighting may be causing a nuisance to neighbours, details of the problem, and the proposed method of solving the problem, will be recorded in the Environmental Data Record (Record Sheet 2).

If the problem persists, further investigation will be implemented to determine whether the lights exceed the vertical luminance criteria provided in the AS4282 *Control of Obtrusive Effects of Outdoor Lighting* (Standards Australia 1997b). If they do exceed these criteria, corrective action is required.

At the end of each year, the Light and Monitoring Records will be reviewed by the farm manager (or consultants) to determine the effectiveness of the implemented tasks to meet the objectives. Any areas where deficiencies occur will be investigated further and appropriate corrective actions undertaken.

Light Complaints

The Complaints Register will be monitored monthly. Recorded complaints will be reviewed and the following information will be reported in the Complaints Register:

- Management options available to reduce or solve the problem.
- Corrective action taken to eliminate the source of each complaint.
- Effectiveness of method used.
- Response of complainant/s about the level of impact after steps has been put into place to solve the problem.
- Details of further monitoring (through assessment by the farm manager and consultation with the complainants).

5.7.6 CORRECTIVE ACTION

After determining the specific source of the lighting complaint, the following will be investigated:

- Analyse the cause of the complaint.
- Take appropriate remedial action (modify the design or operation accordingly).
- Change the location of security lighting.
- Adjust the direction of security lighting.
- Modify the location of roads on the property.
- Install additional buffers between the poultry farm and receptors.
- Install additional buffers between roads and receptors.

5.8 IMPACTS TO COMMUNITY AMENITY DUE TO PESTS AND VERMIN

Waste material generated at the site (spent litter, manure and mortalities) can cause a risk to the environment. Waste sources can often attract pests and vermin if not managed appropriately. Certain design features of the proposed development will reduce the likelihood of pests and vermin. Spent litter will be stored within an enclosed shed with concrete rat wall to stop the incidence of pests and vermin. Mortalities will be appropriately composted oin on site facility. Additional management strategies will be used to further reduce the impact to community amenity from pests and vermin.

5.8.1 OBJECTIVES

Objective 1: Minimise the incidence of pests/vermin around the poultry sheds.

Objective 2: Minimise the incidence of pests/vermin from dead poultry storage.

Objective 3: Minimise the incidence of pests/vermin from spent litter.

.Objective 4: Minimise the incidence of pests/vermin complaints.

5.8.2 MANAGEMENT STRATEGIES

Objective 1 – Pests/Vermin around the poultry sheds

- Baiting program around the sheds as required (see Procedure 15 – Vermin Control).
- Grass in the range area and surrounding the poultry sheds kept short (see Procedure 15 – Vermin Control).
- Shade in the form of trees must be fast growing trees that are not attractive to wild birds.
- Range area grass must be mown regularly to prevent seeding of grasses, as grass seeds attract wild birds.
- Outdoor surrounds kept in a tidy state at all times.
- All feed stored in properly designed silos and any spillages promptly cleaned up.
- Strategic baiting programs will be used to control rodents and pests, as necessary.

Objective 2 – Pests/Vermin from dead poultry

- Dead poultry removed from sheds daily (see Procedure 11 – Poultry Movements and Mortalities and Procedure 30 – Staff Training).

Objective 3 – Pests/Vermin from spent litter

- Immediate removal of the spent litter off-site after shed clean-out.

Objective 4 – Wild birds in free-range areas

- Keep all feeding and watering equipment inside sheds.
- Keeping grass within range areas short to avoid grass seeds which attract wild birds.
- Select shade trees in enclosure and around poultry sheds that do not attract wild birds.
- Using scarecrows and other various devices that discourage wild birds.

Objective 5 – Pests/Vermin complaints

- Maintain a Complaints Register (see Procedure 30 – Staff Training and Procedure 33 – Complaint Investigation and Recording).
- Operate a telephone complaints line (see Procedure 32 – Community Consultation).
- Instruct all staff on the appropriate handling of complaints.

5.8.3 SPECIFIC PERFORMANCE INDICATORS

The poultry facility meets the objective of the *Environmental Protection Act 1994*: "*to protect Queensland's environment while allowing for development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends (ecologically sustainable development)*".

The poultry facility must therefore not increase the number or variety of the following animals:

- flies
- rats and mice
- wild birds
- dogs, cats and foxes.

5.8.4 MONITORING AND RECORDING

Monitoring of pests and vermin will be undertaken in accordance with the requirements of the National Farm Biosecurity Manual for Chicken Growers (ACMF 2010).

5.8.5 Reporting and Review

Where the monitoring indicates that pest/vermin numbers or types are increasing, corrective action will be undertaken. The farm manager will record details of the problem, and the proposed method of solving the problem in the Environmental Data Record (Record Sheet 2).

At least weekly, pest/vermin monitoring results will be reviewed by the farm manager to determine the effectiveness of the implemented tasks to meet the objectives. Any areas where deficiencies occur will be investigated further and appropriate corrective actionsundertaken.

5.8.6 Corrective Action

If flies, rats and mice, wild birds, dogs, cats or foxes become a problem, the following corrective action will be undertaken.

Objective 1 – Pests/Vermin from sheds

- Use of approved chemicals to kill flies.
- Using spot treatment if problem sites with high maggot numbers can be identified (outside of sheds).
- If there is resistance to some baiting chemicals, use an alternative chemical (outside of sheds).
- Cleaning up spilled feed as it attracts wild birds.
- During times of peak rodent activity, rodent stations may be placed on the range areas while birds have no access to the range – they MUST be removed and the range inspected for removal of any dead rodents or bait remnants prior to bird access to the range.

Objective 2 – Pests/Vermin from dead poultry storage

- Ensure storage containers and cold room are impermeable and in good working condition, repair or replace as required.

Objective 3 – Pests/Vermin from spent litter

- None required - the spent litter will be taken off-site after removal from the shed. Spent litter will only be stockpiled on-site during emergencies when it cannot be transported off-site. If this is the case, the stockpile shall be located on an impermeable base and. Short-term stockpiles are to be covered prior to permanent removal to avoid nutrient leaching from rainfall and to minimise dust and odour emissions. Short-term stockpiles to be bunded to prevent entry and contamination of stormwater run-off.

Objective 4 – Pests/Vermin complaints

- Determine the specific source of pests/vermin.
- Analyse the cause of the complaint.

- Take appropriate remedial action (modify the design or operation accordingly).

5.9 IMPACTS OF CLIMATE CHANGE

5.9.1 OBJECTIVES

Objective 1 – Minimise greenhouse gas emissions from the poultry sheds.

Objective 2 – Minimise greenhouse gas emissions from energy (electricity and gas) use.

Objective 3 – Minimise greenhouse gas emissions from vehicles.

Objective 4 – Minimise greenhouse gas emissions during construction.

5.9.2 MANAGEMENT STRATEGIES

Objective 1 – Minimise poultry sheds greenhouse gas emissions

Greenhouse gas emissions can be generated from the poultry sheds in the form of methane and nitrous oxide. The generation of manure greenhouse gas emissions will be managed by:

- Formulating diets to ensure protein is not oversupplied and hence reducing nitrogen excretion.
- Maintaining birds in their thermo-neutral zone to minimise excessive feed intake.
- Ensuring litter in the sheds does not become excessively wet and generate conditions that are ideal for the generation of methane and nitrous oxide.

Objective 2 – Minimise greenhouse gas emissions from energy (electricity and gas) use

Greenhouse gases can be generated indirectly from the on-site use of gas and electricity. Gas will be used on the farm to power heaters to heat the brooding ends of the sheds duringthe first grow out stage (Day 1 to ~ Day 14). Electricity will be used to power the mechanically ventilated sheds fans, cooling pads and lights. In addition, electricity will be used in the farm manager's residence and for other on-farm uses. The greenhouse gas emissions from energy usage will be minimised by:

- Maintaining ventilation fans to ensure they are operating optimally. This includes regularly cleaning blades and checking belts, bearings and fan shutters.
- Regularly conducting static pressure testing in sheds to ensure they are sealed and fixing any air leaks.
- Installing insulation in roofs and walls of sheds.
- Running cooling pads continuously and cleaning regularly to improve their efficiency.
- Using energy efficient lighting.
- Only using lighting when required.
- Installing internal heat circulation fans at brooding ends of the sheds to reduce heating requirements if required.

- Sectioning off brooding ends of the sheds with barriers to reduce volume of air that is required to be heated.

Objective 3 – Minimise greenhouse gas emissions from on-site vehicle usage, transport of feed, bedding, birds and spent litter.

Greenhouse gas emissions will be generated from the on-site use of vehicles. Minimal vehicle usage is expected on farm. It will include the farm manager's vehicle, front end loaders for cleaning out spent litter and forklifts for moving birds in and out of sheds. Vehicle and transport related emissions will be minimised by:

- Only using on-farm vehicles when required.
- Maintain vehicles in sound operating order to optimise fuel consumption (see Procedure 29 – Equipment/Vehicles and Traffic).
- Feed will be supplied from the integrator/processor. They are likely to have access to a number of mills, reducing transport emissions related to the feed delivery. Several days of feed will be stored on-site.
- Spent litter will be sold off-site and is likely to be used as a soil conditioner and replacement fertiliser. This will offset the greenhouse emissions generated from the production of nitrogenous fertilisers.

Objective 4 – Minimise greenhouse gas emissions during construction

Greenhouse gas emissions will be generated during the construction phase via vehicle usage and mobile plant and equipment. Construction related emissions will be minimised by:

- Mobile plant and equipment will be maintained in sound operating order to optimise fuel consumption (see Procedure 29 – Equipment/Vehicles and Traffic).

5.9.3 SPECIFIC PERFORMANCE INDICATORS

The poultry farm conforms to the management hierarchy outlined in the *Waste Reduction & Recycling Act (2011),* which states the following waste and resource management hierarchy:

"The *waste and resource management hierarchy* is the following precepts, listed in the preferred order in which waste and resource management options should be considered:

(a) AVOID unnecessary resource consumption;
(b) REDUCE waste generation and disposal;
(c) RE-USE waste resources without further manufacturing;
(d) RECYCLE waste resources to make the same or different products;
(e) RECOVER waste resources, including the recovery of energy;
(f) TREAT waste before disposal, including reducing the hazardous nature of waste;
(g) DISPOSE of waste only if there is no viable alternative."

5.9.4 MONITORING AND RECORDING

Keeping Records

The farm manager should meter and keep good records of the following to enable greenhouse gas emissions to be estimated and reported:

- annual electricity usage
- gas usage
- fuel usage
- number of birds.

5.9.5 GREENHOUSE GAS EMISSION MONITORING

None required, as there is currently no requirement or method to measure diffuse greenhouse gas emissions from agricultural production.

5.9.6 REPORTING AND REVIEW

As the farm will exceed the threshold of keeping 87 600 birds, it may have to provide data to the National Pollutant Inventory (NPI) for calculating estimated shed ammonia emissions for the previous financial year based on the current formula by 30 September each year.

Fuel usage thresholds may also be triggered under the National Pollutant Inventory. Once the farm is up and running, it will be clearer as to whether this reporting is necessary. If this is the case, the farm would be required to report a range of gaseous emissions (refer to Emission Estimation Technique manual for Intensive Livestock – Poultry Raising Version 1.0; Environment Australia 2002) for more information on fuel usage thresholds. A copy of the current technical manual is available from the NPI website: http://www.npi.gov.au/resource/emission-estimation-technique-manual-intensive-livestock-poultry-raising-version-30.

The farm may also exceed set thresholds for energy consumption and production of greenhouse gas emissions under the federal government's National Greenhouse and Energy Reporting System (NGERS). Once the farm is up and running, it will be clearer as towhether this reporting is necessary.

The NGERS divides GHG emissions into the following categories:

Scope 1: direct GHG emissions that occur from sources owned or controlled by a business or farm.
Scope 2: indirect GHG emissions associated with the off-site generation of the electricity, heating/cooling or steam purchased for consumption by a businessor farm.
Scope 3: other indirect GHG emissions generated because of a farms activity, but physically produced by another business or farm.

Farms which produce 25 kt of CO_2-e/yr or more of Scope 1 or Scope 2 emissions, or which consumes more than 100 TJ/yr of energy, need to report their emissions or energy consumption to the Department of Climate Change. Currently, the NGERS does not include agricultural emissions such as CH_4 and N_2O. However, any farm that exceeds the set thresholds through use of fossil fuels must report the associated GHG emissions and energy use or consumption.

5.9.7 CORRECTIVE ACTION

Objective 1 – Minimise poultry shed greenhouse gas emissions

- Addition of more bedding to sheds to prevent anaerobic conditions.
- Adjustment of shed ventilation.

Objective 2 – Minimise greenhouse gas emissions from energy (electricity and gas) use

- Install electricity meters to monitor shed electricity usage.
- Conduct energy audit to identify areas where energy savings can be made.
- Investigate cost-effective renewable energy to offset fossil fuel energy use.

Objective 3 – Minimise greenhouse gas emissions from on-site vehicle usage, transport of feed, fresh litter, birds and spent litter.

- Repair or replace faulty and inefficient vehicles.

Objective 4 – Minimise greenhouse gas emissions during construction

- Repair or replace faulty and inefficient vehicles, mobile plant and equipment.

5.10 CONTINGENCY PLANS

5.10.1 RECORDING OF EMERGENCIES AND INCIDENTS

As soon as practicable after becoming aware of any emergency or incident which results in the release of contaminants not in accordance or reasonably expected to be not in accordance with the conditions of the development approval, the farm manager must notify the administering authority of the release by telephone or facsimile.

