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(e) The Licensed Commercial *Operator* or the responsible *Competent Person* is to ensure the safety of themselves, co-workers and public at all times during any tasks associated with the handling, transport and use of particular *Herbicide Treatment*.

(f) Pay particular attention to prevailing meteorological conditions, immediate environmental concerns and to preserving integrity of non-target species of *Vegetation*. Ensure drift and environmental contamination is prevented / minimised.

(g) Ensure *Herbicide*s are not applied to *Vegetation* near to or on *Hazardous Areas* (without holding a distribution permit and complying with the distribution permit conditions) or certified organic farmland and chemical-free properties and land (e.g., Cattlecare, HACCP and other quality-controlled properties) where contamination of the crops or farmland could occur, and livestock could be injured.

(h) Comply with provisions of the particular *Herbicide*'s Safety Data Sheet at all times and be aware of hazards involved in (and not limited to) transport, handling, diluting in liquid and spraying *Herbicide*s.

(i) When *Herbicide*s are being used, tasks carried out efficiently with an awareness of hazards and sensitivity of public.

14.2 Transport of Herbicides

Transport *Herbicide* in accordance with the *Laws*, product label and Safety Data Sheets.

14.3 Storage of Herbicides

(a) Provide secure storage facilities for *Herbicide* used to control *Vegetation Regrowth*.

(b) Storage of *Herbicide*s complies with the requirements of the *Law*s including Chemical Usage (Agricultural and Veterinary) Act (Qld) and the advisory Standard "Storage and use of Chemicals in Rural Workplaces".

14.4 *Access* in Private Property

(a) Contact and advise the *Landholders* or *Occupiers*, of proposal to chemically treat *Vegetation* on their property so that specific treatments can be finalised with the *Landholder* or *Occupier* prior to *Services* being planned / organised by the *Operator*. (Areas of certified organic farmland and chemical-free properties and land (e.g., Cattlecare, HACCP and other quality-controlled properties) or *Hazardous Areas* may require limitations being placed on treatments that can be used and land that can be treated by spraying or other methods of application).

(b) Contact all *Landholders* or *Occupiers* of affected properties, use the *Landholder* or *Occupier* permission form and provide 7 *Business Days'* notice of intentions to commence *Herbicide Treatment*. Obtain completed *Landholder's* or *Occupier's* permission, signed by *Landholder* or *Occupier* before any *Herbicide Treatment* can commence. These forms are to be returned with monthly invoice. Carry out the *Herbicide Treatment* within 20 *Business Days* of notice being provided to *Landholder* or *Occupier*.

(c) *Service Provider*s, where permission is not given by the *Landholder* or *Occupier*, arrange an alternate solution in the first instance; otherwise immediately notify the *Energy Queensland Officer* so that alternate treatment can be negotiated by *Energy Queensland*.

(d) Leave gates in an "as found" condition unless directed in writing by the *Landholder* or *Occupier*.

14.5 Hazardous Areas, State Forests, National Parks, Vegetation Protected By Vegetation Protection Orders (VPOS)

Determine if any of the areas to be treated are in a declared "*Hazardous Area*", a State Forest, and National Park, subject to a *Vegetation* Protection Order (VPO) or other restrictions under the *Law*s including the Nature Conservation Act. Determine the requirements / restrictions that apply and ensure requirements of any Codes and *Law*s including the Agricultural Chemical Distribution Control Act and Regulations (Qld) are complied with.

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14.6 Control of Invasive Plants (Weeds)

Use all reasonable and practical measures to minimise spread of *Invasive Plants (Weeds)* and comply with requirements of Clause 8.6 of the *WCS*133.

14.7 Environmental Criteria

When using chemicals, environmental considerations are extremely important, and ensure adherence to set criteria below:

(a) Only chemicals approved for use on targeted species and within the field environment in which they are required to operate on *Energy Queensland Overhead Conductors* and supporting infrastructure corridors and *Access* tracks can be used by suitably commercial licensed and qualified employees (*Operators* or Subcontractors).

(b) When engaged to conduct *Herbicide Treatment*, *Service Provider*s' chemicals are NOT permitted to be stored at *Energy Queensland* sites.

(c) All chemicals used, acceptable to the *Authority* administering the area and used in strict accordance with manufacturer's requirements and if established, any additional requirements required by *Authority* or *Energy Queensland*. Records of which chemical used, and areas treated, documented, and maintained in accordance with *Law*s and as part of project / contact documentation.

(d) Disposal of any waste chemical or control of any chemical spill, in strict accordance with the *Law*s and manufacturer's (generally detailed in the *SDS*) and *Authority* requirements.

(e) Immediately report to *Energy Queensland Officer,* any spill that does or has potential to result in environmental nuisance or harm being caused.

(f) Near to or on certified organic farmland and chemical-free properties and land (e.g., Cattlecare, HACCP and other quality-controlled properties), apply *Herbicide*s to *Vegetation* with extreme caution ensuring contamination of crops or farmland and injury to livestock by spray drift does not occur.

14.8 Application

(a) Fit appropriate signs to vehicles to alert other traffic when applying *Herbicide*s from a moving vehicle.

(b) *Herbicide*s considered for use subject to the reviewing of their *SDS* sheets for their specific applications (targeted species and the field environment in which they are required to be applied).

(c) Select and apply *Herbicide* that achieves a 95% kill-rate over a minimum of 12 months.

(d) Read the label and apply *Herbicide* at correct application rate, in optimal weather conditions and using correct application method / equipment.

(e) Properly maintain and correctly calibrate equipment. Maintain all spray equipment in a leak free condition.

14.9 Methods of Application

14.9.1 Foliar Application

(a) Foliar application can be used on *Vegetation* and the application is to be directed at the target, to the point where it runs off. The selectivity of the foliar spray technique is achieved through application to the non-desirable species while not applying to desirable (or low growing) species or by the use of species selective *Herbicides*.

(b) Apply the *Herbicide* in strict accordance with chemical manufacturer's specification for application including any addition of *Surfactant* (wetting agent).

14.9.2 Distribution of Ground Application Herbicide

(a) Ground application *Herbicide* can be used on *Vegetation* where weeds are growing (usually on grazing land). This treatment becomes effective after sufficient rainfall has occurred to move the chemical into the root zone where it is absorbed by plants.

(b) Ground applied *Herbicide* should not be applied in the following situations (if required seek direction from the *Energy Queensland Officer*):

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(i) Salt or *Erosion* prone areas.

(ii) Within 100 metres of a recognised *Watercourse*.

(iii) On land with a *Slope* greater than 20% (11 degrees).

(iv) Under conditions which will cause pellet movement to non-target areas during application.

14.9.3 Special Requirements for Herbicide Use

(a) Near Creeks, Dams, Sensitive Crops and Other Sensitive Areas (e.g., Paddocks Containing Livestock) – Trees or sapling *Regrowth* to be treated near creeks, dams, sensitive crops, and other sensitive areas with a suitably registered *Herbicide*, or as otherwise agreed by the *Landholder* or management agency.

(b) Certified organic farmland and chemical-free properties and land (e.g., Cattlecare, HACCP and other quality-controlled properties) property owners and *Operators* will need to liaise where *Herbicides* are to be used. *Herbicides* will be used in accordance with label and *SDS* requirements.

(c) Use of residual *Herbicides* [remain active in the soil for an extended period of time (months) and can act on successive weed germinations] needs to manage potential movement of the *Herbicide* into sensitive or adjoining areas.

14.10 Worksite Documentation for Herbicide Treatment

At all times, provide at the *Worksite*, the following documents (**as amended from time to time**):

(a) "Regulations and Code of Practice for Management of Hazardous Substances at Workplace", issued by Work Health and Safety Queensland.

(b) The Unrestricted Commercial *Operators* Licence issued under the licensing provisions of the Agricultural Chemicals Distribution Control Act (*ACDC*).

(c) *SDS* of every *Herbicide* being used or being transported / stored on vehicle.

(d) Product labels for particular *Herbicide* being used (Manufacturer's instructions).

(e) Record details in accordance to Section 26 of the Agricultural Chemicals Distribution Control Act for example, location of treatment site, date and time, *Herbicide* used and application rate, *Vegetation* treated and meteorological conditions.

(f) Equipment operating and maintenance manuals for the equipment being used.

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15 Design and Minor Rural New Construction Clearing and *Access* Tracks

15.1 Design and Minor Rural New Construction - General

(a) This Section 15 provides for the clearing (green field) of the routes of proposed overhead power lines in rural areas; the heaping of fallen timber and *Vegetation* along the routes, the provision of *Access* tracks along the centreline / route(s) and from existing public roadways or property *Access* roads and the provision of *Access* gates. *Vegetation* clearing profile(s) *Access* Track(s) nominated on the Site-specific route plan(s) or Construction Issue Plan(s) distributed for identification of route and the extent of the clearing. It is not applicable to clearing and removal of *Vegetation* on existing lines. Section 15 is NOT for specification is not for High-Risk Works. Refer Back to *WCS* 1.5

(b) The specific requirements for clearing of *Vegetation* at green field Site(s) required under Section 15 of this Specification includes:

(c) Clearing of *Vegetation* to the nominated profile including removal by machinery, hand felling and chemical treatment of trees, and the treatment of nominated *Marginal Trees* along the route as directed.

(d) Where identified in the Site-specific Environmental Management Plan, the burning of timber heaped along the Overhead Conductor (powerline) route.

(e) Removal of timber from Site for disposal, where nominated on the Site-specific *Drawings* [route plan(s) or Construction Issue Plan(s)].

(f) Clean up and reinstatement of the Worksite as necessary to the satisfaction of the Authority or *Landholder*(s) and the *Energy Queensland Officer*.

(g) The provision of *Access* tracks suitable for traffic by pneumatic tyred conventional two-wheel drive vehicles and articulated vehicles.

15.1.1 Risk Management

(a) Level 1 Projects – *Access* tracks and land *Stabilisation* and rehabilitation construction and maintenance projects of high complexity and /or high estimated expenditure with requirements for working in environmentally and / or culturally sensitive areas. Where the *Service Provider* will generally be engaged as the Principal *Service Provider* for the works. Often involving multiple stages and with requirements for working in conjunction with other electrical infrastructure construction and maintenance. The degree of construction complexity may require direct specialist environmental or cultural and / or civil engineering input and assessment (e.g., new construction or extension to existing *Access* tracks, land *Stabilisation* and rehabilitation, *Watercourse* crossings, point or distributed load bearing construction of pads, civil construction in areas with surface water and water flow management issues.)

(b) Level 2 Projects – *Access* tracks and land *Stabilisation* and rehabilitation construction and maintenance projects of medium complexity and / or medium estimated expenditure that may involve minimal multiple staged works with minimal requirements for working around and in environmental and cultural heritage sensitive areas (e.g. new minor construction or extension to existing *Access* tracks, installation and maintenance of construction pads, existing *Infrastructure Drainage* and *Access* track drainage maintenance).

(c) Level 3 Projects – *Access* tracks and land *Stabilisation* and rehabilitation construction and maintenance projects of low complexity and / or low estimated expenditure with no requirements for working around and in environmentally and / or culturally sensitive areas, (e.g. gate installation and maintenance, grading and patch repair of existing *Access* track spots).

15.2 Main Specification to Take Precedence

Where a Main Specification accompanies this specification and differs from this specification, the Main Specification shall take precedence.

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15.3 Identification of Route and level of Clearing

Route plans or construction plans for the power line are included, with selected structure positions of existing and proposed power line/s (where applicable) clearly marked. Plans include details of the clearing Profile which applies to the various sections of the clearing and *Access* works. The attached *Environmental Plan* details specific clearing standards / methods and *Access* works to be taken (if any) in identified areas along the route and these take precedence over the requirements of this Specification.

15.4 Scope of Works

Works required under this Specification include:

(a) Clearing to the nominated profile including removal by machinery, hand felling and chemical treatment of trees, the treatment of flagged trees and felling or directional pruning of *Marginal Trees* as directed.

(b) The provision of *Access* tracks suitable for traffic by pneumatic tyred conventional two-wheel drive vehicles and articulated vehicles.

(c) The heaping or removal of fallen trees and other *Vegetation* to the specified requirements.

(d) Removal of timber from site for disposal, where nominated on the *Drawings*.

(e) Stacking of commercial and useable timber.

(f) The installation of *Access* gates in existing fences were shown on the *Drawings* and as nominated by the *Liaison Person*.

(g) Clean up and reinstatement as necessary to the satisfaction of Landholders and the *Liaison Person*.

15.5 Marking of Line Route

The actual Overhead Conductor (powerline) route to be cleared will be shown on a Construction Issue Plan or route plan or a detailed sketch endorsed for use by the *Energy Queensland Officer*. *Energy Queensland* may establish infrastructure locations (for example pole positions) beforehand or alternatively the line route including infrastructure locations will be clearly conveyed by the *Energy Queensland Officer* to the *Service Provider* / *Operator*.

The centreline of proposed power lines will normally be marked by pegs. Structure and stay pegs may also be marked. Offset finder stakes may also be used to show the limits of the clearing.

Marginal Trees: All trees outside the cleared corridor, within the Risk Management Zone, any part of which could fall to within the following safe distances from the centreline of the power line, unless otherwise specified:

- 132kV 3.0 metres;
- 66kV 2.5 metres;
- 33 kV, 22kV or 11kV 2 metres;
- 19.1kV, 12.7kV or 11kV Single Wire Earth Return (S.W.E.R.) line 1 metre;
- Low Voltage line 1.5 metres.

These trees will be flagged/marked with fluorescent pink tape or paint prior to the commencement of work and the cost of treatment of these trees will be included in the scope of the work.

15.5.1 *EMP*/*EWP*/SPRMP (including Cultural Heritage)

Where a project has an area or particular item identified that requires special consideration then it shall be noted on the *Environmental Plan* or SPRMP. These items will also be flagged/marked, unless otherwise stated on the *Environmental Plan* or SPRMP, with Blue tape or paint beforehand by the Designer, *Liaison Person*, Environmental Representative, Cultural Heritage Officer or *Energy Queensland* Representative.

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15.6 Details of requirements for Clearing

The clearing profile for the *Vegetation* clearing at green field Site(s) is either full width or narrow width profile in accordance with the requirements of the provided *Drawings* (Construction Issue Plan or route plan) for the nominated Overhead Conductor (powerline) route, and the Environmental Management Plan and the Cultural Heritage Management Plan as specified, unless directed otherwise in writing by the *Energy Queensland Officer.*

Clearing to the narrow width profile cannot proceed without a completed written approval being provided. The written approval is to be endorsed (signed) by the Regional Asset Manager, Environmental Manager, and Community Liaison Manager, and approved (signed) by the *Vegetation* Specialist.

Where a Main Specification accompanies this specification and differs from this specification, the Main Specification shall take precedence.

15.6.1 Requirements Track and Clearing Requirements - General

The overriding principle is to reduce the extent of bare earth and topsoil disturbance and to encourage low growing *Vegetation* that does not impact on line clearances and *Access* areas. Clearing by chain saw or by using slashers, mega mulchers or groomers that minimise soil disturbance are preferred. Machine clearing methods using the front mounted stick-rake may be used for *Vegetation* clearing works on larger projects. Large rubber tyred articulated machines are preferred to minimise soil disturbance and maintain grass and shrub ground cover where practicable. The method used for clearing each section of line shall be agreed and specified before work commences. Provision is required for a follow up *Herbicide* application to regrowth approximately 3 – 6 months after any mechanical clearing technique to ensure effective control of *Vegetation*. These areas will be identified on a plan at the completion of the initial clearing to assist the *Herbicide* applicator.

Remove all stumps within the width nominated in the clearing profile, with the following exceptions:

- The banks of *Watercourse*s.
- Terrain which is too steep or inaccessible for Machine Clearing.
- Areas subject to *Erosion* or where danger of *Erosion* exists.

beyond 5 metres each side of the centreline, stumps of large trees (approx. 400mm diameter) away from the centreline clearing required for conductor stringing may remain if cut off at stump height (1.0 metre to 1.2 metres above ground) and treated with *Herbicide* as specified in subsection 14.1.

There should be no remaining stumps within 3 metres of the centreline to ensure that line stringing and future maintenance *Access* is not impeded.

Fill all large holes and other damage to the ground surface created by the clearing activities with soil from the adjacent disturbed area and leave the surface generally in such condition as to present no hazard to livestock, vehicles, or horsemen.

Felled trees and other *Vegetation* shall be removed from any firebreak, fence line or *Access* track and from the firebreak between standing timber and the heaps stacked along the power line and shall not be left caught-up in or leaning on any standing timber.

Shade or ornamental trees and wind breaks may require special treatment as directed on-site by the *Landholder* and the *Liaison Person*.

Fire shall not be used by the *Service Provider* as a clearing tool. Any use of fire shall be authorised beforehand by the *Liaison Person* and necessary permits obtained as required under Fire and Rescue Authority Act.

15.6.2 Clearing Width

(a) For Rural *Vegetation* Zones, the nominated corridor clearing width on each side of the route centreline for the relevant Overhead Conductor (powerline) type and voltages is provided in the Table L-1 and Table L-2 below. For Urban *Vegetation* Zones the nominated corridor clearing width on each side of the route centreline for the relevant Overhead Conductor (powerline) type and

voltages is provided in *WCS*1.6, Appendix A -*Vegetation* Management Profiles, Figure A1 - Profile for Urban Area Powerlines.

(b) These nominated corridors clearing width are restricted to the initial clearing of *Vegetation* at green field Site(s) along the nominated Overhead Conductor (powerline) route to gain *Access* for further works (for example, Overhead Conductor (powerline) construction), and all other clearing of *Vegetation* at green field Site(s) in the Overhead Conductor (powerline) corridor(s) is to be in strict accordance with Appendix A - *Vegetation* Management Profiles, of *WCS*1.6.

(c) This nominated corridor clearing width may be varied, and is dependent on the local geographical conditions, for example the *Vegetation* species and mature height of trees, climate and topography of the Site and in accordance with the Site-specific Environmental Management Plan.

Table L-1 – Rural *Vegetation* Zone - Corridor Clearing Widths - Bare Overhead Conductor

Line Voltage	Clearing Width on each side of the centreline
132kV	20 metres
66kV	15 metres
33 kV, 22kV or 11kV	10 metres
19.1kV, 12.7kV or 11kV Single Wire Earth Return Line	7.5 metres
Low Voltage Open Wire Line	5 metres

Table L-2 – Rural *Vegetation* Zone - Corridor Clearing Widths - Aerial Bundled Cable and Covered Conductor

Line Voltage	Clearing Width on each side of the centreline
33 kV, 22kV or 11kV	3 metres
Low Voltage ABC Line	1.5 metres (The clearing width may be extended to 3 metres on one side where vehicular *Access* is required)

15.6.2.1 Full Width clearing

The clearing profile is to be in accordance with, *WCS*1.6 -*Vegetation* Management Profiles, Appendix A , Figure A2 - Profile for Rural Area Powerlines detailing the nominated clearing width distance either side of the centre line (DFCL) that is applicable for the specified Overhead Conductor (powerline) voltage.

Marginal Trees are to be treated as directed by the *Energy Queensland Officer*.

Marginal Trees are flagged / marked with fluorescent pink tape or paint and the specific *Vegetation* management requirements will be stated on the Site-specific route plan(s), Construction Issue Plan(s) and / or in the approved clearing instructions provided by the *Energy Queensland Officer.*

At infrastructure positions along the Overhead Conductor (powerline) route the clearing width either side of the centre line may need to be increased to allow the *Access* track to be divided and permit vehicles to drive each side of the infrastructure position for construction and maintenance activities to occur.

15.6.2.2 Narrow Width Clearing

The clearing profile is to be in accordance with *WCS*1.6 - *Vegetation* Management Plan, Appendix A - *Vegetation* Management Profiles, Figure A2 - Profile for Rural Area Powerlines.

At infrastructure positions along the Overhead Conductor (powerline) route the clearing width either side of the centre line may need to be increased to allow the *Access* track to be divided and permit vehicles to drive each side of the infrastructure position for construction and maintenance activities to occur. An *Access* track is to be prepared which is trafficable by conventional 4-wheel drive vehicles and also articulated heavy

vehicles, as per *Access* track standards in Section 9. The location of *Access* tracks will be marked in the field before commencement of clearing.

At structure positions the *Access* track shall divide to allow vehicles to drive each side of the structure to allow for construction and maintenance activities.

15.6.3 Infrastructure Sites

Infrastructure locations may be pegged along the Overhead Conductor (powerline) route.

Even though a narrower width of clearing for the corridor may be specified for areas along the Overhead Conductor (powerline) route, *Complete Clearing* including the removal of all stumps is required at each infrastructure location to allow for the establishment of laydown areas and heavy plant pads for construction and maintenance activities to occur at the Site.

Sufficiently cleared areas of *Vegetation* (including trees) are required for the construction and maintenance of laydown areas and heavy plant pads at each infrastructure location. The radial dimensions of the areas for *Vegetation* (including trees) required to be cleared will be determined by the type of heavy plant and equipment that will need to *Access* the Worksite at the infrastructure location. The radial dimensions of the areas for *Vegetation* (including trees) required to be cleared at each infrastructure location will be specified on the site-specific construction issue plan(s) or route plan(s).

15.6.4 Water Courses, Areas Subject to Erosion, and Steep Terrain

Machine clearing shall not be undertaken within a zone of 10 metres from the banks of any *Watercourse*. Within such zones, hand clearing procedures shall be adopted, and trees felled at stump height. All fallen timber is to be snigged or winched above the flood zone. Pushing or falling of trees and debris into a *Watercourse* is prohibited.

Clear only the minimum amount of *Vegetation* required below the banks of any *Watercourse*. Only *Vegetation* that has the potential to breach safe electrical clearances shall be removed, as directed by the *Liaison Person*.

Areas subject to *Erosion* or in*access*ible for machine clearing, including a 10-metre perimeter, shall be cleared by hand clearing procedures and trees felled at stump height. Every endeavour shall be made to fell all timber into a position that will not concentrate the flow of runoff. The *Liaison Person* shall direct the extent of any additional *Erosion* prevention measures or techniques required. Payment for additional works directed by the *Liaison Person* shall be made at the hourly rates nominated in the Applicable Schedule.

The *Liaison Person* may instruct the *Service Provider* in writing to fell trees in other areas at stump height, at no price variation.

Vegetation cleared by hand is to be cut as close as possible to the ground (<150mm). Higher stumps may be retained if required by the *Landholder*. Felling of trees at stump height shall be by axe or saw, without sharp protrusions being left on stumps.

With the exception of stumps remaining in a *Watercourse*, all stumps must be treated with an approved *Herbicide* in accordance with the manufactures recommended method of application. Stumps remaining in a *Watercourse* are to be swabbed with Roundup Bioactive at the recommended dose immediately after cutting to reduce the potential for regrowth.

15.6.5 Steep Side *Slope*s

Where land *Slope*s steeply across the route of the line (greater than 15 degrees) and no instruction is given on the plans, the *Liaison Person* may direct:

(a) The clearing width be displaced towards the higher side of the centreline and the *Service Provider* shall then clear the full displaced width; or

(b) The clearing width is displaced towards the higher side of the centreline and selective clearing be employed on the lower side of the centreline.

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15.6.6 Deep Gullies

In areas such as deep gullies and valleys where the line conductors will be high above the tops of mature trees, only a portion of the gully may require clearing or no clearing may be required. In these cases, instructions are provided in the *Environmental Plan*. The extent of clearing shall be to the satisfaction of the *Liaison Person*.

15.6.7 Structure Sites (If pegged)

Even though a narrower width of clearing may be specified for a general area, *Complete Clearing* including the removal of all stumps is required at each structure site to allow for construction and maintenance activities.

Unless shown otherwise on the *Drawings* or directed otherwise by the *Liaison Person*, the following clearing is required:

(a) On Road Easements – the felling or Directional Pruning of trees and other *Vegetation* as directed by the *Liaison Person*

(b) All Other Locations – clearing and levelling of the following size, centred about the structure location:

• 66kV line	900 square metres (30mX30m)
• 33kV, 22kV or 11kV line	400 square metres (20mX20m)
• 19.1kV or 12.7kV Single Wire Earth Return	225 square metres (15mX15m)
• Low Voltage line	100 square metres (10mx10m)

15.6.8 Clearing Works Required Outside the Defined Clearing Width

The *Service Provider* shall fell, or directional prune as directed, *Marginal Trees*, irrespective of the direction in which they may at present be leaning.

Trees and other *Vegetation* felled outside the defined clearing width shall be removed from any firebreak, fence line or *Access* track and from the firebreak between standing timber as described in subsection 8.2.

15.6.9 Clearing on Roads, State land and Freehold land

On main roads and local authority roads, preservation of trees is required where possible. Subject to the relevant Authority's requirements, the *Liaison Person* may direct particular trees and other *Vegetation* to be felled or directionally pruned.

(a) Main Roads

The *Service Provider* shall comply with the conditions of the agreement granted to Ergon Energy by the Department of Main Roads for clearing works along Highways.

(b) Local Authority Roads

The *Service Provider* shall comply with the conditions of the agreement granted to Ergon Energy from a Local Authority to clear along roads under their jurisdiction.

(c) State Controlled Land

Timber on roads and certain leasehold land and reserves etc. remains the property of the Crown. The *Service Provider* will comply with any specifications and directions regarding the salvage and disposal of merchantable timber provided to Ergon Energy by the responsible State Government Agency. (DERM, DPI or Main Roads)

(d) Freehold Land

The *Service Provider* shall comply with the conditions of the permit granted to Ergon Energy from the Department of Environment and Resource Management for clearing on freehold land where required in accordance with the Sustainable Planning Act and the *Vegetation* Management Act.

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The *Liaison Person* will reinforce with the *Service Provider* the requirements of relevant Authorities, contained in permits or authorisations.

15.6.10 Heaping or windrowing (if agreed by the land holder)

Gather together all fallen timber including *Marginal Trees*, branches, scrub, undergrowth, and combustible material resulting from the clearing operation together with any leaf litter and logs, and stack in neat compact heaps (compressing the heaps after stacking). Stick rakes or other approved equipment shall be used to minimise ground surface disturbance and soil content in the heaped material. Trunks, tops, limbs, and roots shall be trimmed, and the heaps formed parallel to the centre line clear of all road works, drains, *Watercourse*s, banks, fences, gates, or structures.

Locate heaped material clear of power lines and at least 10m clear of all drains and *Watercourse*s or their flood banks, to prevent obstruction to water flow. Stacking shall be carried out in such a manner that any flow of water shall not dislodge the heaps. Where practicable, without contravening any other provision of this Specification the heaps should be located on the lower side of the centre line only, and where any danger of flooding exists the heaps shall be located on the downstream side of the centre line and any structure.

Heaps shall not be in a continuous unbroken line but shall be not more than 20 metres long and 3 metres high, with 5 metre gaps provided between heaps to permit the passage of stock and vehicles. The heaps shall be left in such a way that burning may be carried out without further stacking and without danger to any adjacent property or to the overhead power line.

A definite fire break shall be required between the heaps and standing *Vegetation*, the gap distance to be determined in consultation with the property owner. The *Service Provider* shall liaise with the *Landholder* for any special instructions regarding *Access* to the site before clearing work commences on the property.

All large loose stones, rocks or boulders shall be moved to the edge of the cleared area, or to specific positions within the cleared area as directed by the *Liaison Person*. Location of all heaps of rubble is subject to the approval of the *Liaison Person*.

15.6.11 Preservation of Timber of Commercial Value

The *Service Provider* shall trim any logs of commercial value to currently accepted standards and any other timber required by *Landholder*s for their own use and leave neatly and compactly stacked. Locate clear of the centre track, power lines and clear of heaps of fallen timber, to the approval of the *Liaison Person*.

15.6.12 Trimming or Pruning of Remaining Trees

Where trees are to be retained and pruned, the pruning shall be carried out to AS 4373 Pruning of Amenity Trees. The Standard details techniques that reduce the risk of hazard development, branch failure, fungal infection, or premature tree death. The procedures in the Standard are based on the widely accepted theories of compartmentalisation of decay in trees.

15.7 *Access* Tracks

15.7.1 *Access* Tracks - General

The *Service Provider* shall provide vehicular *Access* to the whole line route, with additional *Access* tracks from existing public roadways or property *Access* roads where detailed on the *Drawings* and marked in the field. Designated avoidance areas such as Cultural Heritage sites, steep *Slope*s or riparian zones shall also be marked in the field. *Access* track location and construction shall be in accordance with WSC 1.5. *Access* Tracks Construction Standards and Specifications

The centre line *Access* track shall be as straight as practical, and generally follow the power line centre line for the entire line route except in areas of cultivation and where, because of steep *Slope*s, impassable creeks or other obstructions, the track would not be trafficable by conventional four-wheel drive pneumatic tyred vehicles and articulated vehicles. At structure positions the track shall divide to allow vehicles to drive each side of the structure to allow for construction and maintenance activities.

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Construction of *Access* tracks shall be finished by power grader or by bulldozer blade where an adequate travel surface standard to the satisfaction of the *Liaison Person* can be achieved. Every effort shall be made to preserve existing grass cover and no windrows of soil or debris are to be left on the lower side of the track or across drainage lines. Drainage is to be directed away from the centre line of the route.

Access tracks shall be free of stumps, stakes, timber, protruding rocks, holes, or any unevenness which could restrict the progress of vehicles along the route during construction, patrol, or maintenance of the power line. In addition, overhanging branches shall be removed up to 5 metres above tracks to provide clear *Access* for vehicles. Table 3 details the minimum standard for construction of *Access* tracks constructed under this specification.

The *Service Provider* is responsible for ensuring that existing *Access* tracks are adequate and safe for use by all users during the course of the clearing works, and is responsible for upgrading if required, at no cost to Ergon Energy. All *Access* tracks and crossings shall be maintained in a good trafficable condition, and where damage is caused by activities of the *Service Provider*, reconstructed as necessary on completion of works. Such maintenance and reconstruction shall be to the satisfaction of and at no cost to *Energy Queensland* Energy.

15.7.2 *Access* Track Standards and Specifications

Table 3: Access Track Standards and Specifications

Design parameter	Standard
Formation	Crowned with cross fall of 1-3 degrees on ridge top or flat ground Out *Slope*d with 1-3 degrees outfall inside cut locations
Pavement surface	Natural weathered surface with *Patch Gravelling* on clay soils to improve traffic-ability. The desirable surface is short grass to minimise *Erosion*.
Pavement width	2.8 metres minimum, 4 metres maximum
Shoulder width	0.6 metres
Clearing width for track, if track is away from powerline easement	1 metre either side of earthworks (track formation)
Maximum gradient	10 degrees but may be steeper where construction results in less disturbance and the surface provides good traction.
Formation in Wet Tropics, National Parks, and State Forest	3-metre-wide formation. 4-metre-high to *Vegetation*.

15.7.3 Gullies and Watercourses

Where the *Access* track crosses gullies or *Watercourse*s the *Service Provider* shall make the approaches so that, as far as possible, no scouring will occur during flooding or heavy rain. Where cutting is required, a wide mound of earth (*Whoa-boy*) should be left at the head of the cutting to prevent runoff water being funnelled into the cutting. Crossings should neither be built up above nor undercut below the bed of the *Watercourse* or gully at the crossing. Placing of logs, stones, pipes, etc. is generally not required. If the *Watercourse* or gully is such that, in the opinion of the *Liaison Person* a track constructed across it would not be or remain trafficable, then no track shall be provided. If clearing or *Access* tracks impact on the bed or banks of a *Watercourse*, work should be conducted under the conditions of a Riverine Protection Permit issued under part 8 of the Water Act.

In such cases an *Access* track not nominated on the plan may be required around the obstacle and advised in writing by the *Liaison Person*.

15.7.4 Steep Terrain

Where the *Access* track must be located off the contour or directly down a *Slope*, the grade of the track should not exceed 10 degrees. When the natural *Slope* is over 10 degrees, the track may be cut around the

side of the hill or ridge to gain extra length to achieve the required grade. In areas of side *Slope* where cutting is required, the track shall be constructed with a slight out *Slope* so that runoff water discharges along the full outer edge of the track, as per table 3.

15.7.5 Drainage Control

'*Whoa-boys*' (earth mounds) shall be constructed on tracks of 6% (1 in 16) (3.5 degrees) or greater *Slope* to prevent water flowing along the track. The height of '*Whoa-boys*' should be approximately 300mm (compacted) and the spacing in metres along the track may be calculated by using the formula:

200 / % Grade

For example: On a 10% grade, '*Whoa-boys*' would be 20 metres apart.

On small grades, '*Whoa-boys*' should be constructed from the downhill side with either a grader or bulldozer, so the topsoil and *Vegetation* on the uphill side of the mound remains undisturbed. On steep grades, '*Whoa-boys*' may be constructed from the uphill side provided the soil is collected gradually so as not to leave a deep gutter next to the mound. All '*Whoa-boys*' shall be rolled with the wheels or tracks of the machine to help stabilise the newly constructed mound.

