Somerset
REGIONAL COUNCIL

AGENDA
ORDINARY COUNCIL MEETING

Date:	Thursday, 21 December 2023
Time:	9 am
Venue:	Simeon Lord Room Esk Library Building 19 Heap Street ESK

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2.	Leave of absence	-
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4.	Business arising out of minutes of previous meeting	-
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7.	Reception and consideration of Officers' reports	-

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13.	Request for Exemption Certificate for use of former storage building as Clubhouse and Extension at Lowood Football Grounds	587
14.	Kilcoy Streetscape Revitalisation Project – Master Plan Report	612
15.	Consultation Paper – Food Act 2006 – Proposal to Require State Food Businesses to be Licensed	683
16.	Elements Festival 2024 proposed to be held from 25 January to 27 January 2024 at Lot 2 Sunday Creek Road, Jimna	Late report provided separately

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SOMERSET REGIONAL COUNCIL - OFFICER'S REPORT

To: Andrew Johnson, Chief Executive Officer
From: Madeline Jelf, Senior planner
Director: Luke Hannan, Director of Planning and Development
Date: 12 December 2023
Subject: Development Application No. 23169
Development Application for a:

- Material Change of Use for an Intensive Animal Industry (poultry farm – maximum 400,000 birds)
- Environmentally Relevant Activity – ERA 4(2) Poultry Farm >200,000 birds
- Reconfiguration of a Lot by Boundary realignment (five into five lots)

File No: DA23169 Action Officer: SP - MJ
Assessment No: 03309-00000-000

1.0 APPLICATION SUMMARY

Subject Land

Location:	49 Court Avenue, Brightview Un-named #5158 Road, Brightview Stone Gully Road, Brightview
Real property description:	Lot 1 RP31160 Lot 2 RP31160 Lot 4 RP32344 Lot 40 SP199026 Lot 41 SP199026
Site area:	Lot 1 = 19.741ha Lot 2 = 19.524ha Lot 4 = 38.268 Lot 40 = 16.1332ha Lot 41 = 27.33 ha Total – 120.995ha
Current land use:	Dwelling house and grazing land
Easements/encumbrances:	K RP165792, L RP165793, M RP165794

South East Queensland Regional Plan 2017

Land use category:	Regional landscape and rural production area

Somerset Region Planning Scheme (Version Four)

Zone:	Rural zone
Precinct:	Not applicable
Overlays:	Agricultural land overlay Biodiversity overlay Bushfire hazard overlay Flood hazard overlay High impact activities management area overlay Infrastructure overlay

Application

Proposal:	Intensive animal industry (Poultry farm), Environmentally Relevant Authority and boundary realignment

Category of assessment:	Impact assessment
Applicant details:	LL and Sons Pty Ltd C/- ACS Engineers (Aust) Pty Ltd PO Box 554 BEAUDESERT QLD 4285
Owner details:	LL and Sons Pty Ltd
Date application received:	8 November 2022
Date application properly made:	14 November 2022
Referral agencies	State Assessment and Referral Agency Lockyer Valley Regional Council (Third party Advice only)
Public notification	Required
Notification period	9 March 2023 – 30 March 2023
Submissions received	116 total (97 properly made)

RECOMMENDED DECISION
Approve the development application subject to the conditions and requirements contained in the schedules and attachments of this report.

Locality Plan of Lot 1 RP31160, Lot 2 RP31160, 4 RP32344, 40 SP199026 and Lot 41 SP199026

Situated at 49 Court Avenue, Brightview, Un-named #5158 Road, Brightview and Stone Gully Road, Brightview

2.0 PROPOSAL

This development application seeks approval for a:

- Material change of use for an Intensive Animal Industry (poultry farm – maximum 400,000 birds)
- Environmentally Relevant Activity – ERA 4(2) Poultry Farm >200,000 birds
- Reconfiguration of a Lot by Boundary realignment (five into five lots).

On land at 49 Court Avenue, Brightview, Un-named #5158 Road, Brightview and Stone Gully Road, Brightview formally described as Lot 1 RP31160, Lot 2 RP31160, 4 RP32344, 40 SP199026 and Lot 41 SP199026.

Poultry farm

The development will consist of the establishment of eight tunnel ventilated broiler chicken sheds housing a maximum of 400,000 birds across the eight sheds. The sheds will be constructed to meet the applicable RSPCA Approved Farming Scheme Standards and incorporate the current industry best practice shed design and fit outs.

The eight sheds will be constructed to 176m x 17.8m dimensions providing a total gross floor area for the development of 25,062.4 m2.

Ancillary works include the construction of a visitor/staff car parking area, site office, amenities building, generator shed, pump shed, gas tanks, water tanks and managers' residences.

At peak production and with all eight sheds in service the proposed poultry farm will generate approximately 1,932 heavy vehicle movements per annum. Vehicles travelling to the site will travel from Brightview Road to Court Avenue North. These roads have been assessed with respect to the impact that the proposed development traffic will have on road infrastructure and safety. The proposed development is not expected to have any adverse impact on the capacity of the roads along the route. Surrounding local roads including Brightview Road and Court Avenue North are considered suitable for the use with no upgrades triggered.

Operation of the poultry farm will require electrical power supply from a connection to the Energex network to run fans, cool pads, lights and other on farm uses. Onsite gas storage will be required to supply to heaters early in the growing stage and during cooler periods.

Water for chicken drinking and cooling will be stored in 3 x 250 kL storage tanks. Water is to be sourced from a new water supply connection from the UU network.

The farm will be responsible for growing, then supplying chickens to the processing plant owned by the nominated company. The processor provides the day old chickens and the feed. Day old chickens are delivered in batches to the farm from a hatchery and are subsequently collected at various stages of the growing cycle and transported to a processing plant. The birds are grown for approximately 48 to 52 days with progressive thin out which removes birds for processing.

A growing cycle is made up of the placement of new litter, the placement of day old birds, the growing of the birds and the progressive removal of birds and cleanout. Each cycle takes approximately 59 days resulting in 6 cycles per year. At the end of each production cycle, approximately 50% of shed litter is removed from the site in covered vehicles and transported off site for use as fertilizer. The remaining 50% undergoes a pasteurisation process allowing it to achieve a suitable quality for reuse within the shed (refer to section 4.2 and SBMP for further information). The sheds will be cleaned and disinfected. New litter will be layered on the shed floor prior to the delivery of every new batch of day old chicks.

Boundary realignment
The application also involves the realignment of the five subject lots to ensure the poultry farm buildings are not located over the boundaries but also to ensure that the five lots have frontage to a road reserve and also a developable area outside the flood hazard area.

The proposed boundary realignment results in an 81.554 hectare lot which will contain the poultry farm development, associated structures and internal driveway and four smaller lots that range in size as follows:

- Proposed Lot 1 – 9.9586 hectares
- Proposed Lot 2 – 9.9586 hectares
- Proposed Lot 3 – 9.7075 hectares
- Proposed Lot 4 – 9.7095 hectares.

Proposed Lot 1 will contain the existing dwelling house and will maintain access to Court Avenue North. Proposed Lot 2 contains an existing shed and Proposed Lot 3 and 4 will be vacant. Proposed Lots 2 – 4 will be accessed via Unformed Road 5158, which will require upgrading.

3.0 SITE DETAILS
The subject land comprises five rural allotments which contain a combined area of about 120 hectares with road frontage to Court Avenue North, Unnamed Road 5158 and an unformed section of Stone Gully Road adjoins the site to the east. The subject land is currently used for grazing purposes and contains a portion of a mapped wetland and its associated buffer area. Portions of the land is heavily impacted by the Flood hazard overlay, with the land generally sloping in a southerly direction towards the floodplain.

The immediately adjoining allotments are utilised for rural purposes and generally improved by dwelling houses and associated outbuildings. To the east of the site is an established rural lifestyle area which is dominated by lots with an average size of 4 hectares. To the south is an established rural residential estate which is contained within Lockyer Valley Regional Council.

4.0 PLANNING LEGISLATION
The application will be assessed against the matters set out in section 45 and decided in accordance with section 60 of the *Planning Act 2016*.

5.0 ASSESSMENT BENCHMARKS
5.1 State Planning Policy
A new State Planning Policy (SPP) came into effect on 3 July 2017 and is not currently reflected in the Somerset Region Planning Scheme. An assessment of the proposed development against the assessment benchmarks contained within Part E of the SPP is required.

The application has been assessed against the assessment benchmarks and the proposal is considered to comply.

5.2 South East Queensland Regional Plan 2017
The site is located within the regional landscape and rural production area. The application has been assessed against the provisions of the regional plan and the associated regulatory requirements and was considered to comply.

5.3 Schedule 10 of the *Planning Regulation 2017*
The development application did not require assessment against any of the assessment benchmarks within the Regulation.

The proposal does not impact on any regulated vegetation or koala habitat areas, is not located in proximity to a Queensland heritage place or local heritage place, is not known to be on a contaminated land register, nor involves any environmentally relevant activities.

5.3.1 Schedule 11 – Koala habitat areas

The subject land contains mapped core koala habitat but outside the koala priority area. The habitat is located in the north eastern and south eastern corners of the subject land and will not be impacted by the development. In this circumstance, an additional assessment was not required.

5.4 Temporary local planning instruments

There are currently no temporary local planning instruments in effect within the Somerset Region.

5.5 Variation approvals

The property is not benefitted by any variation approvals.

5.6 Somerset Region Planning Scheme (Version Four)

5.6.1 Strategic framework assessment

The development application has been assessed against the strategic framework of the planning scheme and is considered to overall support Council's strategic intent for the region. The following represents an overview of how the proposal aligns with each of the seven themes that collectively represent the policy intent of the planning scheme.

Settlement pattern

Element 3.3.10 of this theme provides specific outcomes for the development of high impact activities within the region, and seeks to ensure that the urban, rural residential, rural lifestyle and tourism focus areas are protected from impacts of high impact activities. High impact activities, such as poultry farms, must be appropriately located to protect the health, wellbeing, amenity and safety of communities and individuals from the impacts of air, noise, and odour emissions.

The proposal has demonstrated that the impacts of the development on surrounding communities can be managed, in particular in relation to odour.

The settlement pattern theme contains 13 elements. The most relevant elements to the proposal are discussed below.

Element – High impact activities	
3.3.10.1 Specific outcomes	**Council officer comment**
a) The location of high impact activities in Somerset Region: i. provides a reasonable level of amenity protection for towns, small townships, rural residential areas and other substantial settlements of established small rural lifestyle lots; ii. protects the amenity of the Principal Future Strategic Tourism Focus Area and the Lake	The subject land is located within a rural area which offers diverse land sizes. The application material provided has identified that the proposal can operate without causing adverse environmental impacts. The assessment of these considerations is contained within this report.

Somerset Water based Recreation Focus Area in order to promote tourism and recreation development opportunities in these two focus areas; iii. protects the long-term urban growth opportunities provided by the Glamorgan Vale Urban Investigation Area; iv. has no adverse impact on water quality in the catchments of the major drinking water storages of Lake Somerset, Lake Wivenhoe and the Mid Brisbane River below Wivenhoe Dam; v. does not worsen the opportunity for rural activities to be undertaken on adjoining premises by way of impacts arising from the operation of the high impact activity. b) High impact activities are appropriately located and managed to protect the health, well being, amenity, safety and environmental health of communities and individuals from the impacts of air, noise and odour emissions and from the impacts of hazardous materials.	

3.3.12 Element— Bushfire	
Specific outcomes	**Council officer comment**
a) The risk of loss of life and property due to bushfires is minimised through: i. the appropriate use of land having regard to its level of bushfire hazard; and ii. the incorporation of appropriate siting and design measures that mitigate bushfire risks; b) Sensitive land uses which require a high level of immunity from natural hazards avoid locating in areas of high bushfire hazard; c) Community infrastructure is located and designed to maintain the necessary level of functionality to support affected persons during and immediately after a bushfire event. d) The location and design of development and land use:	The subject land is mapped as containing Medium Potential Bushfire Intensity and High Potential Bushfire Intensity. The majority of the mapped hazard will be contained within the poultry farm lot. The proposed poultry sheds are located within predominantly cleared areas of the site. It is expected that the operator would appropriately manage the bushfire risk as part of the farm's operation. Any future dwelling houses constructed on Proposed Lots 2 – 4 will not be impacted by the current bushfire hazard mapping. It is considered that the proposal can appropriately address the bushfire hazard on the site.

i. supports, and does not unduly burden, disaster management response or recovery capacity and capabilities; ii. directly, indirectly and cumulatively avoids an increase in the severity of bushfire hazard and the potential for damage on the site or to other properties; iii. maintains or enhances natural processes and the protective function of landforms and vegetation that can mitigate risks associated with bushfire hazard;	

Natural environment

The natural environment theme contains four elements, namely biodiversity network, watercourses and wetlands, air and noise environment, and contaminated land. The subject land is included on the Biodiversity overlay map, in particular as containing Regulated Vegetation and containing a High Ecological Significance Wetlands.

Element – Biodiversity network	
3.4.2.1 Specific outcomes	**Council officer comment**
a) The areas of ecological significance identified on Strategic Framework Map 2—Natural Environment are protected (including significant vegetation (remnant, regrowth and other vegetation of local significance), waterways and wetlands); b) Areas of ecological significance are protected from the adverse impacts of development unless the proposal: i. is a significant community project and/or for an infrastructure item identified on Strategic Framework Map 5—Access, Mobility and Infrastructure; or ii. is for a small-scale, low-impact, nature oriented tourism activity; or iii. avoids, mitigates or offsets the impacts of the development on the area of ecological significance; b) Areas of ecological significance located adjacent to a development proposal are protected, mitigated or offset through appropriate measures that minimise	The subject land contains mapped regulated vegetation (Category B), regulated vegetation (wetland) and High ecological significant wetland. The application material has been accompanied by a Site Based Environmental Management Plan (SBEMP) which has identified that the poultry farm can operate without adversely impacting on the wetland. As such, the development is considered to not adversely impact on the vegetation or wetland.

impacts on the area of ecological significance, including setbacks to the area, fencing and supplementary planting, as deemed reasonable and relevant to the proposal; and c) The integrity of the biodiversity corridors identified on Strategic Framework Map 2—Natural Environment are maintained or enhanced through the minimisation of development footprint and strategic rehabilitation works.	

Element – Biodiversity network	
3.4.3.1 Specific outcomes	**Council officer comment**
a) The waterways and wetlands of Somerset Region identified on Strategic Framework Map 2 – Natural Environment are protected and enhanced; b) Waterways and wetlands are protected from the adverse impacts of development unless the proposal: i. Is a significant community project and/or for an infrastructure item identified on Strategic Framework Map 5 – Access, Mobility and Infrastructure; or ii. Is for small scale, low impact, nature-oriented tourism activities; or iii. Avoids, mitigates or offsets the impacts of the development on the waterway and/or wetland; c) Waterways and wetlands located adjacent to a development proposal are protected, mitigated or offset through appropriate measures that minimise impacts on the waterway and/or wetland, including setbacks to the waterway and/or wetland, fencing and supplementary planting, as deemed reasonable and relevant to the proposal; and d) Industry standard best practice water quality management principles are incorporated in development proposals in the region's towns and small townships.	The mapped wetland is located to the south of the proposed poultry shed location. As discussed previously the application was supported by a SMEMP which has demonstrated that the development can occur without adversely impacting the wetlands. Proposed Lots 2 – 4 have demonstrated that a developable area clear of the wetland buffer can be achieved, which will ensure future development will not impact on the wetland.

Element – Air and noise environment	
3.4.4.1 Specific outcomes	**Council officer comment**
a) Air, noise and odour emissions from development and their impacts on community health and wellbeing and the natural environment are minimised	The proposal has been supported by an odour impact assessment. The original odour impact assessment identified that the adjoining property to the north was largely impacted by the 2.5

through appropriate design, siting, construction and operation; b) High impact activities that are likely to generate noise or air emissions avoid unacceptable environmental and amenity impacts through appropriate separation from towns or urban areas, small townships, rural residential areas and other settlements of established small rural lifestyle lots, Regional Water Storages, the Principal Future Strategic Tourism Focus Areas, the Lake Somerset Water-based Recreation Focus Areas and the Glamorgan Vale Urban Investigation Areas; and c) High impact industry is located, designed, constructed and operated to avoid or minimise air, odour and noise emissions and any potential impacts on sensitive land uses.	odour unit (ou) contour. While the sensitive receptor on the adjoining lot was not impacted by the odour plume, the facilities that the landowner occupies for large periods of the day would be impacted. As a result, an amended odour impact assessment was provided which altered the odour contour to contain more of the odour plume to land owned by the applicant and other land that is used for grazing purposes and is heavily impacted by flooding and environmental overlays. The revised odour plume identified that poultry farm can occur without the 2.5ou contour impacting on any existing sensitive receptors. In terms of the proposed boundary realignment, it has been demonstrated that proposed Lots 2 – 4 are capable of providing a development area which is outside the odour plume and also outside of the applicable overlay areas. It is considered that the applicant has provided sufficient evidence that the proposal can occur without causing significant adverse impacts to the existing and proposed sensitive receptor (dwelling houses).

Natural resources

The natural environment theme contains five elements, namely agricultural land, extractive resources, mining tenements, forestry and potable water resources. The subject land both is mapped as containing quality agricultural land. The subject land is not impacted by the other elements applicable to this theme.

Element – Agricultural land	
3.5.2.1 Specific outcomes	**Council officer comment**
a) Agricultural land identified on Strategic Framework Map 4— Economic Development and Natural Resources is protected for sustainable agricultural uses, through avoidance from fragmentation, alienation and/or use for non-agricultural development unless there is an overriding need for the proposal and it cannot be located on an alternative site; and b) Sensitive land uses that have the potential to generate land use conflict with the current or future use of agricultural land identified on Strategic Framework Map 4— Economic Development and Natural Resources for agricultural purposes are appropriately separated from that land	The western portion of the subject land contains mapped agricultural land. The location of the proposed poultry sheds is outside the mapped agricultural land. In terms of the boundary realignment, Proposed Lot 1 will be subject to a large portion of agricultural land and also mapped important agricultural areas. Proposed Lot 1 will contain the existing dwelling house and will contain an area of about 9.9 hectares. Given the proposal involves only a boundary realignment, and the size of the current allotments already results in the fragmentation of the agricultural land.

Community identity and regional landscape character

The community identity and regional landscape character of the region is not affected by the proposal, as the development does not compromise the existing or planned character of the regions centres, townships or rural living areas. There were no specific outcomes of this theme that were considered relevant to the assessment of the proposal.

Economic development
The proposal does not impact on the continued development of Council's town centres network nor the industrial development areas within each town. The proposal supports an existing business providing rural economic opportunities.

Infrastructure and services
The provision of infrastructure and services at the development site meets the desired standard of service and the standard requirements set out in the development codes.

Transport
The proposed development utilises Unnamed Road 5158 and Court Avenue North to obtain access to Brightview Road and onto Gehrke Road and the Warrego Highway. With the imposition of applicable conditions, it is considered that the development can occur without an inappropriate risk to the local road network.

5.6.2 Code compliance summary

The assessment below identifies how the development proposal achieves the assessment benchmarks and where the development proposal:

(a) proposes an alternative outcome to the identified acceptable outcomes satisfying or not satisfying the corresponding performance outcomes; or
(b) proposes an outcome where no acceptable outcome is stated in the code and the proposed outcome does not satisfy the performance outcome.

Applicable code	**Compliance with overall outcomes**	**Performance outcomes**
Rural zone code	Yes	PO13
Intensive animal industry code	Yes	Not required
Services works and infrastructure code	Yes	Not required
Transport access and parking code	Yes	Not required
Applicable overlay code	**Compliance with overall outcomes**	**Performance outcomes**
Agricultural land overlay code	Yes	PO1
Biodiversity overlay code	Yes	PO7
Bushfire hazard overlay	Yes	Not required
Flood hazard overlay	Yes	Not required
High impact activity management area overlay	Yes	PO1

The assessment of the development proposal against the performance outcomes of the applicable code(s) is discussed below.

5.6.3 Performance outcome assessment

Rural zone code

Performance outcome	Acceptable outcome
Amenity	
PO13 The design, location and operation of development does not result in any undue adverse impact on the amenity of the locality, having regard to: (a) hours of operation; (b) lighting; (c) noise; (d) dust, odour and other airborne emissions; (e) public health and safety; (f) traffic generation; (g) the use of *advertising devices*; (h) visual amenity; and overlooking and privacy	**AO13** No acceptable outcome provided.
Proposal Supporting information (SBEMP and odour assessment) provided as part of the application material have demonstrated compliance. **Performance Outcome Assessment** The odour assessment provided has demonstrated that no sensitive receptors will be impacted by the poultry farm. The odour plume does extend outside of the subject land, however the impacted land is already environmentally constrained. The proposed lots created as a result of the boundary realignment provide a developable area outside of the odour contour. Landscaping is proposed surrounding the poultry farm pad to screen the sheds from the surrounding landscape. The SBEMP has identified that the facility can be operated as to ensure amenity issues can be managed. It is recommended that that alternative outcome be accepted in this instance.	

Agricultural land overlay code

Performance outcome	Acceptable outcome
PO1 Loss, fragmentation, alienation or diminished capacity of agricultural land is avoided unless: (a) an overriding need exists for the development in terms of public benefit; (b) no suitable alternative site exists; loss or fragmentation is minimised to the extent possible.	**Where for a material change of use in the Rural zone** **AO1.1** Development (inclusive of the *development footprint*) is not located on land identified as Agricultural land Class A or Class B or Important Agricultural Areas on the **Agricultural land overlay maps OM01a-b** unless identified in **Table 7.2.1.3.B**. **AO1.2** The *development footprint* for development other than *rural activities* identified in **Table 7.2.1.3.B** is equal to or less than 750m^2 on land identified as Agricultural land Class A or Class B or Important Agricultural Areas on the **Agricultural land overlay maps OM01a-b**.

	Where for Reconfiguring a Lot in the Rural zone **AO1.3** Reconfiguring a lot does not result in the creation of a lot with an area less than 100 hectares on land identified as Agricultural Land Class A or Class B or Important Agricultural Areas on the **Agricultural land overlay maps OM01a-b**.
Performance Outcome Assessment The poultry farm component of the development application is located outside the mapped agricultural land. The subject lots impacted by the mapped agricultural land already have an area less than 100 hectares. The rear of each of Lots 1 - 4 will contain class B Agricultural land classification, this land is contained within the flood plain. Lots 1 – 4 will also contain Important agricultural areas. Given the size of the current lots, it is considered that the agricultural land has already been fragmented and the outcome is acceptable in this circumstance. It is recommended that the alternative outcome be accepted in this instance.	

Biodiversity overlay code

Performance outcome	**Acceptable outcome**
Wetlands	
PO7 *Wetlands* are protected by: (a) maintaining adequate separation distances between *wetlands* and development; (b) maintaining and enhancing aquatic and terrestrial habitat including vegetated corridors to allow for native fauna (terrestrial and aquatic) movement; (c) maintaining water quality by providing buffers to allow filtering of sediments, nutrients and other pollutants; and (d) retaining and improving existing *wetland* associated vegetation. Note - A supporting Ecological Site Assessment is prepared in accordance with **SC6.1 - Planning Scheme Policy 1 – Ecological Site Assessment Guidelines**.	**AO7.1** No clearing of *native vegetation* is undertaken within wetland buffer areas identified on the **Biodiversity overlay maps OM003e-f**. **Where for *Material Change of Use*** **AO7.2** A minimum setback is provided between *buildings* and *structures* and the edge of a *wetland* as identified on the **Biodiversity overlay maps OM003e-f** by a distance not less than 100 metres. **Where for *Reconfiguring a Lot*** **AO7.3** A minimum setback is provided between a new boundary created by *reconfiguring a lot* and the edge of a *wetland* as identified on the **Biodiversity overlay maps OM003e-f** by a distance not less than 100 metres. **Where for *Operational Works* (comprising *works for infrastructure* or *excavating or filling* or *landscape works*)**

	AO7.4 A minimum setback is provided between *operational works* and the edge of a *wetland* as identified on the **Biodiversity overlay maps OM003e-f** by a distance not less than 100 metres.
Performance Outcome Assessment The proposed boundary realignment lot layout results in lot boundaries within 100 metres of the wetland. Notwithstanding this, a developable area for each lot has been provided which is in excess of 200 metres from the wetland. The separation of future development from the wetland will assist in providing adequate protection to the wetland. It is recommended that the alternative outcome be accepted in this instance.	

High Impact Activity Management Area overlay code

Performance outcome	Acceptable outcome
PO1 *High impact activities* in Somerset Region are appropriately located and operated to: (a) maintain the amenity of the *high impact activity management area*, having regard to the following: (i) air quality, including dust and odour; (ii) water quality; (iii) noise; and (iv) amenity considerations relevant to the *site*, locality and region; (b) protect the opportunity for the compact urban expansion of the towns of Esk, Fernvale, Kilcoy, Lowood and Toogoolawah and the possible future development of the Glamorgan Vale Urban Investigation Area, from the impacts of *high impact activities*; (c) protect opportunities for tourism development; and (d) contribute to the management of water quality in the regional water storages of Lake Somerset and Lake Wivenhoe.	**AO1.1** *High impact activities* located within the *high impact activity management area* as shown on the ***High impact activities management area overlay maps OM008a-b*** are supported by a detailed site analysis that confirms that the site is suitable for the proposed high impact activity in terms of effective buffering from sensitive uses and appropriate access to water.
Performance Outcome Assessment The subject land falls within the High Impact Activity Management Area and is in close proximity to a number of rural lifestyle allotments and rural residential lots. The application has been accompanied by an odour impact assessment which identifies that the 2.5ou contour does not impact on any surrounding sensitive receptors contained within surrounding properties.	

As discussed previously, originally the odour contour significantly impacted an adjoining property to the north of the subject land. While the contour did not impact on the dwelling house, it impacted on areas of the property that the landowner used daily for recreation purposes. The applicant as part of considering the submissions received during public consultation altered the shed design and provided an amended odour impact assessment which predominantly removed the odour contour from the adjoining northern property. The amended layout increased the amount of the contour that was contained within the subject land but did increase the impact on other adjoining properties. The impacted properties are already heavily constrained by environmental factors (flooding and wetland) and the imposition of the area of contour is not considered to have reduced the development potential for residential purposes.

The proposal is unique for the region in that it is capable of connecting to the reticulated water network. The reticulated water is expected to be stored within tanks on the site, as such ensuring a reliable source of water for the farm.

While the subject land is situation sleeved within two areas of higher density rural areas, the application has identified that the proposal can operate without adversely impacting on these areas.

It is recommended that the alternative outcome be accepted in this instance.

5.6.4 Overall outcome assessment

The proposal is considered to comply with all the relevant performance outcomes. As such, a detailed assessment of the overall outcomes was not required.

5.7 Local government infrastructure plan

5.7.1 Priority infrastructure area

The development land is not located within the priority infrastructure area as shown in the Local government infrastructure plan mapping.

5.7.2 Infrastructure charges

The proposed development is for Intensive animal industry (poultry farm) which is identified as being a high impact rural use under Somerset Regional Council Charges Resolution (No. 1) 2023.

The draft infrastructure charges notice is attached and includes charges for the networks identified in the below sections of this report.

5.7.3 Trunk infrastructure requirements

5.7.3.1 Water and sewerage networks

The application material has identified that the poultry farm will be connected via new connection to the existing reticulated water network. At a minimum, should the application be approved, Lot 5 (containing the poultry farm) will be required to be connected to the reticulated water network. Proposed Lots 1 – 4 will likely not require connection to the water network by Urban Utilities and any future dwellings on these lots will require on site provisions for potable water storage.

Infrastructure charges for the water and sewerage networks (where applicable) are managed by Urban Utilities separately from this development application.

5.7.3.2 Public parks and community land network

Infrastructure charges for the public parks and community land network are not applicable to the proposal as the proposal is outside of the relevant service catchments.

5.7.3.3 Stormwater network
Infrastructure charges for the stormwater network are not applicable as the site is located outside of the Urban Footprint.

5.7.3.4 Transport network
The proposed development is to accessed from Unnamed Road 5158 and Court Avenue North. A number of upgrades have been identified for these roads and also the intersection of Court Avenue and Brightview Road. If approved, the upgrade requirements are anticipated to be conditioned.

It is not anticipated that the development will adversely impact on the local road network.

An adopted charge for the transport network applies.

6.0 REFERRAL AGENCIES
6.1 Statutory referrals
In accordance with the *Planning Regulation 2017*, the application required referral to the State Assessment and Referral Agency (SARA) for matters relating to state-controlled roads. SARA advised that objections to the approval of the development application, subject to the imposition of development conditions. SARA's referral agency response will be attached to Council's decision notice and a copy has been attached to this report for Council's reference.

6.2 Third party advice
Council sought third-party advice from Lockyer Valley Regional Council given the proximity of the development to their region and also the potential impact on their road network.

Lockyer Valley Regional Council responded advising they had no objection as long as the development was conditioned to comply with the supporting information and associated plans. The Lockyer Valley Regional Council response is provided in the attachments to this report.

7.0 PUBLIC NOTIFICATION
7.1 Notification requirements
The application was subject to impact assessment, and public notification was required. The application was publicly notified in accordance with the requirements of the Development Assessment Rules as follows:

(a) Public notification was served to all adjoining landowners on 6 March 2023.
(b) A notice was published in The Lockyer Valley and Somerset Independent newspaper on 8 March 2023.
(c) A notice in the prescribed form was placed on the premises on 8 March 2023 and maintained for the minimum period of 15 business days until 30 March 2023.

Council received the Notice of Compliance on 31 March 2023, confirming that public notification had been undertaken in accordance with the statutory requirements.

7.2 Matters raised in submissions
During the public notification period, Council received 116 submissions, of which 97 were considered to be properly made.

The matters raised in the submissions are outlined below:

Submission concern – Odour impacts A number of submissions raised concerns about the odour impacts of the proposed development.
Officer comment

As discussed previously within the report, the application has provided an odour impact assessment which identifies that the 2.5ou contour does not impact on any existing sensitive receptors and the vacant land that is impacted is already impacted by environmental factors.

It is recommended that the standard development conditions be imposed.

Submission concern – Dust and air pollution
A number of submissions raised concerns about toxic dust and air pollution being caused by the farm and the potential impacts on community health.

Officer comment
As discussed previously, the application has been accompanied by supporting information which identifies that the farm can operate without dust causing unacceptable concerns.

The Site Based Environmental Management Plan (SBEMP) identifies that the dust records will be kept and the plan will be updated to mitigate any concerns raised as part of actual data collection. If approved, the SBEMP will conditioned.

It is recommended that the standard development conditions be imposed.

Submission concern – Increased vehicle movement
A number of submissions raised concerns regarding the increase in vehicle movements on the local road network.

Officer comment
The application material was accompanied by a Traffic Impact Assessment which identified the upgrades it considered to be required to ensure the local network was sufficiently designed to cater for the increased traffic. Council has reviewed this assessment and if approved, would require additional road upgrades to ensure the local network is appropriate.

The Department of Transport and Main Roads have also considered the development on a more macro scale and its likely impact on their road network and have provided conditions requiring upgrades where applicable.

It is recommended that the standard development conditions be imposed.

Submission concern – Potential environmental impacts
A number of submissions raised concerns regarding the proximity of the development to the wetlands and in particular the endangered Swamp Tea Tree and koala habitat.

Officer comment
The application has identified that the poultry farm will not impact on the wetland area and is located outside of the wetland buffer area. The SBEMP and Stormwater Management Plan highlight how the farm will operate to ensure that contaminants are not released from the development into the wetland and greater environment.

If approved, conditions will be imposed ensuring compliance with the associated documents and also appropriate stormwater outcomes are achieved.

The core koala habitat within the subject land is not proposed to be interfered with as part of the development.

It is recommended that the standard development conditions be imposed.

Submission concern – Animal welfare concerns
Concerns have been raised about the accelerated intensification of animal agriculture, and its acceptance of crowding, confinement, cruel breeding practices and poor welfare outcomes for farmed animals. The applicant wants to confine 50,000 chickens into each shed for the majority of their short 5-7 week lives.

The rapid growth that broiler chickens experience, as a result of selective breeding, also comes with extreme animal welfare issues. Normally, it would take a chicken around 96 days to reach 2kg in weight. However, selective breeding, along with artificial lighting means that chickens grow at 3x the natural rate.
Officer comment Poultry farms are generally managed by the RSPCA which ensures the welfare of birds is paramount. The application material identifies that this farm is intended to be accredited by the RSPCA, which will ensure a number of factors including density, animal enrichment activities, growing conditions etc. It is recommended that the standard development conditions be imposed.

8.0 OTHER RELEVANT MATTERS

8.1 Amendment to application material

As already discussed within this report, the application was altered as a response to dealing with submissions received during the public consultation process. The amendment did not involve an increase in the intensity of the development or its specific location on the site, but did involve a relocation of the fan positions, which altered the odour plume.

Given the impact of this change and the existing public awareness of the development it was not considered that the application needed to undertake any additional public consultation.

8.2 Reasonable expectations of the community

In determining whether a development is consistent with the reasonable expectations of the community, it is relevant to consider:

a) what are the expectations of the community;
b) the reasonableness of those expectations considering the planning provisions applying to the subject land; and
c) after the reasonable expectations are identified by following the first two steps, consideration of the extent to which those expectations are consistent with the proposed development.

The subject land is located in area that has contrasting land uses, which includes broadscale cropping and grazing but also areas of more dense rural development as part of historic subdivisions. A poultry farm development is appropriate within the rural area where the application can demonstrate that the proposal will not adversely affect the local community or the environment. In this instance, the development has been able to demonstrate that this is the case.

While the community expectations would be that the land be maintained as vacant grazing land, the application is considered to have demonstrated compliance with the planning scheme.

8.3 Public interest

It is acknowledged that the poultry industry generally contributes to the community by providing a protein product for consumption. The development application has provided sufficient evidence to support the proposal and demonstrated general compliance with the planning scheme.

While the contribution of the industry in relation to the greater community is noted, and in this instance the application has identified that generally the existing rural community will not adversely impacted.

8.4 Balanced decision advancing the *Planning Act 2016*

The *Planning Act 2016* requires that decision making process are ethical, and:

a) take into account short-term and long-term environmental effects;

b) applies precautionary principles to ensure that lack of scientific certainty doesn't result in serious or irreversible damage; and
c) provides for equity between present and future generations.

As discussed previously within this report, the proposal has demonstrated that the environmental impacts of the development can be appropriately managed with the imposition of reasonable and relevant conditions.

9.0 CONCLUSION

The proposed development involves a new poultry farm development for 400,000 birds across 8 sheds within the rural area of Brightview. The application also involves a boundary realignment to alter the boundary locations to ensure the poultry farm structures are not built over the boundaries and to ensure that all five lots have access to a gazetted road and developable area free of flood hazard.

The application has demonstrated general compliance with the planning scheme and is considered to be able to be conditioned to ensure ongoing operational matters are managed appropriately.

It is recommended that the application be approved, subject to the imposition of reasonable and relevant conditions, as outlined in the schedules and attachments.

10.0 ATTACHMENT

1. Locality Plan – Drawing No. ACS-210100-SITE-03 – Revision 3 – prepared by ACS Engineers – dated 8 August 2023
2. Site layout - Drawing No. ACS-210100-SITE-04 – Revision 3 – prepared by ACS Engineers – dated 8 August 2023
3. Shed Typical Sections - Drawing No. ACS-210100-SITE-06 – Revision 3 – prepared by ACS Engineers – dated 8 August 2023
4. Vegetation Environmental Buffer - Drawing No. ACS-210100-SITE-11 – Revision 3 – prepared by ACS Engineers – dated 8 August 2023
5. Stormwater Management Plan - Drawing No. ACS-210100-SITE-12 – Revision 3 – prepared by ACS Engineers – dated 8 August 2023
6. Stormwater Management Plan Report - 210100 Revision 1 – prepared by ACS Engineers – dated 2 November 2022
7. Erosion and Sediment Control notes and details - Drawing No. ACS-210100-SITE-13 and 14 – Revision 3 – prepared by ACS Engineers – dated 8 August 2023
8. Erosion and Sediment Control Plan - Drawing No. ACS-210100-SITE-15 – Revision 3 – prepared by ACS Engineers – dated 8 August 2023
9. Odour and overlay layouts - Drawing No. ACS-210100-SITE-16 – Revision 3 – prepared by ACS Engineers – dated 8 August 2023
10. Lot Reconfiguration Layout - Drawing No. ACS-210100-SITE-17 – Revision 3 – prepared by ACS Engineers – dated 8 August 2023
11. Site Based Environmental Management Plan – Reference No. 210100 – Revision 2 – prepared by ACS Engineers – dated 3 August 2023
12. Poultry farm odour assessment – Reference No. 21-209 – prepared by Astute Environmental – dated 1 November 2022
13. Poultry farm odour assessment – addendum – Prepared by Astute Environmental – dated 7 August 2023
14. SARA Concurrence Agency Assessment – Reference 2211-32171-SRA – dated 20 March 2023
15. Draft Infrastructure Charges Notice

RECOMMENDED DECISION

1. THAT Council approve Development Application No. 23169 for a Development Permit for:

a. Material Change of Use for an Intensive Animal Industry (poultry farm – maximum 400,000 birds)
b. Environmentally Relevant Activity – ERA 4(2) Poultry Farm >200,000 birds.
c. Reconfiguration of a Lot by Boundary realignment (five into five lots)

on land situated at 49 Court Avenue, Brightview, Un-named #5158 Road, Brightview and Stone Gully Road, Brightview, formally described as Lot 1 RP31160, Lot 2 RP31160, 4 RP32344, 40 SP199026 and Lot 41 SP199026, subject to the recommended conditions and requirements contained in the schedules and attachments to this report.

2. THAT the officer report for this application be published to the website as Council's Statement of Reasons in accordance with s63(5) of the *Planning Act 2016*.

DEVELOPMENT PERMIT MATERIAL CHANGE OF USE – Intensive Animal Industry		
SCHEDULE 1 – GENERAL CONDITIONS Assessment manager		
No.	**Condition**	**Timing**
GENERAL		
	Approved plans/documents	
1.1	Carry out the development generally in accordance with the material contained in the application, supporting documentation, and the approved plans and documents listed in the Table of Approved Plans and Documents (including where amended by Council), except where amended by these development conditions. 1. Locality plan – Drawing number ACS-210100-SITE-03 Revision 3 – prepared by ACS Engineers – dated 07/08/23 2. Site Layout - Drawing number ACS-210100-SITE-04 Revision 3 – prepared by ACS Engineers – dated 07/08/23 3. Bulk earthworks layout plan - Drawing number ACS-210100-SITE-05 Revision 3 – prepared by ACS Engineers – dated 07/08/23 4. Shed Typical Sections - Drawing number ACS-210100-SITE-06 Revision 3 – prepared by ACS Engineers – dated 07/08/23 5. Access Details - Drawing number ACS-210100-SITE-10 Revision 3 – prepared by ACS Engineers – dated 07/08/23 6. Vegetative Environmental Buffer - Drawing number ACS-210100-SITE-11 Revision 3 – prepared by ACS Engineers – dated 07/08/23 7. Stormwater Management Plan - Drawing number ACS-210100-SITE-12 Revision 3 – prepared by ACS Engineers – dated 07/08/23 8. Stormwater Management Plan Report - 210100 Revision 1 – prepared by ACS Engineers – dated 2 November 2022 9. Erosion and Sediment Control Notes - Drawing number ACS-210100-SITE-13 Revision 3 – prepared by ACS Engineers – dated 07/08/23 10. Erosion and Sediment Control Notes and Details - Drawing number ACS-210100-SITE-14 Revision 3 – prepared by ACS Engineers – dated 07/08/23 11. Erosion and Sediment Control – Plan - Drawing number ACS-210100-SITE-15 Revision 3 – prepared by ACS Engineers – dated 07/08/23 12. Odour & Overlays Layout - Drawing number ACS-210100-SITE-16 Revision 3 – prepared by ACS Engineers – dated 07/08/23	At all times.

	13. Site Based Environmental Management Plan – Reference No. 210100 – Revision 2 – prepared by ACS Engineers – dated 03/08/2023 14. Poultry farm odour assessment – Reference No. 21-209 – prepared by Astute Environmental – dated 1 November 2022 15. Poultry farm odour assessment – addendum – Prepared by Astute Environmental – dated 7 August 2023 16. Traffic Impact Assessment, titled "Brightview Poultry Farm" reference number 1504 version 2 prepared by PSA consultants dated 28 February 2023.	
	Availability of Development Approval	
1.2	A legible copy of this Development Approval, including the approved plans and documents bearing Council's stamp, must be available on the subject land for inspection.	During the construction phase.
	Comply with planning scheme and local laws	
1.3	The development must comply with the relevant provisions of the Somerset Region Planning Scheme (Version 4.2) and Local Laws, to the extent they have not been varied by this Development Approval.	At all times.
	Pay outstanding rates and charges	
1.4	Pay to Council any outstanding rates or charges or expenses that are a charge over the subject land levied by Council, including any charges that are levied but not fully paid over the subject land.	Prior to the commencement of the use.
	No cost to Council	
1.5	All development conditions of this Development Approval must be complied with at no cost to Council unless stated otherwise in any specific condition of approval.	At all times.
	Repair damage caused by development	
1.6	Repair any damage to existing infrastructure (e.g. kerb and channel, footpath, or roadway) that may have occurred as part of the development. Any damage that is deemed to create a hazard to the community must be repaired immediately.	At all times.
	Bird numbers	
1.7	The maximum number of birds to be housed at any one time is 400,000 birds, with a maximum of 50,000 birds permitted in each shed.	At all times.
	Farm operation	
1.8	The poultry farm is to operate as a conventional broiler farm.	At all times.
	Landscaping	
1.9	Provide landscaping onsite in accordance with Vegetative Environmental Buffer – Drawing No. ACS-210100-SITE-11 Revision 3 – dated 07/08/23.	Prior to the commencement of

		use and to be maintained.
1.10	The Vegetative Environmental Buffer is to act as a vegetation screen to surrounding the subject land.	Prior to the commencement of use and to be maintained.
1.11	Provide certification, from a suitably qualified person, that landscaping has been implemented in accordance with condition 1.9 of this condition.	Prior to the commencement of use.
	Reticulated drinking water	
1.12	The development is to ensure a suitable supply of potable water is provided to meet the overall needs to the development.	Prior to the commencement of the use and to be maintained.
1.13	Connect the development to the reticulated drinking water network in accordance with the standards and requirements of the South East Queensland Distributor-Retailer Authority, trading as Urban Utilities.	Prior to the commencement of the use and to be maintained.
1.14	Provide written evidence (e.g. connection certificate) from Urban Utilities that the development has been connected to the reticulated network and that all requirements of Urban Utilities have been satisfied.	Prior to the commencement of the use.
	Shed design	
1.15	Construct the poultry sheds using colours, materials and finishes that are non-reflective, do not produce glare and incorporate natural tones of greens, greys and browns to be compatible with the surrounding character.	Prior to commencement of use and to be maintained.
1.16	The sheds are be orientated so that the fan ends of the sheds are located towards the south-west.	Prior to commencement of use and to be maintained.
	Emergency Management Plan	
1.17	Submit to and obtain approval from Council an Emergency Management Plan prepared by a suitably qualified person that addresses the flooding risk present in the locality and how the development will function during flood events.	Prior to commencement of use.
1.18	Implement the requirements and recommendations of the approved Emergency Management Plan.	Prior to commencement of use and to be maintained.

	Period to complete development	
1.19	Council must approve the related Boundary realignment Application to approve Plan of Subdivision and the survey plan must be endorsed by Titles Queensland prior to the commencement of the Intensive Animal Industry (poultry farm). OR All lots the subject of the application must be amalgamated prior to commencement of the Intensive Animal Industry (poultry farm).	As indicated.

SCHEDULE 2 – ENGINEERING Assessment manager		
No.	**Condition**	**Timing**
2.1	Make an Operational Work application to Council and pay the required fees where an application involves earthworks, erosion and sediment control, roadworks, car parks, landscaping, clearing and stormwater drainage required as stated in the following conditions.	Prior to the commencement of Operational Work.
2.2	All works are to be designed and constructed in accordance with the requirements of the *Somerset Regional Council Planning Scheme.*	At all times.
2.3	Bear the costs of works carried out to Council and utility services infrastructure and assets, including any alterations and repairs resulting from compliance with these conditions.	At all times.
2.4	It is required that the design and construction of civil components of the Operational Work are to be certified by a Registered Professional Engineer Queensland (RPEQ), including: • Plans and specifications must be prepared and certified with the Operational Work application. • Certification that the works have been undertaken in accordance with the approved plans, specifications and to Council's requirements.	Prior to Compliance Assessment.
2.5	Obtain Council approval for the demolition or removal of any existing buildings on site necessary for the approved development to proceed.	As part of Operational Works.
	EARTHWORKS	
2.6	All earthworks to be constructed in accordance with AS3798. Fill material is to be placed, compacted, and tested by a suitably qualified inspection and testing organisation.	At all times.
2.7	Rehabilitation of dam sites, including methods of construction, management and supervision is to ensure that the site will be suitable for the proposed use. Test results as required and a certificate of quality and uniformity is to be provided by a Registered Professional Engineer Queensland (RPEQ).	Prior to commencement of use.

2.8	Contaminated material must not be used as fill on the site. Any filling must be undertaken using inert materials only.	At all times.
2.9	Any fill, cut and other stored material must be contained within properties comprising the development application. Fill cannot be placed on adjacent properties without providing Council with written permission from the respective property owner(s).	At all times.
	ROADWORKS	
2.10	All works on or adjacent to roadways must be adequately signed in accordance with the "*Austroads Guide to Temporary Traffic Management*". Any Road or lane closure must be applied for in writing to Council, and all conditions of that approval complied with during construction of the works.	Prior to commencement of and during construction of works.
2.11	Intersection of Brightview Road and Court Avenue North is to be constructed to provide a sealed rural road, with sufficient sealed area to allow for the turning manoeuvres of B-Double vehicles.	Prior to Operational Works.
2.12	Provide written approval from the Department of Transport and Main Roads to carry out works on a state controlled road.	Prior to Operational Works.
2.13	Court Avenue North is to be constructed to provide a sealed rural road, with 4m seal and 9m formation in accordance with Somerset Regional Council design standards and drawing SRC-ROAD-009 between Brightview Road intersection and Un-named Road 5158.	As part of Operational Works.
2.14	Un-named Road 5158 is to be constructed to provide a sealed rural road, with 4m seal and 9m formation in accordance with Somerset Regional Council design standards and drawing SRC-ROAD-009 between Court Avenue North intersection and property access. **OR** If the lots are amalgamated rather than the boundary realignment be completed; access to the Intensive Animal Industry (poultry farm) is to be provided via an internal driveway directly to Court Avenue North, with no access provided to Un-named Road 5158.	Prior to commencement of the Intensive animal industry (poultry farm) use.
2.15	Intersection of Court Avenue North and Un-named Road 5158 is to be constructed to provide a sealed rural road, with sufficient sealed area to allow for the turning manoeuvres as shown on PSA consultants Traffic Impact Assessment, titled "Brightview Poultry Farm" reference number 1504 version 2 and dated 28 February 2023.	As part of Operational Works.
	VEHICLE ACCESS	
2.16	The landowner is responsible for construction and maintenance of vehicular access for the property, from the road carriageway to property boundary in accordance with *Somerset Regional Council*	At all times.

	Planning Scheme. Approval is to be sought from Council and the landowner must advise all potential purchasers accordingly.	
2.17	All vehicles shall enter and leave the site in a forward gear.	At all times.
	STORMWATER	
2.18	Ensure Stormwater drainage is delivered to a lawful point of discharge.	At all times.
2.19	Stormwater drainage and flows are to have no increase in peak discharge immediately downstream of this development for a selected range of storm durations, and a selected range of AEP's up to the defined flood event.	At all times.
2.20	Stormwater drainage and flows are to have no actionable nuisance effect on adjoining, upstream, or downstream landholders.	At all times.
2.21	Stormwater drainage and flows are to have no increase in flood levels on adjoining land that may damage or adversely effect the value or potential use of the land.	At all times.
2.22	Design and construction of all stormwater drainage works must comply with the relevant section/s of the Queensland Urban Drainage Manual (QUDM) and the *Somerset Regional Council Planning Scheme*.	As part of Operational Works.
2.23	Stormwater Drainage shall be constructed in general accordance with ASC Engineers, Stormwater Management Plan, titled "Proposed Poultry Farm, Prepared for: LL & Son Pty Ltd, Court Avenue North, Brightview, QLD" and dated 23 February 2023, Ref 210100.	As part of Operational Works.
2.24	Attenuate the difference between pre and post developed flows.	As part of Operational Works.
2.25	Convey stormwater flows through the development from the upstream catchment.	As part of Operational Works.
2.26	Adjoining properties and roadways to the development are to be protected from ponding or nuisance from stormwater as a result of any site works undertaken as part of the proposed development.	Prior to Council's endorsement of the Plan of subdivision.
2.27	Containments or contaminated water must not be directly or indirectly released from the Premises to surface water or groundwater at or outside the premises except for: (a) uncontaminated overland stormwater flow; or (b) uncontaminated stormwater to the stormwater system.	At all times.
	STORMWATER RE-USE	
2.28	The development must incorporate a stormwater re-use system	Prior to

	utilizing stormwater detention structures and/or tanks to ensure water is re-used throughout the site to supply dust suppression and the like in general accordance with ASC Engineers, Stormwater Management Plan, titled "Proposed Poultry Farm, Prepared for: LL & Son Pty Ltd, Court Avenue North, Brightview, QLD" and dated 23 February 2023, Ref 210100.	commencement of use.
	EROSION AND SEDIMENT CONTROL	
2.29	Erosion and sedimentation controls shall be implemented, as necessary, and shall be maintained to Council's satisfaction at all times during the course of the project. Should Council determine that proposed controls are ineffective or a downstream drainage system has become silted, the developer will: • Be required to install additional measures. • Be responsible for the restoration work. Should the developer fail to complete the works determined by Council within the specified time, the Council will complete the work and recover all costs from the developer associated with the work.	At all times.
2.30	Measures shall be applied to prevent site vehicles tracking sediment and other pollutants onto adjoining streets during the course of the project, and to prevent dust nuisance.	At all times.
2.31	Prepare an Erosion and Sediment Control Plan designed by a Registered Professional Engineer Queensland (RPEQ) and Certified Professional in Erosion & Sediment Control (CPESC). Implement all relevant sediment and erosion control measures and temporary fencing as identified on the approved engineering drawings as part of the operational works. All sediment control devices and sediment collection points shall be regularly monitored, sediment removed as necessary and devices maintained responsibly during construction and maintenance period of the development works.	As part of the lodgement of the Operational Works application.
2.32	All wastes to be managed in accordance with the relevant legislation and regulations with regulated waste to be disposed of at a licensed facility and general solid waste to be disposed of at approved landfill sites with the contractor covering all costs incurred for the receipt and management of the waste.	At all times.
2.33	Where vegetation is removed, the vegetation waste shall be disposed of by: i) Milling; ii) Chipping and/or mulching iii) Disposal at an approved waste disposal facility. iv) Burning provided fire permits are in place. Waste other than vegetation waste, generated as a result of the operations shall be disposed of to an approved disposal facility.	At all times.

2.34	All declared weeds and pests are to be removed from the subject land and kept clear of such nuisance varieties during the course of operations.	At all times.
2.35	Apart from declared weeds and pests, areas with trees, shrubs and landscaping currently existing on the subject land must be retained where possible and action taken to minimize disturbance during construction work.	As part of Operational Works.
SCHEDULE 3 - ENVIRONMENTAL		
No	**Condition**	**Timing**
	General	
3.1	Notwithstanding any other condition of this development approval, this development approval does not authorise any release of contaminants that causes, or is likely to cause, an environmental nuisance or harm beyond the boundaries of the development site.	At all times.
3.2	No change, replacement or operation of any plant or equipment is permitted if the change, replacement or operation of the plant or equipment increases, or is likely to substantially increase, the risk of environmental harm.	At all times.
3.3	The approved use shall not cause any adverse impact on the amenity of the neighbourhood by the emission of noise, vibration, odour, glare, fumes, smoke, vapour, steam, soot, ash, dust, waste water, waste products, grit, oil or otherwise.	At all times.
3.4	The approval holder must not implement any management plan prepared as a condition of this development permit, or amend any management plan, where such implementation or amendment would result in a contravention of any condition of this development approval.	At all times.
	Site Based Environmental Management Plan	
3.5	A Site Based Environmental Management Plan (SBEMP) must be prepared and submitted to Council for approval. The SBEMP must address the following matters: ▪ Environmental commitments – a commitment by senior management to achieve environmental goals. ▪ Identification of environmental issues and potential impacts covering at least air quality, water quality, land degradation and contamination as well as waste management. ▪ Control measures for design, construction and routine operations to minimise the likelihood of causing environmental harm. ***Note - These should include:*** ▪ References to the location and extent of the area affected by site activities as shown on the plan of development. ▪ Procedures to be implemented to effect environmental	Prior to commencement of the use.

	management such as shed washing/ disinfecting and collection of waste water and so on. ▪ Facilities for the storage of fuels, chemicals, and other potential contaminants. ▪ Contingency plans and emergency procedures for non-routine situations. ▪ Organisational structure and responsibility. ▪ Effective communication. ▪ The monitoring of releases of contaminants into the environment. ▪ Conducting environmental impact assessment of any releases. ▪ Staff training, in particular, the promotion of awareness of environmental issues and the prevention of adverse environmental impacts from the operations of the approved development. ▪ Record keeping. ▪ The periodic review of environmental performance and continual improvement. A copy of the Site Based Environmental Management Plan approved pursuant to this condition must be kept at the approved place and be made available to all employees and an authorised officer of Council, upon request by an employee or that officer.	
3.6	The development is to comply with the Site Based Environmental Management Plan.	At all times.
	Review of Site Based Environmental Management Plan	
3.7	The approved Site-Based Management Plan must provide provisions for a review of this Plan to be carried out at least: a) immediately after potential or actual source of environmental contamination, that is not already identified in the Plan, is realised; or otherwise b) every two years after the commencement of the use. Changes, to procedures and operations for carrying out the approved development realised by any review process, must be implemented immediately.	At all times.
	Lighting	
3.8	Light sources must be positioned and shielded, when necessary, to prevent light spillage causing a nuisance to any other premises outside the boundaries of the property to which this development permit relates.	At all times.
	Noise	
3.9	The approval holder must ensure: a) Vehicle and forklift manoeuvring areas and access roads are to be well maintained with minimal obstacles which may cause loads to react (i.e. speed bumps, pot holes and grates); b) Care is taken during loading and unloading of trucks	At all times.

	during catch out to reduce the impacts on surrounding properties; c) Regular and effective maintenance of stationary and mobile equipment is to be undertaken to ensure acoustic outputs are maintained.	
3.10	All onsite roads must be well maintained to minimise truck bounce as they move around the site. Vehicles using internal roads must be limited to 20km/hr.	At all times.
3.11	Mechanical plant must be designed and installed to comply with the nose criterion presented in condition 2.13.	At all times.
3.12	Noise Levels at a Noise Sensitive Place Measured as the Adjusted Maximum Sound Pressure Level $L_{Amax\ adj,T}$ Period Background noise level plus 5 dB(A) 7 am – 6 pm Background noise level plus 5 dB(A) 6 pm – 10 pm Background noise level plus 3 dB(A) 10 pm – 7 am Noise Levels at a Commercial Place Measured as the Adjusted Maximum Sound Pressure Level $L_{Amax\ adj,\ T}$ Period Background noise level plus 10 dB(A) 7 am – 6 pm Background noise level plus 10 dB(A) 6 pm – 10 pm Background noise level plus 8 dB(A) 10 pm – 7 am	At all times.
	Noise levels – monitoring and recording	
3.13	When requested by Council, monitoring and recording of noise levels must be undertaken to investigate any non-vexatious or frivolous complaint caused by noise emissions from operations at the premises. Such monitoring must be undertaken within a reasonable and practicable timeframe nominated by the Council and be carried out by a suitably qualified and experienced person. Once completed, the results of such monitoring must be submitted to the Council for review and any recommendations made in the report implemented.	At all times.
	Deceased Birds	
3.14	All deceased birds from the poultry farm shall be: • Where required to be stored on site, held under refrigeration at a temperature of no greater than 5 Degrees Celsius. • Not be stored on site for greater than 7 days; • Transported from site by an approved waste transporter; • Disposed of at an approved disposal or treatment facility.	At all times.
	Dust	
3.15	Dust and particulate matter must not exceed the following levels when measured at any nuisance sensitive or commercial place, namely –	At all times.

	Dust deposition of 120 milligrams per square metre per day, when monitored in accordance with Australian Standard 3580.10.1 – 2003 or more recent edition; OR A concentration of particulate matter with an aerodynamic diameter of less than 2.5 micrometres ($PM_{2.5}$) suspended in the atmosphere of 25 micrograms per cubic metre over a 24 hour averaging time each year, at a nuisance sensitive or commercial place downwind of the site, when monitored in accordance with Australian Standard 3580.9.10 – 2006 (or more recent edition) "Ambient air – Particulate matter – Determination of suspended particulate $PM_{2.5}$ low-volume sampler with size selective inlet – Gravimetric method" or Australian Standard 3580.9.7 – 2009 (or more recent edition) OR "Ambient air – Particulate matter - Determination of suspended particulate matter – Dichotomous sampler (PM_{10} and $PM_{2.5}$) – Gravimetric method. OR Any alternative method of monitoring PM_{10} which may be permitted by the "Air Quality Sampling Manual" as published from time to time by the Department of Environment and Heritage Protection.	
	Waste	
3.16	Waste must not be: • burnt or buried at or on the development site; nor • allowed to be burnt or buried at or on the development site; nor • removed from the development site and burnt elsewhere • stockpiled on the development site; nor processed on the development site unless permitted under an approved management plan under a condition of this approval.	At all times.
	Contaminants	
3.17	Contaminants must not be directly or indirectly released from the development site to surface waters or the bed and banks of any surface waters except as permitted under an approved management plan under a condition of this approval.	At all times.

SCHEDULE 4 – REFERRAL AGENCY RESPONSES		
Pursuant to section 62 of the *Planning Act 2016*, the following referral agency responses have been received and are attached to the Decision Notice.		
No.	**Condition**	**Timing**
	State Assessment and Referral Agency response	
4.1	Comply with the requirements of the referral agency response 2211-32171 SRA dated 20 March 2023, or as amended.	As indicated on the referral agency response.

4.2	Provide certification to Council from a suitably qualified person or the relevant agency demonstrating that the requirements of the referral agency response have been met.	Prior to the commencement of the use.

SCHEDULE 5 – ADVICE Assessment manager	
No.	**Advice**
	Notes and advice notes
5.1	Notes contained within a development condition are part of the condition. Advice notes contained within a development condition are not part of the condition and are provided for additional guidance specific to the condition. Advice statements contained within this schedule are provided for guidance about the development. Advice statements are not exhaustive and are provided to assist applicants in meeting their obligations under other instruments.
	Aboriginal Cultural Heritage
5.2	The *Aboriginal Cultural Heritage Act 2003* establishes a Duty of Care for Indigenous Cultural Heritage. This applies on all land and water, including freehold land. The Cultural Heritage Duty of Care lies with the person or entity conducting an activity. Penalty provisions apply for failing to fulfil the Cultural Heritage Duty of Care. Persons proposing an activity that involves additional surface disturbance beyond that which has already occurred at the proposed site need to be mindful of the Cultural Heritage Duty of Care requirement. Details on how to fulfil the Cultural Heritage Duty of Care are outlined in the Cultural Heritage Duty of Care Duty Guidelines gazetted with the Act. Council strongly advises that you obtain a copy of the Cultural Heritage Duty of Care Guidelines and seek further information on the responsibilities of proponents under the terms of the current Aboriginal Cultural Heritage Act. Information about the cultural heritage duty of care is available at qld.gov.au/firstnations/environment-land-use-native-title/cultural-heritage/cultural-heritage-duty-of-care
	Fire ants
5.3	Parts of the Somerset Region are within Fire Ant Biosecurity Zones. If you are working with organic materials, you are legally obliged to check the fire ant biosecurity zones and use fire ant-safe practices before moving them to a new location (*Biosecurity Regulation 2016*). If you are unable to do so, you must apply for a biosecurity instrument permit. Penalties can also apply to individuals and businesses that do not use fire ant-safe practices before moving materials. It is a legal obligation to report any sighting or suspicion of fire ants within 24 hours to Biosecurity Queensland on 13 25 23.

	The Fire Ant Biosecurity Zones as well as general information can be viewed on the DAF website www.daf.qld.gov.au/fireants
	Infrastructure charges
5.4	An Infrastructure Charges Notice accompanies this Development Approval and Levied Charges are applicable. Details of the current value of the Levied Charge, how the Levied Charges were calculated, how the Levied Charge may be escalated, and when payment of the Levied Charge is required can be found on the Infrastructure Charges Notice or the accompanying information notice. From 1 July 2014, Infrastructure Charges related to the water supply and wastewater network are given by and paid to the South East Queensland Distributor-Retailer Authority, trading as Urban Utilities, and are separate from this Development Approval and the accompanying Infrastructure Charges Notice. Additional advice about the Infrastructure Charges Notice may be sought from Council's planning section, on (07) 5424 4000 or mail@somerset.qld.gov.au.
	Water supply and wastewater
5.5	Authorisation to connect the approved development to the water supply and wastewater networks and for property service connections require a Water Approval from the South East Queensland Distributor-Retailer Authority, trading as Urban Utilities. For the approval of a Plan of Subdivision, written evidence from Urban Utilities must be provided to Council to verify that the conditions of any necessary Water Approval have been complied with.
	Building works
5.6	This Development Approval for material change of use does not include an approval for the change of classification or for the commencement of building works under the *Building Act 1975*. A separate building development approval may be required for change of classification or commencement of building works under the *Building Act 1975*. Advice should be sought from a Building Certifier (either through a private certification company or through Council's building section) about further development approvals for building works.
	Advertising devices
5.7	This Development Approval does not authorise the installation of advertising devices. Advertising devices (other than billboards or where particular overlays apply) are governed by Council's *Local Law No. 1 (Administration) 2011* and *Subordinate Local Law No. 1.4 (Installation of Advertising Devices) 2011*. Advertising devices, other than 'permitted advertisements' (as that term is defined in the subordinate local law), require Local Law Approval prior to installation.
	Property access application
5.8	The application form for a property access approval may be downloaded from Council's website at somerset.qld.gov.au/our-services/roads. The landowner must have the property access approval in place prior to commencing works on the crossover.
	Vegetation clearing

5.9	Clearing native vegetation, including native vegetation that is a koala habitat, may require additional permits or notifications that are outside of this Development Approval. The landowner is responsible for ensuring that any clearing undertaken complies with requirements of any State or Federal agencies.	
DEVELOPMENT PERMIT FOR RECONFIGURING A LOT (BOUNDARY REALIGNMENT)		
SCHEDULE 1 – GENERAL CONDITIONS Assessment manager		
No.	**Condition**	**Timing**
GENERAL		
	Approved plans/documents	
1.1	Carry out the development generally in accordance with the material contained in the application, supporting documentation, and the approved plans and documents listed in the Table of Approved Plans and Documents (including where amended by Council), except where amended by these development conditions. 1. Access Details - Drawing number ACS-210100-SITE-10 Revision 3 – prepared by ACS Engineers – dated 07/08/23 2. Stormwater Management Plan - Drawing number ACS-210100-SITE-12 Revision 3 – prepared by ACS Engineers – dated 07/08/23 3. Erosion and Sediment Control Notes - Drawing number ACS-210100-SITE-13 Revision 3 – prepared by ACS Engineers – dated 07/08/23 4. Erosion and Sediment Control Notes and Details - Drawing number ACS-210100-SITE-14 Revision 3 – prepared by ACS Engineers – dated 07/08/23 5. Erosion and Sediment Control – Plan - Drawing number ACS-210100-SITE-15 Revision 3 – prepared by ACS Engineers – dated 07/08/23 6. Odour & Overlays Layout - Drawing number ACS-210100-SITE-16 Revision 3 – prepared by ACS Engineers – dated 07/08/23 7. Lot Reconfiguration Layout - Drawing number ACS-210100-SITE-17 Revision 3 – prepared by ACS Engineers – dated 07/08/23	At all times.
	Availability of Development Approval	
1.2	A legible copy of this Development Approval, including the approved plans and documents bearing Council's stamp, must be available on the subject land for inspection.	During the construction phase.
	Comply with planning scheme and local laws	
1.3	The development must comply with the relevant provisions of the Somerset Region Planning Scheme (Version 4.2) and Local Laws, to the extent they have not been varied by this Development Approval.	At all times.

	Pay outstanding rates and charges	
1.4	Pay to Council any outstanding rates or charges or expenses that are a charge over the subject land levied by Council, including any charges that are levied but not fully paid over the subject land.	Prior to the request for approval of the Plan of Subdivision.
	No cost to Council	
1.5	All development conditions of this Development Approval must be complied with at no cost to Council unless stated otherwise in any specific condition of approval.	At all times.
	Repair damage caused by development	
1.6	Repair any damage to existing infrastructure (e.g. kerb and channel, footpath, or roadway) that may have occurred as part of the development. Any damage that is deemed to create a hazard to the community must be repaired immediately.	At all times.
	Survey marks	
1.7	A Registered Cadastral Surveyor must install new Survey Marks in their correct positions in accordance with the Plan of Subdivision and the endorsement of the work must be certified in writing.	Prior to the request for approval of the Plan of Subdivision.
	Valuation	
1.8	Pay to Council the applicable amount at the time of request for plan of subdivision endorsement for the issue of new valuations by the Department of Resources. Currently, the amount is set at $44.00 per allotment.	Prior to the request for approval of the Plan of Subdivision.
SCHEDULE 2 - PERIODS FOR THE APPROVAL		
	Period to complete development	
2.1	Council must approve the Application to approve Plan of Subdivision for the boundary realignment and the survey plan must be endorsed by Titles Queensland prior to the commencement of the Intensive Animal Industry (poultry farm) also approved by this development permit.	As indicated.
SCHEDULE 3 - PROPERTY ACCESS (PROPOSED LOTS 1 TO 4)		
	Landowners responsible for access	
3.1	The landowner is responsible for construction and maintenance of vehicular access for the property, from the road carriageway to property boundary in accordance with *Somerset Region Planning Scheme*.	At all times.
	Property access application required	

3.2	Make a property access application to Council, and pay the required fees, for the new property access (crossover).	Prior to commencement of access works.
3.3	Construct new the property access (crossover) as detailed in this Development Approval and the Property Access Approval.	Prior to the request for approval of the Plan of Subdivision.
SCHEDULE 4 - SERVICES AND CONNECTIONS		
	Reticulated drinking water	
4.1	As a minimum, connect Lot 5 to the reticulated drinking water network in accordance with the standards and requirements of the South East Queensland Distributor-Retailer Authority, trading as Urban Utilities.	Prior to the request for approval of the Plan of Subdivision.
4.2	Provide written evidence (e.g. connection certificate) from Urban Utilities that a minimum of proposed Lot 5 has been connected to the reticulated network and that all requirements of Urban Utilities have been satisfied.	As part of the request for approval of the Plan of Subdivision.
	Services to remain within lots	
4.3	Provide certification from a Registered Cadastral Surveyor that all services (for example, water, wastewater, drainage, electricity, telecommunications) are wholly contained within the lot that they serve. OR Provide written evidence from a relevant service provider that any connection that is not wholly contained within a lot is acceptable to the relevant service provider (for example, by use of wayleave or easement). A copy of any relevant wayleave or easement document (or similar) must be attached to the request for approval of the Plan of Subdivision.	As part of the request for approval of the Plan of Subdivision.
	Remove redundant services	
4.4	Remove any services made redundant as a result of the development and reinstate the land.	Prior to the request for approval of the Plan of Subdivision.
	Reticulated electricity and telecommunications	
4.5	As a minimum connect proposed Lot 5 to the reticulated electricity and telecommunications networks to the standards of the relevant service provider. Where proposed allotments front existing overhead electricity or telecommunication service, the development may connect direct to such service to the approval and requirements of the service provider.	Prior to the request for approval of the Plan of Subdivision.

4.6	Provide written evidence (e.g. certificate of supply or agreement) from the relevant service provider that a minimum of Lot 5 has been connected to the reticulated networks, connection is available at a standard connection, or has a current supply agreement.	As part of the request for approval of the Plan of Subdivision.
SCHEDULE 5 - ROADWORKS		
5.1	All works on or adjacent to roadways must be adequately signed in accordance with the "*Austroads Guide to Temporary Traffic Management*". Any Road or lane closure must be applied for in writing to Council, and all conditions of that approval complied with during construction of the works.	Prior to commencement of and during construction of works.
5.2	Court Avenue North is to be constructed to provide a sealed rural road, with 4m seal and 9m formation in accordance with Somerset Regional Council design standards and drawing SRC-ROAD-009 between Brightview Road intersection and Un-named Road 5158.	As part of Operational Works.
5.3	Un-named Road 5158 is to be constructed to provide a gravel rural road, in accordance with Somerset Regional Council design standards and drawing SRC-ROAD-009 between Court Avenue North intersection and property access.	As part of Operational Works and completed prior to lodgement of the Application to Approve Plan of Subdivision.
5.4	Intersection of Court Avenue North and Un-named Road 5158 is to be constructed to provide a sealed rural road, with sufficient sealed area to allow for the turning manoeuvres as shown on PSA consultants Traffic Impact Assessment, titled "Brightview Poultry Farm" and dated 28 February 2023.	As part of Operational Works.
SCHEDULE 6 - EARTHWORKS		
6.1	Any dams located outside the wetland buffer that are across proposed lot boundaries shall be removed.	Prior to Council's endorsement of the Plan of subdivision.
6.2	Any fill, cut and other stored material must be contained within properties comprising the development application. Fill cannot be placed on adjacent properties without providing Council with written permission from the respective property owner(s).	At all times.
6.3	Contaminated material must not be used as fill on the site. Any filling must be undertaken using inert materials only.	At all times.