All emergencies and incidents must be recorded in the Emergencies and Incidents Record. The following information is to be recorded:

- The location of the emergency or incident.
- The time of the release.
- The time that the farm manager became aware of the release.
- The suspected cause of the release.
- Actions taken to prevent any further release and mitigate any environmental harm and/or environmental nuisance caused by the release.

Once completed, the Emergencies and Incidents Record will be supplied to theAdministering Authority. The notification of incidents must include but not limited to other following:

i. The name of the farm manager;
ii. The location of the emergency or incident;
iii. The number of the Certificate of Registration issued conjointly to the development approval;
iv. The name and telephone number of the designated contact person;
v. The time of the release;
vi. The time the farm manager became aware of the release;
vii. The suspected cause of the release;
viii. Actions taken to prevent any further release and mitigate any environmental nuisance caused by the release.

Within 14 days of submitting the Emergencies and Incidents Record (Record Sheet 3), the farm manager will provide the following written advice to the Administering Authority:

- Proposed actions to prevent a recurrence of the emergency or incident.
- Outcomes of actions taken at the time to prevent or minimise environmental harm and/ or environmental nuisance, and
- The results of any environmental monitoring performed.

5.10.2 WATER SUPPLY LOSS

A back up water supply for at least two days will be available in the case of breakdown or loss of supply.

5.10.3 INTERRUPTION TO FEED SUPPLY

Silos on-farm hold sufficient emergency feed to allow the procuring of an alternative feed source. To ensure continuity of feed supply, feed will be ordered well before the silos are empty. If the regular feed mill is unable to supply feed, the integrator/processor will have access to numerous mills.

5.10.4 EQUIPMENT MALFUNCTION

The farm manager and farm staff have the skills required to fix most minor equipment malfunctions. Commonly needed spare parts will be kept on-site. In the case of equipment failure, such as automatic systems used to supply adequate ventilation, the sheds have been designed with manual operation systems.

5.10.5 POWER LOSS

In the event of power loss, backup diesel generators are available on-site. The back-up generators are tested every four weeks to ensure they are working effectively.

5.10.6 FIRE

Fire hazards will be managed primarily through a prevention strategy involving careful farm design and management. Potentially flammable chemicals are stored in sealed containers within an enclosed, locked shed/office. Any clean bedding material is stored away from flammable substances. In the event of a fire starting in or approaching the poultry farm, the Rural Fire Service would be contacted immediately. Precautions will be taken to ensure staff safety e.g. buildings or areas will be evacuated if necessary.

An existing on-site dam will be used as the permanent fire-fighting water supply if required.

Fire water hydrants will also be installed as per the Administering Authority requirements.

5.10.7 TEMPORARY OR PERMANENT LOSS OF TRAINED OPERATORS

At all times, staff will be trained in the duties and responsibilities applicable to their position. As much as possible, at least one other staff member will be familiar with the duties of the other staff members.

5.10.8 DISEASE OUTBREAK OR MASS DISPOSAL OF DEAD POULTRY

Emergency animal diseases have the potential to severely impact Queensland's economy or lifestyle. Some emergency diseases can affect large numbers of animals and have the potential to close Queensland's animal trade and animal products markets.

All emergency animal diseases **must be reported to Biosecurity Queensland on 13 25 23** as soon as they are suspected. All poultry farm mangers/staff should be aware of the signs of emergency diseases in the birds.

In the case of an excessive number of poultry deaths (any substantial increase in poultry mortalities), then:

- Immediately contact Biosecurity Queensland on 13 25 23.
- Immediately contact the processor. This will enable an investigation to ascertain the cause of death by the company technical staff.
- The processor will contact the Department of Agriculture, Forestry and Fishery (DAFF) in the event of a suspected disease outbreak in accordance with relevant AUSVETPLAN (Animal Health Australia 2010, 2013) manual procedures. DAFF veterinary officers have the main responsibility and resources to combat an exotic disease incursion or endemic disease outbreak.
- Contacting the Administering Authority as required to assist in the disposal of the poultry on-site (burial, composting) or off-farm (land fill site).
- In the event contact cannot be made with any of the above, it is strongly advised that an environmental consultant is contacted to obtain specialist advice before carcass disposal is undertaken.

If poultry are to be buried on-site as a requirement of a government agency following an exotic disease outbreak, then ensure:

- The base of dead poultry disposal pits and trenches is at least 2 m above the ground water table at all times.
- The base of the pits is sealed with clay to minimise nutrient leaching, refer to "Earth pad preparation for deep litter piggeries, solid waste stockpiles and composting areas" (DAFF 2011).
- Runoff in and out of the pit is avoided with appropriate bunding.
- The pit is covered with at least 0.5 m of compacted earth once it is full.

The farm manager will be familiar with the contingency plans described above. Other staff members and contractors will be informed of contingency plans relevant to their area of work. The SBMP will be kept in the farm office so the contingency plans will be readily accessible by all staff and contractors. The plan will be reviewed annually and updated as needed.

A copy of the AUSVETPLAN Enterprise Manual for the poultry industry and other supporting AUSVET documents should be kept on-site. The manual provides guidelines on the farm managers responsibilities during an EAD outbreak, as required by the relevant government authorities, and the strategies that may be adopted to improve preparedness for, or to handle, a suspected EAD.

Standard operating procedures for each government jurisdiction, agency support plans for the involvement of other areas of emergency management (eg police, local government), diagnostic resources and training materials also support the AUSVETPLAN core materials. All of these documents can be accessed from the Animal Health Australian website (http://www.animalhealthaustralia.com.au/programs/emergency-animal-disease-preparedness/ausvetplan/ausvetplan-manuals-and-supporting-documents/).

5.11 MANAGEMENT OF THE SITE BASED MANAGEMENT PLAN

5.11.1 SBMP IMPLEMENTATION AND MANAGEMENT

Once approved, the SBMP will be implemented. The SBMP must be implemented at the subject site prior to commencement of any construction work associated with the development. The farm manager will be responsible for the ongoing management of the SBMP and achievement of environmental goals.

The effectiveness of the SBMP will be monitored on an ongoing basis by comparing monitoring results with the objectives for each identified environmental impact. Individual components of the SBMP will be assessed as necessary and an entire system evaluation conducted annually. Modifications will be made to the SBMP as necessary and those changes will be reported to the Administering Authority.

All documents pertaining to the SBMP, including records, will be held in the farm office where they are accessible by all staff.

All records pertaining to the SBMP will be kept for a minimum of three years.

5.11.2 STAFF AND CONTRACTOR TRAINING

Upon employment, all staff/contractors will be inducted in the SBMP

It will be the responsibility of the farm manager to ensure that all staff members are regularly trained in the components of the SBMP that are relevant to their duties and responsibilities. Training will be conducted using a combination of techniques including direct supervision of tasks, group training courses and independent reading of relevant information by staff members.

Staff will be updated as needed e.g. when relevant sections of the SBMP are upgraded by the farm manager.

Staff performance in relation to environmental management duties and responsibilities will be reviewed when the SBMP is reviewed on an annual basis. However, where unsatisfactory environmental performance occurs, relevant staff and procedures will be investigated promptly.

The farm manager will be responsible for ensuring that all contract staff are made aware of sections of the SBMP as appropriate to their contracted duties. Where unsatisfactory performance occurs, relevant contractors and procedures will be investigated.

5.11.3 Document control

All documents pertaining to the SBMP for the farm will be kept in the farm office. Farm staff will access them as required. Documents will be updated as appropriate and all current issues held at the farm office.

5.11.4 Non-conformances

Details of non-conformities in relation to the SBMP will be recorded in the Environmental Data Record and appropriate corrective action taken.

5.11.5 Corrective action

When non-conformities are identified within the system, action will be taken to correct them. Each case of non-conformity will be assessed to determine why the non-conformity occurred and to put steps in place to prevent the problem recurring. Details will be recorded in the Environmental Data Record, and the SBMP updated if necessary.

5.11.6 Review of environmental performance and continuous improvement (including responsibility and timing)

The SBMP will be reviewed immediately after a potential or actual source of environmental nuisance or environmental harm, this is not already identified in the SBMP is released.

The SBMP will be reviewed by the farm manager and farm owner after one year and before 18 months of the development commencing to ensure that it is working effectively.

The SBMP will be reviewed within every three years of the date of completion of the initial review. This process will identify changes (if needed) and make appropriate recommendations. The audit will analyse the way in which procedures are actually carried out compared to the way in which they are written and analysis of monitoring data to determine future monitoring needs and also put forward recommendations regarding future monitoring and analysis.

The frequency of monitoring and the results of the monitoring data will be compared with the requirements listed in the SBMP. This is to establish if monitoring is being undertaken as described in the SBMP, if there are recent changes to the system that are not covered by the SBMP or if changes need to be made to the SBMP.

An assessment of the data from the monitoring activities will be undertaken. This is to confirm that there is compliance with the level of impact stated in the objectives. It is also used to determine whether the type and frequency of monitoring is appropriate.

6 RECORDING REQUIREMENTS

6.1 DAILY

Record daily:

- All poultry coming in and out of the poultry farm, including number and date of movement.
- Mortalities.
- Litter conditions.

6.2 WEEKLY

Record weekly:

- Fly populations.
- Shed temperature and ventilation velocity.
- Shed electricity usage if metered.

6.3 PERIODICALLY

Record periodically:

- Noise assessments
- Dust assessments
- Odour assessments
- Light assessments

6.4 ANNUAL

- All details of any environmental measurement and monitoring undertaken, including
    - Odour
    - Fuel usage
    - Gas usage
    - Electricity usage
- Review of staff training requirements.
- Soil monitoring (every 2 years).

6.5 AS REQUIRED

Record as required:

- Poultry deaths, including mass deaths
- Any complaints
- Any emergencies and incidents
- Any items of concern noted during ad hoc or monitoring assessments
- Any accidental release of contaminants
- Any training undertaken
- Litter application

7 REPORTING REQUIREMENTS

7.1 AS REQUIRED

- Any dust measurements required to be undertaken by the Administering Authority.
- Any noise measurements required to be undertaken by the Administering Authority.
- Any odour measurements required to be undertaken by the Administering Authority.
- NPI substance emissions if threshold is triggered to the National Pollutant Inventory Office.
- GHG emissions and energy use or consumption if set thresholds for fossil fuel usage are triggered in the National Greenhouse and Energy Reporting System (NGERS).
- All records and documentation required under the SBMP will be made available to and authorised officer of the Administering Authority upon request.

8 SAMPLE RECORD SHEETS

The records that must be maintained at all times by the farm owner, farm manager and the poultry farm staff are:

- ***Complaints Register*** - to record details of complaints made by the general public in relation to impacts on community amenity.
- ***Environmental Data Record*** - to record any items of concern noted during ad hoc or monitoring assessments by the farm manager or farm staff as well as any actions taken and the effectiveness of those actions and any items of concern noted during monitoring or assessment of laboratory analysis or other monitoring information.
- ***Emergency and Incident Record*** - to record any accidental release of contaminants (chemicals) and the action taken to restrict these from causing environmental pollution.
- ***Training Register*** – to record all training undertaken by farm management and staff.
- ***Noise Assessment Record*** - to record all noise monitoring undertaken.
- ***Dust Assessment Record*** - to record all dust monitoring undertaken.
- ***Odour Assessment Record*** - to record all odour monitoring undertaken.
- ***Light Assessment Record*** - to record all light monitoring undertaken.

Sample copies of records and registers are included in the following pages.

8.1 RECORD SHEET 1 – COMPLAINTS REGISTER

The complaint registration form below is to be used to record all complaints received at the farm. Further details may be provided on pages to be attached.

Date	Time	Complainant's name, Address, Telephone number	Complaint	Response & investigation undertaken	Initials of person responsible	Action taken as a result of complaint	Signature of Responding officer

8.2 RECORD SHEET 2 – ENVIRONMENTAL DATA RECORD

The environmental data record form below is to be used to record any items of concern noted during ad hoc or monitoring assessments by the farm manager or farm staff as well as any actions taken and the effectiveness of those actions and any items of concern noted during monitoring or assessment. Further details may be provided on pages to be attached.

Date	Item	Comment/ Action taken	Effectiveness of action taken	Requirement/ Recommendation for changes to SBMP	Signature of responsible officer

8.3 RECORD SHEET 3 – EMERGENCY AND INCIDENT RECORD

The emergency and incident registration form below is to be used to record any accidental release of contaminants and the action taken to restrict these from causing environmental pollution.

Designated Contact Person:_____

Certificate

Date & time of incident	Date & time aware of incident	Cause of incident	Location of the incident	Corrective action

8.4 RECORD SHEET 4 – TRAINING REGISTER

The following is a record of formal environmental training/information programs undertaken.