Where required, discharge drains shall be constructed from the lower end of '*Whoa-boys*', extended where necessary to discharge onto a stable vegetated area, and also to prevent runoff water flowing onto other sections of the *Access* track.

Where earth is excavated to construct benching for crane operations on steep sites topsoil from the excavation shall be stockpiled and spread over the banks to encourage *Stabilisation*, to enable future use of the benching by maintenance plant. Provision may be made for *Stabilisation* of these disturbed sites with grass seed or other recognised soil *Stabilisation* techniques, to be nominated in the Main Specification.

15.8 *Access* Gates

The *Service Provider* shall install *Access* gates of the size and style nominated in either the *Drawings* or in the Main Specification, along the route of the power line. Gates, posts, and fittings shall be supplied and delivered by *Energy Queensland* to a single site along the line route to be agreed beforehand by the *Liaison Person* and the *Service Provider*.

Installation includes cutting of the existing fence and removal of posts where necessary, the piecing, re-tensioning, and retying including repair, if necessary, to restore the fence to as good as or better condition as existed prior to the erection of the gate.

15.9 Additional Works and Variation of Clearing

The *Service Provider* shall undertake such additional clearing and *Access* works not provided for in the previous sections, as may be directed by the *Liaison Person* in writing during the course of the contract, under the terms and conditions of the Specification. Payment for such works shall be at the rates tendered in the applicable Schedule.

15.10 Damage to Property

15.10.1 Damage to Property - General

For the purpose of clearing and *Access* work this clause shall take precedence over the 'Damage to Property' clause in other Standard Specifications.

The *Service Provider* shall plan and carry out the work under this specification in such a manner as to minimise the occurrence of damage to or loss of any property, improvements, services, livestock, poultry, cultivation, crops, etc. Any such damage or loss (including time spent searching for straying livestock, payment of pound fees, etc.) caused by the *Service Provider* or plant shall be at the expense of the *Service Provider* and shall be immediately repaired, replaced, or otherwise rectified by the *Service Provider* to the satisfaction of the *Liaison Person* and *Landholder*.

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Failing restoration of damaged property or payment of adequate compensation to the injured party, the *Service Provider* shall indemnify Ergon Energy against all actions, proceedings, claims, demands, damages, penalties, costs, charges, and expenses of any description in respect of or arising out of such damage.

15.10.2 Improvements and Services

The *Service Provider* shall be responsible for locating and avoiding damage being caused to water mains, cables, drains, culverts, roads, grids, bridges, power lines, telephone lines and other improvements or services.

15.10.3 Fencing and Gates

Gates and fences shall be kept stock proof at all times, and timber shall be felled and disposed of so that damage to fencing or gates is avoided. No timber or debris shall be left lying on or adjacent to any fence or gate. Any damage caused to fencing or gates shall be immediately repaired to the satisfaction of the *Liaison Person* and the *Landholder*. If the *Service Provider* requires removing fences to obtain working space, the *Service Provider* shall immediately provide and install, at no cost to *Energy Queensland*, suitable temporary stock-proof fencing of sound construction to the satisfaction of the *Liaison Person* and the *Landholder*.

Gates shall be left as found and where closed shall be closed and fastened immediately after ingress or egress. All temporary fences or gates shall be removed by the *Service Provider* immediately they are no longer required, and the original fence shall be restored by the *Service Provider* to the satisfaction of the *Liaison Person* and the *Landholder*.

15.10.4 Hedges and Other Barriers

Other than work agreed to by the *Liaison Person* and *Landholder*, any damage to hedges and other barriers between properties or paddocks within properties shall be immediately rectified by installation of a suitable fence at the expense of the *Service Provider* and to the satisfaction of the *Liaison Person* and *Landholder*

15.10.5 Crops and Cultivated Areas

The *Service Provider* shall ensure that the work under this Specification is carried out in such a manner that damage to cultivated areas and crops, including pasture grass and fruit trees, is kept to a minimum. In levelled cultivated areas no *Access* track dozing or grading shall be required. Where possible, *Access* tracks shall be located to avoid such cultivated areas, crops etc., and vehicles and plant shall travel around and not through such areas except when necessary to carry out actual work within their confines.

Any damage or loss caused by the *Service Provider* or *Service Provider*'s plant to cultivate areas and crops etc., which in the opinion of the *Liaison Person* could reasonably have been avoided, shall be at the expense of the *Service Provider*.

15.11 Obstructions to Roads & Bridges

Any obstructions to roads, bridges, tracks, *Watercourse*s, dams that prevent normal *Access*, caused during clearing shall be removed immediately, and the original conditions restored without delay.

15.12 Straying Livestock

The *Service Provider* at all times shall be entirely responsible for ensuring that livestock do not stray on roadways or from their confined pastures due to any fault, negligence or damage caused by the *Service Provider*, or the *Service Provider*'s plant. If any claim shall arise in respect of any livestock which have strayed as a direct or indirect cause of any work performed by or on behalf of the *Service Provider*, then such claim shall be the responsibility of the *Service Provider*, whether such claim arises during the execution of the work or at any later date.

15.13 Permission to enter properties

Where work is to be carried out on private property *Energy Queensland* will obtain an easement, a wayleave or alternatively "Consent to Enter" before work is commenced. On major projects a schedule setting out the

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real property description of all land to be crossed by the power line, together with any special requirements of the *Landholder* that are known to *Energy Queensland*, will be provided to the *Service Provider* prior to the commencement of field work.

Before entering any property, the *Service Provider* shall notify the respective *Landholder* of the intention to enter the property for the purpose of carrying out clearing or *Access* works and for ascertaining any additional requirements concerning work on the particular property. Such notice shall be given at least forty-eight (48) hours before commencing clearing or *Access* work on that property.

15.14 Benchmarks & Reference Trees

Before interfering with any marked trees associated with the powerline survey the *Service Provider* shall advise the *Liaison Person* of the intentions. Care should also be taken to avoid disturbance to trees that may have indigenous cultural heritage value (scar trees). Discovery of Indigenous Cultural Heritage and any trees carrying benchmarks. That are required to be removed shall require *Energy Queensland* approval first. They shall be cut one metre above such marks, where practicable, and the cut

must have a *Slope* of 25mm/300mm. After cutting, the exposed end grain shall be protected by a galvanised iron or sheet aluminium cap securely fixed to the stump.

Reinstatement of any marked trees disturbed or removed by the *Service Provider* shall be at the *Service Provider*'s expense.

15.15 Pegs & Survey Marks

The *Service Provider* shall be held responsible for any pegs or survey marks destroyed, removed, or disturbed during clearing operations and shall bear the cost of resurvey where necessary and replacing of such pegs or survey marks, including any survey pegs previously placed by Ergon Energy to indicate the proposed power line. The *Service Provider* shall immediately advise the *Liaison Person* in writing of any pegs disturbed.

15.16 Working in Proximity to Electrical Parts

The *Service Provider* shall ensure that all workers observe the exclusion zones (in most cases, at least 3 metres) prescribed under the Electrical Safety Regulation, and the Code of Practice for Work in proximity to Electrical Parts. All workers shall be treated as untrained persons for exclusion zones purposes unless they have been specifically designated as Authorised Persons pursuant to section 59 of the Electrical Safety Regulation.

Trees (or any parts of trees) that are considered to be within these exclusion zones are to be avoided and reported to the *Liaison Person* immediately.

The *Service Provider* shall ensure by mechanical restraint that falling trees do not infringe on the exclusion zones.

When using rope as a restraint, use a fibre or synthetic rope of adequate strength in preference to a steel wire rope for increased electrical safety in situations of marginal clearances.

A tree branch or limb shall only be cut when it is below the conductors or would not fall onto the conductors when cut. Where there is no such assurance the line shall be de-energised prior to undertaking tree trimming work.

15.17 State Forests, National Parks, Conservation Parks

Under no circumstances shall the *Service Provider* undertake any work within a State Forest, National Park, or Conservation Park, without first having obtained explicit instructions from the *Liaison Person*. Operations here will be under a specific *EMP*, and boundaries will be clearly identified. Site specific inductions to communicate the requirements of the *EMP* will be conducted for all workers before work commences on these sites. State Forest, National Parks and Conservation Parks including area with CH are considered not to be MINOR works.

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15.18 Acts, Regulations, By-Laws and Approvals

Service providers shall have all required Acts, Regulations, By-Laws, as per a work site.

The *Service Provider*s shall have all relevant Acts, Regulations, By-Laws, Approvals and shall observe the requirements of any Government or Semi-Government Department, Local Authority, owner, or lessee of property through which the route passes or adjoins.

16 Construction and Maintenance of Wash Down Facilities

16.1 Construction and Maintenance of Wash Down Facilities - General

All construction methods and materials used are to be in accordance with the included clauses of this Specification and attached *Drawings* (specification) of this Section 16:

(a) Figure M-1 – *Access* Track Infrastructure – Temporary Wash Down Facilities – Construction and Maintenance Details.

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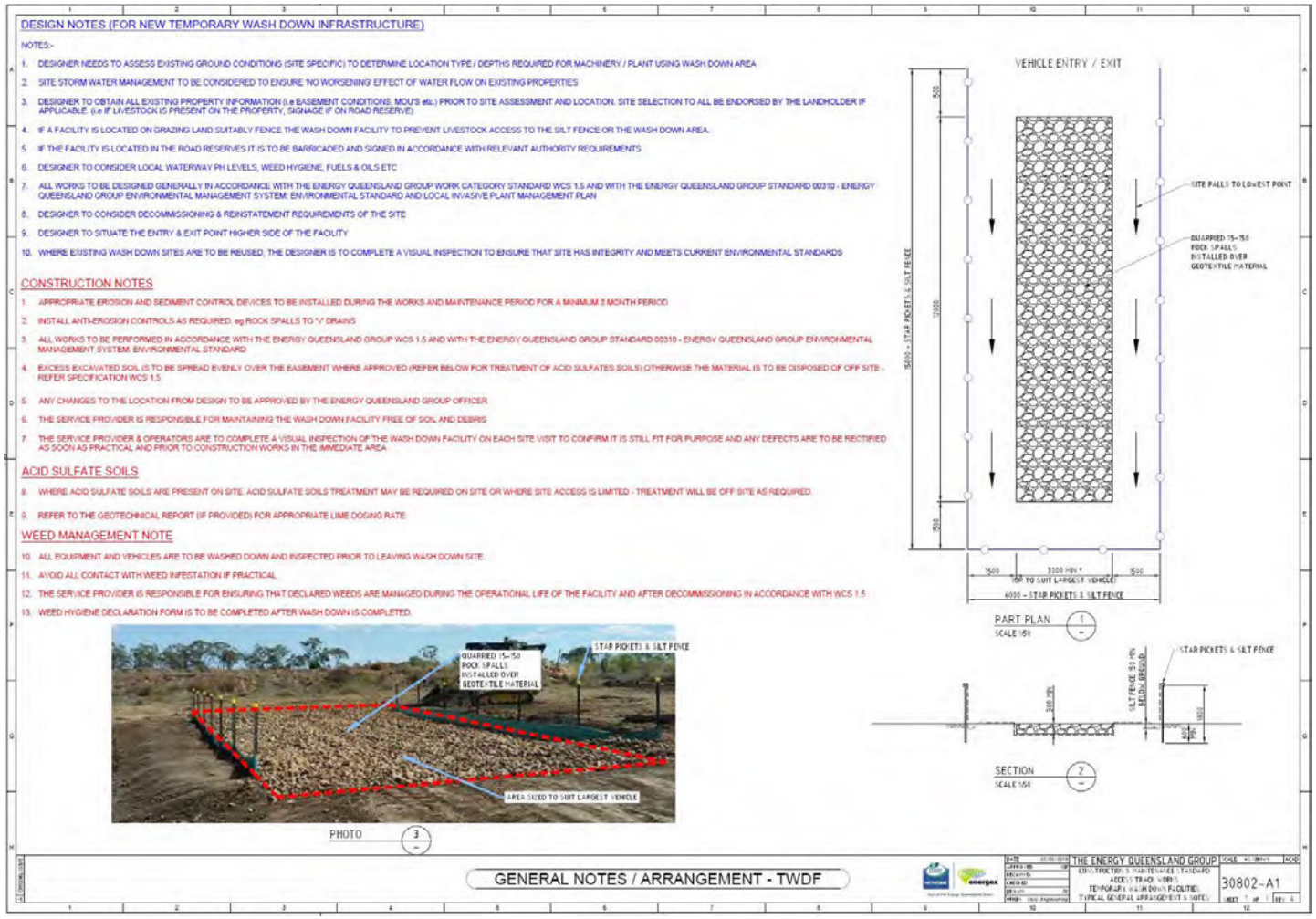

Figure M-1 – *Access* Track Infrastructure – Temporary Wash Down Facilities – Construction and Maintenance Details.

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17 Construction and Maintenance of Helicopter Landing Sites

17.1 Construction and Maintenance of Helicopter Landing Sites - General

All construction methods and materials used are to be in accordance with this Specification, Section 17, and in accordance with the *Energy Queensland* Aviation Standard.

(a) Figure N-1 – Helicopter Landing Sites – Maintenance Standard – General Arrangement Sheet 1.

(b) Figure N-2 – Helicopter Landing Sites – Maintenance Standard – General Arrangement Sheet 2.

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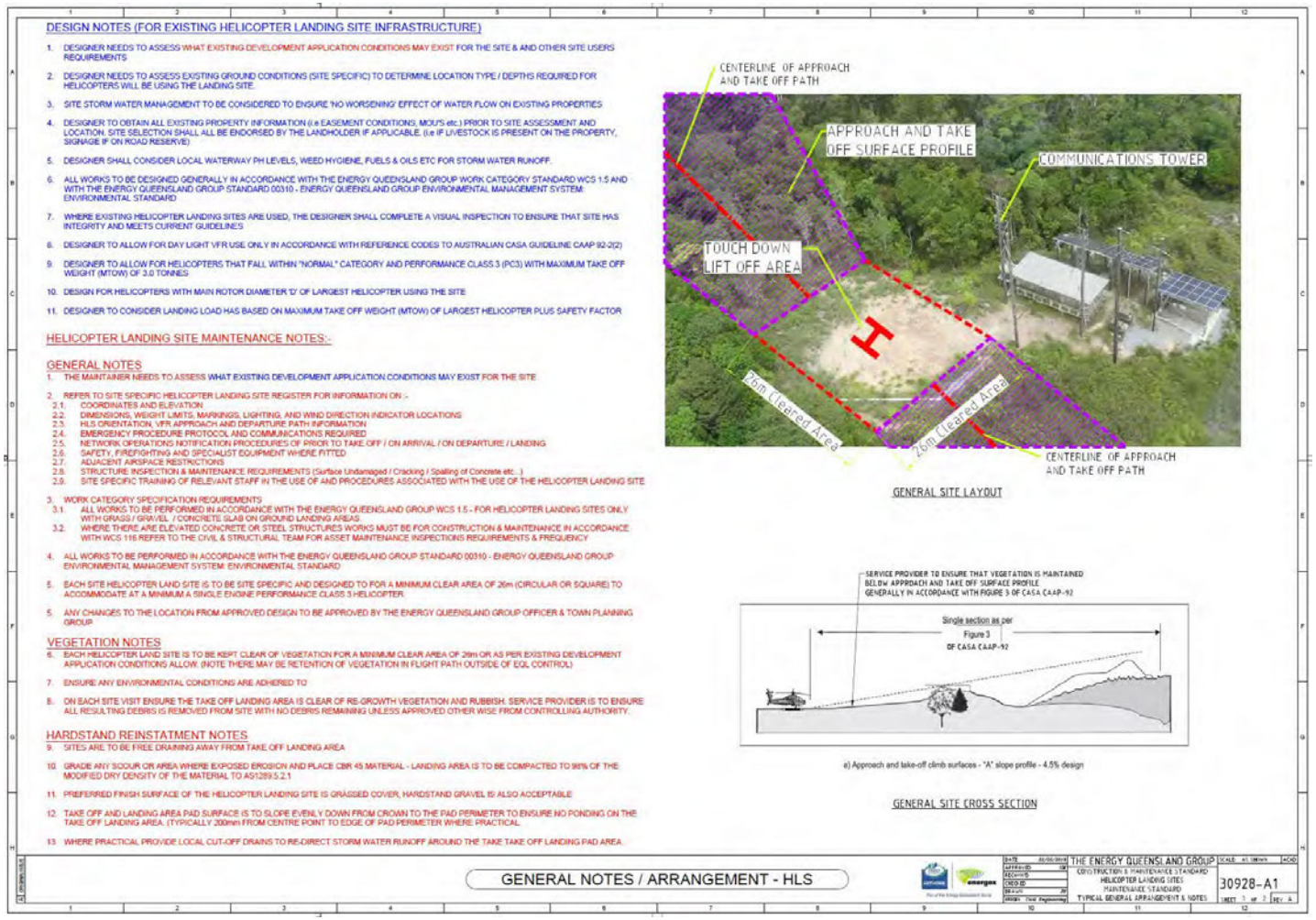

Figure N-1 – Helicopter Landing Sites – Maintenance Standard – General Arrangement Sheet 1.

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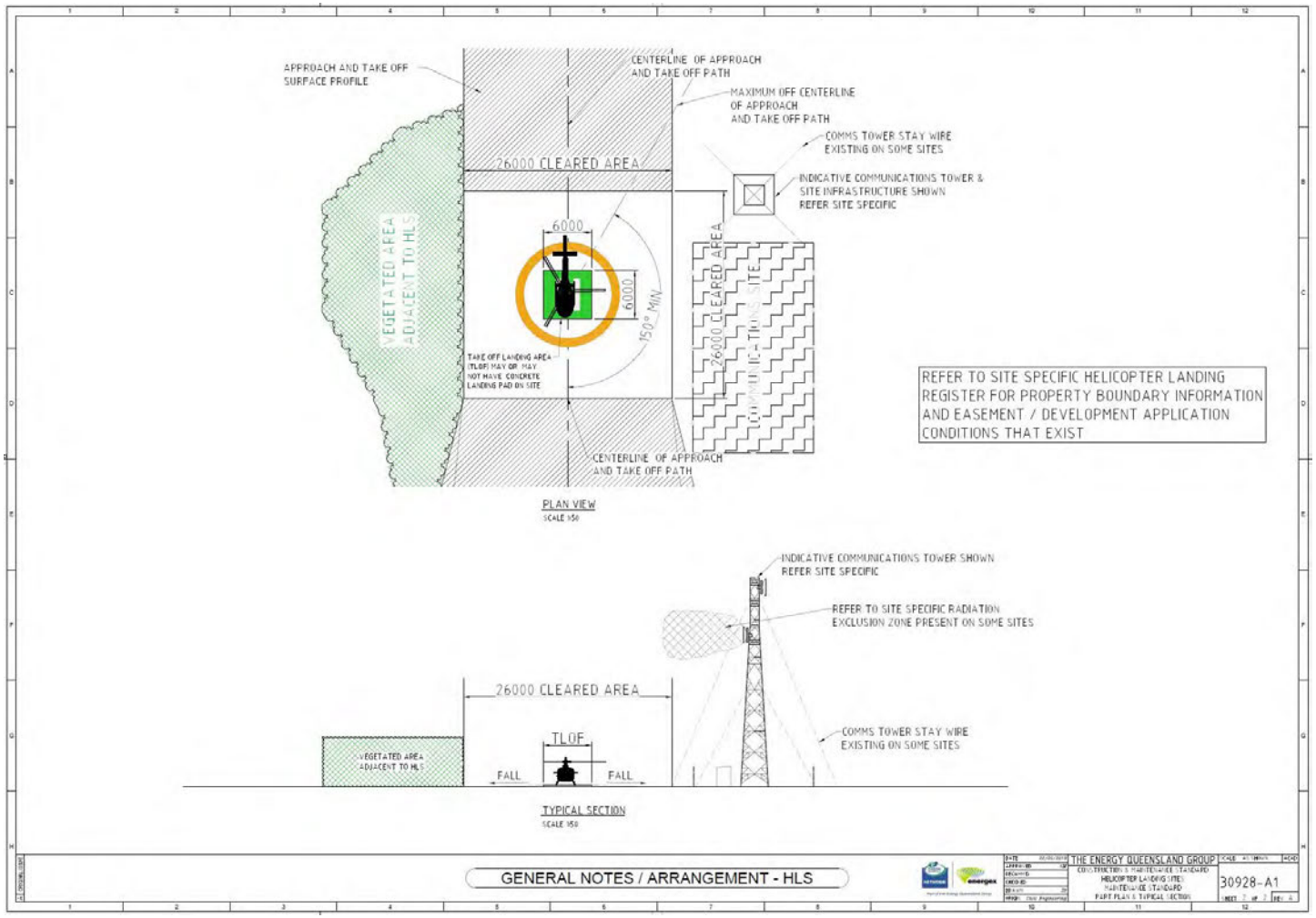

Figure N-2 – Helicopter Landing Sites – Maintenance Standard – General Arrangement Sheet 2.

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1. SCOPE

This Work Category Specification (*WCS1.5*) documents the *Service* requirements for land management (including the construction, condition assessment and maintenance of *Access* track infrastructure, and land *Stabilisation* and Rehabilitation) in the vicinity of *Energy Queensland's* electricity network.

1.1 General

(a) As part of and in conjunction with this *WCS*1.5, read *WCS*133 for the general standards and conditions that are relevant to, and are incorporated into this category of work.

(b) For the avoidance of doubt, a breach of a general standard or condition contained in *WCS*133 is a breach of *WCS*1.5.

(c) The civil construction and maintenance relative to land management including and not limited to *Access* tracks, infrastructure projects at remote and inaccessible locations and land *Stabilisation* and rehabilitation. Typically, this work occurs at *Sites* with varying degrees of construction / maintenance complexity and environmental sensitivity (e.g., significant environmental and cultural heritage areas, *Watercourses,* and tidal land in accordance with *WCS*133). This involves projects of varying duration, expenditure and complexity as outlined below:

(i) Level 1 Projects – *Access* tracks and land *Stabilisation* and rehabilitation construction and maintenance projects of high complexity and /or high estimated expenditure with requirements for working in environmentally and / or culturally sensitive areas. Where the *Service Provider* shall generally be engaged as the Principal Contractor for the works. Often involving multiple stages and with requirements for working in conjunction with other electrical infrastructure construction and maintenance. The degree of construction complexity may require direct specialist environmental or cultural and / or civil engineering input and assessment (e.g., new construction or extension to existing *Access* tracks, land *stabilisation* and rehabilitation, *Watercourse* crossings, point or distributed load bearing construction of pads, civil construction in areas with surface water and water flow management issues.)

(ii) Level 2 Projects – *Access* tracks and land *stabilisation* and rehabilitation construction and maintenance projects of medium complexity and / or medium estimated expenditure that may involve minimal multiple staged works with minimal requirements for working around and in environmental and cultural heritage sensitive areas (e.g. new minor construction or extension to existing *Access* tracks, installation and maintenance of construction pads, existing *Infrastructure Drainage* and *Access* track drainage maintenance).

(iii) Level 3 Projects – *Access* tracks and land *stabilisation* and rehabilitation construction and maintenance projects of low complexity and / or low estimated expenditure with no requirements for working around and in environmentally and / or culturally sensitive areas, (e.g., gate installation and maintenance, grading and patch repair of existing *Access* track spots).

Note: Level 3 *Service Providers* only perform Level 3 land management and land *stabilisation* / rehabilitation projects.

Note: Level 2 *Service Providers* may perform Level 2 or Level 3 land management and land *stabilisation* / rehabilitation projects.

Note: Level 1 *Service Providers* may perform Level 1, Level 2 or Level 3 land management and land *stabilisation* / rehabilitation projects.

1.2 Application

(a) The application of land management Services includes, but is not limited to, the following functions:

(i) Construction, condition assessment and maintenance of *Access* tracks.

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(ii) Construction, condition assessment and maintenance of *Minor Creek Crossings*.

(iii) Construction, condition assessment and maintenance of *Infrastructure Drainage*.

(iv) Construction, condition assessment and maintenance of gates.

(v) Construction, condition assessment and maintenance of pads / laydown areas.

(vi) Construction, condition assessment and maintenance of wash (clean) down facilities (bays) for the control of *Invasive Plants (Weeds)*.

(vii) Construction, condition assessment and maintenance of helicopter landing sites.

(viii) Installation and maintenance of *Access* directional and structure location signage.

(ix) Clearing of *Vegetation* limited to the width of *Access* track footprint.

(x) Chemical control of *Invasive Plants* (Weeds).

(xi) Land *stabilisation* and rehabilitation.

(xii) Clearing of *Vegetation* limited to either side of the proposed *Overhead Conductor* (powerline) route centreline at green field sites.

(xiii) undertaken to facilitate the construction of new or maintenance of existing electrical *Overhead Conductors* and supporting infrastructure and the installation of electrical underground cables on public or private property and other nominated areas.

(b) The applications excluded from *Services* being provided, are:

(i) Clearing of *Vegetation* for maintenance utilising mechanical plant on easements and corridors (outside the width of *Access* track footprint).

(ii) Pruning of *Vegetation* (working from an Elevated Work Platform (*EWP*) or rope and harness [tree climbing] or utilising Live Work *Vegetation* removal technique).

(c) Service Providers are required to carry out the construction, condition assessment and maintenance of *Access* tracks (including associated civil infrastructure), and land *stabilisation* and rehabilitation in varying locations throughout the nominated *Energy Queensland* regions.

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2. AMENDMENT RECORD

Release	Release Date	Change
9	04/04/2024	**Section 4 Competencies, Training and Qualifications** • Aligned/Updated EQL/Esitrain course codes: • Removed courses: E295 – Environmental Awareness E298 - Sediment Control Awareness T0524 – Cultural Heritage **Section 6.2 Equipment used for Herbicide Treatment** • Inserted: In accordance with the Chemical Usage (Agricultural and Veterinary) Control Regulation. **Section 8 Environment** • Inserted: Section 8.4 Biosecurity Section 8.5 Fire Ants in South East Queensland Section 8.6 Cultural Heritage **Section 9.1** • Inserted: EQL Specification for Land Management **Section 9.1 General** • Inserted: Work Category Specification *WCS*1.6A – *Vegetation* Management Assessment EQL Standard - Environmental Management Standard EQL Specification - Land Management • Removed: Civil Aviation Advisory Publication CAAP 92-2(1) - Guidelines for the establishment and operation of onshore Helicopter Landing Sites. **Section 12 Glossary** • Included: *RGVM* - Registered Gross Vehicle Mass *Whoa-boy* - Trafficable Diversion Banks **Section 13.1 Available Documents** • Removed: Guidelines for the establishment and operation of onshore Helicopter Landing Sites CAAP 92-2(1) **Section 12 Glossary** • Included: *RGVM* - Registered Gross Vehicle Mass *Whoa-boy* - Trafficable Diversion Banks

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Release	Release Date	Change
		Section 13.1 Available Documents • Removed: Guidelines for the establishment and operation of onshore Helicopter Landing Sites CAAP 92-2(1) **Section 13.2.1** • Inserted Standard for Remote and Isolated Work • Removed *WCS*1.5 Appendix K Water Crossing Works Checklist **Section 13.2.2 Queensland Acts and Regulations** • Inserted: Agricultural Chemicals Distribution Control Act Agricultural Chemicals Distribution Control Regulation Chemical Usage (Agricultural and Veterinary) Control Act. Chemical Usage (Agricultural and Veterinary) Control Regulation. Fisheries Act **Section 13.2.3 Australian Standards and Other Documents** • Inserted: Fish Habitat Area Code of Practice - The lawful use of physical, pesticide and biological controls in a declared Fish Habitat Area.

3. AIMS / OBJECTIVES

The aims and objectives of this *WCS*1.5 is to ensure:

(a) The overall aims and objectives detailed in *WCS*133, Section 3 - Aims and Objectives, are met by the application of procedures herein.

(b) The additional category of work specific aims and objectives below are met:

(i) Construction and maintenance operations are to occur in a safe manner near to electricity network infrastructure.

(ii) *Access* tracks (including associated civil infrastructure), structural integrity maintained.

(iii) Land *stabilisation* and rehabilitation Site stable and Erosion free condition, preventing any likely environmental nuisance or harm.

(iv) *Access* tracks (including associated civil infrastructure) constructed and maintained for the provision of uninterrupted Site *Access* to undertake construction and maintenance of the electricity distribution and transmission network infrastructure.

(v) Ensure safe, environmentally appropriate operation and prevent interruption of electricity supply.

4. COMPETENCIES, TRAINING AND QUALIFICATIONS

(a) *Service Providers* and their *Operators* / subcontractors performing the *Services* are suitably licensed and trained in accordance with *WCS*133, Section 4 - Competencies, Training and Qualifications.

(b) For competencies, training and qualification requirements specific to this category of work refer to the below included references and clauses.

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4.1 EQL Competencies

Table 1 specifies the EQL Competencies / *Authorisations* (or combinations thereof) that are EQL requirements to be held by *Operators*.

Table 1- Operator Competencies

Course Code	Competency Description	Operator Requirements
Operators hold the following competencies.		
1013	*Access* Electrical Network Infrastructure for the Individual of Workgroup (IWG) in QLD (Note 2 and Note 3).	R
1006	Asbestos Awareness	R
1003	Biosecurity Awareness (Note 1)	R
1083	Generic Contractor Worker Induction (GCWI) in QLD	R
1018	Fire Ant Management	R
1656	Introduction to Electrical Network Infrastructure for Authorised Persons	R
1583	Oil Spill Management (Note 1)	MO
1073	Wet Tropics - World Heritage	AR
1009	Working Safely On or Near Electrical Network Infrastructure in QLD (System Key for EQL Contractors ONLY)	R
	Excavator / Dozer / Grader / or similar plant [wheeled or tracked] (Note 4).	AR
	Certificate III in Civil Construction Plant Operations [RII30813] (Note 5).	AR
	Electricity Officer (Note 6)	
CPCWHS1001	Prepare to work safely in Construction Industry (White Card)	R
Operators hold the following competencies when undertaking Powerlink works		
		EQL / Powerlink
EXT01001	Unexploded Ordnances[1]	AR / R
POW01511	Land *Access* Protocol	/ R

Legend:
R Required.
AR As required.
MO A minimum of one person on Worksite holds this competency.

Note 1: *Service Providers* with their own environmental training system equivalent as a minimum to the EQL environmental training system may train and assess their own *Operators* as competent.

Note 2: Hold this *Authorisation* if required to sign onto an *Access* Permit as a *Work Group* member, for *HV* circuit(s) isolated as per SAHV procedures.

Note 3: *Service Providers* or their *Operators* while working exclusively on or in transmission line, easements / corridors are not required to hold this competency.

Note 4: *Operators* are to be trained and assessed as competent by a Registered Training Organisation (RTO) with appropriate scope for the plant being operated. Provide *Energy Queensland Officer*

[1] This competency is exclusive to Operators undertaking Powerlink works.

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with a copy of current 'Statement of Attainment' or 'Nationally Recognised Qualification' for all *Operators* of Excavator / Dozer / Grader / or similar plant.

Note 5: *Primary Operators* on *Worksites* where:
Level 1 Project works are being conducted are to hold this qualification.
Level 2 Project works are being conducted may be required to hold this qualification.

Note 6: Only *Operators* carrying out work directly for and on behalf of *Energy Queensland* need to be authorised by *Energy Queensland* as Electricity Officers.

5. VEHICLES AND PLANT

(a) For vehicles and plant requirements, refer to *WCS*133, Section 5 – Vehicles and Plant.

(b) For vehicles and plant requirements specific to this category of work refer to the below included references and clauses.

5.1 Energised Electrical Plant

All mobile plant (e.g., general purpose vehicles, excavators, dozers, graders or similar plant) used in performance of work in the vicinity of energised electrical *Overhead Conductors* and plant is to strictly comply with requirements of the *Laws* and including and not limited to the following listed Acts and Codes of Practice:

(a) Work Health and Safety Act.

(b) Work Health and Safety Act – Plant Code of Practice.

(c) Work Health and Safety Act – Mobile Crane Code of Practice.

(d) Work Health and Safety Act – Safe Design and Operation of Tractors Code of Practice.

6. MATERIALS, TOOLS AND EQUIPMENT

(a) For materials, tools, equipment requirements, refer to *WCS*133, Section 6 – Materials Tools and Equipment.

(b) For materials, tools, equipment requirements specific to this category of work refer to the below included references and clauses.

6.1 Lifting Equipment

All lifting equipment complies with the *Laws* and relevant Australian Standards, and test / certification certificates available for all lifting equipment.