SCHEDULE 7 – ADVICE *Assessment Manager*
This approval has effect in accordance with the provisions of section 71 of the *Planning Act 2016. [A copy of section 71 will be enclosed with the Decision Notice]*

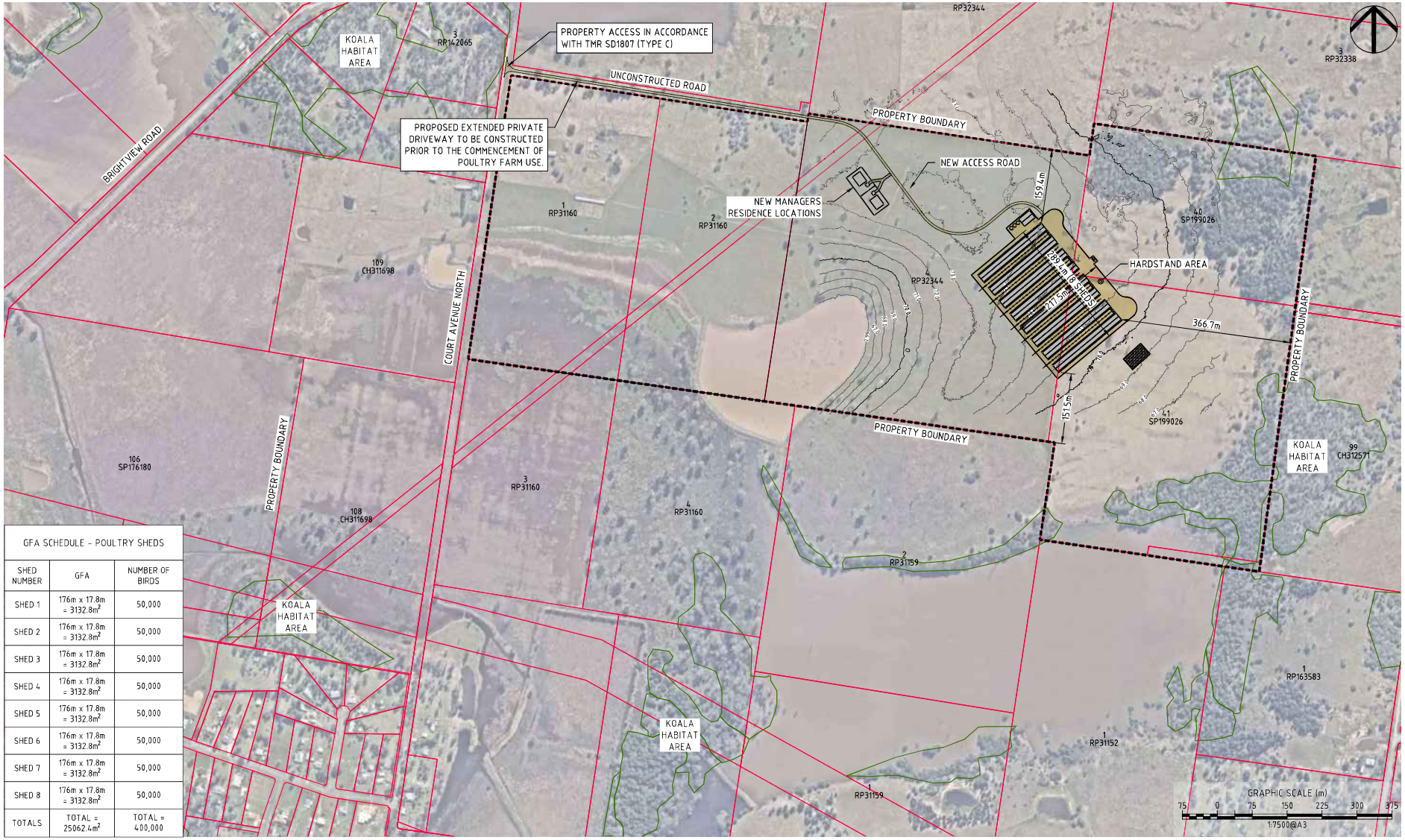
Currency Period - Pursuant to section 85 of the *Planning Act 2016* the approval will lapse if the plan of subdivision is not provided to the local government within the 'currency period' – being four (4) years starting the day the approval takes effect.
The applicant may make representations (change representations) about a matter in this development application within the applicant's appeal period under the process established in chapter 3, part 5, subdivision 1 of the *Planning Act 2016.*
The *Planning Act 2016* provides for a person to make a change to this development application outside the applicant's appeal period, following the process outlined in chapter 3, part 5, subdivision 2 of the Act.
This development approval is for the proposed development only. Any additional uses/structures, if triggers assessable development, may require their own planning approval and will be assessed on its own merits.
Biosecurity Queensland should be notified on 13 25 23 of proposed development(s) occurring in the Fire Ant Restricted Area before earthworks commence. It should be noted that works involving movements of soil associated with earthworks may be subject to movement controls and failure to obtain necessary approvals from Biosecurity Queensland is an offence. It is a legal obligation to report any sighting or suspicion of fire ants within 24 hours to Biosecurity Queensland on 13 25 23. The Fire Ant Restricted Area as well as general information can be viewed on the DAF website www.daf.qld.gov.au/fireants
All works shall be carried out in accordance with the *Workplace, Health and Safety Act (as amended)* and the *workplace Health and Safety Regulation (as amended).*
Upon receiving the certification by a RPEQ, and submission and approval of as constructed drawings and documentation, Council will accept the works as "On Maintenance". Council will bond the developer for an amount equal to 5% of the operational works and the Developer is required to maintain all works for a period of 12 months for civil works and 18 months for landscaping (maintenance period) from the date of "On Maintenance". Any defective works must be rectified within the maintenance period. At the end of the maintenance period the works shall be inspected and if satisfactory, shall be placed "Off Maintenance". Bonds or other securities will be released after the works have been placed "Off Maintenance".
The Plan of Subdivision will not be released until all works are completed to Council's satisfaction or uncompleted works are suitably bonded.
The Applicant has the Right of Appeal to the Planning and Environment Court regarding the conditions of this approval. Should the Applicant notify Council in writing that the conditions of approval are accepted without dispute and that the right of appeal to the Court will not be exercised, the Decision Notice may be taken to be the development permit.

Attachments for the Decision Notice include:

Carry out the development generally in accordance with the material contained in the application, supporting documentation, and the approved plans and documents listed in the Table of Approved Plans and Documents (including where amended by Council), except where amended by these development conditions.

1. Locality plan – Drawing number ACS-210100-SITE-03 Revision 3 – prepared by ACS Engineers – dated 07/08/23
2. Site Layout - Drawing number ACS-210100-SITE-04 Revision 3 – prepared by ACS Engineers – dated 07/08/23
3. Bulk earthworks layout plan - Drawing number ACS-210100-SITE-05 Revision 3 – prepared by ACS Engineers – dated 07/08/23
4. Shed Typical Sections - Drawing number ACS-210100-SITE-06 Revision 3 – prepared by ACS Engineers – dated 07/08/23
5. Access Details - Drawing number ACS-210100-SITE-10 Revision 3 – prepared by ACS Engineers – dated 07/08/23
6. Vegetative Environmental Buffer - Drawing number ACS-210100-SITE-11 Revision 3 – prepared by ACS Engineers – dated 07/08/23
7. Stormwater Management Plan - Drawing number ACS-210100-SITE-12 Revision 3 – prepared by ACS Engineers – dated 07/08/23
8. Stormwater Management Plan Report - 210100 Revision 1 – prepared by ACS Engineers – dated 2 November 2022
9. Erosion and Sediment Control Notes - Drawing number ACS-210100-SITE-13 Revision 3 – prepared by ACS Engineers – dated 07/08/23
10. Erosion and Sediment Control Notes and Details - Drawing number ACS-210100-SITE-14 Revision 3 – prepared by ACS Engineers – dated 07/08/23
11. Erosion and Sediment Control – Plan - Drawing number ACS-210100-SITE-15 Revision 3 – prepared by ACS Engineers – dated 07/08/23
12. Odour & Overlays Layout - Drawing number ACS-210100-SITE-16 Revision 3 – prepared by ACS Engineers – dated 07/08/23
13. Site Based Environmental Management Plan – Reference No. 210100 – Revision 2 – prepared by ACS Engineers – dated 03/08/2023
14. Poultry farm odour assessment – Reference No. 21-209 – prepared by Astute Environmental – dated 1 November 2022
15. Poultry farm odour assessment – addendum – Prepared by Astute Environmental – dated 7 August 2023
16. Traffic Impact Assessment, titled “Brightview Poultry Farm” reference number 1504 version 2 prepared by PSA consultants dated 28 February 2023.
17. SARA Concurrence Agency Assessment – Reference 2211-32171-SRA – dated 20 March 2023**.**

This completes the report for Development Application DA23169.



GFA SCHEDULE - POULTRY SHEDS		
SHED NUMBER	GFA	NUMBER OF BIRDS
SHED 1	176m x 17.8m = 3132.8m²	50,000
SHED 2	176m x 17.8m = 3132.8m²	50,000
SHED 3	176m x 17.8m = 3132.8m²	50,000
SHED 4	176m x 17.8m = 3132.8m²	50,000
SHED 5	176m x 17.8m = 3132.8m²	50,000
SHED 6	176m x 17.8m = 3132.8m²	50,000
SHED 7	176m x 17.8m = 3132.8m²	50,000
SHED 8	176m x 17.8m = 3132.8m²	50,000
TOTALS	TOTAL = 25062.4m²	TOTAL = 400,000

REVISION/DETAILS		DWN	DATE
3	AMENDED SHED ORIENTATION	NJF	07/08/23
2	UPDATED FOR RFI RESPONSE	MA	18/01/23
1	PRELIMINARY	MA	28/10/22

SURVEY DATA
DATUM: GDA94
MAP GRID: MGA-56
HEIGHT ORIGIN: -
SURVEY BOOKS: -
DES: NJF DATE: 08/2022

LL & SONS PTY LTD
3 STEFFENS ROAD, FOREST HILL QLD 4342
PROPOSED POULTRY FARM & RECONFIGURATION OF A LOT
COURT AVENUE NORTH, BRIGHTVIEW QLD 4311

LOCALITY PLAN

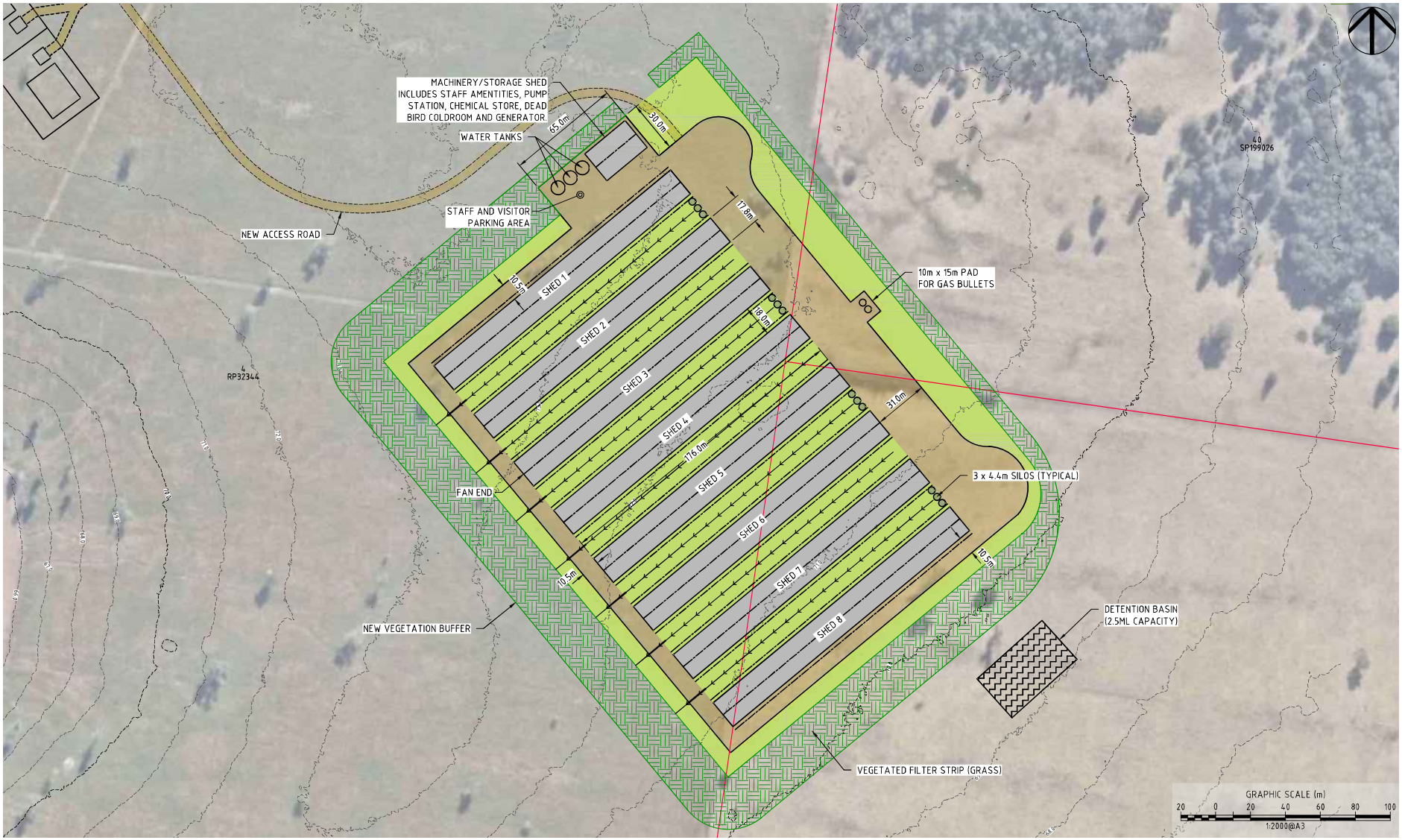
ENGINEERING CERTIFICATION (RPEQ)

#	FIELD	NAME	SIGNATURE	DATE
13697	CIVIL	S. SHAY		08/08/23

PO Box 554
Beaudesert QLD 4285
(07) 5541 3500
www.acsengineers.com.au
ACS Engineers
CIVIL | ENVIRONMENTAL | PROJECT MANAGEMENT

DRAWING NUMBER: ACS-210100-SITE-03
REVISION: 3

FILE: C:\JOBS\DATA\ACS\YN\210100 POULTRY FEASIBILITY - COURT AVENUE NORTH_4P\DESIGN\DRAWING FILES\ACS-210100-SITE.DWG PLOT TIME: 10/8/2023 - 9:56AM BY USER: MEKFALVEY



				SURVEY DATA	LL & SONS PTY LTD	SITE LAYOUT		PO Box 554 Beaudesert QLD 4285 (07) 5541 3500 www.acsengineers.com.au	ACS Engineers CIVIL | ENVIRONMENTAL | PROJECT MANAGEMENT
				DATUM GDA94	3 STEFFENS ROAD, FOREST HILL QLD 4342				
				MAP GRID MGA-56					
3	AMENDED SHED ORIENTATION	NJF	07/08/23	HEIGHT ORIGIN -	PROPOSED POULTRY FARM & RECONFIGURATION OF A LOT	ENGINEERING CERTIFICATION (RPEQ)		DRAWING NUMBER	REVISION
2	UPDATED FOR RFI RESPONSE	MA	18/01/23	SURVEY BOOKS -		# 13697 FIELD CIVIL NAME S. SHAY SIGNATURE DATE 08/08/23		ACS-210100-SITE-04	3
1	PRELIMINARY	MA	28/10/22	NJF 08/2022	COURT AVENUE NORTH, BRIGHTVIEW QLD 4311				
	REVISION/DETAILS	DWN	DATE	DES DATE					

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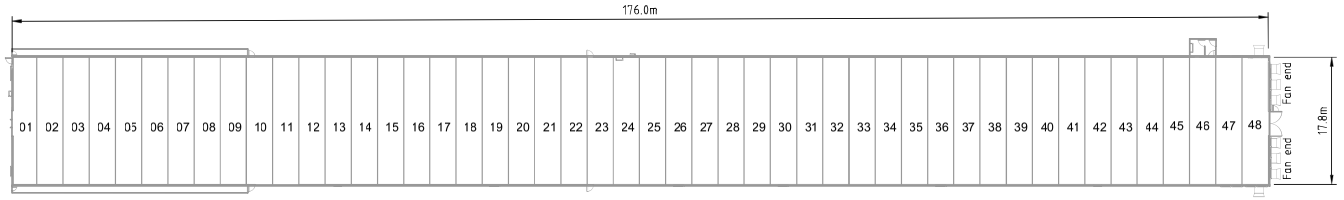
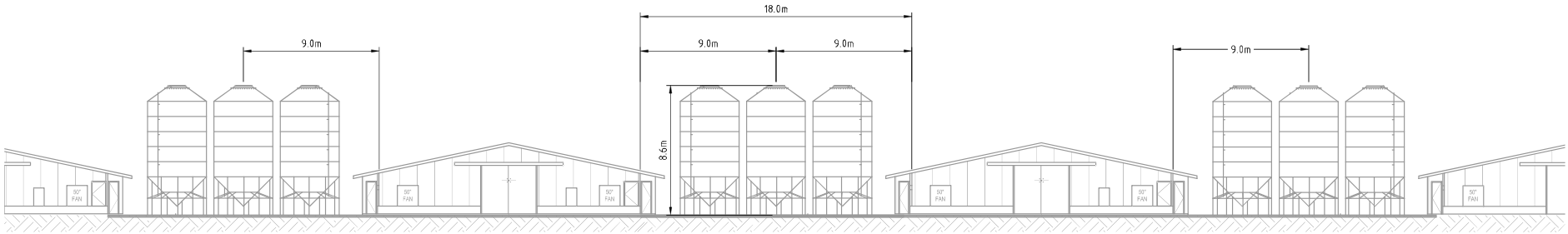


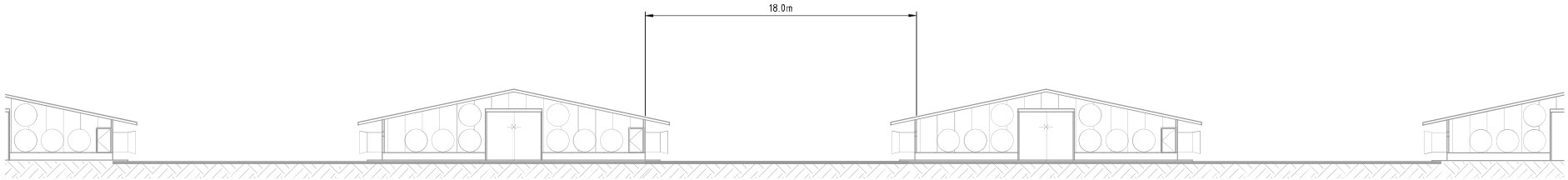
PLAN VIEW - NTS

NORTH WESTERN VIEW - NTS

SOUTH EASTERN VIEW - NTS



NORTH EASTERN END - NTS



SOUTH WESTERN END - NTS

				SURVEY DATA	
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				MAP GRID	MGA-56
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2	UPDATED FOR RFI RESPONSE	MA	18/01/23	SURVEY BOOKS	-
1	PRELIMINARY	MA	28/10/22	NJF	08/2022
	REVISION/DETAILS	DWN	DATE	DES	DATE

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LL & SONS PTY LTD

3 STEFFENS ROAD, FOREST HILL QLD 4342

PROPOSED POULTRY FARM & RECONFIGURATION OF A LOT

COURT AVENUE NORTH, BRIGHTVIEW QLD 4311

SHED TYPICAL SECTIONS

ENGINEERING CERTIFICATION (RPEQ)

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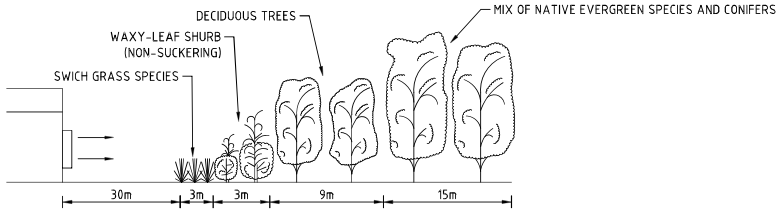
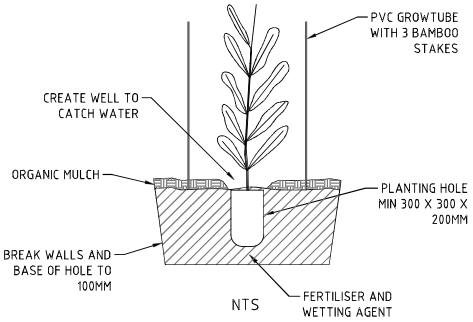


TYPICAL PROFILE DIAGRAM OF THE VEB

NTS



NTS

VEGETATIVE BUFFERS - LANDSCAPE BUFFER AND VEGETATIVE ENVIRONMENT BUFFER (VEB)

1. LANDSCAPE BUFFER TO BE 10M WIDE, VEB TO BE 30M (MIN) WIDE.
2. SPACING SHOULD RESULT IN PROMOTING QUICK VERTICAL GROWTH TO SHADE OUT WEED COMPETITION.
3. VEB TO BE PLANTED GENERALLY IN ACCORDANCE WITH 'VEGETATIVE ENVIRONMENTAL BUFFERS FOR AUSTRALIAN POULTRY FARMS - PRODUCER GUIDE' SEPT 2012 BIELEFELD, MCGAHAN & PRENTICE, "VEGETATIVE ENVIRONMENTAL BUFFERS FOR MEAT CHICKEN FARMS - LITERATURE REVIEW, JULY 2015 BEILEFIELD ETAL AND GUIDE TO VEGETATIVE ENVIRONMENTAL BUFFERS FOR TUNNEL-VENTILATED POULTRY HOUSE - JULY 2007 SCOTT.
4. VEB TO BE PLANTED WITH A MIXTURE OF UNDER STOREY (SHRUB) AND OVER STOREY (TREE) SPECIES CONSISTING OF:

4.2. INSIDE ROWS - SWICH GRASSES (EST. HEIGHT 1M)
- CAREX ABBRESSA
- PENNISETUM ALOPECUROIDES

4.3. MIDDLE ROWS - WAXY LEAF SHRUB (EST. HEIGHT 3M)
- ATRIPLEX MUMMULARIA
- CORDYLINE AUSTRALIS
- BRACHYCHITAN ACERIFOLIUS

4.4. MIDDLE OUTER ROWS - DECIDUOUS TREES (EST. HEIGHT 20M)
- ACACIA SALICIMA
- MELIA AZEDARACH
- MELALENCA BRACTEAT
- CALLICTEMON CITRINUS FORMS
- ELAEAGINUS MACROPHYLLA
- BRACHYCHITON POPULNEUM

4.5. OUTER ROWS - EVERGREEN AND CONIFER TREES (EST. HEIGHT 30-40M)
- ARAUCARIA CUNNINGHAMII
- AGATHIS ROBUSTA
- EUCALYPTUS TERETICORNIS

5. LANDSCAPING BUFFER (8m WIDE) TO BE PLANTED (MINIMUM PLANTING DENSITY OF ONE (1) TREE OR SHRUB PER 16M^2) WITH A MIXTURE OF UNDERSTOREY (SHRUB) AND OVERSTORY (TREE) SPECIES ENDEMIC TO THE LOCAL REGIONAL ECOSYSTEM CONSISTING OF:
   INSIDE ROW - LEPTOSPERMYM PETERSONII (EST. HEIGHT 4-5MN)
   MIDDLE ROW - MELALEUCA LINARIFOLIA (EST. HEIGHT 10M)
   OUTSIDE ROW - EUCALYPTUS MELANOPHLOIA (EST. HEIGHT 20M)

   OTHER SUITABLE ALTERNATIVES INCLUDE:
   - EUCALYPTUS MOLUCCANA
   - ANGOPHORA FLORIBUNDA
   - CORYMBIA DARKSONIANA
   - LOPHOSTEMEN SUAVEOLENS
   - MELALEUCA BRACTEATA
   - MELALEUCA TRICHOSTACHYA
6. 750MM TREES AND 500MM SHRUBS ARE TO BE PLANTED AS DETAILED IN INSET
7. BUFFER AREA TO BE FENCED TO PROTECT TREES FROM CATTLE
8. PLANTS TO BE MAINTAINED UNTIL ESTABLISHED. FAILURES TO BE REPLACED.

PLANTING REQUIREMENTS

1. MULCHING

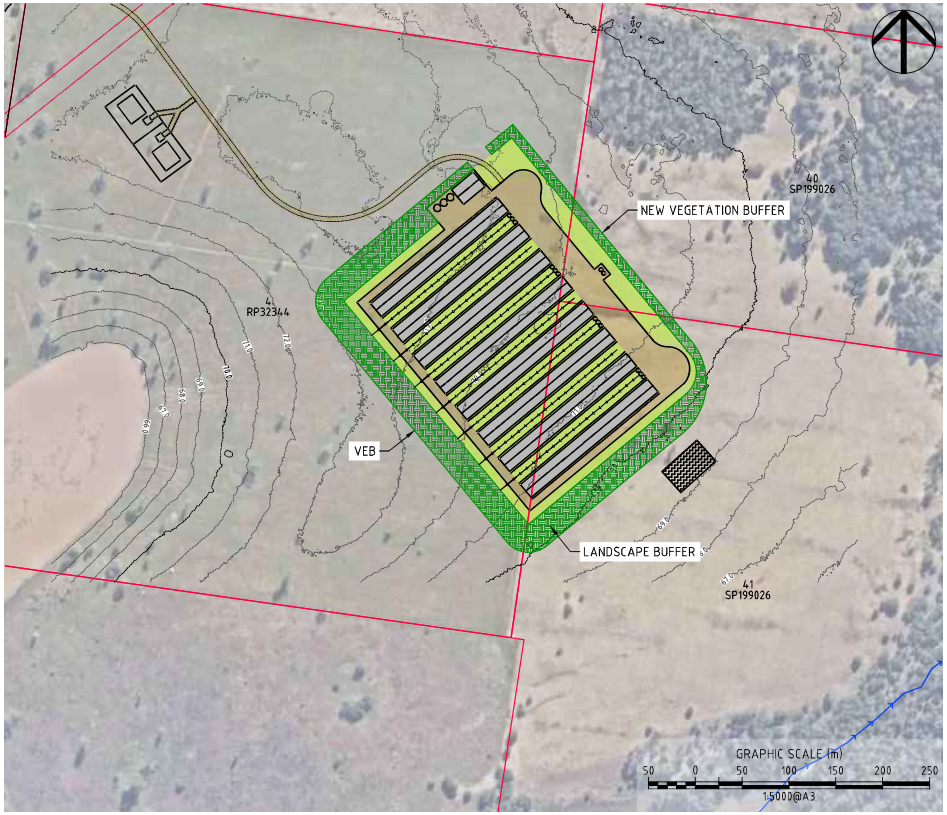
A. LAY ORGANIC MULCH SUCH AS HOOP PINE FINES OR SIMILAR (TO MEET AS4454-2003) TO PROTECT BARE SOIL, RETAIN SOIL MOISTURE AND SUPPRESS WEED RE-GROWTH.
B. ENSURE MULCH IS FREE OF WEED SEED OR FOREIGN OBJECTS.
C. SPREAD TO A DEPTH OF 100MM - 150MM AND ALLOW TO SETTLE FOR 4 WEEKS BEFORE PLANTING SEEDLINGS].
D. SPOT SPRAY EMERGING WEEDS AS NECESSARY.

2. PLANTING

A. RAKE AWAY AN AREA OF MULCH (MIN 300MM X 300MM) TO EXPOSE THE SOIL.
B. DIG A HOLE AT LEAST TWICE THE SIZE OF THE TUBE / POT (MIN 300MM X 300MM X 200MM DEEP)
C. DISTURB THE SURROUNDING SUBSTRATE UP TO 100MM TO AVOID LEAVING 'CLEAN' SIDES AND BASE OF THE HOLE PARTICULARLY WHEN AN AUGER HAS BEEN USED TO DIG THE HOLE.
D. POUR 5-6 LITERS OF WATER INTO THE HOLE AND ALLOW TO DRAIN FREELY.
E. ADD SLOW RELEASE FERTILISER AND SOIL WETTING AGENT TO THE BASE OF THE WELL AND COVER WITH A SMALL AMOUNT OF EXISTING SOI, OR MIX IN WITH THE SOIL TO BE PLACED BACK AROUND THE PLANT. AVOID ANY CONTACT OF THE FERTILISER AND SOIL WETTING AGENT WITH THE PLANT ROOTS.
F. PLANT THE SEEDLING SLIGHTLY BELOW THE SOIL LEVEL AND BACK FILL THE HOLE WITH EXISTING SOIL COVERING THE TOP OF THE POTTING MIX. CREATE A SMALL WELL TO CATCH WATER.
G. REPLACE MULCH AROUND THE PLANT. ENSURE NO MULCH TOUCHES THE BASE OF THE TRUNK, MAINTAINIUNG A SPACE OF 50-100MM BETWEEN MULCH AND TRUNK.
H. ERECT A 'GROWTUBE' AROUND EACH PLANT, REMOVE GROWTUBES WHEN PLANTS ARE AT 1.5 TIMES THE HEIGHT OF THE GROWTUBE.
I. WATER EACH PLANT THOROUGHLY WITHIN 1 HOUR OF PLANTING.

3. WATERING

A. FOLLOW-UP WATERING SHOULD CONSIST OF:
   - ONCE PER WEEK - FOR THE FIRST 4 WEEKS
   - ONCE PER FORTNIGHT - FOR 4 TO 6 WEEKS
   - ONCE PER MONTH - FOR 3 TO 6 MONTHS



				SURVEY DATA		LL & SONS PTY LTD	VEGETATIVE ENVIRONMENTAL BUFFER
				DATUM	GDA94	3 STEFFENS ROAD, FOREST HILL QLD 4342	
				MAP GRID	MGA-56		
3	AMENDED SHED ORIENTATION	NJF	07/08/23	HEIGHT ORIGIN	-	PROPOSED POULTRY FARM & RECONFIGURATION OF A LOT	
2	UPDATED FOR RFI RESPONSE	MA	18/01/23	SURVEY BOOKS	-		
1	PRELIMINARY	MA	28/10/22	NJF	08/2022	COURT AVENUE NORTH, BRIGHTVIEW QLD 4311	
REVISION/DETAILS		DWN	DATE	DES	DATE		

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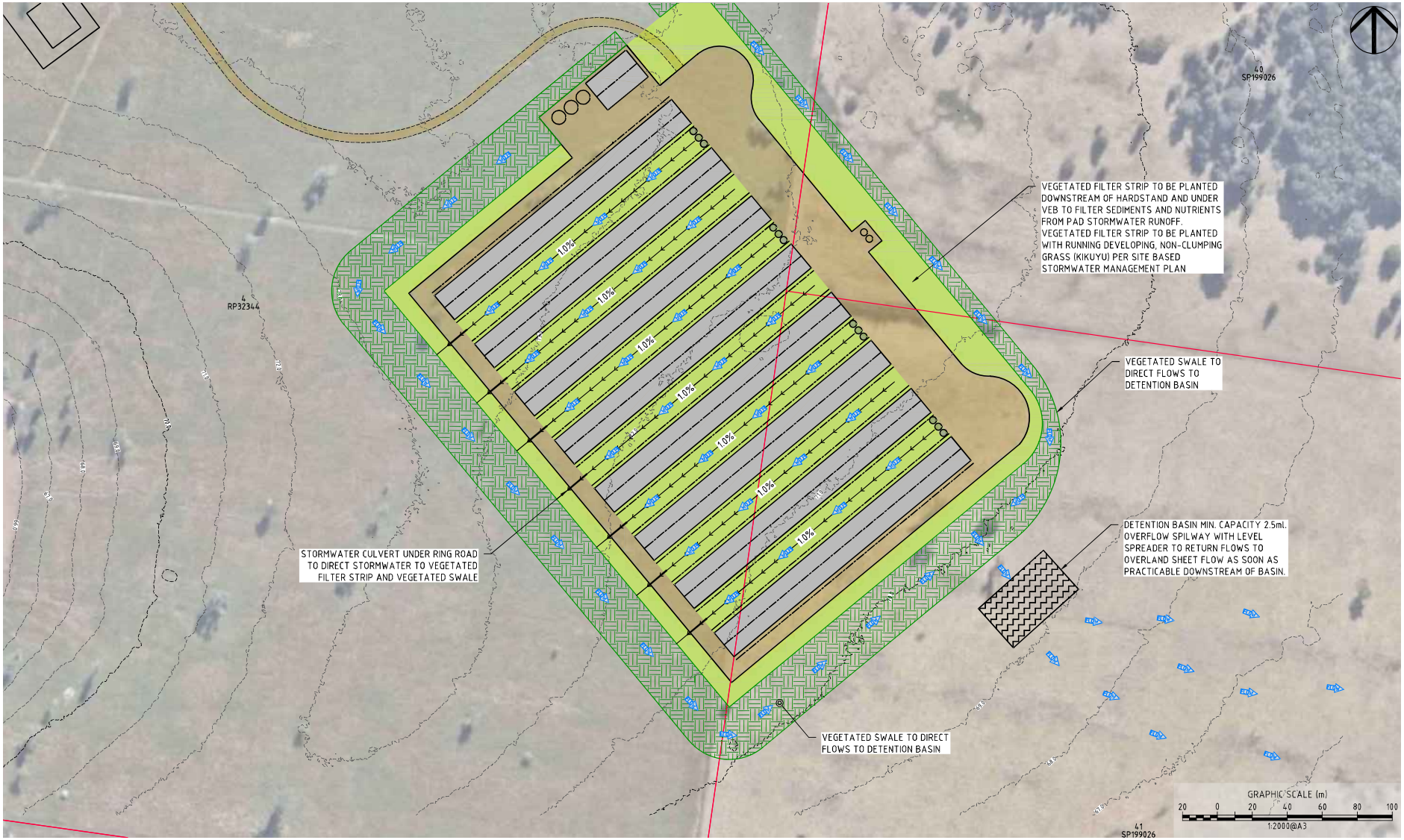

				SURVEY DATA	
				DATUM	GDA94
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1	PRELIMINARY	MA	28/10/22	NJF	08/2022
	REVISION/DETAILS	DWN	DATE	DES	DATE

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LL & SONS PTY LTD

3 STEFFENS ROAD, FOREST HILL QLD 4342

PROPOSED POULTRY FARM & RECONFIGURATION OF A LOT

COURT AVENUE NORTH, BRIGHTVIEW QLD 4311

STORMWATER MANAGEMENT PLAN

ENGINEERING CERTIFICATION (RPEQ)

#	FIELD	NAME	SIGNATURE	DATE
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Stormwater Management Plan

Proposed Poultry Farm

Prepared for: LL & Son Pty Ltd

Court Avenue North, Brightview, QLD, 4311

ACS Engineers

2 November 2022

210100

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Document Control:-

Rev No.	Author	Reviewed	Approved		Description	Date
	Name	Name	Name	Signature		
1	Sara Sutherland and Susan Shay	Susan Shay	Susan Shay		For use	02/11/2022

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Revision 1 Issued for use

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1. Introduction

This site-based stormwater management plan has been developed to identify the potential stormwater related impacts from the proposed development of a poultry farm on Court Avenue North (Lot 4 RP32344, Lot 40 SP199026 and Lot 41 SP199026) in Brightview.

The following report details the stormwater management requirements for the development in order to achieve compliance with the *Somerset Regional Council Planning Scheme and the Environmental Protection Policy (Water)*, specifically the necessary mitigation measures to ensure that there is no worsening of the stormwater discharges from the site into downstream properties, no worsening of flood plain extents and no increased risk of contamination of downstream surface waters.

2. Site Details / Description of Development

A seven shed commercial style poultry farm is proposed over Lot 4 RP32344, Lot 40 SP199026 and Lot 41 SP199026. The proposed development area is located on a high point on the subject lots and away from any waterways or drainage lines. Identified and mapped wetland areas are located in excess of 200m to the west and south of the development area. The poultry sheds are proposed to be sited as per drawing set ACS-210100-SITE.

3. Stormwater Planning

The Somerset Region Planning Scheme 'Intensive Animal Industry Code' outlines the purpose of the code is to locate and design the use in a way which protects surrounding uses and the environment from unacceptable impacts. The following overall outcomes listed in the code specifically relate to stormwater:

- Not located where the use could have adverse impacts on water quality in the catchments of the major drinking water storages
- Does not cause environmental harm or nuisance by way of… water quality

4. Stormwater Quantity

4.1. Catchment Description

One catchment contributes to the stormwater runoff at the site of the proposed poultry sheds. This catchment, the site of the poultry sheds fall gently towards the south east. The catchment is considered undulating open grazing land, with good grass cover and few trees. A low soil permeability (less than 5 mm/day) has been assumed for the stormwater runoff calculations due to the soil characteristics identified for the site, which are described as predominantly hard pedal mottled-yellow duplex soils.

4.2. Peak Discharge Calculations

4.2.1. Methodology

The rational method was adopted for the purposes of calculating the peak discharge for the catchment, using the friends equation to determine the time of calculation. The Queensland Urban Drainage Manual (QUDM) describes this method and each variable in detail.

4.2.2. Inputs

The peak flow analysis required the following input data:

- Catchment area
- Flow lengths and slopes
- Catchment fraction of impervious area
- Intensity-Frequency-Duration data
- Australian Rainfall and Runoff Data
- Time of Concentration (TOC)

Table 1 below details the catchment information included in the pre and post developed peak flow calculations.

Table 1: Catchment Characteristics

Scenario	Catchment Area (m2)	Fraction Impervious (%)	TOC (min)
Pre-developed Catchment A	81818	0	36
Post-developed Catchment A	81818	90	36

4.2.3. Analysis Results

Table 2 below details the pre and post developed peak discharge rates and volumes from the site, utilising the Rational Method for a 1% AEP. Results for more frequent AEP's are presented in Appendix A.

Table 2: Peak Discharge and Volume Results

Scenario	Peak Discharge 1% AEP (m^3/s)
Pre-developed Catchment A	1.845
Post-developed Catchment A	2.651

As expected, the increase in impervious area results in an increase in the peak flows of 43% from the subject area. This area is however part of a much larger catchment that drains to the wetland area in the south east of the subject property. While there is not expected to be any actionable nuisance from stormwater to neighbouring properties as a result of the proposed poultry farm, management devices are recommended though to ensure flows are returned where possible to natural flow characteristics as soon as practicable downstream of the development site.

4.3. Proposed Stormwater Quantity Management

In order to mitigate the potential increase in stormwater flows, the following management measures are proposed:

- Runoff from sheds and hardstands to be directed to grassed swales and side drains along the western and eastern length of the development area to contour bank level spreaders to the south of the development area to detain and return flows to overland sheet flow, to subsequently discharge across the to the downstream wetland and natural drainage lines.

Stormwater on site and discharging from the site will be managed in accordance with this site-based report and the project drawings ACS-210100-SITE.

5. Stormwater Quality

5.1. Potential Contaminants

Nitrogen and phosphorous are the two primary contaminants from poultry farms. The primary source of nutrients from a poultry farm is the particulate matter contained in the dust generated from shed exhaust fans. This particulate matter settles on the shed pad areas. During shed clean-out procedures, water outflow is restricted and limited and does not increase nutrient contamination on shed pad areas.

5.2. Potential Impacts

Nutrients deposited on the shed pad have the potential to be accumulated in soil and lost to runoff. While nitrogen and phosphorous are essential for plant growth, if they are present in excessive quantities this can lead to negative environmental impacts. If excess nutrients enter a water system, overloading the natural nutrient capacity, algae populations can grow in larger than normal amounts.

5.3. Proposed Stormwater Quality Management

The Department of Agriculture and Fisheries (DAF) document *Development of Meat Chicken Farms in Queensland* (July, 2016), states that for an intermittent waterway, a setback distance of the poultry sheds of **50 m** applies. This is to manage and mitigate against degrading the local water quality and wider environmental harm.

The Catchment Management Overlay map in the planning scheme shows the site is located within a lower risk catchment area and not within an identified buffer to a waterbody. The flood hazard overlay map in the planning scheme shows the site of the proposed poultry farm is located outside the flood hazard area. The proposed poultry farm site is also located outside of areas identified as high ecological value on the Biodiversity Overlay – Wetlands, including buffer areas.

To reduce the risk of impacts to surface water from the proposed development and to ensure compliance with the Environmental Protection (Water) Policy 2009, a number of farm water quality objectives have been developed.

1) Minimise surface water contamination from poultry sheds and range areas
2) Minimise surface water contamination from poultry shed wash down
3) Minimise surface water contamination from dead poultry storage
4) Minimise surface water contamination from spent litter
5) Minimise surface water contamination from chemical and fuel storage
6) Minimise surface water contamination from stormwater runoff

The following stormwater controls are proposed to meet the farm water quality objectives.

5.3.1. Internal Controls

Floors

The floors of the sheds will be a compacted earthen base (hydraulic conductivity of no greater than 1 x 10^{-9}m/s) with a reinforced concrete nib wall around the perimeter of the sheds. The wall will act as a bund, preventing ingress of external stormwater flows and preventing waste from internal activities exiting the shed and contaminating external stormwater flows.

Litter

All spent litter will be stockpiled within the sheds prior to being loaded directly into enclosed trucks for removal from site. Any spillages of spent litter will be contained and promptly cleaned.

Dead Birds

Dead birds are removed daily from the sheds and placed in enclosed, impermeable storage containers within an on-site cold room until collection by approved contractors.

Internal Shed Water Usage

The sheds will be washed down using high pressure, low volume methods. Any excess water generated during the wash down process will be removed by running the ventilation fans until the small amount of water has evaporated. Cleaning water from internal shed washing is not discharged to the external stormwater system.

Chemical Storage

Chemicals used for cleaning and maintenance will be stored in bunded storage areas sized to contain the contents of any chemicals should there be a spill.

5.3.2. External Controls

A minimum 50m buffer (as required by DAF and Seqwater) will be maintained between the sheds and any existing natural drainage lines to minimise any potential impact to water quality. The shed pads will be constructed such that all runoff from the sheds will be directed to the south east, through stormwater quality treatment devices then via overland flow to the natural drainage paths. This design feature further increases the distance between the runoff source and the receiving drainage lines and allows for additional treatment of flows to restore to background characteristics.

Upslope stormwater runoff will be diverted around the pads and to the natural drainage lines. Stormwater generated from the development will be directed to flow through grassed areas between the sheds before being treated via vegetated filter strips (VFS) east and west of the poultry complex, grassed swales and a detention basin for subsequent discharge to the natural flow paths. Grassed swales and vegetative filter strips will function by slowing runoff velocities and filtering out sediment and other pollutants.

VFS' will be planted to the east and west of the poultry complex. VFSs are grassed or vegetated strips of ground that stormwater flows across. The VFSs will be established with Kikuyu grass or similar non-clump forming grass. These filter strips treat stormwater through infiltration, settling and adsorption and improve filtration of suspended solids by slowing the velocity of runoff. The decrease in velocity occurs because of flow resistance of the vegetation, and results in a reduction in the capacity of flow to transport sediment.

Filter strips are commonly used in agriculture and act as a buffer zone between watercourses from sediment (TSS), nutrients and bacteria accompanying the stormwater runoff. VFSs are recommended by the poultry industry and state agricultural and environmental authorities as a suitable method of reducing the nutrient load (phosphorous and nitrogen) of runoff from sources of potential excess nutrients.

A surface water detention dam (1.5ML) will be utilised in conjunction with vegetative filter strips (VFS) to remove potential nutrients from the stormwater. In order to reduce the presence of wild birds in the vicinity of

the poultry sheds, water captured within the detention basin will be utilised for irrigation of landscaped as soon as practicable to maintain a generally empty status. Increased exposure to wild birds is considered a major biosecurity risk especially in relation to waterfowl. It is important for the poultry farm operational area not to have environmental and amenity factors that attract large numbers of wild birds.

The proposed stormwater system is designed to complement the natural drainage characteristics of the land. Runoff from the sheds and hard stand areas will not concentrate stormwater, but disperse the flows to natural overland sheet flow and allow the water to travel to its existing natural point of discharge.

After re-joining the natural drainage paths the low nutrient level runoff will be further diluted with upstream clean stormwater.

5.1. Monitoring, Recording and Corrective Actions

Water quality monitoring will begin before construction activities. Samples will be taken from the detention basin on a quarterly basis during construction, and in addition to coincide with any incidents or events on site including excessive rain events, any loss of containment or spills. An incident report will be completed by the Contractor on them being made aware of any incident.

The detention basin is to be given construction priority so it will be available to collect and settle stormwater from the construction site before discharging downstream. Potential impacts will be assessed against changes in quality from the baseline analyses prior to construction.

5.2. Compliance

The farm will seek to achieve the objectives of the Development Guidelines for Water Quality Management in Drinking Water Catchments (Seqwater, 2017). Through the maintenance of existing external controls detailed in Section 5.3.2, the farm will achieve the acceptable outcomes of the development guidelines.

In addition, the proposed stormwater quality treatment train has been assessed to ensure the reductions in mean annual nutrient loads from an unmitigated development. The existing and developed vegetated drainage path and detention basin characteristics, along with agricultural source nutrient characteristics, were modelled using the MUSIC software in accordance with MUSIC Modelling Guidelines (Water By Design, 2018). The reduction targets are outlined in Table 3 below along with the modelled treatment train effectiveness, demonstrating compliance with the reduction targets. Figure 3 details the modelled treatment train from the MUSIC software program. The MUSIC Modelling Report can be provided upon request for model input and results information.

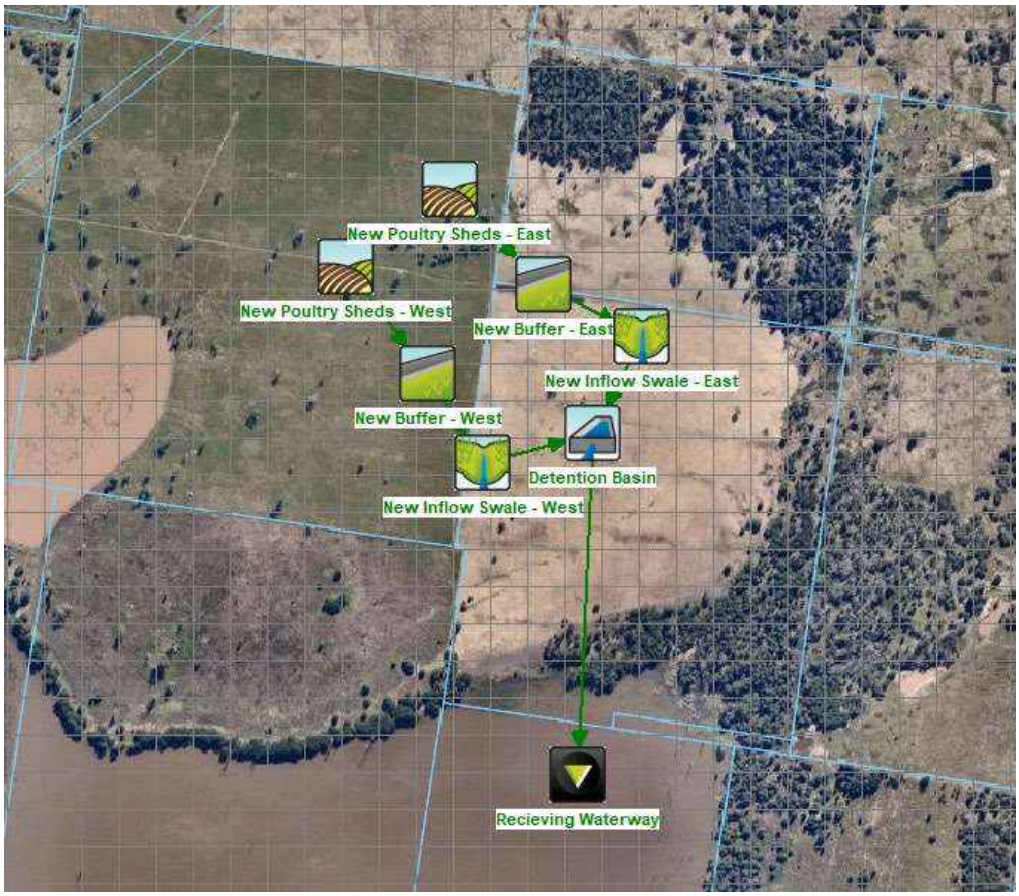

Figure 1 - MUSIC Treatment Train

Table 3 - Nutrient Removal Targets and Model Results

Nutrient Parameter	Minimum Reductions in mean annual load from unmitigated development	Modelled Treatment Train Effectiveness (%)
Total Suspended Solids (kg/yr)	85% Reduction	95.5
Total Phosphorus (kg/yr)	65% Reduction	71.5
Total Nitrogen (kg/yr)	45% Reduction	45
Gross Pollutants (kg/yr)	95% Reduction	100

If best practice management is followed, along with the internal and external stormwater quality management controls, the farm stormwater quality objectives and compliance with the relevant development schemes and guidelines will be achieved. The quality of stormwater discharging from the site is expected to be no worse than pre-development quality The likelihood of environmental harm is low should the proposed management strategies be adhered to.

6. Erosion and Sediment Control

Sediment will be generated as a result of the development works. While the potential exists for sediment to be generated during the construction phase, the potential sediment volume is dependent upon rainfall, site topography, the material type exposed, flow characteristics, and the construction practices and program.

The potential sediment yield during construction will vary with the extent of site exposed during the construction programme. It is recommended that the following measures be adopted along with the whole of site and construction stage specific sediment and erosion control plans detailed on the proposal plans to ensure that the water quality of the receiving waters is not adversely impacted by the development works.

Potential erosion and sediment generation and risk assessment is undertaken using the Revised Universal Soil Loss Equation (RUSLE).

RUSLE calculates annual erosion rates based on:

A = R x K x LS x C x P

Where:

A = annual soil loss due to erosion (t/ha/yr)
R = rainfall erosivity factor
K = soil erodibility factor
LS = topographic factor derived from slope length and gradient
C = cover and management factor
P = erosion control practice factor

Table 4 below shows the factors used for the erosion risk assessment.

Table 4 - RUSLE Factors

Factor	Reference	Value
R	Calculated from Table E1 from the IECA Best Practice Erosion and Sediment Control, Book 2, Appendix E.	2411
K	Table E4 from the IECA Best Practice Erosion and Sediment Control, Book 2, Appendix E.	0.018
LS	Table E3 from the IECA Best Practice Erosion and Sediment Control, Book 2, Appendix E.	Varies for this assessment
C	Table E9 from the IECA Best Practice Erosion and Sediment Control, Book 2, Appendix E.	1
P	Table E11 from the IECA Best Practice Erosion and Sediment Control, Book 2, Appendix E.	1.3

Figure 2 and Figure 3 below shows the calculated annual soil loss and associated risk assessment, varied by the LS factor.

Slope Ratio	Slope Gradient (%)	Slope Length (m) 10	20	30	40	50	60	70	80
1 in 100	1	6	7	8	9	10	10	11	11
1 in 50	2	10	14	16	17	19	20	22	23
1 in 33	3	14	19	23	27	29	32	34	37
1 in 25	4	17	25	30	36	40	44	48	51
1 in 20	5	20	30	38	45	51	57	62	67
1 in 16.6	6	24	36	46	55	63	70	77	83
1 in 12.5	8	30	45	61	74	85	96	95	116
1 in 10	10	38	62	81	99	115	130	144	159
1 in 8.3	12	48	78	104	128	150	170	190	209
1 in 7.1	14	58	95	128	157	185	211	236	260
1 in 6.3	16	67	112	151	187	220	252	282	311
1 in 5.5	18	76	128	173	216	254	292	328	362
1 in 5	20	85	144	196	244	289	332	373	413
1 in 4	25	106	182	250	313	372	429	484	537
1 in 3.3	30	126	218	300	377	451	521	589	655
1 in 2.5	40	160	281	390	493	591	686	777	903
1 in 2	50	188	332	464	588	706	821	846	1129

Figure 2 - Erosion risk rating varied by LS factor

Soil Loss Class	Soil Loss Rate (t/ha/yr)	Soil Erosion Risk Rating
1	0 to 150	Very Low
2	151 to 225	Low
3	226 to 350	Low-moderate
4	351 to 500	Moderate
5 to 6	501 to 1500	High
7	above 1500	Extremely High

Figure 3 - Erosion risk rating definitions

The proposed poultry farm site has a general slope of 1.0%. With earthworks to facilitate the shed pads hardstands and operational areas will typically maintain this slope or flatter. Cut and fill embankments will be higher however limited to 1 in 6 or flatter where possible. Slope lengths will be limited such that a very low soil erosion risk rating is maintained.

Erosion and sediment control measures are to be adopted in accordance with IECA Best Practice Erosion and Sediment Control, ACS drawings ACS-210100-SITE, and the measures outlined below.

6.1. Construction Phase

a) Construct stabilised shake down area at the site access.
b) Construct diversion drains and detention basin as detailed on the preliminary engineering plans.
c) Erect sediment controls as detailed on the preliminary engineering plans.
d) Strip topsoil and stockpile within the controlled area on site.
e) Carry out bulk earthworks involving cut to fill.
f) Exposed soils and stockpiles are to be watered, as required, to minimise soil losses as a result of wind.
g) Finalised earthworks to be top soiled and seeded or landscaped as directed.
h) Maintain all sediment devices and other interim controls regularly.
i) Remove sediment controls after the establishment of the landscaping and grass cover.

6.2. Operation Phase

a) Drains to be turfed, or grass seeded with turf reinforcing matting overlain. Water collected within the main dam may be used for watering grass seed.
b) Dam in/outflow areas to be lined with geotextile, overlain by 50 mm rock for velocity and scour control.
c) All embankments post construction to be turfed, grass seeded, or stabilised with plants and heavy mulching.

6.3. Maintenance of Controls

Type of Maintenance Control	Measures
General	These notes must be read in conjunction with the erosion and sediment control site plan and associated notes. Should there be a discrepancy in notes between documents, this document takes precedence. The Owner is responsible for the installation and maintenance of the sediment and erosion control measures during the construction phase. In the event that site conditions change considerably from those considered within this management plan, a revised erosion and sediment control plan must be designed and implemented. All erosion and sediment control measures, including drainage control, must be maintained in proper working order at all times during their operational lives. Sediment removed from sediment traps and places of sediment deposition must be disposed of in a lawful manner that does not cause ongoing soil erosion or environmental harm.
Land Clearing	Land clearing should not occur unless preceded by the installation of all necessary drainage and sediment control structures. The exemption would be any land clearing necessary to allow installation of these control measures. Land clearing is to be staged according to the relevant staging plans. If vegetation clearing must be carried out well in advance of earthworks, this clearing should be limited to the removal of woody vegetation only. Clearing and grubbing and removal of existing ground cover should not occur until immediately prior to earthworks occurring in that stage of works.
Construction Staging	Where possible, the bulk of the earth works should occur when rainfall totals are typically at the lowest for the year. Construction staging to occur in accordance with the approved construction staging plans. All new erosion and sediment controls are to be constructed, and existing controls cleaned, prior to the construction of the next stage of the project.
Site Access	Site entry/exit points shall be appropriately managed to minimize the risk of sediment being tracked onto sealed, public roadways.
Soil Stockpiling	If any soils are to be stockpiled on site, stockpiles must be: Appropriately protected from wind, concentrated surface flow and excessive up-slope stormwater surface flows.

	Located at least 2 m away from any hazardous area, retained vegetation, or drainage area. Located up-slope of an appropriate sediment control system (correctly installed sediment fence). Provided with an appropriate protective cover (synthetic, mulch or vegetative) if soil is to be stockpiled for more than 28 days.
Site Monitoring	Erosion and sediment control measures to be inspected daily by the site manager (or nominated representative) during periods of runoff-producing rainfall, and de-silted, repaired and amended as app **Daily site inspections**, during periods of runoff-producing rainfall must include: • all drainage, erosion and sediment control measures; • occurrences of excessive sediment deposition (whether on-site or off-site); • all site discharge points. • Weekly site inspections must include: • all drainage, erosion and sediment control measures; • occurrences of excessive sediment deposition (whether on-site or off-site); • occurrences of construction materials, litter or sediment placed, deposited, washed or blown from the site, including deposition by vehicular movements; • litter and waste receptors; • oil, fuel and chemical storage facilities. • Site inspections immediately prior to anticipated runoff-producing rainfall must include: • all drainage, erosion and sediment control measures • Site inspections immediately **following runoff-producing rainfall** must include: • treatment and de-watering requirements of sediment basins; • sediment deposition within sediment basins and the need for its removal; • all drainage, erosion and sediment control measures; • occurrences of excessive sediment deposition (whether on-site or off-site); • occurrences of construction materials, litter or sediment placed, deposited, washed or blown from the site, including deposition by vehicular movements; • occurrences of excessive erosion, sedimentation, or mud generation around the site office, car park and material storage areas. • In addition to the above, **monthly site inspections** must include: • surface coverage of finished surfaces (both area and percentage cover); • health of recently established vegetation; • proposed staging of future site clearing, earthworks and site/soil stabilisation.
Drainage Control Management	Inspect all drainage lines for erosion around the edges of the drain edging prior to forecast rainfall, and after significant runoff producing storm events, and repair if required. Check for movement of, or damage to, the drain and immediately repair as necessary. During construction, all reasonable and practicable measures must be implemented to control flow velocities in such a manner that prevents soil erosion along drainage paths and at the entrance/exit point of all drains and drainage structures. All temporary earth banks, flow diversion systems, and sediment basin embankments must be machine compacted, seeded and mulched within

	10 days of formation for the purpose of establishing a vegetative cover, unless otherwise stated in an approved Vegetation Management Plan. Remove all sediment from the drains prior to and after rainfall events to ensure the sediment pond capacity is maintained.
Sediment Control Management	Inspect coarse sediment traps prior to forecast rain events and after runoff producing storm events. All necessary repairs are to be made immediately. Repair any torn sections of fabric with a continuous piece of fabric. When making repairs, restore the system to the original configuration, unless an amended layout is required or specified. If the fabric is sagging at any point, install additional support posts/stakes. Remove any accumulated sediment in sediment traps or catch drains if the sediment deposit exceeds a depth of 100 mm. All sediment basins are to be inspected after each runoff event. If damage has occurred at inlet and outlet weir locations, make the necessary repairs. Clean out accumulated sediment once basin storage has been decreased by 20%. Water within the sediment basin is to be reused on site only, and can be used for dust suppression and vegetation watering. Reuse of water from the sediment basins is to be undertaken in a manner which does not cause erosion in the applied area.
Flood Event Management	No erodible material shall be stockpiled within 40 m of the 1% AEP flood line. Prior to a significant rain event likely to induce flooding, the following activities should be undertaken at a minimum: Cover all stockpiles and open soils with an impermeable material and secure. Soil binder should be sprayed on all open soils where it is not feasible to cover the entire area. Clean out all sediment traps and catch drains and appropriately store captured sediment. Clean out the sediment basin and appropriately store captured sediment. After the flood event, undertake the site monitoring routine and make repairs as necessary.
Site Rehabilitation/Revegetation Management	Site revegetation must occur in accordance with the approved vegetation plan. A minimum 70% ground cover must be achieved on all non-completed earthworks if further construction activities or soil disturbances are likely to be suspended for more than 30 days. No completed earthworks surface shall remain denuded for longer than 60 days. All cut and fill earth batters must be topsoiled and grassed/seeded within 10 days of completion of grading. Maintenance responsibility for the establishment of vegetation, that is the requirement to irrigate the plants and grass used to generate ground cover, lies with the Owner.
Responses to Complaints	Complaints during this type of construction usually relate to noise and dust. Generally, the complaint is made known to the Contractor, the Principal, the Superintendent and/or the Council. The Contractor shall keep a record of all complaints identifying the nature of the complaint and any remedial action taken to address such complaint. The Contractor shall act as soon as possible to remedy the problem, if the complaint is considered valid and reasonable. A complaints record shall be made available by the contractor for regular inspection by the Superintendent. For the purpose of direction by others, the Contractor's details are to be supplied to Council prior to commencement of the works. Complaints relating to dust shall require the Contractor to immediately water the exposed earth surfaces and any soil stockpile areas as well as

	haul roads to control dust. Such watering shall occur immediately when the complaint is registered with the Contractor. Watering should continue periodically until conditions suit, or the works are completed to a state that prevents dust transport.

7. Conclusion

The preceding assessment has demonstrated the merits of the proposal in respect to the stormwater management requirements of the Somerset Region Planning Scheme and the EPP (Water).

This Stormwater Management Plan Report has demonstrated that the potential stormwater impacts associated with the poultry farm are within acceptable and manageable limits. The farm is unlikely to have any adverse impacts on neighboring properties and the surrounding environment, with respect to stormwater quantity and quality.

If best practice management is followed, along with the internal and external stormwater quality management controls, the farm stormwater quality objectives and compliance with the EPP (Water) and the Somerset Region Planning Scheme will be achieved, and the likelihood of environmental harm will be low

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Appendix A) Drawing List

Sheet Number	Sheet Title	Revisions
01	Cover Sheet	1
02	General Notes	1
03	Locality Plan	1
04	Site Layout	1
05	Bulk Earthworks Layout Plan	1
06	Shed Typical Sections	1
07	Sections – Sheet 01	1
08	Sections – Sheet 02	1
09	Sections – Sheet 03	1
10	Access Details	1
11	Vegetative Environmental Buffer	1
12	Stormwater Management Plan	1
13	Erosion and Sediment Control – Notes	1
14	Erosion and Sediment Control – Notes and Details	1
15	Erosion and Sediment Control – Plan	1
16	Odour and Overlays Layout	1
17	Lot Reconfiguration Layout	1

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Appendix B) Seqwater Development Guidelines Assessment Benchmarks for Assessable Development - Performance Outcomes

Table 5: Assessment benchmarks for assessable development

Performance Outcomes	Acceptable Outcomes	Compliance
Separation distances		
PO1 Development maintains an adequate separation distance and avoids areas of potential flood inundation to protect waterways or water supply sources.	AO1.1 Development complies with the separation distances and other locational criteria specified in Table 5. **Note:** Where another setback distance or locational criteria is identified within this code, the higher standard applies.	**Complies**. Proposed poultry sheds are located more than 400m from the nearest waterway (stream order 3). Refer to drawing set ACS-210100-SITE for details.
Wastewater (other than domestic wastewater)		
PO2 Development does not discharge wastewater unless demonstrated to not compromise the drinking water supply environmental values. **Note:** Drinking water supply environmental values are referenced within Schedule 1 of the *Environmental Protection Policy (Water) 2009.*	AO2.1 Development does not generate wastewater. OR AO2.2 If development generates wastewater, the wastewater is collected and contained on-site, and is: a. lawfully disposed to sewer; b. transferred off-site for treatment/disposal to an appropriately licensed facility;	**Complies**. The proposed development does not generate wastewater.

Performance Outcomes	Acceptable Outcomes	Compliance
	c. reused on-site in a closed-cycle irrigation scheme, industrial processes, washing/cleaning or other purpose; or d. treated to meet the drinking water supply environmental values prior to release. **Note:** Where development involves the release of wastewater, a Wastewater Management Plan (WWMP) is to be prepared by a suitably qualified person. Plans are to provide an assessment of all risks and associated mitigation strategies for preventing adverse impact on the quality of drinking water and may require a water quality monitoring program.	
PO3 Where treated wastewater is irrigated to land, it will: a. be confined to a dedicated area of land on-site; b. be suitably located and sized; and c. use irrigation practices that will not harm groundwater and on-site surface water quality. **Note:** Developments involving the irrigation of wastewater will need to provide a MEDLI Modelling Report demonstrating the nominated land area for wastewater irrigation is suitably located and sized to accommodate design wastewater loads, storages are suitably sized to accommodate design wastewater loads, and	No acceptable outcome is nominated.	**Complies**. The proposed development does not generate wastewater.

Performance Outcomes	Acceptable Outcomes	Compliance
proposed irrigation practices will not damage water quality. It is recommended the modelling exercise incorporate scenarios based on both a 10-year and 20-year planning horizon.		
Solid Waste		
PO4 Solid wastes generated by the development must be managed, stored and disposed in a manner that does not adversely impact on the quality of any surface water or groundwater.	The following acceptable outcomes are applicable to intensive animal industry only. For all other development, no acceptable outcome is nominated. AO4.1 The stockpiling of waste litter, manure and other organics is undertaken as follows: a. on surfaces constructed with permanent impervious underlay to prevent leaching (groundsheets will only be accepted where stockpiling is temporary); b. located outside of an effluent irrigation area; c. located 3m above the seasonal high-water table and away from recharge areas; d. sized to accommodate the proposed disposal timeframes; e. designed with run-off diversion drainage upstream to prevent uncontaminated stormwater movement into the area;	Complies. Solid wastes, including spent poultry litter, will be not be stockpiled on the site, nor reused on site. On-site composting activities will not occur nor will carcasses be buried on-site except unless as required in accordance with any emergency animal disease directive by a biosecurity agency

Performance Outcomes	Acceptable Outcomes	Compliance
	f. bunded to capture contaminated run-off for appropriate treatment and disposal; and g. covered, desirably within a shed but otherwise with weatherproof material. AND AO4.2 The reuse of waste litter, manure and other organics as soil conditioners or fertilizers is not undertaken on-site. AND AO4.3 Composting activities are not undertaken on-site. AND AO4.4 Carcasses are not buried on-site except as required in accordance with any emergency animal disease directive by a biosecurity agency.	
Wastewater		
PO5 Wastewater treatment systems are designed, constructed and managed in ways that do not	AO5.1 Development does not involve an on-site wastewater facility.	Complies. The on-site wastewater treatment and effluent disposal system achieves a Low to risk classification in accordance with Seqwater's Land Use Risk Tool for on-site sewage facilities. Refer

Performance Outcomes	Acceptable Outcomes	Compliance
compromise the drinking water supply environmental values. **Note:** water supply environmental values are referenced within Schedule 1 of the Environmental Protection Policy (Water) 2009.	OR AO5.2 Where the combined total peak design capacity of wastewater treatment is less than 21 Equivalent Persons (EP), the design of the system achieves a Low or Medium Risk classification in accordance with Seqwater's *Land Use Risk Tool for on-site sewage facilities.* OR AO5.3 Where the combined total peak design capacity of wastewater treatment is 21EP or greater, the system is located and designed in the following manner: a. achieves a minimum secondary treatment standard with nutrient removal and disinfection; b. on land at or above the 0.5% AEP flood event; c. the hydraulic capacity of the system is five times the average dry weather flow (ADWF); d. no direct discharge of sewage to a waterway or water supply source occurs, unless during a bypass event that exceeds peak hydraulic capacity and	to Site and Soil Evaluation Report by Stav's Hydraulic Services and LURT Output.

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Performance Outcomes	Acceptable Outcomes	Compliance
	sewage is screened and disinfected before release; e. where treated effluent will be used in irrigation, application is: i. confined to a dedicated area of land suitably located and sized, and using irrigation practices that will not adversely affect groundwater and surface water quality; and ii. located on land at or above the 0.5% AEP flood event; and f. where the combined total peak design capacity of wastewater treatment is 1500EP or greater, and direct discharge to a waterway is the only reasonably practical disposal option, the contribution of flow from the system must be modelled over the range of reasonably expected flow events. If the proportion of flow is: i. <10% of the total flow, 3-log reduction bacteria and virus, and 4-log reduction protozoa, minimum pathogen log-reduction values apply; or	

Performance Outcomes	Acceptable Outcomes	Compliance
	ii. >10% of the total flow, it must demonstrate compliance with the Australian guidelines for water recycling (Phase 2): Augmentation of drinking water supply (to be undertaken in consultation with Seqwater). **Note:** Developments involving the irrigation of wastewater will need to provide a MEDLI Modelling Report demonstrating the nominated land area for irrigation is suitably located and sized to accommodate design wastewater loads, storages are suitably sized to accommodate design wastewater loads and proposed irrigation practices will not result in any adverse impact on water quality. It is recommended the modelling exercise incorporate scenarios based on both a 10-year and 20-year planning horizon and incorporate a minimum of three irrigation concepts.	
Vegetation management		
PO6 Maintain the current extent of any vegetation located adjacent, or connected, to any waterway or water supply source.	AO6.1 Clearing complies with the following locational criteria: a. 25m setback to a stream order 1–3; b. 50m setback to a stream order 4 or greater;	**Complies.** No clearing is proposed within the waterways or setback of the waterways

Performance Outcomes	Acceptable Outcomes	Compliance
	c. 200m setback to a full supply level of a dam, lake or reservoir or watercourse that serves as a potable water supply; d. is not undertaken on land within the 1% AEP flood event; and e. is not undertaken on a slope greater than 15%.	
Stormwater quality and hydrology		
PO7 Manage stormwater at the construction phase to protect drinking water supply environmental values and facilitate the achievement of water quality objectives for receiving waters. **Note:** Drinking water supply environmental values are referenced within Schedule 1 of the *Environmental Protection Policy (Water) 2009.*	AO7.1 At the construction stage, an erosion and sediment control program (ESCP) demonstrates that stormwater achieves the design objectives listed in Table A of the SPP (appendix 2): *Construction Phase – Stormwater management design objectives* (all parts). OR AO7.2 An ESCP demonstrates how stormwater quality will be managed at the construction stage in accordance with an acceptable regional or local guideline so that target contaminants are treated to a design objective at least equivalent to Table A of the SPP (all parts). OR AO7.3	**Complies.** A construction stage erosion and sediment control plans has been developed as part of this site based stormwater management plan. Refer to section 6 of this report and the proposal plans.

Performance Outcomes	Acceptable Outcomes	Compliance
	Stormwater run-off generated during construction is captured and transferred off-site or captured and treated to any applicable re-use standards and reused on-site.	
PO8 Manage stormwater during operational (postconstruction) stages to protect drinking water supply environmental values and facilitate the achievement of water quality objectives for receiving waters. **Note:** Drinking water supply environmental values are referenced within Schedule 1 of the *Environmental Protection Policy (Water) 2009.*	AO8.1 Development does not involve an impervious area greater than 1,000m^2. OR AO8.2 Development is for reconfiguring a lot that; a. will not create more than two additional lots; or b. involves a land area less than 1,000m^2. OR AO8.3 Stormwater run-off generated during operation (post-construction) demonstrates a minimum reduction in mean annual load from unmitigated development that achieves the following stormwater management design objectives: • 85% reduction in total suspended solids; • 65% reduction in total phosphorus; • 45% reduction in total nitrogen; and	**Complies**. The proposed stormwater quality treatment train achieves the minimum reduction in mean annual loads (AO8.3) from the unmitigated development. Refer to section 5 of this report.