Date	Name of participant	Training Course

8.5 RECORD SHEET 5 – NOISE ASSESSMENT RECORD

Date	Noise Monitoring Points (Level of Noise Nuisance)			
	MP 1	MP 2	MP 3	MP 4

Noise Levels and characteristics to assess when determining noise levels:

0	Not Audible
1	Definitely not annoying
2	Very little annoyance
3	Some annoyance
4	Annoying
5	Quite annoying
6	Very annoying
7	Extremely annoying

A	Sound pressure level
B	Its duration
C	The rate at which it happens
D	It's audibility
E	Whether it is continuous at a steady level or whether it has a fluctuating, intermittent, tonal or impulsive nature
F	Whether it has vibration components

NOTE: characteristics as described in Part 1 of the *Environmental Protection (Noise) Policy 1997*

8.6 RECORD SHEET 6 – DUST ASSESSMENT RECORD

	Name	Date & Time	Wind direction	Wind speed	Dust from poultry farm	
					Absent	Present
MP 1 MP 2 MP 3 MP 4						
MP 1 MP 2 MP 3 MP 4						
MP 1 MP 2 MP 3 MP 4						
MP 1 MP 2 MP 3 MP 4						
MP 1 MP 2 MP 3 MP 4						
MP 1 MP 2 MP 3 MP 4						
MP 1 MP 2 MP 3 MP 4						

8.7 RECORD SHEET 7 – LIGHT MONITORING RECORD

	Name	Date & Time	Light source visible Yes / no	Strength of visible light		
				Weak	Moderate	Strong
MP 1 MP 2 MP 3 MP 4						
MP 1 MP 2 MP 3 MP 4						
MP 1 MP 2 MP 3 MP 4						
MP 1 MP 2 MP 3 MP 4						
MP 1 MP 2 MP 3 MP 4						
MP 1 MP 2 MP 3 MP 4						

8.8 RECORD SHEET 8 – ODOUR ASSESSMENT RECORD

STEP 1: Using the German VDI 3882 ((VDI)-RICHTLINIEN 1993) odour intensity scale provided, record the odour intensity every 30 seconds over a 10 minute period.
STEP 2: Enter the highest intensity level experienced during the 10 minute period into the record below.
STEP 3: When an odour intensity of A-D is experienced, corrective action is required.

GERMAN VDI 3882 odour intensity scale

Odour intensity	Intensity level
Extremely strong	A
Very strong	B
Strong	C
Distinct	D
Weak	E
Very weak	F
Not perceptive	G

Name	Date	Time	Wind direction	Wind strength	Odour Monitoring Point			
					MP 1	MP 2	MP 3	MP 4

RECORD SHEET 9 – LIGHT ASSESSMENT RECORD

	Name	Date & Time	Light source visible	Strength of visible light		
			Yes / No	Weak	Moderate	Strong
MP 1 MP 2 MP 3 MP 4						
MP 1 MP 2 MP 3 MP 4						
MP 1 MP 2 MP 3 MP 4						
MP 1 MP 2 MP 3 MP 4						
MP 1 MP 2 MP 3 MP 4						
MP 1 MP 2 MP 3 MP 4						
MP 1 MP 2 MP 3 MP 4						

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10 ENVIRONMENTAL PROCEDURES MANUAL

This section lists procedures to be followed by the poultry farm management and staff to ensure the environmental objectives listed in the SBMP are achieved.

EROSION AND SEDIMENT CONTROL PROCEDURES

PROCEDURE 1 – DAILY SITE INSPECTION

Responsible Person: Farm Manager

- The Farm Manager will undertake a site inspection on a daily basis, checking that the erosion and sedimentation control measures are in working order.
- The Site Foreman will implement any maintenance on erosion or sedimentation control measures before continuing project construction.

PROCEDURE 2 – PRE-CONSTRUCTION EROSION AND SEDIMENT CONTROL

Responsible Person: Site Foreman

Erosion Control

- Stabilise of one entry/exit point prior to construction.
- The Site Foreman will program work activities to complete construction of the ten sheds in stages, only starting another section when one is partially completed to minimise the area of disturbed ground that is exposed to erosion at any one time.
- The Site Foreman will instruct plant operators to minimise removal of vegetation and limit exposed areas. Minimise unnecessary clearance of vegetation.
- Stockpile stripped topsoil and kikuyu for revegetation after construction is completed. Store stockpile within the sediment-controlled zone.
- Store topsoil stockpile within the sediment-controlled zone.
- Design and construct diversion channels for clean water runoff.

Sediment Control

- Install sediment fences along the low side of the development site, between watercourses/streams and the exposed areas.
- Provide devices such as vegetation retention, hay bales, sedimentation fences, and sandbags to reduce flow, reduce scour and capture sediment.

PROCEDURE 3 – DURING CONSTRUCTION EROSION AND SEDIMENT CONTROL

Responsible Person: Site Foreman

Erosion Control

- The Site Foreman will instruct plant operators to minimise removal of vegetation and limit exposed areas. Minimise unnecessary clearance of vegetation.
- Stripped topsoil and kikuyu will be laid on exposed areas after each section is completed to allow for rapid revegetation. Where topsoil and kikuyu is not available, other stabilisation techniques will be introduced e.g. revegetation, erosion control mats, or mulching
- Diversion banks and channels will be maintained and repaired as required.

Sediment Control

- Divert clean water around the construction site and stabilise any drainage channels.
- Provide devices such as vegetation buffer zones, hay bales, sedimentation fences, and sandbags. Maintain all control measures in good working order.

PROCEDURE 4 – POST-CONSTRUCTION EROSION AND SEDIMENT CONTROL

Responsible Person: Site Foreman

Erosion Control

- When construction is completed, revegetation of disturbed areas will be undertaken. Planting of fast growing grass species will be carried out to promote rapid establishment of ground cover. Re-laying of stockpiled topsoil and kikuyu will be undertaken to encourage quick re-establishment of vegetation.
- Erosion prevention measures will be retained until sufficient ground cover becomes established.

Sediment Control

- Permanent revegetation and stabilisation the site.
- Permanent drainage systems are in working order and stabilised.

PROCEDURE 5 – POST–RAINFALL EVENT EROSION AND SEDIMENT CONTROL

Responsible Person: Farm Manager

Erosion Control

- Assess any damage that has occurred as a result of the rainfall event.
- If significant damage has occurred, complete an entry in Record Sheet 2 – Environmental Data Record to record the incident.
- Repair diversion banks and channels if required.
- Repair erosion gullies if required.
- Install erosion control measures in erosion sensitive areas.

Sediment Control

- Assess any damage that has occurred as a result of the rainfall event.
- If significant damage has occurred, complete an entry in Record Sheet 2 – Environmental Data Record
- Repair control measures such as vegetation buffer zones, hay bales, sedimentation fences, and sandbags if required.
- Remove silt from the sedimentation fences and ensure the fences are in working order.

DAILY PROCEDURES

PROCEDURE 6 – ODOUR MONITORING

Responsible person: Farm Manager

- Smell the air outside and inside each shed to confirm levels of odour are normal for bird age, based on personal experience.
- Record any unusual events in the Environmental Data Record, including corrective action taken and the effectiveness of this action.

PROCEDURE 7 – FEEDING EQUIPMENT

Responsible person: Farm Manager

- Check feeders to ensure spillage is minimised.
- Check feeders are supplying sufficient feed and working correctly.
- Repair faulty feeders and order all used components to restock the spare parts that are kept on-site.
- Check feeders for appropriate height for poultry.

PROCEDURE 8 – DRINKERS

Responsible person: Farm Manager

- Check drinkers for excess water loss.
- Check drinkers are supplying sufficient water.
- Repair faulty drinkers and order all used components to restock the spare parts kept on-site.
- Check drinkers for appropriate height for poultry.

PROCEDURE 9 – DEAD POULTRY COLLECTION

Responsible person: Farm Manager and staff

- Check the sheds for any dead poultry. Dead poultry are to be removed immediately upon discovery.
- Record poultry deaths.
- Remove the dead poultry from the sheds and process in on site composting facility.
- Ensure all access routes (doors/windows) to the cold room are closed to ensure pests and vermin cannot enter.

PROCEDURE 10 – WATER STORAGE TANKS

Responsible person: Farm Manager

Check water storage tanks for sufficient water volume. If unusually low water volume in the storage tanks, check the following:

- Leakages in the drinkers.
- Leakages in the water storage tanks.
- Water supply is working correctly.

PROCEDURE 11 – POULTRY MOVEMENTS AND MORTALITIES

Responsible person: Farm Manager

Record details of all poultry coming in and out of the poultry farm, including:

- Number
- Date of movement
- Mortalities

PROCEDURE 12 – LITTER MONITORING

Responsible person: Farm Manager

- Litter material must be of good quality, water-absorbing material and provide for the bird's behavioural need to dust bathe, scratch and forage.
- Inspect and record the condition of the litter in all of the sheds.
- The floor of the shed must be completely and evenly covered in litter to a minimum average depth of 50mm.
- Litter must be actively maintained in a dry and friable condition.
- Litter condition must be monitored daily and prompt action taken where crusts and/or wet areas are identified.
- Litter management equipment must be available on-farm.
- Litter is to be checked against the moisture content characteristics provided in the table below at the following locations:
    - Adjacent to drinkers.
    - Against shed walls.
    - Adjacent to shed openings (doors).
- The management response to litter moisture content should also be based on the table below.
- Add additional dry litter material if required.
- Check that the litter depth in the shed has not decreased below 50 mm.
- If litter depth is less than 50 mm, rake the area and add fresh litter until the 50 mm depth is exceeded.
- Immediately have removed wet litter patches taken off farm by a contractor to ensure it does not cause water contamination or odour and vermin nuisance.
- Irreparably wet or fouled litter must be removed and replaced with dry, friable litter.
- Where litter is re-used at the end of a batch, it must be treated to address pathogen loads and ammonia concentrations and be dry and friable at bird placement.
- Litter in the brooding area is required to be changed after each batch of birds.

DESCRIPTION OF LITTER AT CORRESPONDING MOISTURE CONTENTS AND MANAGEMENT RESPONSES

Litter Description	Moisture Content (% w.b)	Management Response
Dusty	<15	Increase shed humidity
Dry to friable	15 – 20	Nil
Friable to moist	20 – 30	Nil
Sticky – beginning to cake	30 – 40	Increase ventilation rates and/or manually turn litter.
Wet and sticky – heavy caking	40 – 50	Increase ventilation rates. Add additional litter and/or manually turn litter.
Very wet and sticky	>50	Remove wet litter and replace with dry litter material.

WEEKLY PROCEDURES

PROCEDURE 15 – VERMIN CONTROL

Responsible person: Farm Manager

- Maintain a baiting program according to the National Biosecurity protocols and processor requirements.
- All baits are placed in a dark safe place beyond the reach of children and domestic animals.
- Ensure the following good sanitation procedures have been completed:
    - Procedure 8 – Drinkers.
    - Procedure 12 – Litter Monitoring.
    - Procedure 7 – Feeding Equipment.
    - Procedure 9 – Dead Poultry.
    - Grass surrounding poultry facility checked and mowed as required.
    - Minimising breeding sites (holes, burrows etc.).

PROCEDURE 16 – DOGS, CATS, FOXES AND WILD BIRD CONTROL

Responsible person: Farm Manager

- Ensure the following good sanitation procedures have been completed:
  - Procedure 9 – Dead Poultry
  - Procedure 15 – Vermin Control.
  - Grass in the areas surrounding poultry sheds checked and mowed as required.
- Visually inspect around the poultry farm for signs of wild dogs, wild birds, cats and foxes.
- Contact the Administering Authority if visible signs of wild dogs, wild birds, cats and foxes.

POULTRY PICK-UP PROCEDURES

PROCEDURE 17 – POULTRY MOVEMENTS

Responsible person: Processor

- Limit noise generation during day-old chick delivery and poultry pick-up by informing contractors to minimise the use of engine braking and horns.
- Inform contractors and staff to refrain from shouting and to conduct long-distance communication via two-way radios and telephones.
- For the night-time loading of poultry, ensure forklifts are fitted with croakers. (These will need to comply with Workplace Health and Safety requirements by ensuring all staff and visitors that are on-site during their operation are trained in their use).
- Ensure all machinery used for the collection of poultry is in good working order and is fitted with appropriate muffler devices that comply with manufacturer's specifications.

END-OF-BATCH PROCEDURES

PROCEDURE 18 – FEED EQUIPMENT – END OF BATCH

Responsible person: Farm Manager

- Thoroughly clean feeders.
- Undertake major maintenance to feeders.

PROCEDURE 19 – DRINKERS – END OF BATCH

Responsible person: Farm Manager

- Thoroughly clean drinkers.
- Undertake major maintenance to drinkers.

PROCEDURE 20 – LITTER CLEAN-OUT

Responsible person: Farm Manager and Processor

The activities to be undertaken at the end of a batch are approximately as follows:

Day 0 – At the end of each batch, the remaining birds will be caught, loaded into cages and onto trucks to be transported to the processor for slaughter.

Day 1 – The spent litter from the sheds will be removed using a bob cat and transported off site using an approved waste contractor.

Day 2 – All feeders and drinkers are then cleaned thoroughly using approved cleaning agents.

Day 3-5 – New bedding is added to the shed in preparation for the next batch.

AS-REQUIRED ENTIRE LITTER CLEAN OUT

Day 1 – The spent litter will be heaped inside the shed using a bobcat and directly loaded onto trucks. Spent litter will only be removed from the sheds if a contractor's truck is on- site. If any spent litter is spilt outside the sheds while loading litter, it will be immediately cleaned up and loaded into the truck. The shed floors will then be swept with a bobcat broom. Components within the sheds (feeders, drinkers) will then be washed with a high- pressure, low-volume water sprayer. All water generated will be soaked up in the remaining swept litter piles and then loaded onto the trucks. Trucks will be covered before leaving the site. No excess cleaning water will appear as runoff outside of the sheds.

Day 2 – Disinfectant will be sprayed over all of the walls and the floor. Drinkers and feeders will also be cleaned and disinfected.

Day 5 – Clean bedding material will be spread over the shed floor surface (at a depth of 50 mm generally).

When doing this, the following procedures should be followed.