6.2 Equipment used for Herbicide Treatment

Operate, clean, and maintain all equipment used for *Herbicide Treatment* of *Vegetation* in accordance with the equipment manufacturers' directions. In accordance with the Chemical Usage (Agricultural and Veterinary) Control Regulation.

Operate, clean and maintain all equipment used for *Herbicide* treatment of *Vegetation* In accordance with the equipment manufacturers direction. (NB records are to be kept from use for a minimum of 2 years in accordance with the Chemical Usage (Agricultural and Veterinary) Control Regulation).

6.3 Nominated Tools and Equipment

Table 2 defines specific materials, tools and equipment required when providing *Services* for this category of work.

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Table 2- Materials, Tools and Equipment

Description	Supplier
Suitable instruments for measuring / estimating vertical fall on all civil works only (e.g. (and not limited to) dumpy level or laser device).	*Service Provider*
Digital Camera (high definition).	*Service Provider*
Worksite communications system, e.g. (and not limited to) two-way radios with multi-channel function to limit interference.	*Service Provider*
Oil Spill Kit (on all oil filled plant appropriate for the volume of oil to be contained).	*Service Provider*
Vehicle clean down equipment (where required; generally, *Site* specific *Access* restrictions).	*Service Provider*
Spatial data / recording device (GPS capability)	*Service Provider*
Personal Protective Equipment to safely manage the *Herbicide* specified by the label and Safety Data Sheets for the *Herbicide*.	*Service Provider*
First Aid Kit including a supply of medicinal material as per the *Herbicide* manufacturer's directions, (label and Safety Data Sheets) for all *Herbicides* being transported and distributed.	*Service Provider*

7. SAFETY

(a) For general safety requirements, refer to *WCS*133, Section 7 – Safety.

(b) For additional safety requirements specific to this category of work refer to the below included references and clauses.

(i) Energy Queensland have implemented critical controls for fatal hazards specific to work environments encountered in connection with the distribution of electricity across Queensland. The fatal hazards in Table 3 below have been deemed specific to this category of work and the listed critical controls must be met or exceeded within the *Service Provider's* specific WHS Management Plan or Safe Work Method Statements.

Table 3 – Fatal Hazards

Fatal Hazard	Critical Control
Working on or near electricity	Establish and maintain safe working distances and exclusion zones
Mobile Plant Operations	Conduct pre-start checks to ensure all safety features are in good operational condition and not over-ridden
	Set up vehicle/plant to manufacturer's instructions
	Never exceed safe working limits
	Use a spotter when reversing, and if not available do a walk around
Driving	Ensure vehicle and trailer is in a serviceable condition by conducting a pre-start check
	Ensure all loads are secure and cannot come free during travel
	Safety features are used when in operation, including seat belts worn whenever vehicle in forward motion
	Drive to the conditions, especially in the rain and on dirt roads

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	Establish a journey management plan when driving more than 2 hours and ensure rest breaks are planned and taken
Remote or Isolated Work	Two forms of effective communication are always present, with the ability to raise alarm when needed
	Enough drinking water is available
	A plan is in place if an emergency arises

(c) Additional implement control measures are also required to eliminate and / or reduce the following (but not limited to) risk exposures:

(i) Vehicles traversing over existing *Access* tracks with potential for steep gradients, excessive cross-falls, slippery or loose surfaces, washouts or *Erosion*, boggy surfaces, *Watercourse* crossings or running causeways.

(ii) Oncoming and passing vehicles on *Access* tracks with narrow running surface width or tight corners.

(iii) Operating over rugged terrain.

(iv) Operating of plant and equipment near exposed live parts.

(v) Incensed and or sensitive *Landholders / Occupiers*.

(vi) Operating in severe weather conditions.

(vii) Operating in high fire risk conditions.

(viii) Operating on high altitude terrain with limited to aerial *Access* only.

7.1 Safety Observer for Works

(a) Ensure that a suitably trained and competent Safety Observer is utilised when all mobile plant (for example, general purpose vehicles, excavators, dozers, graders, helicopters, or similar plant) is used for the performance of work in the vicinity of electrical *Overhead Conductors* and Plant and or where other hazards (for example, telecommunications tower) have been identified by *Operator*(s) or the *Energy Queensland Officer*.

(b) The *Operator*(s) is to establish and utilise a communication's system for communicating with the Safety Observer(s) that is suitable and effective for the *Worksite* conditions.

(c) Ensure the nominated worker (*Operator*) has a thorough knowledge of the safe operation of the mobile plant and equipment they may be exposed to while performing the role of a Safety Observer.

7.2 Induction from Energised Powerlines

When locating new fences or maintaining existing fences that are parallel to *High Voltage* powerlines, seek technical advice for developing the *Service Providers* own safe system of work in regard to minimising the potential for induction from the energised *High Voltage* powerlines before the commencement of works.

7.3 Radio Frequency Electro-Magnetic Energy Radiation

The *Service Provider* is to implement control measures to eliminate and / or reduce all risk exposures from helicopters operating in the vicinity of any parties' radio frequency electro-magnetic energy radiation emitting telecommunications installation(s) installed on the telecommunications tower and other party adjacent infrastructure.

8. ENVIRONMENT

(a) For environmental requirements, refer to *WCS*133, Section 8 - Environment.

(b) For environmental requirements specific to this category of work, refer to the below included references and clauses.

(c) At Sites where works occur, the Service Provider is to comply with the following:

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(i) All Commonwealth, State and Local Government legislative requirements
(ii) Environment and Cultural Heritage Conditions for Contracted Work
(iii) Environmental Assessment Response T111
(iv) Cultural Heritage Assessment
(v) Environmental Impact Assessment.
(vi) Environmental Management Plan (EMP)

(d) The service provider is only to carry out an activity after all measures to prevent or minimise the potential for environmental and cultural heritage harm have been taken.

(e) Implement documented environmental and cultural heritage risk / impact assessments and environmental plans at each Worksite.

(f) Maintain and leave the worksite in a condition ensuring no potential for environmental nuisance or harm.

(g) Before commencing works in significant/sensitive environmental or cultural heritage areas, for example (and not limited to) World Heritage Areas, National Parks, Conservation Areas, Marine Parks, marine plants areas, wetlands, *watercourses*, tidal areas or identified cultural heritage sites or landscapes seek direction from the *Energy Queensland* Officer. Notification of work must occur prior to works commencing to the relevant Administrating Authority where required and submission of an Environmental Management Plan in accordance with the relevant legislation, codes and policies is required and is to be implemented for the period the Services are being provided.

(h) Before commencing works, s*ite* specific inductions are required to be undertaken in areas covered under the Code of Practice - Maintenance of Electricity Corridors and infrastructure in Queensland's Parks and Forests.

(i) During *Site* works take all reasonable and practicable measures to ensure an activity does not harm cultural heritage.

(j) During *Site* works where there is the potential for additional disturbance of areas outside the existing *Access* track footprint, seek direction from the *Energy Queensland* Officer to ensure an activity does not harm environmental or cultural heritage values. New clearing works outside the existing footprint may require additional permits, notifications or engagement.

8.1 Watercourse, wetland and tidal Protection

(a) The following requirements apply to works in and adjacent to drains, *watercourses*, tidal areas, and wetlands :

(i) Drains*, watercourses,* tidal areas, and wetlands are not to be polluted by rubbish, *vegetation*, soap, toilet waste, silt, or fuel or oil spillage.

(ii) Spoil and *vegetation* that is disturbed are not to be pushed into or within 10 metres of any drain, *watercourse*, tidal areas or wetlands.

(iii) Chemicals are not to be decanted, mixed, or stored within 30 metres of a drain, *watercourse*, tidal area or wetland.

(iv) Heavy plant is not to enter a *drain, watercourse, tidal area or wetland* without a management plan to remediate the *Site*.

(b) In the event of any accidental spillage of any chemicals on *Worksite*(s) the *Service Provider's Operator* is to notify the *Service Provider* immediately and the *Service Provider* is to take immediate steps to control and clean up any spillage. The *Service Provider* is to report all major and minor chemical spills (e.g. oil spill) on ground surfaces and / or one that may reach a *drain, watercourse, tidal area or wetland* to the *Energy Queensland Officer* within 24 hours of the occurrence. Reporting is to comply with Guide for Managing Minor and Major Oil Spills.

8.2 Soil Conservation and Erosion Control

(a) Where mechanical means are used to construct and maintain an *Access* track appropriate sediment and *Erosion* controls are to be implemented by the *Service Provider* to prevent *Erosion* and release

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of sediments from within the *Access* track footprint, so that, on completion of the works the *Site*(s) shall be in a stable. The *Service Provider* shall provide (for acceptance by the *Energy Queensland Officer*) a *Site*-specific plan detailing *Erosion* and siltation control measures with particular emphasis on the following:

(i) *Erosion* controls.

(ii) Drainage controls.

(iii) Sediment controls.

(iv) *Stabilisation* controls

(b) Sediment and *Erosion* controls must be in accordance with Best Practice *Erosion* and Sediment Control, International *Erosion* Control Association.

(c) Topsoil stripped from the *Access* track footprint prior to foundation preparation (excavation for boxing out to the desired depth) shall be contained and stored in a nominated area and returned to the *Access* track footprint prior to landscaping works.

(d) Any spoil materials removed from the *Site* shall be disposed of at an appropriate facility/site nominated by the S*ervice Provider* or *Energy Queensland Officer*.

(e) Suitable dust suppression measures shall be employed by the *Service Provider* to limit dust nuisance on and off the *Site*(s).

8.3 Department of Agriculture and Fisheries – Marine Plant Advice

(a) Prior to carrying out any *Access* track infrastructure works (including inspection and condition assessment) in a marine plant area, declared fish habitat area, or works that may create a waterway barrier consult the following Department of Agriculture and Fisheries documents:

- Accepted development requirements for operational work that is the removal, destruction, or damage of marine plants.
- Accepted development requirements for operational work that is constructing or raising waterway barrier works.
- Accepted development requirements for operational work that is completely or partly within a declared fish habitat area.

(b) If the proposed *Access* track infrastructure works meet the definition of accepted development set out in the above listed documents, they are to be implemented in accordance with the requirements of the above listed documents including pre and post works notifications.

(c) If the proposed *Access* track infrastructure works do not meet the definition of accepted development set out in the above listed documents seek direction from the *Energy Queensland* Officer as a Development Application may be required prior to commencing *Access* track infrastructure works.

8.1 Biosecurity

(a) The service provider has a general biosecurity obligation to take all reasonable and practicable measures to prevent or minimise their biosecurity risk and to ensure they meet their general biosecurity obligation the service provider must develop and implement biosecurity controls to prevent any biosecurity risk posed or likely to be posed by the activity at the site. The controls should consider but not limited to:

(i) Vehicle and plant clean down (and maintaining records of such clean downs)

(ii) Vehicle, equipment, and employee hygiene

(iii) Chemical control (where permitted)

(iv) Following the Landowner's invasive plant management plans (where requirements are reasonable and practical).

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(b) If vehicles or machinery are brought in from outside the region they must be washed down before commencing work at the site. Vehicles and machinery must be washed down after the completion of the works. All washdown records must be recorded and retained for auditing purposes.

(c) Ensure compliance with relevant Biosecurity Management Plans under the *Biosecurity Act*, Biosecurity Regulation, and subordinate legislation.

8.5 Fire Ants in South East Queensland

(a) To prevent the spread of Fire Ants in Queensland the Service Provider must undertake all works in accordance with:

(i) Biosecurity Act

(ii) Biosecurity Regulation

(iii) Department of Agriculture and Fisheries - Fire Ant Movement Controls (Biosecurity Qld website).

(iv) General Biosecurity Obligation.

(b) Service Providers are to:

(i) Have systems and processes in place to demonstrate compliance with their General Biosecurity Obligation. These can include a Fire Ant Management Plan and Operators who are competently trained to identify Fire Ants and conduct Fire Ant inspections.

(ii) Ensure Operators are aware of their responsibility to identify Fire Ants and measures to be taken to prevent their spread.

(iii) Have a minimum of one Trained Operator shall present on each Worksite in a Fire Ant Biosecurity Zone.

8.6 Cultural Heritage

(a) The Service Provider is to comply with all Laws pertaining to Indigenous cultural heritage, including the *Queensland Aboriginal Cultural Heritage Act* and *Queensland Torres Strait Islander Cultural Heritage Act* and take all reasonable and practicable measures to ensure an activity does not harm cultural heritage (the “cultural heritage duty of care”).

(b) The Service Provider is to comply with all Laws pertaining to Historical heritage, including the *Queensland Heritage Act* and take all reasonable and practicable measures to ensure an activity does not impact on heritage items or places.

(c) The Service Provider must comply with any cultural heritage management directions relating to works under a Cultural Heritage Management Agreement, Field Inspection Agreement or within a Special Instruction area.

(d) In the event of a cultural heritage find (both Indigenous and Historical) during the works the Service Provider is to Stop work immediately in the vicinity of the find and contact an *Energy Queensland* Officer.

9. EXTENT OF WORK

9.1 General

(a) For extent of work requirements, refer to *WCS*133, Section 9 – Extent of Work.

(b) For extent of work requirements specific to this category of work refer to the below included references and clauses.

(i) Provide Services in accordance with (but not limited to):

EQL Work Category Specifications

- Work Category Specification *WCS*1.5 – Land Management
- Work Category Specification *WCS*1.5A – Land Management Assessment

Work Category Specification WCS1.5

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- Work Category Specification *WCS*1.6 – *Vegetation* Management Plan.
- Work Category Specification *WCS*1.6A – *Vegetation* Management Assessment
- Work Category Specification *WCS*1.7 – *Vegetation* Treatment Near Electricity Networks
- Work Category Specification *WCS*1.7A – *Vegetation* Treatment Near Electricity Networks Assessment
- Work Category Specification *WCS*1.8 – *Vegetation* Clearing by Mechanical Plant near Electricity
- Work Category Specification *WCS*1.8A – *Vegetation* Clearing by Mechanical Plant near Electricity Networks Assessment.
- Work Category Specification *WCS*133 – General Standards and Conditions.

EQL Standards

- Environmental Management Standard

EQL Specifications

- Land Management

EQL Manuals & Procedures

- Environmental Assessment Response T111.
- Implement Controls - Handling and Disposal of Redundant Poles.

EQL Forms

- *Access* Track Condition Assessment Data Capture Sheet
- Clean Down Record
- Record of Distribution of *Herbicides*
- Cultural Heritage Assessment form

Codes of Practice

- Code of Practice - Maintenance of Electricity Corridors in Queensland's Parks and Forests.
- Code of Practice - Working in the Vicinity of Overhead and Underground Electric Lines. Safe Work Australia.
- Fish Habitat Area code of practice - The lawful use of physical, pesticide and biological controls in a declared Fish Habitat Area.

Other Relevant Documents

- Accepted development requirements for operational work that is completely or partly within a declared fish habitat area.
- Current plans detailing existing underground essential services infrastructure in the immediate area and surrounding the Worksite.
- Department of Agriculture and Fisheries document - Accepted development requirements for operational work that is the removal, destruction, or damage of marine plants.
- Department of Agriculture and Fisheries document - Accepted development requirements for operational work that is constructing or raising waterway barrier works.
- *Herbicide* Safety Data Sheets and Labels.
- Plant and equipment manufacturers' manuals.
- Safety Data Sheet and Labels for all chemicals used at Worksite, for example fuel, hydraulic oil.
- Service Provider's Safe Systems of Work.
- The requirements of the *Energy Queensland* approved Construction Issue Plan and associated Construction Drawings and instructions.

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9.2 General Project Level Entry Requirements

(a) All *Service Providers* are able to demonstrate sufficient previous construction experience involving similar infrastructure projects to the land management and land *stabilisation* / rehabilitation project level for which they are applying to undertake for *Energy Queensland*. This assessment is based on examples of recent projects and confirmed referee reports that are satisfactory to *Energy Queensland*.

(b) *Service Providers* who initially cannot demonstrate sufficient previous construction experience in either of the higher Level 1 or Level 2 type land management infrastructure projects respectively may apply for reassessment after the satisfactory completion of three *Energy Queensland* land management and land *stabilisation* / rehabilitation infrastructure projects at the Service Provider's current accepted project level (e.g., Level 2 or Level 3).

9.3 Service Provider Responsibilities

(a) Notify as soon as practical, the *Energy Queensland* Officer of the presence of any additional previously un-identified *Access* track, *Minor Creek Crossing*, helicopter landing site and wash (clean) down facility condition(s) that may require further investigation to determine their structural and environmental integrity and / or potential remedial maintenance of the *Access* track(s), *Minor Creek Crossing(s)*, helicopter landing site(s) and / or wash (clean) down facility(s) that may be required.

(b) While actioning construction, condition assessment and maintenance of *Access* track, *Minor Creek Crossing*, helicopter landing site, wash (clean) down facility, and land *stabilisation* and rehabilitation ensure that all work is compliant with the relevant documented safe system of work.

(c) During the routine condition assessment of *Access* track, *Minor Creek Crossing*, helicopter landing site and wash (clean) down facility infrastructure, notify as soon as practical, the *Energy Queensland* Officer of the presence of any structural and environmental condition identified requiring immediate investigation and / or remedial maintenance.

9.4 Standards of Dress

(a) *Service Providers* are to ensure all Operators and Sub-contractors maintain a suitable dress standard when representing the Service Provider and *Energy Queensland* at the Worksite(s).

(b) Operators are to ensure they wear the appropriate Personal Protective Equipment (PPE) in strict accordance with the Service Provider's Safe System of Work.

9.5 Landholders / Occupiers

Energy Queensland fosters goodwill of *Landholders / Occupiers* and others when accessing private property. *Energy Queensland* relies on this goodwill to effectively maintain network infrastructure. Make every effort to foster and enhance this goodwill.

9.6 Maintenance of Barricades and Environmental Controls

(a) Place no spoil materials recovered from the Services being provided where the spoil materials or any sediment from the spoil materials can enter *Watercourse* or stormwater drainage.

(b) Retain all spoil, material, plant and equipment within the barricaded *Worksite*.

(c) Spoil is not being placed on the carriageway or in gutters and drains.

(d) Any stockpiling of spoil is not to exceed the maximum volumes allowed by the controlling Authority of the Site.

9.7 Worksite Conditions

(a) Ensure an area with controlled *Access* is established to safeguard *Landholders* / *Occupiers*, pedestrians, motorists and ground workers against injury or damage.

(b) During and following completion of Services, maintain and leave Worksite in a safe, hazard free condition at all times, and reinstate and maintain Worksite to at least the condition satisfactory to *Energy Queensland* Officer.

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9.8 Exclusion Zones

(a) All Operators (including ground staff) are aware of the location of mobile plant being operated in relation to *Overhead Conductors* and electrical plant, and telecommunication towers when constructing and maintaining *Access* tracks, *Minor Creek Crossings*, helicopter landing sites and wash (clean) down facilities and undertaking land *stabilisation* and rehabilitation.

(b) Treat all *Overhead Conductors* and electrical plant as energised unless an *Access* permit has been received.

(c) Only operate mobile plant in the vicinity of the HV electrical apparatus (*Overhead Conductors* and electrical plant) described in Section 6 of the *Access* permit received.

(d) Only construct and maintain *Access* tracks and *Minor Creek Crossings*, wash (clean) down facilities and undertake land *stabilisation* and rehabilitation between operator earths. At least one earth is visible from the Worksite.

(e) Treat all radio frequency electro-magnetic energy radiation emitting telecommunications installation(s) as transmitting unless the installation has been powered down and confirmed as being de-energised, so that safe *Access* for helicopter works can proceed.

9.9 Environmentally and Culturally Sensitive Areas

(a) A significant portion of the construction, condition assessment and maintenance of *Access* tracks, *Minor Creek Crossings*, helicopter landing sites and wash (clean) down facilities and undertaking land *stabilisation* and rehabilitation project works require the works to occur through environmentally and /or culturally sensitive areas. Consider the likely possible occurrences and impact on environmental and cultural aspects and the control measures that need to be in place while working in environmentally or culturally sensitive areas.

(b) Works in environmentally or culturally sensitive areas shall require control measures. It is recommended that suitable control measurers be utilised on the Worksite during this critical phase of the construction and maintenance of *Access* tracks, *Minor Creek Crossings*, helicopter landing sites and wash (clean) down facilities, and undertaking land *stabilisation* and rehabilitation to prevent the following from occurring:

(i) Accidental spillage of any chemicals.

(ii) Sediment run off.

(iii) Dust nuisance.

(iv) Over clearing and / or unauthorised clearing.

(v) Culture heritage disturbance.

(vi) Contamination of certified organic farmland and chemical-free properties and land (e.g., Cattlecare, HACCP and other quality-controlled properties).

(vii) Invasive Plant species spread.

(viii) Disease spread in relation to intensive animal and horticulture industries; or

(ix) Noncompliance with the protocols for *Access*ing and exiting properties with identified Livestock Protection Assurance Plan and / or Biosecurity Regulation Plan in place and identified with signage at the points of entry to the property.

(c) The Service Provider where required, is to ensure compliance to the relevant components of the Environmental Legislation to develop and implement a project *Erosion and Sediment Control Plan*, before civil construction and maintenance works of *Access* tracks, work pads, ingress and egress from *Worksite, Minor Creek Crossings, Infrastructure Drainage*, gates, helicopter landing sites and wash (clean) down facilities, commence at a *Worksite* in significant environmental area, for example (and not limited to) *Watercourses*, wetlands, tidal lands, national parks, state forests, certified organic farmland or other sensitive areas.

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9.10 Plans and Permits

(a) Areas listed below require specific permits and plans from the controlling Authority to be issued before *Access* track infrastructure work can commence. This may cause delays to the commencement of work if sufficient lead time for the application is not provided:

(i) Riverine Zones.

(ii) Fish Habitat Areas.

(iii) Marine Parks Habitat Areas.

(iv) Acid Sulphate Soil Areas.

(v) Cultural Heritage and Queensland Heritage Areas.

(vi) Remnant, Endangered or Of Concern Regional Ecosystems.

(vii) State Forests, National Parks, and World Heritage Areas.

(viii) Properties with Livestock Protection Assurance Plan and / or Biosecurity Regulation Plan.

(b) Construction work is not to commence on any of these areas (listed above) until both the *Service Provider* and the *Energy Queensland Officer* are satisfied all environmental, biosecurity and cultural considerations / requirements have been addressed and all the necessary *Authority* permits, and plans have been issued to enable the work to commence.

(c) Ensure that these *Authority* issued permits and plans are current and available at the *Worksite*.

9.11 Clearing Vegetation Along Overhead Conductor Powerline Route

(a) The clearing of *Vegetation* (including trees) at greenfield sites along the proposed *Overhead Conductor* (powerline) route(s) and in the vicinity of selected infrastructure (that supports the *Overhead Conductor*) locations is to be in accordance with the *Vegetation* clearing profile(s) specified on the route plan(s) or Construction Issue Plan(s) issued and in accordance with Section 15 of EQL Specification for Land Management, and this *WCS*1.5.

(b) The *Vegetation* clearing profile which applies to the nominated sections of the *Overhead Conductor* (powerline) route(s) shall vary as specified on the route plan(s) or construction plan(s) issued for the *Vegetation* clearing *Services* to be provided.

(c) In addition, the Environmental Management Plan and the Cultural Heritage Management Plan specific to the *Vegetation* clearing in identified areas along the *Overhead Cond*uctor (powerline) route(s) take precedence over the requirements of this *WCS*1.5 and are to be strictly complied with.

9.12 Distribution of Herbicide

(a) When *Herbicide* application is to occur (that is the period from preparation to completion of clean up):

(i) The distribution and use of *Herbicide shall* require a minimum of one suitably qualified person holding a current Commercial Operators Licence for *Ground Distribution* of *Herbicide* – Unrestricted on *Site* at all times, for the following areas:

- All *ACDC* Act Regulated *Hazardous areas*.
- Queensland National Parks and State Forests and Reserves.

(ii) For all *ACDC* Act Regulated areas and *ACDC* Act Excluded (non-regulated) areas outside of Queensland National Parks and State Forests and Reserves; the distribution of *Herbicide* shall be required to be undertaken by a *Competent Person* in strict accordance with the *Laws* and legislation specified below as a minimum:

- Agricultural Chemicals Distribution Control Act
- Agricultural Chemicals Distribution Control Regulation
- Chemical Usage (Agricultural and Veterinary) Control Act
- Chemical Usage (Agricultural and Veterinary) Control Regulation

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(b) Low growing *Vegetation* species and *Invasive Plants* requiring management may be treated with *Herbicide* provided:

(i) The application of *Herbicide* is restricted to the to the width of *Access* track footprint, wash down facilities' footprint and other nominated locations (for example around tower legs, mono and multi structure poles and columns);

(ii) The *Vegetation* is not of recognised significant ecological, visual, cultural or economic importance.

(iii) Safe approach and *Vegetation* clearance distances are maintained; and

(iv) It cannot damage other property (including certified organic farmland and chemical-free properties and land under production) and / or cause a safety issue.

(c) The application of *Herbicide* is to be undertaken in accordance with Section 14 of EQL Specification for Land Management, and this *WCS*1.5.

(d) Wherever possible, *Invasive Plants* are to be identified and treated with *Herbicide* within the width of the *Access* track footprint, wash down facilities' footprint and other nominated locations to prevent the spread of the *Invasive Plant*(s). *Treatment* methods should ensure as much of the *Invasive Plants* are removed as possible, with broad scale *Herbicide Treatments* being preferred.

(e) All records and forms associated with the distribution of *Herbicide* are to be maintained for the period nominated in Section 26 of the Agricultural Chemicals Distribution Control Act.

9.13 Land Management Infrastructure

(a) Construct new and maintain existing land management infrastructure, civil works, in accordance with EQL Specification for Land Management, and this *WCS*1.5.

(b) *Access* track infrastructure (for example, tracks and *Minor Creek Crossings*) is constructed and maintained for the following allowable two levels of vehicle loadings on the *Pavement:*

(i) Constructed and maintained *Pavement* for light vehicle loads only (e.g., 4wd *Access*) that provides, as a minimum standard, four-wheel drive vehicle *Access* to all structures at the nominated locations (generally more remote and isolated areas) across the *Energy Queensland* network.

Note: The *Service Provider* is to check with the local *Energy Queensland Officer* for any specific *Site* exceptions to the above clause.

(ii) Constructed and maintained *Pavement* for all weather and / or heavy vehicle loads with a maximum allowable *RGVM* of 30 Tonnes (6T steer axle / 17T rear axles), for example elevated work platforms and concrete trucks, providing *Access* to high priority electricity network infrastructure (for example sub-transmission line feeders). This requires uninterrupted Site *Access* to undertake additional construction, switching and maintenance of the electricity distribution and transmission network infrastructure. Additionally, at these *Sites* there may be a requirement to provide two-wheel drive vehicle *Access*.

(c) For the construction of additional all weather and / or heavy vehicle load *Access* track infrastructure, for example the extension and / or realignment of *Access* track and *Minor Creek Crossings*, obtain approval from the relevant *Energy Queensland Officer* before the commencement of construction works.

(d) For the provision of *Access* track and *Minor Creek Crossings* initially identified to support *Access* for heavier mobile plant with *RGVM* of > 30 Tonnes (>6T steer axle / >17T rear axles) and / or for all weather *Access* across unsuitable substrate soils, request a Site-specific construction design and / or maintenance specification from the relevant civil and structural engineering via a *Energy Queensland Officer*.

(e) The Specifications and practices adopted for *Access* track and *Minor Creek Crossings* construction and maintenance are to provide for safe and effective *Access* to *Energy Queensland* network infrastructure with minimal environmental impact.

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9.14 Access Track and Minor Creek Crossings – General

(a) Provide vehicular and mobile plant *Access* to the nominated section of *Energy Queensland's* electricity network *Overhead Conductor* (power line) route, with additional *Access* tracks from existing public roadways or property access roads where detailed on the Construction Issue Plan drawings and any *Site* variations are to be marked on the drawings in the field. Designated avoidance areas, for example Cultural Heritage sites, steep slopes or riparian zones are also detailed on the Construction Issue Plan drawings and any Site variations are to be marked on the drawings in the field.

(b) Consultation with the relevant Authority and the acceptance and the approval of the *Energy Queensland Officer* is required before any new *Access* track construction is commenced in order to remedy *Site Access* difficulties.

(c) Where existing *Access* tracks are impassable, eroded, or overgrown, consider alternative locations and opportunities to rebuild the *Access* track in a more suitable location, to reduce long term environmental impact and continuing maintenance resources. This relocation is not to occur without Authority consultation and the acceptance and the approval of the *Energy Queensland Officer*.

(d) Specifications utilised for *Access* track and *Minor Creek Crossing* location and construction are to be in accordance with Section 5, 6, 7 and 8 of EQL Specification for Land Management, and this *WCS*1.5.

(e) Specifications utilised for *Access* track and *Minor Creek Crossing* maintenance are to be in accordance with in accordance with Section 5, 6, 7, 8 and 9 of EQL Specification for Land Management, and this *WCS*1.5.

(f) The centre line of the *Access* track is to be as straight as practical, and generally follow the electricity network *Overhead Conductor* route centre line for the entire length of *Overhead Conductor* route except:

  (i) In areas of cultivation; and / or

  (ii) Where steep slopes, impassable creeks or other obstructions make the *Access* track and *Minor Creek Crossing Pavement* un-trafficable by conventional four-wheel drive pneumatic tyred vehicles and articulated vehicles or for all weather *Access* and / or heavy vehicle and mobile plant.

(g) Consideration should be given to dividing the *Access* track at the location of a structure supporting *Overhead Conductors* (power line) location to allow vehicles and heavy mobile plant to travel each side of the structure to allow for ongoing construction and maintenance activities to be undertaken on the Site.

(h) *Access* tracks and *Minor Creek Crossings* are to be constructed and maintained free of stumps, stakes, timber, protruding rocks, holes, or any unevenness which could restrict the progress of vehicles and heavy mobile plant while undertaking construction, condition assessment patrol(s) or maintenance of the *Access* track, *Minor Creek Crossing*, and electricity network *Overhead Conductor* (power line).

(i) In addition, for *Access* tracks outside of the electricity network easements / corridors, overhanging branches need to be removed up to five metres above *Access* track *Pavement* travel surface to provide clear *Access* for vehicles and heavy mobile plant.

(j) The *Service Provider* is responsible for ensuring that during *Access* track and *Minor Creek Crossing* construction and maintenance works that existing *Access* tracks, *Minor Creek Crossings* and all associated infrastructure (e.g. gates and pads / laydown areas) are maintained in an adequate and safe condition for all required vehicle and heavy mobile plant operations and the *Service Provider* is responsible for all reinstatement of damage as and when required, at no cost to *Energy Queensland*, and excludes damage by third parties and from severe weather events.

(k) Where the *Access* track crosses gullies or *Watercourses* the *Service Provider* is to construct and maintain the approaches so that, as far as practical, no scouring shall occur during flooding or heavy rain events. Where a cutting is required, a wide mound of earth (*Whoa-boy*) is to be constructed at the head of the cutting to prevent runoff water being funnelled into the cutting. *Minor Creek Crossing*

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should neither be built up above nor undercut below the bed of the *Watercourse* or gully at the point of crossing. The placing of loose logs, stones, and pipes in the bed of the *Watercourse* or gully is generally not permitted.

(l) If the *Watercourse* or gully is such that, in the opinion of the *Energy Queensland Officer* an *Access* track constructed across the *Watercourse* or gully would not be or remain trafficable, then no track is to be constructed.

(m) If initial clearing, *Access* track construction or *Minor Creek Crossing* construction impact on the bed or banks of a *Watercourse*, work is to be conducted in compliance with the conditions of a Riverine Protection Permit issued under the Queensland Water Act.

(n) In such cases as detailed above, an *Access* track not nominated on the Construction Issue Plan drawings may be required to be established around the obstacle (e.g., Watercourse or gully) and advised in writing by the *Service Provider* to the *Energy Queensland Officer* seeking approval prior to the commencement of construction.

(o) Where the *Access* track has to be located off the contour or directly down a slope, the grade of the *Access* track slope should not exceed 10 degrees, where practical.

9.15 Drainage Control

(a) Construct drainage control on *Access* tracks of 6% (1 in 16) [3.5 degrees] or greater slope to prevent water flowing along the track *Pavement* in accordance with Section 12 of EQL Specification for Land Management, and this *WCS*1.5.

(b) Where native soil (earth) is excavated on steep sites, stockpiled, and spread topsoil from the excavation over the banks to encourage *stabilisation* to enable future use of the benching by maintenance plant. *Stabilise Disturbed* sites with grass seed or other recognised soil *stabilisation* techniques, in accordance with this *WCS*1.5 and / or as nominated on the *Construction Issue Plan* drawing(s).

(c) Construct and maintain drainage control including land *stabilisation* and rehabilitation in accordance with EQL Specification for Land Management, and this *WCS*1.5.