Performance Outcomes	Acceptable Outcomes	Compliance
	• 95% reduction in gross pollutants. OR AO8.4 Stormwater run-off generated during operation is captured and transferred off-site or captured and treated to any applicable re-use standards and reused on-site. **Note:** A Site Stormwater Quality Management Plan is to be prepared by a suitably qualified individual such as a Civil Engineer or an Environmental Professional and is to be certified by a Registered Professional Engineer (RPEQ) (Civil or Environmental) to demonstrate compliance with the stormwater design objectives.	
PO9 Development maintains or improves the quality of surface water by adopting measures that exclude livestock from entering a water body where a site is being used for animal husbandry or animal-keeping activities.	No acceptable outcome is nominated.	**Complies.** No livestock will have access to water bodies on the subject site.
PO10 Development avoids and minimises changes to the existing surface water natural hydrological regime so that: a. there is no change to the reference high-flow and low-flow duration frequency curves, low-flow spells frequency curve	No acceptable outcome is nominated.	**Complies.** As demonstrated in this report there is not expected to be any change to existing surface water natural hydrological regimes as a result of the proposed development. Existing flows will be maintained.

Performance Outcomes	Acceptable Outcomes	Compliance
and mean annual flow to and from waterways as a result of the development; b. any relevant flows into waterways comply with the relevant flow objectives of the applicable water plan for the area; and c. the collection and re-use of stormwater occurs so there is no increase to the velocity or volume of stormwater flows entering a waterway.		
PO11 The design and location of artificial waterways: a. use natural channel design principles to minimise erosion, flooding and maintenance while maximising ecological and aesthetic values of waterways; b. are compatible with any existing natural waterways; and c. are designed to ensure surface water hydrological regimes are maintained.	No acceptable outcome is nominated. **Note:** The Ipswich City Council Waterway and Channel Rehabilitation Guidelines or Brisbane City Council Natural Channel Design Guidelines demonstrate suitable natural channel design works.	**Complies**. The proposed realigned waterways have been designed in consideration of the existing waterway characteristics and natural channel design principals.
PO12 Development maintains the existing groundwater hydrological regime.	AO12.1 Development does not change the existing groundwater hydrological regime by lowering or raising the water table and hydrostatic pressure outside the bounds of variability of existing predevelopment conditions.	**Complies**. The proposed development is not expected to change existing groundwater hydrological regimes.

Performance Outcomes	Acceptable Outcomes	Compliance
	AND AO12.2 Development does not result in the ingress of saline water into freshwater aquifers. **Note:** Where development is likely to impact on the water table, a hydrological assessment undertaken by a suitably qualified professional may be required to demonstrate no adverse impact on the groundwater hydrological regime.	
Excavation and filling		
PO13 The siting and design of earthworks minimises impacts on the natural landform that may cause contamination or interfere with the flow of a waterway or water supply source.	AO13.1 Earthworks comply with the following locational criteria: a. 25m setback to a stream order 1–3; b. 50m setback to a stream order 4 or greater; c. 200m setback to a full supply level of a dam, lake or reservoir or watercourse which serves as a potable water supply; d. is not undertaken on land at or below the 1% AEP; and e. is not undertaken on a slope greater than 15%.	**Complies**. Earthworks comply with the locational criteria and further an erosion and sediment control plan has been prepared in accordance with best practice which if followed will minimise movement of sediment off site.
PO14	No acceptable outcome is nominated.	**Complies**. An erosion and sediment control plan has been prepared in accordance with best

Performance Outcomes	Acceptable Outcomes	Compliance
Any earthworks minimise erosion and the movement of sediment off-site. **Note:** A Sediment and Erosion Control Plan is to be prepared by a suitably qualified and experienced professional in accordance with best practice such as IECA 2008, Best Practice Erosion and Sediment Control.		practice which if followed will minimise movement of sediment off site.
Dangerous goods, hazardous substances or environmentally hazardous materials		
PO15 Dangerous goods, hazardous substances or environmentally hazardous materials are stored and handled in a manner that minimises the potential for contamination of surface and groundwater in the event of a leak or spill.	AO15.1 The storage or handling of dangerous goods, hazardous substances or environmentally hazardous materials involves an aggregate quantity less than 200L or 200kg. OR AO15.2 The storage or handling of dangerous goods, hazardous substances or environmentally hazardous materials with an aggregate quantity greater than 200L or 200kg and less than 1000L or 1000kg maintains the following separation distances: a. 100m to a minor waterway; b. 100m to a stream order 4 or greater; and c. 800m to a full supply level of a dam, lake or reservoir or watercourse that serves as a potable water supply.	**Complies.** No dangerous goods, hazardous substances or environmentally hazardous materials greater than a 200L or 200kg quantity will be stored or handled on site. All dangerous goods, hazardous substances or environmentally hazardous materials will be appropriately stored and bunded. The storage of petroleum products in bulk (greater than 1000L) will be aboveground in self-bunded vessels that meet *Australian Standard AS 1692 Steel Tanks for Flammable and Combustible Liquids*

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Performance Outcomes	Acceptable Outcomes	Compliance
	AND AO15.3 Dangerous goods, hazardous substances or environmentally hazardous materials are located and stored in the following manner: a. is not undertaken on land within the 1% AEP flood event; b. undercover in a building or similar structure; c. in or on a dedicated impervious secondary containment store or device that permits full recovery of spills; d. in a manner that prevents the movement of packages/containers from their place of storage during a flood event; and e. in accordance with Australian Standard AS 1940-2004: The Storage and Handling of Flammable and Combustible Liquids. OR AO15.4 The storage of dangerous goods, hazardous substances or environmentally hazardous materials (other than petroleum products) in aggregate quantities greater than 1000L or 1000kg is not undertaken unless a site-specific	

Performance Outcomes	Acceptable Outcomes	Compliance
	risk assessment presents minimal risk to drinking water quality. For petroleum products only: AO15.5 The storage of petroleum products in bulk (greater than 1000L) aboveground uses self-bunded vessels that meet *Australian Standard AS 1692 Steel Tanks for Flammable and Combustible Liquids.* OR AO15.6 The storage of petroleum products in bulk (greater than 1000L) aboveground uses single-skin vessels installed within a bunded compound that: a. is sufficiently impervious (permeability should be <10–9 m/s) to retain and recover spillage; and b. has a net capacity of at least 100% of the bunded vessel or aggregate quantity of vessels where operated as a single unit. OR AO15.7 Petroleum products belowground (greater than 200L) are stored in vessels that are non-corrodible, double walled with an interstitial space	

Performance Outcomes	Acceptable Outcomes	Compliance
	between, and meet the requirements of Australian Standard AS 1692: *Steel Tanks for Flammable and Combustible Liquids* and/or UL 1316 *Glass fibre reinforced plastic underground storage tanks for petroleum products, alcohols and alcohol gasoline mixture.*	
Material change of use for extractive industry only		
PO16 Extraction activities do not impact on erosion, natural fluvial processes, river bank stability or the storage capacity volume of a floodplain.	No acceptable outcome is nominated.	Not applicable.
For reconfiguring a lot only		
PO17 When reconfiguring a lot, all resultant lots requiring an on-site wastewater treatment system do not compromise the environmental values of drinking water supply. **Note:** Drinking water supply environmental values are referenced within Schedule 1 of the *Environmental Protection Policy (Water) 2009.*	AO17.1 Any new lot can accommodate an area for on-site wastewater treatment and disposal complying with the following: a. 50m setback to a stream order 1–3; b. 100m setback to a stream order 4 or greater; and c. 400m setback to a full supply level of a dam, lake or reservoir or watercourse that serves as a potable water supply. AND AO17.2	Not applicable.

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Performance Outcomes	Acceptable Outcomes	Compliance
	Any new lot can accommodate an area for on-site wastewater treatment and disposal on land that is not within the 1% AEP flood event and on a slope at or less than 10%. AND AO17.3 Any proposed lots that are to accommodate a future on-site wastewater system, maintain an average lot size of at least 2.5 ha. **Note:** A wastewater site analysis is to be prepared by a suitably qualified professional demonstrating the above.	

Appendix C) Rational Method Calculations

Name	Pre-Developed A	Post-Developed A
Catchment Area (ha)	8.1818	8.1818
Stream Length (m)	200	462
Sheet flow length (m)	200	20
Slope (%)	2	2
Hortons N Value	0.045	0.03
Tc Sheet flow	24.5	7.6
Tc channel flow	11.1	28.5
Total time of conc. (tc)	36.0	36.0

Rainfall Intensities

63%	39.0	39.0
50%#	44.6	44.6
20%*	62.5	62.5
10%	74.9	74.9
5%	87.2	87.2
2%	103.7	103.7
1%	116.5	116.5

Rainfall Depth

63%	23.4	23.4
50%#	26.8	26.8
20%*	37.5	37.5
10%	44.9	44.9
5%	52.3	52.3
2%	62.2	62.2
1%	69.9	69.9
Fraction impervious	0.00000	0.90000
C10 runoff coefficient	0.58	0.86

Frequency Factors

FF, 1-year	0.8	0.8
FF, 2-year	0.85	0.85
FF, 5-year	0.95	0.95
FF, 10-year	1	1
FF, 20-year	1.05	1.05
FF, 50-year	1.15	1.15
FF, 100-year	1.2	1.2

Flow Calculations

63.2% (m^3/s)	**0.412**	**0.610**
50% (m^3/s)	**0.500**	**0.742**
20% (m^3/s)	**0.783**	**1.162**
10% (m^3/s)	**0.988**	**1.465**
5% (m^3/s)	**1.208**	**1.791**
2% (m^3/s)	**1.573**	**2.333**
1% (m^3/s)	**1.845**	**2.651**

Runoff Volume Estimation

Name	Pre-Developed A	Post-Developed A
Catchment Area (ha)	8.1818	8.1818
Cv(pervious)	0.58	0.59
Area Impervious	0	7.3636
Cv Composite	**0.580**	**0.959**

Runoff Volume Estimation - single storm

63.2% Volume (m^3)	**1110.5**	**1836.2**
50% Volume (m^3)	**1270.4**	**2100.5**
20% Volume (m^3)	**1779.7**	**2942.7**
10% Volume (m^3)	**2132.3**	**3525.6**
5% Volume (m^3)	**2482.5**	**4104.6**
2% Volume (m^3)	**2952.5**	**4881.9**
1% Volume (m^3)	**3318.2**	**5486.4**

Appendix D) LURT Output

Rating Details

Property Owner Details				
Property Owner:	"LL & Sons Pty Ltd"			
Postal Address:	"3 Steffens Road"	"Forest Hill"	"QLD"	"4342"
Phone Number:	"0755413500"	**Mobile Number:**	""	
Email:	"susan@acsengineers.com.au"			

Property Details				
Street Address:	"Court Avenue North"	"Brightview"	"QLD"	"4311"
Latitude:	""	**Longitude:**	""	
Lot Number:	""	**Plan Number:**	""	
Area (m2):	"817300"	**Local Government:**	"Somerset Regional Council"	

Rating Risk Rating Questionnaire

Unimitigated Score 4	No further mitigation required	Mitigated Score 3
	LOW	
	Calculating Unmitigated Risk	
1	Does the disposal area and wastewater treatment system maintain the following separation distances (AND): • At least 100m to the nearest watercourse (permanent and non-permanent)? • At least 400m from the full supply level of a potable water supply? Please note: Potable water supply includes any dam, bore, reservoir or conduit used for direct extraction of water for drinking water purposes.	Yes
2	Is the disposal area or the wastewater treatment system (OR): • Less than 50m to the nearest watercourse (permanent and non-permanent)? • Less than 200m from the nearest full supply level of a potable water supply? Please note: Potable water supply includes any dam, bore, reservoir or conduit used for direct extraction of water for drinking water purposes.	N/A
3	Is the disposal area of wastewater treatment system located inside of a defined flood event (Council or State mapping), at a minimum being 1% Annual Exceedance Probability (AEP)?	No
4	What is the maximum slope of the disposal area or wastewater treatment system location?	<5%
5	How many bedrooms are serviced by the proposed wastewater treatment system?	3 or more bedrooms
6	Is the indicative permeability range higher than 1m/day?	No
7	Is the separation distance to the water table/bedrock as specific for the type of system and at a minimum 1m below the disposal depth?	Yes
8	Is the dwelling a permanent or holiday residence?	Permanent Residence
9	Is the indicative drainage class either poorly drained (Soil Category 5) or very poorly drained (Soil Category 6), as defined in Australian Standard AS1547?	Yes
10	Does the proposal involve composting?	No composting
11	Please select an irrigation method.	Absorption
12	Please select the proposed treatment method.	Aerated
13	Does the system propose the diversion or re-use of greywater?	No
	Mitigation Reduction: 1	

Model Conditions

Here are your draft conditions!

1	The poor drainage of the soil necessitates an appropriate depth of topsoil over the proposed effluent disposal area. Either soil remediation (gypsum / scarification) or clean imported topsoil must be provided to a depth of 150mm – 250mm over the disposal area and scarified into soils over the entire disposal area to ensure adequate drainage and reduction of nutrients.
2	The wastewater treatment system must be an advanced secondary wastewater treatment system with Chief Executive approval from the Department of Energy and Public Works. The wastewater treatment system and disposal area must be designed operated and maintained in accordance with manufacturers specifications and the submitted Wastewater Design Report.
3	The disposal area must be planted with kikuyu grass or other native vegetation which provides a high uptake of nitrogen and phosphorus and prevents erosion.
4	The disposal area must incorporate appropriate diversion drainage above the disposal area (to prevent stormwater inundation) and bunds below the disposal area to reduce the risk of waterway contamination.
5	To minimise the risk of failure or inefficiency, the wastewater treatment system and disposal area must be inspected and serviced by an appropriately qualified professional in accordance with the manufacturer's recommendations and at least annually.
6	Ensure that larger deep-rooting plants and trees which may block sunlight are not planted near the disposal area to reduce the chance of root intrusion and clogging and maximise sun exposure.
7	A 100% reserve area is reserved and maintained on-site to allow for an alternative disposal location in case of land application area failure, malfunction or loss of soil uptake capacity. The reserve area must be kept clear of buildings, structures, vehicular movement paths or other activities which may otherwise affect its use for effluent disposal in the future.
8	No vehicular, machinery or domestic animal traffic movement is to occur over the disposal area, to maintain the integrity and function of sub-surface pipelines. Barriers such as fencing or shrubs are to be used when necessary.
9	The design must incorporate a warning system to notify of pump failure and/or high water level comprising of a highly visible strobe warning light at the tank and an internal alarm mounted in the house comprising of an audible and visual. A licenced plumber/service provider must be contacted as soon as practical after an alarm activates to rectify the issue.

SEDIMENT AND EROSION CONTROL – GENERAL NOTES:

1. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES MUST BE IMPLEMENTED AND A REVISED EROSION AND SEDIMENT CONTROL PLAN (ESCP) MUST BE SUBMITTED FOR APPROVAL IN THE EVENT THAT SITE CONDITIONS CHANGE SIGNIFICANTLY FROM THOSE CONSIDERED WITHIN THE ESCP.
2. WHERE THERE IS A HIGH PROBABILITY THAT SERIOUS OR MATERIAL ENVIRONMENTAL HARM MAY OCCUR AS A RESULT OF SEDIMENT LEAVING THE SITE, APPROPRIATE ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES MUST BE IMPLEMENTED SUCH THAT ALL REASONABLE AND PRACTICABLE MEASURES ARE BEING TAKEN TO PREVENT OR MINIMISE SUCH HARM. ONLY THOSE WORKS NECESSARY TO MINIMISE OR PREVENT ENVIRONMENTAL HARM SHALL BE CONDUCTED ON-SITE PRIOR TO APPROVAL OF THE AMENDED EROSION AND SEDIMENT CONTROL PLAN (ESCP).
3. IN CIRCUMSTANCES WHERE IT IS CONSIDERED NECESSARY TO PREPARE AN AMENDED EROSION AND SEDIMENT CONTROL PLAN (ESCP), AND WHERE THE DELIVERY OF SUCH AN AMENDED ESCP IS NOT IMMINENT, THEN ALL NECESSARY NEW OR MODIFIED EROSION AND SEDIMENT CONTROL WORKS MUST BE IN ACCORDANCE TO WITH IECA (2008) BEST PRACTICE EROSION & SEDIMENT CONTROL. UPON APPROVAL OF THE AMENDED ESCP ALL WORKS MUST BE IMPLEMENTED IN ACCORDANCE WITH THE AMENDED PLAN.

SITE ACCESS:

1. PRIOR TO THE COMMENCEMENT OF SITE WORKS, THE LOCATION OF THE SITE ACCESS POINT MUST BE VERIFIED WITH RELEVANT AUTHORITY.
2. SITE ACCESS IS RESTRICTED TO ONE LOCATION.
3. SITE EXIT POINT MUST BE APPROPRIATELY MANAGED TO MINIMISE THE RISK OF SEDIMENT BEING TRACKED ONTO SEALED PUBLIC ROADWAYS.
4. STORMWATER RUNOFF FROM ACCESS ROADS AND STABILISED ENTRY/EXIT POINTS MUST DRAIN TO AN APPROPRIATE SEDIMENT CONTROL DEVICE.

SOIL AND STOCKPILE MANAGEMENT:

1. ALL REASONABLE AND PRACTICABLE MEASURES MUST BE TAKEN TO OBTAIN THE MAXIMUM BENEFIT FROM EXISTING TOPSOIL, INCLUDING:
   (i) WHERE THE PROPOSED AREA OF SOIL DISTURBANCE DOES NOT EXCEED 2500m^2, AND THE TOPSOIL DOES NOT CONTAIN UNDESIRABLE WEED SEED, THE TOP 100mm OF SOIL LOCATED WITHIN AREAS OF PROPOSED SOIL DISTURBANCE (INCLUDING STOCKPILE AREAS) MUST BE STRIPPED AND STOCKPILED SEPARATELY FROM THE REMAINING SOIL.
   (ii) WHERE THE PROPOSED AREA OF SOIL DISTURBANCE EXCEEDS 2500m^2, AND THE TOPSOIL DOES NOT CONTAIN UNDESIRABLE WEED SEED, THE TOP 50mm OF SOIL MUST BE STRIPPED AND STOCKPILED SEPARATELY FROM THE REMAINING TOPSOIL, AND SPREAD AS A FINAL SURFACE SOIL.
   (iii) IN AREAS WHERE THE TOPSOIL CONTAINS UNDESIRABLE WEED SEED, THE AFFECTED SOIL MUST BE SUITABLY BURIED OR REMOVED FROM THE SITE.
2. STOCKPILES OF ERODIBLE MATERIAL THAT HAS THE POTENTIAL TO CAUSE ENVIRONMENTAL HARM IF DISPLACED MUST BE:
   (i) APPROPRIATELY PROTECTED FROM WIND, RAIN, CONCENTRATED SURFACE FLOW AND EXCESSIVE UP-SLOPE STORMWATER SURFACE FLOWS.
   (ii) LOCATED AT LEAST 2m FROM ANY HAZARDOUS AREA, RETAINED VEGETATION OR CONCENTRATED DRAINAGE LINE.
   (iii) LOCATED UP-SLOPE OF AN APPROPRIATE SEDIMENT CONTROL SYSTEM.
   (iv) PROVIDED WITH AN APPROPRIATE PROTECTIVE COVER (SYNTHETIC, MULCH OR VEGETATIVE) IF THE MATERIALS ARE LIKELY TO BE STOCKPILED FOR MORE THAN 28 DAYS.
   (v) PROVIDED WITH AN APPROPRIATE PROTECTIVE COVER (SYNTHETIC, MULCH OR VEGETATIVE) IF THE MATERIALS ARE LIKELY TO BE STOCKPILED FOR MORE THAN 10 DAYS DURING THOSE MONTHS THAT HAVE A HIGH EROSION RISK.
   (vi) PROVIDED WITH AN APPROPRIATE PROTECTIVE COVER (SYNTHETIC, MULCH OR VEGETATIVE) IF THE MATERIALS ARE LIKELY TO BE STOCKPILED FOR MORE THAN 5 DAYS DURING THOSE MONTHS THAT HAVE A EXTREME EROSION RISK.
3. A SUITABLE FLOW DIVERSION SYSTEM MUST BE ESTABLISHED IMMEDIATELY UP-SLOPE OF A STOCKPILE OF ERODIBLE MATERIAL THAT HAS THE POTENTIAL TO CAUSE ENVIRONMENTAL HARM IF DISPLACED IF THE UP-SLOPE CATCHMENT AREA DRAINING TO THE STOCKPILE EXCEEDS 1500m^2.

DRAINAGE CONTROL:

1. ALL DRAINAGE CONTROL MEASURES MUST BE APPLIED AND MAINTAINED IN ACCORDANCE WITH THE CONSTRUCTION PLANS.
2. WHEREVER REASONABLE AND PRACTICABLE, STORMWATER RUNOFF ENTERING THE SITE FROM EXTERNAL AREAS, AND NON-SEDIMENT LADEN (CLEAN) STORMWATER RUNOFF ENTERING A WORK AREA OR AREA OF SOIL DISTURBANCE, MUST BE DIVERTED AROUND OR THROUGH THAT AREA IN A MANNER THAT MINIMISES SOIL EROSION AND THE CONTAMINATION OF THAT WATER FOR ALL DISCHARGES UP TO THE SPECIFIED DESIGN STORM DISCHARGE.
3. DURING THE CONSTRUCTION PERIOD, ALL REASONABLE AND PRACTICABLE MEASURES MUST BE IMPLEMENTED TO CONTROL FLOW VELOCITIES IN SUCH A MANNER THAN PREVENTS SOIL EROSION ALONG DRAINAGE PATHS AND AT THE ENTRANCE AND EXIT OF ALL DRAINS AND DRAINAGE PIPES DURING ALL STORMS UP TO THE RELEVANT DESIGN STORM DISCHARGE.
4. TO THE MAXIMUM DEGREE REASONABLE AND PRACTICABLE, ALL WATERS DISCHARGED DURING THE CONSTRUCTION PHASE MUST DISCHARGE ONTO STABLE LAND, IN A NON-EROSIVE MANNER, AND AT A LEGAL POINT OF DISCHARGE.
5. WHEREVER REASONABLE AND PRACTICABLE, "CLEAN" SURFACE WATERS MUST BE DIVERTED AWAY FROM SEDIMENT CONTROL DEVICES AND ANY UNTREATED, SEDIMENT-LADEN WATERS.
6. DURING THE CONSTRUCTION PERIOD, ROOF WATER MUST BE MANAGED IN A MANNER THAT MINIMISES SOIL EROSION THROUGHOUT THE SITE, AND SITE WETNESS WITHIN ACTIVE WORK AREAS.
7. DRAINS ARE TO BE SIZED AND CONSTRUCTED TO ALLOW WATER TO DRAIN. THIS MAY INCLUDE CUTTING INTO THE EARTH TO OBTAIN THE REQUIRED FALL TO PERMIT DRAINAGE. DIMENSIONS GIVEN ARE A MINIMUM.

EROSION CONTROL:

1. ALL EROSION CONTROL MEASURES MUST BE APPLIED AND MAINTAINED IN ACCORDANCE WITH IECA (2008) BEST PRACTICE EROSION & SEDIMENT CONTROL.
2. THE APPLICATION OF LIQUID-BASED DUST SUPPRESSION MEASURES MUST ENSURE THAT SEDIMENT-LADEN RUNOFF RESULTING FROM SUCH MEASURES DOES NOT CREATE A TRAFFIC OR ENVIRONMENTAL HAZARD.
3. ALL TEMPORARY EARTH BANKS, FLOW DIVERSION SYSTEMS, AND EMBANKMENTS ASSOCIATED WITH CONSTRUCTED SEDIMENT BASINS MUST BE MACHINE-COMPACTED, SEEDED AND MULCHED FOR THE PURPOSE OF ESTABLISHING A TEMPORARY VEGETATIVE COVER WITHIN 10 DAYS AFTER GRADING.
4. UNPROTECTED SLOPE LENGTHS MUST NOT EXCEED 80m, OR AN EQUIVALENT VERTICAL FALL OF 3m DURING THE CONSTRUCTION PERIOD.
5. THE CONSTRUCTION AND STABILISATION OF EARTH BATTERS STEEPER THAN 6:1 (H:V) MUST BE STAGED SUCH THAT NO MORE THAN 3 VERTICAL-METRES OF ANY BATTER IS EXPOSED TO RAINFALL AT ANY INSTANT.
6. SYNTHETIC REINFORCED EROSION CONTROL MATS AND BLANKETS MUST NOT BE PLACED WITHIN, OR ADJACENT TO, RIPARIAN ZONES AND WATERCOURSES IF SUCH MATERIALS ARE LIKELY TO CAUSE ENVIRONMENTAL HARM TO WILDLIFE OR WILDLIFE HABITATS.
7. A MINIMUM 60% GROUND COVER MUST BE ACHIEVED ON ALL NON-COMPLETED EARTHWORKS EXPOSED TO ACCELERATED SOIL EROSION IF FURTHER CONSTRUCTION ACTIVITIES OR SOIL DISTURBANCES ARE LIKELY TO BE SUSPENDED FOR MORE THAN 30 DAYS DURING THOSE MONTHS WHEN THE EXPECTED RAINFALL IS LESS THAN 30mm; MINIMUM 70% COVER WITHIN 30 DAYS IF BETWEEN 30 AND 45mm; MINIMUM 70% COVER WITHIN 20 DAYS IF BETWEEN 45 AND 100mm; MINIMUM 75% COVER WITHIN 10 DAYS IF BETWEEN 100 AND 225mm; AND MINIMUM 80% COVER WITHIN 5 DAYS IF GREATER THAN 225mm. (ALTERNATIVE TO ABOVE)

SEDIMENT CONTROL:

1. ALL SEDIMENT CONTROL MEASURES MUST BE APPLIED AND MAINTAINED IN ACCORDANCE WITH IECA (2008) BEST PRACTICE EROSION & SEDIMENT CONTROL.
2. OPTIMUM BENEFIT MUST BE MADE OF EVERY OPPORTUNITY TO TRAP SEDIMENT WITHIN THE WORK SITE, AND AS CLOSE AS PRACTICABLE TO ITS SOURCE.
3. SEDIMENT TRAPS MUST BE INSTALLED AND OPERATED TO BOTH COLLECT AND RETAIN SEDIMENT.
4. THE POTENTIAL SAFETY RISK OF A PROPOSED SEDIMENT TRAP TO SITE WORKERS AND THE PUBLIC MUST BE GIVEN APPROPRIATE CONSIDERATION, ESPECIALLY THOSE DEVICES LOCATED WITHIN PUBLICLY ACCESSIBLE AREAS.
5. ALL REASONABLE AND PRACTICABLE MEASURES MUST BE TAKEN TO PREVENT, OR AT LEAST MINIMISE, THE RELEASE OF SEDIMENT FROM THE SITE.
6. SUITABLE ALL-WEATHER MAINTENANCE ACCESS MUST BE PROVIDED TO ALL SEDIMENT CONTROL DEVICES.
7. SEDIMENT CONTROL DEVICES MUST BE DE-SILTED AND MADE FULLY OPERATIONAL AS SOON AS REASONABLE AND PRACTICABLE AFTER A SEDIMENT-PRODUCING EVENT, WHETHER NATURAL OR ARTIFICIAL, IF THE DEVICE'S SEDIMENT RETENTION CAPACITY FALLS BELOW 75% OF ITS DESIGN RETENTION CAPACITY.
8. MATERIALS, WHETHER LIQUID OR SOLID, REMOVED FROM SEDIMENT CONTROL DEVICES DURING MAINTENANCE OR DECOMMISSIONING, MUST BE DISPOSED OF IN A MANNER THAT DOES NOT CAUSE ONGOING SOIL EROSION OR ENVIRONMENTAL HARM.

SITE REHABILITATION:

1. ALL DISTURBED AREAS IDENTIFIED AS VERY LOW, LOW, MEDIUM, HIGH, OR EXTREME EROSION RISK MUST BE SUITABLY STABILISED WITHIN 30, 30, 20, 10 OR 5 DAYS RESPECTIVELY, OR PRIOR TO ANTICIPATED RAINFALL, WHICHEVER IS THE GREATER, FROM THE DAY THAT SOIL DISTURBANCES ON THE AREA HAVE BEEN FINALISED.
2. A MINIMUM 60% GROUND COVER MUST BE ACHIEVED ON ALL COMPLETED EARTHWORKS EXPOSED TO ACCELERATED SOIL EROSION WITHIN 30 DAYS DURING THOSE MONTHS WHEN THE EXPECTED RAINFALL IS LESS THAN 30mm; MINIMUM 70% COVER WITHIN 30 DAYS IF BETWEEN 30 AND 45mm; MINIMUM 70% COVER WITHIN 20 DAYS IF BETWEEN 45 AND 100mm; MINIMUM 75% COVER WITHIN 10 DAYS IF BETWEEN 100 AND 225mm; AND MINIMUM 80% COVER WITHIN 5 DAYS IF GREATER THAN 225mm. (ALTERNATIVE TO ABOVE)
3. NO COMPLETED EARTHWORK SURFACE MUST REMAIN DENUDED FOR LONGER THAN 60 DAYS.
4. THE TYPE OF GROUND COVER APPLIED TO COMPLETED EARTHWORKS IS COMPATIBLE WITH THE ANTICIPATED LONG-TERM LAND USE, ENVIRONMENTAL RISK, AND SITE REHABILITATION MEASURES.
5. UNLESS OTHERWISE DIRECTED BY THE SUPERINTENDENT OR WHERE DIRECTED BY THE APPROVED REVEGETATION PLAN, TOPSOIL MUST BE PLACED AT A MINIMUM DEPTH OF 75mm ON SLOPES 4:1 (H:V) OR FLATTER, AND 50mm ON SLOPES STEEPER THAN 4:1.
6. SOIL AMELIORANTS MUST BE ADDED TO THE SOIL IN ACCORDANCE WITH THE APPROVED LANDSCAPE/REVEGETATION PLANS AND/OR SOIL ANALYSIS.
7. TEMPORARY SITE STABILISATION PROCEDURES MUST COMMENCE AT LEAST 30 DAYS PRIOR TO THE NOMINATED SITE SHUTDOWN DATE. AT LEAST 70% STABLE COVER OF ALL UNSTABLE AND/OR DISTURBED SOIL SURFACES MUST BE ACHIEVED PRIOR TO ANY SHUTDOWN. THE STABILISATION WORKS MUST NOT RELY UPON THE LONGEVITY OF NON-VEGETATED EROSION CONTROL BLANKETS, OR TEMPORARY SOIL BINDERS.
8. ALL UNSTABLE OR DISTURBED SOIL SURFACES MUST BE ADEQUATELY STABILISED AGAINST EROSION (MINIMUM 70%) PRIOR TO COMMENCEMENT OF USE, OR SURVEY PLAN ENDORSEMENT.

REVISION/DETAILS		DWN	DATE
3	AMENDED SHED ORIENTATION	NJF	07/08/23
2	UPDATED FOR RFI RESPONSE	MA	18/01/23
1	PRELIMINARY	MA	28/10/22

SURVEY DATA
DATUM: GDA94
MAP GRID: MGA-56
HEIGHT ORIGIN: -
SURVEY BOOKS: -
DES: NJF DATE: 08/2022

LL & SONS PTY LTD

3 STEFFENS ROAD, FOREST HILL QLD 4342

PROPOSED POULTRY FARM & RECONFIGURATION OF A LOT

COURT AVENUE NORTH, BRIGHTVIEW QLD 4311

EROSION AND SEDIMENT CONTROL – NOTES

ENGINEERING CERTIFICATION (RPEQ)

#	FIELD	NAME	SIGNATURE	DATE
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CIVIL | ENVIRONMENTAL | PROJECT MANAGEMENT

DRAWING NUMBER: ACS-210100-SITE-13

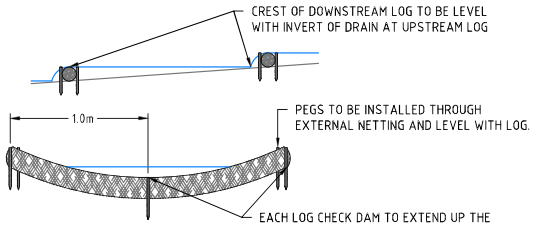
REVISION: 3

SITE MANAGEMENT:

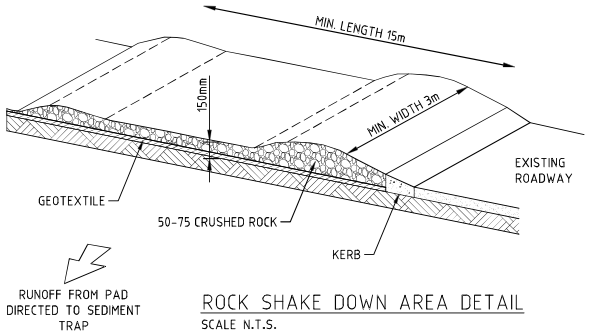
1. ALL OFFICE FACILITIES AND OPERATIONAL ACTIVITIES MUST BE LOCATED SUCH THAT ANY LIQUID EFFLUENT (E.G. PROCESS WATER, WASH-DOWN WATER, EFFLUENT FROM EQUIPMENT CLEANING, OR PLANT WATERING), CAN BE TOTALLY CONTAINED AND TREATED WITHIN THE SITE.
2. THE CONSTRUCTION SCHEDULE MUST AIM TO MINIMISE THE DURATION THAT ANY AND ALL AREAS OF SOIL ARE EXPOSED TO THE EROSIVE EFFECTS OF WIND, RAIN AND SURFACE WATER.
3. LAND-DISTURBING ACTIVITIES MUST BE UNDERTAKEN IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL PLAN (ESCP) AND ASSOCIATED DEVELOPMENT CONDITIONS.
4. LAND-DISTURBING ACTIVITIES MUST BE UNDERTAKEN IN SUCH A MANNER THAT ALLOWS ALL REASONABLE AND PRACTICABLE MEASURES TO BE UNDERTAKEN TO:
   (i) ALLOW STORMWATER TO PASS THROUGH THE SITE IN A CONTROLLED MANNER AND AT NON-EROSIVE FLOW VELOCITIES UP TO THE SPECIFIED DESIGN STORM DISCHARGE;
   (ii) MINIMISE SOIL EROSION RESULTING FROM RAIN, WATER FLOW AND/OR WIND;
   (iii) MINIMISE ADVERSE EFFECTS OF SEDIMENT RUNOFF, INCLUDING SAFETY ISSUES;
   (iv) PREVENT OR AT LEAST MINIMISE, ENVIRONMENTAL HARM RESULTING FROM WORK-RELATED SOIL EROSION AND SEDIMENT RUNOFF;
   (v) ENSURE THAT THE VALUE AND USE OF LAND/PROPERTIES ADJACENT TO THE DEVELOPMENT (INCLUDING ROADS) ARE NOT DIMINISHED AS A RESULT OF THE ADOPTED ESC MEASURES.
5. ALL EROSION AND SEDIMENT CONTROL MEASURES MUST CONFORM TO THE STANDARDS AND SPECIFICATIONS CONTAINED IN:
   (i) THE DEVELOPMENT APPROVAL CONDITION ISSUED BY RELEVANT AUTHORITY; AND/OR
   (ii) THE APPROVED ESCP AND SUPPORTING DOCUMENTATION; OR
   (iii) THE LATEST VERSION OF IECA (2008) BEST PRACTICE EROSION & SEDIMENT CONTROL IF THE STANDARDS AND SPECIFICATIONS ARE NOT CONTAINED IN THE APPROVED ESCP.
6. ANY WORKS THAT MAY CAUSE SIGNIFICANT SOIL DISTURBANCE AND ARE ANCILLARY TO ANY ACTIVITY FOR WHICH REGULATORY BODY APPROVAL IS REQUIRED, MUST NOT COMMENCE BEFORE THE ISSUE OF THAT APPROVAL.
7. ADDITIONAL AND/OR ALTERNATIVE ESC MEASURES MUST BE IMPLEMENTED IN THE EVENT THAT THE RELEVANT AUTHORITY IDENTIFIES THAT UNACCEPTABLE OFF-SITE SEDIMENTATION IS OCCURRING AS A RESULT OF THE WORK ACTIVITIES.
8. LAND-DISTURBING ACTIVITIES MUST NOT CAUSE UNNECESSARY SOIL DISTURBANCE IF AN ALTERNATIVE CONSTRUCTION PROCESS IS AVAILABLE THAT ACHIEVES THE SAME OR EQUIVALENT OUTCOMES AT AN EQUIVALENT COST.
9. SEDIMENT (INCLUDING CLAY, SILT, SAND, GRAVEL, SOIL, MUD, CEMENT AND CERAMIC WASTE) DEPOSITED OFF THE SITE AS A DIRECT RESULT OF AN ON-SITE ACTIVITY, MUST BE COLLECTED AND THE AREA APPROPRIATELY CLEANED/REHABILITATED AS SOON AS REASONABLE AND PRACTICABLE, AND IN A MANNER THAT GIVES APPROPRIATE CONSIDERATION TO THE SAFETY AND ENVIRONMENTAL RISKS ASSOCIATED WITH THE SEDIMENT DEPOSITION.
10. ALL WASTE INCLUDING PETROLEUM AND OIL-BASED PRODUCTS, MUST BE PREVENTED FROM ENTERING AN INTERNAL WATER BODY, OR AN EXTERNAL DRAIN, STORMWATER SYSTEM, OR WATER BODY.
11. ALL FLAMMABLE AND COMBUSTIBLE LIQUIDS, INCLUDING ALL LIQUID CHEMICALS IF SUCH CHEMICALS COULD POTENTIALLY BE WASHED OR DISCHARGED FROM THE SITE, ARE STORED AND HANDLED ON-SITE IN ACCORDANCE WITH RELEVANT STANDARDS SUCH AS AS1940 THE STORAGE AND HANDLING OF FLAMMABLE AND COMBUSTIBLE LIQUIDS.
12. NO MORE THAN 150m OF A STORMWATER, SEWER LINE OR OTHER SERVICE TRENCH MUST TO BE OPEN AT ANY ONE TIME.
13. SITE SPOIL MUST BE LAWFULLY DISPOSED OF IN A MANNER THAT DOES NOT RESULT IN ONGOING SOIL EROSION OR ENVIRONMENTAL HARM.
14. ALL FILL MATERIAL PLACED ON SITE MUST COMPRISE ONLY NATURAL EARTH AND ROCK; AND IS TO BE FREE OF CONTAMINANTS, BE FREE DRAINING, AND BE COMPACTED IN LAYERS NOT EXCEEDING 300mm TO 90% MODIFIED MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS1289.

SITE MAINTENANCE:

1. ENSURE ESC PLANS ARE ON SITE AT ALL TIMES.
2. ALL EROSION AND SEDIMENT CONTROL MEASURES, INCLUDING DRAINAGE CONTROL MEASURES, MUST BE MAINTAINED IN PROPER WORKING ORDER AT ALL TIMES DURING THEIR OPERATIONAL LIVES.
3. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES, INCLUDING DRAINAGE CONTROL MEASURES, MUST BE FULLY OPERATIONAL AND MAINTAINED IN PROPER WORKING ORDER AT ALL TIMES DURING THE MAINTENANCE PERIOD AS SPECIFIED BY RELEVANT AUTHORITY.
4. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES, INCLUDING DRAINAGE CONTROL MEASURES, MUST BE REMOVED AFTER ACHIEVING A SATISFACTORY "OFF-MAINTENANCE INSPECTION" BY THE RELEVANT AUTHORITY.
5. ALL DRAINAGE, EROSION AND SEDIMENT CONTROL MEASURES MUST BE INSPECTED:
   (i) AT LEAST DAILY (WHEN WORK IS OCCURRING ON-SITE);
   (ii) AT LEAST WEEKLY (WHEN WORK IS NOT OCCURRING ON-SITE);
   (iii) WITHIN 24 HOURS OF EXPECTED RAINFALL; AND
   (iv) WITHIN 18 HOURS OF A RAINFALL EVENT OF SUFFICIENT INTENSITY AND DURATION TO CAUSE RUNOFF ON-SITE).
   IF FAILURE HAS BEEN FOUND, IMMEDIATE REMEDIATIONS ARE REQUIRED AND TO A STANDARD WHICH ENSURES THE FAILURE DOES NOT CONTINUALLY OCCUR UNDER DESIGN RAINFALL CONDITIONS.
6. WASHING/FLUSHING OF SEALED ROADWAYS MUST ONLY OCCUR WHERE SWEEPING HAS FAILED TO REMOVE SUFFICIENT SEDIMENT AND THERE IS A COMPELLING NEED TO REMOVE THE REMAINING SEDIMENT (E.G. FOR SAFETY REASONS). IN SUCH CIRCUMSTANCES, ALL REASONABLE AND PRACTICABLE SEDIMENT CONTROL MEASURES MUST BE USED TO PREVENT, OR AT LEAST MINIMISE, THE RELEASE OF SEDIMENT INTO RECEIVING WATERS. ONLY THOSE MEASURES THAT WILL NOT CAUSE SAFETY AND PROPERTY FLOODING ISSUES SHALL BE EMPLOYED. SEDIMENT REMOVED FROM ROADWAYS MUST BE DISPOSED OF IN A LAWFUL MANNER THAT DOES NOT CAUSE ONGOING SOIL EROSION OR ENVIRONMENTAL HARM.
7. SEDIMENT REMOVED FROM SEDIMENT TRAPS AND PLACES OF SEDIMENT DEPOSITION MUST BE DISPOSED OF IN A LAWFUL MANNER THAT DOES NOT CAUSE ONGOING SOIL EROSION OR ENVIRONMENTAL HARM.
8. MAINTENANCE IS TO OCCUR ON ALL EROSION AND SEDIMENT CONTROL MEASURES WHEN CAPACITY REDUCES BY 30%.
9. MAINTENANCE MOWING OF ALL ROAD SHOULDERS, TABLE DRAINS, BATTERS AND OTHER SURFACES LIKELY TO EXPERIENCE ACCELERATED SOIL EROSION MUST AIM TO LEAVE THE GRASS LENGTH NO SHORTER THAN 50mm WHERE REASONABLE AND PRACTICABLE.
10. MAINTENANCE MOWING MUST BE DONE IN A MANNER THAT WILL NOT DAMAGE THE PROFILE OF FORMED, SOFT EDGES, SUCH AS THE CREST OF EARTH EMBANKMENTS.
11. ENSURE RECORDS ARE KEPT OF DATES OF MAINTENANCE AND THE PERSONNEL RESPONSIBLE FOR UNDERTAKING THE MAINTENANCE.
12. IT IS THE CONTRACTORS RESPONSIBILITY TO ENSURE SOIL EROSION IS LIMITED AS MUCH AS POSSIBLE. THE TECHNIQUES USED IN THE DESIGN SHOULD NOT BE TAKEN AS THE MAXIMUM CONTROLS ALLOWABLE, AND THE CONTRACTOR MAY ADD CONTROLS AS NECESSARY TO LIMIT SOIL EROSION AND SEDIMENTATION.
13. MONITORING SHALL BE UNDERTAKEN BY A PERSON WITH EXPERIENCE IN EROSION AND SEDIMENT CONTROL MONITORING. MONITORING IS TO BE UNDERTAKEN IN A MANNER WHICH COMPLIES WITH IECA GUIDELINES 2008, CHAPTER 7. SITE INSPECTION.



GEO LOGS (COIR LOGS)
NOT TO SCALE



ROCK SHAKE DOWN AREA DETAIL
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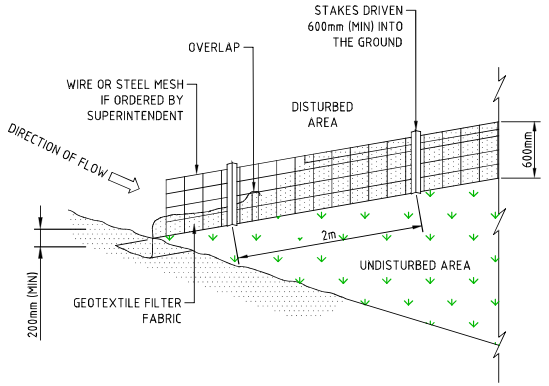

GEOTEXTILE SEDIMENT FENCE
NOT TO SCALE

				SURVEY DATA	
				DATUM	GDA94
				MAP GRID	MGA-56
3	AMENDED SHED ORIENTATION	NJF	07/08/23	HEIGHT ORIGIN	-
2	UPDATED FOR RFI RESPONSE	MA	18/01/23	SURVEY BOOKS	-
1	PRELIMINARY	MA	28/10/22	NJF	08/2022
	REVISION/DETAILS	DWN	DATE	DES	DATE

FILE: C:\ACS\DATA\ACES\YN\210100 POULTRY FEASIBILITY - COURT AVENUE NORTH_4\4-DESIGN\DRAWING FILES\ACS-210100-SITE.DWG PLOT TIME: 08/08/2023 - 9:57AM BY USER: NICKFALVEY

LL & SONS PTY LTD

3 STEFFENS ROAD, FOREST HILL QLD 4342

PROPOSED POULTRY FARM & RECONFIGURATION OF A LOT

COURT AVENUE NORTH, BRIGHTVIEW QLD 4311

EROSION AND SEDIMENT CONTROL - NOTES AND DETAILS

ENGINEERING CERTIFICATION (RPEQ)

#	FIELD	NAME	SIGNATURE	DATE
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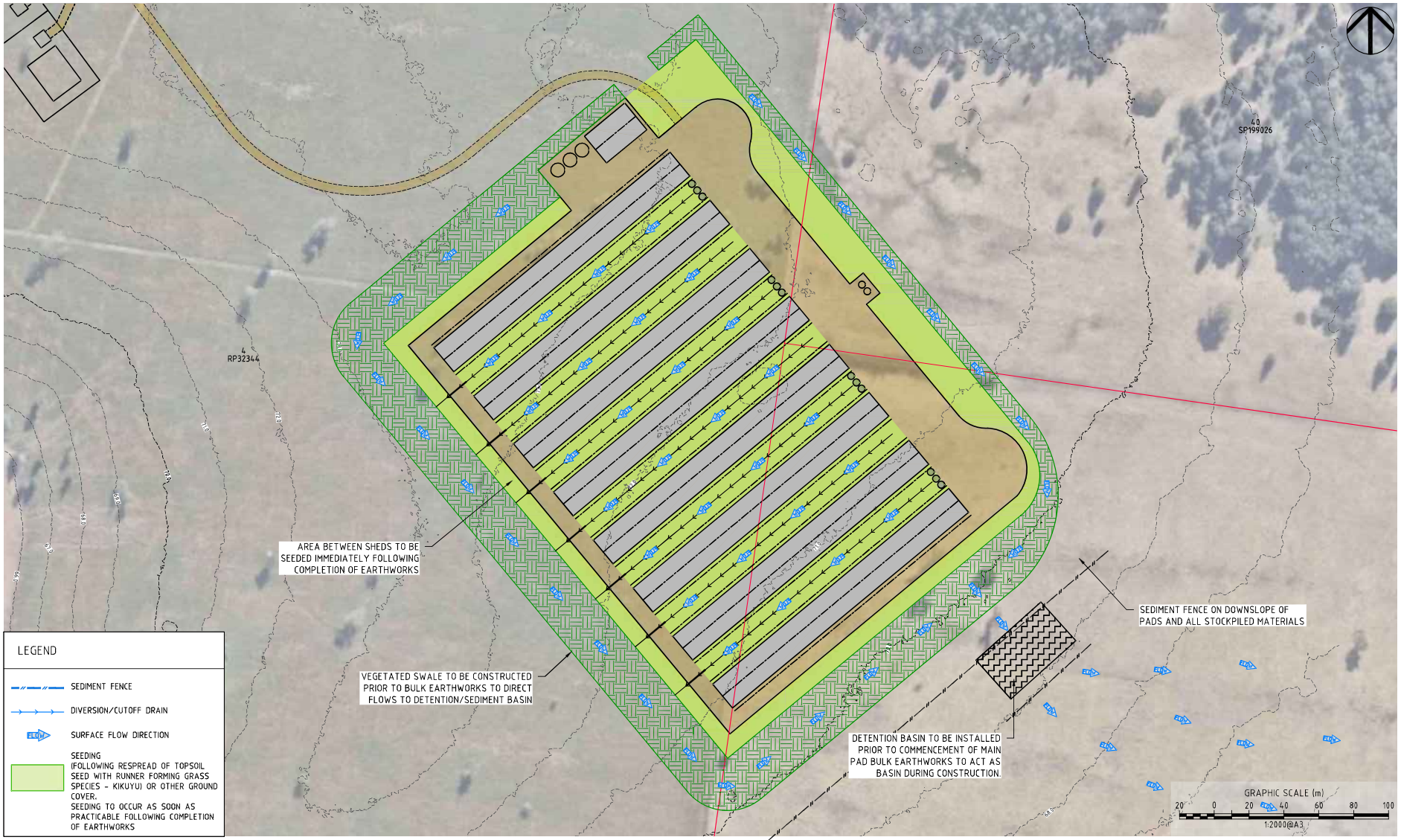
DRAWING NUMBER: ACS-210100-SITE-14

REVISION: 3



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1	PRELIMINARY	MA	28/10/22	NJF 08/2022	COURT AVENUE NORTH, BRIGHTVIEW QLD 4311	
	REVISION/DETAILS	DWN	DATE	DES DATE		

ENGINEERING CERTIFICATION (RPEQ)

#	FIELD	NAME	SIGNATURE	DATE
13697	CIVIL	S. SHAY		08/08/23

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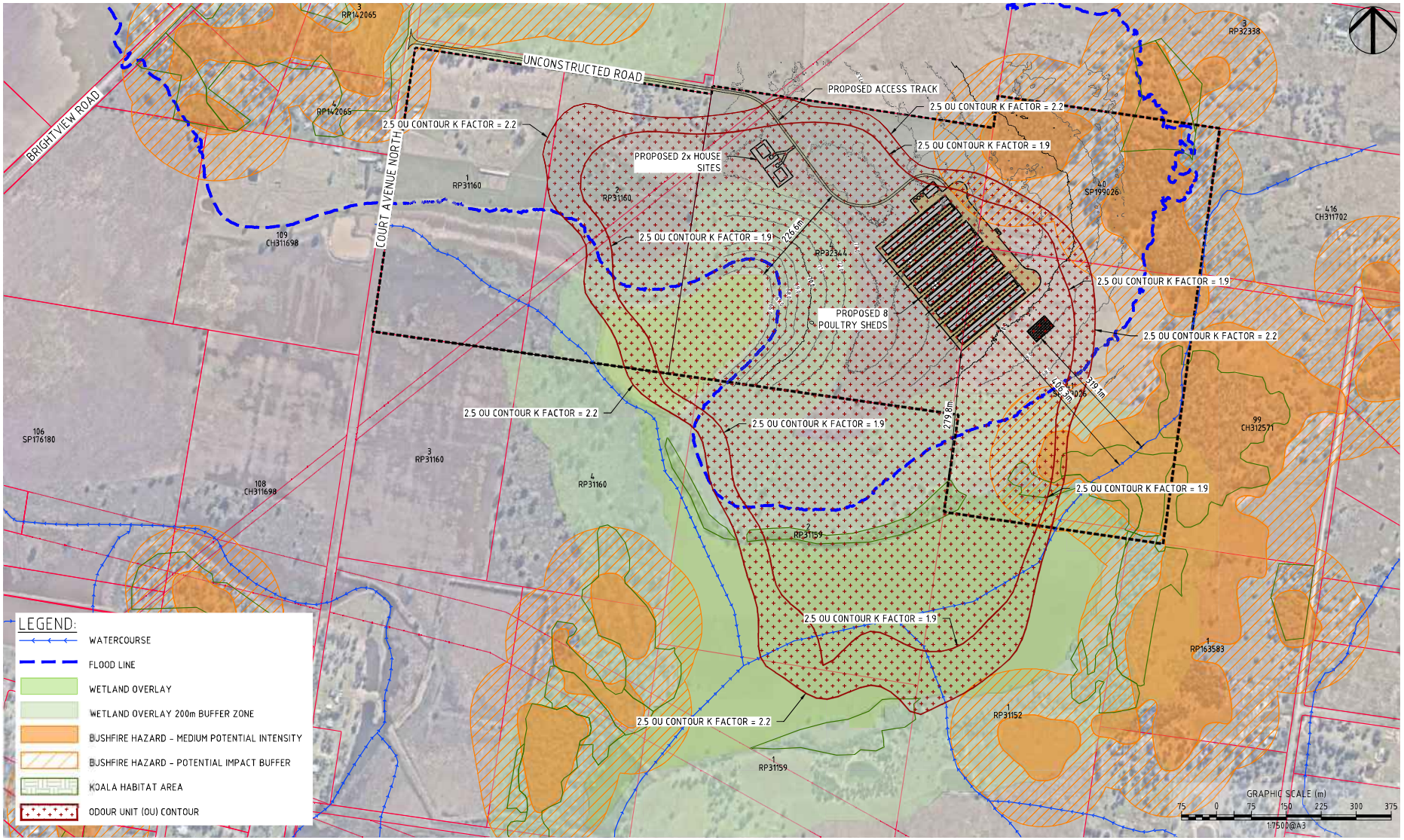

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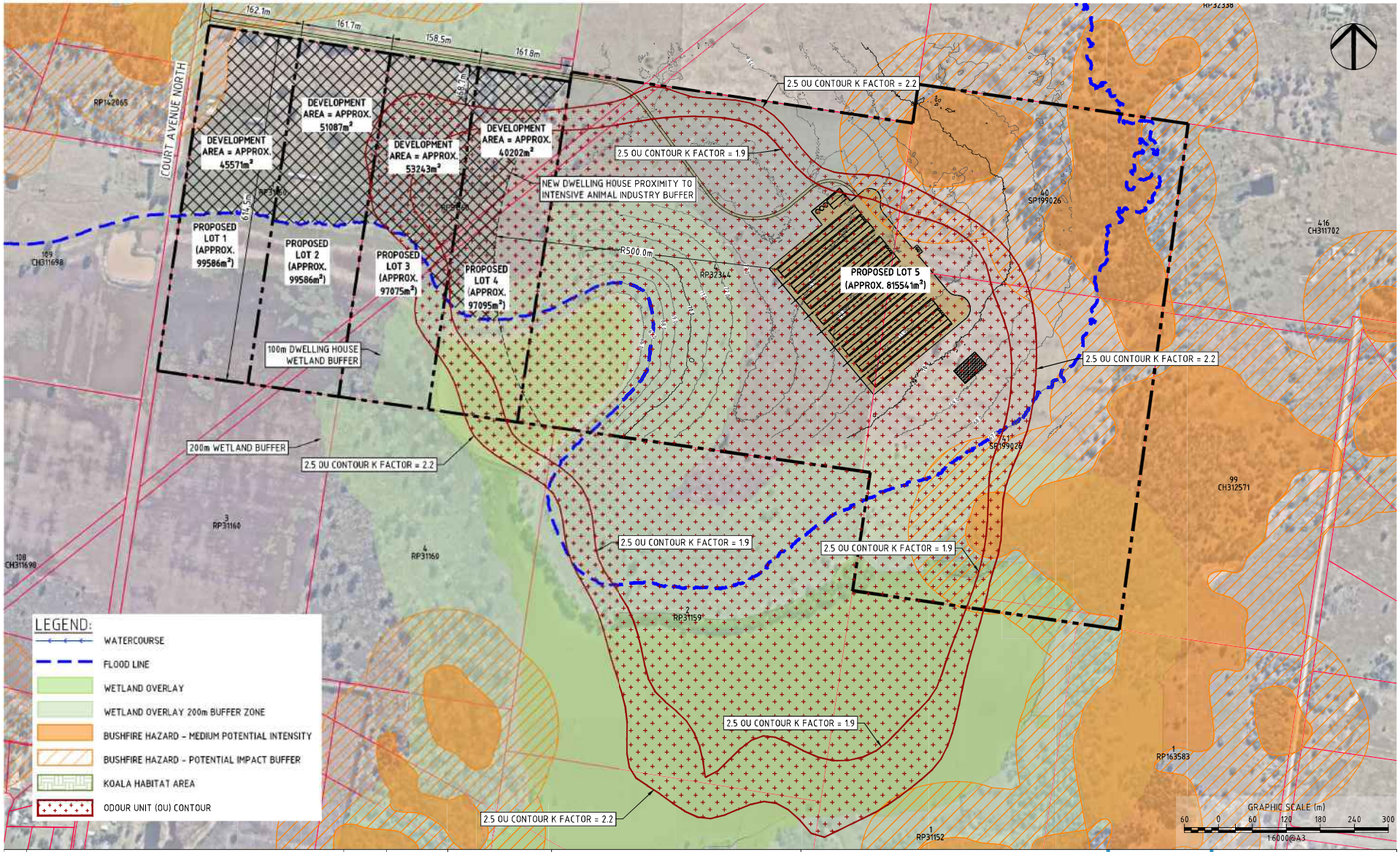

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Site Based Environmental Management Plan

Revision No (2)

Prepared For

LL & Sons Pty Ltd

3 August 2023

ACS Project Number: 210100

Document Control:-

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Revision 1 Issue for use
Revision 2 Updated fan direction to south west

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1. Introduction

The purpose of this ***Site Based Environmental Management Plan*** (SBEMP) is to provide a framework for the environmentally sustainable operation of the LL & Sons Pty Ltd Poultry Farm. The SBEMP reflects the day-to-day operation of the Poultry Farm, while also recognising the needs of the industry, government, and the community.

Development of this SBEMP is a formal commitment to ensure that practical and reasonable efforts are made to operate the farm in an environmentally sustainable manner. This SBEMP is to be utilised as a documentation system for recording, reviewing and monitoring current site practices to constantly develop and improve the environmental operations of the poultry farm. This SBEMP is to be utilised for recording purposes in regard to the following:

- Chemical spills and incidents;
- Odour, dust and noise monitoring;
- Managing community complaints;
- Documenting spent litter removal, site spreading and sales;
- Water and soil analysis; and
- Staff training.

The key components of this SBEMP identify environmental standard practice, as outlined in the *National Environmental Management System for the Meat Chicken Industry – Version 2*, in relation to legal requirements, natural resources and amenity, operation, design and management and monitoring, recording and reviewing. The *Processors Grower's Manual*, the *RSPCA Meat Chicken Farming Scheme Standard* and the *RSPCA Operation Manual* which this farm subscribes to, outline standard operational procedures that in conjunction with this SBEMP will ensure the sustainable operation of the farm.

2. Farm Identification Details

2.1. Farm Description

The proposed poultry farm is located on Court Avenue North in Brightview, QLD, 4311. The site is located within the Somerset Regional Council area, within the Rural Zone. The subject site comprises of the following lots:

- Lot 4 RP32344
- Lot 40 SP199026
- Lot 41 SP199026

The subject site includes a watercourse on the eastern boundary, identified wetlands to the south and south west and a section of dense vegetation to the north east. The remainder of the site is moderately vegetated with established grass cover. The topography at the proposed poultry farm site is relatively flat, with most of the site falling towards the south. There are no existing buildings or ancillary infrastructure on the subject site. The site also includes a dam, access tracks and rural fencing.

Figure 1: Site Location (QLD Globe, 2022)

The proposed poultry farm consists of 8 sheds totally a gross floor area of approximately 25,062.4m^2. Birds are introduced as day olds and are removed over a 48 - 52 day cycle. Thin out and removal procedure is subject to processor demands.

The sheds remain empty for 10 - 14 days whilst cleaning occurs, and the sheds are prepared for the next batch. There are approximately 5.6 to 6.0 batches per year.

Strictly no entry is provided to the farm without permission from management.

The farm is fenced with entry gates clearly defining the farm as a bio security area.

Management contact details are provided clearly on the entry gates. A visitor sign in sheet is required to be filled in on arrival.

3. Natural Resources and Existing Environment

3.1. Property Features, Locality and Characteristics

The proposed poultry farm on current standards is a considered a large sized operation as it will house 400,000 birds per batch.

The farm site is situated in a rural location accessed from Court Avenue North via Brightview Road.

Although the subject site comprises of multiple lots, the poultry sheds will be located on Lot 4 RP32344 and Lots 40 and 41 SP199026. In the surrounding locality, the nearest neighbour's dwelling is situated approximately 800m away from the corner of the closest poultry shed.

Of the 6 neighbouring lots, 4 are owned by LL & Sons. Lot 4 RP32344 also shares a boundary with an unconstructed road reserve. The subject site is also burdened by an electrical easement.

The local topography is relatively flat, with most of the site falling towards the south. The site includes a watercourse, areas of wetlands and sections of dense vegetation. The remainder of the site is moderately vegetated with established grass cover

The subject site is impacted by some Matters of State Environmental Significance (MSES) including, wetland values, wildlife habitat and vegetation and habitat, as shown below in Figure 2 - Subject Site MSES Overlays (Qld Globe 2022)

Figure 2 - Subject Site MSES Overlays (Qld Globe 2022)

3.2. Water

3.2.1. Surface Water

A stream order 3 watercourse flows southward along the eastern property boundary of the site, approximately 400m from the nearest shed location. The watercourse flows to the wetland on the southern boundary of the site. The wetland is 300m from the nearest shed location. A farm dam is located in the south west corner of the property which collects sheet flow from the surrounding land to the north and east. This dam is located 430m from the nearest shed. The wetland and dam drain to Woolshed Creek, a tributary of Lockyer Creek

The poultry sheds are proposed to be located along the ridgeline at the centre of the lots are detailed on the site layout plan. Runoff from the operational area will be directed the detention basin as detailed in the proposal plans.

3.2.2. Groundwater

One stock bore exists on site. RN197100 was drilled in October 2021. At the time of testing the discharge was estimated at 0.5L/s. The bore report indicates the standing water level is 7 m below ground level. Another bore, to the west of the subject site (RN197097) also drilled in October 2021 tested at a yield of 0.18L/s. The standing water level of this bore is recorded at 21.6 m below ground level.

3.2.3. Water Supply

Water is required for both drinking and cooling in meat chicken production and for the cleaning/sanitising in the shed following the removal of birds.

Water will be sourced from the nearby Urban Utilities water supply network. This will require an extension of the network along Court Avenue North and a new 100mm property service connection for the property. An internal water supply network will be installed to the shed site and around the sheds to provide drinking water, cooling water, wash down water and other ancillary needs including water for fire fighting.

Three water storage tanks will be erected at the farm for emergency water storage on-site. Each tank will have a capacity of 250,000 L. This will provide approximately 5 days storage in the event of an interruption to supply.

The yearly water consumption is approximately 40ML per year, calculated based on average drinking water and cool pad consumption per bird batch.

3.3. Climate

Annual average wind rose data generated from the weather station at University of Queensland Gatton shows at 9am there are typically easterly winds, blowing at 10 km/h. However, there are seasonal variations to wind direction, with the months of June to September typically having westerly to north-westerly winds. 3pm data was not available from the Bureau website.

Based on the University of Queensland Gatton Bureau of Meteorology monitoring station, site # 40082, the expected monthly average temperature is shown in Table 1. These values are based on

recorded data between 1913 and 2019. The maximum average temperature occurs in January and the minimum average temperature occurs in July.

The average rainfall data shown in Figure 3. Total average rainfall for the area is 765.6 mm with maximum rain periods occurring in the November – March period.

Table 1: Mean Minimum and Maximum Temperatures Stn 040082 (Gatton University)

Month	Mean Minimum Temperature (°)	Mean Maximum Temperature (°)
January	19.1	31.6
February	19.0	30.8
March	17.4	29.6
April	13.7	27.2
May	10.2	23.8
June	7.6	21.1
July	6.3	20.8
August	6.7	22.5
September	9.5	25.6
October	13.2	28.2
November	16.0	30.3
December	18.1	31.4

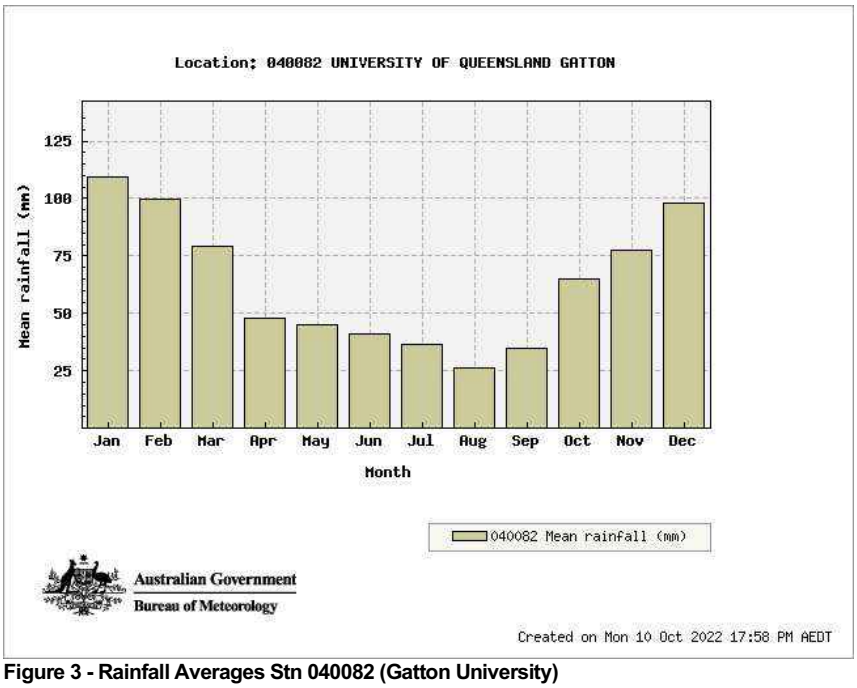

Figure 3 - Rainfall Averages Stn 040082 (Gatton University)

3.4. Soils

The major soil type identified near the site are identified by the Atlas of Australian soils Queensland as grey sodosols or hard pedal mottled-yellow duplex soils.

Figure 4 - Soil types at and adjacent to the site

The report, "Soils and Irrigated Land Suitability of the Lockyer Valley Alluvial Plains, South-East Queensland" details the types of soil present in the Lockyer Valley. Table 2 below provides details of the soils present nearby.

Table 2 - Soil types definitions

Soil Profile Class	Distinguishing Features
Clarendon (Cl)	Humic mottled surface horizon over mottled dark or grey medium to heavy clay with grey calcareous subsoil to 1.5m deep.
Leschke (Lk)	Grey, hardsetting, crusting light to medium clay with grey subsoil to 1.5m. Subsoils are alkaline but may become neutral with depth

Generally the soil type present can support natural pasture but does not support cultivation for pasture improvement

4. Organisational Structure

The farm organisational structure is shown below in Figure 5.

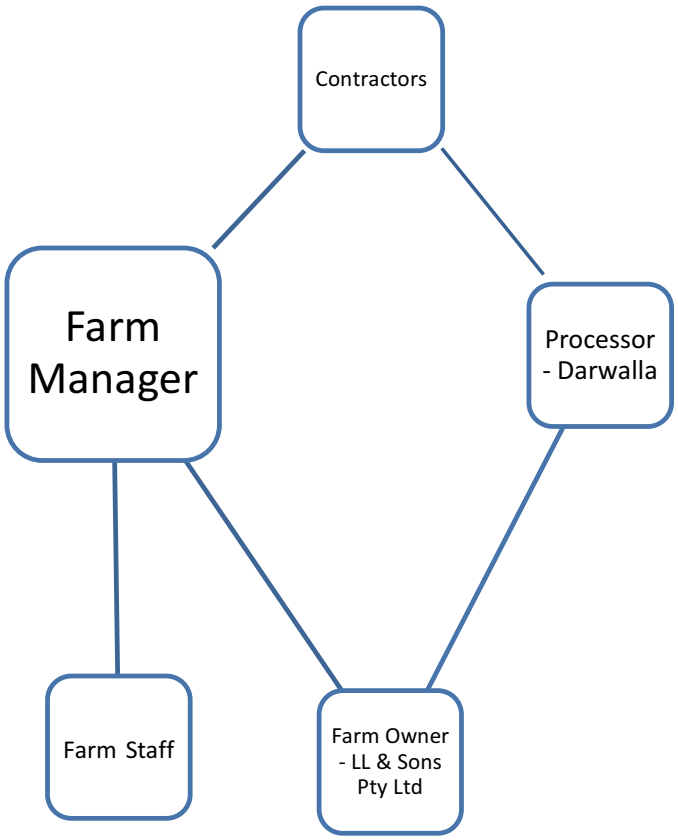

Figure 5 - Organisational Structure

5. Ownership and contact details

Table 3 - Ownership and Contact Details

Farm Owner:	LL & Sons Pty Ltd
Farm Manager:	Don Logan
Processor:	Darwalla
Name of Farm:	
Postal Address:	
Telephone Number:	
Mobile Number:	0429 985 233
Email Address:	hardmyle@bigpond.com
Real Property Description:	Lot 4 RP32344, Lot 40 SP199026 and Lot 41 SP199026
Land Area (Ha):	81.73 ha
Tenure:	Freehold

6. Environmental Issues

6.1. General Environmental Duty

The meat chicken poultry farm must comply with the applicable environmental legal authorities and governance as outlined in Section 13.2. The meat chicken poultry industry aims to operate in an environmentally stable manner through the use of 'best practice environmental management' as detailed in the *National Environmental Management System for the Meat Chicken Industry Version 2*. The grower operates under guidance of the Processors *Growers Manual* and the potential environmental impacts of the meat chicken farm arising from these procedures are outlined in Section 6.2. The management of these impacts and the strategies utilised to maintain environmental sustainability on site are detailed further throughout Sections 7 – 10.2 of Chapter A and throughout Chapter B - Environmental Risk Assessment.

6.2. Potential Environmental Impacts

If meat chicken poultry farms are poorly designed and managed, significant environmental impacts can occur due to the result of the operation or construction of the poultry farm. As is the commonplace for meat chicken poultry farms, the following adverse impacts must be considered:

- Community Amenity;
- Surface Water;
- Groundwater;
- Soil;
- Emissions; and
- Dust, Noise and Odour.

6.2.1. Community Amenity

Community amenity impacts arise from the operation of a meat chicken poultry farm when unreasonable interference with the comfort of the surrounding community lifestyle occurs. This could be the result of odour generation from the poultry farm either through waste disposal or chemical use, noise pollution associated with farm operation and traffic or dust generation and visual amenity due to the location of infrastructure in a rural setting.

The most appropriate solution to addressing the surrounding community amenity is to implement and maintain good management strategies through the adoption of appropriate buffers. Buffers protect the meat chicken farm from residential encroachment and protect the surrounding community from adverse impacts of the meat chicken industry. Buffers that include vegetative screens provide visual amenity to the site area. Inadequate buffers may require additional measures to control the impacts of the meat chicken poultry farm.