- Limit noise generation during litter clean-out, day-old chick delivery and poultry pick-up by informing contractors to minimise the use of engine braking and horns.
- Inform contractors and staff to refrain from shouting and to conduct long-distance communication via two-way radios and telephones.
- For the night time loading of poultry, ensure forklifts are fitted with non-tonal reversing alarms. (These will need to comply with Workplace Health and Safety requirements by ensuring all staff and visitors that are on-site during their operation are trained in their use).
- Ensure all machinery used for removing litter and the collection of poultry is in good working order and is fitted with appropriate muffler devices that comply with manufacturer's specifications.
- Load spent litter to be taken off farm onto litter removal vehicle.
- Ensure all vehicles carrying spent litter are fully covered before leaving the farm.
- Immediately clean-up any litter if it is spilt outside the sheds.
- In emergencies as a contingency due to delays in removal from the farm (short-term) spent litter will be stockpiled adjacent to the sheds on a compacted base, bunded and covered to prevent leaching and contaminated runoff.

PROCEDURE 21 – POULTRY SHED CLEANING

Responsible person: Farm Manager

- Thoroughly clean sheds and disinfect.
- Minimise water use and hence runoff during shed cleaning.
- Use only approved products.
- Ensure all staff that use chemicals are trained in their safe use and handling and MSDS are kept OR contractors are used for wash down and chemical application.

MONTHLY PROCEDURES

PROCEDURE 22 – FEED SILOS

Responsible person: Farm Manager

- Feed silos to be checked for mouldy grain and cobwebs removed.
- Feed silos checked for deterioration / cracks / leaks.

PROCEDURE 23 – WATER STORAGE TANKS

Responsible person: Farm Manager

- Water storage tanks checked for algae growth and water chlorinated if required.
- Water storage tanks checked for leaks and any subsidence.

PROCEDURES FOLLOWING RAIN OF > 20 MM IN A 48 HOUR PERIOD

PROCEDURE 24 – DIVERSION BANKS AND DRAINS

Responsible person: Farm Manager

- Check any diversion banks, drains and bunds to ensure stormwater runoff does not enter shed surrounds.
- Repair as required and record maintenance in the Environmental Data Record.

PROCEDURE 25 – CHEMICAL AND FUEL STORAGE AREAS

Responsible person: Farm Manager

- All chemicals must be handled, stored and used in accordance with the Rural Chemicals Guide 2010.
- Ensure that all chemicals stored on-farm are kept inside an enclosed storage unit within a shed or office, with an impermeable base.
- Fuel (if required) is kept with the inside the shed.
- Check the base of the shed and fuel storage unit for potholes. If inadequate, repair the base when conditions permit.
- Ensure that any bunds around the chemical and fuel storage areas are intact and do not allow the ingress of clean surface water.
- Record any maintenance procedures performed in the Environmental Data Record (see Record Sheet 2).
- Before handling any substances, staff are to be informed about and instructed in its correct use and equipment and where to obtain and wear appropriate protective items of clothing.
- Substances must not be sprayed outside of sheds during windy weather to avoid waste and off-site impacts.
- Any need to change the existing storage and use is to be recorded in the Environmental Data Record (see Section 8).
- Empty containers or those with residues are to be stored in bunded areas before collection by an approved operator for disposal.
- Should the farm manager or staff detect any leak in any substance, this is to be reported to the manager for immediate action.
- Spill kits will be made available around the site to clean up any spills.

CONSTRUCTION PHASE PROCEDURES

PROCEDURE 26 – CONSTRUCTION REQUIREMENTS

Responsible person: Farm Owner and Contractors

- All contractors are to be informed of their environmental obligation and the need to limit any community amenity impacts by:
    - Wherever possible limiting noisy activities between 7.00 am and 6.00 pm Monday to Friday, and 7.00 am to 1.00 pm Saturday.
    - Regularly maintain plant and equipment to prevent excessive noise generation from wear and tear.
    - Inform neighbours when noisy activities will occur.
    - Ensuring residential grade mufflers and silencers are fitted on equipment.
    - Using rubber tyred machinery rather than metal tracked dozers wherever possible.
    - Enclosing or shielding engines of concrete mixers wherever possible.
    - Site speeds to be limited to 30 km/hr.

- Construction hours will be limited to 7.00 am to 6.00 pm Monday to Friday, and 7.00 am to 1.00 pm Saturday. Where the project requires construction outside of these hours, regulatory authorities and stakeholders will be consulted and negotiations undertaken to enable suitable activities to take place.
- Soil erosion and sediment control will be undertaken in accordance with the International Erosion Control Association Best Practice Guidelines and / or the Model erosion and sediment control plans provided in the Urban Stormwater Quality Planning Guidelines 2010.
- Silt traps are to be placed wherever soil has been disturbed during construction.
- Diversion banks constructed around the pad if required to divert runoff from entering the pad.
- All personal are instructed of their responsibilities in this SBMP by the farm manager or farm owner.

ON-GOING PROCEDURES

PROCEDURE 27 – LOCATION OF SBMP DOCUMENTATION

Responsible person: Farm Manager

- A copy of the SBMP will be kept at the farm office at all times and will be readily available to all staff.

PROCEDURE 29 – EQUIPMENT/VEHICLES AND TRAFFIC

Responsible person: Farm Manager and Processor

- Limit noise generation during feed delivery by informing contractors to minimise the use of engine braking and horns.
- Faulty equipment/vehicles are to be serviced upon discovery.
- Excessively noisy equipment/vehicles must be replaced or repaired.
- Maximum on-farm speed limits are to be continually reviewed based on weather and road conditions and all drivers informed.
- Drivers of vehicles must be informed of the poultry farm's SBMP and their associated responsibility (e.g. restricting the use of engine braking and hi-beam headlights near houses).

PROCEDURE 30 – STAFF TRAINING

Responsible person: Farm Manager

- Ensure that all staff and contractors are aware of their responsibilities in general environmental management.
- Ensure that all staff and contractors are aware of their procedural responsibilities.
- Provide staff and contractor training as required and when appropriate environmental courses, seminars or workshops are available.
- Enter any environmental courses, seminars or workshop attendances into the Staff Training Record.

On an annual basis, assess the training requirements of staff members using the staff training matrix below:

Role / **Training Required**	Farm Manager	Employee 1	Employee 2	Employee 3
Environmental awareness				
Litter management				
Litter cleanout / removal				
Dead poultry management				
Spent litter storage				
Control of pests and diseases				
Chemical and fuel usage				
Management of extreme situations				
Liaison with neighbours				
Site Based Management Plan				
Relevant environmental procedures				

E = Experienced in the topic and able to provide training.
S = Skilled in the topic.
T = Received training.
N = Trained but needing supervision.
U = Untrained.
* = Training requirement applies only to the personnel responsible or involved in the specific training topic.

AS-REQUIRED PROCEDURES

PROCEDURE 31 – MASS DISPOSAL OF DEAD POULTRY

Responsible person: Farm Manager / Processor

Refer to Section 5.10.8 of SBMP.

In the case of an excessive number of poultry deaths (any substantial increase in poultry mortalities), then:

- Immediately contact Biosecurity Queensland on 13 25 23.
- Immediately contact the processor. This will enable an investigation to ascertain the cause of death by the company technical staff.
- The processor will contact the Department of Agriculture, Forestry and Fishery (DAFF) (formerly Department of Employment, Economic Development and Innovation (DEEDI)) in the event of a suspected disease outbreak in accordance withrelevant AUSVETPLAN manual procedures. DAFF veterinary officers have the main responsibility and resources to combat an exotic disease incursion or endemic disease outbreak.
- Contacting the Administering Authority as required to assist in the disposal of the poultry on-site (burial, composting) or off-farm (land fill site).

If poultry are to be buried on-site as a requirement of a government agency with an exotic disease outbreak, then ensure:

- The base of dead poultry disposal pits and trenches is at least 2 m above the ground water table at all times.
- The base of the pits is sealed with clay to minimise nutrient leaching.
- Runoff in and out of the pit is avoided with appropriate bunding.
- The pit will is covered with at least 0.5 m of compacted earth once it is full.

PROCEDURE 32 – COMMUNITY CONSULTATION

Responsible person: Farm Manager

- Maintain a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant.
- Any complaint about the farm operations received in person or by telephone at the farm will be received courteously and responded to as soon as practicable.
- All neighbours of the poultry farm are to be supplied with the telephone and fax number of the farm manager.
- All neighbours should be encouraged to contact the farm manager if they have any issues or any complaints concerning the poultry farm.

PROCEDURE 33 – COMPLAINT INVESTIGATION AND RECORDING

Responsible person: Farm Manager

- All complaints must be investigated and recorded in the Complaints Register.
- The complaint record shall include:
  - Nature, time and date of complaint;
  - Type of communication (telephone, letter, email, etc.);
  - Name, contact and email address and contact telephone of complainant (Note: if complainant does not wish to be identified then "Not identified" is to be recorded";
  - Response and investigation undertaken as a result of the complaint;
  - Name of person responsible for investigating the complaint; and
  - Action taken as a result of the complaint investigation and signature of the responsible person.
- Any complaint considered to be frivolous or vexatious is to be redirected to the Administering Authority.
- The Administering Authority will be advised in writing of any odour complaints received by the farm within 48 hours of receiving the complaint. The Administering Authority will be advised of the outcomes of the investigations into the odour complaints and any actions that were necessary to have been implemented to reduce odour emissions from the farm.
- The complainant will be advised within 48 hours of the outcomes of the investigations into the odour complaints and any actions that were necessary to have been implemented to reduce odour emissions from the farm.
- The complaints record must be maintained for a period of no less than 3 years.

APPENDIX A – ENVIRONMENTALLY SENSITIVE AREA SEARCHES

APPENDIX B – SCENIC RIM REGIONAL COUNCIL PLANNING SCHEME OVERLAY MAPS

(Beaudesert Shire Planning Scheme and Bromelton State Development Area)

APPENDIX C – BORE REPORTS AND WATER LICENCE

GROUNDWATER DATABASE

BORE REPORT

REG NUMBER 152550

REGISTRATION DETAILS

		BASIN	1450	**LATITUDE**	27-57-06	**MAP-SCALE**	253
OFFICE	Brisbane	**SUB-AREA**		**LONGITUDE**	152-54-47	**MAP-SERIES**	M
DATE LOG RECD	08-APR-14	**SHIRE**	6510-SCENIC RIM REGIO	**EASTING**	491446	**MAP-NO**	9442-22
D/O FILE NO.		**LOT**	50	**NORTHING**	6908145	**MAP NAME**	
R/O FILE NO.		**PLAN**	SP179833	**ZONE**	56	**PROG SECTION**	
H/O FILE NO.		**ORIGINAL DESCRIPTION**		**ACCURACY**	GPS	**PRES EQUIPMENT**	
				GPS ACC	10		
GIS LAT	-27.95169966	**PARISH NAME**	713-BROMELTON			**ORIGINAL BORE NO**	
GIS LNG	152.9130412	**COUNTY**	WARD			**BORE LINE**	-
CHECKED	Y						
						POLYGON	
						RN OF BORE REPLACED	
FACILITY TYPE	Sub-Artesian Facility	**DATE DRILLED**	28/02/2014			**DATA OWNER**	
STATUS	Existing	**DRILLERS NAME**	RICHTER, WAYNE JOHN				
ROLES	WS	**DRILL COMPANY**	WAYNE RICHTER FRILLING				
		METHOD OF CONST.	ROTARY MUD				

CASING DETAILS

PIPE	DATE	RECORD NUMBER	MATERIAL DESCRIPTION	MAT SIZE (mm)	SIZE DESC	OUTSIDE DIAM (mm)	TOP (m)	BOTTOM (m)
A	28/02/2014	1	Polyvinyl Chloride	7.600	WT	140	0.00	20.00
A	28/02/2014	2	Perforated or Slotted Casing	3.000	AP	140	12.00	18.00
X	28/02/2014	3	Gravel Pack	5.000	GR	250	5.00	21.00
X	28/02/2014	4	Centraliser				11.50	18.50

STRATA LOG DETAILS

RECORD NUMBER	STRATA TOP (m)	STRATA BOT (m)	STRATA DESCRIPTION
1	0.00	0.30	LIGHT BROWN SANDY TOPSOIL
2	0.30	9.50	LIGHT BROWN SANDY CLAY
3	9.50	12.50	LIGHT GREY SANDY CLAY
4	12.50	13.00	SILTY BROWN SAND

BORE REPORT

REG NUMBER 152550

5	13.00	15.50	GREY SANDY CLAY

BORE REPORT

REG NUMBER 152550

RECORD NUMBER	STRATA TOP (m)	STRATA BOT (m)	STRATA DESCRIPTION
6	15.50	16.00	COARSE BROWN SAND
7	16.00	17.50	COARSE SAND & FINE GRAVEL WITH THIN CLAY BANDS
8	17.50	18.00	GREYISH BROWN FINE GRAVEL & SAND
9	18.00	18.20	GREY SANDY CLAY
10	18.20	21.00	GREY SANDSTONE

STRATIGRAPHY DETAILS

SOURCE	RECORD NUMBER	STRATA TOP (m)	STRATA BOT (m)	STRATA DESCRIPTION
DNR	1	0.00	18.20	ALLAN CREEK ALLUVIUM
DNR	2	18.20	21.00	HEIFER CREEK SANDSTONE MEMBER

AQUIFER DETAILS

REC	TOP BED(M)	BOTTOM BED(M)	BED LITHOLOGY	DATE	SWL (m)	FLOW	QUALITY	YIELD (l/s)	CTR	CONDIT	FORMATION NAME
1	13.00	18.20	SAGR	28/02/2014	-7.20	N	3500 US/CM	1.40	Y	UC	ALLAN CREEK ALLUVIUM