9.16 Access Gates and fencing locking rail

(a) Fabricate, supply and construct *Access* gates and fencing locking rails in accordance with Section 10 of EQL Specification for Land Management, and this *WCS*1.5. The style and size shall be nominated on the *Construction Plan drawing*(s) and / or by the *Energy Queensland Officer*.

(b) Installation includes the cutting of the existing fence and the extraction of the existing posts where necessary, the piecing, re-tensioning and retying including repairs, if necessary, to restore the fence to as good as or better condition as existed prior to the construction of the gate or fencing locking rail in accordance with Section 10 of EQL Specification for Land Management, and this *WCS*1.5.

(c) Disposal of chemically treated poles and posts used as gate posts are to be transported and disposed of in accordance with *WCS*133 clause 8.4 and 8.13.

9.17 GPS Tracking

(a) *Service Providers* are to provide at *Site* during all construction, condition assessment and maintenance activities the ability to electronically map the location (latitude and longitude geographic coordinates) of all *Access* track routes and the associated infrastructure (e.g., gates, water crossings, wash down facilities, helicopter landing sites) and this shall also include other locations of interest (e.g., significant changes of direction and steep *Pavement* grades).

(b) Provide the *Access* track location data (latitude and longitude geographic coordinates) to the *Energy Queensland Officer* in the nominated electronic file format. Enter this data into the relevant *Energy Queensland* electronic operating system data base directly when requested to do so by the *Energy Queensland Officer*

(c) The horizontal accuracy of the electronically mapped geographic coordinates for all locations is to be within 3 metres (commercial grade equipment accuracy) of the actual infrastructure geographic ground point.

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9.18 Access Track Inspection and Condition Assessment

9.18.1 Condition Assessment and Hazard Assessment of Access Track Infrastructure – General

Operators carrying out the condition assessment of *Access* track infrastructure are required to assess potential hazards encountered as they progress along the *Access* track(s), conduct the risk assessment(s) for the *Operator's* own protection and to assist other personnel using the *Access* track(s) into the future. The personnel using the *Access* track(s) into the future may be *Vegetation* Management *Workgroups*, Asset Inspectors or *Operators* / *Workgroups* involved in switching, repairing, replacement and / or system augmentation of *Energy Queensland* electricity network assets in the vicinity.

9.18.2 Issue of Inspection and Condition Assessment Works

(a) For inspection and condition assessment of *Access* track infrastructure (including wash down facilities), prior to the commencement of works for the switching, repairing, replacement and / or system augmentation of *Energy Queensland* electricity network assets, the *Energy Queensland Officer* shall raise an inspection request in the relevant electronic operating system data base. Generally, an inspection request shall be raised for all *Access* track infrastructure (including wash down facilities) in the nominated maintenance zone.

(b) For each inspection request, the *Energy Queensland Officer* shall provide the *Service Provider* with the following parameters:

- (i) Description of the maintenance zone including any specific instructions associated with the *Access* track infrastructure (including wash down facilities).
- (ii) Network maps showing the extent or boundaries of the *Access* track infrastructure (including wash down facilities) to be assessed.
- (iii) *Landholder* / *Occupier* details.

(c) The Operator is to:

- (i) Ensure timely and accurate information is returned to *Energy Queensland Officer* in regard to negotiations with *Landholders / Occupiers* and provide details of any specific requirements or requests made by *Landholders / Occupiers*.
- (ii) Advise by e-mail on a daily basis their location in accordance with the program schedule provided by the *Service Provider*.
- (iii) Review the completed field works to ensure that all required condition assessments have been performed. Such reviews are to include examination of the data to identify any anomalies and ensure that the data is in a format acceptable to the *Energy Queensland Officer*.
- (iv) Determine the most appropriate maintenance techniques for managing the restoration of *Access* track infrastructure to a trafficable condition for vehicles and / or heavy mobile plant *Access* and managing the restoration of wash down facilities to a fully operational condition for vehicles and / or heavy mobile plant clean downs.
- (v) Inspect and assess the condition of the *Access* track infrastructure (including wash down facilities) in accordance with this clause and in accordance with EQL Specification for Land Management, and this *WCS*1.5.
- (vi) Record the *Access* track infrastructure's condition and the maintenance required (e.g., washout or *Erosion*, slips or subsidence, damaged culvert or bridge type structure, boggy surface, slashing, blading, *Patch Gravelling* / rocking).
- (vii) Record the wash down facility infrastructure's condition and the maintenance required (e.g., washout or *Erosion*, slips or subsidence, accumulated soil and debris, boggy surface, *Invasive Plant* growth, geotextile fabric degradation).
- (viii) Negotiate with *Landholder / Occupier* (property owners) for *Access* to their properties to undertake the required maintenance (subject to the works being approved by *the Energy Queensland Officer*).

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(d) The Service Provider is to:

(i) Enter the inspection and condition assessment data utilising the nominated electronic file format into the relevant *Energy Queensland* electronic operating system data base. Alternatively refer to *Energy Queensland Access* Track Condition Assessment Data Capture Sheet for reference and assisting *Service Providers* to develop their own data sets for uploading of this type of inspection data into the relevant *Energy Queensland* electronic operating system data base.

(ii) Provide the inspection and condition assessment data for the *Access* track infrastructure (including wash down facilities) assessed within 10 *Business Days* of completion of the field assessments by the *Operators*.

(e) Data requirements to be provided include and is not limited to:

(i) Inspection date.

(ii) Real property address (if available).

(iii) Location (to include latitude and longitude geographic coordinates).

(iv) From pole (where following the electricity network *Overhead Conductor* route) and / or *Access* entry location.

(v) To pole (where following the electricity network *Overhead Conductor* route) and / or *Access* exit location.

(vi) Identified potential hazards [Refer clause 9.18.3 (c)].

(vii) Recording type and location of *Invasive Plants* (Weeds) and pest infestations.

(viii) Required repairs or maintenance to restore *Access* track infrastructure (including wash down facilities) to serviceable condition as specified in this *WCS*1.5.

(ix) Resources required for repairs and maintenance works.

(x) *Access Track Priority*.

(xi) Wash Down Facility Priority.

(xii) Special requirements [including *Landholder / Occupier* (property owners) requests that are subject to approval by the *Energy Queensland Officer*].

(xiii) Comments.

(f) The Service Provider is to download from and enter data into the relevant electronic operating system data base in strict accordance with *WCS*133, clause 10.4 - *Access* to *Energy Queensland* Electronic Systems and Customer Information.

9.18.3 Condition Assessment and Hazard Assessment – Methodology

(a) This section is included to assist with condition assessment and in the application of a hazard identification methodology using assessment / as found data and recording and photographing in field observations.

(b) There may be a point where specialised geotechnical consultancy advice is required if there is any doubt about landslide hazards or specialist knowledge is required for assessing the stability of soils. If you are not sure about the risks associated with a particular feature such as a landslip it should be highlighted in your field notes for inspection and assessment by a suitably qualified and *Competent Person* who is to provide construction details for land *stabilisation* of the *Site*.

(c) The list below provides examples of potential hazards (and is not limited to those provided) that shall be encountered / identified on some *Access* track infrastructure that service *Energy Queensland* assets:

(i) *Invasive Plants* (Weeds).

(ii) Cultural Heritage sites.

(iii) Steep *Pavement* gradients.

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(iv) Excessive cross-fall on *Pavement* surface.

(v) Slippery or loose *Pavement* surface.

(vi) Washout or *Erosion*.

(vii) Slips or subsidence.

(viii) Damaged culvert or bridge type structure.

(ix) Boggy *Pavement* surface.

(x) Fallen trees or *Vegetation* debris.

(xi) Regrowth or long grass.

(xii) Narrow *Pavement* width or tight corners with potential for oncoming and passing vehicle traffic.

(xiii) *Vegetation* overhanging *Access* track infrastructure (potential for restricting high loads or high vehicles *Access*).

(xiv) *Watercourse* crossing / flooded causeway

(xv) Wheel ruts in *Pavement* surface.

(xvi) Springs or ponding.

(d) To assist with condition assessment, identifying hazards and assessing risk, the *Operator* is to:

(i) Prior to inspecting and assessing condition of sections of *Access* track(s) and associated infrastructure (e.g., *Minor Creek Crossings*, *water crossings*). Undertake analysis of:

- The area and existing *Access* track assets in a spatial data system (imagery data from aerial asset surveillance technology) to commence an initial assessment of (and not limited to) slope of land and *Access* tracks, *Minor Creek Crossing*s, water crossings,
- Deterioration of *Access* track *Pavement* surfaces and *Invasive Plants* and *Vegetation* type that shall assist in the identification of hazards.

(ii) With the availability of high-resolution imagery from the aerial asset surveillance technology, this imagery data shall facilitate more effective preplanning for *Site* assessment works. [Imagery data from aerial asset surveillance technology services shall be provided to the Service *Provider* where available to facilitate more targeted field-based assessment (particularly in remote and or isolated locations) and to provide better directions to *Work Groups Access*ing these types of locations.]

(iii) Traverse the *Access* track(s) by light vehicle, four-wheel drive vehicle or on foot to inspect and assess *Access* track infrastructure conditions and for identification of potential hazards prior to the commencement of construction and maintenance of network assets in the vicinity.

(iv) Walk *Access* track(s) where required, to undertake a more detailed ground-based inspection for the condition assessment of *Access* track infrastructure and identification of potential hazards.

(v) Evaluate potential risks associated with progressing further along *Access* track(s) where the *Pavement* surface of the running lane is inadequate for traversing by light or four-wheel drive vehicle or for other heavy mobile plant (e.g., lifter borer, elevated work platform) that may need to follow in the near future.

(vi) Identify *Access* track conditions that would prevent any traversing by vehicles or heavy mobile plant and required repairs or maintenance to restore *Access* track(s) to a trafficable condition for vehicles or heavy mobile plant *Access*.

9.18.4 Identification of Access Track Route Section and Level of Maintenance

(a) Identify each *Access* track route section and the level of repairs or maintenance required to restore that section to a trafficable condition.

(b) The goal of *Access* track maintenance is to provide, as a minimum standard, four-wheel drive vehicle *Access* to all structures, unless otherwise specified in an Environmental Management Plan /

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Environmental Program of Work for a sensitive area. Some works on high priority lines, for example sub-transmission lines require the provision of *Access* track maintenance to a standard to allow for all weather and / or heavy vehicle / mobile plant load of a maximum allowable *RGVM* being 30Tonnes (6T steer axle / 17T rear axles) *Access* plus two-wheel drive vehicle *Access*.

(c) The maintenance standards adopted for *Access* track infrastructure are to provide for safe and effective *Access* to *Energy Queensland* network infrastructure with minimal environmental impact. For the provision of *Access* track infrastructure maintenance to all weather tracks initially constructed to support heavy vehicle / mobile plant load (maximum allowable *RGVM* of 30 Tonnes - 6T steer axle / 17T rear axles) *Access*, refer to the maintenance specification, in accordance with Section 6 of EQL Specification for Land Management, and this *WCS*1.5.

(d) *Energy Queensland Officer* shall provide, or the *Service Provider* shall have direct *Access* to *Access* track route and /or network maps or *Construction Plans* for the electricity distribution and transmission network infrastructure that is to be included, with the location of structures supporting existing power line(s) [where applicable] and marked clearly. plans should include details of the thoroughfares, entry locations for *Site Access*, environmentally sensitive and protected areas, and tenure details that apply over the extent of sections of the *Access* track infrastructure to be assessed.

(e) In identified areas along the *Access* track infrastructure route, the *Site*-specific maintenance activities (if any) detailed in the Environmental Management Plan(s) or Environmental Program of Work(s) are to be taken and these maintenance activities take precedence over the requirements specified in this *WCS*1.5.

(f) In emergency situations where the inspection process is required to facilitate restoration works to the electricity distribution and transmission network infrastructure, and *Access* to difficult *Site* locations is required under adverse weather conditions, it may be necessary to consider constructing a new *Access* track away from the existing *Access* track *Pavement*. The *Service Provider* is to make good all damage caused by such works. This restoration work is to be undertaken to ensure meeting *Energy Queensland's* obligations under the Queensland Electrical Act.

9.18.5 Vehicle Accessibility Criteria

(a) During inspection process, consideration should be given to that different vehicle types have limitations and also seasonal conditions have a big effect on the ability of various vehicle types to utilise the *Access* track(s). For example, two wheeled drive vehicles are limited by clearance and traction, with a gradient limit of about 15 degrees maximum on a dry clay *Pavement*. Large trucks and heavy vehicle / mobile plant have the same traction and gradient limitations and require wider track *Pavement* widths especially on bends. Refer to Table 4 below for a guide to the maximum grade of slope various vehicle configurations can negotiate in ideal conditions.

(b) *Sites* that do not meet the range provided below for *Access* are to be risk assessed to provide a suitable engineered and environmental solution.

Table 4 - Maximum Grade of Slope – Various Vehicle Configurations

Vehicle Configuration	Slope as Percentage (%)	Slope in Degrees
High Clearance 4WD	30%	18°
High Clearance 2WD	20%	11°
Low Clearance 2WD	18%	10°
Rigid Body Truck	15%	8°

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Articulated Truck	10%	5°

9.18.6 Access Track Pavement Type

For the *Access* track infrastructure being assessed, individual sections of the *Access* track *Pavement* shall be recorded in the data set as one of the following types:

(a) Bitumen surface.

(b) Concrete surface.

(c) Raw material running surface (e.g., CBR 20, gravel, rock).

(d) Bare earth surface.

(e) Grassy surface.

9.18.7 Management of Prohibited and Restricted Biosecurity Matter

(a) The *Service Provider* is to provide training to *Operators* on the management of prohibited and restricted biosecurity matter to ensure that their spread is prevented or minimised.

(b) *Service Providers* and *Operators* are to have an awareness of the prohibited and restricted biosecurity matter occurring at particular *Sites* (the local areas across Queensland where they are operating) when undertaking *Access* track infrastructure condition assessment.

(c) Training should include vehicle inspection and clean down procedure such as those provided by the Queensland Department of Agriculture and Fisheries (daf.qld.gov.au) “Come clean go clean” website or alternatively their Vehicle and machinery clean down procedures brochure for reference and assisting *Service Providers* to develop their own vehicle inspection and clean down procedure.

(d) Where *Invasive Plants* are observed during an *Access* track infrastructure (including wash down facility) inspection and condition assessment, their location, species, and area of infestation is to be recorded in the nominated electronic file format for uploading into the relevant *Energy Queensland* electronic operating system data base.

(e) Where infestations of *Invasive Plants* are identified on or in the vicinity of *Access* tracks (including wash down facilities), record the conditions for vehicle and mobile plant clean down (entry to and exit from the Site, dedicated wash (clean) down bays and other applications) requested by the *Authority / Landholder*.

(f) *Operators* undertaking condition assessment works are to record and provide evidence of their own clean downs (for example, person who cleaned down, date, time, location, method of clean down) on the *Service Providers* supplied form that is equivalent to or exceeds the details of *Energy Queensland* Clean Down Record.

(g) The *Operators* undertaking the *Access* track (including wash down facility) infrastructure inspection and condition assessment are to be trained and competent in *Invasive Plants* identification.

(h) *Operators* undertaking condition assessment works are to record and provide evidence of their own compliance with the protocols for *Access*ing and exiting properties with identified Livestock Protection Assurance Plan and / or Biosecurity Regulation Plan in place and identified with signage at the points of entry to the property.

9.19 Land Stabilisation

(a) Identify the cause of existing and potential future on-site *Erosion* problems, and consider the off-site impacts of any proposed drainage, *Erosion*, and sediment controls.

(b) While undertaking any land management *Service* works, ensure appropriate practices are employed to manage and control soil *Erosion* and sediment movement.

(c) This clause identifies the effects of soil *Erosion* and sediment runoff and the *Erosion* minimization and sediment control systems for use on and near to *Access* track (including wash down facility) infrastructure.

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(d) The widely varying *Site* and soil conditions across *Energy Queensland* distribution network require the availability of a number of solutions to adequately address on-site *Erosion* and sediment control. In accordance with Section 12 of EQL Specification for Land Management - Table H5 - Summary of *Stabilisation* Techniques,) for the *stabilisation* techniques that are available for use.

(e) *The Service Provider* is to develop, implement, maintain, and monitor *Erosion* and sediment control program for the full period land management *Service* works are being provided to prevent controllable *Erosion* and to minimise the adverse effects of *Sedimentation* transport. The degree of *Sedimentation* runoff shall adversely affect downstream environment, for example, the downstream concerns may be related to one of the following forms of pollutant:

(i) Coarse sediment runoff.

(ii) Fine-sediment runoff (turbidity).

(iii) Nutrient runoff (often associated with the finer sediments).

(f) Identify possible *Site* constraints during the pre-works stage of any construction and maintenance, for example:

(i) Soil limitations.

(ii) Topographic limitations.

(iii) Water limitations.

(g) Stage works:

(i) To make best use of existing buffer zones and *stabilized* areas.

(ii) So that most of the ground disturbance occurs outside periods when rainfall is highly erosive.

(h) Materials utilised are to maintain their structural integrity during the construction and maintenance phases and until the *vegetation* (or other final surface condition) establishes effective *Erosion* control.

(i) The widely varying *Site* and soil conditions across the *Energy Queensland* distribution network require the availability of a number of solutions to adequately address on-site *Erosion* and sediment control. In accordance with Section 12 of EQL Specification for Land Management, for the management practices or combination thereof available for given Site conditions.

(j) Monitoring the effectiveness of an *Erosion* and sediment control program is an essential part of responsible *Site* management.

9.20 Creek, Gully and Watercourse Crossing Reinstatement

(a) As far as possible, creek, gully and *Watercourse* crossing reinstatement should:

(i) Cross at right-angles.

(ii) Be situated to avoid box cuts.

(iii) Have minimal associated clearing.

(iv) Be protected by drainage structures immediately above the approach slopes.

(v) Be in accordance with *WCS*1.5 Appendices and the specifications contained within.

(b) If the *Watercourse* bed requires reinstatement with gravel, rock, or stone, excavate the existing *Watercourse* bed surface to the depth of anticipated fill material. The reinstated *Watercourse* crossing surface should be approximate to the original *Watercourse* bed surface level. Remove any resulting spoil from the *Watercourse* bed and banks of the *Watercourse* and dispose of as directed by the *Energy Queensland Officer.*

9.21 Erosion control measures

(a) *Erosion* control measures for use on and near to *Access* track infrastructure during construction and maintenance include and are not limited to:

(i) Reducing *Access* track *Pavement* slope grade and length.

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(ii) Surface roughening, for example contour ripping, tracking.

(iii) Surface protection utilising:

- Mulches.
- Hydro mulch.
- *Erosion* control matting.
- Rock mulching.
- Brush matting.
- Respreading cleared Vegetation.

(iv) Progressively rehabilitating *Disrupted Surfaces* of land.

(v) Diversion banks to divert clean *Surface Run-Off* away from *Disrupted Surf*aces of land.

(vi) Installation of 'U' shaped drains not 'V' drains.

(vii) Reducing flow velocities (flow velocities on unlined drains should not exceed 1 ms^{-1}).

(viii) Lining drainage with *Erosion* control mattress, rock, or concrete.

(ix) Installation of energy dissipaters and stilling ponds.

(x) Installation of grade *stabilisation* structures (for example weirs, flumes and drop structures).

(xi) Correct levelling and grade changes to *Access* track *Pavement* surface.

(b) For a detailed summary of *Erosion* control *stabilisation* techniques refer to Section 12 of EQL Specification for Land Management - Land *Stabilisation*, Table H5, - Summary of Available *Stabilisation* Techniques, of this *WCS*1.5, that specifics the advantages, disadvantages, application, and technical aspects of each *Erosion* control *stabilisation* technique.

9.22 Access Track Windrows

Windrows on either side of the *Access* track *Pavement* surface are to be brought back onto the *Access* track *Pavement* surface during maintenance. Unavoidable windrows are only to be on the lower side of an *Access* track *Pavement* surface and gaps are to be constructed at intervals of 20 to 30 metres to allow dispersal of accumulated runoff (water flow).

9.23 Land Rehabilitation

(a) The aim of land rehabilitation is to prevent or minimise environmental harm, and is to:

(i) Reinstate a "natural" ecosystem as similar as possible to the original ecosystem.

(ii) Reinstate previous land use (e.g., construction *Site* for electricity distribution and transmission network infrastructure).

(b) For land rehabilitation there may be requirements to:

(i) Establish *Vegetation* communities that are demonstrably similar to a pre-existing ecosystem (especially where native *Vegetation* is the proposed land use).

(ii) Establish or enhance the habitat of an endangered species.

(iii) Restore stream patterns where there has been a temporary stream diversion.

(iv) Achieve water quality that meets initial specific beneficial use.

(v) Maintain or restore some specific aesthetic values.

(vi) Preserve specific Cultural Heritage that has been registered for the *Site* (note that these values are managed under legislation).

(vii) Achieve specific socio-economic outcomes (for example, restore high value land necessary to maintain a viable industry).

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(viii) Contractors are to check site for Earth Matting and ensure Gate Assembly doesn't breach Earth Matting on EQL assets. Allowing effective separation and distance from all Earthing.

9.23.1 Land Rehabilitation Compliance

All landscaping construction and maintenance for land rehabilitation is to be in strict compliance with Section 13 of EQL Specification for Land Management, and this *WCS*1.5.

9.23.2 Land Rehabilitation Plan

(a) A land rehabilitation plan is to comprise of drawings that:

(i) Are approved by *Authority* and / or *Landholder* consultation for implementation (Subject to any additional works being approved by the *Energy Queensland Officer*) on the *Site*.

(ii) Outlining *Site* conditions.

(iii) Contain all practice, measures and specifications that are needed to undertake the rehabilitation works.

(iv) Detail *Site* attributes relevant to land rehabilitation works (e.g., soils, topography, drainage, aspect, *Site* resilience and descriptions of reference communities).

(v) Detail rehabilitation landscape zones and selected treatment options. It should reference any opportunities, constraints, or key management considerations (for example bushfire hazard, topsoil management and significant fauna values).

(vi) Clearly depict rehabilitation landscape zones and describe treatments to be undertaken in each zone (for example natural regeneration, assisted natural regeneration, reconstruction, or new planting).

(b) Land rehabilitation plan drawings are to include as a minimum:

(i) *Site* preparation details, for example soil preparation and *Site stabilisation* methods for all areas of exposed soil.

(ii) Proposed plants including species, planting palette, stock size, quantities, locations, and planting modules to demonstrate densities.

(iii) *Invasive Plant* species inventory and details of proposed control techniques.

(iv) Target / reference regional ecosystem for each landscape zone.

(v) Specification for planting methods, preparation fertilizers, plant guards and watering.

(vi) Details of special habitat features to be provided for the enhancement or restoration of habitat values, including specifications for design, installation, and ongoing management (e.g., wildlife movement solutions, nest boxes, ground logs and coarse woody debris).

9.23.3 Land Rehabilitation Maintenance and Monitoring

(a) The maintenance and monitoring plan is to include clear and concise maintenance practices, schedules, and responsibilities to ensure the area is properly maintained over the *Plant Establishment Period* and into the longer term, for additional requirements refer to Section 13 of EQL Specification for Land Management, and this *WCS*1.5.

(b) Methods for monitoring, reporting, and recording data are outlined in Section 12 of EQL Specification for Land Management.

9.23.4 Land Rehabilitation Initial Construction and Implementation

(a) The initial landscaping and implementation of the land rehabilitation plan is to include clear and concise landscape practices, schedules, and responsibilities to ensure the area is properly established, for additional requirements refer to Section 13 of EQL Specification for Land Management and this *WCS*1.5.

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(b) The *Service Provider* is to hold the necessary permits, licenses or qualifications that are required to be held while being responsible for implementing rehabilitation works.

(c) Implement the landscaping construction in accordance with the landscaping and maintenance plan documentation provided to the *Service Provider* that includes and is not limited to:

(i) Section 13 of EQL Specification for Land Management

(ii) Landscape revegetation master plan.

(iii) Detailed planting plan for each landscape zone.

(iv) Planting schedule that includes as a minimum:

- Plant location code.
- Scientific name of plant.
- Common name of plant.
- Plant spacing.
- Supplied pot size range.
- Mature height x spread of plant.
- Number of each species of plant supplied in various pot sizes (e.g., 45 litre pot, 200 mm pot, tube stock).
- Identification of plant species for planting on fire breaks (if required).

(v) Final tree survey plan.

(vi) Landscape maintenance and monitoring plan.

(vii) Controlling *Authority* imposed and / or negotiated *Landholder* acceptance of land rehabilitation conditions and subject to approval by the *Energy Queensland* Officer for any additional works.

9.24 Construction and Maintenance of Access Gates and Fencing Locking Rails

9.24.1 Fencing Gate and Locking Rail Type Specification

Table 5 – Fencing Gate and Locking Rail Type Specification

Fencing Gate Types	Clear Opening (millimetres)	Number of Gate Frames	Availability / Fabrication	Comments
Type 1	4500	1	F&SBSP	-
Type 2	9000	2	F&SBSP	-
Type 3	4800	2	AASIRQ	-
Type 4	2400	1	AASIRQ	Restricted use only: For maintenance of existing gates, Regional Queensland. New installation only with approval of *Energy Queensland Officer*.
Locking Rail	3000	-	F&SBSP	-

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Legend:

F&SBSP	Fabricated and supplied by *Service Provider*.
AASIRQ	Available as stores item Regional Queensland

9.24.2 Extent of Work – General

(a) The work included comprises of and is not limited to:

(i) Fabrication of gate and locking rail components (unless directly supplied as a stores item).

(ii) Clearing of the Worksite (including existing gates and timber posts as required).

(iii) Excavation of foundations.

(iv) Post and stay construction.

(v) Hanging of gates and locking rails.

(vi) Reattachment of existing fencing wire.

(vii) Treatment and disposal of spoil.

(b) Clearing of the *Site*:

(i) Clear gate and locking rail *Sites* of all shrubs, scrub, undergrowth, recovered timber gates and posts, dumped material and surface boulders.

(ii) Remove all debris resulting from *Worksite* clearing to the nearest approved refuse tip off *Site* accepting this class of debris and material.

(c) Excavation of foundations:

(i) Undertake ground excavation for foundation construction where required to suit the clear opening dimensions and surface levels nominated for the gate's and locking rail's construction.

(d) Treatment and disposal of spoil:

(i) Dispose of excess spoil away from Site when required in accordance with controlling Authority requirements for transport and disposal and negotiated *Landholder* acceptance.

(ii) Implement appropriate control measures on Sites containing acid sulphate soils.

9.24.3 Construction Materials – General

(a) Concrete:

(i) All concrete used is to be commercial premixed concrete of minimum Grade 20.

(b) Steel gate and locking rail components:

(i) Galvanise all steel fabricated components to AS/NZS 4680.

9.24.4 Construction of Works – General

(a) Place foundation materials in layers and compact between the placements of each successive layer.

(b) Place premixed concrete with sufficient moisture content to ensure the chemical reaction of cement.

(c) After fixing chain latching eye to the post, destroy the thread to prevent the removal of the nut.

(d) Reinstate any minor damage to galvanising of steel components during construction with cold galvanising paint in accordance with paint manufacturer's specification for application.

9.24.5 Detailed Fabrication and Construction Specification

In accordance with Section 10 of EQL Specification for Land Management, and this *WCS*1.5, for detailed fabrication and construction of gates and locking rails specification.

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9.25 Construction and Maintenance of Wash Down Facilities

9.25.1 Inspection of Existing Wash Down Facilities

(a) The *Operator*(s) is to complete a visual inspection of the wash down facility(s) on each site visit to confirm the wash down facility(s) is still fit for purpose and identify any defects.

(b) The *Operator*(s) is to determine the most appropriate maintenance techniques for managing the restoration of wash down facilities to a fully operational condition for vehicles and / or heavy mobile plant clean downs.

(c) Record (including photographs) the wash down facility infrastructure's condition and identified defects including and not limited to:

(i) Washout or *Erosion*.

(ii) Slips or subsidence.

(iii) Accumulated soil and debris.

(iv) Boggy surface.

(v) *Invasive Plant* growth.

(vi) Geotextile fabric deterioration.

(vii) Silt fence (sediment fence) deterioration.

(d) Where *Invasive Plants* are observed in the vicinity of a wash down facility during inspection and condition assessment, their location, species, and area of infestation is to be recorded in the nominated electronic file format for uploading into the relevant *Energy Queensland* electronic operating system data base.

(e) Inspect and assess the condition of wash down facility infrastructure in accordance with this clause and Section 16 of EQL Specification for Land Management, and this *WCS*1.5.

(f) *Energy Queensland Officer* shall provide, or the *Service Provider* shall have direct *Access* to the *Access* track route and / or network maps and as constructed plans [where applicable and available] for existing wash down facility infrastructure that shall include the clearly identified location of wash down facility infrastructure. Included shall be details of the thoroughfares, entry locations for *Site Access*, environmentally sensitive and protected areas, and tenure details that apply over the extent of the wash down facility infrastructure to be assessed.

9.25.2 Maintenance of Existing Wash Down Facilities

(a) At identified wash down facility infrastructure along the *Access* track route, the *Site*-specific maintenance activities (if any) detailed in the Environmental Management Plan(s) or Environmental Program of Work(s) are to be taken and these maintenance activities take precedence over the maintenance requirements specified in this *WCS*1.5.

(b) *Energy Queensland Officer* shall provide, or the *Service Provider* shall have direct *Access* to the *Access* track route and / or network maps and as constructed *Construction Issue Plans* [where applicable and available] for existing / permanent wash down facility infrastructure that shall include the clearly identified location of wash down facility infrastructure. Included shall be details of the specified maintenance works to be constructed, thoroughfares and entry locations for *Site Access*, environmentally sensitive and protected areas and tenure details that apply over the extent of the wash down facility infrastructure and the surrounding area.

(c) Wash down facility infrastructure and the surrounding area are to be maintained free of stumps, stakes, timber, protruding rocks, holes, or any unevenness which could restrict the *Access* of vehicles and heavy mobile plant required to undertake wash downs of vehicles and heavy mobile plant over the wash down bay prior to leaving the *Site*.

(d) Maintenance construction of wash down facility infrastructure is to be in accordance with this clause, existing as constructed plans [where applicable and available] for existing / permanent wash down

facility infrastructure and in accordance with Section 16 of EQL Specification for Land Management and this *WCS*1.5.

(e) Where an existing wash down facility(s) is inaccessible, eroded, or overgrown, consider alternative locations and opportunities to rebuild the wash down facility infrastructure in a more suitable location, to reduce long term environmental and biosecurity impact and continuing maintenance resources. This relocation is not to occur without *Authority* consultation and the acceptance and the approval of the *Energy Queensland Officer* for the new construction, the decommissioning of the existing wash down facility infrastructure and the rehabilitation of the land at the *Site*.

(f) The Specifications and practices adopted for wash down facility infrastructure construction maintenance are to provide for safe and effective wash downs of vehicles and heavy mobile plant over the wash down bay with minimal environmental and biosecurity impact. Wash down facility infrastructure once maintained is too full comply with all current environmental and biosecurity standards and regulations.

(g) The *Service Provider* is to develop, implement, and maintain a maintenance program for accumulated soil and debris removal and disposal, and *Erosion* and *Sedimentation* control for the full period the wash down facility(s) is operational (prior to decommissioning) to prevent controllable *Erosion* and to minimise the adverse effects of *sediment* transport.

(h) Maintain drainage control including land *stabilisation* and rehabilitation in accordance with this *WCS*1.5 and the EQL Specification for Land Management.

(i) Wash down facilities that are not fully operational are be rectified as soon as practical and prior to vehicles and heavy mobile plant movements along *Access* tracks for electricity network infrastructure construction and maintenance works in the surrounding area.

9.25.3 Construction of New Wash Down Facilities

(a) Specifications utilised for new temporary wash down facility location and construction is to be in accordance with this clause, Section 16 of EQL Specification of Land Management and this *WCS*1.5.

(b) Specifications utilised for new permanent wash down facility location and construction is to be in accordance with this clause, Section 16 of EQL Specification for Land Management, this *WCS*1.5, and the *Site* specific civil and structural engineering design drawing.

(c) Consultation with the relevant *Authority* and the acceptance and the approval of the *Energy Queensland Officer* is required before any new construction is commenced in order for wash down facility infrastructure to provide for safe and effective wash downs of vehicles and heavy mobile plant over the wash down bay with minimal environmental and biosecurity impact.

(d) The Specifications and practices adopted for new wash down facility infrastructure construction are to provide for safe and effective wash downs of vehicles and heavy mobile plant over the wash down bay with minimal environmental and biosecurity impact.