6.2.2. Surface Water

Surface water impacts arise from nutrient rich waste expulsion that meat chicken farms produce due to spent litter and the spreading of litter as a fertiliser. The process of eutrophication or elevated nutrient levels may occur as a result of these operations. This encourages the growth of toxic, harmful bacteria in the waterways and can be potentially dangerous to local animal and plant life. Due to these affects, meat chicken poultry farms are required to manage surface water movements through containment or through avoiding nutrient contamination.

6.2.3. Groundwater

Groundwater impacts are a result of nutrients and salts leaching through the soil into the groundwater and contaminating it. This may occur due to poorly sealed shed floors, poorly constructed spent litter storage areas and chemical storage areas. Groundwater contamination is very difficult to detect and remediation is difficult and costly, therefore it is best to ensure adequate management strategies are in place from the beginning of the project.

6.2.4. Soils

Soil impacts often occur in the form of degradation due to elevated nutrient levels and the corresponding changes in pH, soil structural decline, soil erosion, chemical and microorganism contamination and elevated sodicity and salinity levels. The spreading of spent litter is valuable as a use for fertiliser when applied at a sustainable rate, however inappropriate application can trigger soil degradation. This requires the regulation and maintenance of a sustainable spreading strategy.

6.2.5. Gaseous Emissions

Poultry farms are known to contribute to greenhouse pollution through the emission of carbon dioxide (CO_2), nitrous oxide (N_2O) and methane (CH_4). Poultry farms can also contribute to the emission of ammonia (NH_3). Emissions can also result from the formation of electricity or gas and the burning of fossil fuels.

6.3. Environmental Responsibilities of Suppliers and Growers

Environmental legislation dictates that the meat chicken farmer must ensure the sustainable use of spent litter that is supplied to off-site users. It is useful for the grower to have a contract with off-site users stipulating trading volumes and intended uses. Farmers contracted by large processors do not have control over the diet of the poultry and as such the chemical composition of the litter also. It is therefore important to ensure that growers are providing spent litter that is safe and used in an environmentally safe manner.

7. Management of Environmental Impacts

The farm operates in accordance with standard 'best practice environmental management' and as such requires the management of the environmental impacts outlined in Section 6.2 to uphold the Environmental Authority and Governance which the meat chicken farm operates under, as outlined in Section 13.2. The site-based procedures and objectives compiled to manage these impacts are outlined in Sections 7.1 – 7.5. Allocations of responsible persons for these procedures are also detailed.

7.1. Maintaining Community Amenity

Objectives:

1 Noise: Minimise noise generation impacts of the meat chicken farm during operation and construction of the proposed sheds;

2 Odour: Minimise odour impacts from the poultry sheds, poultry carcasses and spent litter whilst reducing odour complaints;

3 Dust: To minimise dust emissions from construction, poultry sheds, carcass management and transportation vehicles; and

4 Visual: Minimise the effect of built infrastructure has on the visual amenity of the local environment.

Management:

1 Noise: Noise generation is minimised by:

- Limiting use of air braking equipment on large vehicles;
- Limiting traffic movements and construction outside of standard operating hours;
- Maintenance of faulty equipment;
- Utilising low noise emitting vehicles on site; and
- Conducting regular noise assessments as per Record Sheet 2.

2 Odour: Odour impacts are minimised by:

- The use of mechanically ventilated sheds to maintain optimum moisture content of the litter;
- Establishment of vegetative environmental buffer down wind of tunnel fans;
- Directing ventilation fans in south-west direction, away from neighbouring odour receptors;
- Variable control of ventilation rates on the sheds to maintain optimum temperature and humidity,
- Daily inspection of sheds to ensure correct temperature and humidity is maintained;

- Installation, inspection and maintenance of drinking watering systems that minimise spillage;
- Insulation of shed roofs to minimise condensation;
- Maintenance of cooling system to ensure operation does not cause wet litter;
- Land sloping away from the poultry sheds and construction of rat walls to prevent ingress of stormwater;
- Litter bed depths of minimum 50mm prior to bird placement;
- Daily monitoring of litter conditions and prompt action taken, by way of tilling, where crusts and/or damp areas are identified. Irreparably wet or fouled patches will be isolated, removed and replaced with dry litter should tilling not improve litter quality;
- Litter must be actively maintained in a dry and friable condition;
- Where litter is re-used at the end of a batch, it must be treated to address pathogens loads and ammonia concentrations and be dry and friable at bird placement;
- Establishment and maintenance of vegetation buffers on the property boundaries;
- Adequate management of poultry carcasses as per Section 8.6;
- Spent litter removal and on-site disposal conducted with covered vehicles, with the avoidance of temporary on-site storage if possible; and
- Odour assessments regularly conducted in conjunction with neighbour consultation;
- Odour complaints from nearby residents are recorded in Record Sheet 1 and managed accordingly.

3 Dust: Dust impacts are minimised:

- Maintaining an on-site speed limit of 20km/hr for all vehicles;
- Use of vegetative screens and buffers;
- Managing the moisture content of on-site litter; and
- Wetting of construction surfaces and transport roads during dry conditions of operation.

4 Visual: Visual amenity is maintained by:

- Use of vegetation and topography to minimise vision of poultry farm facilities from nearby residents and roads.

Responsibility of: Farm manager, Poultry Carcass Removal Contractor, Litter Removal Contractor

7.2. Surface Water Management

Objectives:

1 Minimising surface water contamination due to poultry sheds, associated cleaning procedures and stormwater runoff;

2 Minimising surface water contamination due to storage of poultry carcass, spent litter and chemical storage;

3 Minimising surface water impacts due to spent litter disposal; and

4 Minimising surface water impacts due to stormwater runoff.

Management:

1 Contamination associated with poultry sheds and associated cleaning procedures is minimised by:

- Providing adequate drainage to direct stormwater and shed water runoff to the provided vegetative filter strips;
- Grassed areas and vegetative strips around the poultry sheds are maintained;
- Shed floors are constructed as a compacted clay base and raised above natural ground level to prevent water ingress; and
- Sheds are constructed on sloping ground to prevent stormwater entry into the shed.

2 Contamination associated with storage of poultry carcasses, spent litter and chemical storage is minimised by:

- Poultry carcasses are to be stored in refrigerated container until contractor removal, refer to Section 8.6 for full management procedure;
- Chemical storage sheds are bunded to prevent contamination in case of spillage;
- Temporary storage areas for spent litter are appropriately bunded and covered in the event of emergency, it is commonplace for spent litter to be stored inside the poultry sheds before removal; and
- Re-vegetation of disturbed areas after construction has been completed.

3 Contamination of surface water due to spent litter disposal is minimised by:

- On-site disposal will be managed to ensure application of adequate layering of litter on appropriate areas; and
- Drainage pathways and filter strips are provided on disposal boundaries were deemed necessary.

Responsibility of: Farm manager

7.3. Groundwater Management

Objectives:

1 Minimising groundwater contamination due to poultry sheds, poultry carcass storage, spent litter storage and chemical and fuel storage.

Management:

1 Groundwater contamination is minimised through the following methods:

- All storage facilities and sheds are constructed with impermeable bases to prevent leaching of potential contaminants into the groundwater system;
- Stormwater runoff and water flow is directed away from contaminated sites; and
- On site bore pumping is monitored and a yearly sample is sent away for chemical analysis to ensure the health of the current groundwater supply;
- All sheds are constructed to have a floor treatment with a minimum permeability of $1x10^{-9}$ m/s for a depth of 300mm. This will consist of compacted clay.

Responsibility of: Farm manager

7.4. Maintaining Soil Health

Objectives:

1 Minimising soil erosion during operation and construction; and

2 Minimising soil contamination due to litter disposal and operational procedure.

Management:

1 Erosion during operation and construction of the poultry sheds is minimised by:

- Implementation of a Sediment and Erosion Control Plan as outlined in Section 8.8; and
- Diverting runoff around the construction area and installing silt traps and barriers until adequate ground vegetation is established.

2 Soil contamination is minimised by:

- Ensuring adequate disposal volumes are adhered to on all areas of paddocked land to reduce opportunity for nutrient build up and chemical imbalance.

Responsibility of: Farm manager

7.5. Reducing Gaseous Emissions

Objectives:

1 Minimise meat chicken shed gaseous emissions.

2 Minimise gaseous emissions due to construction and daily operational on-site vehicle usage.

Management:

1 Meat chicken shed gaseous emissions are minimised by:

- Adequately managing litter moisture content such that generation of harmful gases does not become excessive;
- Maintaining adequate shed temperatures such that poultry feed intake is kept to normal conditions;
- Ensuring the diet is adequate and does not oversupply the poultry with nutrients resulting in gaseous excretions;
- Ensuring ventilation fans, drinkers, cooling pads and lighting are operating correctly to ensure efficient energy use; and
- Lighting and other electrical appliances are only used when required.

2 Gaseous emissions due to construction and daily operational usage of vehicles is minimised by:

- Construction vehicles maintained to ensure minimal fuel consumption;
- Minimising the use of on-site farm vehicles where possible; and
- Provision of facilities to store feed supply to limit the amount of feed delivery related movements.

Responsibility of: Farm Manager, Processor.

8. Operation, Design and Management

8.1. Siting and Design

The shed design will be in accordance with current standards and industry best practice. The total gross floor area of the 8 sheds is approximately 25,062.4m^2. The siting of the sheds has been selected based on the existing site features to optimize earthworks volumes, avoid protected area overlays and maintain acceptable distances from sensitive receptors. The design also considers stormwater management, which is detailed further in Section 7.2 and the Site Based Stormwater Management Plan prepared by ACS Engineers.

Table 4 - Design Specifications

Element	Design Description
Sheds, Pad and Roads	The farm site has been located to utilise the existing topography and natural vegetation to reduce potential environmental impacts from odour, dust, noise. The finished floor levels of the individual sheds will be consistent. The size of the overall pad is approximately 290 m x 220 m. The sheds are proposed to be positioned in a northeast southwest direction. With the sheds exhausting to the northeast. A gravel ring road (minimum 3.5m wide) will be provided around the perimeter of the sheds with a service road between pairs of sheds. A wider hardstand will be established on one end of the pad to facilitate loading/unloading of trucks, grain silos and other supporting infrastructure. The proposed sheds will have dimensions of 176 m x 17.8 m separated by approximately 18m. The proposed gross floor area of each shed is 3132.8 m^2. Total gross floor area for development is 25,062.4 m^2.
Floors	The shed floors will be compacted earth/stabilized floors, covered with appropriate litter. At the end of each production cycle, 50% of shed litter is removed from the sheds and taken off site for use as fertilizer. Litter removed from the poultry shed is contained in covered vehicles. The remaining 50% undergoes a process called pasteurisation. The process of pasteurisation involves heaping up of spent litter inside the shed between batches to promote microorganism activity. When microorganisms degrade organic matter, heat energy is created. Once temperatures reach approximately 55^{o}c, pathogens and parasites are killed. Pasteurisation is considered much more environmentally friendly and sustainable over traditional chemical application and large open air composting.

Walls and Roof	The sheds will be constructed to the applicable Australian Standards and Building Code of Australia. The sheds will consist of a steel frame with colorbond or similar metal sheeting roof and a combination of colorbond or similar metal sheeting walls. Although the sheds have been strategically positioned to mitigate visual impacts notwithstanding, the sheds will be green in colour to reduce any visual impact on the surrounding locality. Each will have a concrete wall around the base of the shed to prevent stormwater and vermin entering the sheds
Insulation	Appropriate insulation will be installed in the roofs and walls of the sheds, which are to be fully enclosed.
Tunnel Ventilation	The sheds will be designed to operate as fully tunnel ventilated. Tunnel ventilation is designed to produce a constant environment for the birds inside the sheds. Temperature is varied depending on the age of the birds. Each shed will include gas heaters spaced along the length of the shed and exhaust along the length of the shed. Tunnel fans will be installed along the southwest end of the sheds.
Vermin Control	The sheds will be fully enclosed and vermin proofed. Procedures for managing the vermin are documented within the Site Based Management Plan
Staff	It is expected that the proposed chicken farm will generate 2 full time equivalent roles. Four casual/contract staff will also be employed during labour intensive activities such as shed clean out and chicken placement.
Access	All farm access will be via the proposed new access. The access will be designed and constructed to a standard suitable for the largest vehicle accessing the site.
Biosecurity	Biosecurity is a high priority for the operation of a poultry farm. All persons entering and leaving the farm will transit via the office/amenities block to report to the farm manager and wash.
Ancillary Buildings	The farm will need ancillary buildings primarily for storage purposes. Additional structures and/or facilities anticipated include gas tanks, an office/amenities facility which will include toilets and showers, manager's residence, a generator shed, pump shed, machinery and chemical storage shed and a cool room. See proposal plans for further details.
Stormwater Management	Stormwater generated by the development will be managed by grass swales and a detention basin prior to discharge to the existing flow paths traversing the site.

	Each shed will be some 200 – 300mm above the surrounding land to prevent ingress of stormwater.
Landscaping	A vegetative buffer will be established around the shed perimeter to enhance the dispersion of air emitted from the sheds and to assist in filtering airborne particles and create a visual buffer. See proposal plans for further details.

8.2. Road, Traffic and Machinery Management

The procedures taken to ensure sustainable environmental operation of the poultry farm in regard to dust, noise and light impacts with regards to road, traffic and machinery management are as follows:

- All internal roads are 'all weather' gravel, larger sized gravel particles are used to minimise dust from traffic;
- All trucks entering the property are to use low beam and trailer light functions only where possible. Air brakes are strictly not permitted;
- A maximum speed limit of 20km/h is enforced on site and drivers are asked to comply;
- Pick up areas and non-trafficable areas (including drains) are clearly defined through the use of guide posts and adequate signage;
- Litter removal is completed by covered semi-trailer or B-double;
- Vehicles are privately maintained with provision of a service timetable;
- Timetable for bird pick up and arrival – limiting noise during unacceptable hours.

8.3. Shed Management

Daily shed management procedures are explicitly laid out in the Processors *Grower's Manual* and consist of monitoring shed temperature, dead bird management (culls and mortalities), crop check percentages, weighing every 7 days and checking operational equipment (fans, coolers etc.). An example of the document register for this recording process is shown in the Appendices in Section 15.

The shed floors are to be covered with pine sawdust or other approved bedding material to a depth of 50 mm. Drainage/drainage pipes directing stormwater away from the sheds are provided around all sheds. On site drainage pathways are mown and cleaned regularly to prevent ponding of water. Farm management inspects sheds visually three to four times per day. During this process bird comfort, drinker heights, water pressure and wet spots are monitored. Floors are inspected for damage and repaired after the grow out cycle has been completed.

All sheds are to be fitted with 'state of the art' electronic climate control management systems and emergency alarms which monitor shed conditions. If there is a problem, an automated recorded message is sent to the manager's mobile phone notifying of the fault. An audible alarm is also activated. Weekly maintenance of all sheds is conducted and logged in the Broiler Batch Record Booklet or similar farm diary as shown in the Appendices.

Power meters are attached to all sheds which indicate the energy consumption of the shed.

8.4. Litter Clean-out and Removal

At the end of each production cycle 50% of shed litter is removed from the site in covered vehicles and transported off site for use as fertilizer while the remaining 50% undergoes pasteurization which involves heaping spent litter inside the shed between batches to promote microorganism activity. Microorganisms degrade organic matter creating heat energy which kills pathogens and parasites once the temperature reaches 55^{o}C.

After litter is removed from the sheds, floors are swept to remove residual litter prior to washing of walls and floor with a high-pressure hose and subsequently disinfected. During this time the sheds remain closed and out of service for a minimum of 24 hours. Fresh bedding is then applied as per Section 8.3 and insecticide is applied to the fresh litter. This litter removal and clean-out procedure is in accordance with the Processor's *Growers Manual* and the RIRDC (Rural Industries Research & Development Corporation) guidelines, *Grower options for spent litter utilisation.*

8.5. On-site Spent Litter Spreading

There will be no spreading of spent litter on the Poultry Farm.

8.6. Dead bird management

Dead birds are collected daily in all sheds. Dead birds will be removed to a cold room where they are stored in sealed containers prior to contractor off site removal (minimum twice weekly). This area is located away from drainage pathways. Mortalities and culls are recorded on the daily record application.

8.7. Stormwater Management

On site stormwater management is mandated under *Environmental Protection Act 1994 (ERA 4(2))* to restrict the detrimental effect of the poultry farming activity on surface and groundwater bodies. Management strategies as outlined in Section 8.7.3 and as detailed in ACS Engineers *Site Based Stormwater Management Plan* will been employed to limit the adverse effects on the surrounding catchment and water systems. As a result of the proposed management strategies being adhered to, the environmental harm can be limited, and the likelihood of an occurrence can be reduced.

8.7.1. Hydrology and Flood Impacts

The proposed structures located on the property are not impacted by flooding and are located well above the identified 1% AEP.

Runoff from sheds and hardstands to be directed to grassed swales and side drains along the western and eastern length of the development area to contour bank level spreaders to the south of the development area to detain and return flows to overland sheet flow, to subsequently discharge across the to the downstream wetland and natural drainage lines.

Any bare soil exposed during the construction of the sheds will be replanted, mulched, and/or seeded to ensure adequate ground cover.

8.7.2. Potential Contaminants, Impacts and Water Quality Objectives

The primary source of contamination from the meat chicken farm will be in the form of dust particulate which is emitted as a result of the operation of shed exhaust fans. This particulate matter settles on the shed pad areas. During shed clean-out procedures, water outflow is restricted and limited and does not increase nutrient contamination on shed pad areas.

Nutrients deposited on the shed pad have the potential to be accumulated in soil and lost to runoff. While nitrogen and phosphorous are essential for plant growth, if they are present in excessive quantities this can lead to negative environmental impacts. If excess nutrients enter a water system, overloading the natural nutrient capacity, algae populations can grow in larger than normal amounts.

8.7.3. Proposed Stormwater Quality Management

The Department of Agriculture and Fisheries (DAF) document *Development of Meat Chicken Farms in Queensland* (July, 2016), states that for an intermittent waterway, a setback distance of the poultry sheds of **50 m** applies. This is to manage and mitigate against degrading the local water quality and wider environmental harm.

The Catchment Management Overlay map in the planning scheme shows the site is located within a lower risk catchment area and not within an identified buffer to a waterbody. The flood hazard overlay map in the planning scheme shows the site of the proposed poultry farm is located outside the flood hazard area. The proposed poultry farm site is also located outside of areas identified as high ecological value on the Biodiversity Overlay – Wetlands, including buffer areas.

To reduce the risk of impacts to surface water from the proposed development and to ensure compliance with the Environmental Protection (Water) Policy 2009, a number of farm water quality objectives have been developed.

1 Minimise surface water contamination from poultry sheds and range areas

2 Minimise surface water contamination from poultry shed wash down

3 Minimise surface water contamination from dead poultry storage

4 Minimise surface water contamination from spent litter

5 Minimise surface water contamination from chemical and fuel storage

6 Minimise surface water contamination from stormwater runoff

The following stormwater controls are proposed to meet the farm water quality objectives.

8.7.3.1. Internal controls

Internal controls are set in place in regards to floor, litter and dead bird management, internal shed water usage and chemical storage. Control measures are outlined as follows:

Floors – The floors of the sheds will be a compacted earthen base (hydraulic conductivity of no greater than 1 x 10^{-9}m/s) with a reinforced concrete nib wall around the perimeter of the sheds. The wall will act as a bund, preventing ingress of external stormwater flows and preventing waste from internal activities exiting the shed and contaminating external stormwater flows.

Litter – Spent litter is contained and stockpiled inside the shed walls upon clean-out. As removal occurs, litter which is leaving the property is loaded into covered trucks and any litter stored on site is stored on a compacted base, located away from drainage paths. Spent litter spillages are adequately contained until removal by covered contractor vehicle.

Dead bird management – Dead birds are removed daily from the sheds and placed in enclosed, impermeable storage containers within an on-site cold room outlined in section 8.6 until collection by approved contractors.

Internal Shed Water Usage – Sheds are washed down after litter clean-out and removal using high pressure, low volume water hoses and disinfected and treated for pests. Any remnant water on the floors is evaporated using shed ventilation fans. Cleaning water from internal shed washing is not discharged to the external stormwater system.

Chemical Storage – Chemicals are stored in a shed which is bunded to contain the contents if a spillage occurs. If a spillage occurs, it is recorded in Record Sheet 7.

8.7.3.2. External controls

External controls are set in place in regard to drainage buffers, animal management, runoff diversion and vegetation covers. Control measures are outlined as follows:

Drainage buffers – A minimum 50m buffer (as required by DAF and Seqwater) will be maintained between the sheds and any existing natural drainage lines to minimise any potential impact to water quality. The shed pads will be constructed such that all runoff from the sheds will be directed to the south east, through stormwater quality treatment devices then via overland flow to the natural drainage paths. This design feature further increases the distance between the runoff source and the receiving drainage lines and allows for additional treatment of flows to restore to background characteristics.

Runoff Diversion and Vegetation Cover – Upslope stormwater runoff will be diverted around the pads and to the natural drainage lines. Stormwater generated from the development will be directed to flow through grassed areas between the sheds before being treated via vegetated filter strips (VFS) east and west of the poultry complex, grassed swales and a detention basin for subsequent discharge to the natural flow paths. Grassed swales and vegetative filter strips will function by slowing runoff velocities and filtering out sediment and other pollutants.

VFS' will be planted to the east and west of the poultry complex. VFSs are grassed or vegetated strips of ground that stormwater flows across. The VFSs will be established with Kikuyu grass or similar non-clump forming grass. These filter strips treat stormwater through infiltration, settling and adsorption and improve filtration of suspended solids by slowing the velocity of runoff. The decrease in velocity occurs because of flow resistance of the vegetation, and results in a reduction in the capacity of flow to transport sediment.

Filter strips are commonly used in agriculture and act as a buffer zone between watercourses from sediment (TSS), nutrients and bacteria accompanying the stormwater runoff. VFSs are recommended by the poultry industry and state agricultural and environmental authorities as a suitable method of reducing the nutrient load (phosphorous and nitrogen) of runoff from sources of potential excess nutrients.

A surface water detention dam (1.5ML) will be utilised in conjunction with vegetative filter strips (VFS) to remove potential nutrients from the stormwater.

The proposed stormwater system is designed to complement the natural drainage characteristics of the land. Runoff from the sheds and hard stand areas will not concentrate stormwater, but disperse the flows to natural overland sheet flow and allow the water to travel to its existing natural point of discharge.

After re-joining the natural drainage paths the low nutrient level runoff will be further diluted with upstream clean stormwater.

Animal management – In order to reduce the presence of wild birds in the vicinity of the poultry sheds, water captured within the detention basin will be utilised for irrigation of landscaped as soon as practicable to maintain a generally empty status. Increased exposure to wild birds is considered a major biosecurity risk especially in relation to waterfowl. It is important for the poultry farm operational area not to have environmental and amenity factors that attract large numbers of wild birds.

8.8. Sediment and Erosion Control

Sediment and erosion control is implemented to limit soil impacts in the form of soil erosion, elevated nutrient levels and corresponding chemical and microorganism contamination. A sediment and erosion control plan is provided within the drawing details at Section 12.

8.8.1. Potential Sediment Generation

Sediment will be generated as a result of the development works for the proposed shed expansion. This potential generation is dependent upon site conditions like topography, rainfall, material type and the construction methods used.

The proposed management and quality control measures are outlined in Section 8.8.2.

8.8.2. Erosion and Sediment Control Management

Sediment and erosion control management will consist of the use of diversion drains, sediment fences and establishing adequate vegetation cover. Diversion drains will be installed to divert stormwater runoff flow away from the shed pad area. Sediment fences will be installed to prevent soil losses due to erosion and wind movements. Once construction and development of the new proposed sheds has been completed sediment fences will be maintained until vegetation cover is established to an adequate standard.

The location of these devices and their extent is detailed in the Sediment and Erosion Control Plan detailed in ACS Engineers Site Based Stormwater Management Plan and proposal plans ACS-210100-SITE.

8.9. Odour management

The operation of a meat chicken farm results in the production of odour due to the chemical content of litter and chemicals applied on site. Site odour emissions will be managed through effective operational strategy comprising ventilation usage, regular inspection and maintenance of cooling and drinking water systems, litter management and removal, dead bird management.

8.10. Chemical Storage and Use

Chemicals are stored in a lockable shed with a bunded area to trap spills. An MSDS for all chemicals is stored within the shed. Water wash down facilities are available for vehicles and containers used in the application of the chemicals and a wash down shower is provided for emergencies.

A certified and fully trained contractor is employed to spray the sheds. The sheds are completely shut down and isolated to limit atmospheric emissions. Empty containers will be disposed of in an appropriate manner using a private contractor, or when the Council drum collection occurs.

9. Contingency Measures

Outlined in Table 5 are the contingency procedures to follow and manage the occurrence of an onsite emergency.

Table 5 - Emergency Situations and Contingency Measures

Emergency Situation	Contingency Plan
Power Supply Failure	Two automatic start generators (second generator backs up the first) activate immediately upon power failure. The generators are capable of running the farm under full capacity.
Water supply loss	If UU reticulated water is unavailable, alternative water is available from a local contractor on a daily basis. Before use, all water is required to be filtered and chlorinated via on site water treatment plant.
Abnormal Mortality	In the event of catastrophic deaths from disease, the processor and all relevant parties will be consulted for disposal action required. In the event of catastrophic deaths from natural causes, the processor will be notified, and birds disposed of by private contractor.
Chemical Spill	All chemicals and fuels are stored in bunded areas, MSDS will be used to define adequate clean up procedures.
Equipment Malfunction	The farm manager and certain farm staff will have the skills required to fix most minor equipment malfunctions. Commonly needed spare parts will be kept on-site in case of any emergency for critical infrastructure.
Loss of 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, an order will be placed with an alternative supplier.
Bird Pickup	The processor stipulates bird pickup timetable as outlined in the Processors *Grower's Manual.* Should bird pick up not occur as scheduled farming operations will continue to ensure appropriate bird welfare. Should bird pick up not occur as scheduled farming operations will continue to ensure appropriate bird welfare.
Fire	Potentially flammable chemicals are stored in an enclosed locked shed in individual containers to prevent mixing. Fire extinguishers are stationed around the sheds. Staff will maintain a fire break and are trained in the fire evacuation procedures and the Fire Brigade (Lowood Fire Brigade) will be contacted in the event of a fire approaching the poultry farm.

Spent Litter pickup	In situations where spent litter cannot be taken off-site, it will be temporarily stored on the compacted pad around the sheds. If a rain event occurs, the spent litter will be adequately covered to manage any odour.
Loss of trained operators	At all times, staff will be trained in the duties and responsibilities applicable to their position. There is staff available to take over if the farm manager is unable to fulfil his duties.

10. Monitoring, Recording and Reviewing

10.1. Operational Monitoring

Operational monitoring occurs on a daily basis as a requirement of processor agreements as per the *Processors Growers Manual*. Typically, the following data is recorded.

- All poultry movements on and off the farm;
- Mortalities and culls;
- Litter conditions;
- Shed temperature;
- Shed humidity;
- Ambient Weather conditions;
- Water treatment levels; and
- Water consumption.

10.2. Subjective Monitoring and Community Liaison

Self-auditing by the manager occurs on site on a per batch basis, this consists of boundary checks during each cycle when sheds are at peak capacity. Smell tests will be conducted on the boundary near the closest receptors during this time. If odour levels are abnormal, management practices in all sheds are reviewed to rectify.

Neighbours are also consulted and encouraged to notify the farm if there are any odour, noise and dust impacts. A complaint register is kept by the farm and if a complaint is received it will be recorded.

Record sheets include:

- Complaints Record;
- Noise Assessment Record
- Dust Assessment Record;
- Odour Assessment Record;
- Spent Litter Sales Record;
- Spent Litter Reuse Record;
- Environmental Improvement and Monitoring; and
- Staff Training.

All record sheets are included in the SBEMP throughout sections 10.3.1 to 10.3.9

10.3. Record Registry

10.3.1. 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 attached to this record sheet. This complaints register is to be submitted to any governing authority if requested.

Date	Complainant's name	Complaint	Complaint recorded by	Source of problem	Comment/ Action taken	Does complainant believe impact has declined?	Further action taken?	Signature of responding officer

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10.3.2. Record Sheet 2: Noise Assessment

The noise assessment below is to be used to conduct noise assessments on site.

Date	Noise Monitoring Points (Level of Noise Nuisance)				
	MP 1	MP 2	MP 3	MP 4	MP 5

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.*

10.3.3. Record Sheet 3: Dust Assessment

	Name	Date & Time	Wind direction	Wind speed	Dust from poultry farm	
					Absent	Present
MP 1 MP 2 MP 3 MP 4 MP 5						
MP 1 MP 2 MP 3 MP 4 MP 5						
MP 1 MP 2 MP 3 MP 4 MP 5						
MP 1 MP 2 MP 3 MP 4 MP 5						
MP 1 MP 2						

MP 3 **MP 4** **MP 5**					
MP 1 **MP 2** **MP 3** **MP 4** **MP 5**					
MP 1 **MP 2** **MP 3** **MP 4** **MP 5**					

10.3.4. Record Sheet 4: Odour Assessment

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**	**OMP 5**

10.3.5. Record Sheet 5: Measured Spent Litter Composition and Sales

Spent Litter Removal Records

Date	Amount Sold (t and/or m^3)	Transporter / Destination / Intended Use

10.3.6. Record Sheet 6: Application of Spent Litter On-Farm

Date Applied	Where Applied (Paddock I.D and area)	Application Rate (t/ha)	Application Method

10.3.7. Record Sheet 7: Chemical Spill Record

Date/Location of Spill/Chemical Type	Corrective Action

10.3.8. Record Sheet 8: Environmental Improvement and Monitoring

The record sheet below is used during the manager's self-audit of the site to identify potential areas of improvement or concern. The onsite risk assessment outlined in Chapter B is conducted annually to aide in this process.

Date	What requires Environmental Improvement or Monitoring

10.3.9. Record Sheet 9: Staff Training

This record sheet details all relevant environmental training undertaken by owners, managers, and staff.

Date	Name of participant	Training Course

11. Reviewing the EMP

This SBEMP will be reviewed annually as a minimum, if a complaint is received, or if an expansion, change of operational practice or land use change occurs.

Records pertaining to spent litter removal, noise assessments, dust assessments, odour assessments, complaints, chemical spills, staff training will all be regularly updated and adjusted as required. Soil and water monitoring data will also be included in this SBEMP when conducted or required.

Regular review of the SBEMP ensures environmental practice and procedure is up to date and that appropriate policies and strategies are being incorporated correctly into site operation.

Document Status Record

Date Amended	Amendment Made

Amendments to the document status record are updated whenever changes are made to the SBEMP and highlight the amendment made.

12. Maps and Plans

Sheet Number	Sheet Title	Revision
01	Cover Sheet	1
02	General Notes	1
03	Locality Plan	1
04	Site Layout	1
05	Bulk Earthworks Layout Plan	1
06	Shed Typical Sections	1
07	Sections – Sheet 01	1
08	Sections – Sheet 02	1
09	Sections – Sheet 03	1
10	Access Details	1
11	Vegetative Environmental Buffer	1
12	Stormwater Management Plan	1
13	Erosion and Sediment Control – Notes	1
14	Erosion and Sediment Control – Notes and Details	1
15	Erosion and Sediment Control – Plan	1
16	Odour and Overlays Layout	1
17	Lot Reconfiguration Layout	1

13. Legal Requirements

13.1. Commitment to Sound Environmental Management

We ………………………………..…………..…………..…………..…………..…………... (Grower) and……………………..…………..…………..…………..…………..…………..…………... (Processor), aim to minimise the environmental impact of the farm by ensuring all design and management practices comply with the conditions of development consent, license conditions, relevant State Department Acts (e.g. Environment and Planning) and follow the principles of sound environmental management.

We have set in place this system to evaluate, monitor, record, manage and review environmental impacts. We agree to review the plan at least every two years or more frequently if circumstances require. We will ensure all staff involved in the operation of the farm are adequately trained in environmental issues and relevant training and education is undertaken.

I the grower agree to abide by the requirements outlined in the plan and all staff members employed by me have signed a statement which identifies they understand and agree with these requirements.

Where a legitimate problem exists or arises, we will consult with the relevant authorities (e.g. Local Council) to devise an adequate solution, bearing in mind commercial realities.

Signed: ……………………….. (Grower)

Date: ………………………..

Signed: ……………………….. (Processor)

Date: ………………………..

As a staff member employed by the grower, I understand and agree with the requirements outlined in this environmental management plan.

Staff Member (Full Name)	Signature	Date

13.2. Environmental Authority

LL & Sons Pty Ltd Poultry Farm adheres to strict environmental policies and governing authorities which are outlined below in Table 6.

Table 6 - Environmental Legal Authority and Governance

Local Govt. Authority:	
Local Govt. Consent No.:	
Consent Capacity:	
Date of Approval:	
State Govt Authority:	
EA No.:	
Date of Approval:	
Action Needed:	

14. References

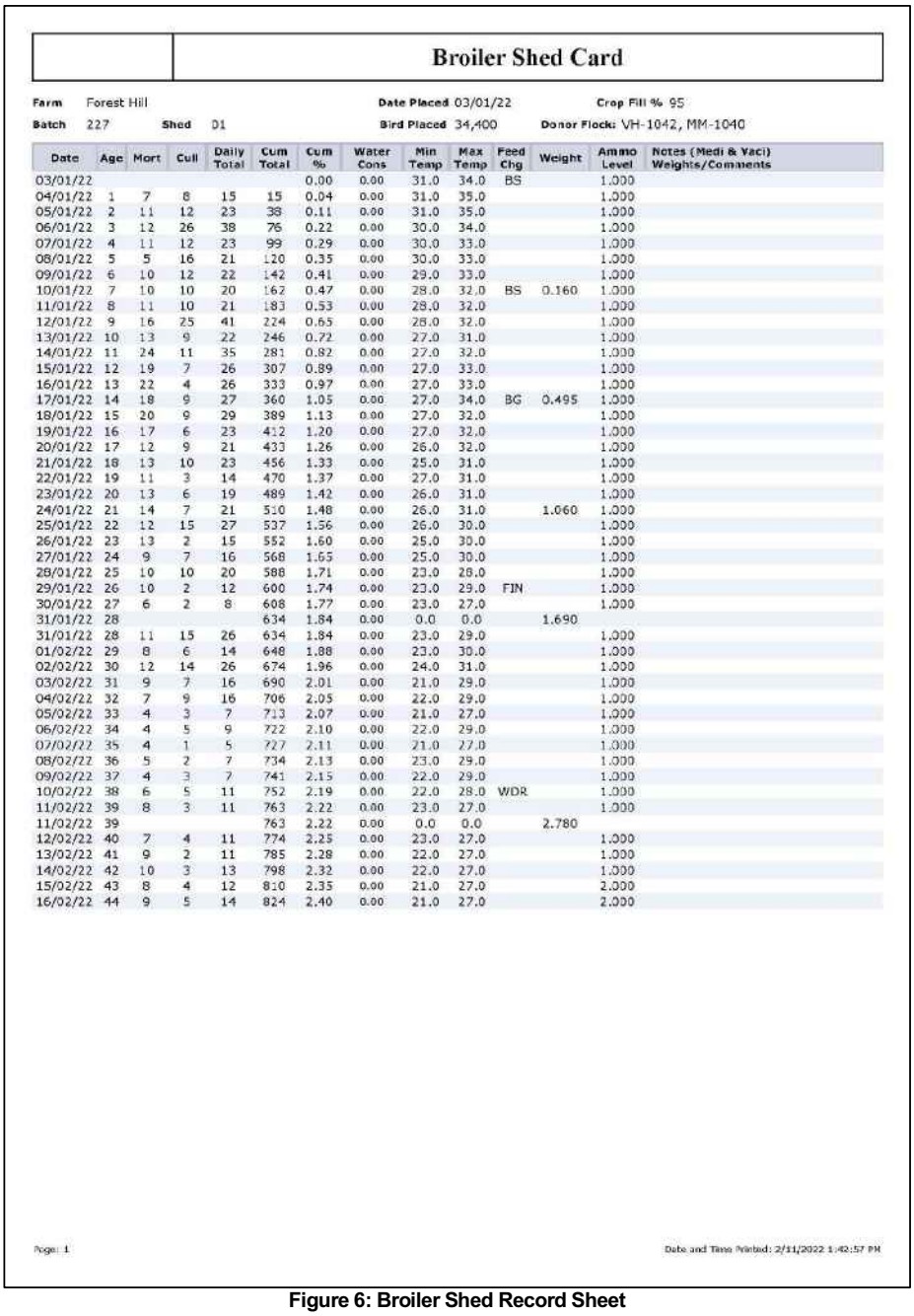
Department of Sustainability, E, Water, Populations and Communities, 2013, *National Pollutant Inventory. Emission estimation technique manual for intensive livestock - poultry raising*, Version 3.0, 13 June 2002, Environment Australia, Australian Government, Canberra, ACT, viewed 9 September 2014, < http://www.npi.gov.au/resource/emission-estimation-technique-manual-intensive-livestock-poultry-raising-version-30 >.

McGahan, E, Bielefeld N, Wiedemann, S & Keane, O 2014, *National Environmental Management System for the Meat Chicken Industry – Version 2*, RIRDC Publication No 14/100, Rural Industries Research and Development Corporation, Canberra.

Wiedemann, S, Bielefeld, N, McGahan, E, Valentine, J & Murphy, C 2015, *Grower options for spent litter utilisation*, RIRDC Publication No 14/093, Rural Industries Research and Development Corporation, Canberra.

15. Appendices - Example Daily Operation Record Sheets

15.1. Broiler Shed Record Sheet



Broiler Shed Card

Farm Forest Hill — Date Placed 03/01/22 — Crop Fill % 95

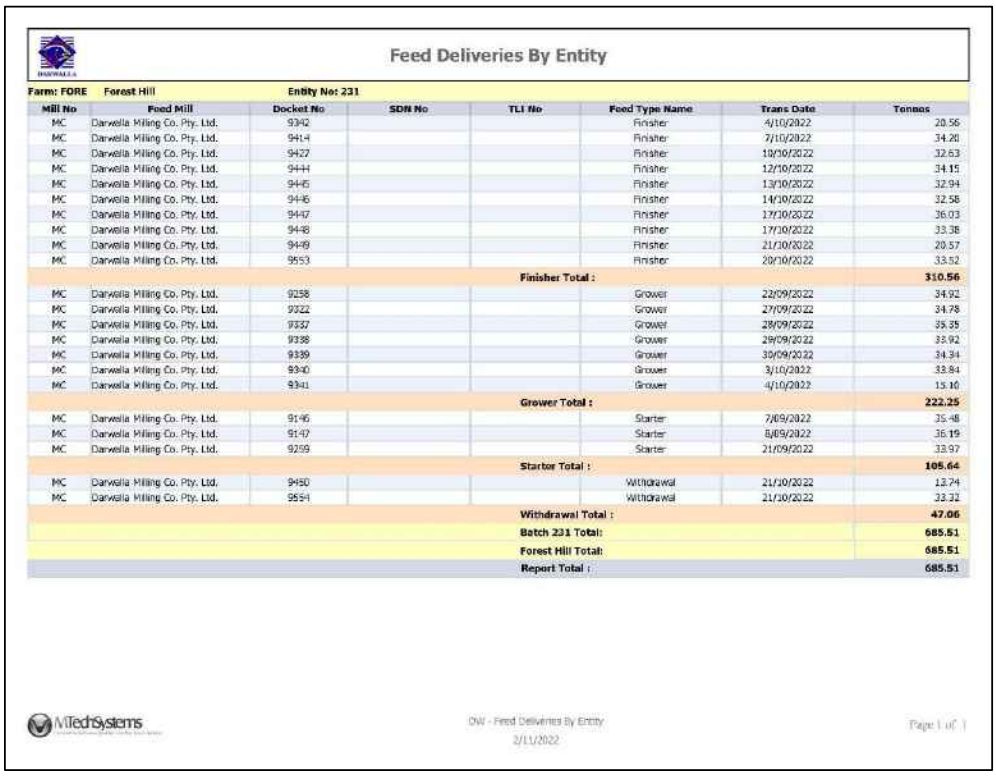
Batch 227 — Shed 01 — Bird Placed 34,400 — Donor Flocks VH-1042, MM-1040

Date	Age	Mort	Cull	Daily Total	Cum Total	Cum %	Water Cons	Min Temp	Max Temp	Feed Chg	Weight	Ammo Level	Notes (Medi & Vaci) Weights/Comments
03/01/22						0.00	0.00	31.0	34.0	BS		1.000	
04/01/22	1	7	8	15	15	0.04	0.00	31.0	35.0			1.000	
05/01/22	2	11	12	23	38	0.11	0.00	31.0	35.0			1.000	
06/01/22	3	12	26	38	76	0.22	0.00	30.0	34.0			1.000	
07/01/22	4	11	12	23	99	0.29	0.00	30.0	33.0			1.000	
08/01/22	5	5	16	21	120	0.35	0.00	30.0	33.0			1.000	
09/01/22	6	10	12	22	142	0.41	0.00	29.0	33.0			1.000	
10/01/22	7	10	10	20	162	0.47	0.00	28.0	32.0	BS	0.160	1.000	
11/01/22	8	11	10	21	183	0.53	0.00	28.0	32.0			1.000	
12/01/22	9	16	25	41	224	0.65	0.00	28.0	32.0			1.000	
13/01/22	10	13	9	22	246	0.72	0.00	27.0	31.0			1.000	
14/01/22	11	24	11	35	281	0.82	0.00	27.0	32.0			1.000	
15/01/22	12	19	7	26	307	0.89	0.00	27.0	33.0			1.000	
16/01/22	13	22	4	26	333	0.97	0.00	27.0	33.0			1.000	
17/01/22	14	18	9	27	360	1.05	0.00	27.0	34.0	BG	0.495	1.000	
18/01/22	15	20	9	29	389	1.13	0.00	27.0	32.0			1.000	
19/01/22	16	17	6	23	412	1.20	0.00	27.0	32.0			1.000	
20/01/22	17	12	9	21	433	1.26	0.00	26.0	32.0			1.000	
21/01/22	18	13	10	23	456	1.33	0.00	25.0	31.0			1.000	
22/01/22	19	11	3	14	470	1.37	0.00	27.0	31.0			1.000	
23/01/22	20	13	6	19	489	1.42	0.00	26.0	31.0			1.000	
24/01/22	21	14	7	21	510	1.48	0.00	26.0	31.0		1.060	1.000	
25/01/22	22	12	15	27	537	1.56	0.00	26.0	30.0			1.000	
26/01/22	23	13	2	15	552	1.60	0.00	25.0	30.0			1.000	
27/01/22	24	9	7	16	568	1.65	0.00	25.0	30.0			1.000	
28/01/22	25	10	10	20	588	1.71	0.00	23.0	28.0			1.000	
29/01/22	26	10	2	12	600	1.74	0.00	23.0	29.0	FIN		1.000	
30/01/22	27	6	2	8	608	1.77	0.00	23.0	27.0			1.000	
31/01/22	28				634	1.84	0.00	0.0	0.0		1.690		
31/01/22	28	11	15	26	634	1.84	0.00	23.0	29.0			1.000	
01/02/22	29	8	6	14	648	1.88	0.00	23.0	30.0			1.000	
02/02/22	30	12	14	26	674	1.96	0.00	24.0	31.0			1.000	
03/02/22	31	9	7	16	690	2.01	0.00	21.0	29.0			1.000	
04/02/22	32	7	9	16	706	2.05	0.00	22.0	29.0			1.000	
05/02/22	33	4	3	7	713	2.07	0.00	21.0	27.0			1.000	
06/02/22	34	4	5	9	722	2.10	0.00	22.0	29.0			1.000	
07/02/22	35	4	1	5	727	2.11	0.00	21.0	27.0			1.000	
08/02/22	36	5	2	7	734	2.13	0.00	23.0	29.0			1.000	
09/02/22	37	4	3	7	741	2.15	0.00	22.0	29.0			1.000	
10/02/22	38	6	5	11	752	2.19	0.00	22.0	28.0	WDR		1.000	
11/02/22	39	8	3	11	763	2.22	0.00	23.0	27.0			1.000	
11/02/22	39				763	2.22	0.00	0.0	0.0		2.780		
12/02/22	40	7	4	11	774	2.25	0.00	23.0	27.0			1.000	
13/02/22	41	9	2	11	785	2.28	0.00	22.0	27.0			1.000	
14/02/22	42	10	3	13	798	2.32	0.00	22.0	27.0			1.000	
15/02/22	43	8	4	12	810	2.35	0.00	21.0	27.0			2.000	
16/02/22	44	9	5	14	824	2.40	0.00	21.0	27.0			2.000	

Page: 1 — Date and Time Printed: 2/11/2022 1:42:57 PM

Figure 6: Broiler Shed Record Sheet

15.2. Feed Delivery Record Sheet



Feed Deliveries By Entity

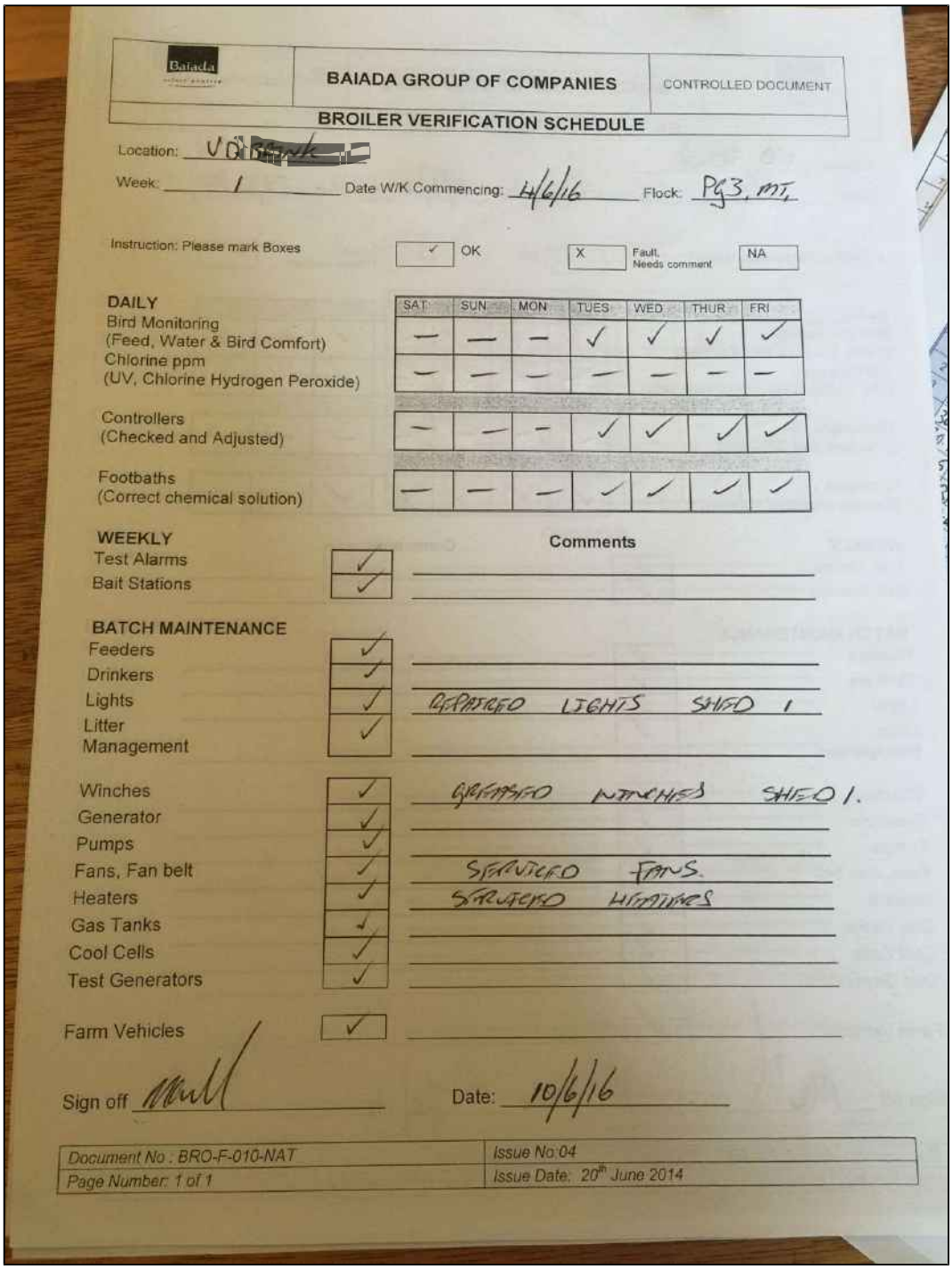
Farm: FORE Forest Hill Entity No: 231

Mill No	Feed Mill	Docket No	SDN No	TLI No	Feed Type Name	Trans Date	Tonnes
MC	Darwalla Milling Co. Pty. Ltd.	9342			Finisher	4/10/2022	20.56
MC	Darwalla Milling Co. Pty. Ltd.	9414			Finisher	7/10/2022	34.20
MC	Darwalla Milling Co. Pty. Ltd.	9427			Finisher	10/10/2022	32.63
MC	Darwalla Milling Co. Pty. Ltd.	9444			Finisher	12/10/2022	34.15
MC	Darwalla Milling Co. Pty. Ltd.	9445			Finisher	13/10/2022	32.94
MC	Darwalla Milling Co. Pty. Ltd.	9446			Finisher	14/10/2022	32.58
MC	Darwalla Milling Co. Pty. Ltd.	9447			Finisher	17/10/2022	36.03
MC	Darwalla Milling Co. Pty. Ltd.	9448			Finisher	17/10/2022	33.38
MC	Darwalla Milling Co. Pty. Ltd.	9449			Finisher	21/10/2022	20.57
MC	Darwalla Milling Co. Pty. Ltd.	9553			Finisher	20/10/2022	33.52
				Finisher Total :			310.56
MC	Darwalla Milling Co. Pty. Ltd.	9258			Grower	22/09/2022	34.92
MC	Darwalla Milling Co. Pty. Ltd.	9322			Grower	27/09/2022	34.78
MC	Darwalla Milling Co. Pty. Ltd.	9337			Grower	28/09/2022	35.35
MC	Darwalla Milling Co. Pty. Ltd.	9338			Grower	29/09/2022	33.92
MC	Darwalla Milling Co. Pty. Ltd.	9339			Grower	30/09/2022	34.34
MC	Darwalla Milling Co. Pty. Ltd.	9340			Grower	3/10/2022	33.84
MC	Darwalla Milling Co. Pty. Ltd.	9341			Grower	4/10/2022	15.10
				Grower Total :			222.25
MC	Darwalla Milling Co. Pty. Ltd.	9146			Starter	7/09/2022	35.48
MC	Darwalla Milling Co. Pty. Ltd.	9147			Starter	8/09/2022	36.19
MC	Darwalla Milling Co. Pty. Ltd.	9259			Starter	21/09/2022	33.97
				Starter Total :			105.64
MC	Darwalla Milling Co. Pty. Ltd.	9480			Withdrawal	21/10/2022	13.74
MC	Darwalla Milling Co. Pty. Ltd.	9554			Withdrawal	21/10/2022	33.32
				Withdrawal Total :			47.06
				Batch 231 Total:			685.51
				Forest Hill Total:			685.51
				Report Total :			685.51

MTechSystems DW - Feed Deliveries By Entity 2/11/2022 Page 1 of 1

Figure 7: Feed Delivery Record Sheet

15.3. Shed Operational Maintenance Record Sheet



BAIADA GROUP OF COMPANIES — CONTROLLED DOCUMENT

BROILER VERIFICATION SCHEDULE

Location: V[redacted]

Week: 1 Date W/K Commencing: 4/6/16 Flock: Pg3, MT,

Instruction: Please mark Boxes — ✓ OK — X Fault, Needs comment — NA

	SAT	SUN	MON	TUES	WED	THUR	FRI
DAILY							
Bird Monitoring (Feed, Water & Bird Comfort)	—	—	—	✓	✓	✓	✓
Chlorine ppm (UV, Chlorine Hydrogen Peroxide)	—	—	—	—	—	—	—
Controllers (Checked and Adjusted)	—	—	—	✓	✓	✓	✓
Footbaths (Correct chemical solution)	—	—	—	✓	✓	✓	✓

		Comments
WEEKLY		
Test Alarms	✓	
Bait Stations	✓	
BATCH MAINTENANCE		
Feeders	✓	
Drinkers	✓	
Lights	✓	GERMICIDAL LIGHTS SHED 1
Litter Management	✓	
Winches	✓	GERMICIDAL WINCHES SHED 1.
Generator	✓	
Pumps	✓	
Fans, Fan belt	✓	SERVICED FANS.
Heaters	✓	SERVICED HEATERS
Gas Tanks	✓	
Cool Cells	✓	
Test Generators	✓	
Farm Vehicles	✓	

Sign off [signature] Date: 10/6/16

Document No : BRO-F-010-NAT	Issue No:04
Page Number: 1 of 1	Issue Date: 20th June 2014

Figure 8: Shed Maintenance Record Sheet

Chapter B Environmental Risk Assessment

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1. Introduction

An assessment of the LL & Sons Pty Ltd Poultry Farm has been undertaken as per the *National Environmental Management System for The Meat Chicken Industry* released by Rural Industries Research and Development Coordination, to identify the risk of causing environmental harm and highlight areas requiring environmental improvement or monitoring.

Section 2 of Part D assesses the vulnerability rating (1-4, where 1 = low vulnerability and 4 = very high vulnerability) on each of the potential environmental impacts associated with various natural resources and amenity located on the meat chicken farm, including:

- Surface water quality;
- Groundwater quality;
- Community amenity – odour, noise, dust and light; and
- Soils.

The vulnerability rating to use is indicated by utilising the ranking tables containing parameters applicable to each rating. It is likely that parameters from more than one rating will apply to most farms therefore discretion is required when applying an overall rating to any set impact.

Section 3 of the environmental risk assessment requires the placement of a risk assessment rating (1-4, where 1 = low risk and 4 = very high risk) on each of the major design and operation features of the meat chicken farm which are outlined below:

- Siting and design;
- Road, traffic and machinery management;
- Shed management;
- Spent litter cleanout and removal;
- On-site spent litter spreading;
- Dead bird management;
- Chemical storage and use;
- Contingency measures; and
- Subjective monitoring and community liaison.

To evaluate the likelihood of an environmental impact, a two dimensional risk matrix is utilised to assess design impacts against natural amenity impacts. Based on the matrix rating the vulnerability of the resource or operation can be determined as follows as per *National Environmental Management System for The Meat Chicken Industry* outlined by RIRDC:

• 1 – 4 means a low overall rating and would not trigger any action.

• 5 –11 means a medium overall rating and may trigger some action.

• 12 –16 means a high overall rating and would trigger some action.

If an action is required, environmental monitoring and improvement will occur. The farm manager will undertake a self-assessment of the farm annually to ensure no increase in risk of adverse environmental impacts.

2. Natural Resources and Amenity (Vulnerability Ratings)

2.1. Vulnerability rating – surface water quality

Rank 1	Rank 2	Rank 3	Rank 4
Meat chicken operation is at least 100 m from surface water bodies (rivers, creeks, wetlands etc) and vegetative filter strips exist. There is minimal possibility of runoff water being contaminated with manure or chemicals. All spent litter storage and compost areas are bunded to prevent entry or exit of runoff. Meat chicken operation is located above the 1 in 100-year flood line.	Meat chicken operation is at least 50 m from surface water bodies (rivers, creeks, wetlands etc) and vegetative filter strips exist. Any runoff that may be contaminated with manure or chemicals is contained on farm. Spent litter storage and compost areas are bunded to prevent entry or exit of runoff for amounts >2 m^3. Meat chicken operation is located above the 1 in 100-year flood line.	Meat chicken operation is at least 25 m from surface water bodies (rivers, creeks, wetlands etc) and vegetative filter strips exist. Any runoff that may be contaminated with manure or chemicals is directed through vegetative filter strips. *Some bunding exists around spent litter storage and compost areas for amounts >2 m^3.* Meat chicken operation located within the 1 in 100-year flood line.	Meat chicken operation is within 25 m of surface water bodies and there are no vegetative filter strips existing. Meat chicken operation is located in a declared catchment area. Contaminated runoff water is allowed to leave the farm. Spent litter storage and compost areas are not bunded. Meat chicken operation is located within the 1 in 100-year flood line.
Ranking: 1	Comments: Refer to site plans and ACS Engineers Site Based Stormwater Management Plan		

2.2. Vulnerability rating – groundwater quality

Rank 1	Rank 2	Rank 3	Rank 4
Groundwater is at least 20 m from surface. Soils overlying groundwater are thick clays. Nearby groundwater sources only used for irrigation.	Groundwater is at least 10 m from surface. Soils overlying groundwater are thick clays.	Groundwater is at least 5 m from surface, with medium permeable soils. Soils overlying groundwater are clay-loam. Nearby groundwater sources only used for stock.	Meat chicken operation located in a groundwater recharge area. Groundwater is less than 5 m from surface. Sandy soils overlying groundwater. Nearby groundwater sources used for human consumption.
Ranking: 2 - 3	Comments: The nearest groundwater monitoring bore RN14320876 indicates a groundwater depth approximately 4.5m below the natural surface. This bore is located approximately 1.7 km north east of the poultry farm site and at an elevation approximately 10m lower. The overlaying soils are low permeability hard pedal mottled-yellow duplex soils. There are no nearby bores to the site used for stock, domestic or irrigation purposes.		

*Groundwater is defined as subsurface water contained in a saturated zone of soil or geological stratum.

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2.3. Vulnerability rating – community amenity (odour)

Rank 1	Rank 2	Rank 3	Rank 4
Meat chicken sheds separated from sensitive receptors* by: >600 m (average farm)** >400 m (small farm)** >800 m (large farm)** Significant hills and valleys between farm and neighbours. Vegetative screens of at least 30 m exist on all sides of the meat chicken operation.	Meat chicken sheds separated from sensitive receptors by at least: 300 m (average farm) 200 m (small farm) 400 m (large farm) *Some hills and valleys between farm and neighbours.* Vegetative screens exist that screen the meat chicken operation from roads and neighbours.	Meat chicken sheds separated from sensitive receptor by at least: 150 m (average farm) 100 m (small farm) 200 m (large farm) *Generally flat open terrain between farm neighbours*. Minimal vegetative screens exist on the farm.	Meat chicken sheds located on a small property and is separated from sensitive receptors by at least: <150 m (average farm) <100 m (small farm) <200 m (large farm) Rural residential and/or urban development surrounding property, with less than 150 m buffer. *Flat open terrain between farm and receptors*. There are no vegetative screens on the farm.
Ranking: 1	Comments: Refer to proposal plans and Astute Environmental Odour Report.		

*A sensitive receptor is defined as any residence, residential development, town or public facility (e.g. school, public hall, recreation area).

**An average farm is designated as 100,000 – 200,000 birds/batch, a small farm is designated as less than 100,000 birds/batch and a large farm is designated as >200,000 birds/batch.

2.4. Vulnerability rating – community amenity (noise, dust and light)

Rank 1	Rank 2	Rank 3	Rank 4
Meat chicken sheds situated from sensitive receptors by 400 m. Significant hills and valleys between farm and neighbours. Vegetative screens of at least 30 m exist on all sides of the meat chicken operation.	Meat chicken sheds situated from sensitive receptors by 200 m. *Some hills and valleys between farm and neighbours*. Vegetative screens exist on the sides of the meat chicken operation that can be seen from the road and by neighbours.	Meat chicken sheds situated from sensitive receptors by 100 m. *Generally flat open terrain between farm neighbours*. Minimal vegetative screens exist on the farm.	Meat chicken sheds located on a small property and is situated from sensitive receptors by <100 m. Rural residential and urban development surrounding property, with less than 200 m buffer. *Flat open terrain between farm and neighbours.* There are no vegetative screens on the farm.
Ranking: 1	Comments: Refer to proposal plans and Astute Environmental Odour Report.		

2.5. Vulnerability rating – soils (if applying spent litter on-farm or operating a free-range production system)

Rank 1	Rank 2	Rank 3	Rank 4
Meat chicken sheds and/or spent litter application area on relatively flat land. Spent litter reuse areas and/or free-range areas are at least 100 m from surface water bodies (rivers, creeks, wetlands etc) and vegetative filter strips exist as well. Soils are: Deep. Loam or clay. Not subject to erosion, salinity, sodicity, soil structural decline, water logging or chemical contamination. Reuse areas are mostly cropped. Free-range areas are managed to limit nutrient accumulation in the soil (i.e. rotationally cropped, manure is scraped from runs) and soil erosion.	Spent litter reuse areas and/or free-range areas are at least 50m from surface water bodies (rivers, creeks, wetlands etc) and vegetative filter strips exist as well. Soils are: Moderately deep. Clay-loam. Reuse areas are suited to a range of crop production. Free-range areas are managed to limit soil erosion (i.e. well vegetated, surface runoff is diverted away, contour banks installed if necessary).	Spent litter reuse areas and/or free-range areas are at least 25m from surface water bodies (rivers, creeks, wetlands etc) and some vegetative filter strips exist as well. Mostly flat open terrain between farm neighbours. If applying spent litter on-farm, soils are: Shallow. Sandy. Suited to some crop production. Free-range areas are denuded and prone to erosion.	Spent litter reuse areas and/or free-range areas are located within 25 m of surface water bodies and there are no vegetative filter strips existing. Meat chicken sheds, free-range areas or spent litter reuse areas on steep land (e.g. >10%). If applying spent litter on-farm, soils are: Very shallow. Very sandy. Only suited to grazing or forestry. Free-range areas are badly denuded and prone to erosion.
Ranking: 1	Comments: Refer to proposal plans, ACS Engineers Site Based Stormwater Management Plan and Astute Environmental Odour Report.		

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3. Design and Operation (Risk Assessment)

3.1. Vulnerability rating – Road, Traffic and Machinery Management

Rank 1	Rank 2	Rank 3	Rank 4
As much as practical traffic movements (excluding bird pick-up) occur between 7 a.m. and 6 p.m. 30 km/hr speed limit enforced on-farm. Truck exhaust brakes not used on-farm or on roads near the farm. All machinery used on-farm fitted with manufacturer specified exhaust equipment. Entrance point to farm has at least 285 m good visibility in both directions.	As much as practical traffic movements (excluding bird pick-up) occurs between 6 a.m. and 9 p.m. 30 km/hr speed limit signs posted on-farm. Truck exhaust brakes not used on-farm or near entrance. All machinery used on-farm fitted with appropriate exhaust equipment. Entrance point to farm has at least 200m good visibility in both directions.	As much as practical traffic movements (excluding bird pick-up) occurs between 5 a.m. and 10 p.m. Entrance point to farm has at least 150 m good visibility in both directions.	Traffic movements (excluding bird pick-up) occurs anytime within the day. Entrance point to farm has less than 150 m visibility in either or both directions.
Ranking: 1	Comments: Site access is located at the end of a road reserve. Normal operating hours are between 7 a.m. and 6 p.m. There is no need for truck exhaust brakes to be used on farm or on nearby roads.		

3.2. Risk assessment – siting and design

Rank 1	Rank 2	Rank 3	Rank 4
Base of shed is compacted clay or impermeable. Meat chicken sheds separated at least 3 km from all other poultry operations. *All surrounding land is designated rural and is not marked for future development*. Technologies installed to reduce odour emissions. Bunding provided to prevent the ingress or outflow of water from areas containing manure (sheds, free-range areas, stockpiles, carcasses etc).	Base of shed is compacted clay or impermeable. Meat chicken sheds separated at least 2 km from all other poultry operations. All surrounding land is designated rural but may be planned for future development. Bunding provided to prevent the ingress or outflow of water from areas containing manure (sheds, free-range areas, stockpiles, carcasses etc).	Base of shed is either not compacted or impermeable. Meat chicken sheds separated at least 1 km from all other poultry operations. Surrounding land is designated rural, but is planned for future development. Bunding provided to prevent the ingress or outflow of water from areas containing manure (sheds, free-range areas, stockpiles, carcasses etc).	Base of shed is either not compacted or impermeable. Meat chicken sheds separated less than 1 km from another poultry operation. Surrounding land is not designated rural. Inadequate bunding provided on-farm.
Ranking: 1	Comments: Refer to proposal plans, ACS Engineers Site Based Stormwater Management Plan and Astute Environmental Odour Report.		

3.3. Risk assessment – shed management

Rank 1	Rank 2	Rank 3	Rank 4
Litter moisture is maintained between 20 and 30%.	Litter moisture is maintained between 15 and 40%.	Litter moisture is sometimes < 10% and/or > 40%.	Litter moisture is regularly < 10% and/or > 40%.
Integrity of floor is checked and maintained after each cleanout.	Integrity of floor is checked and maintained after each cleanout.	Integrity of floor is only checked once per year, with little maintenance.	Integrity of floor is never checked and maintained.
Have regular supply of clean bedding and have sourced backup supply.	Have regular supply of clean bedding and have sourced backup supply.	Have regular supply of clean bedding, but do not have a backup supply.	Do not have a regular supply of clean bedding.
No extraneous water can enter the shed.	No extraneous water can enter the shed.	Litter in shed is sometimes wet from extraneous water.	Litter in shed is regularly wet from extraneous water.
Nipple drinkers with evaporative trays are used.	Nipple drinkers with no evaporative trays are used.	*Cup type drinkers are used.*	Bell type drinkers are used.
Cooling/ventilation equipment (e.g. pads and foggers) are checked and maintained at least twice daily to avoid litter becoming wet during use.	Cooling/ventilation equipment (e.g. pads and foggers) are checked and maintained daily to avoid litter becoming wet during use.	Cooling/ventilation equipment (e.g. pads and foggers) are only checked and maintained weekly during use.	Cooling/ventilation equipment (e.g. pads and foggers) are not checked and maintained during use.
Rodent population monitored daily and appropriately treated.	Rodent population monitored weekly and appropriately treated.	Regular infestations of rodents on-farm and irregularly treated.	Regular infestations of rodents on-farm and not treated.
Ranking: 1	Comments: The sheds will be built and operated using best practice methods.		

3.4. Risk assessment – litter cleanout and removal

Rank 1	Rank 2	Rank 3	Rank 4
Litter moisture is between 20 and 30% at cleanout. Ventilation at cleanout is reduced to a low level that is still safe for workers. Spent litter* immediately removed from farm at cleanout. Spent litter covered before truck leaves farm. Chemical analysis of spent litter and application rates supplied to end-user at cleanout. Sheds cleaned out between 6 a.m. and 6 p.m.	Litter moisture is between 15 and 40% at cleanout. *Spent litter sometimes stored on farm for a short period, but bunded and covered and on a sealed base.* Spent litter covered before truck leaves farm. Chemical analysis of spent litter and application rates supplied to end-user. Sheds cleaned out between 6 a.m. and 6 p.m.	Litter moisture is between 10 and 50% at cleanout. Spent litter stockpiled or composted on-farm in piles that are bunded and have a sealed base. Spent litter covered before truck leaves farm. *Chemical analysis of spent litter and application rates not supplied to end-user.* *Sheds cleaned before 6 a.m. and after 6 p.m.*	Litter is very wet (>50%) or very dry (<10%) at cleanout. Spent litter stored on-farm in piles that are anaerobic, not bunded or on a sealed based. Spent litter not covered before truck leaves farm. *Chemical analysis of spent litter and application rates not supplied to end-user.* *Sheds cleaned before 6 a.m. and after 6 p.m.*

Ranking: 1	Comments: The sheds will be operated using best practice methods.

*Spent litter is defined as litter that is no longer used as bedding. For multi-batch use, used litter may not be spent litter.

3.5. Risk assessment – on-site spent litter spreading & management of nutrients in free-range areas

Rank 1	Rank 2	Rank 3	Rank 4
Spent litter only spread when moisture is between 20 and 30%. Spent litter spread and immediately incorporated. Application rate matched to nutrient uptake and acceptable losses. Spent litter composition always measured. Facility has no free-range areas.	Spent litter moisture is between 15 and 40% during spreading. Spent litter only spread after 9:00 a.m. when atmosphere is unstable. Application rate matched to uptake and acceptable losses. Spent litter composition regularly measured. Facility has no free-range areas.	Spent litter moisture is between 10 and 50% during spreading. Spent litter spread occasionally late in the afternoon and early in the morning when the atmosphere is stable. Application rate regularly exceeds uptake and acceptable losses. Spent litter composition occasionally measured. Management practices are employed to limit nutrient accumulation from manure deposition in free-range areas.	Spent litter is very wet (>50%) or very dry (<10%) during spreading. Spent litter spread regularly late in the afternoon and early in the morning when the atmosphere is stable. Application rate exceeds uptake and acceptable losses or is unknown. Spent litter composition never measured. No management practices employed to limit nutrient accumulation in free-range areas.
Ranking: 1	Comments: No litter will be spread on site.		

3.6. Risk assessment – dead bird management

Rank 1	Rank 2	Rank 3	Rank 4
Dead birds collected from sheds daily. Contingency plan in place for catastrophic bird deaths and all relevant parties informed. Dead birds are immediately placed in collection/disposal system. Dead birds are collected daily for rendering.	Dead birds collected from sheds daily. Contingency plan in place for catastrophic bird deaths and all relevant parties informed. Dead birds are composted in a sealed compost bin. Dead birds removed from farm at least 5 out of 7 days.	Dead birds collected from sheds daily. Contingency plan in place for catastrophic bird deaths, but not all relevant parties informed. Dead birds are buried or composted on-farm.	Dead birds not collected daily. No contingency plan in place for catastrophic bird deaths. If using burial or composting the site is not sufficiently lined or sealed. Dead birds dumped in the bush. Dead birds are burnt in a non-compliance incinerator. Runoff can enter or leave carcass disposal area.
Ranking: 1	Comments: Dead birds are stored in a sealed coldroom until regular collection by licenced contractor.		