PUMP TEST DETAILS PART 1

****** NO RECORDS FOUND ******

PUMP TEST DETAILS PART 2

****** NO RECORDS FOUND ******

BORE CONDITION

****** NO RECORDS FOUND ******

ELEVATION DETAILS

****** NO RECORDS FOUND ******

WATER ANALYSIS PART1

****** NO RECORDS FOUND ******

BORE REPORT

REG NUMBER 152550

WATER ANALYSIS PART 2

****** NO RECORDS FOUND ******

WATER LEVEL DETAILS

PIPE	DATE	MEASURE (m)	N/R	RMK	MEAS TYPE	PIPE	DATE	MEASURE (m)	N/R	RMK	MEAS TYPE	PIPE	DATE	MEASURE (m)	N/R	RMK	MEAS TYPE
A	28/02/2014	-7.20	R		NR												

WIRE LINE LOG DETAILS

****** NO RECORDS FOUND ******

FIELD MEASUREMENTS

PIPE	DATE	DEPTH (m)	COND (uS/cm)	pH	TEMP (C)	NO3 (mg/L)	DO (mg/L)	Eh (mV)	ALK (mEq)	METH	SOURCE
A	28/02/2014		3500							AI	GB

SPECIAL WATER ANALYSIS

****** NO RECORDS FOUND ******

BORE REPORT

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GROUNDWATER DATABASE

BORE REPORT

REG NUMBER 124866

REGISTRATION DETAILS

		BASIN	1450	**LATITUDE** 27-57-56	**MAP-SCALE**
OFFICE	Brisbane	**SUB-AREA**		**LONGITUDE** 152-54-25	**MAP-SERIES**
DATE LOG RECD	27-SEP-05	**SHIRE**	6510-SCENIC RIM REGIO	**EASTING** 490838	**MAP-NO**
D/O FILE NO.		**LOT**	2	**NORTHING** 6906601	**MAP NAME**
R/O FILE NO.		**PLAN**	SP140638	**ZONE** 56	**PROG SECTION**
H/O FILE NO.		**ORIGINAL DESCRIPTION**		**ACCURACY** GPS	**PRES EQUIPMENT**
				GPS ACC 10	
GIS LAT	-27.965634	**PARISH NAME**	713-BROMELTON		**ORIGINAL BORE NO**
GIS LNG	152.9068463	**COUNTY**	WARD		**BORE LINE** -
CHECKED	Y				**POLYGON**
					RN OF BORE REPLACED
FACILITY TYPE	Sub-Artesian Facility	**DATE DRILLED**	03/09/2005		**DATA OWNER**
STATUS	Existing	**DRILLERS NAME**	WARWICK, JOHN FRANK		
ROLES	WS	**DRILL COMPANY**	JF & LG WARWICK		
		METHOD OF CONST.	ROTARY AIR		

CASING DETAILS

PIPE	DATE	RECORD NUMBER	MATERIAL DESCRIPTION	MAT SIZE (mm)	SIZE DESC	OUTSIDE DIAM (mm)	TOP (m)	BOTTOM (m)
A	03/09/2005	1	Polyvinyl Chloride	9.000	WT	125	0.00	13.00
A	03/09/2005	2	Perforated or Slotted Casing	2.000	AP		6.00	11.00
A	03/09/2005	3	Gravel Pack	5.000	GR		5.50	13.00
A	03/09/2005	4	Grout			275	0.00	5.00

STRATA LOG DETAILS

RECORD NUMBER	STRATA TOP (m)	STRATA BOT (m)	STRATA DESCRIPTION
1	0.00	1.00	TOP SOIL
2	1.00	6.00	SANDY LOAM
3	6.00	9.00	SAND COARSE *
4	9.00	11.00	GRAVEL *

BORE REPORT

REG NUMBER 124866

5	11.00	13.00	CLAY

BORE REPORT

REG NUMBER 124866

RECORD NUMBER	STRATA TOP (m)	STRATA BOT (m)	STRATA DESCRIPTION
6	13.00		SANDSTONE

STRATIGRAPHY DETAILS

****** NO RECORDS FOUND ******

AQUIFER DETAILS

REC	TOP BED(M)	BOTTOM BED(M)	BED LITHOLOGY	DATE	SWL (m)	FLOW	QUALITY	YIELD (l/s)	CTR	CONDIT	FORMATION NAME
1	6.00		SAND	03/09/2005	-3.00	N	POTABLE	2.25	Y	UC	ALLAN CREEK ALLUVIUM

PUMP TEST DETAILS PART 1

PIPE	DATE	REC NO.	RN OF PUMP-BORE	TOP (m)	BOTTOM (m)	DIST (m)	METH	TEST TYPES	PUMP TYPE	SUCTION SET (m)	Q PRIOR TO TEST (l/s)	DUR OF Q PR (min)	PRES ON ARRIV (m)	Q ON ARRIV (l/s)
A	03/09/2005	1	124866				PUM		PUMP	12.00				

PUMP TEST DETAILS PART 2

PIPE	DATE	REC	TEST DUR (mins)	SWL (m)	RECOV. TIME (mins)	RESID. DD (m)	MAX DD or P RED (m)	Q at MAX DD (l/s)	TIME TO MAX DD (mins)	Max Q (l/s)	CALC STAT HD (m)	DESIGN YIELD (l/s)	DESIGN BP (m)	SUCT. SET (m)	TMSY (m2/DAY)	STOR
A	03/09/2005	1	420	-3.00			12.00					2.25		12.00		

BORE CONDITION

****** NO RECORDS FOUND ******

ELEVATION DETAILS

****** NO RECORDS FOUND ******

WATER ANALYSIS PART1

****** NO RECORDS FOUND ******

WATER ANALYSIS PART 2

GROUNDWATER DATABASE

BORE REPORT

REG NUMBER 124866

****** NO RECORDS FOUND ******

BORE REPORT

REG NUMBER 124866

WATER LEVEL DETAILS

****** NO RECORDS FOUND ******

WIRE LINE LOG DETAILS

****** NO RECORDS FOUND ******

FIELD MEASUREMENTS

PIPE	DATE	DEPTH (m)	COND (uS/cm)	pH	TEMP (C)	NO3 (mg/L)	DO (mg/L)	Eh (mV)	ALK (mEq)	METH	SOURCE
A	03/09/2005		91							PU	GB

SPECIAL WATER ANALYSIS

****** NO RECORDS FOUND ******

BORE REPORT

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GROUNDWATER DATABASE

BORE REPORT

REG NUMBER 152688

REGISTRATION DETAILS

		BASIN	1450	**LATITUDE**	27-57-36	**MAP-SCALE**	253
OFFICE	Brisbane	**SUB-AREA**		**LONGITUDE**	152-54-34	**MAP-SERIES**	M
DATE LOG RECD	16-JUN-14	**SHIRE**	6510-SCENIC RIM REGIO	**EASTING**	491103	**MAP-NO**	9442-22
D/O FILE NO.		**LOT**	7	**NORTHING**	6907213	**MAP NAME**	
R/O FILE NO.		**PLAN**	RP32768	**ZONE**	56	**PROG SECTION**	
H/O FILE NO.		**ORIGINAL DESCRIPTION**		**ACCURACY**	GPS	**PRES EQUIPMENT**	
				GPS ACC	10		
GIS LAT	-27.96011318	**PARISH NAME**	4507-TEVIOT			**ORIGINAL BORE NO**	
GIS LNG	152.9095485	**COUNTY**	WARD			**BORE LINE**	-
CHECKED	Y						
						POLYGON	
						RN OF BORE REPLACED	
FACILITY TYPE	Sub-Artesian Facility	**DATE DRILLED**	11/05/2014			**DATA OWNER**	
STATUS	Existing	**DRILLERS NAME**	RICHTER, WAYNE JOHN				
ROLES	SM	**DRILL COMPANY**	WAYNE RICHTER DRILLING				
		METHOD OF CONST.	ROTARY MUD				

CASING DETAILS

PIPE	DATE	RECORD NUMBER	MATERIAL DESCRIPTION	MAT SIZE (mm)	SIZE DESC	OUTSIDE DIAM (mm)	TOP (m)	BOTTOM (m)
A	11/05/2014	1	Polyvinyl Chloride	7.600	WT	140	0.00	20.50
A	11/05/2014	2	Perforated or Slotted Casing	3.000	AP	140	15.00	19.50
X	11/05/2014	3	Grout			250	0.00	5.00
X	11/05/2014	4	Gravel Pack	5.000	GR	250	5.00	21.50
X	11/05/2014	5	Centraliser				14.50	20.00

STRATA LOG DETAILS

RECORD NUMBER	STRATA TOP (m)	STRATA BOT (m)	STRATA DESCRIPTION
1	0.00	0.50	BROWN SANDY TOPSOIL
2	0.50	1.50	BROWN SANDY LOAM
3	1.50	9.50	BROWN & GREY SANDY CLAY

BORE REPORT

REG NUMBER 152688

4	9.50	10.50	BROWN SAND

BORE REPORT

REG NUMBER 152688

RECORD NUMBER	STRATA TOP (m)	STRATA BOT (m)	STRATA DESCRIPTION
5	10.50	14.00	GREY SANDY CLAY
6	14.00	14.50	SAND
7	14.50	15.00	GREY CLAY
8	15.00	16.00	FINR GRAINED BROWN SAND
9	16.00	17.00	MEDIUM TO COARSE GRAIN BROWN SAND
10	17.00	17.50	GREY CLAY & WOOD
11	17.50	18.50	SAND & SMALL GRAVEL
12	18.50	20.00	GREY SANDY CLAY
13	20.00	21.50	BROWN SANDSTONE

STRATIGRAPHY DETAILS

SOURCE	RECORD NUMBER	STRATA TOP (m)	STRATA BOT (m)	STRATA DESCRIPTION
DNR	1	0.00	20.00	ALLAN CREEK ALLUVIUM
DNR	2	20.00	21.50	KOUKANDOWIE FORMATION

AQUIFER DETAILS

REC	TOP BED(M)	BOTTOM BED(M)	BED LITHOLOGY	DATE	SWL (m)	FLOW	QUALITY	YIELD (l/s)	CTR	CONDIT	FORMATION NAME
1	9.50	18.50	SAGR	11/05/2014	-9.00	N	2400 US/CM	1.20	Y	UC	ALLAN CREEK ALLUVIUM

PUMP TEST DETAILS PART 1

****** NO RECORDS FOUND ******

PUMP TEST DETAILS PART 2

****** NO RECORDS FOUND ******

BORE CONDITION

****** NO RECORDS FOUND ******

ELEVATION DETAILS

****** NO RECORDS FOUND ******

BORE REPORT

REG NUMBER 152688

WATER ANALYSIS PART1

****** NO RECORDS FOUND ******

WATER ANALYSIS PART 2

****** NO RECORDS FOUND ******

WATER LEVEL DETAILS

PIPE	DATE	MEASURE (m)	N/R	RMK	MEAS TYPE	PIPE	DATE	MEASURE (m)	N/R	RMK	MEAS TYPE	PIPE	DATE	MEASURE (m)	N/R	RMK	MEAS TYPE
A	11/05/2014	-9.00	R		NR												

WIRE LINE LOG DETAILS

****** NO RECORDS FOUND ******

FIELD MEASUREMENTS

PIPE	DATE	DEPTH (m)	COND (uS/cm)	pH	TEMP (C)	NO3 (mg/L)	DO (mg/L)	Eh (mV)	ALK (mEq)	METH	SOURCE
A	11/05/2014		2400							AI	GB

SPECIAL WATER ANALYSIS

****** NO RECORDS FOUND ******

BORE REPORT

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GROUNDWATER DATABASE

BORE REPORT

REG NUMBER 152689

REGISTRATION DETAILS

		BASIN	1450	**LATITUDE**	27-57-36	**MAP-SCALE**	253
OFFICE	Brisbane	**SUB-AREA**		**LONGITUDE**	152-54-34	**MAP-SERIES**	M
DATE LOG RECD	16-JUN-14	**SHIRE**	6510-SCENIC RIM REGIO	**EASTING**	491099	**MAP-NO**	9442-22
D/O FILE NO.		**LOT**	7	**NORTHING**	6907218	**MAP NAME**	
R/O FILE NO.		**PLAN**	RP32768	**ZONE**	56	**PROG SECTION**	
H/O FILE NO.		**ORIGINAL DESCRIPTION**		**ACCURACY**	GPS	**PRES EQUIPMENT**	
				GPS ACC	10		
GIS LAT	-27.96006444	**PARISH NAME**	4507-TEVIOT			**ORIGINAL BORE NO**	
GIS LNG	152.9095016	**COUNTY**	WARD			**BORE LINE**	-
CHECKED	Y						
						POLYGON	
						RN OF BORE REPLACED	
FACILITY TYPE	Sub-Artesian Facility	**DATE DRILLED**	07/06/2014			**DATA OWNER**	
STATUS	Existing	**DRILLERS NAME**	RICHTER, WAYNE JOHN				
ROLES	WS	**DRILL COMPANY**	WAYNE RICHTER DRILLING				
		METHOD OF CONST.	ROTARY MUD				

CASING DETAILS

PIPE	DATE	RECORD NUMBER	MATERIAL DESCRIPTION	MAT SIZE (mm)	SIZE DESC	OUTSIDE DIAM (mm)	TOP (m)	BOTTOM (m)
A	07/06/2014	1	Polyvinyl Chloride	7.600	WT	140	0.00	15.00
A	07/06/2014	2	Screen			140	15.00	18.50
A	07/06/2014	3	Polyvinyl Chloride	7.600	WT	140	18.50	20.00
X	07/06/2014	4	Grout			300	0.00	5.00
X	07/06/2014	5	Gravel Pack	1.500	GR	300	5.00	17.00
X	07/06/2014	6	Gravel Pack	3.000	GR	300	17.00	21.00
X	07/06/2014	7	Centraliser				14.50	19.00