(e) Construction work is not to commence on any new wash down facility infrastructure until both the *Service Provider* and the *Energy Queensland Officer* are satisfied all environmental, biosecurity and cultural considerations / requirements have been addressed and all the necessary *Authority* permits, and plans have been issued to enable the work to commence.

(f) New wash down facility infrastructure and the surrounding area are to be constructed free of stumps, stakes, timber, protruding rocks, holes, or any unevenness which could restrict the *Access* of vehicles and heavy mobile plant required to undertake wash downs of vehicles and heavy mobile plant over the wash down bay prior to leaving the *Site*.

(g) Construct drainage control including land *stabilisation* and rehabilitation associated with new wash down facility infrastructure works in accordance with this *WCS*1.5, the EQL Specification for Land Management and / or as nominated on the *Construction Plan* drawing(s).

(h) Install appropriate *Erosion* and *sediment* control devices during the construction of and while the new wash down facility infrastructure remains operational, or the environmental hazards being controlled cease to exist. Provide anti-erosion controls, for example rock spalls to “V” drains, in accordance

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with this *WCS*1.5, the EQL Specification for Land Management and / or as nominated on the *Construction Plan* drawing(s).

(i) For general wash down facility infrastructure construction criteria and parameters, refer to the following and not limited to listed requirements:

(i) Clear *Site(s)* of wash down facility infrastructure along the *Access* track route, of all shrubs, scrub, undergrowth, dumped trees and timber, and surface boulders.

(ii) Remove all debris resulting from *Worksite* clearing to the nearest approved refuse tip off *Site* accepting this class of debris and material.

(iii) Undertake excavation where required to suit the dimensions and levels nominated for the construction of the wash down facility infrastructure.

(iv) Dispose excess spoil away from the *Site* where required in accordance with the controlling *Authority* requirements for transport and disposal.

(v) Implement appropriate control measures on *Sites* containing acid sulphate soils.

(vi) Using geotextile fabric as an underlay, install Polyester / non-woven or woven geotextile fabric complying with requirements set out in Australian Standard AS 3706 or approved equivalent in the wash down bay. The geotextile fabric is to be continuous and extend fully to the silt fence line.

(vii) The *Pavement* for wash down bay(s), comprises of a single course of quarried 75 – 150 mm diameter grading rock spalls (or equivalent material), with a thickness that is not less than 300 mm below the finished surface of the wash down bay.

(viii) Construct silt fence (sediment fence) around the full perimeter of the wash down bay to contain any *sediment* flows away from the wash down bay. Silt fencing is to extend a minimum of 150 mm below ground level and supported by star pickets. Construction of silt fencing (sediment fencing) is to comply with this *WCS*1.5 and Sections 11 and 16 of EQL Specification for Land Management, and / or as nominated on the *Construction Plan* drawing(s).

(ix) Where wash down facility infrastructure is established on grazing land, suitable fencing (for example barbed wire fencing) [including gates in accordance with Section 9.24, Construction and Maintenance of *Access* Gates and Fencing Locking Rails of this *WCS*1.5] are to be constructed to prevent livestock *Access* to the silt fencing (sediment fencing) and wash down bay.

(x) Where native soil (earth) is excavated on sites, stockpile for later use (for example the decommissioning of a temporary wash down facility) and / or spread topsoil from the excavation over the surroundings to encourage *stabilisation* of the surrounding area. *Stabilise Disturbed* sites with grass seed or other recognised soil *stabilisation* techniques, in accordance with this *WCS*1.5 and / or as nominated on the *Construction Plan* drawing(s).

(xi) Label the wash down facility infrastructure with signage that is consistent with environmental and biosecurity protocols for the operation of the facility.

9.25.4 Decommissioning of Wash Down Facilities

(a) All wash down facility infrastructure that is no longer operational is to be decommissioned and the Site is to be fully rehabilitated.

(b) Record and electronically map the location (latitude and longitude geographic coordinates) of wash down facility infrastructure including the perimeter of the Site. Provide the location data (latitude and longitude geographic coordinates) to the *Energy Queensland* Officer in the nominated electronic file format.

(c) Clear from the Site(s) of wash down facility infrastructure all biosecurity material (for example accumulated *Sedimentation* potentially containing Invasive Plant's seed) and remove to the nearest approved landfill off Site accepting this class of biosecurity material.

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(d) Clear from the Site(s) of wash down facility infrastructure, all construction materials including and not limited to geotextile fabric, rock spalls, silt fencing (sediment fencing), star pickets, livestock fencing and gates.

(e) Remove all discarded construction materials and debris resulting from the clearing of wash down facility infrastructure to the nearest approved refuse tip off Site accepting this class of debris and material.

(f) Fully *Stabilise* and rehabilitate the area where the wash down facility infrastructure was located. The aim of land rehabilitation is to prevent or minimise environmental harm, and is to:

(i) Reinstate a “natural” ecosystem as similar as possible to the original ecosystem.

(ii) Reinstate previous land use (e.g., establishment of pasture species as requested by *Landholder*).

(iii) Establish *Vegetation* communities that are demonstrably similar to a pre-existing ecosystem (especially where native *Vegetation* is the proposed land use).

(g) All landscaping construction and maintenance for land rehabilitation is to be in accordance with Section 13 EQL Specification for Land Management, and this *WCS*1.5.

(h) Undertake *Invasive Plant* eradication of rehabilitated areas by the application of *Herbicide* in accordance with Section 12 of EQL Specification for Land Management, and this *WCS*1.5.

(i) For the first 12 months after land rehabilitation of the Site, the Service Provider is to conduct three monthly Site inspections making note of any plant / grass die-off, Invasive Plant / pest infestations, *Erosion* issues and report back to *Energy Queensland Officer* with any issues identified.

9.26 Construction and Maintenance of Helicopter Landing Sites

9.26.1 General – Helicopter Landing Sites

(a) Existing helicopter landing sites are generally located in remote locations and / or at high altitude locations (for example, a communications site located upon the top of a mountain range peak).

(b) *Access* to existing helicopter landing sites is generally restricted and the majority of *Sites* can only be reached by transporting personnel, materials, and equipment by helicopter to the *Site*.

(c) For helicopter landing sites where the take-off landing area is only a grass / gravel / concrete slab on ground landing area, all construction and maintenance work is to be performed in accordance with this *WCS1.5*.

(d) For helicopter landing sites where the take-off landing area is an elevated / suspended concrete or steel or timber structural pad of the ground, all construction and maintenance work is to be performed in accordance with Section 17 of EQL Specification for Land Management, Refer to the *Energy Queensland Officer* and the *Energy Queensland* civil and structural engineering group for the take-off landing area structural pad inspection requirements and their frequency, and the maintenance requirements and their frequency.

(e) *Energy Queensland Officer* shall provide, or the *Service Provider* shall have direct *Access* to the site-specific helicopter landing site register and as constructed plans [where applicable and available] for existing helicopter landing site(s) that shall include the clearly identified location of the helicopter landing site(s). Included shall be and is not limited to details of:

(i) *Site* latitude and longitude geographic coordinates and elevation.

(ii) Helicopter landing site dimensions, weight limits, markings, lighting, and wind direction indicator locations.

(iii) Helicopter landing site orientation, Visual Flight Rules (VFR) approach and departure path information.

(iv) Adjacent airspace restrictions.

(v) Environmentally sensitive and protected areas.

(vi) Tenure details that apply over the extent of the helicopter landing site to be assessed.

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9.26.2 Inspection of Helicopter Landing Sites

(a) The *Operator(s)* is to complete a visual inspection of operational helicopter landing site(s) on each *Site* visit to confirm the operational helicopter landing site(s) is still fit for purpose, complies with current CASA Guidelines and the requirements of this *WCS*1.5, in accordance with Section 17 of EQL Specification for Land Management, EQL Aviation Standard of this *WCS*1.5. and identify any defects.

(b) The *Operator(s)* is to determine the most appropriate maintenance techniques for managing the restoration of helicopter landing site to a fully operational condition for helicopter operations.

(c) Record (including photographs) the helicopter landing site infrastructure's condition and identified defects including and not limited to:

(i) Structural integrity of the take-off landing area (for example, concrete landing pad surface damage, cracking, and spalling of concrete or grassed / gravelled landing pad surface washout or *Erosion*, or boggy surface).

(ii) Washout or *Erosion* present over the full extent of the 26-metre wide (circular or square) cleared safety area

(iii) Slips or subsidence present over the full extent of the 26-metre wide (circular or square) cleared safety area

(iv) Accumulated soil, debris, and rubbish present over the full extent of the 26-metre wide (circular or square) cleared safety area

(v) Boggy surface present over the full extent of the 26-metre wide (circular or square) cleared safety area

(vi) *Vegetation* regrowth present over the full extent of the 26-metre wide (circular or square) cleared safety area.

(vii) *Vegetation* regrowth impacting the approach and take off surface profile in accordance with Section 17 EQL Specification for Land Management and EQL Aviation Standard

(d) Inspect and assess the condition of the helicopter landing site infrastructure in accordance with this clause of this *WCS*1.5 and in accordance with Section 17 of EQL Specification for Land Management and EQL Aviation Standard.

9.26.3 Maintenance of Helicopter Landing Sites

(a) At the identified helicopter landing site, the *Site*-specific maintenance activities (if any) detailed in the Environmental Management Plan(s) or Environmental Program of Work(s) are to be taken and these maintenance activities take precedence over the remainder of the maintenance requirements for the helicopter landing site as specified in this *WCS*1.5.

(b) Maintenance construction of helicopter landing site(s) is to be in accordance with this clause, existing as constructed plans [where applicable and available] for existing helicopter landing site(s), in accordance with EQL Aviation Standard and Section 17 EQL Specification for Land Management and of this *WCS*1.5.

(c) The Specifications and practices adopted for helicopter landing site(s) maintenance (including associated construction works) are to enable the landing and take-off of helicopters to be completed safely from the take-off landing area on the helicopter landing site with minimal environmental and biosecurity impact. Helicopter landing site(s) once maintained is to full comply with all current CASA regulations and guidelines, and current environmental and biosecurity standards and regulations.

(d) For helicopter landing site(s) maintenance (including associated construction works) criteria and parameters, refer to the following and not limited to listed requirements:

(i) Helicopter landing site is to be site specific and with a minimum cleared area of 26 metres (circular or square) [for example, to accommodate at a minimum a single engine performance class 3 helicopter].

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(ii) Helicopter land site is to be cleared of regrowth *Vegetation* for a minimum area of 26 metres (circular or square) or in accordance with existing development application conditions.

(iii) Ensure the take-off landing area is cleared of regrowth *Vegetation*, debris and rubbish. The *Service Provider* is to ensure all resulting debris from the *Site* maintenance is removed from the *Site* with no debris remaining unless approved otherwise by the controlling *Authority*.

(iv) The cleared area is to be free draining away from take-off landing area at completion of the maintenance works.

(v) Grade any scour(s) or areas where exposed *Erosion* has occurred and reinstate by the placement and compaction of CBR 45 graded material, where the CBR 45 graded material is placed on the take-off landing area, the material is required to be compacted to 98% of the modified dry density of the material to AS1289.5.2.1.

(vi) The preferred reinstatement method of surface for the helicopter landing site during maintenance is the establishing of grass cover, or hardstand gravel is also an acceptable reinstatement surface.

(vii) The take-off landing area pad surface is to slope evenly down from crown to the pad perimeter edge, ensuring no ponding on the take-off landing area. (Typically, a 200mm fall in height from the centre point to the edge of pad perimeter where practical.)

(viii) Where practical construct local cut-off drains to re-direct storm water runoff around the take-off landing area pad.

(ix) Clear *Vegetation* regrowth impacting the approach and take off surface profile in accordance with Section 17 of EQL Specification for Land Management, EQL Aviation Standard and this *WCS*1.5. (Note that there may be the retention of *Vegetation* in the approach and take off surface profile that is outside of *Energy Queensland's* control.)

9.26.4 Construction of New Helicopter Landing Sites

(a) Specifications utilised for construction of a new helicopter landing site is to be in accordance with this clause, Section 17 of EQL Specification for Land Management, this *WCS*1.5 and the *Site* specific civil and structural engineering design / construction drawing provided by the *Energy Queensland* Officer (e.g., *Energy Queensland* civil and structural engineering group).

9.27 Completion Of Work

The *Service Provider* is to confirm completion of *Services* when they have finalised all construction, condition assessment and maintenance works at the *Worksite(s)*.

9.28 Damage

(a) For the prevention and management of damage, refer to *WCS*133, Clause 9.23 - Damage.

(b) For the prevention and management of damage specific to this category of work refer to the below included references and clauses.

(c) Rebuild without delay; any infrastructure it may damage and, in all cases, make temporary arrangements to restore / replace to its former effectiveness immediately following the occurrence of the damage.

10. RECORDS

(a) For records requirements, refer to *WCS*133, Section 10 - Records.

(b) For records requirements specific to this category of work refer to the below included references and clauses.

(c) Incorporate photographs in the report of the 'as found condition' of *Access* tracks, *Minor Creek Crossings*, *Infrastructure Drainage*, and gates including the extent of degradation, *Erosion* or corrosion of infrastructure.

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(d) Records and data transfers between *Energy Queensland* and the Service Provider are to be in the nominated format. (For example, nominated electronic file format enter into the relevant Energy Queensland electronic operating system data base directly when requested to do so by the Energy Queensland Officer.)

10.1 Returned Powerlink Documentation

Service Providers undertaking the Powerlink construction and maintenance works shall be required to provide additional completed works documentation and data when and as requested by the *Energy Queensland Officer*. Powerlink documentation and data includes and is not limited to:

(a) *Access* track restoration report.

(b) Wash down record and external party certificates.

(c) Hygiene declaration for imported materials.

(d) Creek crossing checklist.

(e) L.I.R.A (*Landholder* interaction recording application).

(f) QESI Code pre and post work notifications for protected areas.

(g) Plant and machinery daily pre-start with machinery hours / kilometres recorded.

11. WORK VERIFICATION

For work verification requirements, refer to *WCS*133, Section 11 – Work Verification.

12. GLOSSARY

(a) For standard definition of words, acronyms and abbreviations used in this *WCS*, refer to *WCS*133, Section 12 - Glossary.

(b) For additional definitions of words, acronyms, and abbreviations specific to this category of work, refer below.

Term	Definition
Access	Means to approach *Energy Queensland* infrastructure in field locations, primarily *Access* track infrastructure, helicopter landing points and four-wheel drive remote and isolated terrain (*Access* routes).
Access Track Priority / Access Track Priorities	The categories given to *Access* track infrastructure that defines how quickly the maintenance / reinstatement work shall be required, for example: ▪ P1 requires immediate maintenance / reinstatement as it presents a hazardous condition for *Access* purposes. ▪ P2 requires maintenance / reinstatement within nine months. PM requires reassessment on the next maintenance cycle.
ACDC	Agricultural Chemicals Distribution Control
Batter / Slope Face	The vertical (usually on an angle) surface of an area that has been cut or filled to create a bench or *Access* track.
Competent Person	A person who has acquired through training, qualification, experience or a combination of these, the knowledge and skill enabling that person to correctly perform the required task.
Disrupted / Unprotected Surfaces	Surfaces that have been stripped bare of *Vegetation* cover or ripped up during the course of undertaking construction / maintenance activities and which remain unprotected and susceptible to erosive forces (e.g., rain, wind).

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Term	Definition
Energy Queensland	Any member of the Energy Queensland Group of companies for example Energex, Ergon Energy Network etc.
EQL	Energy Queensland Limited
Erosion	The wearing away of the land surface by water, rainfall, wind or other natural geological agents.
EWP	Elevated Work Platform
Ground Distribution **	The spraying or dispersing of *Herbicide* from ground equipment.
Hazardous Area **	An area determined by an *Authority*, which would be adversely affected by the application of *Herbicide*s.
Herbicide	A chemical which kills plants (*Vegetation*).
Herbicide Treatment**	Means the application of *Herbicide* formulations, either neat or diluted, to *Vegetation*. This may include the addition of other chemical formulations to the *Herbicide* mixture to enhance the effectiveness of the mixture (*Surfactants*). There are various means of *Herbicide Treatment* which include *Herbicide* spraying, basal bark application, *Stem Injection*, cut stump or the application of pelletised *Herbicide*.
Infrastructure Drainage	Defined as a system of drainage to prevent moisture (e.g., storm water) ponding around and the build-up of soil and debris around tower legs, mono and multi structure poles and columns (wood / concrete / steel) and their foundations at ground level.
Invasive Plants (Weeds)	*Vegetation* identified under the *Laws* including the Biosecurity Act (as amended), which have or could have a serious economic, environmental, or social impact.
Landholder	Means the owner or an *Occupier* or *Authority* having jurisdiction over the particular parcel or land, easement, road reserve or similar.
Minor Creek Crossing	Defined as a dry or shallow crossing with water an average depth of up to 500 mm during periods of flow.
Occupier	The tenant, who may not necessarily be the owner of the land.
Overhead Conductors	*EQL* overhead mains (that are conductors of electricity) energised at voltages up to and including 132kV including open and insulated services.
Patch Gravelling	A process of laying a mixture of coarse mineral particles less than 75mm in equivalent diameter on the driving surface of the *Access* track *Pavement*.
Pavement	The *Access* track running surface.
RGVM	Registered Gross Vehicle Mass
Sedimentation	The deposition of soil or rock particles that have been transported by water or wind which have slowed down to the point where the transported particles drop out or accumulate.
Stabilise / Stabilising / Stabilisation	Protecting a surface to prevent (further) *Erosion* of an area – can use *Vegetation* or artificial means (e.g., rock, concrete, or matting).

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Term	Definition
Surface Run-Off	Water from rainfall that is not absorbed or detained, and so becomes surface flow.
Vegetation	Any plant growth living or dead.
Watercourse	As per the Water Act (Qld) description being, "a river, creek, or stream, including a stream in the form of an anabranch or tributary, in which water flows permanently or intermittently, regardless of the frequency of flow events: (a) in a natural channel, whether artificially improved or not; or (b) in an artificial channel that has changed the course of the stream and includes in-stream islands, benches, and bars". Refer to the Queensland Water Act for the complete definition and for the meaning of other terms used in that Act.
Whoa-boy	A trafficable diversion banks - *(They are constructed to divert water off the track without causing erosion and allowing vehicles or people to cross over them).*
WCS	Means work category specification.
** Specific to *Herbicide Treatment*.	

13. REFERENCES

(a) For reference requirements, refer to *WCS*133, Section 13 - References.

(b) For additional reference requirements specific to this category of work refer to the below included references and clauses.

13.1 Available Documents

Make available (at all times) to Infield *Operators*, the relevant documents / forms listed in Table 6 for verifying *Service* requirements.

Table 6 – Available Documents

Document Reference	Detail / Description
Electrical Safety Office	Code of Practice Working in the Vicinity of Overhead and Underground Electric Lines
EQL	EQL approved Construction Plan and associated drawings and instructions.
EQL Form	*Access* Track Condition Assessment Data Capture
EQL Form	Environmental Assessment Response T111
EQL Form	Clean Down Record
EQL Form	Cultural Heritage Assessment
EQL Work Category Specification	*WCS*1.5 Land Management.
EQL Work Category Specification	*WCS*1.5A Land Management Assessment
EQL Work Category Specification	*WCS*1.6A Vegetation Management Plan - Assessment
EQL Work Category Specification	*WCS*1.7A Vegetation Treatment Near Electricity Networks
EQL Work Category Specification	*WCS*133 General Standards and Conditions
Energy Queensland Electrical Network System drawings	Relevant Electrical Network geographical information required for actioning all work at the Worksite.
Energy Queensland	Record of Distribution of *Herbicides*.
Manufacture's Safety Data Sheet	*Herbicide* Safety Data Sheets and Labels.
Manufacture's operation and maintenance manuals	Operation & Maintenance manuals specific to plant and equipment being supplied/used onsite.
Department of Agriculture and Fisheries	Fish Habitat Area code of practice - The lawful use of physical, pesticide and biological controls in a declared Fish Habitat Area
Powerlink Qld - LIRA	*Landholder* Interaction Recording Application

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Document Reference	Detail / Description
Safe Work Australia – Safety Data Sheets	Safety Data Sheet and Label for all chemicals used at Worksite, for example fuel, hydraulic oil.
Service Provider	Safe Work Method Statements & associated Work Instructions.
Service Provider	Service Provider's *Herbicide* application data

13.2 Recommended Documents

Refer below for the recommended documents that are of relevance.

13.2.1 EQL Documents

Table 7 – EQL Documents

Document Reference	Detail / Description
EQL	*Access* Track Condition Assessment Data Capture Sheet
EQL	Clean Down Record
EQL	Environment and Cultural Heritage Conditions for Contracted Work
EQL	Environmental Management Plan (EMP)
EQL	HSE Incident Management Requirements
EQL	Specification for Land Management
EQL	Standard for Fatigue Management
EQL	Standard for Heat Stress Management
EQL	Standard for Remote and Isolated Work
EQL	Work Health and Safety Conditions for Contracted Work R116
EQL Work Category Specification	*WCS*1.5A Land Management Assessment
EQL Work Category Specification	*WCS*1.6 *Vegetation* Management Plan
EQL Work Category Specification	*WCS*1.6A *Vegetation* Management Plan - Assessment
EQL Work Category Specification	*WCS*1.7 *Vegetation* Treatment Near Electricity Networks
EQL Work Category Specification	*WCS*1.7A *Vegetation* Treatment Near Electricity Networks
EQL Work Category Specification	*WCS*1.8 *Vegetation* Clearing by Mechanical Plant Near Electricity Networks.
EQL Work Category Specification	*WCS*1.8A *Vegetation* Clearing by Mechanical Plant Near Electricity Networks - Assessment
EQL Work Category Specification	*WCS*133 General Standards and Conditions

13.2.2 Queensland Acts and Regulations

(a) For Queensland Acts and Regulations, refer to *WCS*133, Section 13.2.2 – Queensland Acts and Regulations.

(b) For additional Queensland Acts and Regulations specific to this category of work, refer to the latest version of the Acts & Regulations below:

Acts

- Aboriginal Cultural Heritage Act.
- Agricultural Chemicals Distribution Control Act
- Biosecurity Act
- Chemical Usage (Agricultural and Veterinary) Control Act.
- Environment Protection and Biodiversity Conservation Act.
- Environmental Protection Act.
- Fire and Emergency Services Act.
- Fisheries Act
- Marine Parks Act.
- Nature Conservation Act
- Pest Management Act.
- Torres Strait Islands Cultural Heritage Act.

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- *Vegetation* Management Act.

Regulations

- Agricultural Chemicals Distribution Control Regulation
- Biosecurity Regulation.
- Chemical Usage (Agricultural and Veterinary) Control Regulation.
- Environmental Protection Regulation.
- Marine Parks Regulation.
- Nature Conservation (Administration) Regulation.
- Nature Conservation (Wildlife) Regulation.
- Work Health and Safety QLD- Managing the risks of plant in the workplace - Code of Practice.
- Work Health and Safety QLD – Mobile Crane Code of Practice.
- Work Health and Safety QLD – Safe Design and Operation of Tractors Code of Practice.

13.2.3 Australian Standards and Other Documents

(a) For Australian Standards and other documents, refer to *WCS*133, Section 13.2.3 – Australian Standards and other Documents.

(b) For additional Australian Standards and other documents specific to this category of work, refer below:

- Australian Standard AS 4454 - Composts, soil conditioners and mulches.
- Australian Standard AS/NZS 1418.5 - Cranes, hoists, and winches-Part 5: Mobile cranes (EN 13000, MOD).
- Australian Standard AS 2550.5 - Cranes, hoists, and winches - Safe use - Mobile cranes.
- Australian Standard AS 3706.0 - Geotextiles - Methods of test - General introduction and list of methods.
- Australian Standard AS/NZS 4680 - Hot-dip galvanized (zinc) coatings on fabricated ferrous articles.
- Australian Standard AS1289.5.2.1 - Methods of testing soils for engineering purposes; Method 5.2.1: Soil compaction and density tests — Determination of the dry density / moisture content relation of a soil using modified compaction effort.
- Australian Standard AS 3743 - Potting mixes.
- Australian Standard AS 4970 - Protection of trees on development sites
- Australian Standard AS 4373 – Pruning of amenity trees.
- Australian Standard AS 4419 - Soils for landscaping and garden use.
- Code of Practice - Maintenance of Electricity Corridors in Queensland's Parks and Forests.
- Department of Agriculture and Fisheries - Accepted development requirements for operational work that is the removal, destruction, or damage of marine plants.
- Department of Agriculture and Fisheries - Accepted development requirements for operational work that is constructing or raising waterway barrier works.
- Fish Habitat Area Code of Practice - The lawful use of physical, pesticide and biological controls in a declared Fish Habitat Area

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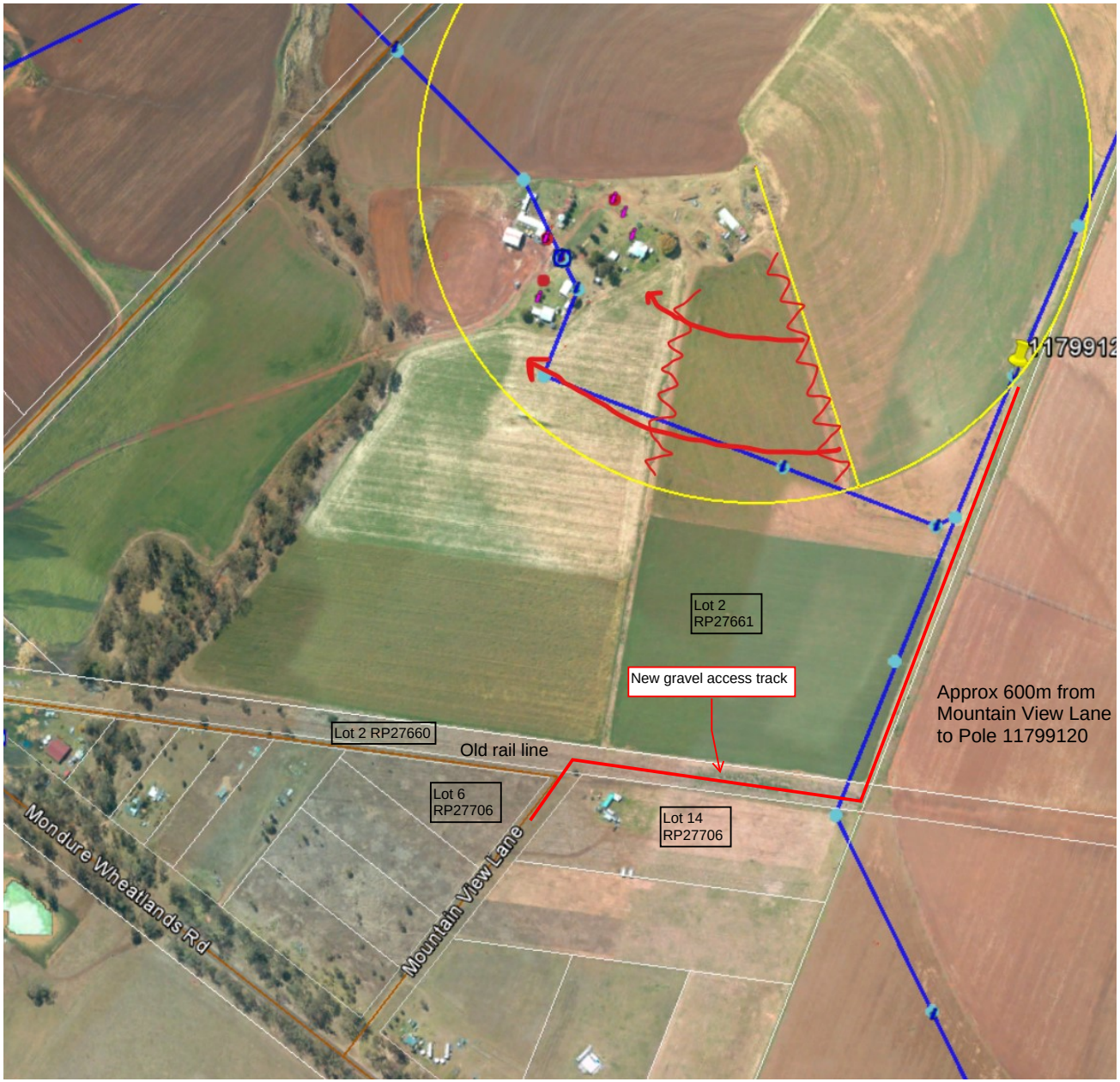
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RP27661
New gravel access track
Approx 600m from
Mountain View Lane
to Pole 11799120
Lot 2 RP27660
Old rail line
Lot 6
RP27706
Lot 14
RP27706
Mondure Wheatlands Rd
Mountain View Lane

INTERNAL CURRENT STATE TENURE SEARCH
QUEENSLAND TITLES REGISTRY PTY LTD

Search Date: 14/05/2024 14:06 Title Reference: 48005795
Date Created: 27/02/2010

Previous Title: 40008706

LAND DESCRIPTION

Estate in PERPETUITY

LOT 2 REGISTERED PLAN 27660
Local Government: SOUTH BURNETT

REGISTERED LESSEE

Dealing No: 712575711 07/07/2009

THE STATE OF QUEENSLAND
(REPRESENTED BY DEPARTMENT OF TRANSPORT AND MAIN ROADS)

PERPETUAL TENURE INFORMATION

For Conditions, Primary Tenure information including Purpose and Term of Tenure, refer to title reference 40008706

ENCUMBRANCES, EASEMENTS AND INTERESTS

1. SUB LEASE No 710837899 24/07/2007 at 11:22
WONDAI SHIRE COUNCIL
TERM: 01/07/2007 TO 01/07/2037 OPTION AS THEREIN STATED
Lodged at 11:22 on 24/07/2007 Recorded at 09:25 on 09/08/2007

ADMINISTRATIVE ADVICES - NIL
UNREGISTERED DEALINGS - NIL

Caution - Charges do not necessarily appear in order of priority

** End of Current State Tenure Search **

Information provided under section 34 Land Title Act (1994) or section 281 Land Act (1994)

14.11 OLD PAVERS FROM BLACKBUTT TOWNSHIP REDEVELOPMENT

File Number: **17/07/2024**

Author: **Acting General Manager Liveability**

Authoriser: **Chief Executive Officer**

PRECIS

Request use for the old pavers from Blackbutt Township Redevelopment.

SUMMARY

The Blackbutt Tennis Club Inc. has written to Council asking if they could utilise the old pavers from the Blackbutt Township Redevelopment project to create a base for the bulker bags for the Containers for Change.

OFFICER'S RECOMMENDATION

That Council resolves to donate pavers to the Blackbutt Tennis Club Inc for the use of creating a base for the bulker bags at the Blackbutt Containers for Change under Council Disposal of Asset Policy 3.2.3 Exceptions for Valuable Non-Current Asset Contracts.

Under *Section 236* of the *Local Government Regulation 2012* provides for the following exemptions to *Section 227*;

b) the valuable non-current asset is disposed of to:

i) a government agency; or

ii) a community organisation

FINANCIAL AND RESOURCE IMPLICATIONS

Nil financial and resource implications

LINK TO CORPORATE/OPERATIONAL PLAN

EC6 – Appropriately support and encourage volunteers, advisory groups and community organisations to value add to Council's services and infrastructure.

COMMUNICATION/CONSULTATION (INTERNAL/EXTERNAL)

Cr Little attendance Blackbutt Tennis Association meeting to discuss the project and use of pavers to set up an area for the containers for change. Acting General Manager has liaised with internal Council departments and can confirm the pavers have no further use for Council.

LEGAL IMPLICATIONS (STATUTORY BASIS, LEGAL RISKS)

No direct Legal Implications

POLICY/LOCAL LAW DELEGATION IMPLICATIONS

No direct Policy/Local Law Delegation Implications

ASSET MANAGEMENT IMPLICATIONS

As per Council's Disposal of Assets Policy;

3.2.3 Exceptions for Valuable Non-Current Asset Contracts. Under Section 236 of the Regulation provides for the following exemptions to Section 227;

b) the valuable non-current asset is disposed of to:

i) a government agency; or

ii) a community organisation

Other option would be for the pavers to be auction at Council's next community auction and the Club can bid.

REPORT

The Blackbutt Tennis Club Inc has written to Cr Little regarding the old pavers that are being stored at the Blackbutt Wastewater Plant. They are left over from the Blackbutt Township Redevelopment project. At the time of the project Council did offer the pavers to local community groups, some group did accept the offer. The remaining pavers where then stored.

The Club would like to use the pavers to create a base for the bulker bags that are used to hold bottle and can at the Blackbutt Containers for Change site. In their correspondence to Cr Little the Club has said they will only take the number of pavers required for their project.