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3.7. Risk assessment – chemical storage and use

Rank 1	Rank 2	Rank 3	Rank 4
Material Safety Data Sheets (MSDS) provided for all chemicals used on farm. Approved contractor is used to apply chemicals, with minimal storage of chemicals on-farm. All staff trained in the correct handling and use of chemicals. All chemicals applied at concentrations that strictly adhere to the manufacturer's instructions or to state agricultural department's specifications. Empty containers disposed of as per manufacturer's instructions	MSDS provided for all chemicals stored and used on farm. All chemicals and fuels stored and used in accordance with workplace health and safety codes of practice. All chemicals applied at concentrations that strictly adhere to the manufacturer's instructions or to state agricultural department's specifications. *All staff trained in the correct handling and use of chemicals.* Empty containers disposed of as per manufacturer's instructions	Chemicals application not always adhered to manufacturer's instructions or to state agricultural department's specifications. Empty containers not immediately disposed of as per manufacturer's instructions. Some MSDS provided for chemicals stored and used on farm. Chemicals sometimes stored outside. *Only manager trained in the correct handling and use of chemicals.*	No MSDS provided. Chemicals stored or used on farm not approved by the National Registration Authority for Agricultural and Veterinary Chemicals. No staff trained in the correct handling and use of chemicals. Chemicals application does not follow manufacturer's instructions or to state agricultural department's specifications. *Empty chemical containers lying around farm.* *Chemicals stored outside.*
Ranking: 1	Comments: The sheds will be operated and maintained using best practice methods.		

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3.8. Risk assessment – contingency measures

Rank 1	Rank 2	Rank 3	Rank 4
Contingency plan in place for all of the following: • Catastrophic deaths • Backup power supply • Backup water supply • Equipment malfunction • Fire • Interruption of bird supply to abattoir. Interruption to spent litter pick-up or application. • Containment and clean up of chemical/fuel leaks and spills. • Loss of trained operators.	Contingency plan in place for the following: • Catastrophic deaths • Backup power supply • Backup water supply • Interruption of bird supply to abattoir. • Interruption to spent litter pick-up or application.	Contingency plan in place for the following: • Catastrophic deaths • Backup power supply • Backup water supply	No contingency plans in place for any of the following: • Catastrophic deaths • Backup power supply
Ranking: 1	Comments: Refer to Section 9 (Chapter A) of this report.		

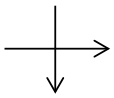
3.9. Subjective monitoring and community liaison

Rank 1	Rank 2	Rank 3	Rank 4
Regular checks are made at the property boundary for unacceptable levels of odour, dust and noise. Maintain complaints register, with full details of complaints received, results of investigations into complaints and corrective actions. Always advise neighbours of any unusual events or problems that may cause an unavoidable odour, dust or noise problem, including what is being done to mitigate the problem and the expected duration of the (determining parameter). Participate in mediation with unresolved disputes.	Some checks are made at the property boundary for unacceptable levels of odour, dust and noise. Keep record of complaints, but not always investigate or have follow up action. Infrequently inform neighbours of any unusual events or problems that may cause an unavoidable odour, dust or noise problem. Sometimes participate in mediation with unresolved disputes.	Irregular checks are made at the property boundary for unacceptable levels of odour, dust and noise. Irregularly keep complaints register. Rarely inform neighbours of any unusual events or problems that may cause an unavoidable odour, dust or noise problem. Rarely participate in mediation with unresolved disputes.	No checks are made at the property boundary for unacceptable levels of odour, dust and noise. No complaints register kept. No contact ever made with neighbours when there may be potential problems (e.g. excessive odour generation). No dispute resolution performed.
Ranking: 1	Comments: Refer to Section 8.9 and 10 of this report.		

4. Environmental Improvement/Monitoring

4.1. Risk Assessment Matrix

Complete the Environmental Improvement / Monitoring matrix by multiplying the rating designated for each natural resource and amenity by the rating designated for each design and operation factor. Note: shaded areas do not require completion.

	Design & Operation Rating (1-4)	**Surface Water Quality**	**Ground Water Quality**	**Community Amenity – Odour**	**Community Amenity – Noise, Dust & Light**	**Soil (Applic. Area)**
Natural Resources & Amenity Rating (1-4)		*Number from 2.1.*	*Number from 2.2.*	*Number from 2.3.*	*Number from 2.4.*	*Number from 2.5.*
Siting & Design	*Number from 3.1.*	1 x 1 = 1	2.5 x 1 = 2.5	1 x 1 = 1	1 x 1 = 1	1 x 1 = 1
Road Traffic and Machinery Management	*Number from 3.2.*	1 x 1 = 1			1 x 1 = 1	
Shed Management	*Number from 3.3.*	1 x 1 = 1	2.5 x 1 = 2.5	1 x 1 = 1	1 x 1 = 1	
Litter Cleanout and Removal	*Number from 3.4.*	1 x 1 = 1	2.5 x 1 = 2.5	1 x 1 = 1	1 x 1 = 1	1 x 1 = 1
On-site Spent Litter Applic. & Management of Nutrients in Free Range Areas.	*Number from 3.5.*	1 x 1 = 1	2.5 x 1 = 2.5	1 x 1 = 1	1 x 1 = 1	1 x 1 = 1
Dead Bird Management	*Number from 3.6.*	1 x 1 = 1	2.5 x 1 = 2.5	1 x 1 = 1	1 x 1 = 1	1 x 1 = 1
Chemical Storage & Use	*Number from 3.7.*	1 x 1 = 1	2.5 x 1 = 2.5	1 x 1 = 1	1 x 1 = 1	1 x 1 = 1
Contingency Measures	*Number from 3.8.*	1 x 1 = 1	2.5 x 1 = 2.5	1 x 1 = 1	1 x 1 = 1	1 x 1 = 1
Subjective Monitoring & Community Liaison	*Number from 3.9.*	1 x 1 = 1	2.5 x 1 = 2.5	1 x 1 = 1	1 x 1 = 1	1 x 1 = 1

Number of 1 -4 means a low rating and would not trigger any action.

Number of 5 – 11 means a medium rating and may trigger explanation or action.

Number 12 – 16 means a high rating and would trigger explanation or action.

Actions would take the form of an Environmental Improvement Program (EIP) or monitoring.

4.2. Trigger Action/Explanation:

All risk ratings are below 5 therefore no actions are triggered. Regular review of risk ratings is recommended.

Report

Poultry Farm Odour Assessment - Brightview

ACS Engineers

Job: 21-209

Date: 1 November 2022

Astute Environmental Consulting

Astute Environmental Consulting Pty Ltd
PO Box 6147, Clifford Gardens, QLD 4350
ABN - 50 621 887 232

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1 INTRODUCTION

ACS Engineers on behalf of LL & Sons contacted Astute Environmental Consulting Pty Ltd (Astute) and requested a proposal to perform an odour assessment relating to a proposed meat chicken farm located at Court Avenue North in Brightview in Queensland on land described as Lot 4 on RP32344 Lots 40 and 41 on SP199026 ("the site"). It is proposed to construct and operate an eight shed meat chicken farm on the site, with each shed holding up to 50,000 birds. The proposed layout of the shed pad has been provided by ACS Engineers and is presented in Figure 1-1.

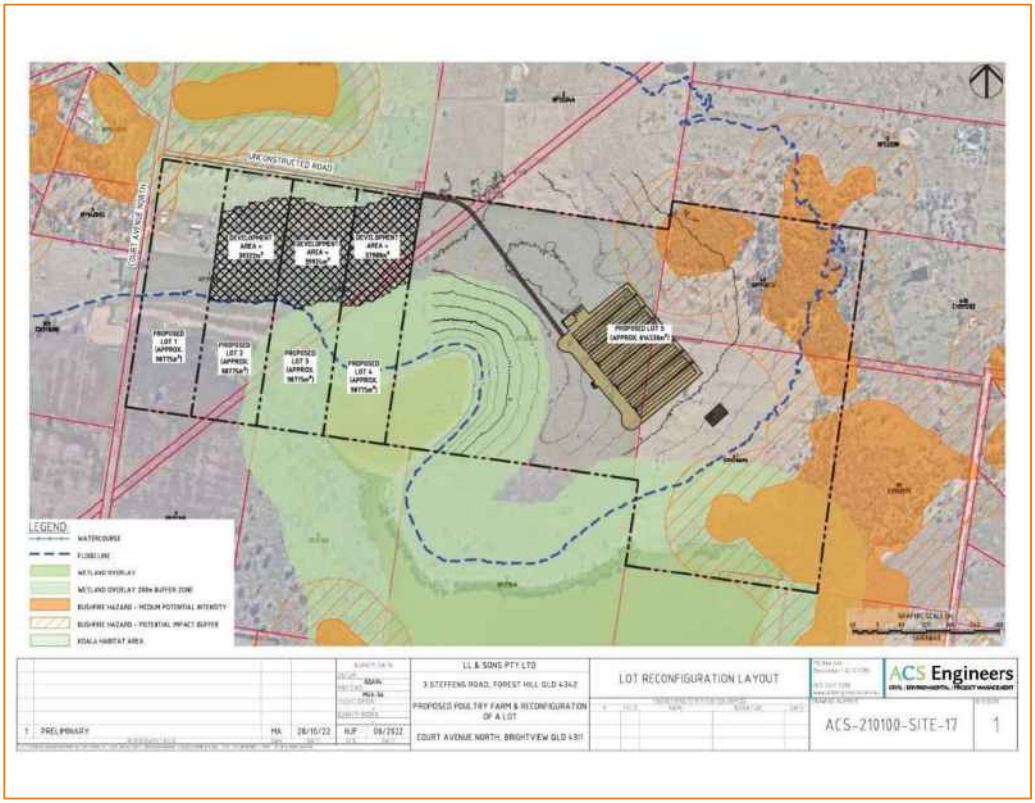


Figure 1-1: Site Layout (Source: ACS Engineers)

1.1 Study Objective

The objective of this assessment is to determine the potential odour and dust impact in line with the *Guideline: Odour Impact Assessment from Developments* (DEHP, 2021) and having regard to the methodology in the *Planning and environment guideline for establishing meat chicken farms – Guide 1 Assessment Guide* (McGahan, et al., 2021).

1.2 Scope of Work

The scope of work for the assessment included:

- Obtain information regarding the proposed sheds including shed capacity;
- Obtain local weather data from private and or DES/The Bureau weather stations;
- Validating the onsite weather station with TAPM;
- Modelling meteorology for the area using TAPM/CALMET;

- Estimating emissions for the proposed 8 sheds;
- Predicting odour dispersion using CALPUFF; and
- Prepare a report.

The methodology used is summarised graphically in Figure 1-2.

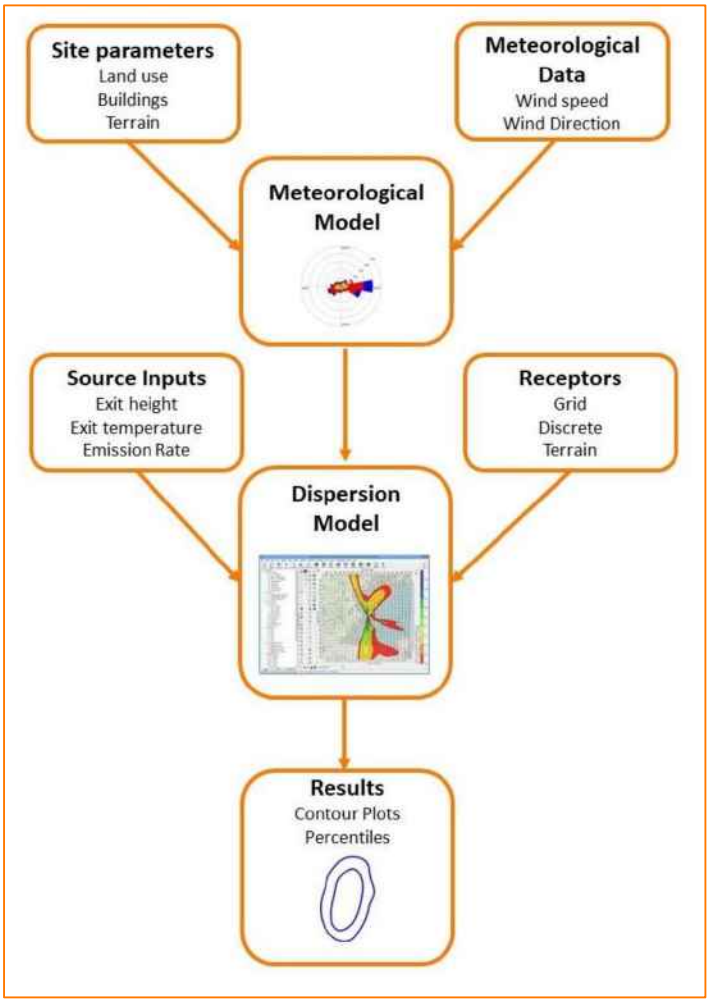


Figure 1-2 Modelling Methodology

2 ODOUR CRITERION

The *Guideline: Odour Impact Assessment from Developments* (DEHP, 2021)[1] is the principal guidance document used in Queensland for assessing odour impacts.

In addition to guiding how to estimate odour emissions and model the dispersion of odour, the odour guideline states that odour concentrations predicted by the modelling at the "most exposed existing or likely future off-site sensitive receptors" should be compared with the following guideline values:

- 0.5 ou, 1-hour average, 99.5th percentile for tall stacks; and
- 2.5 ou, 1-hour average, 99.5th percentile for ground-level sources and down-washed plumes from short stacks.

For this work, as the sheds are ground level sources, we have adopted the odour criterion of $C_{99.5\ 1hr}$ = 2.5 ou.

3 MODELLING METHODOLOGY

3.1 Representative Year

The selection of a representative meteorological year for dispersion modelling is important. Typically, one single year of data is included in an assessment. Critical meteorological factors for air quality assessments include wind speed, temperature and relative humidity. These need to be assessed against long term data to determine which year is most similar to the average conditions rather than simply selecting a modelling year at random. However, for sites where local data (including on-site data) is used, the selection of a representative year is not considered as significant as for a site where no local data is available.

Eight years of meteorological data was analysed from the Gatton Department of Environment and Science (DES) Automatic Weather Station (located approximately 1.5 km to the northwest of the proposed development) from 2014 to 2018 to capture the most recently available data.

The data from the station was compared using box and whisker plots for wind speed in Figure 3-2 and temperature in Figure 3-3. Humidity was not analysed due to large data gaps. Directionality was also checked using a spider plot (not shown here), and limited differences were found year to year.

A box and whisker plot is a figure that presents information based on factors such as minimum and maximum values, the 25th and 75th quartile values and averages. They are useful for indicating whether a distribution is skewed and whether there are potential unusual observations (outliers) in the data set. They are particularly useful when large numbers of observations are involved and when two or more data sets are being compared (Statistics Canada, 2013).

Figure 3-1 below shows how a box plot is structured. In the case of the figure, the maximum, minimum, quartile, median and average values are shown. The Inter Quartile Range (IQR) in the figure shows the middle 50% of values (difference between the 75th and 25th percentiles).

[1] "the odour guideline"

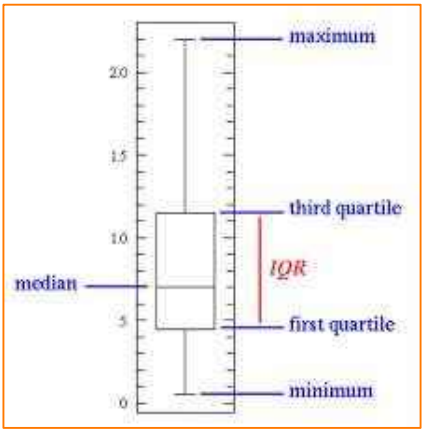


Figure 3-1: Boxplot Structure

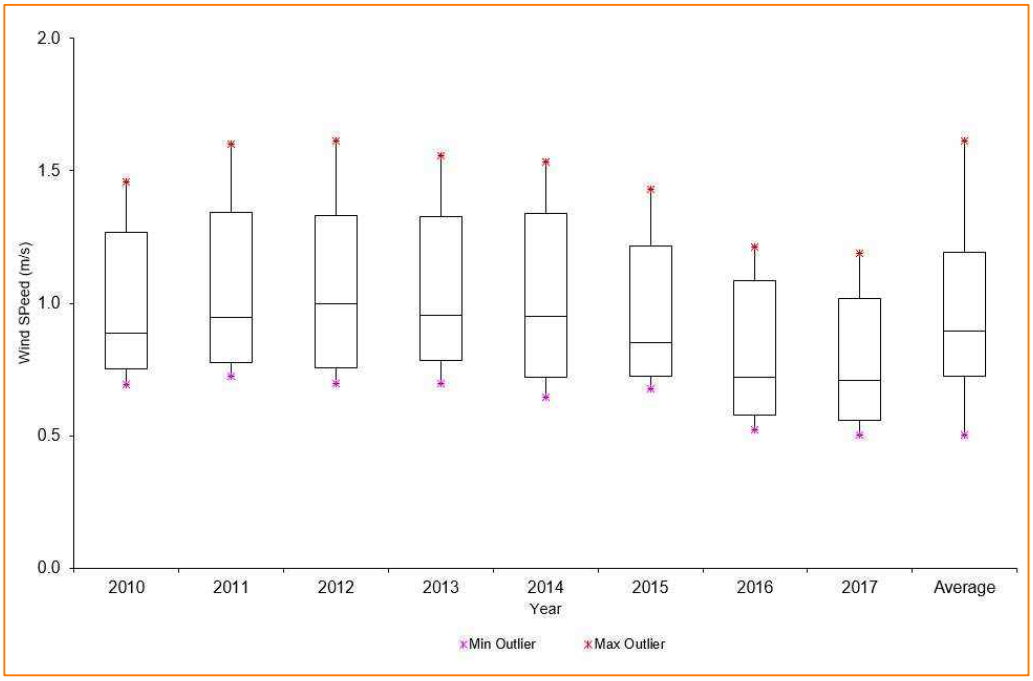


Figure 3-2: Average Wind Speed by Hour of Day

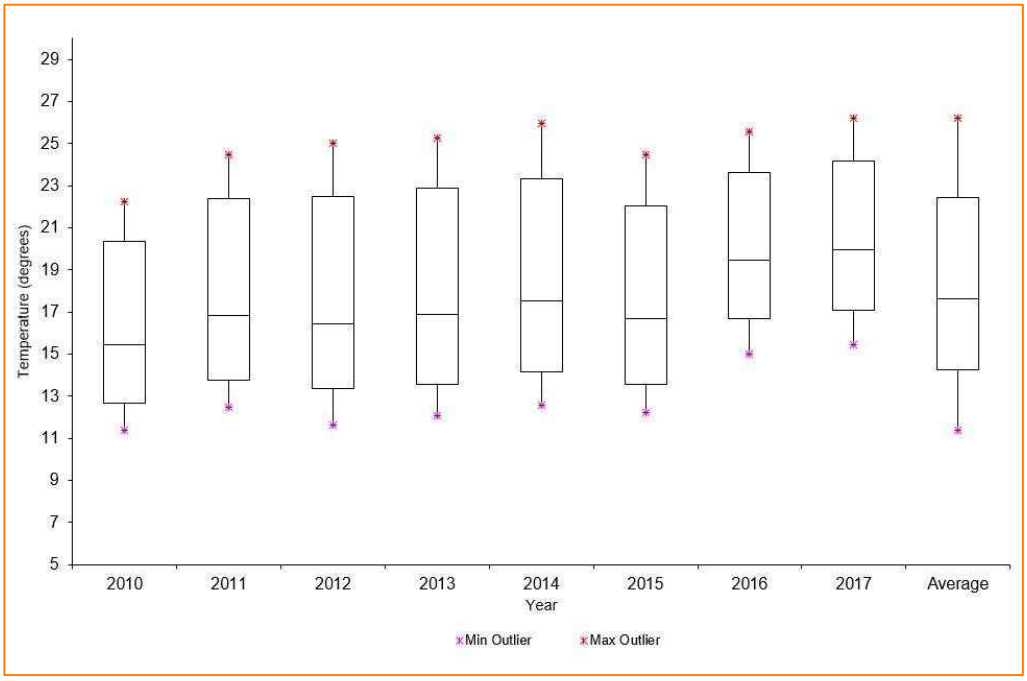


Figure 3-3: Average Temperature by Hour of Day

The year 2014 was selected as the most representative to the eight-year average with priority given to wind speed, the key meteorological parameter for the dispersion of odour. The year 2014 has previously been found to be representative at other locations in South East Queensland.

3.2 Meteorological Methodology

3.2.1 TAPM

TAPM (version 4), is a three-dimensional meteorological and air pollution model developed by CSIRO. The model is a prognostic model which uses synoptic scale data to predict hourly meteorology in the area modelled. Details about TAPM can be found in the TAPM user manual (Hurley, 2008a) and details of the model development and underlying equations can be found in Hurley (2008b). Details of validation studies performed for TAPM are also available and include Hurley et. al. (2008c).

TAPM v4 predicts meteorological data including wind speed and direction in an area using a series of fluid dynamics and scalar transport equations (Hurley, 2008b) and it has both prognostic meteorological and air pollution (dispersion) components. The benefit with using TAPM is that key meteorological aspects including the influence of terrain induced flows are predicted both locally and regionally.

TAPM-generated three-dimensional meteorological data was used as the initial guess wind field and the local topography and available surface weather observations from the Gatton DES and Amberley (BoM) were used to refine the wind field defined by the TAPM data.

The TAPM default landuse database was further refined as it poorly represented the landuse within the 300m modelling domain, particularly with the identification of agricultural land and also the scattered low sparse woodland. The default and updated landuse is shown in Figure 3-4 below.

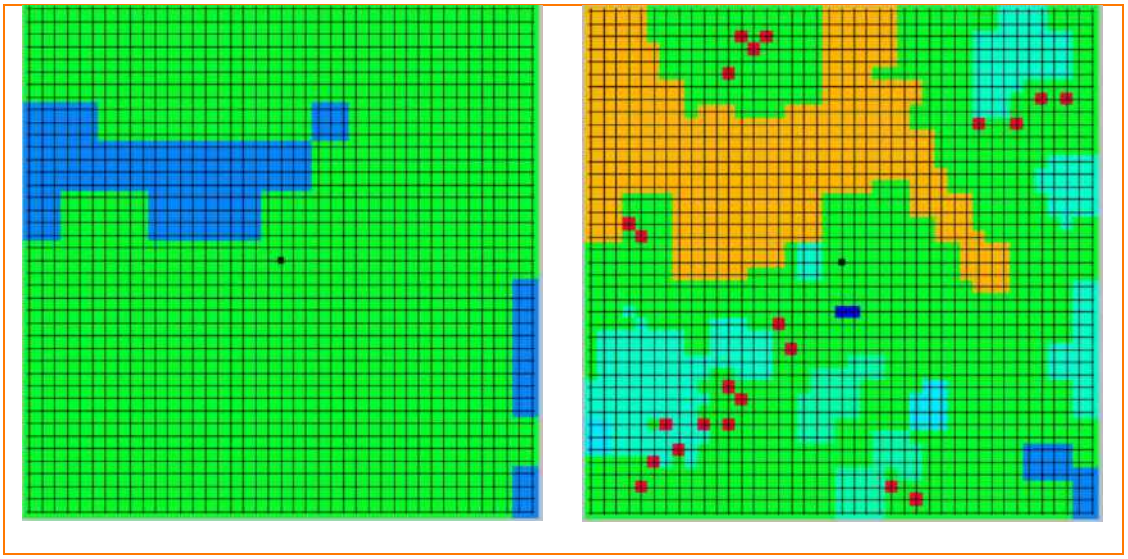


Figure 3-4: Default TAPM (left) and Adjusted Landuse (right) for the Site

The model setup is summarised in Table 3-1 below.

3.2.2 CALMET

CALMET is the meteorological pre-processor to CALPUFF and generates wind fields which include slope flows, terrain effects, and can incorporate factors including terrain blocking. CALMET uses meteorological inputs in combination with land use and terrain information for the modelling domain to predict a three-dimensional meteorological grid (which includes wind speed, direction, air temperature, relative humidity, mixing height, and other variables) for the area (domain) to be modelled in CALPUFF.

A 10 km x 10 km domain was modelled for the proposed modification with the centre of the domain near the site. A terrain resolution of 30m was used throughout the domain and was initially taken from the SRTM dataset using CALPUFF view. This was then converted to a 100m resolution for the model runs.

A terrain and land use resolution of 30 m was used throughout the domain. The terrain data was derived based on the SRTM dataset and the Landuse was initially based on the Australia Pacific Global Land Cover Characterization (GLCC) dataset at 1km resolution. The land use was then manually edited at 100 m resolution based on a recent aerial photograph of the area.

The model setup is summarised in Table 3-1 below.

3.2.3 Dispersion Modelling

CALPUFF is a dispersion model that simulates complex effects including vertical wind shear, coastal winds including recirculation and katabatic drift. The model employs dispersion equations based on a Gaussian distribution of puffs released within the model run, and it takes into account variable effects between emission sources.

The model setup is summarised in Table 3-1 below.

Table 3-1: TAPM, CALMET and CALPUFF Setup

Model	Parameter	Value
TAPM (v 4.0.5)	Number of grids (spacing)	30km, 10km, 3km, 1km, 0.3km
	Number of grid points	41 x 41 x 25 (vertical)
	Year of analysis	2014
	Centre of analysis	27° 30' South (latitude), 152°30.5' East (longitude)
	Meteorological data assimilation	Yes Gatton DES Amberley Bureau of Meteorology
	Radius of influence	Gatton DES; 5,500 m Amberley; 2,000 m
CALMET (v 6.5.0)	Meteorological grid domain	10km x 10km
	Meteorological grid resolution	0.1km
	South-west corner of domain	X = 446.500 km, Y = 6953.000 km
	Surface meteorological stations	N/A
	Upper air meteorological data	Model generated.
	3D Windfield	m3D from TAPM (0.3km) input as in initial guess in CALMET
	Year of analysis	2014
	Terrad	4.5 km
CALPUFF (v 6.40)	Method used to compute dispersion coefficients	2 - dispersion coefficients using micrometeorological variables
	Minimum turbulence velocity (Svmin)	0.5 m/s
	Minimum wind speed (m/s) allowed for non-calm conditions	0.5
	Default settings	All other CALPUFF defaults have been used

3.3 Emissions Estimation

The odour emissions model of Ormerod and Holmes (2005) was used for this assessment. The K Factor method, as it is commonly known, is the basis of the *Best Practice Guidance for the Queensland Poultry Industry - Plume Dispersion Modelling and Meteorological Processing* (PAEHolmes, 2011) and the *Planning and environment guideline for establishing meat chicken farms – Guide 1 Assessment Guide* (McGahan, et al., 2021).

The K Factor method is based on real-world odour test data from a variety of poultry broiler farms, and uses a series of equations which enable emissions to be predicted as a function of:

- the size and number of birds present;
- the stocking density of birds; and
- the ventilation rate, which varies by bird age and ambient temperature.

The odour emissions rate is predicted using the following equation (Ormerod & Holmes, 2005; PAEHolmes, 2011):

$$OER = 0.025 \times K \times A \times D \times V^{0.5} \qquad \textbf{Equation 1}$$

Where ***OER*** = odour emission rate (ou/s), ***A*** = total shed floor area (m²), ***D*** = average bird density (in kg/m²), **V** is the ventilation rate in m³/s and **K** is the K factor.

In simple terms, the K in the equation is a scaling factor used to reflect the performance of a farm compared to a standardised emissions curve. Emissions have been calculated with a K factor of 2.2 (K=2.2) with results also presented at K=1.9 which is the upper limit described in (McGahan, et al., 2021).

Maximum shed ventilation rates used to estimate emissions were based on a standard flow of 10 m^3/hr/bird at maximum, and then varied by temperature. Table 3-2 shows the shed ventilation rate (% of maximum) as a function of how much the ambient temperature is above target temperature based on PAEHolmes (2011).

Table 3-2: Example Calculated Shed Ventilation as Percentage of Maximum Ventilation

Bird Age (weeks)	1	2	3	4	5	6	7	8
Temperature (°C) above Target	Ventilation Rate (Percent of maximum)							
<1	1.7	2.5	5.1	7.6	9.8	11.5	17.0	17.0
1	1.7	12.5	12.5	25.0	25.0	25.0	25.0	25.0
2	1.7	25.0	25.0	37.5	37.5	37.5	37.5	37.5
3	1.7	37.5	37.5	50.0	50.0	50.0	50.0	50.0
4	1.7	37.5	37.5	50.0	50.0	50.0	50.0	50.0
6	1.7	37.5	37.5	62.5	75.0	75.0	75.0	75.0
7	1.7	37.5	37.5	62.5	75.0	75.0	87.5	100.0
8	1.7	62.5	62.5	62.5	75.0	75.0	100.0	100.0
9	1.7	62.5	62.5	87.5	100.0	100.0	100.0	100.0

The exit temperature of the plume was based on the method described in Ormerod and Holmes (2005) and as summarised elsewhere including in Dunlop et al. (2010). This methodology is consistent with the *Planning and environment guideline for establishing meat chicken farms, Guide 1 Assessment guide* (McGahan, et al., 2021).

3.4 Farm Setup and Bird placement

Key assumptions used in the emission estimation included:

1. Maximum ventilation rate of 10 m^3/hr/bird at maximum per PAEHolmes (2011);
2. 50,000 birds per shed;
3. 47 day batch, with 10 day cleanout based on batch cards provided to us;
4. Thinning
    a. 32% of birds placed removed at day 34;
    b. 50% of birds placed removed at day 45; and
    c. All gone by end of day 47[2].
5. Standard target and exit temperatures; and

[2] Based on batch card provided by LL & Sons for another farm. Values are 70th percentile values across multiple batches.

6. K factor for all sheds of 2.2;

4 EXISTING ENVIRONMENT

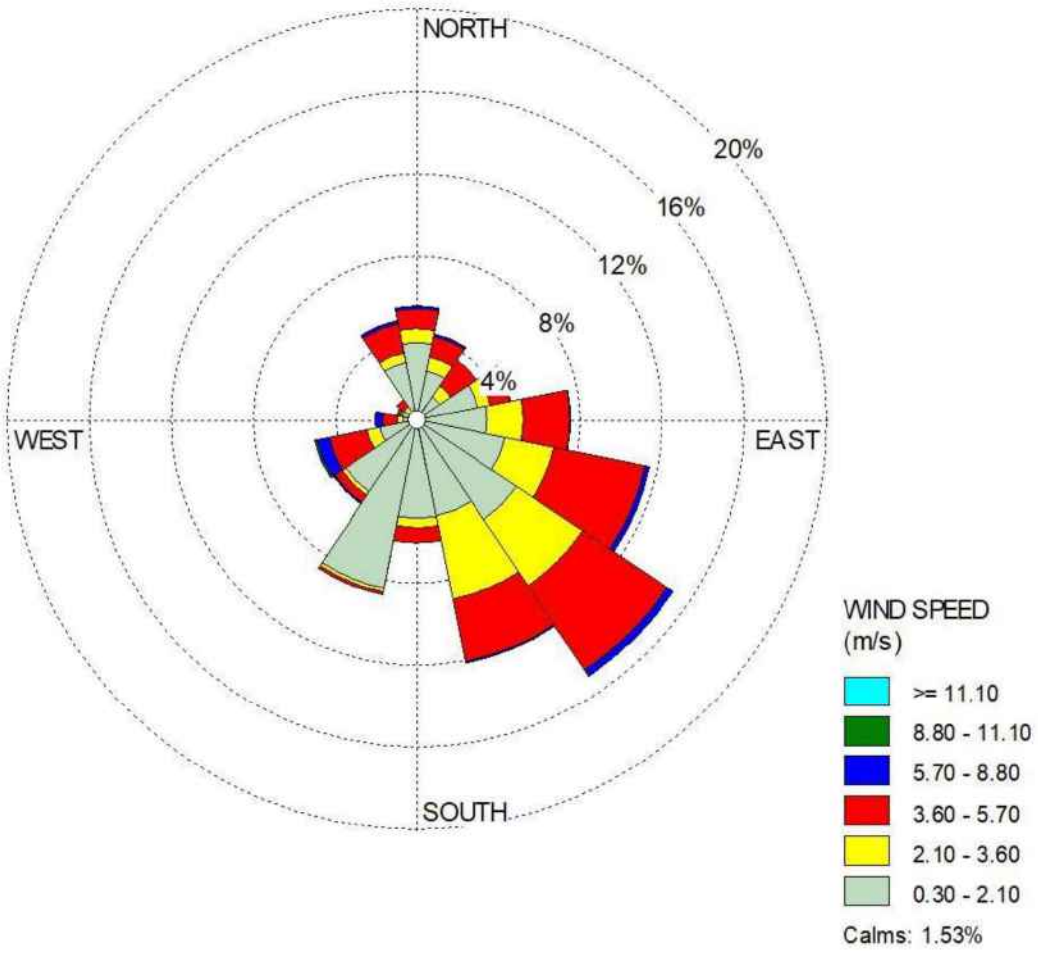
4.1 Meteorological Data

The principal meteorological parameters that influence plume dispersion are wind direction, wind speed, atmospheric stability (turbulence) and atmospheric mixing height (height of turbulent layer). This section presents a summary of the key meteorological features.

4.1.1 Wind Speed and Direction

Wind roses are used to show the frequency of winds by direction and strength. The bars show the compass points (north, north-north-east, north-east etc) from which wind could blow. The length of each bar shows the frequency of winds from that direction and the different coloured sections within each bar show the wind speed categories and frequency of winds in those categories. In summary, wind roses are used to visually show winds over a period of time.

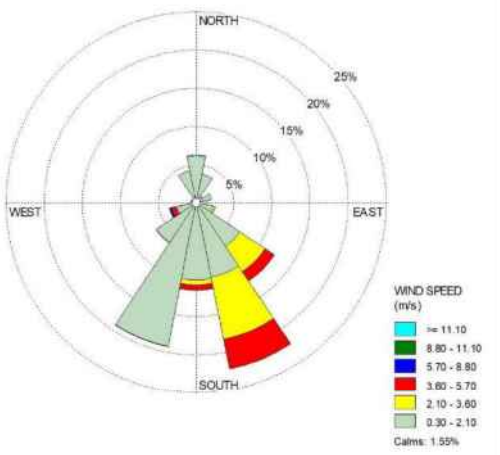
The wind roses below were created from data extracted from CALMET and are presented in Figure 4-1 (annual) and Figure 4-2 (time of day). The annual wind roses show that the prevailing wind directions are all directions except for the south-east which has a slightly lower relative frequency of winds, which is a function of the terrain in the area and synoptic-scale effects. The wind roses show a relatively low proportion of calm winds (~0.1 %) with light winds (up to 3 m/s) occurring frequently (~54% of the time). The wind speed frequencies for the modelling year (2007) are summarised graphically in Figure 4-3.



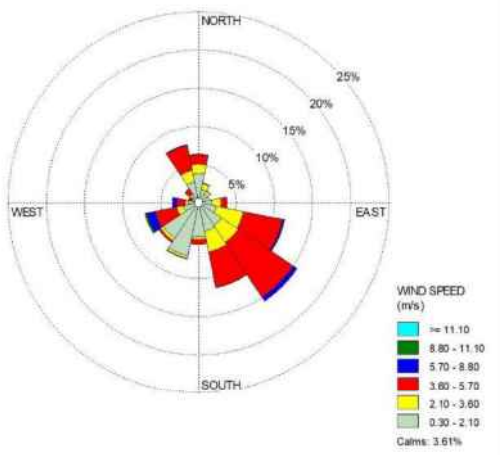
Location: X = 451,500 m East Y = 6,958,000 m South	*Year:* 2014	*Data Source:* CALMET extract
Calm winds: 1.53 %	*Average wind speed:* 2.26 m/s	*Creator:* W. Shillito

Figure 4-1: Annual Wind Rose

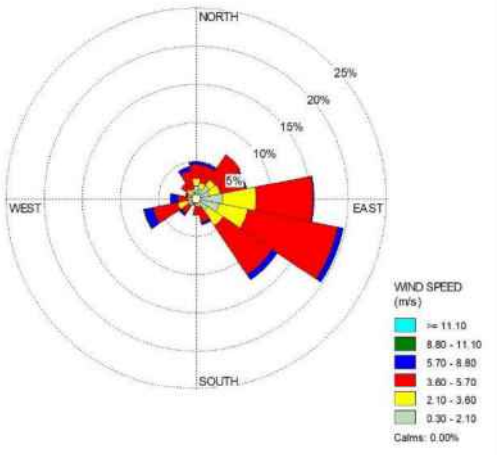
1 AM to 6 AM



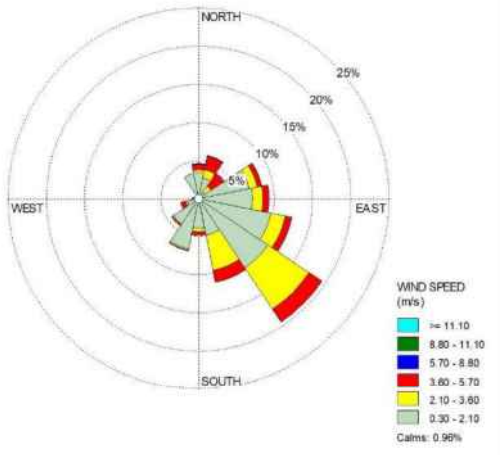
7 AM to 12 PM



1 PM to 6 PM



7 PM to 12 AM



Period	*Average wind speed (m/s)*	*Calm winds %*	WIND SPEED (m/s) >= 11.10; 8.80 - 11.10; 5.70 - 8.80; 3.60 - 5.70; 2.10 - 3.60; 0.30 - 2.10
1 AM to 6 AM	1.58	1.55	
7 AM to 12 PM	2.57	3.61	
1 PM to 6 PM	3.67	0.0	
7 PM to 12 AM	2.00	0.96	
Location: X = 451,500 m East Y = 6,958,000 m South	*Year:* 2014	*Data Source:* CALMET extract	*Creator:* W. Shillito

Figure 4-2: Time of Day Wind Rose

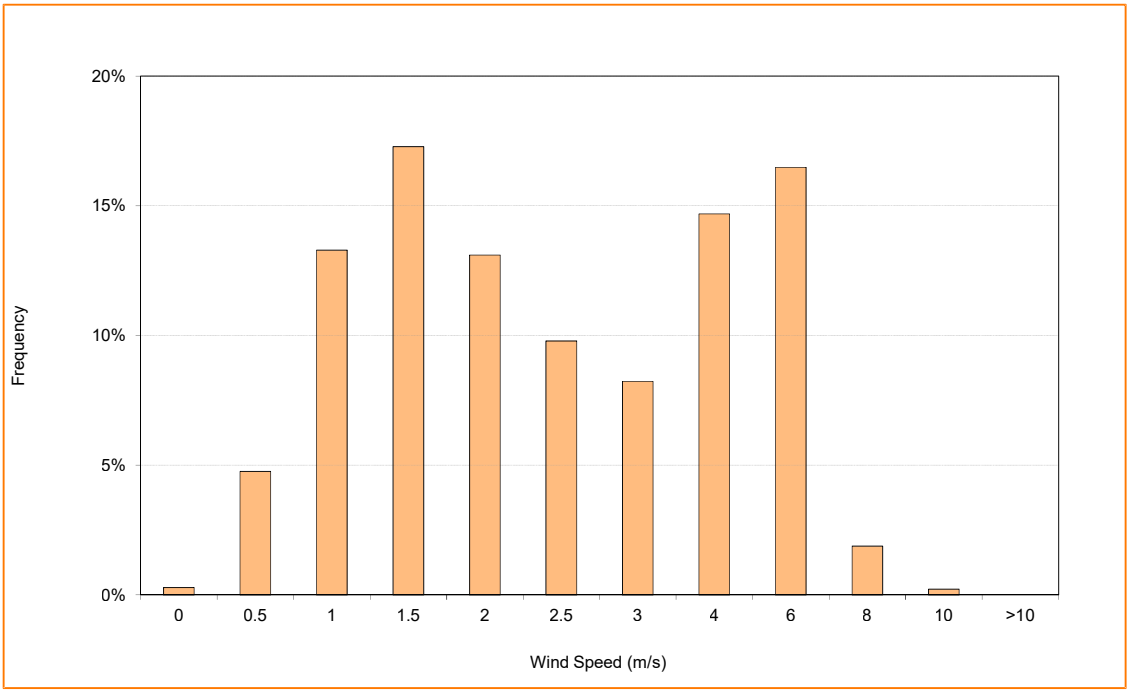


Figure 4-3: Wind Speed Frequency

4.1.2 Atmospheric Stability

Atmospheric stability is a key factor in dispersion modelling and is used to describe turbulence in the atmosphere. Turbulence is an important factor in plume dispersion. Turbulence increases the width of a plume due to random motion within the plume. This changes the plume cross-sectional area (width and height of the plume), thus diluting or spreading the plume. As turbulence increases, the rate at which this occurs also increases. Limited or weak turbulence, therefore, does not dilute or diffuse the plume as much as strong turbulence and therefore leads to high downwind concentrations. This is often associated with very low wind speeds (<0.3 m/s).

The Pasquill-Gifford stability scheme has been in use for many years to define turbulence in the atmosphere. The scheme uses stability classes from A to F[3]. Class A is highly unstable and at the other end of the scheme are class F conditions, which are very stable conditions that commonly occur at night and in the early morning. As noted above, under stable conditions, plumes do not disperse as well as during the day (unstable conditions) and can lead to impacts, especially for ground level sources.

Between Class A and Class F are stability classes which range from moderately unstable (B), through neutral (D) to slightly stable (E). Whilst classes A and F are most often associated with clear skies, class D is linked to sunset and sunrise, or cloudy and/or windy daytime conditions. Unstable conditions most often occur during the daytime and stable conditions are most common at night.

[3] Note that CALPUFF uses a more accurate micrometeorological scheme for turbulence.

The stability classes predicted by CALMET are summarised in Figure 4-4. The data shows that E and F class stability which can only occur at night (along with D class winds which can occur day or night) occurs ~43% of the time.

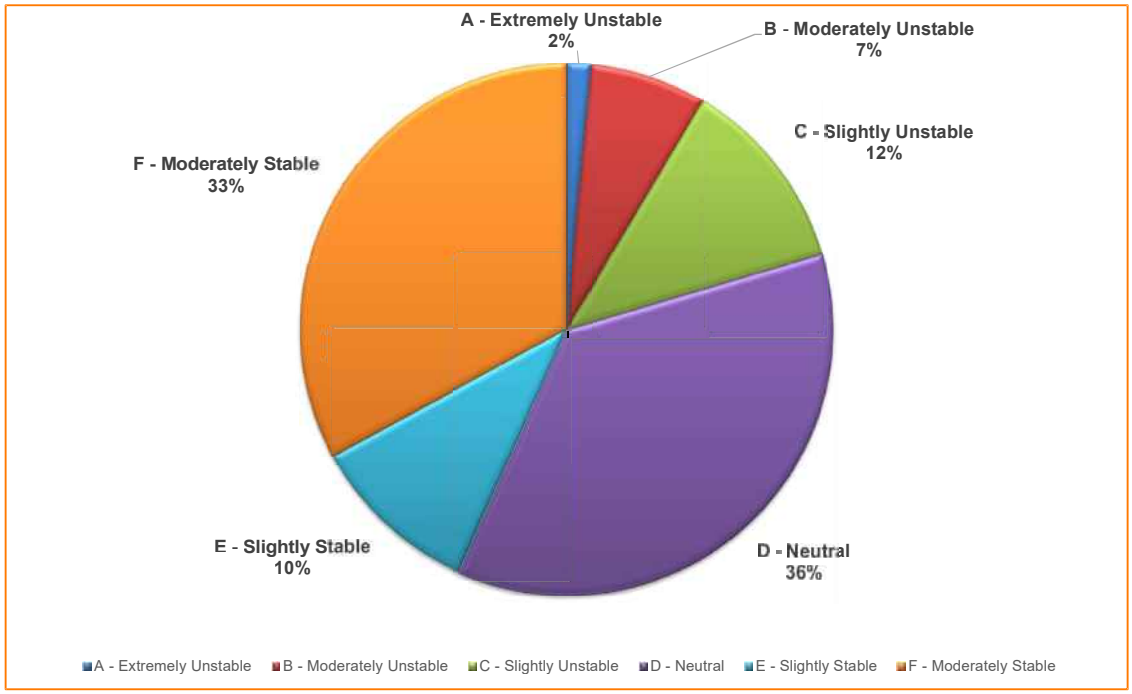


Figure 4-4: Atmospheric Stability

4.1.3 Atmospheric Mixing Height

The mixing height is the height of vertical mixing of air and suspended gases or particles above the ground. This height can be measured by the observation of the atmospheric temperature profile. A parcel of air rising from the surface of the Earth will rise at a given rate (called the dry-adiabatic lapse rate). As long as the parcel of air is warmer than the ambient temperature, it will continue to rise. However, once it becomes colder than the temperature of the environment, it will slow down and eventually stop (University of Michigan , 2004).

The mixing height is commonly referred to as an inversion layer. It is an important parameter when assessing air emissions as it defines the vertical mixing of a plume. This is because the air below the layer has restricted dispersion vertically.

The estimated variation of mixing height over time predicted at the site by CALMET is shown in Figure 4-5. The diurnal cycle is clear in this figure whereby at night the mixing height is normally relatively low and after sunrise it increases as a result of heat associated with the sun on the Earth's surface. Overall, the estimated mixing height shown below is as expected.

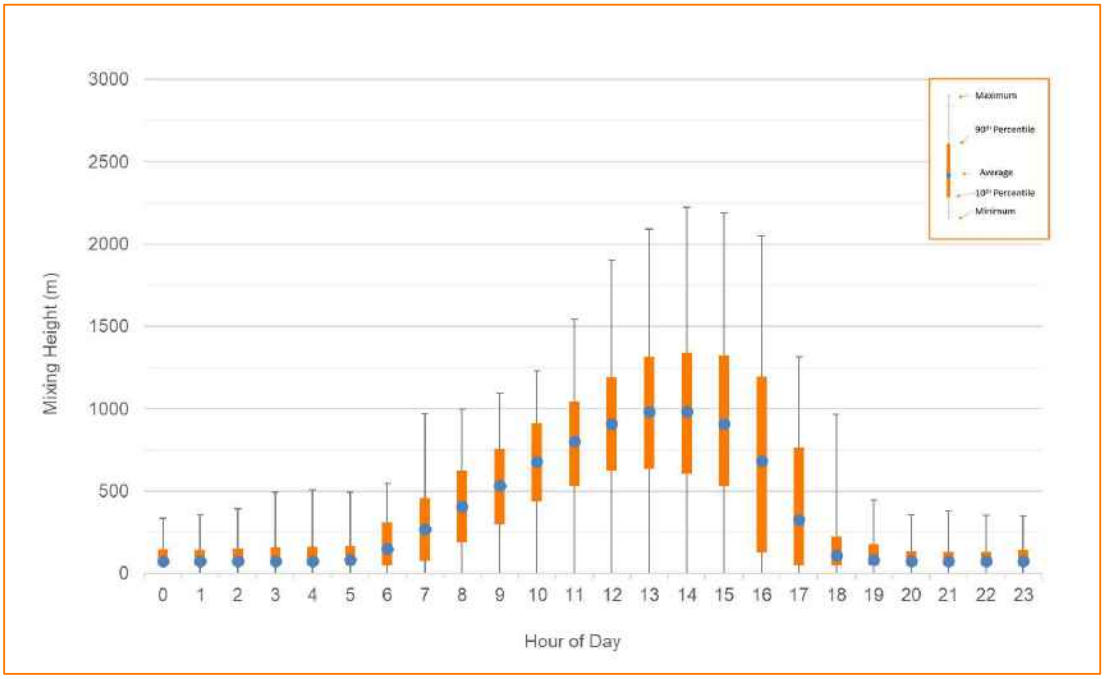


Figure 4-5: Predicted Mixing Heights

4.2 Sensitive Receptors

Several sensitive receptors that are not associated with LL & Sons have been identified for the project. Their locations are presented in Figure 4-6 below[4]. The black polygon is the shed pad, and the black circles show the point source location which is off the fan end of the sheds.

[4] SR2 was included in the modelling however is a shed, so has not been included in this report.

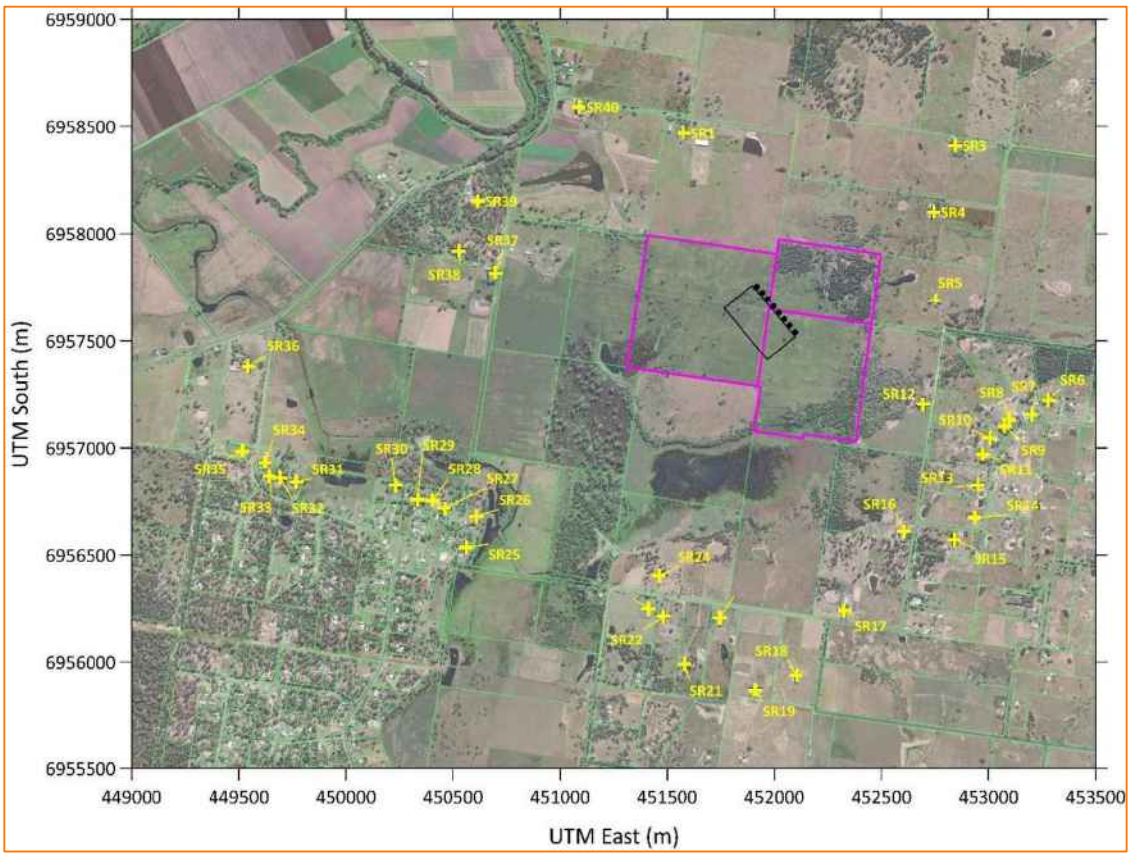


Figure 4-6: Sensitive Receptors relevant to the Development

Table 4-1: Locations of Sensitive Receptors[5]

ID	UTM East (m)	UTM South (m)
SR1	451,577	6,958,469
SR3	452,844	6,958,411
SR4	452,744	6,958,100
SR5	452,751	6,957,682
SR6	453,281	6,957,223
SR7	453,200	6,957,155
SR8	453,096	6,957,133
SR9	453,076	6,957,099
SR10	453,006	6,957,046
SR11	452,972	6,956,970
SR12	452,697	6,957,203
SR13	452,949	6,956,825
SR14	452,935	6,956,675
SR15	452,839	6,956,572
SR16	452,605	6,956,609
SR17	452,325	6,956,240
SR18	452,103	6,955,939
SR19	451,912	6,955,869
SR20	451,745	6,956,206
SR21	451,582	6,955,990
SR22	451,482	6,956,214
SR23	451,413	6,956,248
SR24	451,461	6,956,404
SR25	450,562	6,956,534
SR26	450,608	6,956,680
SR27	450,459	6,956,718
SR28	450,403	6,956,755
SR29	450,334	6,956,759
SR30	450,232	6,956,824
SR31	449,767	6,956,841
SR32	449,694	6,956,860
SR33	449,642	6,956,866
SR34	449,623	6,956,932
SR35	449,517	6,956,986
SR36	449,543	6,957,380
SR37	450,697	6,957,817
SR38	450,528	6,957,919
SR39	450,616	6,958,152
SR40	451,089	6,958,592

[5] SR2 was included in the modelling however is a shed, so has not been included in this report.

5 RESULTS

The predicted odour concentrations are shown below as follows:

- Table 5-1: Sensitive Receptor Predicted Odour Concentrations (99.5th 1 hour) – K=2.2;
- Table 5-2: Sensitive Receptor Predicted Odour Concentrations (99.5th 1 hour) ;
- Figure 5-1: Predicted ground level odour concentration ; and
- Figure 5-2: Predicted ground level odour concentration .

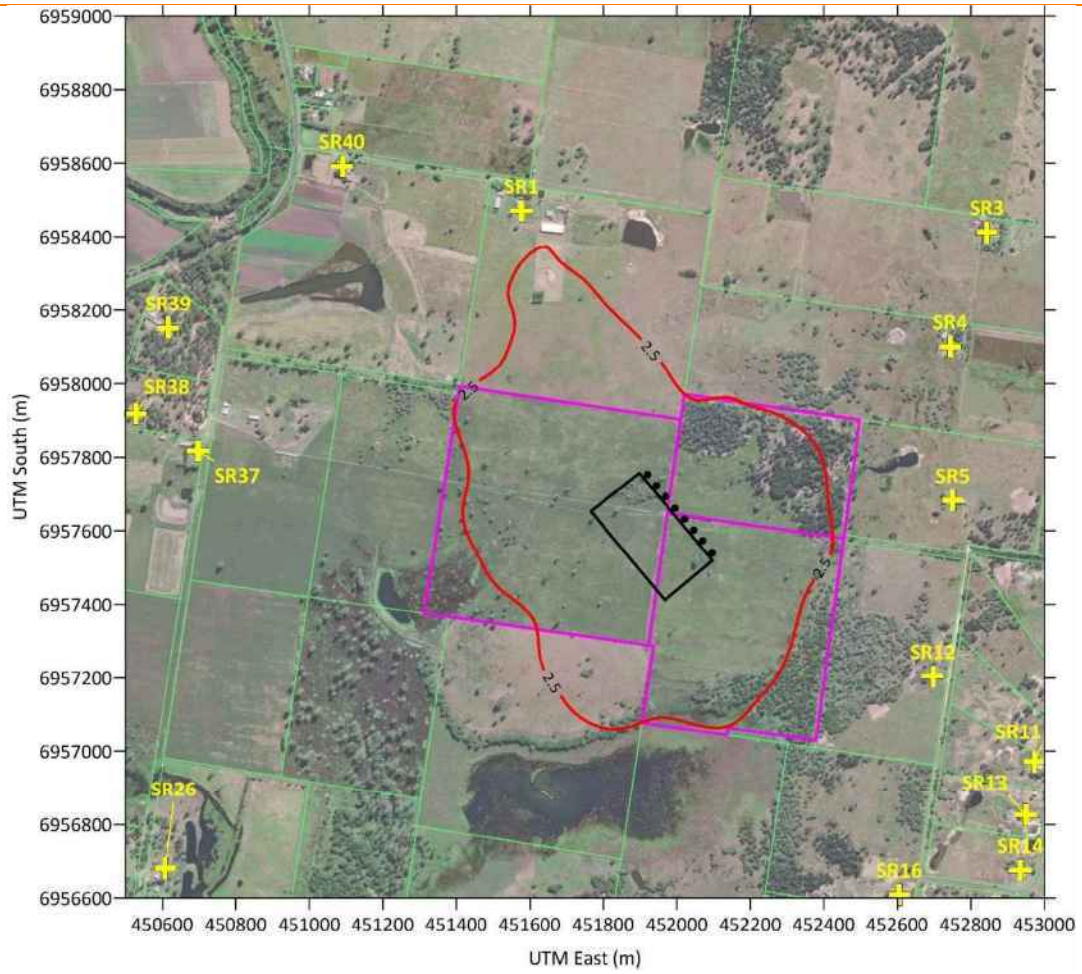
The predicted odour concentrations are predicted to comply with all identified sensitive receptors with a k factor of 2.2 and 1.9. The most 'at risk' receptor is SR1 which is located to the north of the proposed sheds.

Table 5-1: Sensitive Receptor Predicted Odour Concentrations (99.5th 1 hour) – K=2.2

Sensitive Receptor	Odour Concentration (K=2.2)	Sensitive Receptor	Odour Concentration (K=2.2)
SR1	2.4	SR22	1.3
SR3	0.7	SR23	1.2
SR4	1.3	SR24	1.2
SR5	1.1	SR25	0.7
SR6	0.4	SR26	0.6
SR7	0.4	SR27	0.6
SR8	0.5	SR28	0.6
SR9	0.4	SR29	0.7
SR10	0.4	SR30	0.6
SR11	0.5	SR31	0.5
SR12	0.7	SR32	0.5
SR13	0.4	SR33	0.5
SR14	0.4	SR34	0.5
SR15	0.5	SR35	0.5
SR16	0.6	SR36	0.5
SR17	0.7	SR37	0.9
SR18	1.1	SR38	0.7
SR19	1.3	SR39	1.0
SR20	1.4	SR40	1.2
SR21	1.4		

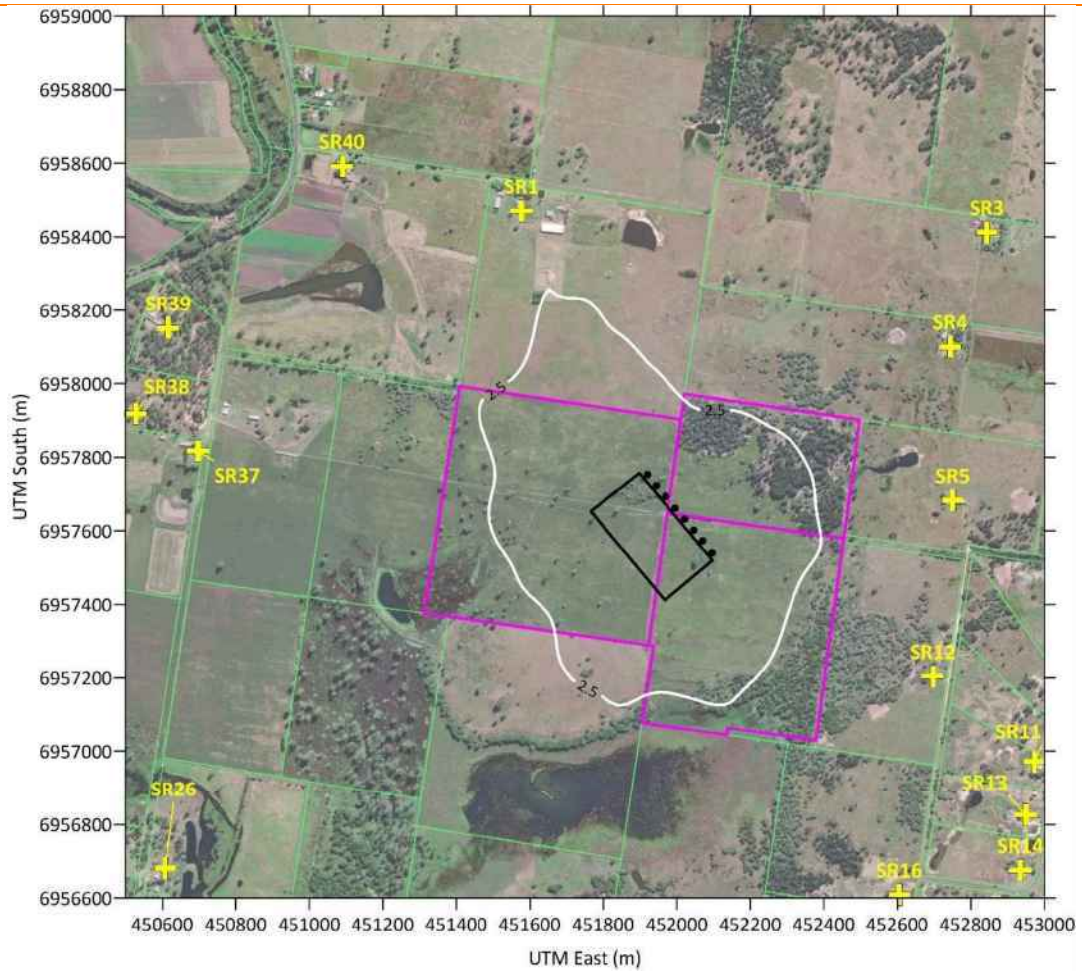
Table 5-2: Sensitive Receptor Predicted Odour Concentrations (99.5th 1 hour) K=1.9

Sensitive Receptor	Odour Concentration (K=1.9)	Sensitive Receptor	Odour Concentration (K=1.9)
SR1	2.0	SR22	1.1
SR3	0.6	SR23	1.0
SR4	1.1	SR24	1.0
SR5	0.9	SR25	0.6
SR6	0.3	SR26	0.6
SR7	0.4	SR27	0.6
SR8	0.4	SR28	0.5
SR9	0.4	SR29	0.6
SR10	0.4	SR30	0.5
SR11	0.4	SR31	0.4
SR12	0.6	SR32	0.4
SR13	0.4	SR33	0.4
SR14	0.4	SR34	0.5
SR15	0.4	SR35	0.5
SR16	0.5	SR36	0.5
SR17	0.6	SR37	0.8
SR18	1.0	SR38	0.6
SR19	1.1	SR39	0.9
SR20	1.2	SR40	1.1
SR21	1.2		



Species:	Site:	Scenario:	Averaging Period:	Percentile:
Odour	Brightview	Proposed K=2.2	1 hour	99.5th
Criterion:	**Units:**	**Meteorology:**	**Model:**	**Author:**
2.5 ou	ou	2014	CALPUFF v 6.42	G. Galvin

Figure 5-1: Predicted ground level odour concentration K=2.2



Species:	Site:	Scenario:	Averaging Period:	Percentile:
Odour	Brightview	Proposed K=1.9	1 hour	99.5th
Criterion:	**Units:**	**Meteorology:**	**Model:**	**Author:**
2.5 ou	ou	2014	CALPUFF v 6.42	G. Galvin

Figure 5-2: Predicted ground level odour concentration K=1.9

6 DISCUSSION

6.1 Odour

The methodology used here is a standard one, whereby a representative year was selected, and the model suite of TAPM/CALMET/CALPUFF was used to predict odour concentrations. The use of TAPM to generate on site meteorology is consistent with multiple guidance documents, including DEHP (2021).

The results shown above indicate that the 8 shed farm complies with the $C_{99.5\ 1hr}$ = 2.5 ou criterion at all receptors, for both K=2.2 and the less conservative K=1.9.

As the site is located in an area with multiple receptors, a weather station was installed on the site to validate the performance of TAPM for generating on site winds. This is discussed below.

6.2 On site winds

As noted above, the use of TAPM to predict on site winds for a site without a weather station is a common one. Here, although we have modelled a representative year, we have also compared the performance of TAPM for a defined period in 2022, against on site data.

Relevant details about the weather station are provided in Section 6.2.1 below and the TAPM validation is detailed in Section 6.2.2 below.

6.2.1 Onsite Weather Station

An Environdata weather station was installed on site in early May 2022. The station was selected and installed with consideration of the following Australian Standards (AS) as well as data required for dispersion modelling requirements:

- AS3580.1.1:2016: Methods for sampling and analysis of ambient air: Guide for the siting of sampling units; and
- AS3580.14:2014: Methods for sampling and analysis of ambient air: Meteorological monitoring for ambient air quality monitoring applications.

Key features of the weather station are as follows:

- a 10 meter instrument mast;
- a Vaisala Ultrasonic Wind Sensor WXT532 using ultrasound to determine horizontal wind speed and direction;
- sensors including temperature, relative humidity, solar radiation and barometric pressure;
- a tipping bucket rain gauge; and
- it uses Environdata's WeatherMation software to continuously record and process measured data.

For the validation, hourly data from 4 May 2022 to 29 September 2022 (averages for all variables except wind direction, which was vector averaged data) were extracted from WeatherMation. These were then compared to data from the same period from TAPM.

6.2.2 Data Validation

TAPM was run for the period 4 May 2022 to 29 September 2022 using the same domain size and land use as described above. This period was selected based on the data at hand, and also the

available TAPM synoptic data available at the time the report was prepared. The output from TAPM (without data assimilation) was then compared to the weather station data for the same period.

The paired hourly data were analysed using the methodology detailed in Emery et al. (2001) with the exception that daily wind direction analysis was also performed in line with Johnson (2019) who recommended daily gross error checks for direction as opposed to hourly. The use of statistical measures such as those above go beyond simple visual checks like comparing wind roses, and take into account a variety of variables critical to accurately comparing the data.

We note that the site sits in an area with variable landuse. Regarding this, Kemball-Cook et. al. (2005) proposed a series of benchmarks for model performance under complex conditions including areas with variable terrain heights and land uses. Kemball-Cook et al. suggested a gross error benchmark of ≤55° for wind direction and a bias benchmark of ±20° for areas with complex features. These benchmarks were adopted in other studies including USEPA (2015) and USEPA (2020).

Concerning variable land use and complex terrain, the American Meteorological Society (2012) defines complex terrain as “A region having irregular topography, such as mountains or coastlines. Complex terrain can also include variations in land use, such as urban, rural, irrigated, and unirrigated”.

The wind speed and direction statistics are provided in Table 6-1 and Table 6-2. Windroses showing the observed and modelled data are shown in Figure 6-1.

Table 6-1: Wind Speed Statistics

Variable	Calculated Value	Criteria	Meets Criteria?
Bias	-0.2	±0.5	Yes
RMSE	1.2	≤2	Yes
IO	0.84	≥0.6	Yes
SkillE	0.7	≤1	Yes
SkillR	0.6	≤1	Yes
SkillV	0.8	Close to 1	Yes

Table 6-2: Wind Direction Statistics

Variable	Calculated Value	Criteria	Meets Criteria?
Bias (hourly)	3.0	±10°(±20° complex)	Yes
Gross Error (hourly)	49.3	≤30° (≤55° complex)	No for standard, yes for complex.
Bias (daily)	7.9	±10°(±20° complex)	Yes
Gross Error (daily)	27.9	≤30° (≤55° complex)	Yes

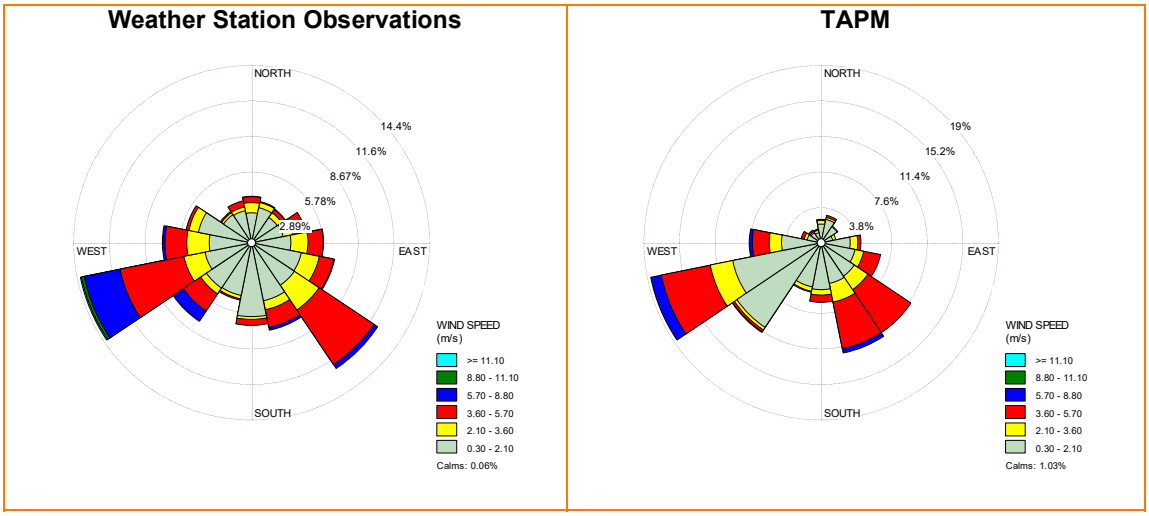


Figure 6-1: TAPM Wind Rose Comparison (May to September 2022)

When using the benchmarks above, Emery et. al. (2001) noted that the purpose of the benchmarks is not necessarily to give a passing or failing grade to any one particular application, but rather to put the results into context. In other words, by assessing a variety of benchmarks for wind speed and direction, the relative accuracy of the dataset as a whole can be assessed.

When looking at Table 6-1 and Table 6-2 it can be seen that the model performs well for wind speed, and relatively well for wind direction.

Regarding wind speed, the model compared well to observe data up to approximately 6 m/s but then tended to under predict winds above 7 m/s. This is not considered critical in odour studies.

Concerning wind direction, whilst the hourly gross error value was predicted to be 49°, the results indicate compliance with the complex terrain benchmark and also the daily benchmarks. This is consistent with the visual direction agreement observed in Figure 6-1.

In summary, TAPM derived data compares well to the observed data and is considered appropriate to be used as a source of data for the representative year.

7 CONCLUSION

The modelling presented in this report considers the proposed site and has been performed in accordance with standard methods.

With a conservative K factor of 2.2, the modelling indicates that the proposed site would not lead to any exceedances of the odour criterion at the nearest sensitive locations. In addition, the results of the weather station validation give confidence that the modelling results using winds generated with TAPM are consistent with winds measured in the area.

Based on our assessment we recommend the development be approved and operated in line with current industry best practice and have standard amenity conditions included in its approval.

8 REFERENCES

American Meteorlogical Society , 2012. *Glossary of Meteorlogy - Complex Terrain.* [Online]
Available at: http://glossary.ametsoc.org/wiki/Complex_terrain
[Accessed 13 September 2019].

DEHP, 2021. *Guideline: Odour Impact Assessment from Developments,* Brisbane: Department of Environment and Heritage Protection.

Dunlop, M., Duperouzel, D. & Pott, L., 2010. *Separation Distances for Broiler farms - Verifying methods and investigating the effects of thermal buoyancy (Publication Number 10/073),* Canberra: Rural Industries Research and Development Corporation.

Emery, C., Tai, E. & Yarwood, G., 2001. *Enhanced Meteorological Modelling and Performance Evaulation for Two Texas ozone Episodes. Report to the Texas Natural Resource Conservation Commission, College Station, TX, USA. ,* Novato, CA, USA: Environ.

Hurley, P., 2008a. *TAPM V4 User Manual,* Canberra, Australia: CSIRO Marine and Atmospheric Research.