STRATA LOG DETAILS

RECORD NUMBER	STRATA TOP (m)	STRATA BOT (m)	STRATA DESCRIPTION

BORE REPORT

REG NUMBER 152689

1	0.00	0.50	BROWN SANDY TOPSOIL
2	0.50	1.50	BROWN SANDY LOAM

BORE REPORT

REG NUMBER 152689

RECORD NUMBER	STRATA TOP (m)	STRATA BOT (m)	STRATA DESCRIPTION
3	1.50	9.50	BROWN & GREY SANDY CLAY
4	9.50	10.50	BROWN SAND
5	10.50	14.00	GREY SANDY CLAY
6	14.00	14.50	SAND
7	14.50	15.00	GREY CLAY
8	15.00	16.00	FINE GRAINED BROWN SAND
9	16.00	17.00	MEDIUM TO COARSE GRAIN BROWN SAND
10	17.00	17.50	GREY CLAY & WOOD
11	17.50	18.50	SAND & SMALL GRAVEL
12	18.50	20.00	GREY SANDY CLAY
13	20.00	21.00	BROWN SANDSTONE

STRATIGRAPHY DETAILS

SOURCE	RECORD NUMBER	STRATA TOP (m)	STRATA BOT (m)	STRATA DESCRIPTION
DNR	1	0.00	20.00	ALLAN CREEK ALLUVIUM
DNR	2	20.00	21.00	KOUKANDOWIE FORMATION

AQUIFER DETAILS

REC	TOP BED(M)	BOTTOM BED(M)	BED LITHOLOGY	DATE	SWL (m)	FLOW	QUALITY	YIELD (l/s)	CTR	CONDIT	FORMATION NAME
1	9.50	18.50	SAGR	07/06/2014	-9.00	N	2400 US/CM	1.20	Y	UC	ALLAN CREEK ALLUVIUM

PUMP TEST DETAILS PART 1

****** NO RECORDS FOUND ******

PUMP TEST DETAILS PART 2

****** NO RECORDS FOUND ******

BORE CONDITION

****** NO RECORDS FOUND ******

BORE REPORT

REG NUMBER 152689

ELEVATION DETAILS

**** NO RECORDS FOUND ****

WATER ANALYSIS PART1

**** NO RECORDS FOUND ****

WATER ANALYSIS PART 2

**** NO RECORDS FOUND ****

WATER LEVEL DETAILS

PIPE	DATE	MEASURE (m)	N/R	RMK	MEAS TYPE	PIPE	DATE	MEASURE (m)	N/R	RMK	MEAS TYPE	PIPE	DATE	MEASURE (m)	N/R	RMK	MEAS TYPE
A	07/06/2014	-9.00	R		NR												

WIRE LINE LOG DETAILS

**** NO RECORDS FOUND ****

FIELD MEASUREMENTS

PIPE	DATE	DEPTH (m)	COND (uS/cm)	pH	TEMP (C)	NO3 (mg/L)	DO (mg/L)	Eh (mV)	ALK (mEq)	METH	SOURCE
A	07/06/2014		2400							AI	GB

SPECIAL WATER ANALYSIS

**** NO RECORDS FOUND ****

BORE REPORT

User Licence for digital data

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You agree to accept all responsibility and risks associated with the use of the supplied data. DNRM makes no representations or warranties in relation to the supplied data, and, you agree that, to the extent permitted by law, all warranties relating to accuracy, reliability, completeness, currency or suitability for any particular purpose and all liability for any loss, damage or costs (including consequential damage) incurred in any way (including but not limited to that arising from negligence) in connection with any use of or reliance on the supplied data are excluded or limited. You agree to continually indemnify the State of Queensland and DNRM (and their officers and employees) against any loss, cost, expense, damage and liability of any kind (including consequential damage and liability in negligence) arising directly or indirectly from or related to any claim relating to your use of the supplied data or any product made from the data.

**** End of Report. Produced:** 11/06/2015 10:07:49 AM ******

GROUNDWATER DATABASE

BORE REPORT

REG NUMBER 138924

REGISTRATION DETAILS

		BASIN	1450	**LATITUDE**	27-58-18	**MAP-SCALE**	253
OFFICE	Brisbane	**SUB-AREA**		**LONGITUDE**	152-55-09	**MAP-SERIES**	M
DATE LOG RECD	02-FEB-09	**SHIRE**	6510-SCENIC RIM REGIO	**EASTING**	492053	**MAP-NO**	9442-22
D/O FILE NO.		**LOT**	21	**NORTHING**	6905937	**MAP NAME**	
R/O FILE NO.		**PLAN**	SP121037	**ZONE**	56	**PROG SECTION**	
H/O FILE NO.		**ORIGINAL DESCRIPTION**		**ACCURACY**	GPS	**PRES EQUIPMENT**	
				GPS ACC	10		
GIS LAT	-27.9716362	**PARISH NAME**	713-BROMELTON			**ORIGINAL BORE NO**	BEAUDESERT SALEYARDS
GIS LNG	152.9191953	**COUNTY**	WARD			**BORE LINE**	-
CHECKED	Y						
						POLYGON	
						RN OF BORE REPLACED	
FACILITY TYPE	Sub-Artesian Facility	**DATE DRILLED**	07/01/2009			**DATA OWNER**	
STATUS	Existing	**DRILLERS NAME**	RICHTER, KAREN				
ROLES	WS	**DRILL COMPANY**	WAYNE RICHTER DRILLING				
		METHOD OF CONST.	ROTARY AIR				

CASING DETAILS

PIPE	DATE	RECORD NUMBER	MATERIAL DESCRIPTION	MAT SIZE (mm)	SIZE DESC	OUTSIDE DIAM (mm)	TOP (m)	BOTTOM (m)
A	07/01/2009	1	Polyvinyl Chloride	7.600	WT	140	0.00	25.00
A	07/01/2009	2	Perforated or Slotted Casing	3.000	AP	140	10.00	24.00
X	07/01/2009	3	Grout			200	0.00	2.00
X	07/01/2009	4	Grout			190	2.00	5.00
X	07/01/2009	5	Gravel Pack	5.000	GR	190	5.00	31.00

STRATA LOG DETAILS

RECORD NUMBER	STRATA TOP (m)	STRATA BOT (m)	STRATA DESCRIPTION
1	0.00	1.50	HEAVY DARK BROWN CLAYEY SOIL
2	1.50	2.50	LIGHT BROWN CLAY
3	2.50	4.50	DARK BROWN CLAY
4	4.50	9.00	LIGHT GREY SANDY CLAY

BORE REPORT

REG NUMBER 138924

RECORD NUMBER	STRATA TOP (m)	STRATA BOT (m)	STRATA DESCRIPTION
5	9.00	12.00	GULLY WASH
6	12.00	13.00	SANDY GREY CLAY
7	13.00	23.00	CLAYEY GULLY WASH
8	23.00	29.00	GREY SILTSTONE & OILY SHALE
9	29.00	31.00	GREY SANDSTONE

STRATIGRAPHY DETAILS

****** NO RECORDS FOUND ******

AQUIFER DETAILS

REC	TOP BED(M)	BOTTOM BED(M)	BED LITHOLOGY	DATE	SWL (m)	FLOW	QUALITY	YIELD (l/s)	CTR	CONDIT	FORMATION NAME
1	12.00	23.00	SANC GRAV	07/01/2009	-6.00	N	2100 US/CM	0.40	Y	UC	ALLAN CREEK ALLUVIUM

PUMP TEST DETAILS PART 1

****** NO RECORDS FOUND ******

PUMP TEST DETAILS PART 2

****** NO RECORDS FOUND ******

BORE CONDITION

****** NO RECORDS FOUND ******

ELEVATION DETAILS

****** NO RECORDS FOUND ******

WATER ANALYSIS PART1

****** NO RECORDS FOUND ******

WATER ANALYSIS PART 2

****** NO RECORDS FOUND ******

BORE REPORT

REG NUMBER 138924

WATER LEVEL DETAILS

PIPE	DATE	MEASURE (m)	N/R	RMK	MEAS TYPE	PIPE	DATE	MEASURE (m)	N/R	RMK	MEAS TYPE	PIPE	DATE	MEASURE (m)	N/R	RMK	MEAS TYPE
A	07/01/2009	-6.00	R		NR												

WIRE LINE LOG DETAILS

****** NO RECORDS FOUND ******

FIELD MEASUREMENTS

PIPE	DATE	DEPTH (m)	COND (uS/cm)	pH	TEMP (C)	NO3 (mg/L)	DO (mg/L)	Eh (mV)	ALK (mEq)	METH	SOURCE
A	07/01/2009		2100							AI	GB

SPECIAL WATER ANALYSIS

****** NO RECORDS FOUND ******

BORE REPORT

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- You may create and distribute hardcopy and digital products based on or containing the supplied data, provided all the following conditions are met:
- You must display this acknowledgment on the product(s): "Based on or contains data provided by the State of Queensland (Department of Natural Resource and Mines) 2014. In consideration of the State permitting use of this data you acknowledge and agree that the State gives no warranty in relation to the data (including accuracy, reliability, completeness, currency or suitability) and accepts no liability (including without limitation, liability in negligence) for any loss, damage or costs (including consequential damage) relating to any use of the data. Data must not be used for direct marketing or be used in breach of the privacy laws."
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1 Obligations:

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**** End of Report. Produced:** 11/06/2015 10:10:30 AM ******

APPENDIX D – SIGNIFICANT FLORA AND FAUNA SEARCH RESPONSE

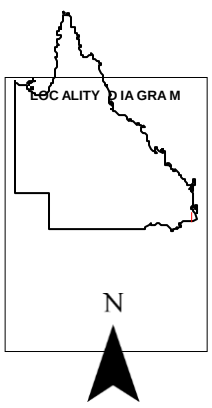
Koala Habitat in South East Queensland

Requested By: SROCHE@LIVE.COM.AU
Date: 21 May 15 Time: 09.21.53

Centred on Lot on Plan:

50 SP179833

Queensland Government



Area of Interest - Lot & Plan

Koala SPP - Habitat Values

Bushland Habitat

- High Value Bushland
- Medium Value Bushland
- Low Value Bushland

Suitable for Rehabilitation

- High Value Rehabilitation
- Medium Value Rehabilitation
- Low Value Rehabilitation

Other Areas of Value

- High Value Other
- Medium Value Other
- Low Value Other
- Generally not suitable
- Water

South East Queensland Koala Habitat Values western SEQ

- Bushland Habitat
- Suitable for rehabilitation
- Other areas of value
- Generally not suitable
- Water

Cadastral Boundaries

Local Government BoundariesRoad Names

0 130 260 390
520 650 m

Note - These maps are not regulatory. Regulatory maps and requirements can be downloaded from the EHP website. Further information in relation to regulatory requirements for development and planning activities should be sought from the relevant Local Government Authority or the Department of Environment and Heritage Protection.

This product is projected into GDA 1994 MGA Zone 56

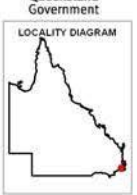
Protected Plants Flora Survey Trigger Map

Legend

- Lot and Plan
- High risk area
- Cadastral line
  Property boundaries shown are provided as a locational aid only
- Freeways / motorways / highways
- Secondary roads / streets

Queensland Government

LOCALITY DIAGRAM



N

0 150 300 450 600 750 m

This product is projected into:
GDA 1994 Queensland Albers

This map shows areas where particular provisions of the Nature Conservation Act 1992 apply to the clearing of protected plants.

This map is produced at a scale relevant to the size of the area selected and should be printed as A4 size in portrait orientation.

For further information or assistance with interpretation of this product, please contact the Department of Environment and Heritage Protection at palm@ehp.qld.gov.au

Disclaimer:
While every care is taken to ensure the accuracy of the data used to generate this product, the Queensland Government makes 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 damages) and costs which might be incurred as a consequence of reliance on the data, or as a result of the data being inaccurate or incomplete in any way and for any reason.