ATTACHMENTS

Nil

14.12 SOUTH BURNETT REGIONAL COUNCIL CLIMATE CHANGE ADAPTATION STRATEGY (AND ACTION PLAN) 2024-2034

File Number: **17072024**

Author: **Acting Manager Environment & Planning**

Authoriser: **Chief Executive Officer**

PRECIS

The report presents to Council the DRAFT SBRC Climate Change Adaptation Strategy (and Action Plan) 2024-2034 for its further consideration and adoption.

SUMMARY

In early 2022 Council received funding from the State's 2022-24 Local Government Grants and Subsidies Program - Planning to prepare a regional climate change adaptation strategy. The Strategy has now been drafted and includes a broader action plan. This Strategy seeks to guide future decision making around council's operations and how it may incorporate actions to mitigate against, prepare for, and work through all kinds of climate related challenges that may impact on the business.

The report provides a broad overview of its preparation and the various actions for consideration.

OFFICER'S RECOMMENDATION

That South Burnett Regional Council resolved to:

1. Note the content of this report.
2. Adopt the SBRC Climate Change Adaptation Strategy (and Action Plan) 2024-2034 to be utilised in guiding future Council strategic, budgetary, and operational decisions.

FINANCIAL AND RESOURCE IMPLICATIONS

Council received external funding to prepare the Strategy through the State's 2022-24 Local Government Grants and Subsidies Program – Planning. The total budget was $38,000 ex GST. (Budget Item 23/24FY – Business Unit 1165 – Project 100512).

The ongoing implementation of this Strategy and Action Plan will be shared across all Directorates. The action plan identifies those respective areas of responsibility.

The scope of the consultancy did noy include the development of cost estimates to undertake the proposed actions that have been identified.

The actions that have been identified are on the basis that they, generally, can be implemented via existing Council programs and projects. The intention is that by utilising a climate change adaptation lens over existing policies, programs, and proposed projects, many of the actions can be delivered at minimal or no additional cost to Council and maybe achieved through existing business resources.

The exception is the development of a drought preparedness plan which was identified as a key priority in late 2023.

LINK TO CORPORATE/OPERATIONAL PLAN

Council's current Corporate Plan 2021-2026 supports the actions recommended through a range of key priorities identified below.

- EC7 Development and implementation, in consultation with local communities, of realistically achievable rural resilience programmes.

- GR8 Support and advocate for appropriate growth and development with responsive planning schemes, processes, customer service and other initiatives.
- GR14 Support our community and key stakeholders to build a plan for our region's eventual coal transition.
- EN2 Develop and implement energy efficient initiatives to reduce Council's energy / carbon footprint.
- EN3 Continue to provide and investigate options to improve waste reduction, landfill management and recycling.
- EN5 Encourage responsible investment in renewable energy.
- EN6 Encourage investment in transport innovation, for example electric vehicles and charging stations.
- EN7 Support initiatives that promote and protects biodiversity, natural resource management and caring and retaining our unique landscapes.
- OR5 Continue to give priority to ongoing financial sustainability and prudent budget management.

COMMUNICATION/CONSULTATION (INTERNAL/EXTERNAL)

The final draft strategy maintains an internal focus on Council's operations.

An internal workshop was held on 4 October 2023 with Councillors and Senior Executive to gain a greater understanding of SBRC's desired approach to Climate Change Adaptation, to further explore the scope of the project and to discuss in broad detail, actions likely to be supported.

Mead Perry Group prepared a survey, and this was sent to all senior staff as an information gathering exercise for all existing actions occurring within Council.

An Initial draft report was submitted to Council on 22 January 2024 for feedback and to initiate further opportunity to explore the drafted actions. Due to staff changes within the organisation, this review was delayed. The initial draft was reviewed in April/May with feedback provided to the consultants.

Part of the feedback was recast the final strategy and for it to be rescoped to focus solely on internal actions for Council. The reasoning for this change was due to the facts that the grant funding had to be expended and acquitted by 30 June 2024. Given the document had not publicly consulted, it would be difficult to propose a range of actions that may seek to impose actions to be undertaken by others outside of Council's control.

In the absence of a broader external consultation program, it was best that any Strategy seek to focus on Council operations and how it may, as an organisation, be able to undertake actions within its control, to become more climate resilient into the future.

It is also noted that to have this matter adopted and to meet funding acquittal timeframes, the proposed actions have not been widely communicated internally prior to this report being presented. The proposed actions are time bound however these times may be amended and are subject to financial and physical resourcing. The project scope did not include the preparation of costings for each of the actions identified.

Council may wish to, at some time in the future, seek to amend its Strategy to become a more outward facing document with the support of its community and regional industries. If the region is to be successful in becoming more climate resilient then it will require community/industry sector education, greater awareness and buy in. Council cannot do it alone.

LEGAL IMPLICATIONS (STATUTORY BASIS, LEGAL RISKS)

This Strategy and accompanying action plan seek to provide Council with guidance with its future decision making associated with climate adaptation. into the future. As mentioned above, identified actions have not been costed as part of the initial consultancy scope. Therefore, there is some risk associated with non-costings being available in adopting the Strategy. The draft actions, however,

have been framed to allow them to be included in future operational and budgetary deliberations with manageable timeframes within this current term of council. Some actions are ongoing and of a longer timeframe.

There are no immediate legal implications identified in adopting the draft Strategy with its proposed content and actions.

Having an adopted Strategy and action plan demonstrates Council has considered and is committed to climate adaptation within its own operations. This may assist Council with future applications to undertake some of the actions identified.

POLICY/LOCAL LAW DELEGATION IMPLICATIONS

The adoption of the Strategy and action plan may impact on future policy directions for council. For example, actions identified in the built environment, waste, transport, water management delivery areas and so on, will influence future policy directions and decisions.

The adoption of this Strategy aligns with Council's Environmental Sustainability Policy adopted on the 28 June 2023.

ASSET MANAGEMENT IMPLICATIONS

The Strategy and its action plan will have some implications on asset management programs. Future design and actions will need to cater for climate resilience and adaptation. There are several proposed actions that may have implications on the future asset management and upgrades. For example, lighting upgrades to reduce ongoing emissions, implementation of energy efficiencies across all of council's facilities, and creating drought tolerant plantings across operations, are some example implications that may result from the Strategy's adoption.

REPORT

Consultants Mead Perry Group were commissioned in September 2023 to provide Council with climate change consultancy services in developing a new climate change adaptation strategy.

The following deliverables were identified in the brief:

- Identify existing practices that are contributing to improved climate change outcomes.
- Identify opportunities to initiate or change existing practices to enhance positive climate change outcomes.
- Identify opportunities to invest in Council infrastructure that extends its useable life and improve its resilience to climate change and disaster events.
- Provide a report with findings, recommendations, and an action plan to guide Council in its decision making in this area.

The consultancy was funded through external funding, as identified in the financial implications section above.

Due to several ongoing constraints through staff turnover, leave and so on, and lateness of the consultancy engagement, this project was delayed. The opportunity for broader internal consultation was limited. External consultation was not undertaken.

The draft Strategy and accompanying action plan, as proposed, meets the intent of the funding applied for. Whilst it would have been worthwhile to undertake a comprehensive community

consultation program with surveys and workshops, the constraints identified above, impacted on progressing this process within the funding timeframe available.

It is noted that engagement with Council identified an important action being the development of a Drought Preparedness Plan that explicitly addresses the changing demographics of the region. This Plan would focus on informing and assisting new rural property owners in the region to better understand the consequences of drought and how they can be better prepared for its impacts. The preparation of such a plan has been identified in the action plan.

ATTACHMENTS

1. SBRC Climate Change Adaptation Plan (Final Draft - July 2024) ⇩

Climate Change Adaptation Strategy
July 2024

(Adopted CM xx / 7 / 2024 Item Number xx)

Table of Contents

Adoption by Council

(Adopted CM xx / 7 / 2024 Item Number xx)

ECM Version Control

Version Control	Date
ECM 3188387	July 2024

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Acknowledgement

We acknowledge and respect the Wakka Wakka and Auburn Hawkwood people, the traditional owners of this land that we live, work and play and respect their cultures, their ancestors and their elders past, present and future generations.

Abbreviations

CSIRO	Commonwealth Scientific and Industrial Research Organisation
DPF	Diesel Particulate Filter
EGR	Exhaust Gas Recirculation
EOL	End of Life
ICT	Information Computer Technology
IPCC	Intergovernmental Panel on Climate Change
LED	Light-Emitting Diode
SBRC	South Burnett Regional Council
UN	United Nations
UNFCCC	United Nations Framework Convention on Climate Change
VIC	Visitor Information Centre

1 Introduction

This Climate Change Adaptation Strategy has been produced by South Burnett Regional Council (SBRC) in response to the changing climate in our local region. The concept of climate change has been extensively referenced throughout this document. However, Council understands that not all SBRC residents embrace the idea of climate change.

The core premise of the Climate Change Adaptation Strategy is that, as a region, we have faced and will continue to face extreme weather events, from floods to drought, and everything in between, including heatwaves, severe storms, and bushfires.

While it's not the only stakeholder or agency responsible for preparing for climate change, Council has a responsibility to help its community prepare for and mitigate against the widespread impacts the changing climate has on our region. This responsibility extends to infrastructure, assets and services and ensuring that they are designed, constructed, and maintained, and are robust enough, to respond to these climate changes.

The core purpose of this plan is to help protect the South Burnett region and build climate resilience, no matter what the cause of these events.

In 2023, South Burnet Regional Council Councillors joined a growing number of Councils recognising the serious risk that a changing climate poses to the safety of our community, and that immediate action is required to build community resilience in response to the local impacts of a changing climate.

The decision to develop a Climate Change Adaptation Strategy (2024 to 2034) came following the adoption of Council's Environmental Sustainability Policy in 2023. It provides a strategic context and roadmap to building resilience in response to the effects of a changing and variable climate.

South Burnett Region, like the rest of Australia and many parts of the world, expects the changing climate to exacerbate the frequency and severity of events such as floods, droughts, heatwaves, severe storms, and bushfires.

This Adaptation Strategy and Action Plan will ensure Council embeds consideration of a changing climate into all corporate decision-making. It will guide our planning and response to both slow moving and fast changes in our climate and provide a clear pathway forward. It also aligns with our goal of developing an understanding of Council's current greenhouse gas emissions as a baseline for future action.

This Strategy has been created to ensure the South Burnett Regional Council is in the best position possible to mitigate against, prepare for, and work through all kinds of climate related challenges and emergencies that effects its business.

To best mitigate, adapt to, and build resilience in response to a changing climate in our region, four pillars of positive action are identified:

1) Environmental action
2) Governance and operations
3) Community action
4) Commerce and industry action

Under these four pillars, nine high level goals have been identified:

1. Environmental Action

a. To develop an understanding of Council's current greenhouse gas emissions as a baseline for future action.
b. To ensure a climate responsive built environment.
c. To protect and enhance our natural environment.
d. To transition to a circular economy.
e. To reduce our emissions by embracing affordable, efficient, and renewable energy solutions.

2. Governance and Operations

a. Council will lead in climate change preparedness and management, with an educated, mindful, responsive culture within its own operations, and encourage other sectors in the South Burnett region to do the same.
b. To strengthen resilience as an organisation, ensuring Council is prepared, ready and adaptive to climate change related events.

3. Community Action

a. To build an educated, engaged, resilient and responsive community through conversations, workshops, and information sharing.

4. Commerce and Industry Action

a. To work proactively and collaboratively with local business, industry and other agencies to build a more resilient and supportive business network within the region that has strong connections both within and external to the region.

By taking steps to understand and improve our capacity to respond to a changing climate, resilience of our organisation and our community will be enhanced.

2 The Story So Far

2.1 About the South Burnett Region

Located on the edge of the Great Dividing Range and set against a backdrop of the Bunya Mountains, the South Burnett comprises a unique blend of vibrant country towns, and associated rural and supporting industries, set amongst a scenic rural landscape, enjoying a relaxed and laid-back living.

It is part of the Wide Bay–Burnett region, which extends from the northern edge of the Sunshine Coast to the coastal town of Winfield, and inland to the orchards and grazing areas of the Burnett. The region occupies 3% of the state's total area and includes around 7% of the state's population.

Situated inland from the Sunshine Coast and an easy two-hour drive from Brisbane, the South Burnett is a great place to make a home. In the past our region was best known for its peanuts – the "Peanut Capital of Australia".

The South Burnett however, offers much more. Residents enjoy a relaxed country lifestyle, contrasted with abundant opportunities and possibilities afforded by well-established and innovative industries. From agriculture, manufacturing, mining and renewable energy, to art, culture, tourism, health and quality education, the South Burnett really does have it all.

The region is blessed with rich agricultural land that produces high-quality agricultural products for both domestic and international markets including peanuts, navy beans, maize, wheat, grain, dubosia and sorghum.

The region also boasts Swickers - Queensland's only export accredited pork abattoir. The local wine industry is gaining momentum, producing award-winning wines, that can be paired with produce direct from paddock to plate. Kingaroy is the hub of the South Burnett and has an airport, bus services to Brisbane, a shopping centre, education, health, various Government agencies and many facilities generally expected in much larger centres.

All townships within the region support a vigorous sporting and social lifestyle with facilities such as museums, art galleries, shopping centres, indoor/outdoor sporting facilities, parks and green spaces, local theatre groups, annual festivals and music venues. The timber-town of Blackbutt is home to Australia's only annual avocado festival. Historical Nanango is considered Queensland's fourth oldest town and has a number of heritage-listed sites including Ringsfield House, the Nanango Court House and the Butter Factory. Further to the north, 12km from Murgon, is the spectacular Bjelke-Petersen Dam.

Another dam in the region popular for fishing is Boondooma Dam. Rock wallabies can be seen on local cliffs, particularly around twilight hours. The Garnet gem fields are located just west of Proston.

2.2 The Statistics

- Our population 34,290 (2023), expecting growth to 37,107 by 2041.
- Population density 4.02 persons per square kilometre.
- Land area 8,397 square kilometres.
- There are 13,528 local jobs and 13,202 employed people.
- Gross Regional Product – $2.11 billion.
- Largest industry by employment is health care and social assistance.
- The region consists of a diverse economy largely based on the sustainable utilisation of natural resources, including farming, mining, non-renewable and renewable power generation, timber harvesting, cropping and ecotourism.
- The South Burnett Regional Council area is predominantly rural, with the existing centre of Kingaroy and smaller townships at Murgon, Nanango and Wondai, and villages at Benarkin, Blackbutt, Durong, Hivesville, Kumbia, Maidenwell, Memerambi, Proston, Tingoora, and Wooroolin. Rural land is used largely for agriculture, particularly cattle grazing, and crop and cereal growing (including peanuts, navy beans, wheat, grain and sorghum). Timber production, viticulture, coal mining and electricity generation are also important industries.
- There are 3,345 registered businesses in the region. The Agriculture, Forestry and Fishing industry had the largest number of total registered businesses in South Burnett Region, comprising 43.5% of all total registered businesses, compared to 8.4% in Queensland.
- In 2020/21, the total value of agricultural output in South Burnett Regional Council was $169m. The largest commodity produced was Livestock processing, which accounted for 67.4% of South Burnett Region's total agricultural output in value terms.

Sourced From: Informed Decisions (2023a, 2023b).

2.3 Council's Corporate Plan and Responsibilities

SBRC has a range of existing plans and policies in place that describe its approach to delivering sustainable outcomes, including its Corporate Plan 2021-2026. The theme of this plan is "The South Burnett … unique communities working together in a strong and vibrant region".

There are five key pillars to the Corporate Plan:

1) Enhancing liveability and lifestyle.
2) Providing key infrastructure for our towns and villages
3) Growing our region's economy and prosperity.
4) Safeguarding our environment, and
5) Organisational excellence.

While Council's ability to prepare for and manage a changing climate is relevant to all five pillars, pillar four holds the most significance. The highlighted outcomes below relate directly to this Action Plan:

EN1 Investigate, develop and implement a Environmental Sustainability Policy.

EN2 ***Develop and implement energy efficient initiatives to reduce Council's energy / carbon footprint.***

EN3 ***Continue to provide and investigate options to improve waste reduction, landfill management and recycling.***

EN4 Ongoing commitment to biosecurity and pest management, including declared and non-declared species.

EN5 ***Encourage responsible investment in renewable energy.***

EN6 ***Encourage investment in transport innovation, for example electric vehicles and charging stations.***

EN7 ***Support initiatives that promote and protects biodiversity, natural resource management and caring and retaining our unique landscapes.***

EN8 Develop and implement a systematic programme to identify and take action to address overgrown allotments across all regional residential areas.

EN9 Develop and implement a systematic programme to identify and take action to address stray / feral / pests and wild animals.

EN10 Community education and assistance to support food and other local businesses to meet relevant Local Laws compliance standards.

Regarding the Environmental Sustainability Policy adopted in June 2023, Council has committed to focusing on:

Priority Area / Goal	Corporate Plan 2021-2026 Pillar Reference
Renewable energy production and purchasing.	4. Safeguarding our environment
Establishing a social licence for action.	
Developing an understanding of Council's current greenhouse gas emissions as a baseline for future action.	4. Safeguarding our environment
The continue adoption of hybrid vehicles into the Council fleet.	4. Safeguarding our environment 5. Organisational excellence.
The consideration of battery-operated small plant as a replacement for petrol operated equipment.	4. Safeguarding our environment 5. Organisational excellence.
The utilisation of the procurement framework to drive local reuse and recycling.	3. Growing our region's economy and prosperity 4. Safeguarding our environment 5. Organisational excellence
The expansion of wastewater reuse.	4. Safeguarding our environment 5. Organisational excellence
The ongoing focus on the reduction of waste to landfill.	1. Enhancing liveability and lifestyle 4. Safeguarding our environment 5. Organisational excellence
Repurposing and reusing infrastructure.	1. Enhancing liveability and lifestyle 2. Providing key infrastructure for our towns and villages 3. Growing our region's economy and prosperity 4. Safeguarding our environment
The treatment of invasive species.	4. Safeguarding our environment
Increasing tree canopy cover on public land.	1. Enhancing liveability and lifestyle 2. Providing key infrastructure for our towns and villages 4. Safeguarding our environment

South Burnett Region Climate Change Adaption Strategy

Priority Area / Goal	Corporate Plan 2021-2026 Pillar Reference
Protecting and enhancing waterways and natural areas.	1. Enhancing liveability and lifestyle 2. Providing key infrastructure for our towns and villages 4. Safeguarding our environment
The improvement of ecological value of the urban forest by utilising species endemic to the South Burnett region.	4. Safeguarding our environment
Making its best endeavours to achieving State and Commonwealth environmental targets.	4. Safeguarding our environment 5. Organisational excellence.

Much of the above is directly impacted by our changing climate – hence the policy's relevance to this Action Plan.

2.4 Building on Strong Foundations

In addition to the creation of the Environmental and Sustainability Policy, much work has already been completed by SBRC that will help the region best prepare for a constantly changing climate. The table below provides a summary of some of the projects / actions already delivered, as well as a work in progress list of current activities.

Department	Action
Works	• Works installed a water bore in the Kingaroy depot to support our road works water use, because of limited access to natural streams during drought.
ICT	• ICT dispose of EOL ICT e-waste through ACT logistics who are accredited with the below. https://actlogistics.com.au/accreditations/
Fleet	• **Vehicles:** • All passenger vehicles (Sedans, Hatch, Wagons) purchased are Hybrid (fuel/electric) models. Currently have one hybrid in the vehicle pool fleet with more to come when replacements are due and appropriate for operational needs. • Currently for utilities the hybrid market is only at beginning stages and these vehicles are not available as yet, when the market expands these utilities may be considered. • Trucks sold in Australia currently meet Euro 5/6 Emission standards and require emission devices and systems to be fitted such as EGR (Exhaust Gas Recirculation), Ad-

Department	Action
	blue (Additive injected into exhaust system to counteract emissions) and DPF (Diesel Particulate Filter which traps particles that are burnt off during set driving conditions) • Engines in Yellow plant and mobile machinery meet Tier standards for emissions. Currently in Australia a Tier 3 engine (Very limited emission controls) can still be purchased, however due to meet regulations overseas most machines are now supplied with a Tier 4/Tier 4 final engine (can include EGR, Ad-blue & DPF devices and systems). Council currently have numerous machines with Tier 4 /Tier 4 final engines. • Fuel usage is calculated into whole of life costs evaluations for replacement vehicles.
Waste	• Waste fluids such as oils and coolants are captured and collected for recycling. • Old batteries are collected for recycling. • Certain filters are collected for recycling. • Old Cutting edges removed from Graders, loader Etc. are used for wear plates on other items such as sacrificial skid wear plates on slashers instead of scrapping.
Built	• Solar Panels on Council buildings. • Solar Air Conditioning. • Solar Hot Water systems. • Solar Heat blankets on pools. • Blankets on all outdoor swimming pools. • Smart energy efficiency building design in new building projects i.e. Nanango Administration Building, Murgon Swimming Pool Kiosk and Change Room. • LED light upgrades in offices, depots, libraries, art galleries, VIC's etc. • Air ventilation system – upgrades at the Nanango Pool. • Air Conditioning – controlled levels in air conditioning units in Council offices between 22 to 28 degrees.

Department	Action
Parks	• Recycled plastic products used in bollard upgrades and fencing materials, board walks. • Solar lighting in park shelters. • Solar lighting along park footpaths and rail trails. • Increased tree planting to improve the tree canopy in urban streets and reduce temperatures. • Increased tree planting in parks to improve tree canopy and reduce temperatures in parks. • Use of recycled water within Community sporting and recreation facilities i.e., Golf courses, football fields, cricket fields, showgrounds.
Future Projects	• Solar panels on Council owned buildings where this is a business case for their installation • Batteries for storing solar energy and using the energy in peak times. • Review plant energy efficiencies within swimming pools, Council offices and depots. • Review white good energy efficiencies across Council buildings and depots. • Increase tree plantings in urban areas, streets and parks to reduce ambient street level and urban temperatures. • Encourage all new buildings to have energy efficiency build targets. • New equipment in parks – recycled plastic options. • Solar lighting for streets/park footpath v's electricity street and park lighting. • Food waste recycling in Council offices. • Recycled bottle collection in Council facilities. • Irrigation for parks and gardens. • Recycled water in KTP, Memorial Park.

2.5 Action Plan Context

This Action Plan has been informed and guided by applicable international, federal, state and regional frameworks, legislation, strategies and plans, as well as the SBRC Corporate Plan, including:

- 2016 Paris Climate Change Agreement – Australian Ratification - International Climate Change Agreement
- Sendai Framework for Disaster Risk Reduction 2015-2030
- World Health Organisation Sustainable Development Goal
- National Climate Resilience and Adaptation Strategy
- Queensland Climate Adaptation Strategy (Q-CAS)
- Queensland Strategy for Disaster Resilience
- Queensland State Planning Policy (SPP)
- Queensland Planning Act 2016
- The Burnett Regional Resilience Strategy
- Queensland Disaster Management Act 2003
- Queensland Prevention, Preparedness, Response and Recovery Disaster Management Guideline
- Queensland and Emergency Risk Management Framework (QERMF) Risk Assessment Process Handbook
- SBRC Corporate Plan 2021-2026
- SBRC Environment and Sustainability Policy 2023
- SBRC Local Disaster Management Plan (LDMP)
- SBRC Waste Strategy 2023-2029

2.6 Use of this Action Plan

- Council will progressively implement this plan over the next 10 years with regular review.
- Council will use this Plan to guide internal decision making about operational priorities, investment, budgets, and resource allocations.
- The Council actions listed in this Plan are specific, timebound and require committed resources, as required.
- They ensure that Council is maximising its sphere of influence, delivering results on the ground locally, advocating for strong action at a state and federal level, and supporting the community to do their part.
- We will also use the plan to monitor and report on progress towards our shared goals.

3 Our Changing Climate – South Burnett

3.1 Climate Change Defined

As noted earlier in this document, whether the concept of human induced climate change is embraced or not, the region is facing a changing climate and continued major weather events.

Climate change is defined by the Intergovernmental Panel on Climate Changes (IPCC, 2018) as "a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere".

3.2 Impacts of a Changing Climate

The impacts of climate change are being experienced across the community now and are forecast to increase. Climate change related extreme weather events, have widespread impacts such as:

- Increased damage to buildings and infrastructure, leading to higher maintenance costs.
- Increased pressure and demands on emergency services.
- Reduced access to water.
- More heat-related deaths, particularly among the elderly and vulnerable.
- Damage to local vegetation and waterways.
- Negative impact to industries such as agriculture and tourism through increased intensity of drought and damaging rainfall events
- Interruptions to supply chains and food production.

3.3 A Shared Responsibility

Council recognises that stewardship of our environment is a shared responsibility. Council's role is to work collaboratively with all stakeholders such as traditional custodians, government agencies, education and research organisations, industry and business sectors, residents, and landholders to share knowledge, ideas and opportunities to seek to influence change through advocacy and partnerships, to ensure sustainable actions for the future benefit of our communities.

Global, National and State Context Responding to climate change is a global responsibility. As noted, in 2015, Parties to the United Nations Framework Convention on Climate Change (UNFCCC) came together to accelerate climate action, formalised in what we know as the Paris Agreement (United Nations, 2015). The central aim of the Paris Agreement is to strengthen the global response to the threat of climate change by keeping global temperature rise this century well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit temperature increase even further to 1.5 degrees Celsius.

The Queensland Government has committed to lifting Queensland's ambition on climate action by setting an emissions reduction target of 75% by 2035 (Queensland Department of Energy and Climate, 2024). The government is set to introduce legislation to lock in its emissions reduction targets, including the

existing targets of 30% reduction below 2005 levels by 2030, and zero net emissions by 2050.

The responsibility of delivering immediate climate action is often assumed by local governments, who can localise their community's ambitions for transformational change.

Council adopts several roles to achieve this strategy's outcomes and priorities.

Council will provide leadership to deliver services and programs, as well as regulate, advocate, educate, facilitate, or partner with our communities and other stakeholders, together all these roles play a part in protecting the environment and promoting sustainability.

Council will undertake each of these roles, to varying degrees, as part of its ongoing journey to create and maintain healthy and natural built environments.

Our community places high value on the diverse habitats and our region's natural beauty and unique lifestyle. Council also plays an important role as a leader in planning for its future growth and as a steward of our region's environment by actively working to raise awareness and build greater community understanding and participation in preserving and enhancing our biodiversity and natural spaces.

Where Council does not have a direct role, it may advocate to other levels of government for improved outcomes. It is important to recognise that Council is not solely responsible for funding, achieving outcomes or policy change for many matters, with some issues the responsibility of state and federal governments, and the private sector.

This Climate Change Adaptation Strategy aims to deliver tangible actions to mitigate and adapt to the challenges faced by climate change.

3.4 Our Region's Weather

The Regional Action Climate Roadmap state in their Creating Our Climate Ready Future report:

"Our changing climate means more frequent and extreme climate hazards are impacting our region - rain, storms, flooding, droughts, heatwaves and bushfires. Some of these happen fast, while others unfold slowly. While our community has experienced many of these hazards before, it is the increasing severity and frequency of these hazards, in close succession, that will result in rising impacts on our region.

The places we live, work and play were not planned with this severity or frequency of climate hazards in mind. Our region also attracts many new residents each year, who are not familiar with local climatic hazards, especially water security and drought, as the region has experienced an abundance of rain in recent times. Now is the time to assess what assets, activities and people will be exposed to these hazards, and to consider whether there are changes we can make to our residences, workplaces, recreation areas and community spaces, and the way we run our activities, organisations, and businesses, to prevent or at least minimise the impacts.

Many of the changes we need to make to prepare for climate change impacts can bring other benefits too. They can bring opportunities to build the economic vibrancy of our region, strengthen our community capital, and support healthy environments and landscapes.

These changes can also lead to improved human health and wellbeing, making our places more liveable, attractive and valuable. New business and employment opportunities can arise from developing innovative solutions to climate challenges, emissions reductions initiatives and resource efficiencies."

Our region has experienced considerable change over the past few years. An increasing number of "tree changers" have moved to the area to purchase lifestyle properties and hobby farms etc. This trend became apparent during Covid, as people escaped more highly populated towns with the goal of enjoying a more laidback, "green" existence, away from the hustle and bustle of city life.

Unfortunately, most of these people moved to the region in greener times. While the South Burnett has experienced a considerable amount of rain over the past few years, these "green times" will not continue – dry weather, and drought, is a certainty at some stage in the future.

These "new locals" have not yet experienced the region in dry times, and all it brings with it, from extreme heat to threatened water security, the strain on our local power supplies, and its impact on local industry and business, especially agriculture.

Education and resilience are key, when it comes to preparing our new locals for dryer, more challenging times.

3.5 Recent Events

The Queensland Reconstruction Authority (2022) detail the following events:

"Between 2010 and 2022, the Burnett region endured 17 significant disaster events including flooding, severe weather and storms, cyclones, and bushfires. The region experienced four significant disaster events in the 2021-2022 disaster season including the Southern Queensland Flooding, Southeast Queensland Rainfall and Flooding, Ex-Tropical Cyclone Seth, and the Central, Southern and Western Rainfall and Flooding events.

These disaster events have caused significant damage to property, infrastructure, businesses and homes, compounding localised stresses in the region. From these lived experiences our community has an appreciation of the factors that can enhance resilience and strengthen our region our local networks, sense of community, connection to the landscape, and a desire for a happy and healthy lifestyle.

The Burnett Regional Resilience Strategy provides the blueprint for a more resilient future where the community works together to create shared solutions to common problems.

Developing this strategy provided an opportunity to work collaboratively across local governments and in partnership with the Queensland Government and other local stakeholders with an approach that is locally led, regionally coordinated and

state supported. This Strategy was developed in partnership with the Bundaberg Regional Council, Cherbourg Aboriginal Shire Council, North Burnett Regional Council, South Burnett Regional Council and the Queensland Government via the Queensland Reconstruction Authority.

The Strategy builds upon the Burnett Catchment Flood Resilience Strategy released in 2018, by taking an all-hazards approach to the challenges of bushfire, earthquake, drought and heatwave. By strengthening disaster resilience our communities are better equipped to deal with the increasing prevalence of disasters. It was a useful tool when creating this plan."

3.6 Our Weather Changes

The State of the Climate Report 2022, released by the CSIRO (2022a) and the Bureau of Meteorology, says changes to weather and climate extremes are happening at an increased pace across Australia. The report, released every two years, shows an increase in extreme heat events, intense heavy rainfall, longer fire seasons and a rise in sea levels (CSIRO, 2022b).

Weather events will continue to impact our region in several ways. The Climate Change in the South East Queensland Region report, published by the Queensland Government (2019b) outlined the following projections:

Higher Temperatures

Maximum, minimum and average temperatures are projected to continue to rise. For the near future (2030), the annually averaged warming is projected to be between 0.6 and 1.3°C above the climate of 1986–2005. By 2070, the projected range of warming is 1.1 to 3.3°C, depending on future emissions. The region's summer average temperature is 24°C. This could rise to over 25°C by 2030 and to over 27°C by 2070.

Hotter and More Frequent Hot Days

There is likely to be a substantial increase in the temperature reached on the hottest days, and an increase in the frequency of hot days and the duration of warm spells.

Harsher Fire Weather

Fire weather is a measure of fuel dryness and hot, dry, windy conditions. Climate change is likely to result in harsher fire-weather in the future.

Fewer Frosts

A substantial decrease in the frequency of frost risk days is projected by the end of the century.

Reduced Rainfall and More Intense Downpours

High climate variability is likely to remain the major factor influencing rainfall changes in the next few decades. Rainfall projections for 2070 show little change or a decrease, particularly in winter and spring; however, the projections show high variability. The intensity of heavy rainfall events is expected to increase.

The Climate Change in Queensland report, published by the Queensland Government (2019b) outlined:

Increase in Drought

Projecting changes in the frequency and duration of drought is difficult. However, by late this century, under a high emissions scenario, it is likely that the region will experience more time in drought.

The climate is changing across Queensland. Average temperatures across the state are currently 1°C higher than they were 100 years ago. Recent decades have shown a clear warming trend. Our climate is already highly variable, but climate change is leading to shifts beyond this natural variability."

3.7 Climate Change and Disaster Management

Weather events and disaster management go hand in hand. Through the creation of our Disaster Management Plan, South Burnett Regional Council is prepared to face major disasters. Unfortunately, drought is not acknowledged as a disaster in the Queensland State Disaster Management Plan (Queensland Disaster Management Committee, 2023), and most funding and support packages do not kick in until a drought is formally declared, and when they do, they are generally focused on the support of the family unit, rather than helping to feed, water and save cattle or crops.

Disaster management planning is generally focused on response, recovery, and resilience, rather than pre-planning and preparedness. Drought isn't an overnight disaster – it can take months of dry weather before a drought is declared, and planning for it is crucial.