Hurley, P., 2008b. *TAPM V4 Part 1: Technical Description,* Canberra, Australia: CSIRO Marine and Atmospheric Research.

Hurley, P., Edwards , M. & Luhar, A., 2008c. *TAPM V4 Part 2: Summary of Some Verification Studies,* Canberra Australia: CSIRO Marine and Atmospheric Research.

Johnson, M. T., 2019. *Meteorological Model Performance Evaluation of an Annual 2002 MM5 (version 3.6.3) Simulation,* Iowa: Iowa Department of Natural Resources.

Kemball-Cook, S. et al., 2005. *Annual 2002 MM5 Meteorological Modeling to Support Regional Haze Modeling of the Western United States. ,* Denver: Prepared for the Western Regional Air Partnership (WRAP).

McGahan, E., Wiedemann, S. & Galvin, G., 2021. *Planning and environment guideline for establishing meat chicken farms – Guide 1 Assessment Guide - Publication 21-080,* Canberra: Agrifutures .

Ormerod, R. & Holmes, G., 2005. *Description of PAE Meat Chicken Farm Odour Emissions Model,* Brisbane: Pacific Air & Environment.

PAEHolmes, 2011. *Best Practice Guidance for the Queensland Poultry Industry - Plume Dispersion Modelling and Meteorological Processing,* Bribane: PAEHolmes .

Statistics Canada, 2013. *Constructing box and whisker plots.* [Online]
Available at: https://www.statcan.gc.ca/edu/power-pouvoir/ch12/5214889-eng.htm

University of Michigan , 2004. *Central Campus Air Quality Model (CCAQM) Instructions.* [Online]
Available at: http://www-personal.umich.edu/~weberg/mixing_height_inv.htm
[Accessed 27 July 2018].

USEPA, 2015. *Combined WRF/MMIF/AERCOARE/AERMOD Overwater Modeling Approach for Offshore Emission Sources - Volume 2 – Evaluation of Weather Research and Forecasting Model Simulations for Five Tracer Gas Studies with AERMOD,* Seattle, WA, USA: USPEA .

USEPA, 2020. *2016 Alaska State-wide Weather Research Forecast (WRF) Meteorological Model Performance Evaluation,* Research Triangle Park, NC: USEPA.

7 August 2023

Susan Shay
Principal Engineer/Director
ACS Engineers
susan@acsengineers.com.au

Astute Environmental Consulting

Dear Susan

Addendum - 49 Court Avenue and Stone Gully Road, Brightview

I refer to your question regarding changing the fan directions for the proposed 8 shed farm at 49 Court Avenue and Stone Gully Road, Brightview ("the site").

This letter is to be read as an addendum to our report *Poultry Farm Odour Assessment – Brightview 21-209 R1-3* (1 November 2021)[1] and should be read in conjunction with our report *Response to Submissions – Poultry Farm - 49 Court Avenue and Stone Gully Road - DA23169 23-132 R1-1* dated 17 May 2023[2].

Using the same methodology in the odour assessment, we changed the discharge location of the sheds from facing the north east, to face the south west. The original and new fan end source locations are shown in Figure 1 below where the original locations are shown as black circles, and the new locations as blue circles. The green lines show existing cadastre, and the black polygon shows the approximate pad location.

The results for the original scenario with fans to the north east are shown in Figure 2 below for K =2.2. The contour lines are white. For comparative purposes, the results for the fans facing south west are also shown at K=2.2 in Figure 3 below where the results for the north east fan run are shown in white for 2.5. ou and the results for the new fan locations to the south west are shown as blue contours.

When looking at the contours, it is important to note that these are a percentile value not a continuous value. For 44 hours a year, the odour at the red line is predicted to be 2.5 ou, for the rest of the year is expected to be below this. Further information can be found in DEHP (2021).

The receptor concentrations for both scenarios are shown in Table 1 below and show compliance for the new scenario at K=2.2 with a maximum offsite receptor concentration of $C_{99.5\ 1hr}$ = 1.7 ou. If a K factor of 1.9 were adopted, the concentrations would be lower again. The results for K=1.9 are shown in Figure 4 and Table 2 below.

[1] The odour assessment
[2] The submissions response report

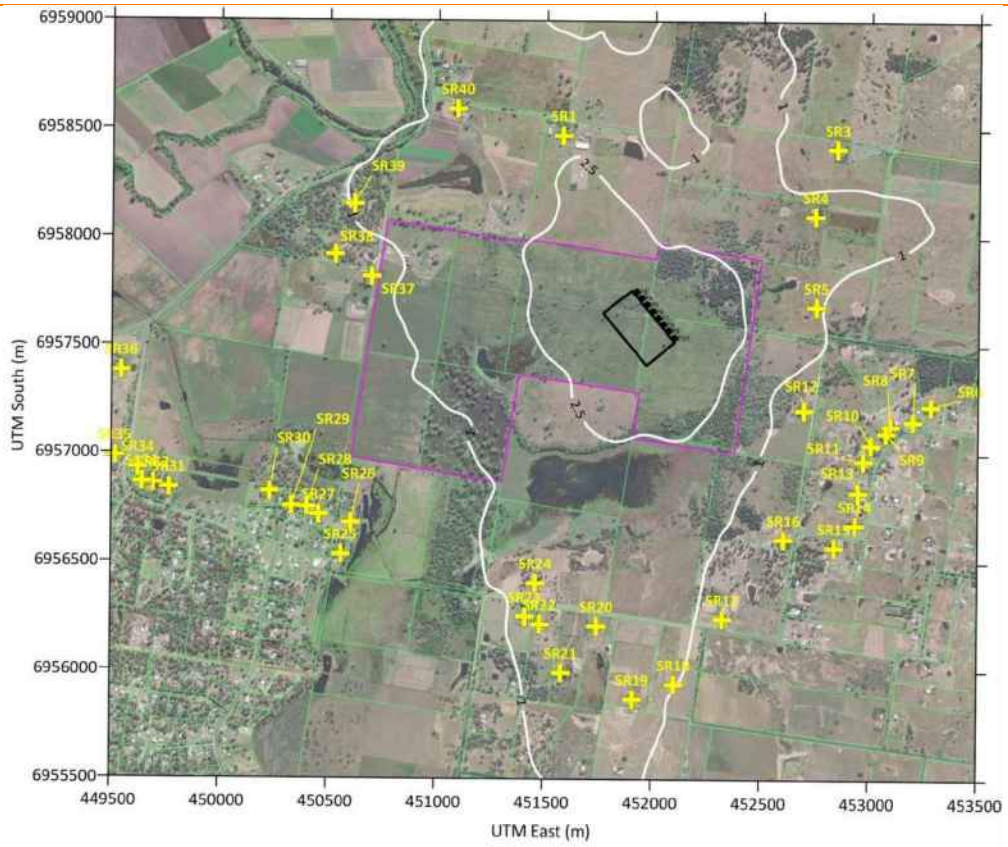
Concerning particulate emissions, as demonstrated by the model results in the submissions response report, the fans facing north east scenario was compliant for PM_{10} with and without background concentrations included. Considering the locations, shape, and extent of the contours in Figure 4-1 to Figure 4-4 of the submission response report, the change in the location of the fans to the south west will not see any significant change in impacts, and compliance with the criterion would be expected.

If you have any questions, please contact me.

Yours sincerely

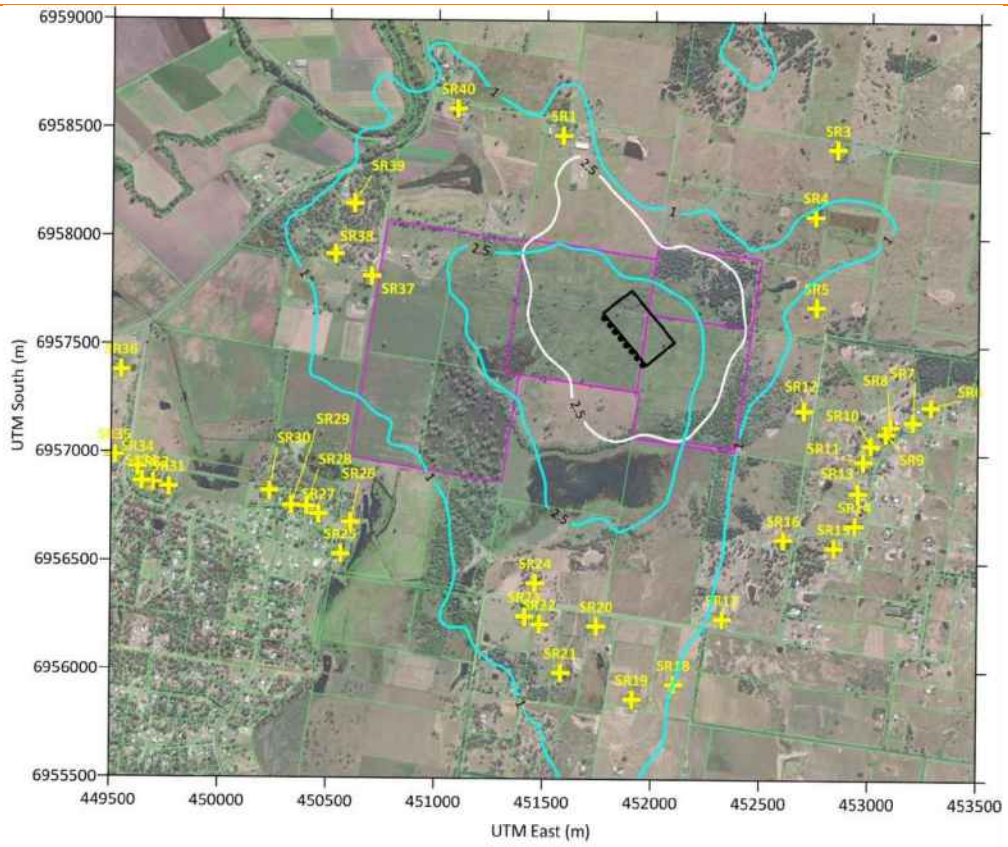
Geordie Galvin
B.Eng (Env Eng) M.Eng (Env) MIEAust F.AirQual
Principal Environmental Engineer

Figure 1: Original (black) and New (blue) shed sources



Species:	Site:	Scenario:	Averaging Period:	Percentile:
Odour	Brightview	North East Fans (old) K=2.2	1 hour	99.5th
Criterion:	**Units:**	**Meteorology:**	**Model:**	**Author:**
2.5 ou	ou	2014	CALPUFF v 6.42	G. Galvin

Figure 2: Fans North East K=2.2

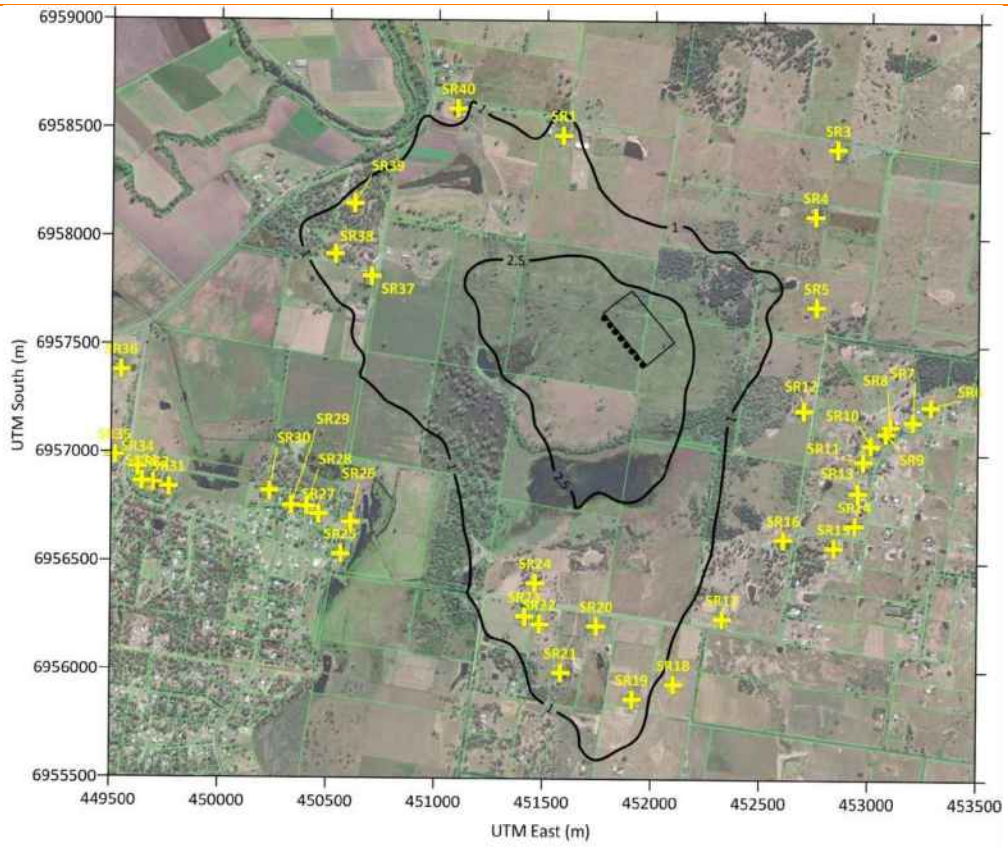


Species: Odour	**Site:** Brightview	**Scenario:** South West K=2.2 (blue) North East (old) White K=2.2	**Averaging Period:** 1 hour	**Percentile:** 99.5th
Criterion: 2.5 ou	**Units:** ou	**Meteorology:** 2014	**Model:** CALPUFF v 6.42	**Author:** G. Galvin

Figure 3: Fans South West K=2.2

Table 1: South West Fans $C_{99.5\ 1hr}$ Receptor Concentrations K=2.2

Receptor	North East Fans	South West Fans
SR1	2.4	1.2
SR2	2.1	1.1
SR3	0.7	0.7
SR4	1.3	1.1
SR5	1.1	0.9
SR6	0.4	0.5
SR7	0.4	0.5
SR8	0.5	0.5
SR9	0.4	0.4
SR10	0.4	0.5
SR11	0.5	0.4
SR12	0.7	0.7
SR13	0.4	0.4
SR14	0.4	0.4
SR15	0.5	0.4
SR16	0.6	0.5
SR17	0.7	0.9
SR18	1.1	1.0
SR19	1.3	1.3
SR20	1.4	1.6
SR21	1.4	1.3
SR22	1.3	1.5
SR23	1.2	1.4
SR24	1.2	1.6
SR25	0.7	0.7
SR26	0.6	0.8
SR27	0.6	0.7
SR28	0.6	0.7
SR29	0.7	0.7
SR30	0.6	0.8
SR31	0.5	0.6
SR32	0.5	0.6
SR33	0.5	0.6
SR34	0.5	0.6
SR35	0.5	0.7
SR36	0.5	0.8
SR37	0.9	1.7
SR38	0.7	1.4
SR39	1.0	1.3
SR40	1.2	1.1
Criterion	2.5 ou	



Species:	Site:	Scenario:	Averaging Period:	Percentile:
Odour	Brightview	South West K=1.9 (black)	1 hour	99.5th
Criterion:	**Units:**	**Meteorology:**	**Model:**	**Author:**
2.5 ou	ou	2014	CALPUFF v 6.42	G. Galvin

Figure 4: Fans South West K=1.9

Table 2: South West Fans $C_{99.5\ 1hr}$ Receptor Concentrations K=1.9

Receptor	North East Fans	South West Fans
SR1	2.0	1.0
SR2	1.8	1.0
SR3	0.6	0.6
SR4	1.1	1.0
SR5	0.9	0.7
SR6	0.3	0.4
SR7	0.4	0.4
SR8	0.4	0.4
SR9	0.4	0.4
SR10	0.4	0.4
SR11	0.4	0.4
SR12	0.6	0.6
SR13	0.4	0.3
SR14	0.4	0.3
SR15	0.4	0.3
SR16	0.5	0.5
SR17	0.6	0.7
SR18	1.0	0.9
SR19	1.1	1.1
SR20	1.2	1.4
SR21	1.2	1.1
SR22	1.1	1.3
SR23	1.0	1.2
SR24	1.0	1.4
SR25	0.6	0.6
SR26	0.6	0.7
SR27	0.6	0.6
SR28	0.5	0.6
SR29	0.6	0.6
SR30	0.5	0.7
SR31	0.4	0.5
SR32	0.4	0.5
SR33	0.4	0.5
SR34	0.5	0.5
SR35	0.5	0.6
SR36	0.5	0.7
SR37	0.8	1.5
SR38	0.6	1.2
SR39	0.9	1.1
SR40	1.1	1.0
Criterion	2.5 ou	

Queensland Government

SARA reference: 2211-32171 SRA
Council reference: DA23169
Applicant reference: 210100

20 March 2023

Chief Executive Officer
Somerset Regional Council
PO Box 117
ESK QLD 4312
mail@somerset.qld.gov.au

Attention: Madeline Jelf

Dear Madeline

SARA referral agency response—49 Court Avenue and Stone Gully Road, Brightview

(Referral agency response given under section 56 of the *Planning Act 2016*)

The development application described below was confirmed as properly referred by the State Assessment and Referral Agency (SARA) on 24 November 2022.

Response

Outcome:	Referral agency response – with conditions
Date of response:	20 March 2023
Conditions:	The conditions in **Attachment 1** must be attached to any development approval
Advice:	Advice to the applicant is in **Attachment 2**
Reasons:	The reasons for the referral agency response are in **Attachment 3**

Development details

Description:	Development permit	Material change of use for Intensive Animal Industry (poultry farm – maximum 400,000 birds) and environmentally relevant activity 4 (2) – Poultry farming (farming more than 200,000 birds
	Development permit	Reconfiguring a lot - Boundary realignment (five into five lots)
SARA role:	Referral agency	

South East Queensland (West) regional office
Level 4, 117 Brisbane Street, Ipswich
PO Box 2390, North Ipswich QLD 4305

SARA trigger:	Schedule 10, part 5, division 4, subdivision 1, table 2 (Planning Regulation 2017) Environmentally relevant activities (only if ERA has not been devolved to a local government) Schedule 10, part 9, division 4, subdivision 1, table 1 (Planning Regulation 2017) Development impacting state transport infrastructure
SARA reference:	2211-32171 SRA
Assessment manager:	Somerset Regional Council
Street address:	49 Court Avenue and Stone Gully Road, Brightview
Real property description:	Lot 1 on RP31160; Lot 2 on RP31160; Lot 4 on RP32344; Lot 40 on SP199026; Lot 41 on SP199026
Applicant name:	LL & Sons Pty Ltd, C/- ACS Engineers (Aust) Pty Ltd
Applicant contact details:	PO Box 554 Beaudesert QLD 4285 susan@acsengineers.com.au
Environmental Authority:	This referral included an application for an environmental authority under section 115 of the *Environmental Protection Act 1994.* Below are the details of the decision: • Approved • Reference: 2023-03 • Effective date: In accordance with Section 200 of the *Environmental Protection Act 1994* • Prescribed environmentally relevant activity (ERA): ERA 4 (2) – Poultry farming (farming more than 200,000 birds) If you are seeking further details about the environmental authority, please contact the Department of Agricultural and Fisheries (DAF) at: livestockregulator@daf.qld.gov.au.
Human Rights Act 2019 considerations:	A consideration of the 23 fundamental human rights protected under the *Human Rights Act 2019* has been undertaken as part of this decision. It has been determined that this decision does not limit human rights.

Representations

An applicant may make representations to a concurrence agency, at any time before the application is decided, about changing a matter in the referral agency response (section 30 of the Development Assessment Rules). Copies of the relevant provisions are in **Attachment 4**.

A copy of this response has been sent to the applicant for their information.

For further information please contact Judy Sandmann, Senior Planning Officer, on (07) 3432 2405 or via email IpswichSARA@dsdilgp.qld.gov.au who will be pleased to assist.

Yours sincerely

Kieran Hanna
A/Manager

enc Attachment 1 - Referral agency conditions
Attachment 2 - Advice to the applicant
Attachment 3 - Reasons for referral agency response
Attachment 4 - Representations about a referral agency response provisions
Attachment 5 - Documents referenced in conditions

cc LL & Sons Pty Ltd, C/- ACS Engineers (Aust) Pty Ltd, susan@acsengineers.com.au

Attachment 1—Referral agency conditions

(Under section 56(1)(b)(i) of the *Planning Act 2016* the following conditions must be attached to any development approval relating to this application) (Copies of the documents referenced below are found at Attachment 5)

No.	Conditions	Condition timing
Development permit – Material change of use for Intensive Animal Industry and environmentally relevant activity 4 (2) – Poultry farming (farming more than 200,000 birds		
Schedule 10, part 5, division 4, table 2, item 1 (Planning Regulation 2017) – Environmentally relevant activities (only if ERA has not been devolved to a local government) - The chief executive administering the *Planning Act 2016* nominates the Director-General of Department of Agriculture and Fisheries to be the enforcement authority for the development to which this development approval relates for the administration and enforcement of any matter relating to the following condition:		
1.	Development authorised under this approval for environmentally relevant activity 4 (2) is limited to 8 sheds housing a total of 400,000 birds, kept inside the sheds at all times, and ventilating in a north-easterly direction as shown in the following plans: • Locality Plan, ACS Engineers, dated 24 February 23, Drawing Number ACS-210100-SITE-03, Revision 2; • Site Layout, ACS Engineers, dated 24 February 23, Drawing Number ACS-210100-SITE-04, Revision 2; and • Shed Typical Sections, ACS Engineers, dated 24 February 23, Drawing Number ACS-210100-SITE-06, Revision 2.	At all times.
Schedule 10, part 9, division 4, subdivision 1, table 1, item 1 (Planning Regulation 2017) – Development impacting state transport infrastructure - The chief executive administering the *Planning Act 2016* nominates the Director-General of Department of Transport and Main Roads to be the enforcement authority for the development to which this development approval relates for the administration and enforcement of any matter relating to the following condition:		
2.	Heavy vehicles as defined in the *Transport Operations (Road Use Management) Act 1995* associated with the proposed development are only to use the route identified on Figure 3: Heavy Vehicle Haulage Route of the Traffic Impact Assessment prepared by PSA Consulting dated 28 February 2023, reference 1504 and revision V2 as the haul route.	At all times.

Attachment 2—Advice to the applicant

General advice	
1.	Terms and phrases used in this document are defined in the *Planning Act 2016*, its regulation or the State Development Assessment Provisions (SDAP) (version 3.0). If a word remains undefined it has its ordinary meaning.

Attachment 3—Reasons for referral agency response

(Given under section 56(7) of the *Planning Act 2016*)

The reasons for the SARA's decision are:
The development complies with State code 6: Protection of state transport networks of the SDAP, subject to conditions. Specifically, the development does not:

- create a safety hazard for users of state transport infrastructure or public passenger services.
- result in a worsening of the physical condition or operating performance of the state transport network.
- compromise the state's ability to construct, operate and maintain state transport infrastructure.

The development complies with the purpose and outcomes of State code 22: Environmentally relevant activities of the SDAP, subject to conditions. Specifically, the development:

- is located and designed to avoid or mitigate environmental harm on environmental values of the natural environment, adjacent sensitive land uses and sensitive receptors.
- avoids impacts on matters of state environmental significance.

Material used in the assessment of the application:

- the development application material and submitted plans
- *Planning Act 2016*
- Planning Regulation 2017
- the SDAP (version 3.0), as published by SARA
- the Development Assessment Rules
- SARA DA Mapping system
- section 58 of the *Human Rights Act 2019*

Attachment 4—Representations about a referral agency response provisions

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Attachment 5—Documents referenced in conditions

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Development Assessment Rules—Representations about a referral agency response

The following provisions are those set out in sections 28 and 30 of the Development Assessment Rules[1] regarding **representations about a referral agency response**

Part 6: Changes to the application and referral agency responses

28 Concurrence agency changes its response or gives a late response

28.1. Despite part 2, a concurrence agency may, after its referral agency assessment period and any further period agreed ends, change its referral agency response or give a late referral agency response before the application is decided, subject to section 28.2 and 28.3.

28.2. A concurrence agency may change its referral agency response at any time before the application is decided if—

(a) the change is in response to a change which the assessment manager is satisfied is a change under section 26.1; or

(b) the Minister has given the concurrence agency a direction under section 99 of the Act; or

(c) the applicant has given written agreement to the change to the referral agency response.[2]

28.3. A concurrence agency may give a late referral agency response before the application is decided, if the applicant has given written agreement to the late referral agency response.

28.4. If a concurrence agency proposes to change its referral agency response under section 28.2(a), the concurrence agency must—

(a) give notice of its intention to change its referral agency response to the assessment manager and a copy to the applicant within 5 days of receiving notice of the change under section 25.1; and

(b) the concurrence agency has 10 days from the day of giving notice under paragraph (a), or a further period agreed between the applicant and the concurrence agency, to give an amended referral agency response to the assessment manager and a copy to the applicant.

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1 Pursuant to Section 68 of the *Planning Act 2016*

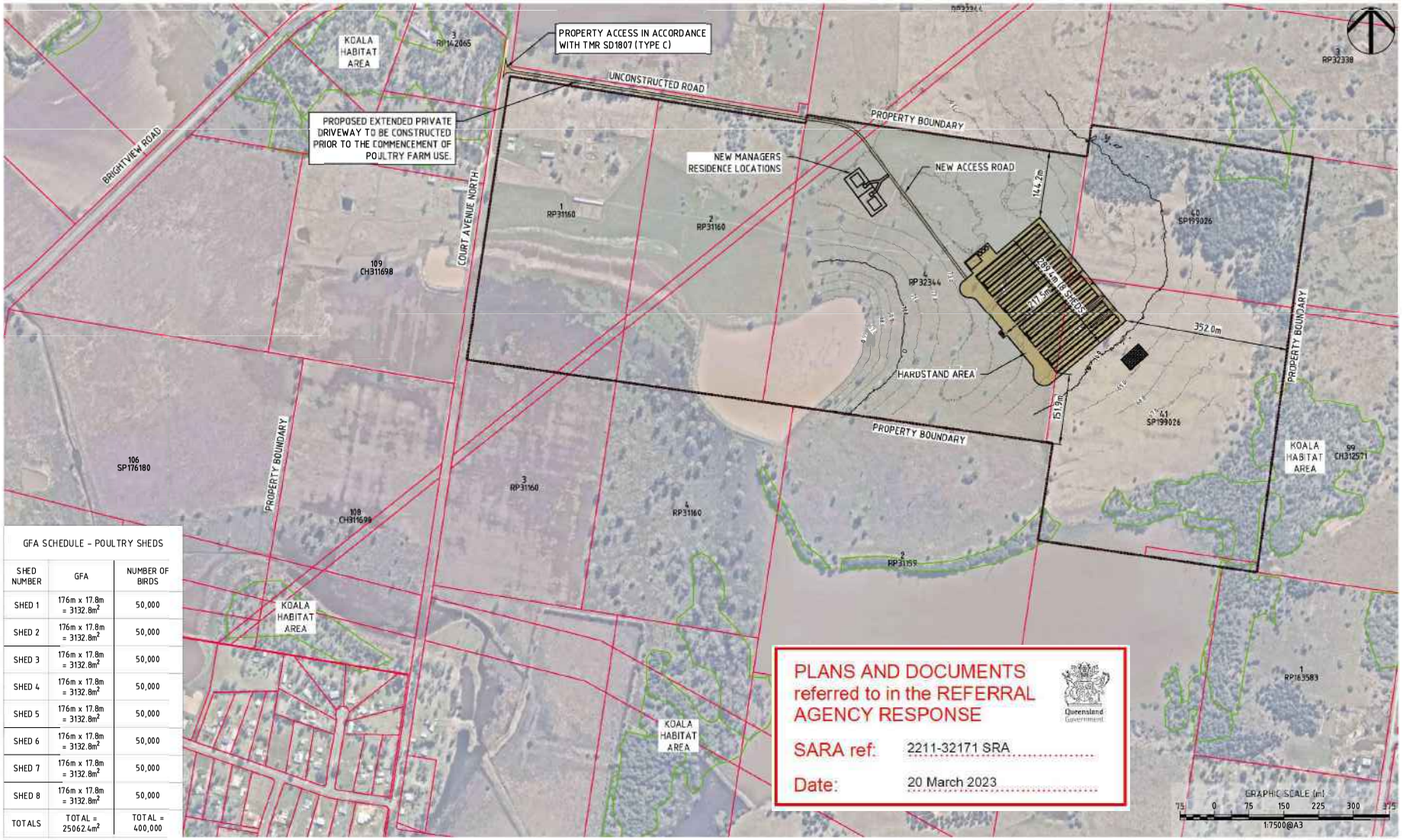
2 In the instance an applicant has made representations to the concurrence agency under section 30, and the concurrence agency agrees to make the change included in the representations, section 28.2(c) is taken to have been satisfied.

Part 7: Miscellaneous

30 Representations about a referral agency response

30.1. An applicant may make representations to a concurrence agency at any time before the application is decided, about changing a matter in the referral agency response.[3]

[3] An applicant may elect, under section 32, to stop the assessment manager's decision period in which to take this action. If a concurrence agency wishes to amend their response in relation to representations made under this section, they must do so in accordance with section 28.



GFA SCHEDULE – POULTRY SHEDS

SHED NUMBER	GFA	NUMBER OF BIRDS
SHED 1	176m x 17.8m = 3132.8m²	50,000
SHED 2	176m x 17.8m = 3132.8m²	50,000
SHED 3	176m x 17.8m = 3132.8m²	50,000
SHED 4	176m x 17.8m = 3132.8m²	50,000
SHED 5	176m x 17.8m = 3132.8m²	50,000
SHED 6	176m x 17.8m = 3132.8m²	50,000
SHED 7	176m x 17.8m = 3132.8m²	50,000
SHED 8	176m x 17.8m = 3132.8m²	50,000
TOTALS	TOTAL = 25062.4m²	TOTAL = 400,000

2	UPDATED FOR RFI RESPONSE	MA	18/01/23		
1	PRELIMINARY	MA	28/10/22	NJF	08/2022

SURVEY DATA
DATUM: GDA94
MAP GRID: MGA-56

LL & SONS PTY LTD
3 STEFFENS ROAD, FOREST HILL QLD 4342

PROPOSED POULTRY FARM & RECONFIGURATION OF A LOT

COURT AVENUE NORTH, BRIGHTVIEW QLD 4311

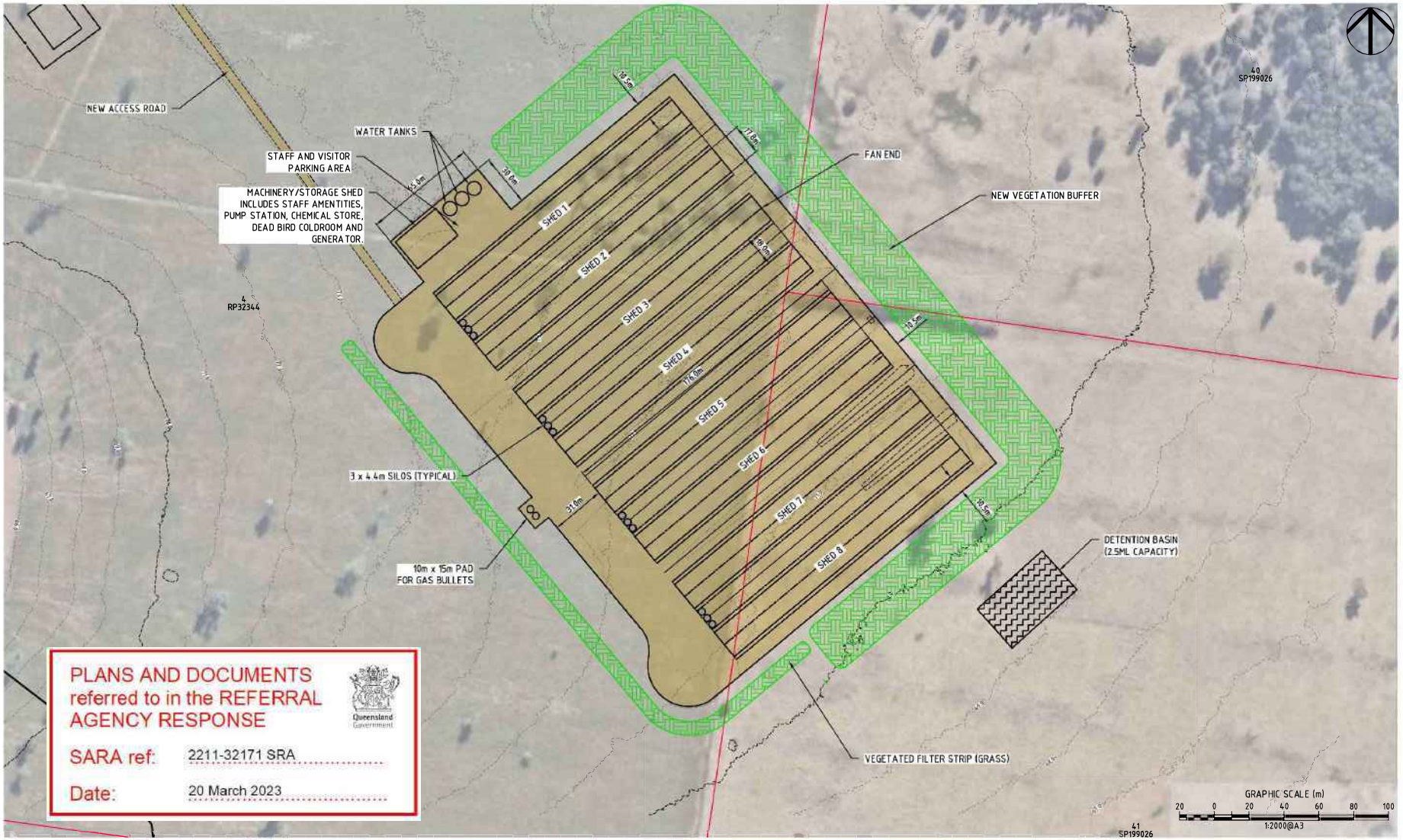
LOCALITY PLAN

13697	CIVIL	S. SHAY	24/02/23

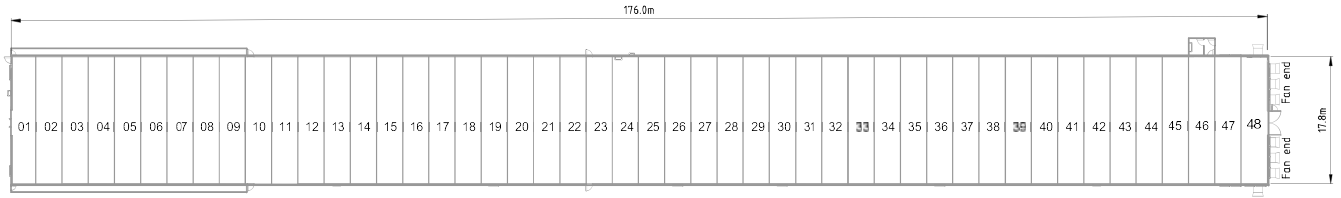
ACS Engineers
CIVIL | ENVIRONMENTAL | PROJECT MANAGEMENT

DRAWING NUMBER: ACS-210100-SITE-03

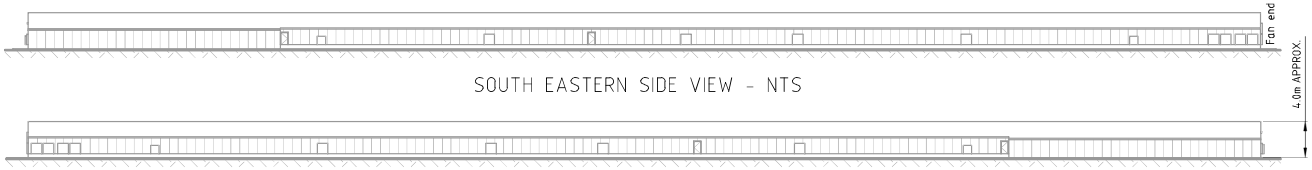
REVISION: 2



				SURVEY DATUM: GDA94	LL & SONS PTY LTD	SITE LAYOUT	ACS Engineers CIVIL | ENVIRONMENTAL | PROJECT MANAGEMENT
				MAP GRID: MGA-56	3 STEFFENS ROAD, FOREST HILL QLD 4342		
					PROPOSED POULTRY FARM & RECONFIGURATION OF A LOT		
2	UPDATED FOR RFI RESPONSE	MA	18/01/23				
1	PRELIMINARY	MA	28/10/22	NJF	08/2022	COURT AVENUE NORTH, BRIGHTVIEW QLD 4311	13697 CIVIL S. SHAY 24/02/23	ACS-210100-SITE-04	2

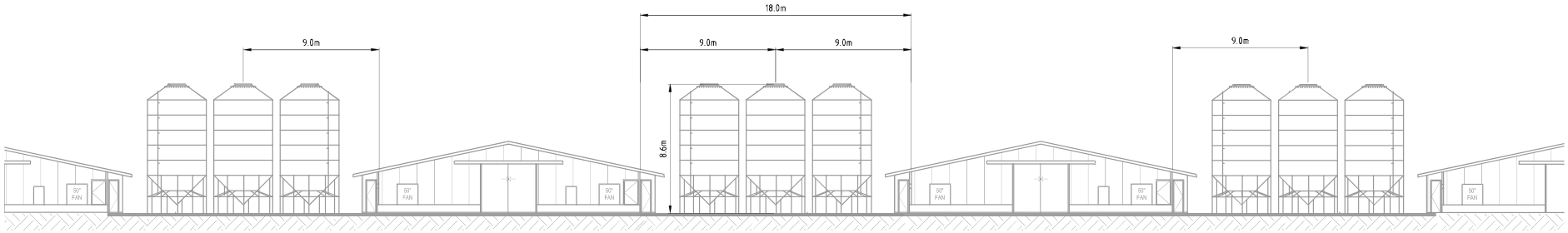


PLAN VIEW - NTS



SOUTH EASTERN SIDE VIEW - NTS

NORTH WESTERN SIDE VIEW - NTS



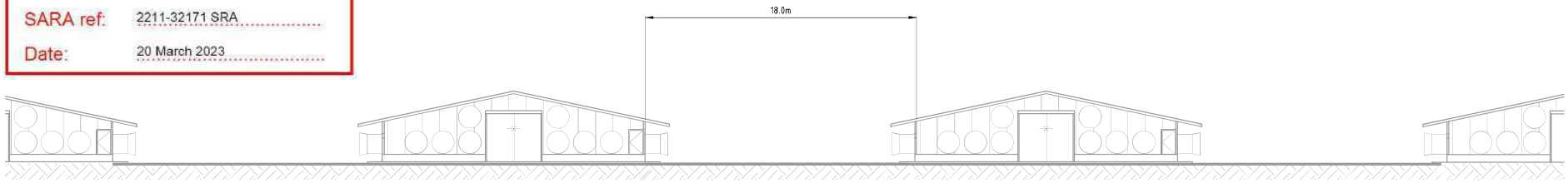
SOUTH WESTERN END - NTS

PLANS AND DOCUMENTS referred to in the REFERRAL AGENCY RESPONSE

Queensland Government

SARA ref: 2211-32171 SRA

Date: 20 March 2023



NORTH EASTERN END - NTS

				SURVEY DATA		LL & SONS PTY LTD	SHED TYPICAL SECTIONS	PO Box 554 Beaudesert QLD 4285 (07) 5541 3500 www.acsengineers.com.au	ACS Engineers CIVIL | ENVIRONMENTAL | PROJECT MANAGEMENT
				DATUM GDA94		3 STEFFENS ROAD, FOREST HILL QLD 4342			
				MAP GRID MGA-56					
				HEIGHT ORIGIN -		PROPOSED POULTRY FARM & RECONFIGURATION OF A LOT	ENGINEERING CERTIFICATION (RPEQ)		
				SURVEY BOOKS -			# 13697 | FIELD CIVIL | NAME S. SHAY | SIGNATURE | DATE 24/02/23	DRAWING NUMBER ACS-210100-SITE-06	REVISION 2
2	UPDATED FOR RFI RESPONSE	MA	18/01/23						
1	PRELIMINARY	MA	28/10/22	NJF	08/2022	COURT AVENUE NORTH, BRIGHTVIEW QLD 4311			
	REVISION/DETAILS	DWN	DATE	DES	DATE				

FILE: C:\SDS\DATA\ACES\YNY210100 POULTRY FEASIBILITY - COURT AVENUE NORTH_4D\DESIGN\DRAWING FILES\ACS-210100-SITE.DWG PLOT TIME: 24/2/2023 - 8:47AM BY USER: MARCELA.ALVES

2.2.1 Brightview Road

Brightview Road is a two-lane, two-way sealed road. Based on SRC road Hierarchy classifications, Brightview Road is classed as a trunk connector road, with a 7m seal on 10m foundation without kerb and channel in good condition. The road has a posted rural speed limit of 100km/hr.

2.2.2 Court Avenue North

Court Avenue North is a Council owned and maintained unsealed road and is classified as a local road under the SRC Planning scheme. Based on the SRC Planning Scheme it has an assumed posted access road speed limit of 40km/hr. The most efficient travel path between the development and the Warrego Highway is shown in Figure 3.

Figure 3: Heavy Vehicle Haulage Route (Source: QLD Globe, PSA Consulting)

2.2.3 Warrego Highway

The Warrego Highway is a state-controlled highway, stretching from the Ipswich Motorway to Charleville. In the vicinity of the site, the Highway is a four-lane, two-way, sealed, dual carriageway with a posted speed limit of 100km/hr.

Notice

Environmental Protection Act 1994

Decision about an application for an environmental authority

This statutory notice is issued by the administering authority pursuant to section 198 of the Environmental Protection Act 1994 *to advise you of a decision on your application for an environmental authority.*

To: Forest Hill Holdings Pty Ltd
3 Steffens Road
FOREST HILL QLD 4342

Our reference: 2023-03

Decision about an application for an environmental authority

1 Application details

The application for an environmental authority was received by the administering authority on 25 November 2022.

Application reference number: 2211-32171 SRA

Land description: 1RP31160; 2RP31160; 4RP32344; 40SP199026; 41SP199026

49 Court Avenue Brightview Queensland

2 Decision

The administering authority has decided to approve the application.

3 Annual fee

The first annual fee is payable within 20 business days of the effective date shown in the attached environmental authority.

The anniversary day of this environmental authority is the same day each year as the effective date. An annual return and the payment of the annual fee will be due each year on this day.

4 Review and appeal rights

You may apply to the administering authority for a review of this decision within 10 business days after receiving this notice. You may also appeal against this decision to the relevant court. Information about your review and appeal rights is attached to this notice. This information is guidance only and you may have other legal rights and obligations.

Queensland Government

Luke Boucher
Manager, Environmental Regulation

15 March 2023

Delegate of the administering authority
Environmental Protection Act 1994

Enquiries:
Department of Agriculture and Fisheries
Intensive Livestock Unit
203 Tor Street
TOOWOOMBA QLD 4350

Phone: 13 25 23
Fax: 07 4529 9233
Email: livestockregulator@daf.qld.gov.au

Attachments

Environmental authority 2023-03

Information sheet: Internal review and appeal (ESR/2015/1742)

Permit

Environmental Protection Act 1994

Environmental authority 2023-03

This environmental authority is issued by the administering authority under Chapter 5 of the Environmental Protection Act 1994.

Environmental authority number: 2023-03

Environmental authority takes effect on the date that your related development approval DA23169 takes effect. This is the take effect date.

Within 5 business days of the environmental authority taking effect, the administering authority must be given written notice of the occurrence. Prior to the commencement of the activity, the administering authority must be given written notice of the proposed date of commencement.

The first annual fee is payable within 20 business days of the take effect date.

The anniversary date of this environmental authority is the same day each year as the take effect date. The payment of the annual fee will be due each year on this day.

Environmental authority holder(s)

Name and Suitable Operator Reference	Registered address
Forest Hill Holdings Pty Ltd Suitable operator reference: RSO001313	3 Steffens Road FOREST HILL QLD 4342

Environmentally relevant activity and location details

Environmentally relevant activity	Location
ERA 4 — Poultry farming 2 farming more than 200,000 birds	1RP31160; 2RP31160; 4RP32344; 40SP199026; 41SP199026 49 Court Avenue Brightview Queensland

Additional information for applicants

Environmentally relevant activities

The description of any environmentally relevant activity (ERA) for which an environmental authority (EA) is issued is a restatement of the ERA as defined by legislation at the time the EA is issued. Where there is any inconsistency between that description of an ERA and the conditions stated by an EA as to the scale, intensity or manner of carrying out an ERA, the conditions prevail to the extent of

Queensland Government

the inconsistency.

An EA authorises the carrying out of an ERA and does not authorise any environmental harm unless a condition stated by the EA specifically authorises environmental harm.

A person carrying out an ERA must also be a registered suitable operator under the Environmental Protection Act 1994 (EP Act).

Contaminated land

It is a requirement of the EP Act that an owner or occupier of contaminated land give written notice to the administering authority if they become aware of the following:

- the happening of an event involving a hazardous contaminant on the contaminated land (notice must be given within 24 hours); or
- a change in the condition of the contaminated land (notice must be given within 24 hours); or
- a notifiable activity (as defined in Schedule 3) having been carried out, or is being carried out, on the contaminated land (notice must be given within 20 business days) that is causing, or is reasonably likely to cause, serious or material environmental harm.

For further information, including the form for giving written notice, refer to the Queensland Government website www.qld.gov.au, using the search term 'duty to notify'.

Take effect

Please note that, in accordance with section 200 of the EP Act, an EA has effect:

a) if the authority is for a prescribed ERA and it states that it takes effect on the day nominated by the holder of the authority in a written notice given to the administering authority – on the nominated day; or
b) if the authority states a day or an event for it to take effect – on the stated day or when the stated event happens; or
c) otherwise – on the day the authority is issued.

However, if the EA is authorising an activity that requires an additional authorisation (a relevant tenure for a resource activity, a development permit under the Planning Act 2016 or an SDA Approval under the State Development and Public Works Organisation Act 1971), this EA will not take effect until the additional authorisation has taken effect.

If this EA takes effect when the additional authorisation takes effect, you must provide the administering authority written notice within 5 business days of receiving notification of the related additional authorisation taking effect.

The anniversary day of this environmental authority is the same day each year as the effective date. The payment of the annual fee will be due each year on this day.

If you have incorrectly claimed that an additional authorisation is not required, carrying out the ERA without the additional authorisation is not legal and could result in your prosecution for providing false or misleading information or operating without a valid environmental authority.

Luke Boucher
Manager, Environmental Regulation

15 March 2023

Delegate of the administering authority
Environmental Protection Act 1994

Enquiries

Department of Agriculture and Fisheries
Intensive Livestock Unit
203 Tor Street
TOOWOOMBA QLD 4350

Phone: 13 25 23
Fax: 07 4529 9233
Email: livestockregulator@daf.qld.gov.au

Department of Agriculture and Fisheries

Obligations under the *Environmental Protection Act 1994*

In addition to the requirements found in the conditions of this environmental authority, the holder must also meet their obligations under the Act, and the regulations made under the Act. For example, the holder must comply with the following provisions of the Act:

- general environmental duty (section 319)
- duty to notify environmental harm (section 320-320G)
- offence of causing serious or material environmental harm (sections 437-439)
- offence of causing environmental nuisance (section 440)
- offence of depositing prescribed water contaminants in waters and related matters (section 440ZG)
- offence to place contaminant where environmental harm or nuisance may be caused (section 443)

Other permits required

This permit only provides an approval under the *Environmental Protection Act 1994*. In order to lawfully operate you may also require permits / approvals from your local government authority, other business units within the department and other State Government agencies prior to commencing any activity at the site. For example, this may include permits / approvals with your local Council (for planning approval), the Department of Transport and Main Roads (to access state-controlled roads), the Department of Natural Resources and Mines (to clear vegetation), and the Department of Agriculture and Fisheries (to clear marine plants or to obtain a quarry material allocation).

Development Approval

This permit is not a development approval under the *Planning Act 2016*. The conditions of this environmental authority are separate, and in addition to, any conditions that may be on the development approval. If a copy of this environmental authority is attached to a development approval, it is for information only, and may not be current. Please contact the Department of Agriculture and Fisheries to ensure that you have the most current version of the environmental authority relating to this site.

Conditions of environmental authority

The environmentally relevant activity conducted at the location as described above must be conducted in accordance with the following site-specific conditions of approval.

Agency interest: General	
Condition number	**Condition**
G1	Any breach of a condition of this environmental authority must be reported to the **administering authority** as soon as practicable within 24 hours of becoming aware of the breach. **Records** must be kept including full details of the breach and any subsequent actions taken.
G2	The **activity** must be undertaken in accordance with written procedures that: a) identify potential risks to the environment from the **activity** during routine operations and emergencies; and b) establish and maintain control **measures** that minimise the potential for environmental harm; and c) ensure plant, equipment and **measures** are maintained in a proper and effective condition; and d) ensure plant, equipment and **measures** are operated in a proper and effective manner; and e) ensure that staff are trained and aware of their obligations under the Environmental Protection Act 1994; and f) ensure that reviews of environmental performance are undertaken at least annually; and g) Identify risk of harm or nuisance to surrounding land uses and **measures** to minimise any environmental harm or nuisance; and h) Include a management plan which outlines practices that prevent or minimise the risk of environmental harm or nuisance to surrounding land uses.
G3	All reasonable and practicable **measures** must be taken to prevent or minimise **environmental harm** caused by the activities.
G4	Activities conducted under this environmental authority must not be conducted contrary to any of the following limitations: a) the maximum number of birds onsite must not exceed 400,000 birds; and b) birds are to be housed within poultry sheds at all times

G5	The poultry farming activity and associated facilities must be constructed generally in accordance with the following plans: 1. Locality Plan, ACS Engineers, dated 24/02/23, Drawing Number ACS-210100-SITE-03, Revision 2; and 2. Site Layout, ACS Engineers, dated 24/02/23, Drawing Number ACS-210100-SITE-04, Revision 2; and 3. Shed Typical Sections, ACS Engineers, dated 24/02/23, Drawing Number ACS-210100-SITE-06, Revision 2.
G6	Poultry shed floors must be constructed and maintained in accordance with accepted engineering practice to ensure long term structural integrity. The in-situ coefficient of permeability of the finished base, batters and embankments must not exceed 0.1mm/day. If this standard cannot be achieved using the in-situ material, lining must be carried out in accordance with the design permeability specification of Planning and environment guideline for establishing meat chicken farms (Guide 2 – Applicant guide) (2021, Publication no. 21-162).
G7	The holder of this environmental authority must not make any material alteration to the **activity** which may affect the operating capacity of the **activity** or change the way in which the **activity** operates, without the prior written approval of the **administering authority**.
G8	The environmentally relevant activity to which this environmental authority relates must be established and operated in accordance with the Planning and environment guideline for establishing meat chicken farms (Guide 2 – Applicant guide) (2021, Publication no. 21-162) or subsequent versions. In the event of any inconsistency between the conditions of this Environmental Authority, the Planning and environment guideline for establishing meat chicken farms (Guide 2 – Applicant guide) (2021, Publication no. 21-162) and the development information, the documents will prevail in the following order to the extent of the inconsistency:- • the conditions of this Environmental Authority; • the Planning and environment guideline for establishing meat chicken farms (Guide 2 – Applicant guide) (2021, Publication no. 21-162); and • the development information.
G9	The poultry sheds and associated infrastructure must be suitably designed and located to be protected from a 1% AEP flood event.

Monitoring	
G10	Standard agronomic soil chemistry of lands the subject of this environmental authority that receive waste generated by the environmentally relevant activity must be conducted in accord with Condition G12.
G11	A chemical and microbiological analysis of relevant water courses must be conducted in accord with Condition G12. A typical analysis includes the following elements: **Bacteria** *E.coli* and/or Thermotolerant Coliforms Enterococci **Chemical Analysis** Biochemical Oxygen Demand (BOD) Electrical Conductivity Dissolved Oxygen Nitrogen- Ammonia Nitrogen-Total (and its forms-nitrate and nitrite) Cations (Calcium, Magnesium, Sodium and Potassium) Sodium Adsorption Ratio pH Phosphorus (Total) Total Suspended Solids
G12	Monitoring described in condition G10 and G11 must be undertaken when requested by the **administering authority**, in the manner prescribed by the **administering authority**. The monitoring results must be provided within 10 business days to the **administering authority** upon its request.
G13	When required by the **administering authority**, monitoring must be undertaken in the manner prescribed by the **administering authority** to investigate a complaint of **environmental nuisance** arising from the activity. The monitoring results must be provided within 10 business days to the **administering authority** upon its request.
G14	All **records** must be kept for a period of at least five years and provided to the **administering authority** upon request.
Agency interest: Air	
Condition number	**Condition**
A1	Birds, bird carcasses and litter located on the relevant land must be managed to minimise the risk of odour and airborne contaminants causing an **environmental nuisance** to any **sensitive place** or **commercial place**.

A2	Dust and particulate matter emissions must not exceed the following concentrations at any **sensitive place** or **commercial place**: a) dust deposition of 120 milligrams per square metre per day, when monitored in accordance with Australian Standard AS 3580.10.1 (or more recent editions), or b) a concentration of particulate matter with an aerodynamic diameter of less than 10 micrometre (µm) (PM10) suspended in the atmosphere of 50 micrograms per cubic metre over a 24 hour averaging time, when monitored in accordance with Australian Standard AS 3580.9.6 (or more recent editions) or any other method approved by the **administering authority**.
A3	Litter within poultry sheds must be maintained to be in a friable state at all times while birds are housed in the sheds.
Agency interest: Water	
Condition number	**Condition**
WT1	Contaminants must not be released to **groundwater** or at a location where they are likely to release to **groundwater**.
WT2	Any **release** of contaminants generated by the **activity** to **waters** must not cause **environmental harm**.
WT3	The stormwater runoff from **disturbed areas** must be managed to minimise the release of contaminants offsite.
Agency interest: Noise	
Condition number	**Condition**
N1	Noise generated by the **activity** must not cause **environmental nuisance** to any **sensitive place** or **commercial place.**

N2	Noise from the **activity** must not include **substantial low frequency noise** components and must not exceed the levels identified in Table 3 – Noise limits and the associated requirements at any nuisance **sensitive place** or **commercial place**. **Table 3 – Noise limits**

Noise level measured in dB(A)	Monday to Saturday			Sunday and Public Holidays		
	7am-6pm	6pm-10pm	10pm-7am	9am-6pm	6pm-10pm	10pm-9am
	Noise measured at a nuisance **sensitive place**					
LAeq adj, 1 hr	Background +5	Background +3	Background +3	Background +5	Background + 3	Background + 3
LAmax, 1 hr	Background +10	Background +8	Background +5	Background +10	Background +8	Background +5
	Noise measured at a **commercial place**					
LAeq adj, 1 hr	Background +10	Background +8	Background +5	Background +10	Background +8	Background +5
LAmax, 1 hr	Background +15	Background +13	Background +10	Background +15	Background +13	Background +10

Agency interest: Land	
Condition number	**Condition**
L1	Any **release** of contaminants generated by the **activity** to **land** must not cause **environmental harm**.
L2	Before applying to surrender this environmental authority the site must be rehabilitated to achieve a safe, stable, non-polluting landform.

Agency interest: Waste	
Condition number	**Condition**
WS1	All waste generated in carrying out the **activity** must be lawfully reused, recycled or removed to a facility that can lawfully accept the waste.
WS2	Waste being treated must be lawfully treated to render it less hazardous and be fit for its intended use or disposal.
WS3	Any **release** or utilisation of waste products generated by the **activity** must not cause **environmental harm**.

WS4	Solid waste stockpile and composting areas shall be protected from rainfall runoff by diversion banks or drains and shall be located within a **controlled drainage area**.
WS5	Stockpiles of manure, sludge and spilt or spoilt feedstuff shall be managed to avoid burning, including spontaneous combustion. Any fires shall be extinguished as soon as practically possible.

END OF PERMIT

Attachments

1. Locality Plan, ACS Engineers, dated 24/02/23, Drawing Number ACS-210100-SITE-03, Revision 2; and
2. Site Layout, ACS Engineers, dated 24/02/23, Drawing Number ACS-210100-SITE-04, Revision 2; and
3. Shed Typical Sections, ACS Engineers, dated 24/02/23, Drawing Number ACS-210100-SITE-06, Revision 2.

Definitions

Key terms and/or phrases used in this document are defined in this section and **bolded** throughout this document. Applicants should note that where a term is not defined, the definition in the *Environmental Protection Act 1994* (the Act), its regulations or environmental protection policies must be used. If a word remains undefined it has its ordinary meaning.

activity means the environmentally relevant activities, whether resource activities or prescribed activities, to which the environmental authority relates.

administering authority means the Department of Agriculture and Fisheries or its successor or predecessors.

Annual Exceedance Probability (AEP) An Annual Exceedance Probability (AEP) event is the probability of a level of flooding being equalled or exceeded, at least once, in any given year. For example, a 1% AEP, is a flood level that has a one per cent chance of occurring in any given year.

appropriately qualified person(s) means a person or persons who has professional qualifications, training, skills and/or experience relevant to the EA requirement and can give authoritative assessment, advice and analysis in relation to the EA requirement using the relevant protocols, standards, methods or literature.

background means noise, measured in the absence of the noise under investigation, as $L_{A90,T}$ being the A-weighted sound pressure level exceeded for 90 percent of the time period of not less than 15 minutes, using Fast response.

birds means chickens, ducks, geese, guineafowl and turkeys.

commercial place means a place used as a workplace, an office or for business or commercial purposes and includes a place within the curtilage of such a place reasonably used by persons at that place.

controlled drainage areas means a self-contained catchment surrounding those parts of the feedlot complex from which uncontrolled stormwater runoff would constitute an environmental hazard. It is typically established using a series of:

- catch drains to capture runoff from the feedlot pens and all other surfaces within the feedlot complex, and ultimately convey that runoff to a treatment, collection or disposal system, and
- diversion banks or drains placed immediately upslope of the feedlot complex, which are designed to divert 'clean' or uncontaminated upslope runoff around the feedlot complex.

delegate of the administering authority means an officer of the Department of Agriculture and Fisheries or its successor as cited by the administering authority.

disturbed areas includes areas:

1. that are susceptible to erosion;
2. that are contaminated by the activity; and/or
3. upon which stockpiles of soil or other materials are located.

environmental harm as defined in Chapter 1 of the Environmental Protection Act 1994.

environmental nuisance as defined in Chapter 1 of the Environmental Protection Act 1994.

environmental value as defined in Chapter 1 of the Environmental Protection Act 1994.

groundwater means water that occurs naturally in, or is introduced artificially into, an aquifer.

$L_{Aeq\ adj,T}$ means the adjusted A weighted equivalent continuous sound pressure level measures on fast response, adjusted for tonality and impulsiveness, during the time period T, where T is measured for a period no less than 15 minutes when the activity is causing a steady state noise, and no shorter than one hour when the approved activity is causing an intermittent noise.

land does not include **waters**.

Max$L_{pA,T}$ means the maximum A-weighted sound pressure level measured over a time period T of not less than 15 minutes, using Fast response.

measures has the broadest interpretation and includes plant, equipment, physical objects, monitoring, procedures, actions, directions and competency.

noxious means harmful or injurious to health or physical well-being.

offensive means causing offence or displeasure; is unreasonably disagreeable to the sense; disgusting, nauseous or repulsive.

prescribed water contaminants means contaminants listed within Schedule 9 of the Environmental Protection Regulation 2008.

records include breach notifications, written procedures, analysis results, monitoring reports and monitoring programs required under a condition of this authority.

release of a contaminant into the environment includes:

1. to deposit, discharge, emit or disturb the contaminant; and
2. to cause or allow the contaminant to be deposited, discharged, emitted or disturbed; and
3. to fail to prevent the contaminant from being deposited, discharged emitted or disturbed; and
4. to allow the contaminant to escape; and
5. to fail to prevent the contaminant from escaping.

secondary containment system means a system designed, installed and operated to prevent any release of contaminants from the system, or containers within the system, to land, groundwater, or surface waters.

sensitive place includes the following and includes a place within the curtilage of such a place reasonably used by persons at that place:

a) caretaker's accommodation; or
b) a childcare centre; or
c) a community care centre; or
d) a community residence; or
e) a detention facility; or
f) a dual occupancy; or
g) a dwelling house; or
h) a dwelling unit; or
i) an educational establishment; or
j) a health care service; or
k) a hospital; or
l) a hotel, to the extent the hotel provides accommodation for tourists or travellers; or
m) a multiple dwelling; or
n) non-resident workforce accommodation; or
o) a relocatable home park; or
p) a residential care facility; or
q) a resort complex; or
r) a retirement facility; or
s) rooming accommodation; or
t) rural workers' accommodation; or
u) short-term accommodation; or
v) a supervised accommodation service; or
w) a tourist park.

substantial low frequency noise means a noise emission that has an unbalanced frequency spectrum shown in a one-third octave band measurements, with a predominant component within the frequency range 10 to 200 Hz. It includes any noise emission likely to cause an overall sound pressure level at a noise sensitive place exceeding 55 dB(Z).

waters includes river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, unconfined water, natural or artificial watercourse, bed and bank of any waters, dams, non-tidal or tidal waters (including the sea), stormwater channel, stormwater drain, roadside gutter, stormwater run-off, and groundwater and any part thereof.

you means the holder of the environmental authority.

GFA SCHEDULE - POULTRY SHEDS

SHED NUMBER	GFA	NUMBER OF BIRDS
SHED 1	176m x 17.8m = 3132.8m^2	50,000
SHED 2	176m x 17.8m = 3132.8m^2	50,000
SHED 3	176m x 17.8m = 3132.8m^2	50,000
SHED 4	176m x 17.8m = 3132.8m^2	50,000
SHED 5	176m x 17.8m = 3132.8m^2	50,000
SHED 6	176m x 17.8m = 3132.8m^2	50,000
SHED 7	176m x 17.8m = 3132.8m^2	50,000
SHED 8	176m x 17.8m = 3132.8m^2	50,000
TOTALS	TOTAL = 25062.4m^2	TOTAL = 400,000

REVISION/DETAILS		DWN	DATE
2	UPDATED FOR RFI RESPONSE	MA	18/01/23
1	PRELIMINARY	MA	28/10/22

SURVEY DATA
DATUM: GDA94
MAP GRID: MGA-56
HEIGHT ORIGIN: -
SURVEY BOOKS: -

DES	DATE
NJF	08/2022

LL & SONS PTY LTD

3 STEFFENS ROAD, FOREST HILL QLD 4342

PROPOSED POULTRY FARM & RECONFIGURATION OF A LOT

COURT AVENUE NORTH, BRIGHTVIEW QLD 4311

LOCALITY PLAN

ENGINEERING CERTIFICATION (RPEQ)

#	FIELD	NAME	SIGNATURE	DATE
13697	CIVIL	S. SHAY		24/02/23

PO Box 554
Beaudesert QLD 4285
(07) 5541 3500
www.acsengineers.com.au
ACS Engineers
CIVIL | ENVIRONMENTAL | PROJECT MANAGEMENT

DRAWING NUMBER: ACS-210100-SITE-03

REVISION: 2

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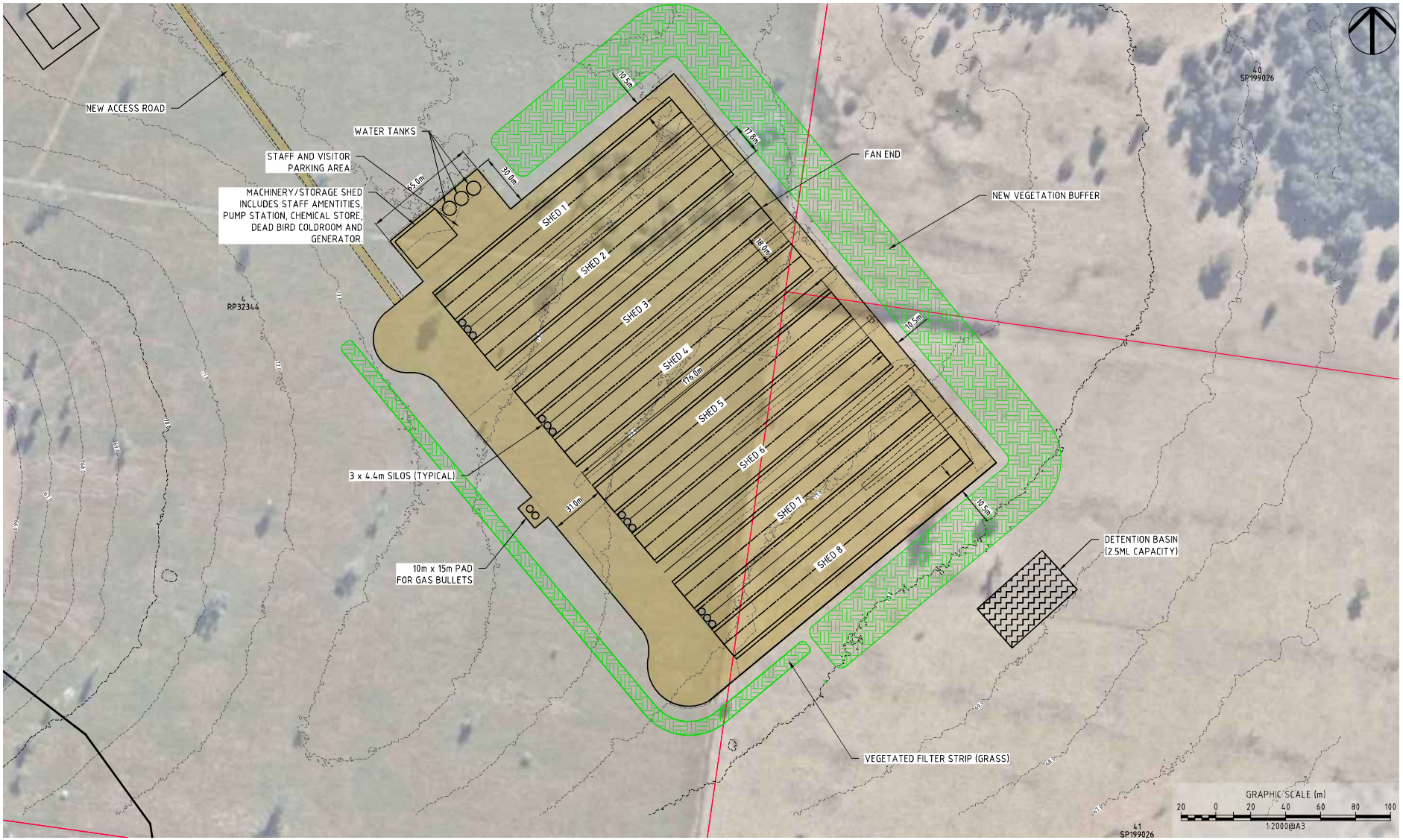

230

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				MAP GRID MGA-56			#	FIELD	NAME	SIGNATURE	DATE
				HEIGHT ORIGIN -	PROPOSED POULTRY FARM & RECONFIGURATION OF A LOT		13697	CIVIL	S. SHAY		24/02/23
				SURVEY BOOKS -							
2	UPDATED FOR RFI RESPONSE	MA	18/01/23	NJF	08/2022						
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REVISION/DETAILS		DWN	DATE								

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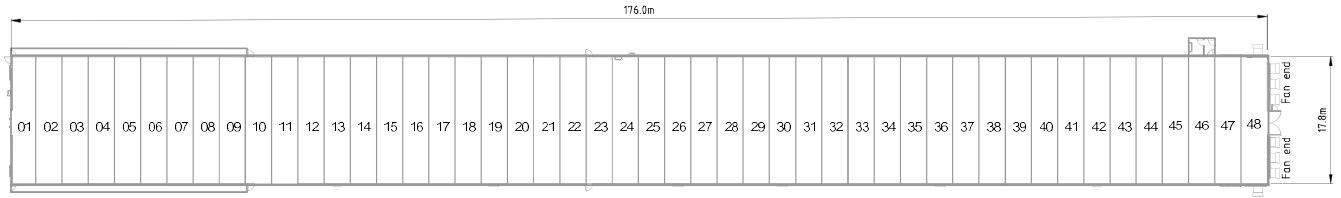
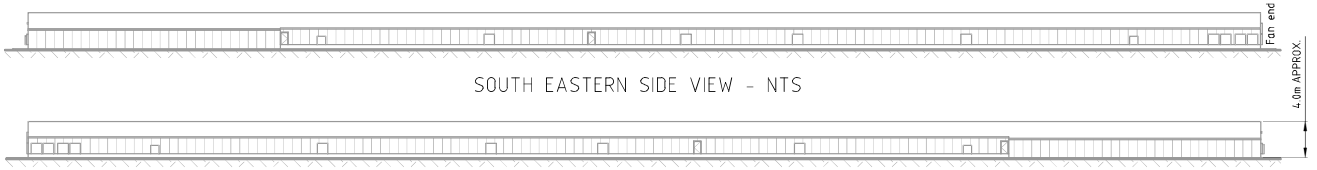
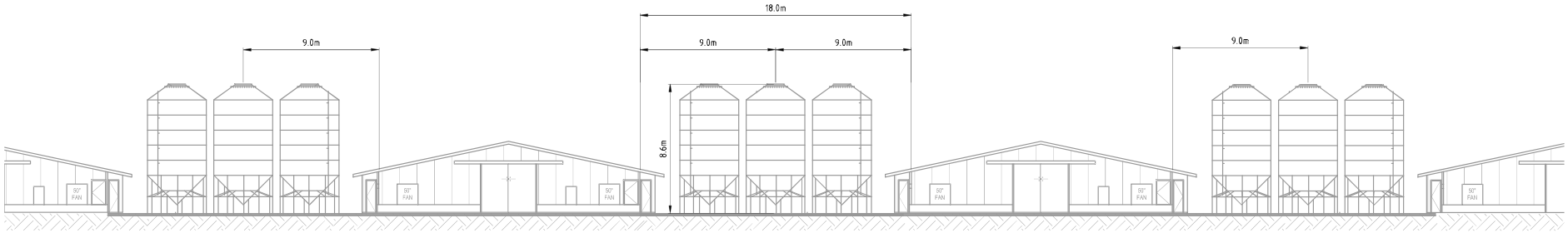


PLAN VIEW - NTS

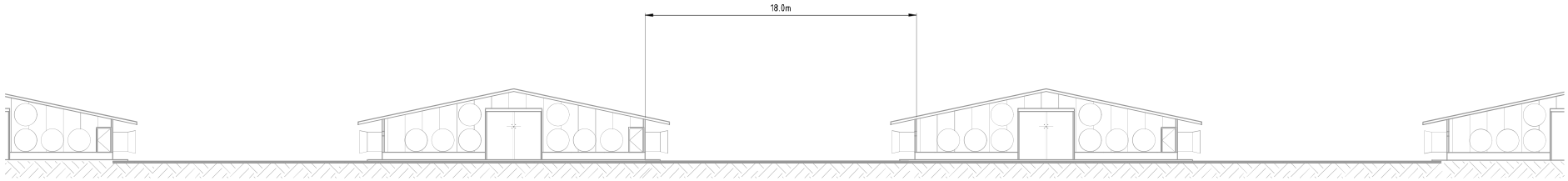


SOUTH EASTERN SIDE VIEW - NTS

NORTH WESTERN SIDE VIEW - NTS



SOUTH WESTERN END - NTS



NORTH EASTERN END - NTS

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				DATUM GDA94							
				MAP GRID MGA-56							
				HEIGHT ORIGIN -							
				SURVEY BOOKS -	3 STEFFENS ROAD, FOREST HILL QLD 4342						
2	UPDATED FOR RFI RESPONSE	MA	18/01/23		PROPOSED POULTRY FARM & RECONFIGURATION OF A LOT		ENGINEERING CERTIFICATION (RPEQ)				
1	PRELIMINARY	MA	28/10/22	NJF 08/2022			#	FIELD	NAME	SIGNATURE	DATE
REVISION/DETAILS		DWN	DATE	DES DATE	COURT AVENUE NORTH, BRIGHTVIEW QLD 4311		13697	CIVIL	S. SHAY		24/02/23
							DRAWING NUMBER ACS-210100-SITE-06				REVISION 2

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Information sheet

Environmental Protection Act 1994

Internal review and appeals

This information sheet gives a summary of the process for the review of decisions and appeals to the Land Court and the Planning and Environmental Court under sections 519 to 539F of the Environmental Protection Act 1994 *and subordinate legislation. This information sheet replaces the two information sheets (1) Internal review and appeal to Land Court (ESR/2015/1742) and (2) Internal review and appeal to the Planning and Environment Court (ESR/2015/1572).*

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Version History

Version	Effective date	Description of changes
1.00	13 August 2015	First published version of the guideline.
2.00	13 August 2015	Minor changes and references to legislation updated.
3.00	10 October 2016	Updated to reflect latest version of *Environmental Protection Act 1994*.
3.01	6 July 2017	Replaced references to the *Sustainable Planning Act 2009* with *Planning Act 2016* (commenced 3 July 2017).
3.02	13 June 2018	The document template, header and footer have been updated to reflect current Queensland Government corporate identity requirements and comply with the Policy Register.
4.00	01 April 2019	Update of conditions relating to financial assurance to reflect the introduction of the Mineral and Energy Resources (Financial Provisioning) Act 2018 and the subsequent changes to the Environmental Protection Act 1994.
5.00	1 November 2019	Updated for the commencement of the progressive rehabilitation and closure plan framework.
6.00	15 September 2020	Updated to reflect changes introduced by the *Environmental Protection and Other Legislation Amendment Act 2020.*
6.01	14 April 2022	Facsimile number removed.