Queensland Government

Wildlife Online Extract

Search Criteria: Species List for a Specified Point
Species: All
Type: All
Status: All
Records: All
Date: All
Latitude: -27.9536
Longitude: 152.9130
Distance: 2
Email: sroche@live.com.au
Date submitted: Thursday 21 May 2015 09:15:57
Date extracted: Thursday 21 May 2015 09:20:02

The number of records retrieved = 21

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	amphibians	Bufonidae	*Rhinella marina*	cane toad	Y			2
animals	birds	Campephagidae	*Coracina novaehollandiae*	black-faced cuckoo-shrike		C		2
animals	birds	Corvidae	*Corvus orru*	Torresian crow		C		2
animals	birds	Maluridae	*Malurus melanocephalus*	red-backed fairy-wren		C		2
animals	birds	Meliphagidae	*Melithreptus albogularis*	white-throated honeyeater		C		2
animals	birds	Meliphagidae	*Philemon citreogularis*	little friarbird		C		2
animals	birds	Meropidae	*Merops ornatus*	rainbow bee-eater		SL		2
animals	birds	Monarchidae	*Grallina cyanoleuca*	magpie-lark		C		2
animals	birds	Pardalotidae	*Pardalotus striatus*	striated pardalote		C		2
animals	birds	Phasianidae	*Coturnix ypsilophora*	brown quail		C		2
animals	birds	Psittacidae	*Trichoglossus haematodus moluccanus*	rainbow lorikeet		C		2
animals	birds	Psittacidae	*Trichoglossus chlorolepidotus*	scaly-breasted lorikeet		C		2
animals	birds	Rhipiduridae	*Rhipidura leucophrys*	willie wagtail		C		2
animals	birds	Timaliidae	*Zosterops lateralis*	silvereye		C		2
animals	insects	Nymphalidae	*Danaus petilia*	lesser wanderer				2
animals	insects	Nymphalidae	*Danaus plexippus plexippus*	monarch				2
animals	mammals	Phascolarctidae	*Phascolarctos cinereus (southeast Queensland bioregion)*	koala (southeast Queensland bioregion)		V	V	1
animals	reptiles	Agamidae	*Pogona barbata*	bearded dragon		C		2
animals	reptiles	Diplodactylidae	*Diplodactylus vittatus*	wood gecko		C		1/1
animals	reptiles	Scincidae	*Cryptoblepharus pulcher pulcher*	elegant snake-eyed skink		C		2
plants	higher dicots	Polygonaceae	*Persicaria prostrata*	creeping knotweed		C		1/1

CODES

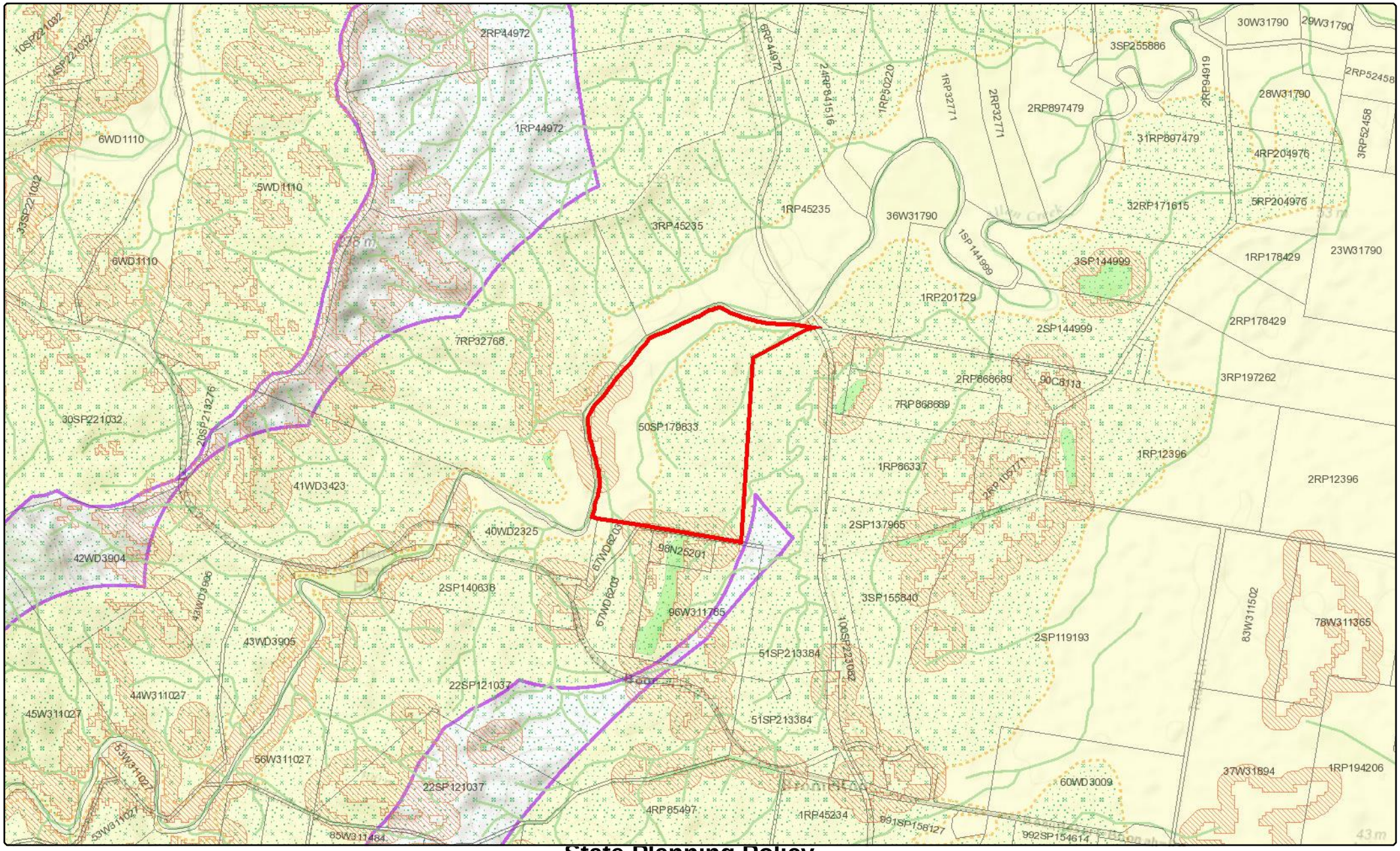
I - Y indicates that the taxon is introduced to Queensland and has naturalised.

Q - Indicates the Queensland conservation status of each taxon under the *Nature Conservation Act 1992.* The codes are Extinct in the Wild (PE), Endangered (E), Vulnerable (V), Near Threatened (NT), Least Concern (C) or Not Protected ( ).

A - Indicates the Australian conservation status of each taxon under the *Environment Protection and Biodiversity Conservation Act 1999.* The values of EPBC are Conservation Dependent (CD), Critically Endangered (CE), Endangered (E), Extinct (EX), Extinct in the Wild (XW) and Vulnerable (V).

Records – The first number indicates the total number of records of the taxon for the record option selected (i.e. All, Confirmed or Specimens).
This number is output as 99999 if it equals or exceeds this value. The second number located after the / indicates the number of specimen records for the taxon.
This number is output as 999 if it equals or exceeds this value.

APPENDIX E – MATTERS OF STATE ENVIRONMENTAL SIGNIFICANCE



State Planning Policy

Department of State Development

Infrastructure and Planning

Queensland Government

Local government development assessment

Date: 21/05/2015

0 185 370 740 1,110 1,480

Metres

Disclaimer:

This map has been prepared with due care based on the best available information at the time of publication. The department holds no responsibility for any errors, inconsistencies or omissions within this document. Any decisions made by other parties based on this document are solely the responsibility of those parties.
Please note whilst Bushfire Hazard Areas have not been triggered they may still apply.

Legend

Drawn Polygon Layer

Override 1

Cadastre (50k)

Cadastre (50k)

Climatic regions - stormwater management design objectives

Climatic regions - stormwater management design objectives

MSES - Regulated vegetation (intersecting a watercourse)

MSES - Regulated vegetation (intersecting a watercourse)

Potential bushfire impact buffer

Potential bushfire impact buffer

Flood hazard area* - Level 1 - Queensland floodplain assessment overlay

Flood hazard area* - Level 1 - Queensland floodplain assessment overlay

Flood hazard area* - Level 1 - Local Government flood mapping area

Flood hazard area* - Level 1 - Local Government flood mapping area

MSES - Regulated vegetation

MSES - Regulated vegetation

Water supply buffer area (SEQ)

Water supply buffer area (SEQ)

Queensland Government

Department of
State Development
Infrastructure and Planning

State Planning Policy

Local government development assessment

Date: 21/05/2015

APPENDIX F – ABORIGINAL CULTURAL HERITAGE SEARCH RESPONSE

Orla Keane

From: Christy A Anderson [Christy.Anderson@datsip.qld.gov.au]
Sent: Monday, 1 June 2015 12:17 PM
To: Orla Keane
Subject: Cultural Hertiage Search: YOUR ref's: 8348 8331 8314 8345 8327 8280 8299 8272 8344

Follow Up Flag: Follow up
Flag Status: Flagged

I refer to your application in which you requested advice on Aboriginal cultural heritage places recorded on the above location.

The Cultural Heritage Database and Register search has been completed and I would like to advise that no Aboriginal cultural heritage is currently recorded in your specific search area, from the data provided by you. However, it is probable that the absence of recorded Aboriginal cultural heritage places reflects a lack of previous cultural heritage surveys of the area. Therefore, our records are not likely to reflect a true picture of the Aboriginal cultural heritage values of the area.

I note that, pursuant to the Cultural Heritage Duty of Care Guidelines, you have advised that the proposed activity is a 'Category 5 activity'. As such, I take this opportunity to remind you that in accordance with those Guidelines:-

> Where an activity is proposed under category 5 there is generally a high risk that it could harm Aboriginal cultural heritage. In these circumstances, the activity should not proceed without cultural heritage assessment.
>
> Where an activity is proposed under category 5, it is necessary to notify the Aboriginal Party and seek:
> (a) Advice as to whether the feature constitutes Aboriginal cultural heritage; and
> (b) If it does, agreement as to how best the activity may be managed to avoid or minimise harm to any Aboriginal cultural heritage.

I remind you also that the extent to which the person has complied with Cultural Heritage Duty of Care Guidelines and the extent to which the person consulted with Aboriginal parties about the carrying out of the activity, and the results of the consultation are factors a court may consider when determining if a party has complied with the duty of care.

Please refer to our website www.datsip.qld.gov.au/people-communities/aboriginal-and-torres-strait-islander-cultural-heritage for a copy of the gazetted
Cultural Heritage duty of care guidelines, which set out reasonable and practical measures for meeting the duty of care.

There is currently no registered Cultural Heritage body for the 33BWR466, 13MH368, 50SP158093, 7DY829, 7RP32768, 50SP179833, 41WD3423, 3M341013 and 4SP170101 areas.

The Cultural Heritage body for the 14SP130707, 9SP236780, 3RP30946 and 100SP142036 areas is:

Mandandanji Cultural Heritage Services Pty Ltd
Ms Lorraine Tomlinson
Manager
10 Blaxland Place
Narangba QLD 4504

Phone: (07) 3886 8723
Fax: (07) 3886 8723
Email: info@mandandanji.com.au

There is currently no registered Aboriginal party for the 13MH368, 50SP158093, 7RP32768, 50SP179833, 41WD3423, 3M341013 and 4SP170101 areas.

The Aboriginal party for the 33BWR466 area is:

QC99/5 PRC - QUD6005/99
Barunggam People
Averil Dillon
9 Downes Road
Chinchilla Q 4413
Ph: (07) 4668 9649
Email: barunggam@yahoo.com.au

The Aboriginal party for the 7DY829 area is:

QC09/2 - QUD101/09
Bigambul People
Just Us Lawyers
238 Kelvin Grove Road
RED HILL
QLD 4059
Ph (07) 3369 7145 Fax (07) 3315 2727

For the 13MH368, 50SP158093, 7RP32768, 50SP179833, 41WD3423, 3M341013 and 4SP170101 area without a registered Aboriginal party, an appropriate contact can be identified by:

Andrew Rutch
Southern Region CH Coordinator
Cultural Heritage
Ph: 3247 6220

Should you have any further queries, please do not hesitate to contact me on (07) 3405 3050.

Christy Anderson | Policy Officer
Cultural Heritage | Community Participation
Department of Aboriginal and Torres Strait Islander Partnerships

6B Neville Bonner Building, 75 Williams Street, BRISBANE QLD 4001
T: 07 3247 6212 | Ext: 66212

I acknowledge Aboriginal and Torres Strait Islander people as the Traditional Owners of this country throughout Australia, and their connection to land and community.

I pay my respect to all Traditional Owners, and to the Elders both past and present.

Stay tuned!
The Department of Aboriginal and Torres Strait Islander Partnerships will soon be implementing a new operating platform for the Cultural Heritage database and register.
Visit the website for updates and additional information

APPENDIX G – CULTURAL HERITAGE CERTIFICATE OF EFFECT

Queensland Government

CERTIFICATE OF AFFECT
QUEENSLAND HERITAGE REGISTER

Client Reference: Tilley

Certificate Number: CA001443
Result 1 of 1

Caoilinn Murphy
Po Box 2175

QLD 4350

This is a certificate issued under section 33(1)(b) of the *Queensland Heritage Act 1992* (Heritage Act) as to whether a place is affected by: entry in the Queensland Heritage Register (QHR) as a Queensland heritage place, a current QHR application, or is excluded from entry in the QHR.

RESULT

This response certifies that the place identified as:

Place Ref: None
Place Name: None
Lot: 50 Plan: SP179833
Located at:

is neither on the QHR nor the subject of a QHR application under the Heritage Act.

ADDITIONAL ADVICE

Note: This certificate is valid at the date of issue only

If you have any queries in relation to this search please contact the Heritage Branch on 13QGOV or heritage@ehp.qld.gov.au.

Issued on behalf of the Chief Executive,
Department of Environment and Heritage Protection

Date of issue: 10/02/2016
Receipt No: 3062790

APPENDIX H – SEARCH RESPONSE FOR ENVIRONMENTAL MANAGEMENT REGISTER & THE CONTAMINATED LAND REGISTER

Department of Environment and Heritage Protection (EHP)
ABN 46 640 294 485
400 George St Brisbane, Queensland 4000
GPO Box 2454, Brisbane QLD 4001, AUSTRALIA
www.ehp.qld.gov.au

SEARCH RESPONSE

ENVIRONMENTAL MANAGEMENT REGISTER (EMR)
CONTAMINATED LAND REGISTER (CLR)

Scott Roche
11 Clifford Street, Toowoomba
Toowoomba City QLD 4350

Transaction ID: 50183456 EMR Site Id: 11 June 2015
Cheque Number:
Client Reference:

This response relates to a search request received for the site:
Lot: 50 Plan: SP179833
75 TILLEY Road
BROMELTON

EMR RESULT

The above site is NOT included on the Environmental Management Register.