Council has identified "drought preparedness" as a gap in the disaster management planning process. An important part of this process for the South Burnett region is knowledge sharing between long-term landowners and Traditional Owners, and newcomers to the area.

These multi-generational agriculturists and Traditional Owners understand how to prepare for, mitigate against and manage their way through a drought. These long-term locals know the land and how to best navigate a dry spell as a drought approaches. They have learned experiences and insights that could and should be shared that will assist lifestyle farm and hobby farm owners long before the assistance packages kick in.

Several priority actions pertaining to drought preparedness and disaster management have been identified in this Action Plan, including:

1) Create a Drought Preparedness Plan, to be delivered in coordination with the Disaster Management Plan.
2) Support First Nations people / Traditional Owners (and multi-generational rural landholders) to share stories, knowledge and practices in sustainable land management activities relevant to the changing climate, through events, resources, and online platforms.

4 It's Time for Action

4.1 Mitigation, Adaptation, Resilience

Our focus moving forward will be to address three key elements of resilience, in regard to preparing for a changing climate:

1) **Mitigation:** reducing and avoiding emissions, and to increase use of renewables.

Mitigation is addressing the root cause of the problem rather than dealing with its impacts. The IPCC describes mitigation as "human intervention to reduce the sources or enhance the sinks of greenhouse gases". In this Plan we use the term "emission reduction" when referring to actions that will help to mitigate climate change. Emissions reduction occurs locally too but is a contribution to a global effort that requires others to act too. A dual pathway is needed.

2) **Adaptation:** responding to the impacts of a changing climate. Identifying transition and physical risks and plan to respond to these risks and predicted impacts.

The IPCC (2018) defines adaptation as "the process of adjustment to actual or expected climate and its effects." It is doing what we can to live with and minimise the destruction and suffering caused by climate change. Adaptation occurs locally as a response to local impacts.

3) **Resilience Building:** to have an increased level of adaptive capacity across the organisation, and the community. This will enable us to consider embedding climate change resilience into all corporate governance.

Our vision will see a resilient region that will be adaptable and diverse. Our ability to bounce back after change or difficulty and undertaking proactive actions in a changing climate will result in improved outcomes for the South Burnett region and its residents and industry.

We have begun the journey to improve climate change resilience management in a strategic and considered approach. We will be responsive and resilient to climate change risks. We are supportive of innovative and sustainable solutions. We will continue to develop plans and implement adaptation actions to reduce and mitigate impacts to the organisation, our community, natural environment, and economy.

As the IPCC (2010) stated: "Many adaptation and mitigation options can help address climate change, but no single option is sufficient by itself. Effective implementation depends on policies and cooperation at all scales and can be enhanced through integrated responses that link mitigation and adaptation."

Environment	Governance
Built environment. Water management. Natural environment. Sustainable transport. Waste & recycling management. Emission reduction & energy efficiency.	Financial management. Council culture & education. Engagement & partnerships. Risk & disaster management. Council policies, procedures & plans.
Community	**Commerce and Industry**
First Nations / Traditional Owners engagement & knowledge sharing. Community resilience, education & support.	Knowledge sharing. Commerce & industry resilience, education & support.

Under these four pillars, nine high level goals have been identified:

5. Environmental Action

b. To develop an understanding of Council's current greenhouse gas emissions as a baseline for future action.
c. To ensure a climate responsive built environment.
d. To protect and enhance our natural environment.
e. To transition to a circular economy.
f. To reduce our emissions by embracing affordable, efficient, and renewable energy solutions.

6. Governance and Operations

b. Council will lead in climate change preparedness and management, with an educated, mindful, responsive culture within its own operations, and encourage other sectors in the South Burnett region to do the same.
c. To strengthen resilience as an organisation, ensuring Council is prepared, ready and adaptive to climate change related events.

7. Community Action

b. To build an educated, engaged, resilient and responsive community through conversations, workshops, and information sharing.

8. Commerce and Industry Action

b. To work proactively and collaboratively with local business, industry, and other agencies to build a more resilient and supportive business network within the region that has strong connections both within and external to the region.

4.2 Roadmap

This Action Plan sets out our road map to building resilience of our organisation's environment, community, business and industry, and governance to a variable and changing climate to enhance our climate resilience.

This is just one component of a multi-faceted approach to mitigating, adapting to and building resilience against the effects of a changing climate. Managing a changing climate is a trans-boundary issue.

Actions (or inaction) by one stakeholder can both improve and erode the resilience of another. Economies of scale and collectively sharing knowledge can improve climate change governance. An important part of the institutional arrangements and engagement with external stakeholders is the clarification of roles and responsibilities that are associated with climate change governance.

4.3 Climate Resilience Action Plan

The actions that have been identified on the basis that they, generally, can be implemented via existing Council programs and projects. The intention is that by utilising a climate change adaptation lens over existing policies, programs and proposed projects, many of the actions can be delivered at no additional cost to Council and can be achieved through existing business resources.

The exception is the development of a drought preparedness plan which was identified as a key priority in late 2023.

PILLAR	DELIVERY AREA	ACTION	METRICS	TIMELINE	DELIVERY
ENVIRONMENT	Built environment	Incorporate sustainable building elements into council buildings where there is a sound business case to do so, including incorporating solar panels on Council buildings and utilising batteries to store energy.	Council Procurement Policy.	As required	Internal
	Built environment	Incorporate sustainable built elements into the planning scheme	Amended Planning Scheme	3 years	Internal
	Emissions reduction & energy efficiency	Undertake an organisational wide emissions profile report to assist council in understanding Council's current greenhouse gas emissions footprint, and to provide a baseline for future action.	Council Emissions Profile	2 years	Internal
	Emissions reduction & energy efficiency	Following the delivery of an emissions profile, Council will be in the position to review and set emissions-related targets for its operations.	Council Climate Change Policy Developed	6 months	Internal
	Emissions reduction & energy efficiency	Undertake an energy efficiency review of Council assets, including depots, parks and buildings, in regard to energy use, white goods efficiency, renewable energy use etc.	Included in Asset Management Plan	18 months	Internal
	Emissions reduction & energy efficiency	Change lighting to LED or solar lighting, at all public facilities, subject to meeting lighting guidelines.	Inclusion in Asset Management Plan	Ongoing	Internal

PILLAR	DELIVERY AREA	ACTION	METRICS	TIMELINE	DELIVERY
	Emissions reduction & energy efficiency	Review and progressively transition Council buildings off natural gas, where it is cost effective to do so.	Included in Asset Management Plan	2 years	Internal
	Emissions reduction & energy efficiency	Create a policy that clarifies Council's support of renewable energy developments and outlines its expectations of providers around increased collaboration, community engagement, and social licence.	Development of Council Climate Change Policy	18 months	External
	Sustainable transport	Accelerate the transition to low emissions options for Council's fleet where it is cost effective to do so	Amendment to Procurement Policy – Fleet	Ongoing	Internal
	Sustainable transport	Review the availability of and access to EV charging network for Council vehicles and deliver solutions to address any gaps.	Charging station review	3 years	
	Sustainable transport	Transition Council's small machines to electric powered alternatives, where operationally viable and cost effective to do so.	Procurement Policy Amended	Ongoing	Internal
	Natural environment	Deliver a strategy for preserving our natural environment that considers:	Voluntary Conservation	3 years	

PILLAR	DELIVERY AREA	ACTION	METRICS	TIMELINE	DELIVERY
		• Identification of climate change refugia for native flora and fauna, • Protection and enhancement of the ecological values of identified wildlife corridors by increasing tree canopy cover across the region, and • Supporting private land holders to protect, conserve and enhance ecologically significant areas on private property.	Agreement Program established		
	Natural environment	Create a street tree planting program to support the transition of our urban canopy to one that is resilient and future proofed and provides shade and urban cooling – replace all trees removed with street trees, review species, and focus the planting of street trees in high rental areas.	Street Tree program developed	Ongoing	
	Waste & recycling management	Continue to implement the Waste Strategy 2023-2029 to monitor and reduce waste and ensure continued focus on a circular economy. Consider: • New / increased recycling options for the local community to access • Use of recycled products in public places and spaces • Eliminating non-essential use of single-use plastic at Council-sponsored and organised events, • Food waste recycling in Council offices, and • Increased bottle collection points in all council buildings etc.	Partnering with COEX public places program	Ongoing	Internal

PILLAR	DELIVERY AREA	ACTION	METRICS	TIMELINE	DELIVERY
	Water management	Review the management of water and provide recommendations for an integrated approach (to be included in the Drought Preparedness Plan). Consider: • Water harvesting at Council buildings, parks and sports grounds, • Reviewing irrigation systems in our parks, and • Utilising recycled water in our parks. • Water harvesting at Council buildings, parks and sports grounds – review irrigation systems in our parks and use recycled water in parks.	Asset Management Plan	18 months	Internal
GOVERNANCE	Engagement & partnerships	Utilise the Climate Risk Management Framework for Queensland Local Government framework.	Implement Climate Risk Management Framework within Council operations	Ongoing	Internal
	Engagement & partnerships	Consider the establishment of a Changing Climate Resilience Reference Group, to focus on preparedness for major climate related disasters, as well as drought (with representatives from the local community, industry, business and environmental groups).	Establishment of Reference Group	12 months	
	Risk & disaster management	Prepare a Drought Preparedness Plan, focused on a longer-term regional response and preparedness to drought (as the lead coordination agency in times of drought).	Development of Drought Preparedness Plan	2 Years	Internal

PILLAR	DELIVERY AREA	ACTION	METRICS	TIMELINE	DELIVERY
	Risk & disaster management	Enhance our risk assessment process and explicably quantify the extent of climate change risks into our corporate risk register and risk management framework.	Updated Risk Register	18 months	Internal
	Council policies, procedures and plans	Review purchasing and procurement policies for sustainability clauses, focused on renewable energy.	Revised Procurement Policy	12 months	Internal
	Council policies, procedures and plans	Review all key policies, procedures, strategies and plans, with a changing climate lens, and update where relevant. Key Council documents may include: • Administration Waste Reduction Policy, Asset Management Policy, Community Grants Policy, Community Group Infrastructure Changes, Construction of Unmade Roads, Corporate Risk and Internal Audit Framework, Corporate Risk Management Policy, Demolition, Removal or Relocation of Buildings Policy, Disposal of Assets Policy, Environment and Sustainability Policy, Financial Sustainability Policy, Council Fact Sheets, Procurement Policy, Policy Governance Framework, Water Restrictions Policy, Trade Waste Management Policy, Risk Management Policy, Water and Waste Water Customer Service Standards, Planning Scheme, Local Laws, Disaster Dashboard, Emergency Kit, Advocacy Action Plan, Asset Management Plans, Business Continuity and Recovery Plan, Operational Plan, Corporate Plan,	Revised Policies	18 months	Internal

PILLAR	DELIVERY AREA	ACTION	METRICS	TIMELINE	DELIVERY
		Regional Development Strategy, and Agriculture Strategy. Note: Internal consultation will be required to complete this list.			
	Council policies, procedures and plans	Report annually on Council's Climate Change Adaptation Strategy performance and deliverables.	Annual Climate Change Adaptation report prepared	Annual reporting	Internal
	Council policies, procedures and plans	Explore the opportunity to introduce funding for a small business climate adaptation grants program, as part of Council's grants framework that seeks to support improved business practices and operations (eg improved lighting, energy efficiency, solar and energy storage, mechanical ventilation options, improved building design, shade tree plantings)	Funding explored and considered by Council	2 Years	Internal
	Council culture & education	Create a changing climate aware culture at SBRC, and to continue to build climate change capabilities and strengthen accountability, with consideration given to: • Ongoing training for elected representatives and staff around climate change and other relevant sustainability issues, • Explore the development of a Volunteering Policy, to support staff volunteering opportunities to actively respond to weather events,	Change Management Plan developed	12 months	Internal

PILLAR	DELIVERY AREA	ACTION	METRICS	TIMELINE	DELIVERY
		• Include climate action education as part of staff induction, and Embed climate action into staff roles and responsibilities and performance management,			
	Financial management	Identify and monitor infrastructure assets at risk due to climate change and prioritise actions (assessing financial implications etc).	Asset Management Plan	18 months	Internal
		As part of this process, identify funding and grant opportunities to fund these initiatives over the next 10 years.	Funding opportunities identified	10 years	Internal
COMMUNITY	Community resilience, education & support	Ongoing focus on the beautification of Council owned gardens and parks including increased shade options (both natural (eg shade trees) and built form structures for all users).	Annual Capital program	Ongoing	

Bibliography

Commonwealth Scientific and Industrial Research Organisation. (2022a). *State of the Climate*. CSIRO. https://www.csiro.au/en/research/environmental-impacts/climate-change/state-of-the-climate

Commonwealth Scientific and Industrial Research Organisation. (2022b, November 23). State of the Climate 2022 – Australia continues to warm; heavy rainfall becomes more intense. *CSIRO*. https://www.csiro.au/en/news/all/news/2022/november/state-of-the-climate-report-2022

Department of Climate Change, Energy, the Environment and Water. (2022). *National Climate Resilience and Adaptation Strategy*. DCCEEW. https://www.dcceew.gov.au/climate-change/policy/adaptation/strategy

Informed Decisions. (2023a). *About the Profile Areas | South Burnett*. Economy ID. https://profile.id.com.au/rda-wide-bay-burnett/about?WebID=150

Informed Decisions. (2023b). *Businesses by Industry | South Burnett*. Economy ID. https://economy.id.com.au/south-burnett/number-of-businesses-by-industry

Intergovernmental Panel on Climate Change. (2010). *Topic 4: Adaptation and Mitigation*. IPCC 5th Assessment Synthesis Report. https://ar5-syr.ipcc.ch/topic_adaptation.php

Intergovernmental Panel on Climate Change. (2018). Glossary — Global Warming of 1.5 °C. In *IPCC*. https://www.ipcc.ch/sr15/chapter/glossary/

Queensland Department of Energy and Climate. (2024). *Queensland's 2035 Clean Economy Pathway: 75% by 2035*. https://www.epw.qld.gov.au/__data/assets/pdf_file/0028/48493/queensland-2035-clean-economy-pathway.pdf

Queensland Department of Environment and Heritage Protection. (2017). *Queensland Climate Adaptation Strategy*. https://www.qld.gov.au/__data/assets/pdf_file/0017/67301/qld-climate-adaptation-strategy.pdf

Queensland Department of Housing, Local Government, Planning and Public Works. (2017). *State Planning Policy*. https://planning.statedevelopment.qld.gov.au/planning-framework/plan-making/state-planning/state-planning-policy

Queensland Disaster Management Committee. (2023). *State Disaster Management Plan*.

https://www.disaster.qld.gov.au/__data/assets/pdf_file/0027/339336/Interim-2023-QSDMP-V1.2.pdf

Queensland Fire and Emergency Services. (2023). *Queensland Emergency Risk Management Framework Risk Assessment Process Handbook*. https://www.disaster.qld.gov.au/__data/assets/pdf_file/0021/339402/H1102-QFES-Risk-Assessment-Process-Handbook.pdf

Queensland Government. (2003). *Disaster Management Act 2003*. https://www.legislation.qld.gov.au/view/pdf/2024-02-01/act-2003-091

Queensland Government. (2019a). *Climate Change in Queensland*. https://www.qld.gov.au/__data/assets/pdf_file/0023/68126/queensland-climate-change-impact-summary.pdf

Queensland Government. (2019b). *Climate Change in the South East Queensland Region*. https://www.qld.gov.au/__data/assets/pdf_file/0023/67631/seq-climate-change-impact-summary.pdf

Queensland Government. (2023). *Prevention preparedness response and recovery disaster management guideline*. https://www.disaster.qld.gov.au/disaster-management-guideline

Queensland Reconstruction Authority. (2022a). *Burnett Regional Resilience Strategy*. https://www.qra.qld.gov.au/sites/default/files/2022-09/burnett_regional_resilience_strategy_low_res_web_l-r.pdf

Queensland Reconstruction Authority. (2022b). *Queensland Strategy for Disaster Resilience*. https://www.qra.qld.gov.au/sites/default/files/2022-09/queensland_strategy_for_disaster_resilience_high_res.pdf

Regional Action Climate Roadmap. (2022). *Creating Our Climate Ready Future*. https://regionalclimateroadmap.com.au/downloads/RCAR_Sunshine%20Coast_Noosa_FINAL%20Roadmap_05%20Jan%202023.pdf

South Burnett Regional Council. (2021a). *Corporate Plan 2021 - 2026*. https://www.southburnett.qld.gov.au/downloads/file/4863/draft-corporate-plan-2021-2026

South Burnett Regional Council. (2021b). *Environmental Sustainability Strategy*. https://www.sdrc.qld.gov.au/living-here/sustainability/environmental-sustainability-strategy

South Burnett Regional Council. (2023). *Waste Strategy 2023 - 2029*. https://www.southburnett.qld.gov.au/downloads/file/6541/waste-management-strategy-2023-2029

United Nations. (2015). *The Paris Agreement*. United Nations Climate Change; United Nations. https://unfccc.int/process-and-meetings/the-paris-agreement

United Nations Office for Disaster Risk Reduction. (2015). *Sendai Framework for Disaster Risk Reduction 2015-2030*. UNDRR. https://www.undrr.org/publication/sendai-framework-disaster-risk-reduction-2015-2030

World Health Organization. (2022). *Sustainable Development Goals*. WHO. https://www.who.int/europe/about-us/our-work/sustainable-development-goals

14.13 MATERIAL CHANGE OF USE - INTENSIVE ANIMAL INDUSTRY (EXPANSION OF EXISTING FEEDLOT TO 6,425 SCU AND ASSOCIATED INFRASTRUCTURE) AT 1270 AND 1344 MEMERAMBI BARKERS CREEK ROAD WATTLE CAMP (AND DESCRIBED AS LOTS 1, 2, 6 & 7 RP157322, LOTS 3, 4, 5 & 8 ON RP157323 AND LOTS 9, 10 & 11 ON RP157327). APPLICANT: PAKADERINGA FEEDLOT Q PTY LTD C/- AGDSA

File Number: **MCU23/0031**

Author: **Acting Manager Environment & Planning**

Authoriser: **Chief Executive Officer**

PRECIS

Material Change of Use – Intensive Animal Industry (Expansion of Existing Feedlot to 6,425 standard cattle units (SCU) and Associated Infrastructure) at 1270 & 1344 Memerambi Barkers Creek Road WATTLE CAMP (and described as Lots 1, 2, 6 & 7 on RP157322, Lots 3, 4, 5 & 8 on RP157323 and Lots 9, 10 & 11 on RP157327).

SUMMARY

- The application is a Development Permit for a Material Change of Use for an Intensive Animal Industry (Expansion of Existing Feedlot from 3,125 SCU to a total of 6,425 SCU and Associated Infrastructure).
- The proposed development will be staged as follows:
  - Stage 1 consisting of an additional 1,500 SCU in conventional pens;
  - Stage 2 consisting of an additional 1,800 SCU in fully covered pens; and
  - Additional manure storage area and cattle handling yards are also proposed as part of the expansion.
- The subject site is located in the Rural zone under the South Burnett Regional Council Planning Scheme 2017 and Impact Assessment was triggered as per Table 5.5.13.
- The subject sites have a combined site area of 674.6 hectares.
- The development application is assessed against the entirety of the Planning Scheme, including:
  - Strategic Framework;
  - Rural zone code; and
  - Services and works code.
- The development application required referral to the State Assessment and Referral Agency (SARA) for non-devolved Environmentally Relevant Activities (Schedule 10, Part 5, Division 4, Table 2) and development impacting on State Transport Infrastructure and Thresholds (Schedule 10, Part 9, Division 4, Subdivision 1, Table 1).
- Council issued an Information Request on 21 December 2023, and the applicant provided an Information Request Response on 15 April 2024.
- SARA issued an Information Request on 26 February 2024, and the applicant provided an Information Request Response on 15 April 2024.
- SARA provided a Referral Agency Response on 24 May 2024, including Referral Agency conditions. Included in this correspondence was a Decision Notice and Environmental Authority.
- The development application was publicly notified in accordance with Part 4 of the Development Assessment Rules, from 9 May 2024 to 30 May 2024. During this period, one (1) properly made submission to the proposal was received. An applicant response to the submission was received by Council on 6 June 2024.
- The application has been assessed and the proposal generally meets the requirements of the Planning Scheme and relevant codes or has been conditioned to comply.
- Refer to Attachment A – Statement Reasons.
- Refer to Attachment B – Infrastructure Charges Notice.

- Refer to Attachment C – Approved Plans.
- Refer to Attachment D – Traffic Impact Assessment.
- Refer to Attachment E – Bushfire Hazard Advice.
- Refer to Attachment F – Referral Agency Response.
- The application is recommended for approval, subject to reasonable and relevant conditions.

OFFICER'S RECOMMENDATION

That Council approve the Development Permit for a Material Change of Use for Intensive Animal Industry (Expansion of Existing Feedlot to 6,425 SCU and Associated Infrastructure) at 1270 & 1344 Memerambi Barkers Creek Road, WATTLE CAMP (and described as Lots 1, 2, 6 & 7 on RP157322, Lots 3, 4, 5 & 8 on RP157323 and Lots 9, 10 & 11 on RP157327) subject to the following conditions.

GENERAL

GEN1. The approved development must be maintained generally in accordance with the approved plans and documents, except where amended by the conditions of this permit:

Drawing/ Document Title	Prepared By	Plan No.	Rev.	Date
Property Plan (Aerial Imagery)	AgDSA	A001	B	11/04/2024
Property Plan	AgDSA	A002	B	11/04/2024
Concept Plan	AgDSA	A003	B	11/04/2024
Design Plan	AgDSA	A004	C	11/04/2024
Controlled Drainage Area	AgDSA	A005	B	11/04/2024
Traffic Impact Assessment	RMA Engineers	-	1	25/10/2023
Bushfire Hazard Advice	Range Environmental Consultants	J001523		03/10/2023

Timing: At all times.

GEN2. The development herein approved may not start until the following development permits have been issued and complied with as required:
- Development Permit for Building Works;
- Permit for Plumbing and Drainage Work; and
- Development Permit for Operational Works.

APPROVED USE

GEN3. The approved development is a Material Change of Use for Intensive Animal Industry as shown on the approved plans and does not imply approval for other similar uses. The number of cattle in the feedlot must not exceed 6,425 standard cattle units.

GEN4. The development is to occur sequentially in the following Stages and as detailed in the approved plans and documents:
- Stage 1: Additional 1,500 SCU; and
- Stage 2: Additional 1,800 SCU.

GEN5. Conditions within this approval are applicable to each Stage of the development, unless otherwise specified.

COMPLIANCE, TIMING, AND COSTS

GEN6. All conditions of the approval shall be complied with before the change occurs (prior to the commencement of the use of each Stage) and while the use continues, unless otherwise noted within these conditions.

GEN7. The development (including landscaping, parking, driveway and other external spaces) shall be maintained in accordance with the Approved Plans, subject to and modified conditions of this approval.

GEN8. Maintain the site in a clean and orderly state at all times.

GEN9. All works, including the repair or relocation of services is to be completed at no cost to Council.

HOURS OF OPERATION

GEN10. The approved hours of operation for staff and general operations are 24 hours a day, seven days a week.

GEN11. Heavy vehicle movements are restricted to 6:00am to 6:00pm daily.

LANDSCAPING

GEN12. Existing landscaping is to be maintained along the property boundary at the westernmost end of Memerambi-Barkers Creek Road for the extent of the feedlot pens.

ENVIRONMENTAL HEALTH

GEN13. Odours or airborne contaminants must be appropriately managed so as to not cause environmental nuisance to any sensitive receivers.

GEN14. Dust prevention measures must be undertaken to ensure that dust does not cause a nuisance to occupiers of adjacent properties.

GEN15. Where outdoor lighting is required, the applicant must locate, design and install lighting which minimise the potential for light spillage to cause nuisance to neighbours.

ENGINEERING WORKS

ENG1. Complete all works approved and works required by conditions of this development approval and/or any related approvals at no cost to Council, prior to commencement of the use unless stated otherwise.

ENG2. Undertake Engineering designs and construction in accordance with the Planning Scheme, Council's standards, relevant design guides, and Australian Standards.

ENG3. Be responsible for the full cost of any alterations necessary to electricity, telephone, water mains, sewer mains, stormwater drainage systems or easements and/or other public utility installations resulting from the development or from road and drainage works required in connection with the development.

LOCATION, PROTECTION AND REPAIR OF DAMAGE TO COUNCIL AND PUBLIC UTILITY SERVICES INFRASTRUCTURE AND ASSETS

ENG4. Be responsible for the location and protection of any Council and public utility services infrastructure and assets that may be impacted on during construction of the development.

ENG5. Repair all damages incurred to Council and public utility services infrastructure and assets, as a result of the proposed development immediately should hazards exist for public health and safety or vehicular safety. Otherwise, repair all damages immediately upon completion of works associated with the development.

STORMWATER MANAGEMENT

ENG6. Provide overland flow paths that do not adversely alter the characteristics of existing overland flows on other properties or that create an increase in flood damage on other properties.

ENG7. Ensure that adjoining properties and roadways are protected from ponding or nuisance from stormwater as a result of any site works undertaken as part of the proposed development.

ENG8. Design and construct stormwater drainage incorporating performance measures identified in 'National Beef Cattle Feedlot Environmental Code of Practice' to minimise adverse impacts on surface waters external to the feedlot area and manure and effluent utilisation areas.

WATER SUPPLY

ENG9. Provide a potable water supply for the use of staff, independent from Council's water reticulation system. Monitor water quality continuously to ensure compliance with Australian Drinking Water Guidelines - current edition 2011 and enHealth Guidance of Use of Standards for Potable Water to accommodate the requirements of staff and visitors.

ENG10. Provide water supply for the proposed Feedlot operations in accordance with the National Guidelines for Beef Cattle Feedlots in Australia.

ON-SITE WASTEWATER DISPOSAL

ENG11. Connect the development to an on-site wastewater disposal system, in accordance with the AS1547:2012 *On-site domestic wastewater management* and the Queensland Plumbing and Wastewater Code - 2019.

PARKING AND ACCESS - SERVICING

ENG12. Ensure access to car parking spaces, vehicle loading and manoeuvring areas and driveways remain unobstructed and available for their intended purpose during the hours of operation.

ENG13. Ensure loading and unloading operations are conducted wholly within the site and vehicles enter and exit the site in a forward direction.

ROAD UPGRADING

ENG14. Upgrade Corndale Road between Ch 4800-5200 to match the road standard either side, including culvert/drainage upgrades.

Comment: Council has a road design available for the upgrade of this section that can be referenced. Contact Councils Infrastructure Department for further details. Road upgrades will be subject to a further Operational Work application.

Comment: This condition is imposed pursuant to Section 145 of the *Planning Act 2016*.

TRANSPORT ROUTE

ENG15. The approved transport route is from the Bunya Highway, east to the site entrance via King Street, Corndale Road, and Memerambi-Barkers Creek Road. No heavy vehicle access is permitted to the east from the site entrance along Memerambi-Barkers Creek Road.

ENG16. The section of King Street, Corndale Road, and Memerambi-Barkers Creek Road between the Bunya Highway and the site entrance to the property is not currently an approved B-Double Route. Obtain an approval for the route to be used by multi-combination vehicles from the National Heavy Vehicle Regulator prior to allowing access to Multi-Combination vehicles via above road section. Please refer to the following link for more information: https://www.nhvr.gov.au/road-access/access-management/applications-and-forms

EROSION AND SEDIMENT CONTROL - GENERAL

ENG17. Ensure that all reasonable actions are taken to prevent sediment or sediment laden water from being transported to adjoining properties, roads and/or stormwater drainage systems.

ENG18. Remove and clean-up sediment or other pollutants in the event that sediment or other pollutants are tracked/released onto adjoining streets or stormwater systems, at no cost to Council.

STANDARD ADVICE

ADV1. Section 85(1)(b) of the *Planning Act 2016* provides that if all stages of this approval are not acted upon within a period of six (6) years the approval will lapse.

ADV2. This development approval does not authorise any activity that may harm Aboriginal Cultural Heritage. Under the Aboriginal Cultural Heritage Act 2003 you have a duty of care in relation to such heritage. Section 23(1) provides that "A person who carries out an activity must take all reasonable and practicable measures to ensure the activity does not harm Aboriginal Cultural Heritage." Council does not warrant that the approved development avoids affecting Aboriginal Cultural Heritage. It may therefore be prudent for you to carry out searches, consultation, or a Cultural Heritage assessment to ascertain the presence or otherwise of Aboriginal Cultural Heritage. The Act and the associated duty of care guidelines explain your obligations in more detail and should be consulted before proceeding. A search can be arranged by visiting https://www.datsip.qld.gov.au and filling out the Aboriginal and Torres Strait Islander Cultural Heritage Search Request Form.

ADV3. Infrastructure charges are now levied by way of an infrastructure charges notice issued pursuant to section 119 of the *Planning Act 2016*.

ADV4. Council is offering a reduction in infrastructure charges payable through the development incentive scheme which is available between 1 December 2020 and 31 December 2025. Eligible development under this scheme is required to be completed by 31 December 2025.

For further information or application form please refer to the rules and procedures available on Council's website.

ADV5. The State Assessment and Referral Agency has imposed conditions on the development permit as attached as per Attachment F.

ADV6. Attached for your information is a copy of Chapter 6 of the Planning Act 2016 as regards Appeal Rights.

FINANCIAL AND RESOURCE IMPLICATIONS

No implication can be identified.

LINK TO CORPORATE/OPERATIONAL PLAN

Growing our Region's Economy and Prosperity

- GR8 Support and advocate for appropriate growth and development with responsive planning schemes, process, customer service and other initiatives.

COMMUNICATION/CONSULTATION (INTERNAL/EXTERNAL)

Refer to CONSULTATION in this report.

LEGAL IMPLICATIONS (STATUTORY BASIS, LEGAL RISKS)

No immediate implications identified. Should the applicant wish to challenge council's decision or conditions imposed, it may seek to lodge a negotiated decision or Appeal. This may incur further costs associated with this application.

POLICY/LOCAL LAW/DELEGATION IMPLICATIONS

The application has been assessed in line with Council's adopted planning scheme.

ASSET MANAGEMENT IMPLICATIONS

No implication can be identified.

REPORT

1. APPLICATION DETAILS

Site address	1270 & 1344 Memerambi Barkers Creek Road WATTLECAMP	
Real property description	Lots 1, 2, 6 & 7 RP157322, Lots 3, 4, 5 & 8 on RP157323 and Lots 9, 10 & 11 on RP157327	
Easements or encumbrances on title	No existing easements or encumbrances identified	
Area of Site	674.6 hectares	
Current Use	The subject sites are currently used for the existing feedlot, associated grazing and backgrounding activities, and are improved by two dwellings as well as structures, infrastructure and features associated with the feedlot.	
Environmental Management Register or Contaminated Land Register	The site is not listed on the EMR or CLR.	
Applicant's name	Pakaderinga Feedlot Q Pty Ltd C/- AgDSA	
Zone	Rural	
Applicable Overlays	• Bushfire hazard overlay • Flood hazard overlay • Biodiversity areas overlay • Water catchments overlay • Agricultural overlay	
Proposed use as defined	Intensive Animal Industry (a) Premises used for– (i) the intensive production of animals or animal products, in an enclosure, that requires the food and water to be provided mechanically or by hand; or (ii) storing and packing feed and produce, if the use is ancillary to the use in subparagraph (i); but (b) Does not include the cultivation of aquatic animals.	
Details of proposal	Material Change of Use (MCU's)	
	▪ Access	Memerambi Barkers Creek Road
	▪ Feedlot capacity	6,425 SCU total. 3,300 addition SCU over the following stages: • Stage 1: 1,500 SCU • Stage 2: 1,800 SCU
	▪ Stocking density	Stage 1: 15sqm/SCU Stage 2: 9sqm/SCU
	▪ Number of car parks	10 spaces (8 staff and 2 visitor/maintenance)
	▪ Employees	20 employees
	▪ Hours of Operation	Staff and general operations – 24 hours a day, seven days a week Operations, work and heavy vehicle movements – generally 6am to 6pm
Application type	Aspects of	Type of Approval Requested

	Development	Preliminary Approval	Development Permit
	Material Change of Use (MCU)		X
	Reconfiguration of a Lot (RAL)		
	Building Work (BW)		
	Operational Work (OPW)		
Level of Assessment	Impact Assessment		
Pre-lodgement / Consultation history	No pre-lodgement meeting or written advice issued		
Key planning issues e.g. vegetation, waterway corridors, overland flow	• Strategic Framework • Staging • Odour • Traffic • Dust		
Referral agencies	Agency	Concurrence/ Advice	
	SARA	Concurrence	
Public notification	Yes – 15 business days Public Notification was carried out from 9 May 2024 to 30 May 2024 in accordance with Part 4 of the Development Assessment Rules.		