1 Introduction

The *Environmental Protection Act 1994* (EP Act) includes provisions for the internal review and appeal of certain decisions made under the EP Act.

The decisions that are subject to internal review are referred to as 'original decisions' in Schedule 2 of the EP Act and subordinate legislation.

A person who is dissatisfied with an original decision made by the Department of Environment and Science (the department) may apply to have that decision internally reviewed[1]. Generally, an application for a review of an original decision must be:

- made within 10 business days of the receiving a notice about the original decision or from when the department is taken to have made the decision;
- supported by enough information to enable the department to decide the review application; and
- made using the approved form Application for review of original decision (ESR/2015/1573[2]).

Where an application has been made for a review of an original decision, the applicant may also apply to the relevant court for a stay of the decision to secure the effectiveness of the review and any later appeal.

Once the original decision has been reviewed, a person who is dissatisfied with the review decision may be able to appeal against that decision to the relevant court within 22 business days of receiving the notice about the review decision. Schedule 2, Part 3 includes original decisions for internal review only.

What is the relevant court?

Land Court

Original decisions mentioned in Schedule 2, Part 1 are subject to Land Court appeal. These decisions generally relate to environmental authorities for resource activities.

The EP Act confers jurisdiction to the Land Court to hear and determine matters relating to natural resource issues, including appeals against decisions concerning the grant of mining tenures and other state land interests.

Planning and Environment Court

Original decisions mentioned in Schedule 2, Part 2 can be appealed against to the Planning and Environment Court. These decisions generally relate to environmental authorities for prescribed environmentally relevant activities.

The Planning and Environment Court is constituted by judges and hears matters including those relating to planning and development, environmental protection and management, nature conservation and heritage.

The relevant sections of Chapter 11, Part 3 of the EP Act that provide for the review of decisions and appeals are outlined below.

[1] Note: In accordance with section 521(14) internal reviews are not undertaken for an original decision to issue a clean-up notice.
[2] This form is available on the Queensland Government website at www.qld.gov.au, using the publication number ESR/2015/1573 as a search term.

Chapter 11—Administration, Part 3—Review of decisions and appeals

Division 1—Interpretation

Section 519 Original decisions

(1) A decision mentioned in schedule 2 is an 'original decision'.

(2) A decision under an environmental protection policy or regulation that the policy or regulation declares to be a decision to which this part applies is also an original decision.

Section 520 Dissatisfied person

(1) A dissatisfied person, for an original or review decision, is—

(a) if the decision is about an environmental impact statement (EIS) or the EIS process for an EIS—the relevant proponent under chapter 3, part 1, for the project to which the EIS relates; or

(b) if the decision is about an application for an environmental authority or proposed PRC plan for the application—the applicant; or

(c) if the decision is about an environmental authority, including financial assurance for the environmental authority, or a PRCP schedule—the holder of the authority or schedule; or

(d) if the decision is about an application for registration of a person as a suitable operator—the applicant; or

(e) if the decision is about a registered suitable operator—the operator; or

(f) if the decision is about taking action after receiving an audit report for an audit of a PRCP schedule—the holder of the schedule; or

(g) if the decision is to refuse an application to recognise an accreditation program for an agricultural ERA – the applicant; or

(h) if the decision is about a recognised accreditation program for an agricultural ERA – the owner of the program; or

(i) if the decision is to give an audit notice under section 322, 322A or 323—the recipient; or

(j) if the decision is to conduct an environmental audit or prepare an environmental report for an audit under section 326—the relevant environmental authority holder; or

(k) if the decision is about an environmental investigation or environmental protection order – the recipient; or

(l) if the decision is about a transitional environmental program—the holder of an approval for the program or person or public authority that is required to submit, or submits, the program; or

(m) if the decision is about a temporary emissions licence—

(i) the applicant for the licence; or

(ii) the holder of the licence; or

(n) if the decision is to issue a direction notice, clean-up notice or cost recovery notice—the recipient; or

(o) if the decision is about recording particulars of land in, or removing particulars of land from, the environmental management register or contaminated land register—the land's owner; or

(o) if the decision is about a site management plan for contaminated land—

(i) the recipient for the notice to prepare or commission the site management plan, other than for a decision under section 399; and

(ii) the land's owner; and

(iii) if another person prepares or commissions the plan—the other person, other than for a decision under section 399; or

(p) if the decision is about erecting signs on contaminated land—the land's owner; or

(q) if the decision is about a disposal permit—the applicant for the permit; or

(r) if the decision is about an exemption under chapter 8, part 3F, division 3—the person applying for, or given, the exemption; or

(s) if the decision is to give a notice under section 451(1)—the person to whom the notice is given; or

(t) if the decision is about an application for approval as an auditor under chapter 12, part 3A, division 2—the applicant; or

(u) if the decision is about an auditor—the auditor; or

(v) if the decision is about a complaint under chapter 12, part 3A, division 5—the person who made the complaint; or

(w) if the decision is about a conversion application under section 695—the applicant; or

(x) if the decision is a decision under an environmental protection policy or a regulation that the policy or regulation declares to be a decision to which this part applies—the person declared under the policy or regulation to be a dissatisfied person for the decision.

(2) A submitter for an application is also a dissatisfied person if the decision is about—

(a) a site-specific application for an environmental authority for a petroleum activity; or

(b) an amendment application under chapter 5, part 7 for an environmental authority for a resource activity, other than a mining activity; or

(c) the submission of a transitional environmental program to which section 335 applies.

2 Internal review of decisions

The relevant section of the EP Act regarding the process for the internal review of original decisions is outlined below.

Division 2—Internal review of decisions

Section 521 Procedure for review

(1) A dissatisfied person may apply for a review of an original decision.

(2) The application must—

(a) be made in the approved form to the administering authority within the following period (the 'review application period')—

(i) 10 business days[1] after the day on which the person receives notice of the original decision or the administering authority is taken to have made the decision (the 'review date');

(ii) the longer period the authority in special circumstances allows; and

(b) be supported by enough information to enable the authority to decide the application.

(3) The administering authority must, within 5 business days after the end of the review application period or, if 2 or more applications are received in relation to the original decision, the end of the latest of the review application periods, send the following documents to the other persons who were given notice under this Act of the original decision—

(a) notice of the application (the 'review notice');

(b) either-

(i) a copy of the application and supporting documents; or

(ii) details of where a copy of the application and supporting documents may be inspected or accessed.

(4) The review notice must inform the recipient that submission on the application may be made to the administering authority within 5 business days (the 'submission period') after the day the authority sends the review notice to the recipient.

(5) If the administering authority receives only 1 application in relation to the original decision and is satisfied the applicant has complied with subsection (2), the authority must, within the decision period—

(a) review the original decision;

(b) consider any submissions properly made by a recipient of the review notice; and

(c) make a decision (the 'review decision') to—

(i) confirm or revoke the original decision; or

(ii) vary the original decision in a way the administering authority considers appropriate.

(6) If the administering authority receives 2 or more applications in relation to the original decision and is satisfied the applicants have complied with subsection (2), the authority must, within the decision period-

(a) review the original decision; and

(b) consider any submissions properly made by a recipient of any of the review notices; and

(c) make 1 decision (also the 'review decision') in relation to the applications to-

(i) confirm or revoke the original decision; or

(ii) vary the original decision in a way the administering authority considers appropriate.

(7) The application does not stay (i.e. suspend or stop) the original decision.

Note- See part 3, division 4 in relation to stays.

(8) The application must not be dealt with by—

(a) the person who made the original decision; or

(b) a person in a less senior office than the person who made the original decision.

(9) Within 10 business days after making the review decision, the administering authority must give written notice of the decision to the applicant and persons who were given notice under this Act of the original decision.

(10) The notice must—

(a) include the reasons for the review decision; and

(b) inform the persons of their right of appeal against the decision.

(11) If the administering authority does not comply with subsection (5), (6) or (9), the authority is taken to have made a decision confirming the original decision.

(12) Subsection (8) applies despite the *Acts Interpretation Act 1954*, s. 27A.

(13) This section does not apply to an original decision made by—

(a) for a matter, the administration and enforcement of which has been devolved to a local government—the local government itself or the chief executive officer of the local government personally; or

(b) for another matter—the chief executive personally.

(14) Also, this section does not apply to an original decision to issue a clean-up notice.

(15) In this section—

'decision period', for a review of an original decision, means—

(a) if only 1 application is received in relation to the original decision and a submission is received within the submission period—

(i) 20 business days after the administering authority receives the application; or

(ii) the longer period, of not more than 5 additional business days, the authority in special circumstances decides; or

(b) if only 1 application is received in relation to the original decision and no submissions are received within the submission period—

(i) 15 business days after the administering authority receives the application; or

(ii) the longer period, of not more than 5 additional business days, the authority in special circumstances decides; or

(c) if 2 or more applications are received in relation to the original decision and a submission is received within the submission period for at least 1 of the applications—

(i) 20 business days after the administering authority receives the latest of the applications; or

(ii) the longer period, of not more than 5 additional business days, the authority in special circumstances decides; or

(d) if 2 or more applications are received in relation to the original decision and no submissions are received within the submission period for any of the applications—

(i) 15 business days after the administering authority receives the latest of the applications; or

(ii) the longer period, of not more than 5 additional business days, the authority in special circumstances decides.

3 Appeals to Land Court

The relevant sections of the EP Act regarding the process for appealing against a decision to the Land Court are outlined below.

Division 3—Appeals

Subdivision 1—Appeals to Land Court

Section 523 Review decisions subject to Land Court appeal

This subdivision applies if the administering authority makes a review decision for an original decision mentioned in schedule 2, part 1.

Section 524 Right of appeal

A dissatisfied person who is dissatisfied with the review decision may appeal against the decision to the Land Court.

Section 525 Appeal period

(1) The appeal must be started within 22 business days after the appellant receives notice of the review decision.

(2) However, the Land Court may at any time extend the time for starting the appeal.

Section 526 Land Court mediation

(1) Any party to the appeal may, at any time before the appeal is decided, ask the Land Court to conduct or provide mediation for the appeal.

(2) The mediation must be conducted by the Land Court or a mediator chosen by the Land Court[2].

Section 527 Nature of appeal

The appeal is by way of rehearing, unaffected by the review decision.

Section 528 Land Court's powers for appeal

In deciding the appeal, the Land Court has the same powers as the administering authority.

Section 530 Decision for appeals

(1) In deciding the appeal, the Land Court may—

(a) confirm the review decision; or

(b) set aside the decision and substitute another decision; or

(c) set aside the decision and return the matter to the administering authority who made the decision, with directions the Land Court considers appropriate.

(2) In setting aside or substituting the decision, the Land Court has the same powers as the authority unless otherwise expressly stated.

(3) However, this part does not apply to a power exercised under subsection (2).

(4) If the Land Court substitutes another decision, the substituted decision is taken for this Act, other than this subdivision, to be the authority's decision.

4 Appeals to the Court

The relevant sections of the EP Act regarding the process for appealing against a decision to the Court are outlined below.

Division 3—Appeals

Subdivision 2—Appeals to Court

Section 531 Who may appeal

(1) A dissatisfied person who is dissatisfied with a review decision may appeal against the decision to the Court.

(2) However, the following review decisions cannot be appealed against to the Court—

(a) a review decision to which subdivision 1[3] applies;

(b) a review decision that relates to an original decision mentioned in Schedule 2, Part 3[4].

(3) The chief executive may appeal against another administering authority's decision (whether an original or review decision) to the Court.

(4) A dissatisfied person who is dissatisfied with an original decision to which s. 521 does not apply may appeal against the decision to the Court.

Section 532 How to start appeal

(1) An appeal is started by—

(a) filing written notice of appeal with the registrar of the Court; and

(b) complying with rules of court applicable to the appeal.

(2) The notice of appeal must be filed—

(a) if the appellant is the chief executive—within 33 business days after the decision is made or taken to have been made; or

(b) if the appellant is not the chief executive—within 22 business days after the day the appellant receives notice of the decision or the decision is taken to have been made.

(3) The Court may at any time extend the period for filing the notice of appeal.

(4) The notice of appeal must state fully the grounds of the appeal and the facts relied on.

Section 533 Appellant to give notice of appeal to other parties

(1) Within 8 business days after filing the notice of appeal, the appellant must serve notice of the appeal on—

(a) if the appellant is the chief executive—all persons who were given notice under this Act of the original decision; or

(b) if the appellant is not the chief executive—the other persons who were given notice under this Act of the original decision.

(2) The notice must inform the persons that, within 10 business days after service of the notice of appeal, they may elect to become a respondent to the appeal by filing in the Court a notice of election under rules of court.

Section 534 Persons may elect to become respondents to appeal

A person who properly files in the Court a notice of election becomes a respondent to the appeal.

Section 536 Hearing procedures

(1) The procedure for an appeal is to be in accordance with the rules of court applicable to the appeal or, if the rules make no provision or insufficient provision, in accordance with directions of the judge.

(2) An appeal is by way of rehearing, unaffected by the administering authority's decision.

Section 537 Assessors

If the judge hearing an appeal is satisfied the appeal involves a question of special knowledge and skill, the judge may appoint 1 or more assessors to help the judge in deciding the appeal.

Section 538 Appeals may be heard with planning appeals

(1) This section applies if—

(a) a person appeals against an administering authority's decision (whether an original or review decision) about an application for an environmental authority for a prescribed ERA; and

(b) a person appeals against the assessment manager's decision under the Planning Act about a planning or development matter for the premises to which the application for the authority relates.

(2) The Court may order—

(a) the appeals to be heard together or 1 immediately after the other; or

(b) 1 appeal to be stayed until the other has been decided.

(3) This section applies even though the parties, or all of the parties, to the appeals are not the same.

Section 539 Powers of Court on appeal

(1) In deciding an appeal, the Court may—

(a) confirm the decision appealed against; or

(b) vary the decision appealed against; or

(c) set aside the decision appealed against and make a decision in substitution for the decision set aside.

(2) If on appeal the Court acts under subsection (1)(b) or (c), the decision is taken, for this Act (other than this part), to be that of the administering authority.

5 Stays

Division 4 — Stays

Section 539A Stay of operation of original decisions for internal review

(1) If an application is made for internal review of an original decision mentioned in Schedule 2, Part 1 or 2, the applicant may immediately apply for a stay of the decision to—

(a) for an original decision mentioned in Schedule 2, Part 1—the Land Court; or

(b) for an original decision mentioned in Schedule 2, Part 2—the Court.

(2) The Land Court or the Court may stay the decision only if it considers the stay is desirable having regard to the following—

(a) the interests of any person whose interests may be affected by the granting of the stay or the stay not being granted;

(b) any submission made to the Land Court or the Court by the entity that made the original decision;

(c) the public interest.

(3) A stay may be given on conditions the Land Court or the Court considers appropriate and has effect for the period stated by the Land Court or the Court.

(4) The period of a stay must not extend past the end of the period within which an appeal against the review decision may be started under section 525 or 532.

(5) This section applies subject to sections 539C and 539D.

(6) In this section—

'internal review', of an original decision, means a review of the decision under section 521.

Section 539B Stay of operation of decisions appealed against to Land Court or Court

(1) This section applies to—

(a) an original decision appealed against to the Court if section 521 does not apply to the decision; or

(b) an original decision appealed against to the Land Court or the Court if the decision is confirmed or varied by a review decision.

(2) The Land Court or the Court may grant a stay of a decision appealed against to secure the effectiveness of the appeal.

(3) A stay may be granted on conditions the Land Court or the Court considers appropriate and has effect for the period stated by the Land Court or the Court.

(4) The period of a stay must not extend past the time when the Land Court or the Court decides the appeal.

(5) An appeal against a decision does not affect the operation or carrying out of the decision unless the decision is stayed.

(6) This section applies subject to sections 539C to 539E.

Section 539C Stay of decision about financial assurance

(1) This section applies to an application under section 539A or 539B for a stay of a decision about the amount of financial assurance required under a condition of an environmental authority.

(2) The decision may not be stayed unless the administering authority has been given security for at least 75% of the amount of financial assurance that was decided by the administering authority.

Section 539D Stay of particular decisions if unacceptable risk of environmental harm

(1) This section applies to an application under section 539A or 539B for a stay of a decision–

(a) to ask the scheme manager for a payment of costs and expenses under section 316G; or

(b) to make a claim on or realise an EPA assurance under section 316G; or

(c) to issue an environmental protection order under section 358.

(2) The Land Court or the Court must refuse the application if satisfied there would be an unacceptable risk of serious or material environmental harm if the stay were granted.

Section 539E Stay of decision to issue clean-up notice

(1) This section applies to an application under section 539B for a stay of a decision to issue a clean-up notice.

(2) In deciding the application, the Court must have regard to—

(a) the quantity and quality of contamination of the environment that is likely to be caused if the stay is granted; and

(b) the proximity of the place at or from which the contamination incident is happening or happened to a place with environmental values that may be adversely affected by the contamination.

Section 539F Effect of stay of ERC decision

(1) This section applies if 1 of the following decisions is stayed –

(a) an original decision that is an ERC decision;

(b) an original decision appealed against to the Land Court if the decision is an ERC decision that is confirmed or varied by a review decision.

(2) Despite the stay the decision remains in effect for section 297 and the *Mineral and Energy Resources (Financial Provisioning) Act 2018*.

(3) However, if the holder of the environmental authority in relation to which the ERC decision has been made is required to give a surety under the *Mineral and Energy Resources (Financial Provisioning) Act 2018*, the holder is only required, during the period of the stay, to give a surety of 75% of the amount required.

6 Judicial review

Under the *Judicial Review Act 1991*, a person whose interests would be adversely affected by a decision made by the department has the right to:

- request a statement of reasons explaining a decision; and
- apply to the Supreme Court for a review of a decision if they are not satisfied with the statement of reasons for that decision.

Approved:

15 September 2020

Enquiries:

Permit and Licence Management
Ph. 1300 130 372 (select option 4)
Ph:13 QGOV (13 74 68)
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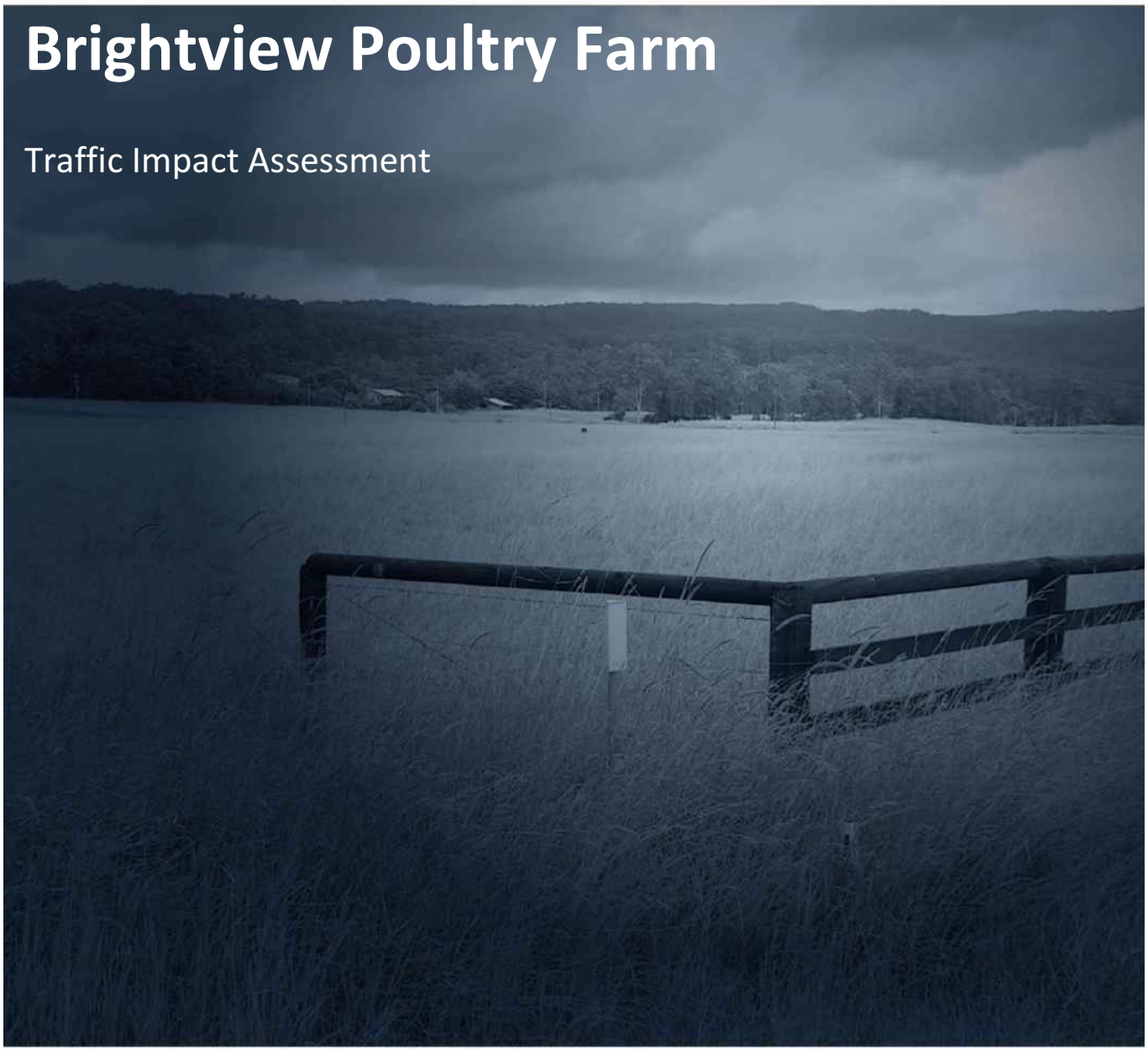
[1] Under the *Environmental Protection Act 1994* business days—'generally, does not include a day between 20 December in a year and 5 January in the following year'.
[2] For information on how to start the appeal, see the *Land Court Rules 2000*. For information on the conduct of the mediation, see the *Land Court Act 2000*. Information is also available on the Land Court website.
[3] Subdivision 1 is about appeals to the Land Court.
[4] Original decisions mentioned in Schedule 2, Part 3 are original decisions for internal review only.

PSA CONSULTING

Brightview Poultry Farm

Traffic Impact Assessment



28 February 2023

Document Control

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PSA Job Number: 1504
Report Name: Traffic Impact Assessment

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LIST OF ACRONYMS

AADT	Average Annual Daily Traffic
BAL	Basic Left Turn
BAR	Basic Right Turn
CEMP	Construction Environmental Management Plan
GTIA	Guide to Traffic Impact Assessments
HRV	Heavy Rigid Vehicle
LGA	Local Government Area
LHS	Left Hand Side
PSA	PSA Consulting
RHS	Right Hand Side
SISD	Safe Intersection Sight Distance
SRC	Somerset Regional Council
TIA	Traffic Impact Assessment
TMP	Traffic Management Plan
TMR	Traffic and Main Roads

1 INTRODUCTION

PSA Consulting (PSA) has been engaged by LL and Sons Pty Ltd to undertake a Traffic Impact Assessment (TIA) to accompany a development application for the proposed commercial poultry farm development on Court Avenue North, Brightview. The development lots are formally described as Lot 1 RP31160, Lot 2 RP311160, Lot 4 RP32344, Lot 40 SP199026, and Lot 41 SP199026 and are all situated in the Somerset Regional Council (SRC) Local Government Area (LGA).

The development involves the construction of a poultry farm consisting of eight (8) tunnel ventilated chicken sheds housing a maximum of 400,000 birds across the property. The proposed farm will be accessed via a new access driveway to be constructed from Court Avenue North. Locality of the site inclusive of the extended driveway is highlighted in Figure 1.

Figure 1: Site Locality Plan (Source: PSA Consulting)

Information contained in this report and analysis has been sourced from the Planning Report prepared by ACS Engineers issued on 2 November 2022. This TIA has been prepared in response to the following Information Requests:

- **SARA Information Request received on 7 December 2022**

Network Impacts

3. Issue: The development proposes Intensive Animal Industry for a poultry farm of 400,000 birds and exceeds the Local Government Area 2 threshold under Schedule 20 of the Planning Regulation 2017. The proposed development is expected to generate heavy vehicle traffic that may impact on the safety and efficiency of the state-controlled road network. The application material has not provided a sufficient information to demonstrate the development will not create a safety hazard for users of the state-controlled road or result in worsening of operating conditions on a state-controlled road, consistent with PO1-PO5 of the SDAP for State Code 6: Protection of state transport networks.

Action:

In order to demonstrate compliance with PO1-PO5 of State code 6 of the SDAP, the applicant is requested to provide a Traffic Impact Assessment certified by an RPEQ and in accordance with the Department of Transport and Main Roads' Guide to Traffic Impact Assessment (GTIA) or other material which addresses the following:

a) Provide the trip generation, trip distribution and when the peak traffic generation of the site occurs during the AM and PM peak of the state-controlled road network.

b) Identify the proposed haulage route for Heavy Vehicles.

c) Demonstrate that Heavy Vehicles can be accommodated on the proposed haulage route. Forest Hill – Fernvale Road (in part), Brisbane Valley Highway and Warrego Highway are B-Double routes. An assessment including swept path analysis of the haulage route, where on a state-controlled road, including where the haulage route intersects with the state-controlled road network is required to confirm the state-controlled road network safely cater for Heavy Vehicles.

- **SRC Information Request received on 23 December 2022**

Traffic Impact Assessment

1. The planning report executive summary (page iii) states that "At peak production and with all eight sheds in service the proposed poultry farm will generate approximately 1,932 heavy vehicle movements per annum. Vehicles travelling to the site will travel from Brightview Road to Court Avenue North. These roads have been assessed with respect to the impact that the proposed development traffic will have on road infrastructure and safety. The proposed development is not expected to have any adverse impact on the capacity of the roads along the route."

Information requested:

Please provide a traffic impact assessment, signed by RPEQ, that demonstrates that these roads have been appropriately assessed and that this development will have no adverse on the surrounding roads.

Court Avenue North Upgrade

2. The planning report executive summary (page iii) states that "Upgrade of Court Avenue North to an 8m formation with 4m seal is recommended ".

Information requested:

Please demonstrate that the proposed upgrade to Court Avenue North is appropriate to the volume of traffic proposed, please also demonstrate compliance with the Somerset Regional Council Planning Scheme.

Internal driveway and car parking

3. The planning report executive summary (page iii) states that "The internal access driveway will be constructed to a gravel standard suitable to cater for the anticipated vehicle types and volumes using the driveway.

Information requested:

Please provide details on the anticipated types and volume of traffic anticipated to be utilising the internal driveway.

4. The planning report executive summary (page iii) states that "Onsite car parking spaces will be provided for staff and visitors".

Information requested:

Please provide detail on number of car parking bays to be provided.

This TIA has been prepared in response to each Information Request and meets the requirements of the QLD Department of Transport and Main Roads (TMR) Guide to Traffic Impact Assessments (GTIA).

The report includes the following:

- Existing Conditions
- Development Details;
- Impact Assessments Including:
    - Traffic Impact Assessment; and
    - Safety Assessment

- Site Access Assessment; and
- On-site Parking Requirements.

2 EXISTING CONDITIONS

2.1 EXISTING SITE

The proposed development site is currently vacant rural property including a watercourse, areas of wetlands and sections of dense vegetation. The remainder of the site is moderately vegetated with established grass cover. The topography is relatively flat, with most of the site falling towards the south.

The subject site comprises of the following lots on Court Avenue North, Brightview, within the SRC region:

- Lot 1 RP31160 (19.74 ha)
- Lot 2 RP31160(19.52 ha)
- Lot 4 RP32344 (38.27 ha)
- Lot 40 SP199026 (16.13 ha)
- Lot 41 SP199026 (27.33 ha)

Currently the site is accessed via Court Avenue North, a Council owned and maintained unsealed road. For the purposes of this assessment, it has been assumed that the site is not currently generating any traffic.

2.2 ROAD NETWORK

The proposed development is located directly east of Court Avenue North and south of Lindstrom Road, approximately 8km southwest of Lowood as shown in Figure 2.

Figure 2: Development Site Plan (Source: PSA Consulting)

2.2.1 Brightview Road

Brightview Road is a two-lane, two-way sealed road. Based on SRC road Hierarchy classifications, Brightview Road is classed as a trunk connector road, with a 7m seal on 10m foundation without kerb and channel in good condition. The road has a posted rural speed limit of 100km/hr.

2.2.2 Court Avenue North

Court Avenue North is a Council owned and maintained unsealed road and is classified as a local road under the SRC Planning scheme. Based on the SRC Planning Scheme it has an assumed posted access road speed limit of 40km/hr. The most efficient travel path between the development and the Warrego Highway is shown in Figure 3.

Figure 3: Heavy Vehicle Haulage Route (Source: QLD Globe, PSA Consulting)

2.2.3 Warrego Highway

The Warrego Highway is a state-controlled highway, stretching from the Ipswich Motorway to Charleville. In the vicinity of the site, the Highway is a four-lane, two-way, sealed, dual carriageway with a posted speed limit of 100km/hr.

3 DEVELOPMENT PROFILE

The proposed development involves the construction of a poultry farm consisting of eight (8) tunnel ventilated sheds, upgrade of the existing private driveway to provide site access. The proposed development will run over lots 4 (RP32344), 40 (SP199026), 41 (SP199026) which will be merged and the adjoining two lots (Lot 1 RP31160 and Lot 2 RP31160) subdivided. This lots under development are shown in Figure 4.

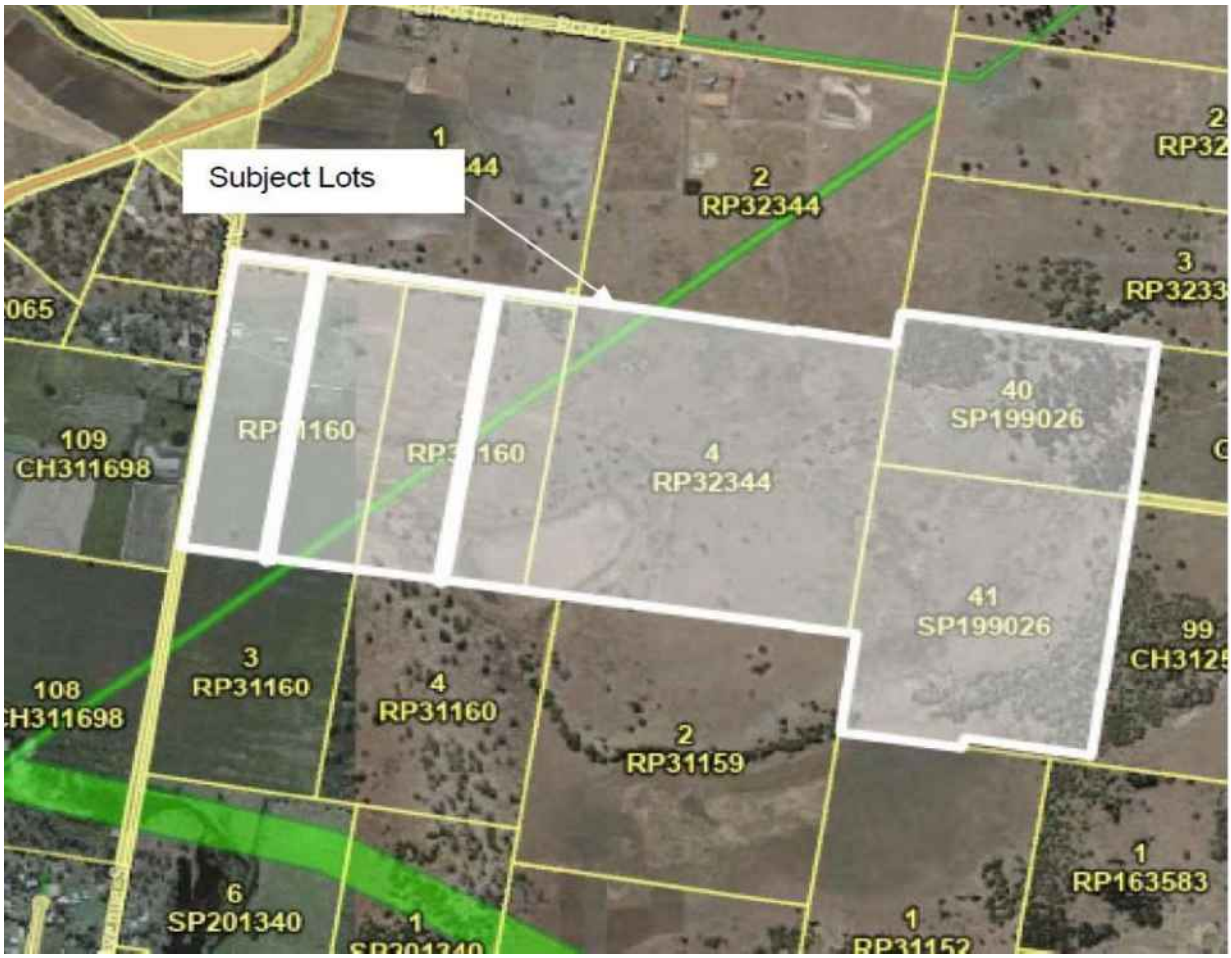

Figure 4: Site Lot Layouts (source: ACS Engineers, QLD Globe)

The proposed poultry farm will consist of eight (8) sheds. The sheds will be surrounded by hardstand area and access tracks. Ancillary buildings and infrastructure such as dead bird storage, gas bullets, silos and machinery sheds will be located around the sheds. The proposed site development plan is shown in Figure 5.

Figure 5: Proposed Site Layout (Source LL & Sons, ACS Engineers)

4 IMPACT ASSESSMENT

4.1 BACKGROUND TRAFFIC

Traffic counts have been obtained for the Heavy Vehicle Haulage route on state-controlled roads from TMR. It has been assumed that all heavy vehicles will utilise the Warrego Highway for movements to and from the site. Traffic counts have been sourced for both inbound and outbound directions for light and heavy vehicle classifications as shown in Table 1.

Table 1: Warrego Highway Traffic Counts 2021 (Source: TMR)

DIRECTION	AADT	AADT CLASS LIGHT	AADT CLASS HEAVY
Ipswich to Toowoomba	11,844	9,636 (81.36%)	2,208 (18.64%)
Toowoomba to Ipswich	11,735	9,322 (79.44%)	2,414 (20.57%)
Both Directions	23,579	18,958 (80.40%)	4,622 (19.60%)

4.2 DEVELOPMENT TRAFFIC GENERATION AND DISTRIBUTION

Heavy Vehicle traffic volumes generated by the proposed poultry farm have been determined in consultation with the client, with the number and type of vehicle movements generated by the farm development outlined in Table 2: Development Traffic Distribution (Source: LL & Sons, ACS Engineers)

Table 2: Development Traffic Distribution (Source: LL & Sons, ACS Engineers)

VEHICLE PURPOSE	VEHICLE TYPE	VEHICLE PROPOSED TRIPS
Day-Old Chick Delivery	Tri-Axle Semi	4
Gas Delivery	HRV	2
Sawdust Delivery	Tri-Axle Semi	20
Feed Delivery	B-Double (19m)	50
Bird Pick-Up	Tri-Axle Semi	60
Litter Removal	Tri-Axle Semi	25
Total per Batch (6 Per Year)		**161**
Heavy Vehicle Total per Year		**966**
Heavy Vehicle Uses per Year		**1932**
Average Heavy Vehicle Road Uses/Day		**5.3**

Based on the average heavy vehicle road uses per day rounded up, it has been assumed that 6 heavy vehicles will be accessing the development each day.

4.3 TRAFFIC IMPACT ASSESSMENT

4.3.1 Local Roads

It is expected that the proposed farm will employ 2 full time equivalent roles. In addition to this, 4 casual/contract staff will also be employed during labour intensive activities such as shed clean out and chicken placement. Given the nature of the development, it is expected that the worst-case scenario of 3 Heavy Vehicles and 6 Light Vehicles entering and exiting the site per day.

Based on the Institute of Public Works Engineering Australia's Street Design Manual, Laneways (the minimum specified road hierarchy) can carry up to 400 vehicles per day. Given that the development is forecast to only generate a total of 9 vehicle movements per day, this is not expected to have a discernible impact on the existing road network.

4.3.2 State Controlled Road Network

The Warrego Highway currently caters for the majority of industrial and heavy vehicle haulage from the Somerset Region. The existing AADT of the Warrego Highway in the vicinity of the site is over 23,000 vehicles. The addition of development traffic will only increase the daily traffic volumes on the Warrego Highway by 0.03%. As such, it is unlikely that the development will have any impact on the existing operation of the Warrego Highway.

4.4 SAFETY IMPACT ASSESSMENT

A desktop road safety impact assessment has been undertaken for the Court Avenue North / Site Access Driveway intersection and Brightview Road / Court Avenue North intersection in accordance with the Section 9 of the GTIA. Risks have been identified and scored in accordance with *Figure 9.3.2(a) – Safety risk score matrix* which has been reproduced in this report as Figure 6.

		Potential consequence				
		Property only (1)	Minor injury (2)	Medical treatment (3)	Hospitalisation (4)	Fatality (5)
Potential likelihood	Almost certain (5)	M	M	H	H	H
	Likely (4)	M	M	M	H	H
	Moderate (3)	L	M	M	M	H
	Unlikely (2)	L	L	M	M	M
	Rare (1)	L	L	L	M	M

L: Low risk
M: Medium risk
H: High risk

Figure 6: Safety Risk Score Matrix (Source: TMR)

Table 3 shows the risk assessment for both the 'without development' and 'with development' scenarios to determine whether the proposed development worsens the existing safety risk for the intersection on Court Avenue North / Site Access and Brightview Road / Court Avenue North.

Table 3: Risk Assessment - Site Access / Court Avenue North, Brightview Road / Court Avenue North (Source: PSA)

RISK ITEM	WITHOUT DEVELOPMENT			WITH DEVELOPMENT		
	Likelihood	Consequence	Risk Score	Likelihood	Consequence	Risk Score
Risk of rear-end collision between vehicles travelling southbound on Court Avenue North and vehicles turning left into Site Access Private Driveway.	2	3	M	3	3	M
Risk of head-on collision between vehicles travelling northbound and southbound on Court Avenue North.	2	3	M	3	3	M
Risk of rear-end collision between vehicles travelling southbound on Brightview Road and Vehicles turning right into Court Avenue North.	2	4	M	3	4	M

RISK ITEM	WITHOUT DEVELOPMENT			WITH DEVELOPMENT		
	Likelihood	Consequence	Risk Score	Likelihood	Consequence	Risk Score
Risk of head-on collision between vehicles travelling northbound and southbound on Brightview Road.	1	5	M	2	5	M
Risk of rear-end collision between vehicles travelling southbound on Warrego Highway and vehicles turning left into Gehrke Road	2	4	M	3	4	M
Risk of head-on collision between vehicles travelling northbound and southbound on Warrego Highway.	2	4	M	3	4	M

As demonstrated by the above safety assessment, there will be a slight increase in the likelihood of a collision occurring due to an increase in vehicle movements, however the overall risk score is not expected to change as both the with and without development scenarios have an overall risk score of medium.

5 ON-SITE PARKING REQUIREMENTS

The Somerset Regional Council (SRC) planning scheme section *8.3.6 Transport, Access and Parking Code* outlines the assessment benchmarks for minimum Car Parking Requirements, Minimal Bicycle Parking Requirements and Minimum Service Vehicle Requirements for Intensive Animal Industry. Brightview Poultry Farm has been assessed as an Intensive Animal Industry and the requirements are listed below in Table 4

Table 4: Minimum Parking Requirements Intensive Animal Industry (Source: SRC)

USE	MINIMUM CAR PARKING REQUIREMENTS	MINIMUM BICYCLE PARKING REQUIREMENTS	MINIMUM SERVICE VEHICLE REQUIREMENTS
Intensive Animal Industry	Nil.	Nil.	No Specific Rate.

Table 4 outlines that there are no minimum requirements for on-site parking, however Brightview Poultry Farm will provide adequate facilities for appropriate parking requirements for staff and visitors.

6 SITE ACCESS

Light and Heavy Vehicle access to the Brightview Poultry Farm and associated buildings is proposed via a new extended private driveway on the unconstructed road reserve that connects Court Avenue North to Lot 4 RP32344, adjacent to Lot 1 and 2 RP31160, as shown in Figure 7.

Figure 7: Site Access (Source: Nearmap, 2023)

The proposed new access will be constructed to accommodate the turning movements of a 25m B-Double Vehicle accessing the site. The access intersection needs to be in accordance with TMR Standard Drawing No. 1807 – Type C Rural Property Access, shown in Figure 8.

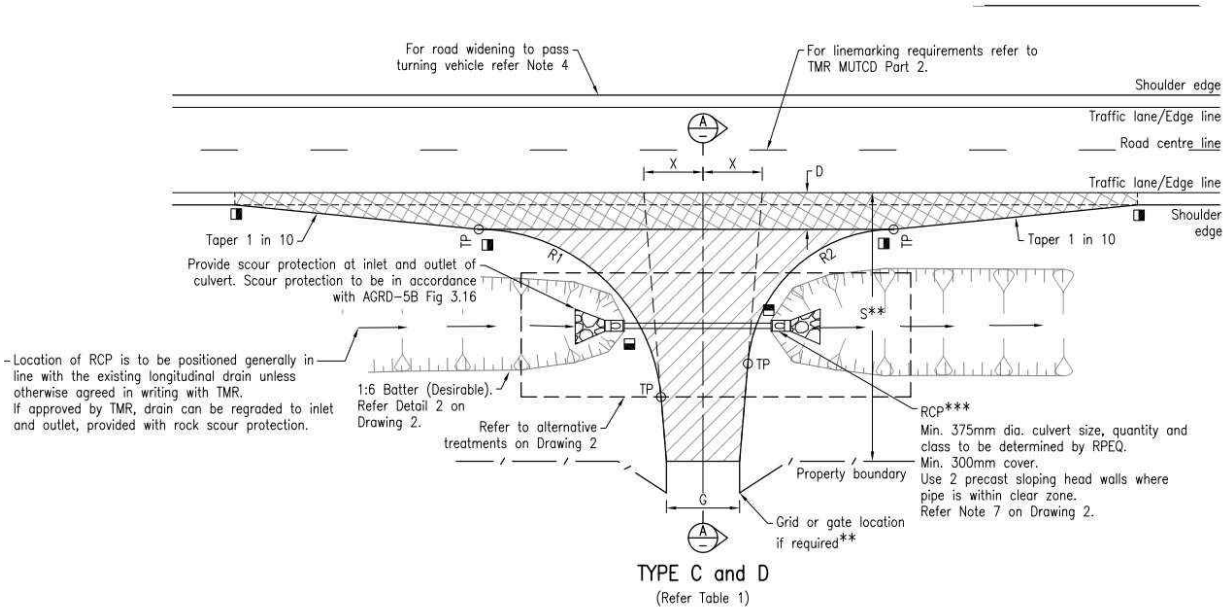

Figure 8: Type C Rural Property Access (Source: TMR)

6.1 SIGHT DISTANCE

The site accesses are to be designed in accordance with standard sight distance requirements to allow for safe turning movements at the priority-controlled accesses. The sight distance requirements based on the different speed zones as per Austroads *Guide to Road Design Part 4A: Unsignalised and Signalised Intersections* are shown below in Table 5.

Table 5: Safe Intersection Sight Distances (Source: PSA Consulting & Austroads)

INTERSECTION LOCATION	POSTED SPEED (KM/H)	DESIGN SPEED (KM/H)	SISD (M)
Site Access/ Court Avenue North	40	50	97
Brightview Road/ Court Avenue North	100	110	285

Sight distances triangles for the Brightview Road / Court Avenue North intersection have been created using the SISD lengths as specified in Table 5, and are shown in Figure 9, with views to the south and north shown in Figure 10 and Figure 11 respectively.

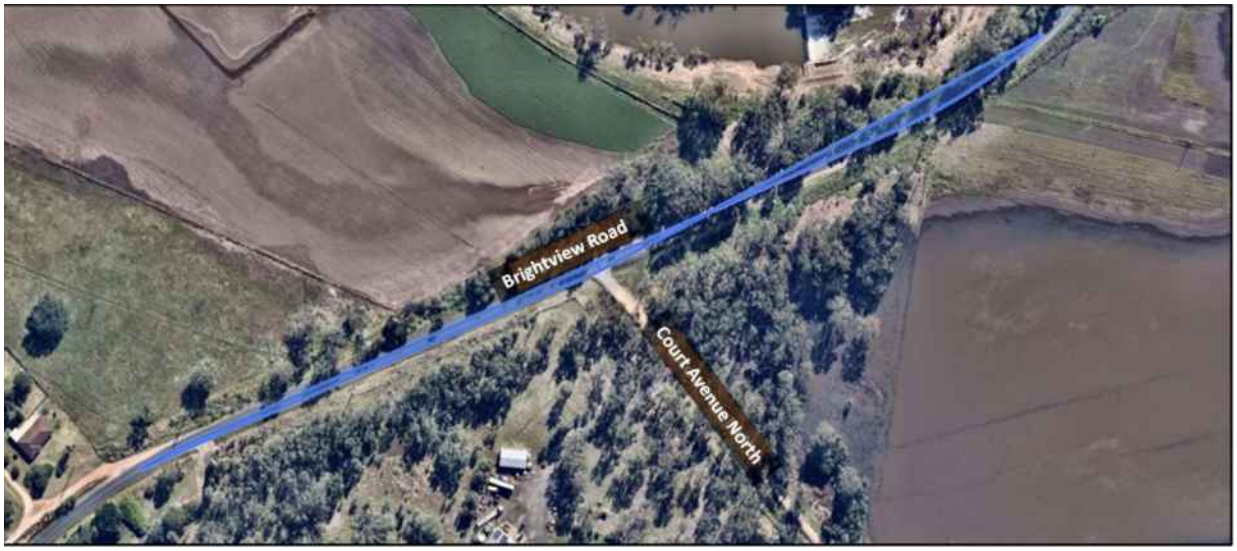

Figure 9: Brightview Road / Court Avenue North Access Sight Lines (Source: PSA)

Figure 10: Brightview Road / Court Avenue North Road Profile South (Source: Google Maps)

Figure 11: Brightview Road / Court Avenue North Road Profile North (Source: Google Maps)

Sight distances triangles for the Court Avenue North / Site Access intersection have been created using the SISD lengths as specified in Table 5, and are shown in Figure 12, with views to the north and south shown in Figure 13 and Figure 14 respectively.

Figure 12: Site Entrance / Court Avenue North Access Sight Lines (Source: PSA)

Figure 13: Site Entrance / Court Avenue Road Profile North (Source: Google Maps)

Figure 14: Site Entrance / Court Avenue Road Profile South (Source: Google Maps)

As per Austroads Guide to Road Design Part 4, all driveways/ intersections are located and constructed to provide adequate sight distance. Along Court Avenue North, a minimum sight distance of 97m is required to be provided for the access driveway onto the new extended private driveway. At the intersection of Court Avenue and Brightview Road, a minimum sight distance of 285m is required. Each assessment demonstrates that there are no restrictions on the available sight distance and sufficient sight distance is provided at each access and in both directions.

6.2 SWEPT PATH ASSESSMENT

Swept path analysis has been undertaken for the site access as well as the heavy vehicle haulage route at the state-controlled intersections. B-Double vehicle access at the following locations have been assessed using AutoCAD and AutoTURN modelling software:

- Site Access to and from Court Avenue North to Site Entrance (Entering and Exiting to the North).
- Court Avenue / Brightview Road intersection. (Entering and Exiting to the South).
- State controlled intersections along the Heavy Vehicle Haulage Route (Gehrke Road / Warrego Highway roundabout).

A 25m long B-Double vehicle template was utilised for the swept path analysis for each of the affected locations. It was found that the B-Double could enter and exit the site (provided that the driveway is constructed to TMR Rural Property Access Type C). The B-Double was able to safely turn onto Brightview Road from Court Avenue The vehicle can also navigate safely through the Warrego Highway (state-controlled road) intersection along the heavy vehicle haulage route.

Full swept path analysis is included in Appendix 1.

7 PUBLIC AND ACTIVE TRANSPORT NETWORK ASSESSMENT

There are no public or active transport facilities within the vicinity of the development site. It is expected that all staff will utilise private vehicles to access the site.

8 SUMMARY

PSA Consulting has prepared this Traffic Impact Assessment report to accompany a development application for the proposed poultry farm development on Court Avenue North, Brightview. The development lots are formally described as Lot 1 RP31160, Lot 2 RP311160, Lot 4 RP32344, Lot 40 SP199026, and Lot 41 SP199026. In summary it is not expected that the proposed development will have an adverse impact to the surrounding network.

- This finding has been supported by the forecasted traffic volumes entering and exiting the site access, located on Court Avenue North.
- Court Avenue North and the Site Entrance Driveway will cater for the proposed volume of traffic and comply with Somerset Regional Planning Scheme
- Access to the site is provided in a location which allows for sufficient sight distance for traffic entering and exiting the site.
- Parking requirements have been met and are consistent with Somerset Regional Council Planning Scheme.
- Based on traffic and trip generation from site, hazards will not be created on state-controlled roads in the surrounding road network or result in worsening of operating conditions.
- The proposed heavy vehicle haulage route is adequate to service the development.

APPENDIX 1: SWEPT PATH ANALYSIS

AP01

N

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REVISION	DESCRIPTION	BY	DATE
1	SWEPT PATH ANALYSIS - SITE ACCESS B-DOUBLE ENTRY	H.F	07.03.2023

PSA CONSULTING

Telephone: 07 3220 0288

Head Office: ... Brisbane Qld 4000

Address: ... Brisbane Qld 4000

Website:

TOWN PLANNING | TRAFFIC ENGINEERING | TRANSPORT PLANNING | PROGRAM MANAGEMENT | INFRASTRUCTURE

DRAWING TITLE: SWEPT PATH ANALYSIS - SITE ACCESS B-DOUBLE ENTRY

CLIENT: LL & SONS PTY LTD

PROJECT: BRIGHTVIEW POULTRY FARM TIA

LOCATION: COURT AVENUE NORTH, BRIGHTVIEW QLD

DRAWING DATE: FEBRUARY 2023

ORIGINAL SIZE: A1 SCALE A3: 1:800

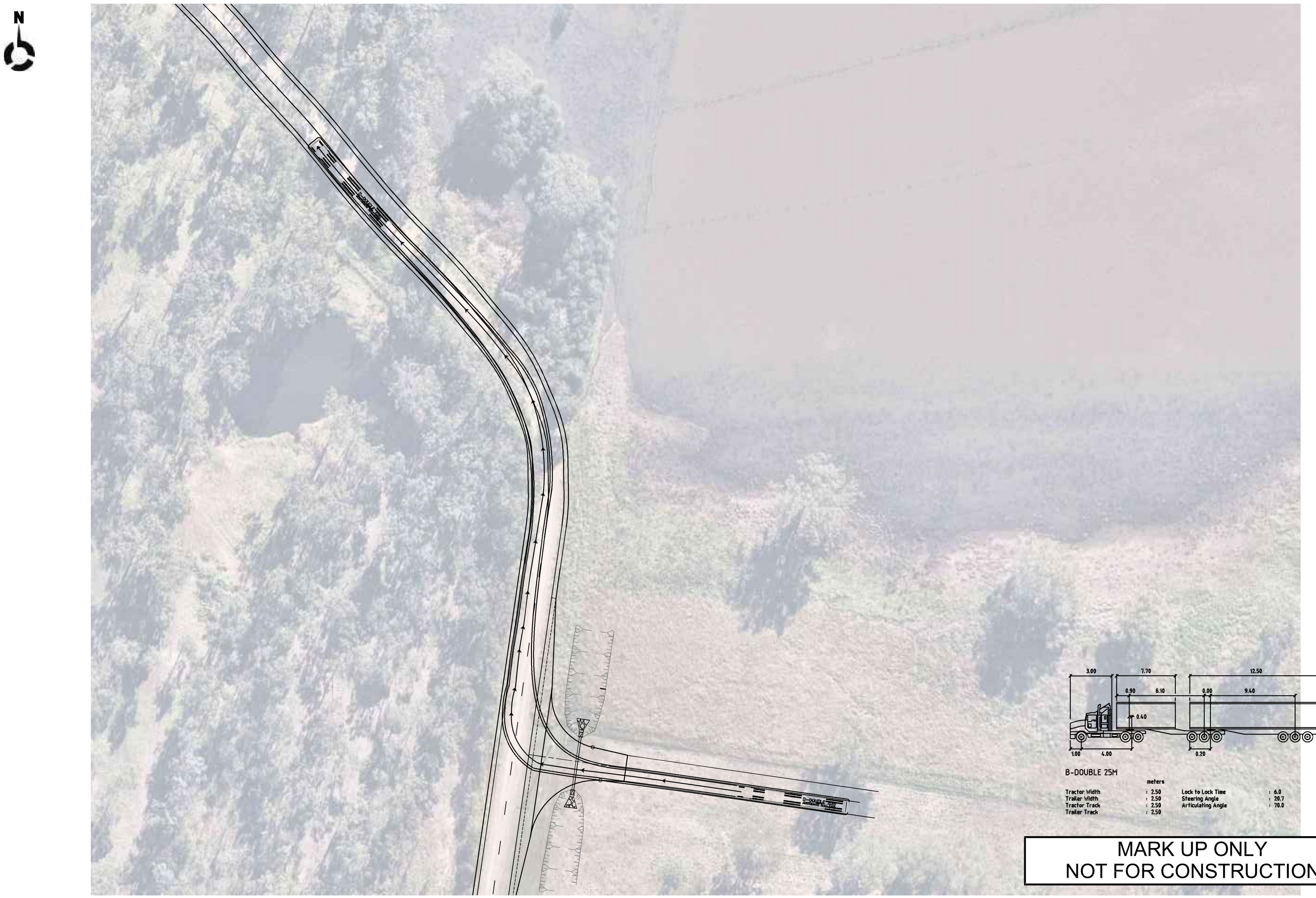
SCALE: 0 8 16 24m SCALE 1:400 (A1)

DRAWN BY: H.F

CHECKED BY: T.G.B

APPROVED BY: T.G.B RPEQ (26741)

PROJECT NO.	DRAWING NO.	REVISION
1504	SK01	1



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NOT FOR CONSTRUCTION

REVISION	DESCRIPTION	BY	DATE
	SWEPT PATH ANALYSIS - SITE ACCESS B-DOUBLE EXIT	H.F	07.03.2023

PSA CONSULTING

Telephone: 07 3220 0288
Head Office: Level 11 / ICON PLACE, 270 Adelaide Street, Brisbane Qld 4000
Address: PO Box 10824, Adelaide Street, Brisbane Qld 4000
Website: www.psaconsult.com.au

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DRAWING TITLE	SWEPT PATH ANALYSIS - SITE ACCESS B-DOUBLE EXIT
CLIENT	LL & SONS PTY LTD
PROJECT	BRIGHTVIEW POULTRY FARM TIA
LOCATION	COURT AVENUE NORTH, BRIGHTVIEW QLD

DRAWING DATE	FEBRUARY 2023	DRAWN BY	H.F
ORIGINAL SIZE	A1 SCALE A2 1:800	CHECKED BY	T.G.B
SCALE	0 8 16 24m SCALE 1:400 (A1)	APPROVED BY	T.G.B RPEQ (26741)
PROJECT NO.	1504	DRAWING NO.	SK02
REVISION	1		

REVISION	DESCRIPTION	BY	DATE
	SWEPT PATH ANALYSIS - COURT AVENUE NORTH B-DOUBLE ENTRY	H.F	07.03.2023

PSA CONSULTING

Telephone: 07 3220 0288
Head Office: Level 11 / ICON PLACE, 270 Adelaide Street, Brisbane Qld 4000
Address: PO Box 10824, Adelaide Street, Brisbane Qld 4000
Website: www.psaconsult.com.au

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DRAWING TITLE	SWEPT PATH ANALYSIS - COURT AVENUE NORTH B-DOUBLE ENTRY
CLIENT	LL & SONS PTY LTD
PROJECT	BRIGHTVIEW POULTRY FARM TIA
LOCATION	COURT AVENUE NORTH, BRIGHTVIEW QLD

DRAWING DATE	FEBRUARY 2023	DRAWN BY	H.F
ORIGINAL SIZE A1	SCALE A3 1:400	CHECKED BY	T.G.B
SCALE 0 4 8 12m	SCALE 1:200 (A1)	APPROVED BY	T.G.B RPEQ (26741)
PROJECT NO.	1504	DRAWING NO. SK03	REVISION 1

REVISION	DESCRIPTION	BY	DATE
	SWEPT PATH ANALYSIS - COURT AVENUE NORTH B-DOUBLE EXIT	H.F	07.03.2023

PSA CONSULTING

Telephone: 07 3220 0288
Head Office: Level 11 / ICON PLACE, 270 Adelaide Street, Brisbane Qld 4000
Address: PO Box 10824, Adelaide Street, Brisbane Qld 4000
Website: www.psaconsult.com.au

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DRAWING TITLE	SWEPT PATH ANALYSIS - COURT AVENUE NORTH B-DOUBLE EXIT
CLIENT	LL & SONS PTY LTD
PROJECT	BRIGHTVIEW POULTRY FARM TIA
LOCATION	COURT AVENUE NORTH, BRIGHTVIEW QLD

DRAWING DATE	FEBRUARY 2023	DRAWN BY	H.F
ORIGINAL SIZE A1	SCALE A3 1:400	CHECKED BY	T.G.B
SCALE 0 4 8 12m SCALE 1:200 (A1)		APPROVED BY	T.G.B RPEQ (26741)
PROJECT NO. 1504	DRAWING NO. SK04	REVISION 1	

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REVISION	DESCRIPTION	BY	DATE
	SWEPT PATH ANALYSIS - GEHRKE ROAD/WARREGO HWY B-DOUBLE ENTRY AND EXIT	H.F	07.02.2023

PSA CONSULTING

Telephone: 07 3220 0288
Head Office: Level 11 / ICON PLACE, 270 Adelaide Street, Brisbane Qld 4000
Address: PO Box 10824, Adelaide Street, Brisbane Qld 4000
Website: www.psaconsult.com.au

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DRAWING TITLE	SWEPT PATH ANALYSIS - GEHRKE ROAD/WARREGO HWY - B-DOUBLE
CLIENT	LL & SONS PTY LTD
PROJECT	BRIGHTVIEW POULTRY FARM TIA
LOCATION	COURT AVENUE NORTH, BRIGHTVIEW QLD

DRAWING DATE	FEBRUARY 2023	DRAWN BY	H.F
ORIGINAL SIZE	A1 SCALE A2 1:800	CHECKED BY	T.G.B
SCALE	0 8 16 24m SCALE 1:400 (A1)	APPROVED BY	T.G.B RPEQ (26741)
PROJECT NO.	1504	DRAWING NO. SK05	REVISION 1

This report has been prepared by:

Level 11 / 270 Adelaide Street Brisbane QLD 4000
PO Box 10824 Adelaide Street Brisbane QLD 4000
Ph: (07) 3220 0288 Fax: (07) 3220 0388
psaconsult.com.au

Infrastructure Charges Notice

Section 119 of the *Planning Act 2016*

1 Infrastructure charge details

Notice details	
Date:	XXX
Notice number:	XXX

Development approval to which levied charge applies	
Approval reference:	DA23169
Applicant:	LL and Sons Pty Ltd C/- ACS Engineers (Aust) Pty Ltd PO Box 554 BEAUDESERT QLD 4285
Approval description:	Development Permit for Material Change of Use for a: Intensive Animal Industry (poultry farm – maximum 400,000 birds Reconfiguration of a Lot by Boundary realignment (five into five lots)

Premises to which the levied charge applies	
Site address:	49 Court Avenue, Brightview Un-named #5158 Road, Brightview Stone Gully Road, Brightview
Real property description:	Lot 1 RP31160 Lot 2 RP31160 Lot 4 RP32344 Lot 40 SP199026 Lot 41 SP199026
Charge area:	Charge Area B

Details of the levied charge	
Charges resolution:	*Charges Resolution (No. 1) 2023*
Current amount of the total levied charge:	**$196,007.21**
Automatic increase of the levied charge:	The amount of the levied charge is subject to an automatic increase. Refer to the information notice attached to this notice for more information on how the increase is worked out.
When payable: Section 112 of the *Planning Act 2016*.	Material change of use—when the change happens

ABN 50 138 958 249
Council Chambers - 2 Redbank Street, Esk QLD 4312
Address all correspondence to - Chief Executive Officer, Somerset Regional Council, PO Box 117, Esk QLD 4312
(07) 5424 4000 mail@somerset.qld.gov.au somerset.qld.gov.au

Offsets or refunds:	Not applicable
Other adjustments:	Not applicable

2 How the levied charge is worked out

Transport network

Stage	Category	Development description	Demand (+) / discounts (-)	Units of measure	Adopted charge	Amount
N/A	High impact rural	MCU - Intensive Animal Industry	25,062.40 (3132.8m2 per shed x 8 sheds)	CUSTOM	$7.92	$198,494.21
N/A	Residential uses	MCU - Intensive Animal Industry	-1.00	lot (3-or-more bedroom dwelling)	$2,487.00	-$2,487.00
				Total levied charge for network		$196,007.21

Summary of levied charges

Stormwater network	$0.00
Public parks and community land network	$0.00
Transport network	$196,007.21
Total levied charge	**$196,007.21**

[1] In accordance with section 3.3 of the Charges Resolution, a discount may not exceed the adopted charge for each network. Where there are any surplus discounts, these will not be refunded, except at Council's discretion through entering an infrastructure agreement, where the surplus discounts may be attached to the land.

3 Details of any charges reductions

A reduction in the adopted charges is not applicable for this development.

ABN 50 138 958 249
Council Chambers - 2 Redbank Street, Esk QLD 4312
Address all correspondence to - Chief Executive Officer, Somerset Regional Council, PO Box 117, Esk QLD 4312
(07) 5424 4000 mail@somerset.qld.gov.au somerset.qld.gov.au

4 Details of any offset or refunds

No offsets or refunds are applicable.

5 Other details

Should you have any questions in relation to this infrastructure charges notice, please contact Council's planning section on (07) 5424 4000 or mail@somerset.qld.gov.au.

Yours sincerely,

Andrew Johnson
Chief Executive Officer

ABN 50 138 958 249
Council Chambers - 2 Redbank Street, Esk QLD 4312
Address all correspondence to - Chief Executive Officer, Somerset Regional Council, PO Box 117, Esk QLD 4312
(07) 5424 4000 mail@somerset.qld.gov.au somerset.qld.gov.au

ICN Information Notice

About the notice

Decision and reasons for the charge
This infrastructure charges notice has been given in accordance with section 119 of the *Planning Act 2016* to support Council's long-term infrastructure planning and financial sustainability.

Representations about this notice
The person given this infrastructure charges notice may make representations to Council within the relevant appeal period in accordance with Chapter 4, part 2, subdivision 5 of the *Planning Act 2016*.

Appeals about this notice
The person given this infrastructure charges notice may appeal the decision to be given the notice. Enclosed is an extract from the *Planning Act 2016* that details your appeal rights.

Charges for the water and wastewater networks
This infrastructure charges notice does not include details about charges or infrastructure required for the water and wastewater networks controlled by the South East Queensland Distributor-Retailer Authority, trading as Urban Utilities.

About the charge

Automatic increase provision of levied charge
The levied charge is to be increased by the difference between the Producer Price Index (PPI) applicable at the time the charge was levied, and the PPI Index applicable at the time of payment of the levied charge, adjusted by reference to the 3-yearly PPI Index average.

If the levied charge is increased using the method described above, the charge payable is the amount equal to the sum of the charge as levied and the amount of the increase. However, the sum of the charge as levied and the amount of the increase is not to exceed the maximum adopted charge the Council could have levied for the development at the time the charge is paid.

3-yearly PPI index average is defined in section 115 of the *Planning Act 2016* and means the PPI index smoothed in accordance with the 3-year moving average quarterly percentage change between quarters. PPI Index is the producer price index for construction 6427.0 (ABS PPI) index number 3101 – Road and Bridge construction index for Queensland published by the Australian Bureau of Statistics.

Goods and services tax (GST)
The Federal Government has determined that contributions made by developers to Government for infrastructure and services under the *Planning Act 2016* are GST exempt.

To whom the charge must be paid
Payment of the levied charge must be made to Somerset Regional Council via Customer Service or Planning and Development Department, PO Box 117, Esk, Qld 4312.

ABN 50 138 958 249
Council Chambers - 2 Redbank Street, Esk QLD 4312
Address all correspondence to - Chief Executive Officer, Somerset Regional Council, PO Box 117, Esk QLD 4312
(07) 5424 4000 mail@somerset.qld.gov.au somerset.qld.gov.au

Payment
This notice is due and payable by the due time shown. Cheques, money orders or postal notes should be made payable to Somerset Regional Council and crossed "Not Negotiable". Change cannot be given on cheque payments. Property owners will be liable for any dishonour fees.

Overseas payees
Please forward your payment by way of bank draft for the required amount in Australian dollars.

How to pay
Contact Council's planning section to obtain a payment advice notice. The payment advice notice will detail the amount payable and the methods of payment available.

Enquiries about this notice or the charge

Enquiries regarding this infrastructure charges notice should be directed to Somerset Regional Council, Planning and Development Department, during office hours, on (07) 5424 4000 or mail@somerset.qld.gov.au.

ABN 50 138 958 249
Council Chambers - 2 Redbank Street, Esk QLD 4312
Address all correspondence to - Chief Executive Officer, Somerset Regional Council, PO Box 117, Esk QLD 4312
(07) 5424 4000 mail@somerset.qld.gov.au somerset.qld.gov.au

Extract of Appeal Provisions – Infrastructure Charges

Planning Act 2016

229 Appeals to tribunal or P&E Court

(1) Schedule 1 states:
   a. matters that may be appealed to:
      i. either a tribunal or the P&E Court; or
      ii. only a tribunal; or
      iii. only the P&E Court; and
   b. the person:
      i. who may appeal a matter (the ***appellant***); and
      ii. who is a respondent in an appeal of the matter; and
      iii. who is a co-respondent in an appeal of the matter; and
      iv. who may elect to be a co-respondent in an appeal of the matter.

(2) An appellant may start an appeal within the appeal period.

(3) The ***appeal period*** is:
   a. for an appeal by a building advisory agency—10 business days after a decision notice for the decision is given to the agency; or
   b. for an appeal against a deemed refusal—at any time after the deemed refusal happens; or
   c. for an appeal against a decision of the Minister, under chapter 7, part 4, to register premises or to renew the registration of premises—20 business days after a notice is published under section 269(3)(a) or (4); or
   d. for an appeal against an infrastructure charges notice—20 business days after the infrastructure charges notice is given to the person; or
   e. for an appeal about a deemed approval of a development application for which a decision notice has not been given—30 business days after the applicant gives the deemed approval notice to the assessment manager; or
   f. for an appeal relating to the *Plumbing and Drainage Act 2018*:
      i. for an appeal against an enforcement notice given because of a belief mentioned in the *Plumbing and Drainage Act 2018*, section 143(2)(a)(i), (b) or (c)—5 business days after the day the notice is given; or
      ii. for an appeal against a decision of a local government or an inspector to give an action notice under the *Plumbing and Drainage Act 2018*—5 business days after the notice is given; or
      iii. for an appeal against a failure to make a decision about an application or other matter under the *Plumbing and Drainage Act 2018*—at anytime after the period within which the application or matter was required to be decided ends; or
      iv. otherwise—20 business days after the day the notice is given; or
   g. for any other appeal—20 business days after a notice of the decision for the matter, including an enforcement notice, is given to the person.