CLR RESULT

The above site is NOT included on the Contaminated Land Register.

ADDITIONAL ADVICE

If you have any queries in relation to this search please phone 13QGOV (13 74 68)

Registrar
Administering Authority

APPENDIX I – MATTERS OF NATIONAL ENVIRONMENTAL SIGNIFICANCE

Australian Government

Department of the Environment

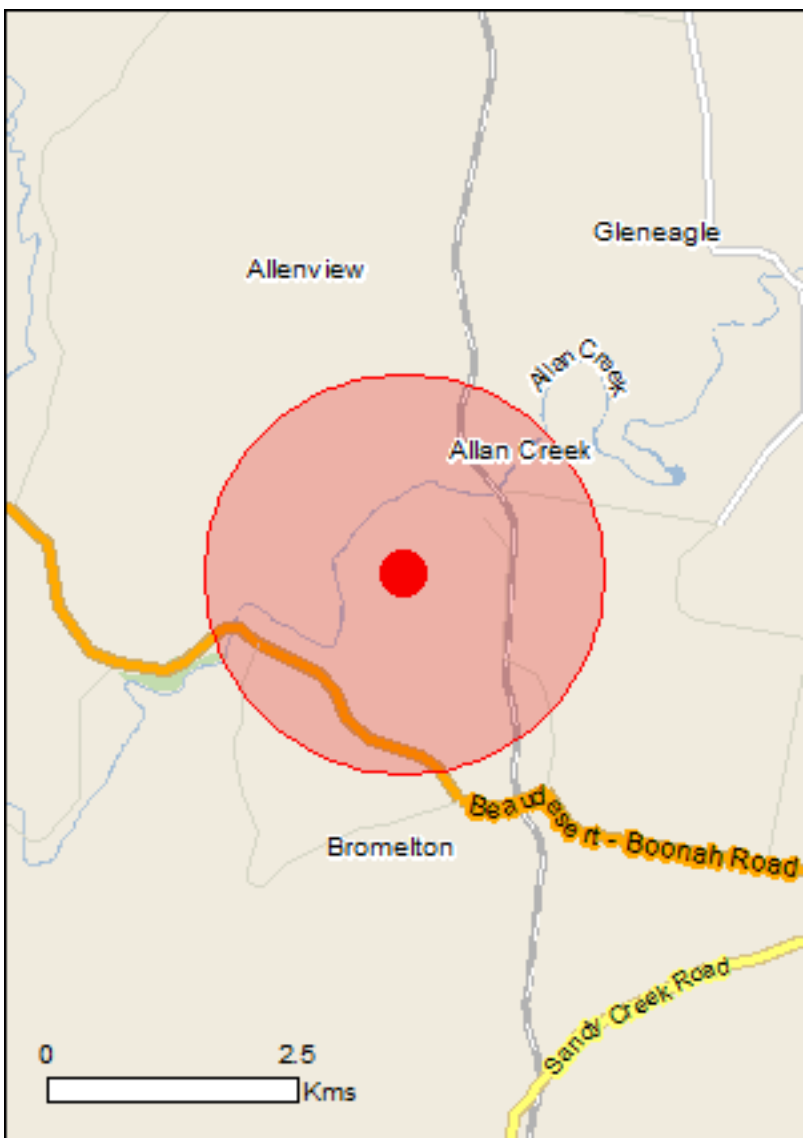
EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected.

Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

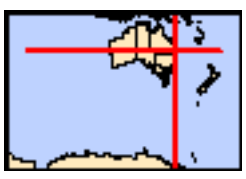
Information is available about Environment Assessments and the EPBC Act including significance guidelines, forms and application process details.

Report created: 10/02/16 11:09:42



Coordinates

Buffer: 2.0Km



Summary

Matters of National Environmental Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	1
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	2
Listed Threatened Species:	21
Listed Migratory Species:	14

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at http://www.environment.gov.au/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Land:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	18
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Commonwealth Reserves Marine:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have nominated.

State and Territory Reserves:	None
Regional Forest Agreements:	None
Invasive Species:	32
Nationally Important Wetlands:	None
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

Wetlands of International Importance (Ramsar) [Resource Information]

Name	Proximity
Moreton bay	30 - 40km upstream

Listed Threatened Ecological Communities [Resource Information]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Name	Status	Type of Presence
Lowland Rainforest of Subtropical Australia	Critically Endangered	Community may occur within area
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland	Critically Endangered	Community may occur within area

Listed Threatened Species [Resource Information]

Name	Status	Type of Presence
Birds		
Anthochaera phrygia Regent Honeyeater [82338]	Critically Endangered	Foraging, feeding or related behaviour may occur within area
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat likely to occur within area
Dasyornis brachypterus Eastern Bristlebird [533]	Endangered	Species or species habitat may occur within area
Erythrotriorchis radiatus Red Goshawk [942]	Vulnerable	Species or species habitat likely to occur within area
Geophaps scripta scripta Squatter Pigeon (southern) [64440]	Vulnerable	Species or species habitat may occur within area
Grantiella picta Painted Honeyeater [470]	Vulnerable	Species or species habitat may occur within area
Lathamus discolor Swift Parrot [744]	Endangered	Species or species habitat likely to occur within area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat may occur within area
Turnix melanogaster Black-breasted Button-quail [923]	Vulnerable	Species or species habitat likely to occur within area
Frogs		

Name	Status	Type of Presence
Mixophyes iteratus		
Giant Barred Frog, Southern Barred Frog [1944]	Endangered	Species or species habitat may occur within area
Mammals		
Chalinolobus dwyeri		
Large-eared Pied Bat, Large Pied Bat [183]	Vulnerable	Species or species habitat likely to occur within area
Petrogale penicillata		
Brush-tailed Rock-wallaby [225]	Vulnerable	Species or species habitat may occur within area
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)		
Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Vulnerable	Species or species habitat known to occur within area
Pteropus poliocephalus		
Grey-headed Flying-fox [186]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Plants		
Bosistoa transversa		
Three-leaved Bosistoa, Yellow Satinheart [16091]	Vulnerable	Species or species habitat likely to occur within area
Notelaea ipsviciensis		
Cooneana Olive [81858]	Critically Endangered	Species or species habitat may occur within area
Phebalium distans		
Mt Berryman Phebalium [81869]	Critically Endangered	Species or species habitat may occur within area
Thesium australe		
Austral Toadflax, Toadflax [15202]	Vulnerable	Species or species habitat may occur within area
Reptiles		
Coeranoscincus reticulatus		
Three-toed Snake-tooth Skink [59628]	Vulnerable	Species or species habitat may occur within area
Delma torquata		
Collared Delma [1656]	Vulnerable	Species or species habitat may occur within area
Furina dunmalli		
Dunmall's Snake [59254]	Vulnerable	Species or species habitat may occur within area

Listed Migratory Species [Resource Information]

* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
Migratory Marine Birds		
Apus pacificus		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
Cuculus optatus		
Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat may occur within area
Hirundapus caudacutus		
White-throated Needletail [682]		Species or species habitat known to occur within area
Merops ornatus		
Rainbow Bee-eater [670]		Species or species habitat may occur within

Name	Threatened	Type of Presence
		area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area
Monarcha trivirgatus Spectacled Monarch [610]		Species or species habitat may occur within area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat likely to occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat likely to occur within area
Migratory Wetlands Species		
Ardea alba Great Egret, White Egret [59541]		Species or species habitat likely to occur within area
Ardea ibis Cattle Egret [59542]		Species or species habitat may occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
Pandion haliaetus Osprey [952]		Species or species habitat may occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area

Other Matters Protected by the EPBC Act

Listed Marine Species		[Resource Information]
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Birds		
Anseranas semipalmata Magpie Goose [978]		Species or species habitat may occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardea alba Great Egret, White Egret [59541]		Species or species habitat likely to occur within area
Ardea ibis Cattle Egret [59542]		Species or species habitat may occur within area
Cuculus saturatus Oriental Cuckoo, Himalayan Cuckoo [710]		Species or species habitat may occur within

Name	Threatened	Type of Presence
		area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area
Hirundapus caudacutus White-throated Needletail [682]		Species or species habitat known to occur within area
Lathamus discolor Swift Parrot [744]	Endangered	Species or species habitat likely to occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area
Monarcha trivirgatus Spectacled Monarch [610]		Species or species habitat may occur within area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat likely to occur within area
Pandion haliaetus Osprey [952]		Species or species habitat may occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat likely to occur within area
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Endangered*	Species or species habitat may occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area

Extra Information

Invasive Species [Resource Information]

Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resouces Audit, 2001.

Name	Status	Type of Presence
Birds		
Acridotheres tristis Common Myna, Indian Myna [387]		Species or species habitat likely to occur within area
Anas platyrhynchos Mallard [974]		Species or species habitat likely to occur within area
Carduelis carduelis European Goldfinch [403]		Species or species habitat likely to occur within area
Columba livia Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
Lonchura punctulata Nutmeg Mannikin [399]		Species or species habitat likely to occur within area
Passer domesticus House Sparrow [405]		Species or species habitat likely to occur within area
Streptopelia chinensis Spotted Turtle-Dove [780]		Species or species habitat likely to occur within area
Sturnus vulgaris Common Starling [389]		Species or species habitat likely to occur within area
Frogs		
Rhinella marina Cane Toad [83218]		Species or species habitat likely to occur within area
Mammals		
Bos taurus Domestic Cattle [16]		Species or species habitat likely to occur within area
Canis lupus familiaris Domestic Dog [82654]		Species or species habitat likely to occur within area
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Lepus capensis Brown Hare [127]		Species or species habitat likely to occur within area
Mus musculus House Mouse [120]		Species or species habitat likely to occur within area

Name	Status	Type of Presence
Oryctolagus cuniculus Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
Rattus norvegicus Brown Rat, Norway Rat [83]		Species or species habitat likely to occur within area
Rattus rattus Black Rat, Ship Rat [84]		Species or species habitat likely to occur within area
Sus scrofa Pig [6]		Species or species habitat likely to occur within area
Vulpes vulpes Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
Anredera cordifolia Madeira Vine, Jalap, Lamb's-tail, Mignonette Vine, Anredera, Gulf Madeiravine, Heartleaf Madeiravine, Potato Vine [2643]		Species or species habitat likely to occur within area
Asparagus aethiopicus Asparagus Fern, Ground Asparagus, Basket Fern, Sprengi's Fern, Bushy Asparagus, Emerald Asparagus [62425]		Species or species habitat likely to occur within area
Cabomba caroliniana Cabomba, Fanwort, Carolina Watershield, Fish Grass, Washington Grass, Watershield, Carolina Fanwort, Common Cabomba [5171]		Species or species habitat likely to occur within area
Chrysanthemoides monilifera Bitou Bush, Boneseed [18983]		Species or species habitat may occur within area
Eichhornia crassipes Water Hyacinth, Water Orchid, Nile Lily [13466]		Species or species habitat likely to occur within area
Lantana camara Lantana, Common Lantana, Kamara Lantana, Large-leaf Lantana, Pink Flowered Lantana, Red Flowered Lantana, Red-Flowered Sage, White Sage, Wild Sage [10892]		Species or species habitat likely to occur within area
Parkinsonia aculeata Parkinsonia, Jerusalem Thorn, Jelly Bean Tree, Horse Bean [12301]		Species or species habitat likely to occur within area
Parthenium hysterophorus Parthenium Weed, Bitter Weed, Carrot Grass, False Ragweed [19566]		Species or species habitat likely to occur within area
Protasparagus densiflorus Asparagus Fern, Plume Asparagus [5015]		Species or species habitat likely to occur within area
Salix spp. except S.babylonica, S.x calodendron & S.x reichardtii Willows except Weeping Willow, Pussy Willow and Sterile Pussy Willow [68497]		Species or species habitat likely to occur within area
Salvinia molesta Salvinia, Giant Salvinia, Aquarium Watermoss, Kariba Weed [13665]		Species or species habitat likely to occur within area
Senecio madagascariensis Fireweed, Madagascar Ragwort, Madagascar Groundsel [2624]		Species or species habitat likely to occur within area

Name	Status	Type of Presence
Reptiles		
Hemidactylus frenatus Asian House Gecko [1708]		Species or species

Name	Status	Type of Presence
		habitat likely to occur within area

Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World and National Heritage properties, Wetlands of International and National Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

For species where the distributions are well known, maps are digitised from sources such as recovery plans and detailed habitat studies. Where appropriate, core breeding, foraging and roosting areas are indicated under 'type of presence'. For species whose distributions are less well known, point locations are collated from government wildlife authorities, museums, and non-government organisations; bioclimatic distribution models are generated and these validated by experts. In some cases, the distribution maps are based solely on expert knowledge.

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers

The following groups have been mapped, but may not cover the complete distribution of the species:

- non-threatened seabirds which have only been mapped for recorded breeding sites
- seals which have only been mapped for breeding sites near the Australian continent

Such breeding sites may be important for the protection of the Commonwealth Marine environment.

Coordinates

-27.9549 152.9163

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Parks and Wildlife Commission NT, Northern Territory Government
-Department of Environmental and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Atherton and Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
Forestry Corporation, NSW
-Geoscience Australia
-CSIRO
-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact Us page.

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APPENDIX J – COPY OF 2011 FLOOD IMAGES

APPENDIX K –SEDIMENTATION & EROSION CONTROL PLAN

APPENDIX L – STORMWATER MANAGEMENT PLAN