Note:
See the P&E Court Act for the court's power to extend the appeal period.

(4) Each respondent and co-respondent for an appeal may be heard in the appeal.

(5) If an appeal is only about a referral agency's response, the assessment manager may apply to the tribunal or P&E Court to withdraw from the appeal.

(6) To remove any doubt, it is declared that an appeal against an infrastructure charges notice must not be about:
   a. the adopted charge itself; or
   b. for a decision about an offset or refund:
      i. the establishment cost of trunk infrastructure identified in a LGIP; or
      ii. the cost of infrastructure decided using the method included in the local government's charges resolution.

230 Notice of appeal

(1) An appellant starts an appeal by lodging, with the registrar of the tribunal or P&E Court, a notice of appeal that:
   a. is in the approved form; and
   b. succinctly states the grounds of the appeal.

(2) The notice of appeal must be accompanied by the required fee.

(3) The appellant or, for an appeal to a tribunal, the registrar, must, within the service period, give a copy of the notice of appeal to:
a. the respondent for the appeal; and
b. each co-respondent for the appeal; and
c. for an appeal about a development application under schedule 1, section 1, table 1, item 1—each principal submitter for the application whose submission has not been withdrawn; and
d. for an appeal about a change application under schedule 1, section 1, table 1, item 2—each principal submitter for the application whose submission has not been withdrawn; and
e. each person who may elect to be a co-respondent for the appeal other than an eligible submitter for a development application or change application the subject of the appeal; and
f. for an appeal to the P&E Court—the chief executive; and
g. for an appeal to a tribunal under another Act—any other person who the registrar considers appropriate.

(4) The ***service period*** is:
a. if a submitter or advice agency started the appeal in the P&E Court—2 business days after the appeal is started; or
b. otherwise—10 business days after the appeal is started.

(5) A notice of appeal given to a person who may elect to be a co-respondent must state the effect of subsection (6).

(6) A person elects to be a co-respondent to an appeal by filing a notice of election in the approved form:
a. if a copy of the notice of appeal is given to the person—within 10 business days after the copy is given to the person; or
b. otherwise—within 15 business days after the notice of appeal is lodged with the registrar of the tribunal or the P&E Court.

(7) Despite any other Act or rules of court to the contrary, a copy of a notice of appeal may be given to the chief executive by emailing the copy to the chief executive at the email address stated on the department's website for this purpose.

231 Non-appealable decisions and matters

(1) Subject to this chapter, section 316(2), schedule 1 and the P&E Court Act, unless the Supreme Court decides a decision or other matter under this Act is affected by jurisdictional error, the decision or matter is non-appealable.

(2) The *Judicial Review Act 1991*, part 5 applies to the decision or matter to the extent it is affected by jurisdictional error.

(3) A person who, but for subsection (1) could have made an application under the *Judicial Review Act 1991* in relation to the decision or matter, may apply under part 4 of that Act for a statement of reasons in relation to the decision or matter.

(4) In this section:
decision includes:
a. conduct engaged in for the purpose of making a decision; and
b. other conduct that relates to the making of a decision; and
c. the making of a decision or the failure to make a decision; and
d. a purported decision; and
e. a deemed refusal.

non-appealable, for a decision or matter, means the decision or matter:
a. is final and conclusive; and
b. may not be challenged, appealed against, reviewed, quashed, set aside or called into question in any other way under the *Judicial Review Act 1991* or otherwise, whether by the Supreme Court, another court, any tribunal or another entity; and
c. is not subject to any declaratory, injunctive or other order of the Supreme Court, another court, any tribunal or another entity on any ground.

232 Rules of the P&E Court

(1) A person who is appealing to the P&E Court must comply with the rules of the court that apply to the appeal.

(2) However, the P&E Court may hear and decide an appeal even if the person has not complied with rules of the P&E Court.

Schedule 1 Appeals

1 Appeal rights and parties to appeals

(1) Table 1 states the matters that may be appealed to:
- a. the P&E court; or
- b. a tribunal.

(2) However, table 1 applies to a tribunal only if the matter involves:
- a. the refusal, or deemed refusal of a development application, for:
  - i. a material change of use for a classified building; or
  - ii. operational work associated with building work, a retaining wall, or a tennis court; or
- b. a provision of a development approval for:
  - i. a material change of use for a classified building; or
  - ii. operational work associated with building work, a retaining wall, or a tennis court; or
- c. if a development permit was applied for—the decision to give a preliminary approval for:
  - i. a material change of use for a classified building; or
  - ii. operational work associated with building work, a retaining wall, or a tennis court; or
- d. a development condition if:
  - i. the development approval is only for a material change of use that involves the use of a building classified under the Building Code as a class 2 building; and
  - ii. the building is, or is proposed to be, not more than 3 storeys; and
  - iii. the proposed development is for not more than 60 sole-occupancy units; or
- e. a decision for, or a deemed refusal of, an extension application for a development approval that is only for a material change of use of a classified building; or
- f. a decision for, or a deemed refusal of, a change application for a development approval that is only for a material change of use of a classified building; or
- g. a matter under this Act, to the extent the matter relates to the Building Act other than a matter under that Act that may or must be decided by the Queensland Building and Construction Commission; or
- h. a decision to give an enforcement notice:
  - i. in relation to a matter under paragraphs (a) to (g); or
  - ii. under the *Plumbing and Drainage Act 2018*; or
- i. an infrastructure charges notice; or
- j. the refusal, or deemed refusal, of a conversion application; or
- k. a matter prescribed by regulation.

(3) Also, table 1 does not apply to a tribunal if the matter involves:
- a. for a matter in subsection (2)(a) to (d):
  - i. a development approval for which the development application required impact assessment; and
  - ii. a development approval in relation to which the assessment manager received a properly made submission for the development application; or
- b. a provision of a development approval about the identification or inclusion, under a variation approval, of a matter for the development.

(4) Table 2 states the matters that may be appealed only to the P&E Court.

(5) Table 3 states the matters that may be appealed only to the tribunal.

(6) In each table:
- a. column 1 states the appellant in the appeal; and
- b. column 2 states the respondent in the appeal; and
- c. column 3 states the co-respondent (if any) in the appeal; and
- d. column 4 states the co-respondents by election (if any) in the appeal.

(7) If the chief executive receives a notice of appeal under section 230(3)(f), the chief executive may elect to be a co-respondent in the appeal.

(8) In this section:
storey see the Building Code, part A1.1.

Table 1 [Extract Only]
Appeals to the P&E Court and, for certain matters, to a tribunal

Column 1 Appellant	Column 2 Respondent	Column 3 Co-respondent (if any)	Column 4 Co-respondent by election (if any)
4 Infrastructure charges notices An appeal may be made against an infrastructure charges notice on 1 or more of the following grounds: a. the notice involved an error relating to: i. the application of the relevant adopted charge; or *Examples of errors in applying an adopted charge:* *a. the incorrect application of gross floor area for a non-residential development* *b. applying an incorrect 'use category', under a regulation, to the development* ii. the working out of extra demand, for section 120; or iii. an offset or refund; or b. there was no decision about an offset or refund; or c. if the infrastructure charges notice states a refund will be given—the timing for giving the refund; or d. for an appeal to the P&E Court—the amount of the charge is so unreasonable that no reasonable relevant local government could have imposed the amount.			
The person given the infrastructure charges notice	The local government that gave the infrastructure charges notice	—	—

Table 2 [Extract Only]
Appeals to the P&E Court only

Column 1 Appellant	Column 2 Respondent	Column 3 Co-respondent (if any)	Column 4 Co-respondent by election (if any)
[No relevant provisions]			

Table 3 [Extract Only]
Appeals to a tribunal only

Column 1 Appellant	Column 2 Respondent	Column 3 Co-respondent (if any)	Column 4 Co-respondent by election (if any)
[No relevant provisions]			

SOMERSET REGIONAL COUNCIL - OFFICER'S REPORT

To:	Andrew Johnson, Chief Executive Officer
From:	Mark Westaway, Senior Planner
Director:	Luke Hannan, Director of Planning and Development
Date:	11 December 2023
Subject:	Development Application No. 23398 Change Application (Minor Change) to Reconfiguring a Lot by Subdivision (two lots into 69 lots and two balance lots in two stages)
File No:	DA23398 Action Officer: SP-MW
Assessment No:	81416-20000-000

1.0 APPLICATION SUMMARY

Subject land

Location:	Hedley Drive and Settlers Rise, Woolmar
Real property description:	Lot 912 SP331660 and Lot 914 SP331660
Site area:	51.22 hectares
Current land use:	Vacant farmland
Easements/encumbrances:	Nil identified

South East Queensland Regional Plan 2017

Land use category:	Urban footprint

Planning scheme details

Planning scheme:	Somerset Region Planning Scheme (Version 4.2)
Zone:	General residential zone
Precinct:	Not within a precinct
Overlays:	OM1 Agricultural land overlay OM3 Biodiversity overlay OM4 Bushfire hazard overlay OM5 Catchment management overlay OM7 Flood hazard overlay OM8 High impact activities management area overlay OM9 Infrastructure overlay OM13 Stock route management overlay

Application details

Development approval:	RAL for Subdivision (two lots into 69 lots and two balance lots)
Development proposal:	RAL for Subdivision (two lots into 69 lots and two balance lots)
Original approval date:	7 June 2023, Ordinary Meeting
Original category of assessment:	Code assessment
Applicant details:	QM Prop Co No.3 Pty Ltd C/- Saunders Havill Group 9 Thompson Street BOWEN HILLS QLD 4006
Owner details:	QM Prop Co No.3 Pty Ltd
Date application received:	1 November 2023

Referral agencies	State Assessment and Referral Agency
Public notification	Not required for original application.

RECOMMENDED DECISION

Approve the change application subject to the conditions and requirements contained in the schedules and attachments of this report.

Locality Plan of Lot 912 SP331660 and Lot 914 SP331660
Situated at Hedley Drive and Settlers Rise, Woolmar

2.0 BACKGROUND AND PROPOSAL

Council, at its Ordinary Meeting of 7 June 2023, approved Development Application No. 23398 for a Reconfiguring a Lot by Subdivision (two lots into 69 lots and two balance lots in two stages), on land at Hedley Drive and Settlers Rise, Woolmar, formally described as Lot 912 SP331660 and Lot 914 SP331660.

The applicant now seeks to change the development approval to:

(a) include a drainage reserve to capture the stormwater detention infrastructure as proposed. The proposed open space has an area of 2.67 hectares. Under the current approval, this infrastructure is contained within the proposed Balance Lot 917; and
(b) reduce the length of corner truncations at intersections from three x 6m to three x 3m.

3.0 PLANNING LEGISLATION

The applicant has made a change application for a minor change in accordance with sections 78 and 79 of the *Planning Act 2016*. An application for a minor change is to be assessed and decided in accordance with sections 81 and 81A of the Act.

A minor change means a change that, for a development approval:

(i) would not result in substantially different development; and
(ii) if a development application for the development, including the change, were made when the change application is made would not cause:
  (A) the inclusion of prohibited development in the application; or
  (B) referral to a referral agency, other than to the chief executive, if there were no referral agencies for the development application; or
  (C) referral to extra referral agencies, other than to the chief executive; or
  (D) a referral agency, in assessing the application under section 55(2), to assess the application against, or have regard to, a matter, other than a matter the referral agency must have assessed the application against, or had regard to, when the application was made; or
(iii) public notification if public notification was not required for the development application.

The proposed changes are considered to meet the test to a minor change, noting that the proposed change:

(i) does not result in substantially different development, having respect to the guidance in the *Development Assessment Rules*;

(ii) does not include prohibited development;
(iii) does not require any additional referral agencies or additional referral matters;
(iv) does not require public notification.

4.0 ASSESSMENT OF REQUESTED CHANGES

All matters relating to the development's compliance with the relevant provisions of the planning scheme were addressed as part of the development approval. Approved plans/documents and development conditions contained in the schedules and attachments to the approval, other than those subject of this assessment, will remain unchanged.

4.1 Background

The development comprises Stages 9 and 10 of what will ultimately comprise a large residential estate that extends through to Highwood Lane. With respect to the most recent stages, Stage 7 has been finalised and is currently being developed with houses while Stage 8 is currently under construction.

4.2 Approved Plans

The approved plans for Stages 9 and 10 comprise general residential lots.

Stage 9 comprises 36 new general residential lots ranging in size between 553m^2 and 1,151m^2. The average lot size is 779m^2. One of the lots is smaller than 600m^2 and six of the lots have a frontage length of less than 18 metres.

Stage 10 comprises 33 new general residential lots ranging in size between 553m^2 and 1,167m^2. The average lot size is 785m^2. One of the lots is smaller than 600m^2 and ten of the lots have a frontage length of less than 18 metres.

5.0 REQUESTED CHANGES TO EXISTING APPROVAL

5.1 Condition 1.1

1.1	Carry out the development generally in accordance with the material contained in the development application, supporting documentation and the plan(s) listed below, except where amended by these conditions of approval.	At all times.
	Proposal Plan – Stages 9 and 10, prepared by Saunders Havill Group, Reference 10703 P 05 Rev F – CP01, dated 8 December 2022	
	Staging Plan – Stage 9, prepared by Saunders Havill Group, Reference 10703 P 05 Rev F – STG09, dated 8 December 2022	
	Staging Plan – Stage 10, prepared by Saunders Havill Group, Reference 10703 P 05 Rev F – STG10, dated 8 December 2022	
	Engineering Services Report, Hedley Park Stage 9 and 10, prepared by Inertia – Job Reference 9896-09, dated 20 January 2023	
	Stormwater Management Plan, Hedley Park Estate, prepared by Inertia – Job Reference 9896, dated 23 January 2023	
	Concurrence Agency Response dated 24 March 2023 and referenced as 2302-33255 SRA.	

Applicant comments

The Proposal Plan, Staging Plans and Engineering Reports listed under the condition are to be amended per the attached supporting information.

Council officer comments

1.1	Carry out the development generally in accordance with the material contained in the development application, supporting documentation and the plan(s) listed below, except where amended by these conditions of approval.	At all times.
	Proposal Plan – Stages 9 and 10, prepared by Saunders Havill Group, Reference 10703 P 05 Rev G – CP01, dated 11 August 2023	
	Staging Plan – Stage 9, prepared by Saunders Havill Group, Reference 10703 P 05 Rev G – STG09, dated 11 August 2023	
	Staging Plan – Stage 10, prepared by Saunders Havill Group, Reference 10703 P 05 Rev G – STG10, dated 11 August 2023	
	Engineering Services Report, Hedley Park Stage 9 and 10, prepared by Inertia – Job Reference 9896-09 Rev 1, dated 26 October 2023	
	Stormwater Management Plan, Hedley Park Estate, prepared by Inertia – Job Reference 9896 Rev 1, dated 24 October 2023	
	Concurrence Agency Response dated 24 March 2023 and referenced as 2302-33255 SRA.	

The changes to the approved plans is to facilitate the creation of the separate stormwater drainage reserve lot. No additional residential allotments have been included as part of the change.

It is considered that the inclusion of the drainage reserve lot is an appropriate outcome and will ensure the existing and future stormwater flows will be affectively managed.

The proposed change is considered acceptable to Council officers.

The approved plans and/or documents listed in point 4 of the Decision notice will also require alteration.

5.2 Condition 2.6

2.6	Dedicate all land shown as park, open space and drainage on Proposal Plan – Stages 9 and 10, prepared by Saunders Havill Group, Reference 10703 P 05 Ref F – CP01, dated 8 December 2022 as reserve.	Prior to Council's endorsement of the Plan of subdivision.

Applicant comments
The Proposal Plan reference is to be updated per the attached amended Proposal Plan.

Council officer comments
The proposal is consistent with Council's requirements. The amended plans have been referenced. An additional note has been included to confirm that this open space is not trunk infrastructure as the site is not listed on Council's LGIP as parkland.

Council's LGIP references a stormwater infrastructure flowpath that runs through the proposed drainage lot but does not include reference to additional works along this flowpath. It is noted the flowpath only serves the area served by future stages of Hedley Park and approximately 15 hectares of Rural zoned land to the north of the subject land. As such the stormwater works are only considered to service the development rather than form trunk infrastructure.

The proposed works include stormwater quantity and quality works.

2.6	Dedicate all land shown as park, open space and drainage on Proposal Plan – Stages 9 and 10, prepared by Saunders Havill Group, Reference 10703 P 05 Ref **G** – CP01, dated **11 August 2023** as reserve. ***Note: This condition is imposed pursuant to Section 145 of the Planning Act 2016***	Prior to Council's endorsement of the Plan of subdivision.

The proposed change is considered to be appropriate and is supported by Council officers.

5.3 Condition 2.23

2.23	Provide 6m x 3 chord truncations on property boundaries at all road intersections. Remove all improvements and obstructions from the area of the corner truncation(s) and area of dedicated road.	Prior to Council's endorsement of the Plan of subdivision for each stage.

Applicant comments
It is proposed to amend condition 2.23 as follows:
Provide ~~6m~~ 3m x 3 chord truncations on property boundaries at all road intersections.
Remove all improvements and obstructions from the area of the corner truncation(s) and area of dedicated road.

Council officer comments
Council's design standards are included within SC6.5 Planning Scheme Policy 4 – Design Standards. The specific condition is derived from SC6.5.8 Roadworks Design Standards and SC6.5.8.1.4 Frontage Requirements which states:

(xi) 6m x 3 chord truncations are to be created on property boundaries at all road intersections. All improvements and obstructions are to be removed from the area of the corner truncation(s) and area of dedicated road.

The lots affected by this condition are proposed Lots 183, 212, 220 and 247. These lots have areas of 884m^2, 858m^2, 864m^2 and 1066m^2 respectively.

A 6m x 3 chord truncation will have an area of approximately 46.5m^2. A 3m x 3 chord truncation will have an area of approximately 11m^2. The difference in area between the two types of truncation is approximately 36m^2, which would result in the smallest of the four affected lots being reduced in size to approximately 822m^2.

The smaller truncation will impact the look and feel of the subdivision and possibly create sight distance issues should Colourbond fencing etc be placed on the boundary.

This requested change is not supported.

6.0 TRUNK INFRASTRUCTURE AND CHARGES

There are no changes to any trunk infrastructure requirement related to the development approval.

An infrastructure charges notice was given with the development approval. The changes do not alter the levied charges given on the notice, and accordingly an amended infrastructure charges notice is not required.

The proposed detention basin is to serve Stage 10, has not been designated as trunk infrastructure and is not subject to any remission of infrastructure charges.

7.0 REFERRAL AGENCIES

In accordance with section 80 of the *Planning Act 2016*, the State Assessment and Referral Agency is not considered an affected entity of the minor change, and as such no comments or conditions have been sought from the state.

Council did not seek any third-party advice for this application.

8.0 PUBLIC NOTIFICATION

The original application was subject to code assessment and therefore did not require public notification.

There were no properly made submissions about the original development application to consider in the assessment of the change application.

9.0 CONCLUSION

The proposed minor change seeks to include a drainage lot as part of Stage 10. This component of the change is supported.

The proposed minor change also seeks to reduce the size of the intersection truncations. This component of the change is not supported.

The proposed changes to the approved development have been assessed against the intent of
the original approval. It is recommended that the application be approved in part, subject to the changes to the development conditions and approved plans contained within the schedules and attachments to this report.

The proposed change does not change the infrastructure charges notice for the original approval.

10.0 ATTACHMENT

1. Proposal Plan – Stages 9 and 10, prepared by Saunders Havill Group, Reference 10703 P 05 Rev G – CP01, dated 11 August 2023
2. Staging Plan – Stage 9, prepared by Saunders Havill Group, Reference 10703 P 05 Rev G – STG09, dated 11 August 2023
3. Staging Plan – Stage 10, prepared by Saunders Havill Group, Reference 10703 P 05 Rev G – STG10, dated 11 August 2023
4. Engineering Services Report, Hedley Park Stage 9 and 10, prepared by Inertia – Job Reference 9896-09 Rev 1, dated 26 October 2023
5. Stormwater Management Plan, Hedley Park Estate, prepared by Inertia – Job Reference 9896 Rev 1, dated 24 October 2023
6. Concurrence Agency Response dated 24 March 2023 and referenced as 2302-33255 SRA.

RECOMMENDED DECISION

THAT Council approve in part the Change Application (Minor Change) to Development Application No. 23398 for a Reconfiguring a Lot by Subdivision (two lots into 69 lots, a drainage lot, and two balance lots in two stages) on land situated at Hedley Drive and Settlers Rise, Woolmar, formally described as Lot 912 SP331660 and Lot 914 SP331660, subject to the recommended conditions and requirements contained in the schedules and attachments to this report.

SCHEDULE 1 – GENERAL CONDITIONS *Assessment Manager*		
No	**Condition**	**Timing**
~~1.1~~	~~Carry out the development generally in accordance with the material contained in the development application, supporting documentation and the plan(s) listed below, except where amended by these conditions of approval.~~	~~At all times.~~

	~~Proposal Plan – Stages 9 and 10, prepared by Saunders Havill Group, Reference 10703 P 05 Rev F – CP01, dated 8 December 2022~~	
	~~Staging Plan – Stage 9, prepared by Saunders Havill Group, Reference 10703 P 05 Rev F – STG09, dated 8 December 2022~~	
	~~Staging Plan – Stage 10, prepared by Saunders Havill Group, Reference 10703 P 05 Rev F – STG10, dated 8 December 2022~~	
	~~Engineering Services Report, Hedley Park Stage 9 and 10, prepared by Inertia – Job Reference 9896-09, dated 20 January 2023~~	
	~~Stormwater Management Plan, Hedley Park Estate, prepared by Inertia – Job Reference 9896, dated 23 January 2023~~	
	~~Concurrence Agency Response dated 24 March 2023 and referenced as 2302-33255 SRA.~~	
1.1	Carry out the development generally in accordance with the material contained in the development application, supporting documentation and the plan(s) listed below, except where amended by these conditions of approval.	At all times.
	Proposal Plan – Stages 9 and 10, prepared by Saunders Havill Group, Reference 10703 P 05 Rev **G** – CP01, dated **11 August 2023**	
	Staging Plan – Stage 9, prepared by Saunders Havill Group, Reference 10703 P 05 Rev **G** – STG09, dated **11 August 2023**	
	Staging Plan – Stage 10, prepared by Saunders Havill Group, Reference 10703 P 05 Rev G – STG10, dated **11 August 2023**	
	Engineering Services Report, Hedley Park Stage 9 and 10, prepared by Inertia – Job Reference 9896-09 **Rev 1**, dated **26 October 2023**	
	Stormwater Management Plan, Hedley Park Estate, prepared by Inertia – Job Reference 9896 **Rev 1**, dated **24 October 2023**	
	Concurrence Agency Response dated 24 March 2023 and referenced as 2302-33255 SRA.	
1.2	Comply with the relevant provisions of the Somerset Region Planning Scheme (Version Four), Planning Scheme Policies and Local Laws.	At all times.
1.3	A Licensed Surveyor must install new Survey Marks in their correct positions in accordance with the Survey Plan and the endorsement of the work must be certified in writing.	Prior to request for endorsement of the Plan of Subdivision for each stage.
1.4	Pay to Council any outstanding rates or charges or expenses that are a charge over the subject land levied by Council; and/or levied but not fully paid over the subject land.	Prior to request for endorsement of the Plan of Subdivision for each stage.
1.5	Pay to Council the applicable amount at the time of request for plan of subdivision endorsement for the issue of new valuations by the Department of Resources. Currently, the amount is set at $41 per allotment.	Prior to request for endorsement of the Plan of Subdivision for each stage.

1.6	Provide certification from a Licenced Surveyor that all services (e.g. water, drainage, electricity, telecommunications) are wholly contained within the lot that they serve.	Prior to request for endorsement of the Plan of Subdivision for each stage.
1.7	Remove any services made redundant as a result of the development and reinstate the land.	Prior to request for endorsement of the Plan of Subdivision for each stage.
SCHEDULE 2 – ENGINEERING *Assessment Manager*		
No	**Condition**	**Timing**
2.1	Make an Operational Work application to Council and pay the required fees where an application involves earthworks, erosion and sediment control, roadworks, car parks, landscaping, clearing and stormwater drainage required as stated in the following conditions.	Prior to the commencement of Operational Work.
2.2	All works are to be designed and constructed in accordance with the requirements of the *Somerset Regional Council Planning Scheme.*	At all times.
2.3	Bear the costs of works carried out to Council and utility services infrastructure and assets, including any alterations and repairs resulting from compliance with these conditions.	At all times.
2.4	It is required that the design and construction of civil components of the Operational Work are to be certified by a Registered Professional Engineer Queensland (RPEQ), including: • Plans and specifications must be prepared and certified with the Operational Work application. • Certification that the works have been undertaken in accordance with the approved plans, specifications and to Council's requirements.	Prior to Compliance Assessment.
	LANDSCAPING	
2.5	The developer must submit a Landscape Plan for all landscaping associated with the development. The plan must be prepared by a suitably qualified and experienced Landscape Architect, horticulturist, or other person experienced in landscape design and construction. The Landscape Plan must address the performance criteria listed below: • Comply with the Somerset Development Manual and Schedule 12A of the *Planning Regulation 2017* (including street trees). • To enhance the appearance of the development internally and externally. • To make a positive contribution to the streetscape; • To screen unsightly objects from public view; • To contribute to an environment by providing shade to reduce glare, heat absorption and radiation; • To ensure common areas are useable; • To provide long term erosion protection;	As part of Operational works for Landscaping Works.

	• To integrate with existing vegetation and other natural features of the site and adjoining lands; and • To provide adequate vehicle sightlines and road safety. The Landscape Plan must also detail: • The typical species to be planted, consisting mainly of drought-tolerant species suitable to their individual location on site; • The number and size of plants; • The typical planting detail including preparation, backfill, staking and mulching. • The developer must prepare and landscape the site in accordance with the approved Landscape Plan, or as otherwise approved by Council. • All declared weeds and pests must be removed from the subject land and the subject land kept clear of such nuisance varieties at all times during the course of development works and any ensuing defects liability period. • Apart from declared weeds and pests, trees, shrubs and landscaped areas currently existing on the subject land must be retained where possible and action taken to minimise disturbance during construction work.	
	OPEN SPACE/PARK	
~~2.6~~	~~Dedicate all land shown as park, open space and drainage on Proposal Plan – Stages 9 and 10, prepared by Saunders Havill Group, Reference 10703 P 05 Ref F – CP01, dated 8 December 2022 as reserve.~~	~~Prior to Council's endorsement of the Plan of subdivision.~~
2.6	Dedicate all land shown as park, open space and drainage on Proposal Plan – Stages 9 and 10, prepared by Saunders Havill Group, Reference 10703 P 05 Ref **G** – CP01, dated **11 August 2023** as reserve. ***Note: This condition is imposed pursuant to Section 145 of the Planning Act 2016.***	Prior to Council's endorsement of the Plan of subdivision.
2.7	Any entry statements, fences, batters, retaining walls and buffer/screen plantings must be located entirely within private land and not within the public road reserve.	At all times.
2.8	Plant street trees at 15 metre intervals along both sides of each street in each stage. *Note: It is recommended the trees are located in a staggered arrangement along the street so they are not directly opposite one another.*	Prior to Council's endorsement of the Plan of subdivision for each stage.
	EASEMENTS	

2.9	Dedicate land subject to flooding during a 1% Average Exceedance Probability (AEP) or Q100 flood event as an easement or reserve for drainage purposes. The easement or reserve is to be dedicated at no cost to Council. The proponent in a form satisfactory to Council's Solicitor shall prepare all documentation.	Prior to Council's endorsement of the Plan of subdivision.
2.10	Provide an easement over stormwater and inter-allotment drainage located within private property. The easement widths may vary but must extend to include the flood paths for the Q100 flood flows including provisions for freeboard and provide suitable means of access for machinery around headwalls and steep batters to enable maintenance operations to occur without encroachment onto private property and are to be in accordance with Queensland Urban Drainage Manual (QUDM). The easement is to be dedicated at no cost to Council. All easement documentation shall be prepared by the proponent in a form satisfactory to Council's Solicitor. *Note: Easements required for the discharge of stormwater over adjacent properties must be agreed to in writing by the owner of the property.*	Prior to Council's endorsement of the Plan of subdivision.
	GENERAL SERVICES	
2.11	Submit development applications to the relevant Energy and Telecommunications regulatory authority to either obtain design layout plans or certification letters to Council that any existing infrastructure or wayleaves are to their satisfaction and that they can provide services when required at the cost of a normal house connection.	Prior to Council's endorsement of the Plan of subdivision for each stage.
2.12	Connect the development to a reticulated water supply, sewer infrastructure, underground electricity supply, and telecommunications utilities in accordance with acceptable standards of the relevant regulatory authority so that it is available to each allotment.	Prior to Council's endorsement of the Plan of subdivision for each stage.
2.13	The applicant must provide written evidence (e.g. connection certificate) from each particular service provider stating either that each lot has been connected to the applicable service, is available at a standard connection, or has a current supply agreement.	Prior to Council's endorsement of the Plan of subdivision for each stage.
2.14	Install hydrant and valve location indicators where serviced by kerb and channel, place brass markers in the kerb line at each service crossing. (For Water, Sewer, Electricity and Telecommunications)	Prior to Council's endorsement of the Plan of subdivision for each stage.
	EARTHWORKS	
2.15	All earthworks to be constructed in accordance with AS3798. Fill material is to be placed, compacted, and tested by a suitably qualified inspection and testing organisation.	At all times.
2.16	Contaminated material must not be used as fill on the site. Any filling must be undertaken using inert materials only.	At all times.

2.17	Any fill, cut and other stored material must be contained within properties comprising the development application. Fill cannot be placed on adjacent properties without providing Council with written permission from the respective property owner(s).	At all times.
	ROADWORKS	
2.18	Dedicate, design and construct all new roads as illustrated on the approved plans, with concrete kerb and channel (including drainage and associated works) in accordance with *Planning Scheme Policy 4 – Design Standards Somerset Regional Council Design Standards*.	As part of Operational Works application.
2.19	Hedley Drive is identified in Council's Local Government Infrastructure Plan (LGIP) as a trunk collector road. Hedley Drive shall be constructed to a trunk collector road standard. *Note: This condition is imposed pursuant to Section 128 of the Planning Act 2016*	As part of Operational Works application.
2.20	Provide road reserve and carriageway widths are to be in accordance with the *Planning Scheme Policy 4 – Design Standards*.	As part of Operational Works application.
2.21	Provide a concrete driveway with a pavement width of 5.5 metres for the full length of the vehicular driveway between proposed Lots 195 to 197.	As part of Operational Works for Stage 9.
2.22	Provide bin pads for proposed Lots 195 to 198 in front of Lots 195 and 198.	As part of Operational Works for Stage 9.
2.23	Provide 6m x 3 chord truncations on property boundaries at all road intersections. Remove all improvements and obstructions from the area of the corner truncation(s) and area of dedicated road.	Prior to Council's endorsement of the Plan of subdivision for each stage.
2.24	Provide a sealed vehicle turn around area with a minimum 9m radius at the end of any terminating roads that are to be constructed as part of a future stage of development.	Prior to Council's endorsement of the Plan of subdivision for each stage.
2.25	Provide verge and access in accordance with *Planning Scheme Policy 4 – Design Standards*.	As part of Operational Works application.
	STREET NAMES	
2.26	Submit a list of road names for all new roads, along with the reasons for selecting such names, for the road names to be considered and approved by Council. The proponent is responsible for the cost of road signs and installation. Street nameplates are to comply with Council's standards.	As part of Operational Works application.

	VEHICLE ACCESS	
2.27	All construction vehicles shall enter and leave the site in a forward gear	At all times.
	FOOTPATHS AND DRIVEWAYS	
2.28	Provide a concrete footpath with a width of 1.5 metres on one side of each street within Stage 9 for the full length of each street within the stage.	As part of Operational Works.
2.29	Provide a concrete footpath with a width of 1.5 metres on one side of each street within Stage 10 for the full length of each street within the stage.	As part of Operational Works.
2.30	Provide a concrete footpath with a width of 1.5 metres for the full length of the pathway between proposed Lots 199 and 200.	As part of Operational Works for Stage 9.
2.31	Provide a concrete footpath with a width of 1.5 metres for the full length of the pathway between proposed Lots 215 and 216.	As part of Operational Works for Stage 9.
2.32	Provide a concrete footpath with a width of 1.5 metres for the full length of the pathway between the end of the driveway between proposed Lots 195 and 196, connecting to the end of the existing pathway between Lots 162 and 163.	As part of Operational Works for Stage 9.
2.33	Provide a concrete footpath with a width of 1.5 metres for the full length of the pathway between proposed Lots 239 and 240.	As part of Operational Works for Stage 10.
2.34	Provide a concrete footpath with a width of 1.5 metres for the full length of the pathway between proposed Lots 219 and 250.	As part of Operational Works for Stage 10.
	STREET LIGHTING	
2.35	Install street lighting in accordance with AS1158 – *Code of Practices for Public Lighting* as follows: i) Local streets and minor collectors (1 to 50 lots) – Lighting Category P5 ii) Collector Roads – Lighting Category P4. Install all street lighting on the same side as footpaths, where applicable. Obtain certification of street lighting installation by a Registered Professional Engineer Queensland (RPEQ).	Prior to Council's endorsement of the Plan of subdivision for each stage.
	VEHICLE ACCESS	
2.36	All vehicular access for new allotments shall provide convenient and safe access and egress from the site in accordance with *Planning Scheme Policy 4 – Design Standards*.	At all times.

2.37	The landowner is responsible for construction and maintenance of vehicular access for the property, from the road carriageway to property boundary in accordance with Council's Policy and Standards. Approval is to be sought from Council and the landowner must advise all potential purchasers accordingly.	At all times.
	STORMWATER	
2.38	Ensure Stormwater drainage is delivered to a lawful point of discharge	At all times.
2.39	Stormwater drainage and flows are to have no increase in peak discharge immediately downstream of this development for a selected range of storm durations, and a selected range of AEP's up to the defined flood event.	At all times.
2.40	Stormwater drainage and flows are to have no actionable nuisance effect on adjoining, upstream, or downstream landholders.	At all times.
2.41	Stormwater drainage and flows are to have no increase in flood levels on adjoining land that may damage or adversely effect the value or potential use of the land.	At all times.
2.42	Design and construction of all stormwater drainage works must comply with the relevant section/s of the Queensland Urban Drainage Manual (QUDM) and the *Somerset Regional Council Design Standards*.	As part of Operational Works.
2.43	Stormwater Drainage shall be constructed in general accordance with Inertia, Site Based Stormwater Management Plan, Ref 9896 and dated 23rd January 2023.	As part of Operational Works
2.44	Where stormwater cannot be discharged to the kerb and channel, provide inter-allotment drainage in accordance with Queensland Urban Drainage Manual (QUDM) and *Somerset Regional Council Planning Scheme*.	As part of Operational Works.
2.45	Submit permission for the discharge of stormwater drainage to a lawful point of discharge from the owners of properties affected by any stormwater discharge from the site. *Note: Such consent may require supporting engineering plans and calculations.*	As part of Operational Works application.
2.46	Adjoining properties and roadways to the development are to be protected from ponding or nuisance from stormwater as a result of any site works undertaken as part of the proposed development.	Prior to Council's endorsement of the Plan of subdivision.
2.47	Containments or contaminated water must not be directly or indirectly released from the Premises to surface water or groundwater at or outside the premises except for: (a) uncontaminated overland stormwater flow; or (b) uncontaminated stormwater to the stormwater system.	At all times.
	EROSION AND SEDIMENT CONTROL	

2.48	Erosion and sedimentation controls shall be implemented in accordance with current IECA best practice and shall be maintained to Council's satisfaction at all times during the course of the project. Should Council determine that proposed controls are ineffective or a downstream drainage system has become silted, the developer will: • Be required to install additional measures. • Be responsible for the restoration work. Should the developer fail to complete the works determined by Council within the specified time, the Council will complete the work and recover all costs from the developer associated with the work.	At all times.
2.49	Measures shall be applied to prevent site vehicles tracking sediment and other pollutants onto adjoining streets during the course of the project, and to prevent dust nuisance.	At all times.
2.50	Prepare an Erosion and Sediment Control Plan designed by a Registered Professional Engineer Queensland (RPEQ). Implement all relevant sediment and erosion control measures and temporary fencing as identified on the approved engineering drawings as part of the operational works. All sediment control devices and sediment collection points shall be regularly monitored, sediment removed as necessary and devices maintained responsibly during construction and maintenance period of the development works.	As part of Operational Works.
2.51	All wastes to be managed in accordance with the relevant legislation and regulations with regulated waste to be disposed of at a licensed facility and general solid waste to be disposed of at approved landfill sites with the contractor covering all costs incurred for the receipt and management of the waste.	At all times.
2.52	Where vegetation is removed, the vegetation waste shall be disposed of by: i) Milling; ii) Chipping and/or mulching iii) Disposal at an approved waste disposal facility. No incineration of vegetation or waste will be permitted at the site. Waste other than vegetation waste, generated as a result of the operations shall be disposed of to an approved disposal facility.	At all times.
2.53	All declared weeds and pests are to be removed from the subject land and kept clear of such nuisance varieties during the course of operations.	At all times.
2.54	Apart from declared weeds and pests, areas with trees, shrubs and landscaping currently existing on the subject land must be retained where possible and action taken to minimise disturbance during construction work.	As part of Operational Works.
SCHEDULE 3 - REFERRAL AGENCY **Department of State Development, Infrastructure, Local Government and Planning**		

Concurrence Agency Response *Agency Response: Recommend Conditions Apply*
Pursuant to section 62 of the *Planning Act 2016*, the Assessment Manager must, other than to the extent a referral agency's response provide advice, comply with all the referral agency responses and include conditions exactly as stated in the response.
The Department of State Development, Infrastructure, Local Government and Planning as a Concurrence Agency has assessed the impact of the proposed development to a state controlled road environment.
The Concurrence Agency Response is dated 24 March 2023 and referenced as 2302-33255 SRA.
The Concurrence Agency response will be attached to Council's Decision Notice for DA23398.
SCHEDULE 4 – ADVICE *Assessment Manager*
This approval has effect in accordance with the provisions of section 71 of the *Planning Act 2016. [A copy of section 71 will be enclosed with the Decision Notice]*
Currency Period - Pursuant to section 85 of the *Planning Act 2016* the approval will lapse if the plan of subdivision is not provided to the local government within the 'currency period' – being four (4) years starting the day the approval takes effect.
The applicant may make representations (change representations) about a matter in this development application within the applicant's appeal period under the process established in chapter 3, part 5, subdivision 1 of the *Planning Act 2016.*
The *Planning Act 2016* provides for a person to make a change to this development application outside the applicant's appeal period, following the process outlined in chapter 3, part 5, subdivision 2 of the Act.
This development approval is for the proposed development only. Any additional uses/structures, if triggers assessable development, may require their own planning approval and will be assessed on its own merits.
Biosecurity Queensland should be notified on 13 25 23 of proposed development(s) occurring in the Fire Ant Restricted Area before earthworks commence. It should be noted that works involving movements of soil associated with earthworks may be subject to movement controls and failure to obtain necessary approvals from Biosecurity Queensland is an offence. It is a legal obligation to report any sighting or suspicion of fire ants within 24 hours to Biosecurity Queensland on 13 25 23. The Fire Ant Restricted Area as well as general information can be viewed on the DAF website www.daf.qld.gov.au/fireants
All works shall be carried out in accordance with the *Workplace, Health and Safety Act (as amended)* and the *workplace Health and Safety Regulation (as amended).*

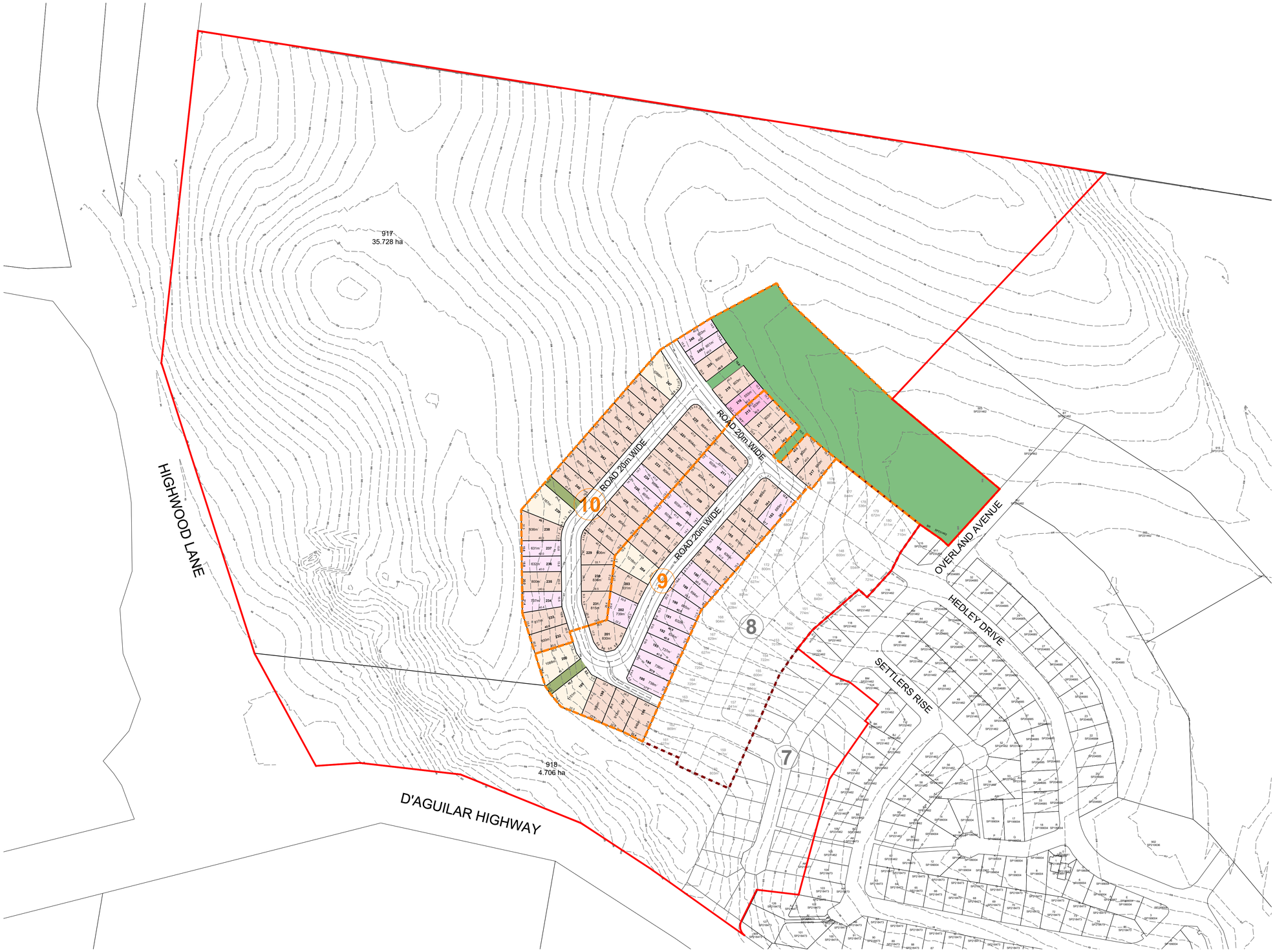
Upon receiving the certification by a RPEQ, and submission and approval of as constructed drawings and documentation, Council will accept the works as “On Maintenance”. Council will bond the developer for an amount equal to 5% of the operational works and the Developer is required to maintain all works for a period of 12 months for civil works and 18 months for landscaping (maintenance period) from the date of “On Maintenance”. Any defective works must be rectified within the maintenance period. At the end of the maintenance period the works shall be inspected and if satisfactory, shall be placed “Off Maintenance”. Bonds or other securities will be released after the works have been placed “Off Maintenance”.
The Plan of Subdivision will not be released until all works are completed to Council’s satisfaction or uncompleted works are suitably bonded.
The Applicant has the Right of Appeal to the Planning and Environment Court regarding the conditions of this approval. Should the Applicant notify Council in writing that the conditions of approval are accepted without dispute and that the right of appeal to the Court will not be exercised, the Decision Notice may be taken to be the development permit.”

Attachments for the Decision Notice include:

- Proposal Plan – Stages 9 and 10, prepared by Saunders Havill Group, Reference 10703 P 05 Rev G – CP01, dated 11 August 2023
- Staging Plan – Stage 9, prepared by Saunders Havill Group, Reference 10703 P 05 Rev G – STG09, dated 11 August 2023
- Staging Plan – Stage 10, prepared by Saunders Havill Group, Reference 10703 P 05 Rev G – STG10, dated 11 August 2023
- Engineering Services Report, Hedley Park Stage 9 and 10, prepared by Inertia – Job Reference 9896-09 Rev 1, dated 26 October 2023
- Stormwater Management Plan, Hedley Park Estate, prepared by Inertia – Job Reference 9896 Rev 1, dated 24 October 2023
- Concurrence Agency Response dated 24 March 2023 and referenced as 2302-33255 SRA.

This completes the report for Change Application DA23398.

PROPOSAL PLAN - STAGES 9 & 10



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PROJECTION - GDA2020 MGA56

LEGEND

- Site Boundary (reinstatement by others)
- Major Contour (1.0m interval)
- Existing Approval
- Stage Boundary
- Indicative Bin Pad location

DEVELOPMENT STATISTICS - Overall Development			
RESIDENTIAL ALLOTMENTS	**No. Lots**	**%**	**Nett Area**
500m² - < 600m²	2	2.9%	0.110 ha
600m² - < 800m²	21	30.4%	1.375 ha
800m² - < 1000m²	41	59.4%	3.364 ha
> 1000m²	5	7.2%	0.549 ha
Total Residential Allotments	**69**	**100.0%**	**5.398 ha**
Nett Residential Area (Ha)	5.398 ha		
Average Lot Size (m²)	782 m²		
Land Budget	**Area (Ha)**	**%**	
Area of Subject Site / Stage	53.733 ha		
Nett Residential Area (no roads)	5.398 ha	10.0%	
Open Space	2.670 ha	5.0%	
Road Areas	1.687 ha	168.7%	
Pedestrian Link	0.086 ha	8.6%	
Current Stage 7	2.504 ha	4.7%	
Proposed Stage 8	3.555 ha	6.6%	
Balance Lot (Lot 917)	33.131 ha	61.7%	
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Total	**53.737 ha**	**100.0%**	

RP DESCRIPTION: Lot 914 on SP282074 & 912 on SP231462

SCALE @A1 1:2000 @A3 1:4000 - LENGTHS ARE IN METRES

20 0 20 40 60 80 100 120 140 160 180 200 220

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STAGING PLAN - STAGE 9

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PROJECTION - GDA2020 MGA56

LEGEND

- Site Boundary (reinstatement by others)
- Major Contour (1.0m interval)
- Existing Approval
- Stage Boundary
- Indicative Bin Pad location

DEVELOPMENT STATISTICS - Stage 9			
RESIDENTIAL ALLOTMENTS	**No. Lots**	**%**	**Nett Area**
500m² - < 600m²	1	2.8%	0.055 ha
600m² - < 800m²	14	38.9%	0.934 ha
800m² - < 1000m²	18	50.0%	1.491 ha
> 1000m²	3	8.3%	0.326 ha
Total Residential Allotments	**36**	**100.0%**	**2.806 ha**
Nett Residential Area (Ha)	2.806 ha		
Average Lot Size (m²)	779 m²		
Land Budget	**Area (Ha)**	**%**	
Area of Subject Site / Stage	3.795 ha		
Nett Residential Area (no roads)	2.806 ha	74.5%	
Road Areas	0.916 ha	24.3%	
Pedestrian Link	0.045 ha	1.2%	
Total	3.767 ha	**100.0%**	

RP DESCRIPTION: Lot 914 on SP282074 & 912 on SP231462

SCALE @A1 1:750 @A3 1:1500 - LENGTHS ARE IN METRES

10 0 10 20 30 40 50 60 70 80 90

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STAGING PLAN - STAGE 10

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PROJECTION - GDA2020 MGA56

LEGEND

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- Major Contour (1.0m interval)
- Existing Approval
- Stage Boundary
- Indicative Bin Pad location

DEVELOPMENT STATISTICS - Stage 10			
RESIDENTIAL ALLOTMENTS	**No. Lots**	**%**	**Nett Area**
500m² - < 600m²	1	3.0%	0.055 ha
600m² - < 800m²	7	21.2%	0.441 ha
800m² - < 1000m²	23	69.7%	1.872 ha
> 1000m²	2	6.1%	0.223 ha
Total Residential Allotments	**33**	**100.0%**	**2.592 ha**
Nett Residential Area (Ha)	2.592 ha		
Average Lot Size (m²)	785 m²		
Land Budget	**Area (Ha)**	**%**	
Area of Subject Site / Stage	6.037 ha		
Nett Residential Area (no roads)	2.592 ha	42.7%	
Open Space	2.670 ha	44.0%	
Road Areas	0.772 ha	12.7%	
Pedestrian Link	0.041 ha	0.7%	
Total	**6.075 ha**	**100.0%**	

RP DESCRIPTION: Lot 914 on SP282074 & 912 on SP231462

SCALE @A1 1:750 @A3 1:1500 - LENGTHS ARE IN METRES

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OVERLANDER AVENUE, WOOLMAR ● 11/08/2023 ● 10703 P 05 Rev G - STG 10

Engineering Services Report

QM Properties

Hedley Park Stage 9 & 10 - DAguilar Highway, Kilcoy, QLD 4515

Woolmar

Job Reference Number – 9896-09

Date: 26 October 2023

Document Status

Rev No	Author	Reviewer	Approved for Issue		
			Name	Signature	Date
0	D.Carrasco	M.Llewelyn	R.Llewelyn		20/01/2023
1	D.Carrasco	M.Llewelyn	R.Llewelyn		26/10/2023

Distribution

Rev No	Date	Issue	Issued To	Format
0	20/01/2023	For Approval	QM Properties	PDF/E
1	26/10/2023	For Approval	QM Properties	PDF/E

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APPENDICES

APPENDIX A – PROPOSED LOT LAYOUT PLAN

APPENDIX B – CIVIL WORKS DRAWINGS

APPENDIX C – ELECTRICAL AND COMMUNICATIONS DBYD RECORDS

APPENDIX D – SRC FILLING & EXCAVATION CODE TABLE

1 Introduction

1.1. Purpose and Scope

Inertia Engineering has been commissioned by QM Properties to prepare an Engineering Services Report for the proposed development at Hedley Park Stage 9 & 10 - DAguilar Highway, Kilcoy, QLD 4515, Woolmar (the subject site). This report, along with the Stormwater Management Plan prepared by inertia will support the Development Application submitted for the proposed development.

The previous stages of the development include:

- Stage 1: Lots 1-18 – Completed
- Stage 2: Lots 19-43 – Completed
- Stage 3: Lots 63-91, 100-104, 126-127 – Completed
- Stage 4: Lots 45-62, 102-120 – Completed
- Stage 7: Lots 121-125, 128-145 – Completed
- Stage 8: Lots 912, 914 – Under construction

This report considers the bulk earthwork design and demonstrates conceptually how the development can be serviced by water, sewer, and other infrastructure such as electricity and telecommunications. The separate Stormwater Management Plan prepared by Inertia addresses the stormwater management (quality and quantity) during the construction and operational phases of the proposed development.

The required detailed design for the service infrastructure will be subject to the conditions (if any) attached to the Development Approval to be provided by Council and any nominated referral agencies.

1.2. Report Limitations

This report has been prepared by Inertia Engineering Pty Ltd for QM Properties and may only be used and relied on by QM Properties for the purpose agreed between Inertia Engineering and QM Properties as detailed within this report.

Inertia Engineering otherwise disclaims responsibility to any person other than QM Properties arising in connection with this report. Inertia Engineering also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by Inertia Engineering in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. Inertia Engineering has no responsibility or obligation to update this report to account for events or changes occurring after the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by Inertia Engineering described in this report. Inertia Engineering disclaims liability arising from any of the assumptions being incorrect.

Inertia Engineering has prepared this report based on information provided by QM Properties and others who provided information to Inertia Engineering (including Government authorities), which Inertia Engineering has not independently verified or checked beyond the agreed scope of work. Inertia Engineering does not accept liability in connection with such unverified information, including errors and omissions in the report which were caused by errors or omissions in that information.

2 Site Characteristics

The land contained within the site is described as follows:

Title Details:	Lot 914 on SP331660 & Lot 912 on SP331660
Street Address:	Hedley Park Stage 9 & 10 - DAguilar Highway, Kilcoy, QLD 4515, Woolmar
Stage 9/10 Area:	7.259 ha
Balance Lot	73,500m2

Refer to Appendix A for the proposed lot layout plan.

2.1. Location

Figure 2-1 – Location Plan

The subject site is located in Woolmar, approximately 2km West of the Kilcoy. It occupies a total area of 7.2 ha and lies within the General Residential Zone under SRC's Planning Scheme (2016). The site is bounded by the D'Aguilar Highway to the south, future developable vacant land to the north and west and previous Hedley Park development stages to the east.

2.2. Topography

The subject site grades constantly along the development given the distribution of the topography starting from a high point in the south-west corner of approximately 130m AHD to a low point of 114m AHD in the north-east corner of the site. The average grade across the site is approximately 3%. The existing site is made up of vacant open farmland.

3 Development Layout

The proposed development is for the reconfiguration of a lot for the creation of Hedley Park Estate Stage 9, from 2 lots into 36 Residential lots and Stage 10, from 2 lots into 33 Residential lots. The proposed development includes associated roadworks, drainage, sewer, and water reticulation.

Access to the site is provided in one (1) location, Hedley Drive to the east of the proposed development.

Refer to Appendix A for the proposed lot layout plan.

Figure 3-1 – Development Layout

4 Flooding

Somerset Regional Council's Flood Hazard Overlay mapping shows that the proposed development area is not subjected to flood inundation from the nearby Sheep Station Creek.

The subject site's location relative the Somerset Region Planning Scheme's OM007e Flood Hazard Overlay Kilcoy is shown below in Figure 4-1.

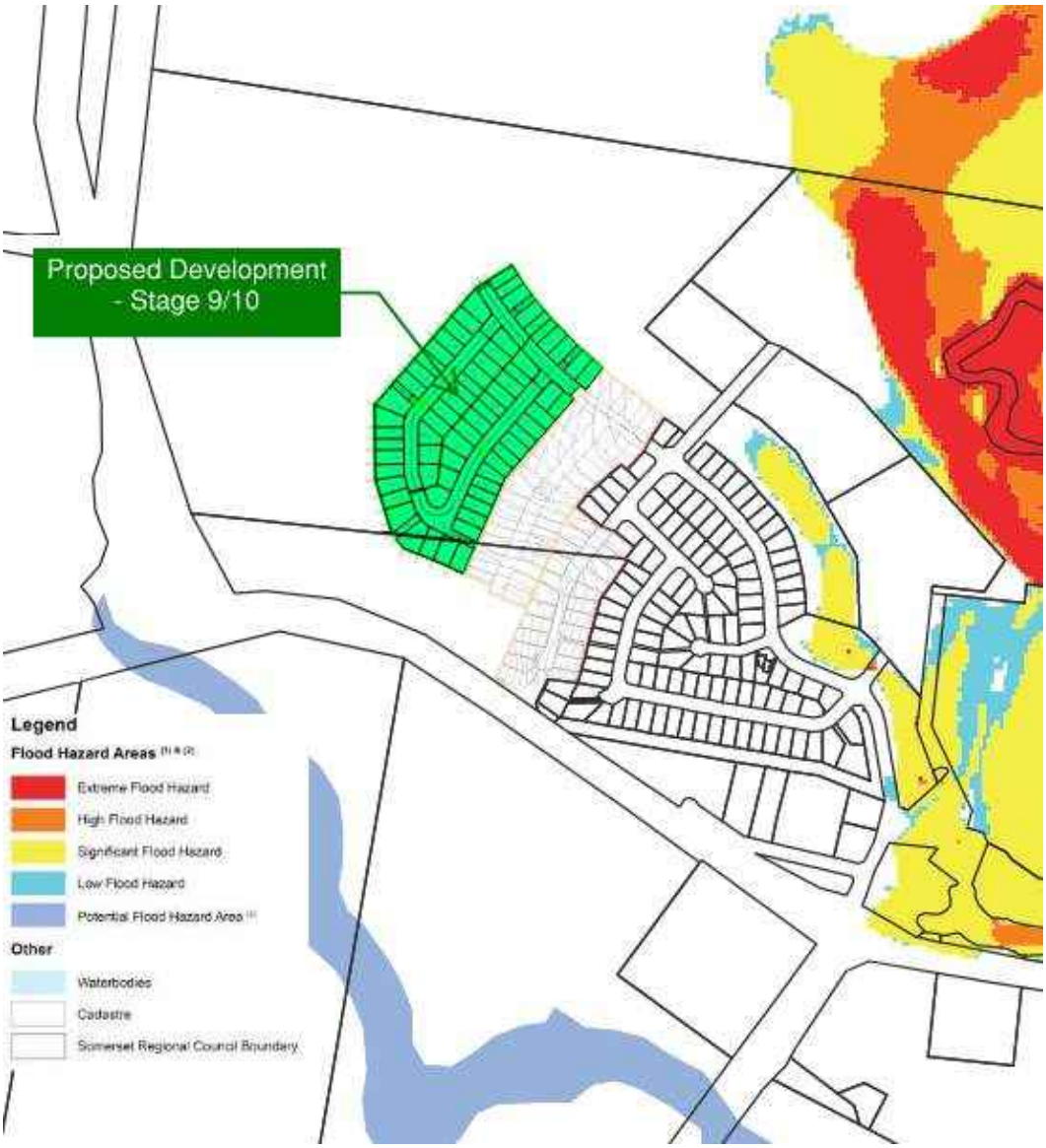


Figure 4-1 – Flood Hazard Overlay Mapping

5 Services, Works and Infrastructure

5.1. Sewerage Reticulation

5.1.1. Existing Sewer

Stage 8 of Hedley Park Estate is approved and currently under construction, with completion expected by December 2023. Stage 8 will provide two (2) connection points on Hedley Drive within the verge in front of lots 182 and 213 for the Stage 9/10 sewer reticulation.

5.1.2. Proposed Sewer

In accordance with Urban Utilities standards, Stages 9 and 10 will be serviced by DN160 PE pipe. The proposed sewer main will extend from the two connection points provided within Hedley Drive which will be constructed as part of Stage 8.

Within Stage 9, lots 182 and 184-193 will be serviced at the rear of the lot. Lots 196 and 197 will be serviced from the corridor link between Stage 8 and Stage 9. All other lots within Stage 9 will be serviced from sewer reticulation provided in the road verges.

Stage 10 will connect to the sewer main provided in Stage 9 at three (3) locations. Sewer main will extend from the connection point provided at the rear of lot 231 to provide rear of lot servicing to Lots 229-231. Sewer main will also extend from the connection point in the verge of Road 3 in front of Lot 232 to provide servicing to Lots 233 and 234. All other lots will be serviced from the connection point on Hedley Drive, with the main extending to the West to provide rear of lot servicing to Lots 220-228 and to the North to provide servicing from the road verges to all remaining lots within Stage 10.

The proposed design provides an end of line arrangement at the North-East end of Hedley Drive to facilitate connection to future Hedley Park Stages

Refer to Appendix B which illustrates the proposed servicing layout plan.

5.2. Water Reticulation

5.2.1. Existing Water

Stage 8 of Hedley Park Estate is approved and currently under construction, with completion expected by December 2023. Stage 8 will provide two (2) DN180 PE connection points for the Stage 9/10 water reticulation. One connection point will be provided in the verge of Hedley Drive in front of Lot 182, with the other located within the corridor link between Stage 8 and 9 in front of Lot 196.

5.2.2. Proposed Water

In accordance with Urban Utility standards, stage 9 and 10 will be serviced by DN180 PE pipe.

Within Stage 9, the proposed watermain will extend within the southern verge of Road 3 and the western verge of Hedley Drive.

Stage 10 will connect to Stage 9 and connection points on Road 3 and Hedley Drive, with the main continuing within the southern verge of Road 3 and the western verge of Hedley Drive.

Two (2) end of line arrangements will be provided to facilitate connection to future Hedley Park Stages. One connection point will be at the North-East End of Hedley Drive and the other in the corridor between lots 239/240.

Refer to Appendix B which illustrates the proposed servicing layout plan.

5.3. Electricity and Communications

Electricity and telecommunication infrastructure is available in the near vicinity of the subject site. The appropriate consultants should be engaged to assess the available capacity in the network to service the development. The location of the existing electricity and communication should be confirmed via potholing prior to construction.

Please refer to Appendix C for Electrical and Communication DBYD Records.

6 Filling and Excavation

6.1. Earthworks

Earthworks for the proposed development adopts the strategy of aiming to follow the existing/natural topography where possible to minimise requirement for batters and/or retaining walls. Lots have been designed to generally provide a consistent grade across adjoining lots, over both rear and side boundaries. Grading of Lots typically varies between 5% and 10%. Where a step between lots is required, this has been set to a maximum of 1V:4H batter slope. Typical details for batter arrangements of lots, and earthworks sections have been provided as part of earthworks sketches.

The site is not subjected to flood inundation from the nearby Sheep Station Creek (refer to Section 4.0) and as a result, the Stage 9/10 bulk earthworks design has been developed without the requirement to consider minimum pad levels or flood storage earthworks.

Due to the challenging (steep) topography the broader site, concept Whole of Site (WOS) earthworks modelling has been completed for the future Hedley Park stages. The site is also constrained by the existing levels of the previous Hedley Park stages to the east and the steep rise (from the existing development) to the existing hilltop to the west. The Stage 9/10 bulk earthworks design has been developed in coordination with the WOS design to ensure the best design outcomes.

The Stage 9/10 proposed earthworks considers the earthworks required for future stages by extending the current proposed earthworks beyond the Stage boundaries. The batters are continued beyond the boundaries until they reach the future lot levels, where a 1.0m wide platform is provided before battering down to the natural surface level. This ensures that the construction of future lots will not impact the existing lots. Additionally, this continuation of earthworks beyond the stage boundary will provide a bund to temporarily divert the upstream catchment around the lots.

Refer to Appendix B which shows a schematic of the earthworks proposed for the site.

In all situations where earthworks are proposed and any ground is disturbed by construction works, sediment and erosion control measures will be implemented in accordance with the following documents:

- Relevant SRC sediment and erosion control guidelines;
- International Erosion Control Association (IECA) Sediment and Erosion Control Guidelines; and
- Australian Standards AS 3798-2007.

6.2. Erosion and Sediment Control Measures

6.2.1. Pre-Development

Prior to construction, the following sediment and erosion control measures will be implemented to minimise disturbance and ensure water quality is maintained;

- Set out transport routes to ensure minimal vegetation disturbance;
- Construct entry/exit areas that comprise a designed gravel pad or hardwood logs in accordance with the IECA (2001);

- Install sediment fences around the proposed bulk earthworks site (along toe of batter alignment); and
- Install dust control fences adjacent to the proposed bulk earthworks site.

6.2.2. Bulk Earthworks

- Earthworks areas are to be protected against wind and water erosion;
- Silt fences are to be erected around the base of the earthworks and material stockpiles;
- Stockpiles and construction material are not permitted to be stored within the road reserve; and,
- Diversion drains to be provided at upstream catchments to reduce flows onto earthworks areas.

6.2.3. Construction

The following measures will be undertaken to mitigate water quality impacts during the construction phase:

- Sediment fences to be erected at the base of all batters and stockpiles to prevent sediment transportation off site;
- Grass filter strips to be placed along all road verges;
- Re-vegetation of all disturbed areas within two weeks of completion;
- All sediment control structures to be maintained in an effective manner and inspected after each storm event. No structure is to accumulate sediment above 40% of its capacity;
- Dust producing areas to be swept to remove silt/dust and wetting of roads is only permitted where sweeping has failed;
- At least one bin or litter trap is to be provided for waste material.

6.2.4. Post-Development-Maintenance Period

Silt fences are to remain in place during the maintenance period until the landscaping has established and accepted “On-Maintenance” by SRC.

6.2.5. Performance Objectives and Indicators

The Guideline on Identifying and Applying Water Quality Objectives states that stormwater runoff during the construction phase must be in accordance within the concentration ranges shown in Table 6.1 below.

Table 6-1 – Construction Phase Pollutant Objectives

Pollutant	Criteria
Total Suspended Solids	90th %tile < 100mg/L for wet weather periods 15mg/L for combined wet and dry periods
pH	6.5 – 8.5
Total Nitrogen (mg/L)	0.65
Total Phosphorous (mg/L)	0.07
Dissolved Oxygen	80 to 105 percent saturation

Oils and Grease	No visible films or odours
Litter	No anthropogenic material greater than 5mm

6.3. Monitoring and Maintenance

The following monitoring and maintenance procedures are to be undertaken by the site supervisor during all phases of the development:

- Restrict all work activities to designated construction areas;
- Earthworks and site cleaning are undertaken in accordance with the Erosion and Sediment Control plans;
- Inspections of Stormwater and Sediment and Erosion Controls are to be conducted at the end of each construction day and after each rainfall event (>25mm); and
- Any failure to the stormwater system shall be immediately rectified to prevent uncontrolled discharge from the site.

7 Conclusions and Recommendations

This Engineering Services Report, together with the Stormwater Management Plan has assessed the stormwater management, earthworks, and service infrastructure for the proposed development at Hedley Park (Stage 9 & 10), Woolmar.

Earthworks, erosion, and sediment control solutions required on site can be performed using common and accepted methods. It is noted that the proposed earthworks will typically adopt batters in place of retaining walls, with wall only proposed where required for the pedestrian links.

Service supply points for water and sewer reticulation, electricity and telecommunications are located adjacent to the proposed development.

This report has demonstrated that the proposed development proposal provides an acceptable solution for all engineering services and has been designed to comply with SRC's Planning Scheme Policy (2016).

8 References

IPWEAQ (2016), Queensland Urban Drainage Manual Fourth Edition

SRC (2016) Somerset Regional Council, Guidelines and Standards

SRC (2016) Planning Scheme Policy

Department of State Development, Infrastructure and Planning (2017), State Planning Policy

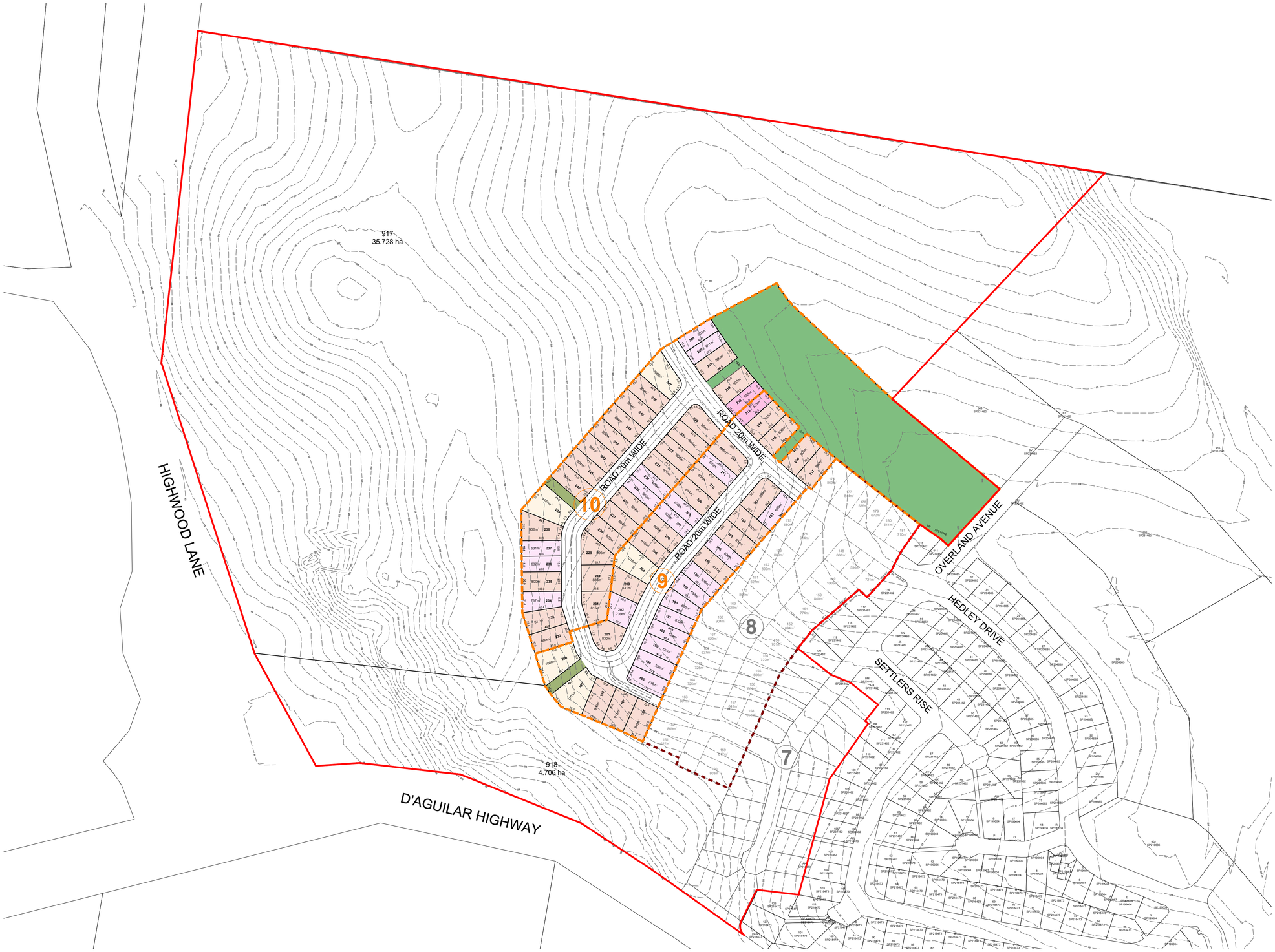
WSAA (2002) Water Services Association of Australia, 'Water Supply Code of Australia – Part 1: Planning and Design', 2002

WSAA (2002) Water Services Association of Australia, 'Sewerage Code of Australia – Part 1: Planning and Design', 2002

Appendices

Appendix A – Proposed Lot Layout Plan

PROPOSAL PLAN - STAGES 9 & 10



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Appendix B – Civil Works Drawings