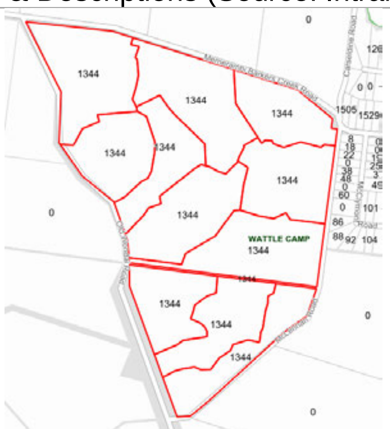
2. THE SITE

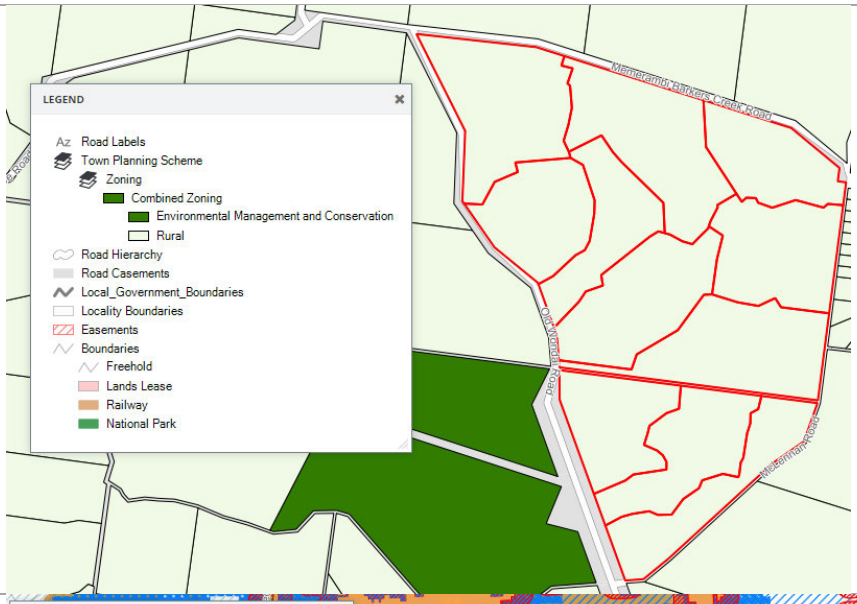
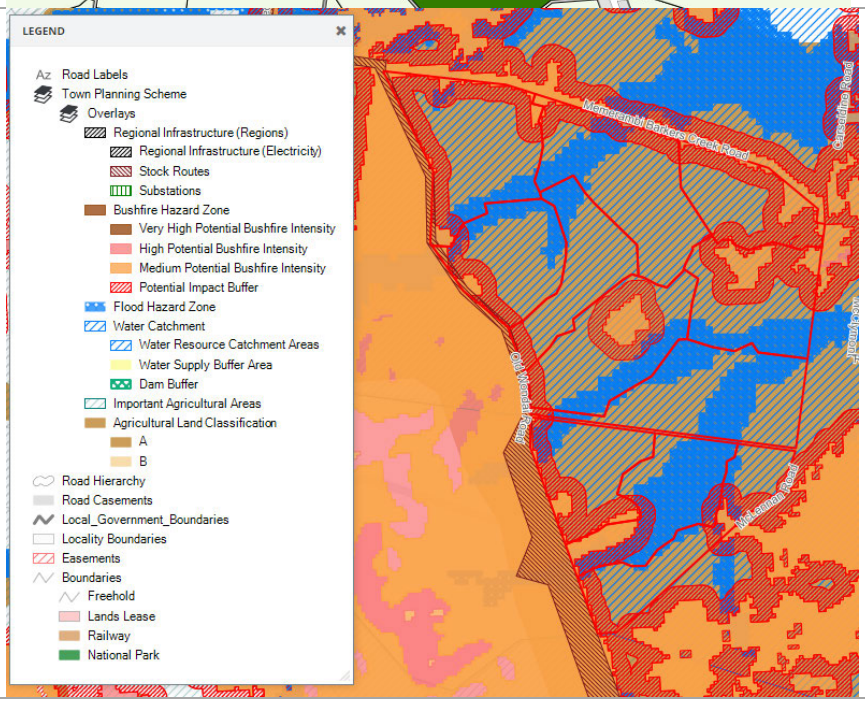
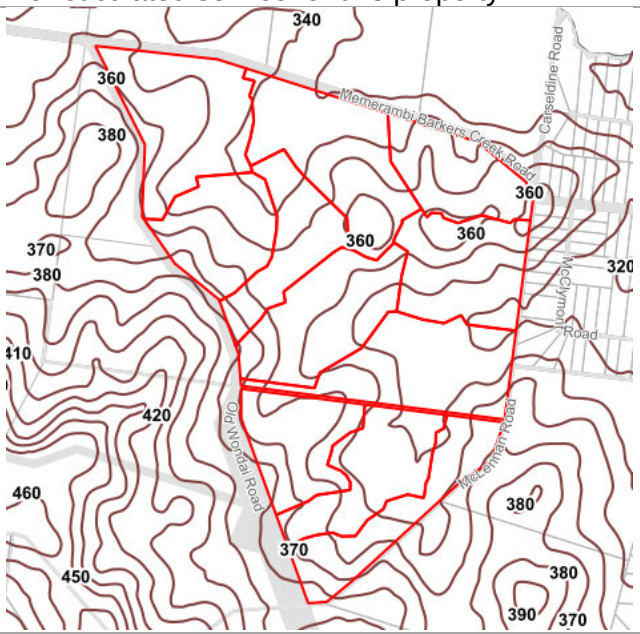
This section of the report provides a description of the site, details about the existing use and notable characteristics of the site, the standard of servicing, and the form of development in the immediately locality.

2.1. SITE DESCRIPTION & EXISTING USE

The subject site is located at 1270 & 1344 Memerambi Barkers Creek Road, Wattle Camp, and is formally described as Lot 1, 2, 6 and 7 on RP157322, Lot 3, 4, 5 and 8 on RP157323, and Lot 9, 10 and 11 on RP157327 (refer to **Table 1**). The site has an area of 674.6 hectares and is currently used for the existing feedlot, associated grazing and backgrounding activities, and are improved by two dwellings as well as structures, infrastructure and features (basins and holding ponds, for example) largely associated with the feedlot.

Table 1 – Maps & Descriptions (Source: Intramaps)

Site		

Zoning	
Overlays	
Services	No reticulated service for this property
Topography	

2.2. DEVELOPMENT HISTORY OF THE SITE

The site includes an existing approval for the feedlot, with the most recent approval being granted on 18 December 2000 by Nanango Shire Council, involving a Material Change of Use for Feedlot Extension. The approval permitted a maximum cattle capacity of 3,125 SCU and stocking density of 15m^2.

3. PROPOSAL DETAILS

The development application seeks a Development Permit - Material Change of Use for Intensive Animal Industry (Expansion of Existing Feedlot to 6,425 SCU and Associated Infrastructure).

The proposed expansion of the feedlot will result in an additional 3,300 SCU to the existing, approved feedlot capacity of 3,125 SCU, resulting in a total capacity of 6,425 SCU. The expansion is proposed in two stages, where Stage 1 includes the construction of 1,500 SCU of capacity in conventional pens. These pens will be located in a separate controlled drainage area to the north of the existing feedlot complex. Stage 1 will also include the expansion of the manure pad, additional handling yards and reconfiguration of the effluent system. Stage 2 includes an additional 1,800 SCU of capacity in fully covered pens. It is anticipated that the feedlot cover will be an open sided steel shed.

Stage 1 pens will have a stocking density of 15m^2/SCU across 16 pens, each with dimensions of 34 metres (width) by 45 metres (depth) resulting in an individual pen area of 1,500 m^2. Each pen will have a maximum capacity of 100 SCU.

While identified as a single stage, the construction of Stage 2 is to occur one row (shed) at a time. Covered pens will have a stocking density of 9m^2/SCU across 18 pens, each with dimensions of 30 metres (width) by 30 metres (depth) resulting in an individual pen area of 900m^2. Each pen will have a maximum capacity of 100 SCU.

Water

Water for the existing feedlot is sourced from the on-site dams. The Stage 2 expansion is reliant on an upgrade to the regional water supply network and will proceed once a reliable water supply can be obtained.

Stormwater

Industry-specific stormwater controls identified in the national guidelines have been incorporated into the design of Stage 1. Design considerations from the national guidelines, relevant to covered pens, have been incorporated into the design of Stage 2. Drainage within the existing feedlot ensures that clean overland flow can pass between two feedlot sections and remain separate to feedlot effluent. The configuration of the Stage 1 expansion has warranted each row to be serviced by its own catch drain controlling runoff from the pens, directing into the main drain and sedimentation basin. Stage 2 will incorporate grass swale drains due to the lower intensity of the runoff.

Effluent

With regard to effluent management, the development requires additional storage capacity of the effluent holding pond. A second effluent pond is proposed, which has been designed in accordance with national guidelines. Water contained in the effluent holding pond is to be reused for dust suppression on internal roadways or sustainably irrigated to surrounding agricultural land.

Traffic / Parking

The existing feedlot is accessed directly from Memerambi-Barkers Creek Road. There is a property access from Old Wondai Road which is only utilised by light vehicles associated with normal farming

activities. The proposed expansion is not anticipated to increase usage of Old Wondai Road. With regard to parking, heavy vehicle parking is provided adjacent to the location in which the vehicle is loading or unloading. There is a large hardstand pad adjacent to the cattle handling facility and feedmill used for heavy vehicle parking. Light vehicles can park at the location in which they are working. This includes the cattle handling facility, feedmill, machinery shed and workshop, and various other locations around the feedlot and property.

General operational details are included in Table 2 below.

Table 2 – Proposal Details

Development Component	Proposed
Standard Cattle Units (SCU)	6,425 SCU • Stage 1: 1,500 SCU • Stage 2: 1,800 SCU
Stocking Density	Stage 1: 15m^2/ SCU Stage 2: 9m^2/ SCU
Employees	Feedlot currently employs 14 people, including three family members across the site. The proposed expansion will result in an additional six (6) full-time employees.
Hours of Operation	Staff and general operations – 24 hours a day, seven days a week. Operations, work and heavy vehicle movements – generally 6am to 6pm.
Access and Vehicle Arrangements	Memerambi-Barkers Creek Road and Old Wondai Road (only utilised by light vehicles). The proposed expansion will not increase the vehicles using Old Wondai Road. The proposed expansion will result in approximately two additional trucks per day.
Parking	10 spaces (8 staff and 2 visitor/ maintenance)

Figure 1 to **Figure 4** below include the property plan, concept plan, design plan, and controlled drainage area plan associated with the proposed development.

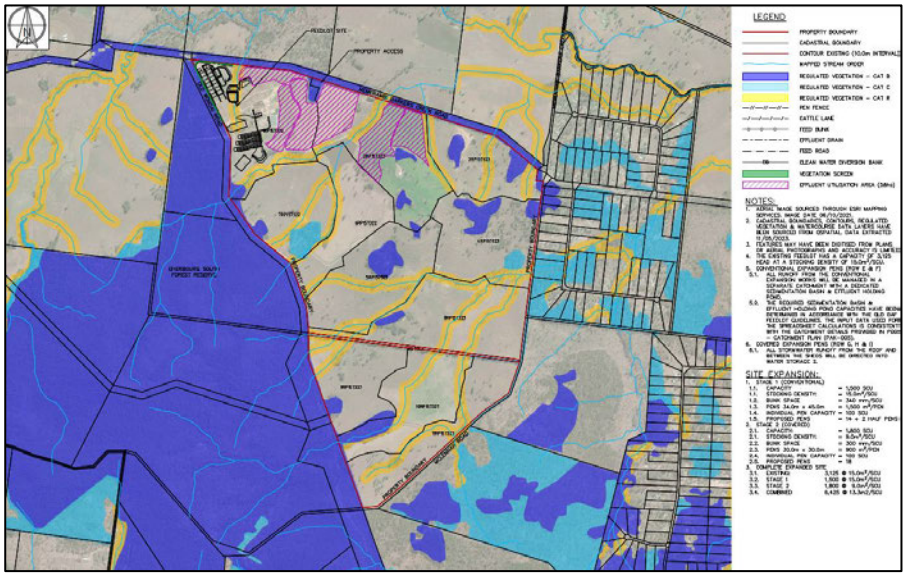


Figure 1. Property Plan (Source: AgDSA)

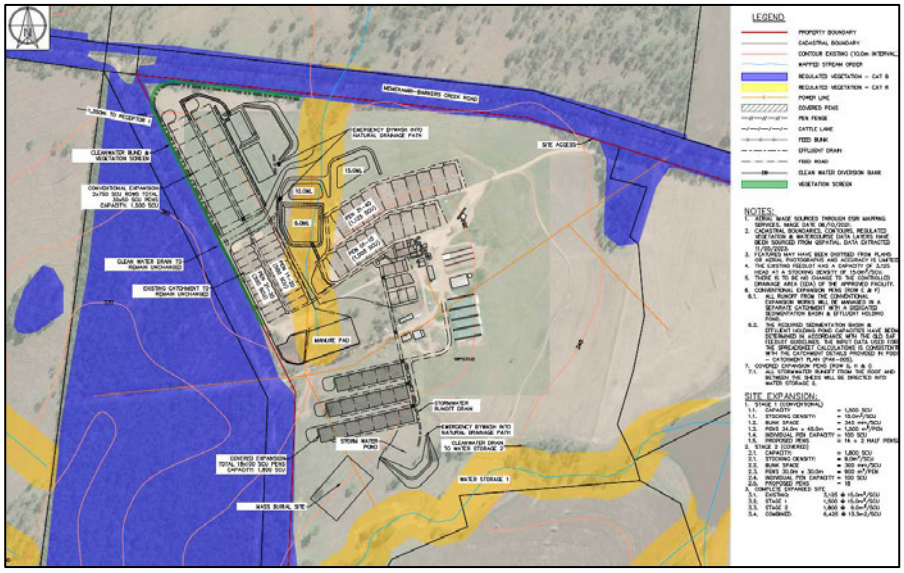


Figure 2. Concept Plan (Source: AgDSA)

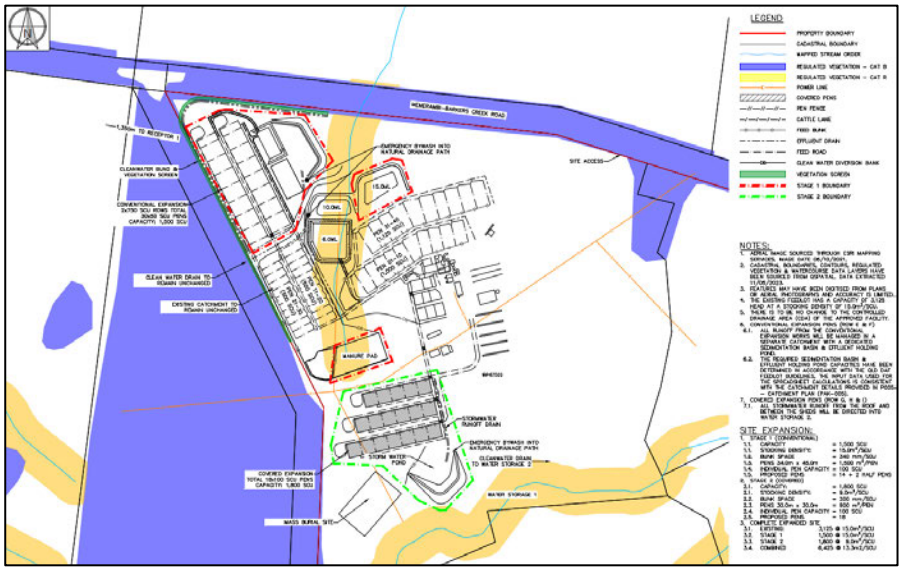


Figure 3. Design Plan (Source: AgDSA)

Figure 4. Controlled Drainage Area Plan (Source: AgDSA)

4. APPLICATION HISTORY

Confirmation Notice

On 14 December 2023, a Confirmation Notice was issued to the Applicant. On 21 December 2023, an Amended Confirmation Notice was issued to the Applicant.

Information Request

On 21 December 2023, an Information Request was issued to the Applicant in accordance with Part 3 of the Development Assessment Rules. The Information Request sought a Staging Plan.

Referral Agency Information Request

On 26 February 2024, the State Assessment and Referral Agency issued an Information Request in accordance with Part 2 of the Development Assessment Rules. The Information Request sought the following information:

- An updated DA Form 1;
- An Odour Impact Assessment; and
- A Mass Morality Management Plan.

Information Request Response

On 11 April 2024, the Applicant jointly responded to the SARA and Council Information Requests.

Public Notification

On 9 May 2024, the applicant undertook Public Notification of the development application in accordance with Part 4 of the Development Assessment Rules. During this period, one (1) properly made submission was received. The matters raised were in relation to:

- Odour management.
- Traffic and road safety.
- Dust management on Memerambi-Barkers Creek Road.
- Shade for animal welfare.

On 6 June 2024, the Applicant responded to the matters raised in the properly made submission.

5. ASSESSMENT OF ASSESSMENT BENCHMARKS

Framework for Assessment
Categorising Instruments for Statutory Assessment

For the *Planning Act 2016*, the following Categorising Instruments may contain Assessment Benchmarks applicable to development applications:

- the *Planning Regulation 2017;*
- the Planning Scheme for the local government area;
- any Temporary Local Planning Instrument; and
- any Variation Approval .

Of these, the planning instruments relevant to this application are discussed below in this report.

The following sections of the *Planning Act 2016* are relevant to this application:

45(5) An impact assessment is an assessment that –

(a) must be carried out –

(i) against the assessment benchmarks in a categorising instrument for the development; and

(ii) having regard to any matters prescribed by regulation for this subparagraph; and

(b) may be carried out against, or having regard to, any other relevant matter, other than a person's personal circumstances, financial or otherwise.

In regard to the prescribed regulation, being the *Planning Regulation 2017,* the following sections apply in the assessment of this application:

Section 30 – Assessment Benchmarks generally

(1) For section 45(5)(i) of the Act, the impact assessment must be carried out against the assessment benchmarks for the development stated in schedules 9 and 10.

(2) Also, if the prescribed assessment manager is the local government, the impact assessment must be carried out against the following assessment benchmarks—

(a) the assessment benchmarks stated in—

(i) the regional plan for a region, to the extent the regional plan is not identified in the planning scheme as being appropriately integrated in the planning scheme; and

(ii) the State Planning Policy, part E, to the extent part E is not identified in the planning scheme as being appropriately integrated in the planning scheme; and

(iii) a temporary State planning policy applying to the premises;

(b) if the development is not in a local government area-any local planning instrument for a local government area that may be materially affected by the development;

(c) if the local government is an infrastructure provider—the local government's LGIP.

(3) However, an assessment manager may, in assessing development requiring impact assessment, consider an assessment benchmark only to the extent the assessment benchmark is relevant to the development.

4.1. PLANNING REGULATION 2017

The Planning Regulation 2017 forms the mechanism by which the provisions of the Act are administered. The Regulation has the ability to regulate and prohibit development and determines the assessment manager and the matters that trigger State interests.

PLANNING REGULATION 2017 DETAILS	
WBB Regional Plan Designation:	*Wide Bay Burnett Regional Plan 2011 – Regional Landscape and Rural Production Area* The RLRPA identifies land with regional landscape, rural production or other non-urban values. It protects this land from inappropriate development, particularly urban or rural residential development. These areas support the lifestyle and wellbeing of the regional population, primarily located in the Urban Footprint. The RLRPA includes land with one or more of these values: • Significant biodiversity; • Regional ecosystems that are endangered or of concern • National parks, conservation parks, resources reserves or other conservation areas; • Significant fauna habitats; • Good quality agricultural land and other productive rural areas • Cultural and landscape heritage values (traditional and non-Indigenous);

	• Natural economic resources, including extractive resources and forestry plantations; • Water catchments, water storages and groundwater resources • Native forests; • Coastal wetlands; • Land that forms strategic and regionally significant inter-urban breaks; • Unsuitable for, or not required for, urban and rural residential purposes; and • Rural towns and associated activities. The RLRPA does not impede existing land use rights. This ensures that existing commitments and significant activities, such as agricultural production, access to natural resources, water storage, tourism, outdoor recreation and nature conservation, can continue. The proposed development is for an expansion to an existing feedlot, where it is considered that the proposed development is consistent with the Regional Plan. In late 2023, the Wide Bay Burnett Regional Plan 2023 was released. It is noted that the site is located in the Priority Agricultural Area. Given the nature of the proposed development and the context of the site, it is not anticipated to conflict with the goals of the new Regional Plan.

4.2. REFERRAL AGENCIES

To determine whether the development application requires referral to the State Assessment and Referral Agency (SARA) or 'another entity', an assessment of the proposal against Schedule 10 of the Regulation has been undertaken.

The application requires referral to the State Assessment & Referral Agency, as demonstrated in **Table 3** for the following triggers:

- Schedule 10, Part 5, Division 4, Table 2 – Non-devolved environmentally relevant activities; and
- Schedule 10, Part 9, Division 4, Subdivision 1, Table 1 – Aspect of development stated in Schedule 20.

Note: Grey shading indicates no provisions.

Table 3 - Matters Prescribed in Schedule 10 of the Planning Regulation

Part	Matter	Applicability to this Development Application	Prohibited Development	Assessable Development	Referral Agency	Assessment Benchmarks / Matters to be assessed against
1	Airport Land	N/A		N/A	N/A	N/A
2	Brothels	N/A	N/A	N/A		N/A
3	Clearing Native Vegetation	N/A	N/A	N/A	N/A	N/A
4	Contaminated Land	N/A		N/A	N/A	N/A
5	Environmentally Relevant Activity	Yes	No	Yes	SARA	SDAP: State Code 22
6	Fisheries: - Aquaculture - Declared Fish Habitat - Marine Plants - Waterway Barrier works	 N/A N/A N/A N/A		N/A	N/A	N/A

Table 3 - Matters Prescribed in Schedule 10 of the Planning Regulation						
Part	Matter	Applicability to this Development Application	Prohibited Development	Assessable Development	Referral Agency	Assessment Benchmarks / Matters to be assessed against
7	Hazardous Chemical Facilities	N/A		N/A	N/A	N/A
8	Heritage Place: - Local Heritage Place - Queensland Heritage Place	N/A		N/A	N/A	N/A
9	Infrastructure Related: - Designated Premises - Electricity - Oil and Gas - State Transport Generally - State Transport Corridors and Future State Transport Corridors - State-controlled transport tunnels and future state-controlled transport tunnels	 N/A N/A N/A Yes Yes N/A			SARA	SDAP: State Code 6
10	Koala Habitat in SEQ region	N/A	N/A			N/A
11	Noise Sensitive Place on Noise Attenuation land	N/A	N/A			
12	Operational Work for Reconfiguring a Lot	N/A		N/A		
12A	Walkable Neighbourhoods – particular reconfiguring a lot	N/A		N/A		N/A
13	Ports: - Brisbane Core Port Land - Within the port limits of the Port of Brisbane - Within the limits of another port - Strategic Port Land	 N/A N/A N/A N/A		N/A	N/A	N/A
14	Reconfiguring a Lot under the Land Title Act	N/A		N/A	N/A	N/A
15	SEQ Development Area	N/A		N/A	N/A	N/A
16	SEQ Regional Landscape and Rural Production	N/A	N/A	N/A	N/A	N/A

Table 3 - Matters Prescribed in Schedule 10 of the Planning Regulation						
Part	Matter	Applicability to this Development Application	Prohibited Development	Assessable Development	Referral Agency	Assessment Benchmarks / Matters to be assessed against
	Area and Rural Living Area: - Community Activity - Indoor Recreation - Residential Development - Urban Activity					
16A	Southport Spit	N/A	N/A			
17	Tidal Works or Work in a Coastal Management District	N/A		N/A	N/A	N/A
18	Urban Design	N/A			N/A	N/A
19	Water Related Development: - Taking or interfering with water - Removing quarry material - Referral dams - Levees	 N/A N/A N/A N/A		N/A	N/A	N/A
20	Wetland Protection Area	N/A	N/A	N/A	N/A	N/A
21	Wind Farms	N/A		N/A		N/A

Based on the findings in **Table 3** it has been concluded that the application requires referral to SARA in accordance with Schedule 10, Part 5, Division 4, Table 2 and Schedule 10, Part 9, Division 4, Subdivision 1, Table 1 of the Planning Regulation 2017.

4.3. STATE PLANNING POLICY

The State Planning Policy (July 2017) (SPP) commenced on the 3 July 2017 and is effective at the time of writing this report. The Planning Regulation 2017 (PR 2017) states the assessment must be carried out against the assessment benchmarks stated in Part E of the State Planning Policy to the extent Part E is not appropriately integrated into the planning scheme.

In accordance with section (8)(4)(a) of the Act, the State Planning Policy applies to the extent of any inconsistency with the Planning Scheme.

State Planning Policy Part E	
Liveable communities and housing	No applicable assessment benchmarks.
Economic growth • Agriculture. • Development and construction. • Mining and extractive resources. • Tourism.	**Agriculture – complies.** The site is identified as an important agricultural area, containing Class A and B agricultural land. Additionally, the site is identified on the stock route network. The proposal involves an expansion to an existing feedlot, with the expansion sites being located on steeper land, which is of identified of lower agricultural value and includes limitations for

	broadacre cropping. These new expansion areas have been located adjacent to the existing feedlot complex, minimising the fragmentation of agricultural land. Additionally, the site is along an identified Stock Route along Old Wondai Road. The feedlot access is not from Old Wondai Road, and therefore, the proposed development will not impact on the function of the stock route. The proposed development therefore complies with the relevant state interest policies relating to Agriculture.
Planning for the environment and heritage. • Biodiversity. • Coastal environment. • Cultural heritage. • Water quality	**Biodiversity – complies.** The site includes regulated vegetation which is of State Environmental Significance. While the proposed development includes the expansion of the feedlot within an area containing Category R vegetation, the clearing of woody vegetation is not proposed, and therefore the proposal complies with the relevant state interest policies relating to Biodiversity.
Safety and resilience to hazards • Emissions and hazardous activities. • Natural hazards, risk, and resilience.	**Natural hazards, risk and resilience – complies.** The site is identified within a bushfire prone area and flood hazard area under SPP mapping. Range Environmental Consultants provided a bushfire advice letter for the proposed development, where the existing feedlot and proposed expansion are located within the potential impact buffer area under the SPP. The letter identifies that the feedlot infrastructure is adequately separated from the adjacent vegetation. Council's flood mapping identifies that the on-site drainage lines are subject to flooding. Clean water from areas upslope from the feedlot is diverted through the feedlot-controlled drainage area via separate drains. The proposed development is therefore considered to comply with the relevant state interest policies relating to Natural hazards, risk, and resilience.
Infrastructure • Energy and water supply. • Infrastructure integration. • Transport infrastructure. • Strategic airports and aviation facilities. • Strategic ports.	No applicable assessment benchmarks. The site is not identified on any of the listed SPP mapping layers relating to Infrastructure. The site is however serviced by the relevant infrastructure suitable for the use of the site as a feedlot.

4.4. DEVELOPMENT CODE ASSESSMENTS

Pursuant to Section 5.5 – Table 5.5.13 – Level of Assessment in the Rural Zone, an application for Material Change of Use for Intensive Animal Industry is subject to Impact Assessment.

The relevant assessment benchmarks are:

- Strategic Framework;
- Rural Zone Code; and

- Services and Works Code.

Strategic Framework

An assessment of the proposed development against the relevant themes under the Strategic Framework is included below.

Section 3.2 Settlement Pattern

Section 3.2 of the planning scheme relates to the Settlement Pattern theme, which identifies the South Burnett Region as having a resilient economy with a strong agricultural heritage, based on animal and crop production. Strategic Outcome 8 seeks to ensure rural villages, including Wattle Camp, allow opportunities for employment and economic activity at a local level. The proposed development involves an expansion to an existing feedlot within a rural locality, providing opportunity for increased employment opportunities and economic activity. Strategic Outcome 10 and Specific Outcome 16 highlight the importance of identifying the impacts of natural hazards on new development. The impacts of bushfire and flooding have been identified through reporting, with appropriate mitigation measures proposed to limit the risk to personal safety and property damage, while ensuring for the effective functioning of infrastructure during and after an event.

Section 3.3 Rural Futures

Section 3.3 of the planning scheme relates to the Rural Futures theme, which identifies the rural landscape as being an intrinsic part of the Region's character. Strategic Outcome 1 identifies that the capacity of important agricultural areas is protected from incompatible land uses to optimise agricultural development opportunities. The development is for an expansion to an existing Intensive animal industry (feedlot) within an Important Agricultural Area. The proposed development includes sufficient separation from nearby sensitive land uses while enhancing the potential for economic benefit from the utilisation of rural land.

Section 3.4 Strong Economy

Section 3.4 of the planning scheme includes the Strong Economy theme, which identifies the Region's economic base to be predominantly rural. The proposed development contributes to the themes outlined in Section 3.4 in that the proposed feedlot expansion will generate additional employment opportunities and local economic activity, thereby supporting the self-sufficiency of the region.

Section 3.5 Natural Systems and Sustainability

Section 3.5 of the planning scheme relates to the Natural Systems and Sustainability theme, which highlights the significance of environmental features and agricultural land within the region. While the site contains regulated vegetation, the development has been located on land subject to historical clearing. As identified in response to Section 3.2 above, the impacts of bushfire and flooding have been identified through reporting, with appropriate mitigation measures proposed to limit the risk to personal safety and property damage, while ensuring for the effective functioning of infrastructure during and after an event.

Section 3.6 Strong Communities

Section 3.6 of the planning scheme relates to the Strong Communities theme, which identifies the assets that contribute to the liveability and prosperity of the region. While the development is for an expansion to an existing feedlot in a rural locality, the proposed development has been designed to minimise potential impacts to surrounding communities, while providing employment opportunities for residents of the nearby towns and villages.

Section 3.7 Infrastructure and Servicing

Section 3.7 of the planning scheme relates to the Infrastructure and Servicing theme, which seeks to ensure that development is adequately serviced. The site is currently serviced by electricity and water services, with minimal changes proposed for Stage 1. It is noted that Stage 2 is contingent on a regional water network project proceeding, where the property is not connected to the reticulated sewerage or water network. The existing feedlot water system is also to be expanded to minimise the impact of the existing feedlot on surface water quality.

Rural Zone Code

The subject site is situated in the Rural Zone of the Planning Scheme. The purpose of the Rural Zone is to:

(a) provide for rural uses and activities;
(b) provide for other uses and activities that are compatible with–
    (i) existing and future rural uses and activities; and
    (ii) the character and environmental features of the zone; and
(c) maintain the capacity of land for rural uses and activities by protecting and managing significant natural resources and processes.

The following table sets out an assessment of the proposal against the Acceptable Outcomes and Performance Outcomes for the Rural Zone Code.

6.2.13.3 Criteria for assessment

Table 6.2.13—Accepted development subject to requirements and assessable development

Performance outcomes	Requirements for accepted development and assessment benchmarks	Response
Section 1 General		
PO1 Development maintains rural amenity and character.	**AO1.1** Buildings are set back 20m from any collector or higher order road and 10m from any other road frontage. AND **AO1.2** The use does not cause odour, noise or air emissions in excess of the prescribed limits in the Environmental Protection (Air) Policy 1997 or the Environmental Protection (Noise) Policy 1997.	**Complies with AO1.1.** The proposed Stage 1 expansion aligns with the existing pens, maintaining the 10 metre setback to Old Wondai Road. **Complies with AO1.2.** The proposed development has been designed to limit additional impacts to sensitive receivers as a result of odour, dust, and noise emissions. The operation of the feedlot is regulated by the Environmental Authority Permit, which includes conditions to ensure the operation of the use meets requirements set out in the Environmental Protection (Air) Policy or the Environmental Protection (Noise) Policy.
PO2 Development does not jeopardise the rural production capacity of the Zone.	Development resulting in lots less than the minimum size in Table 8.4.2 satisfying outcomes –	**Complies with PO2.** The proposed development is for an expansion to an existing feedlot, which does not result

Performance outcomes	Requirements for accepted development and assessment benchmarks	Response
	AO2.1 The proposal is necessary for the efficient production and processing of a crop grown in the area. OR **AO2.2** The proposal provides an alternate productive rural activity that supports regionally significant industry. OR **AO2.3** An agricultural sustainability report prepared by a suitably qualified agronomist demonstrates that – (a) The lot is suitability sized for the proposed activity, including a dwelling house including yard; and (b) There is sufficient water for the proposed activity; and (c) The allotment is capable of being connected to reticulated electricity; and (d) The proposed activity is financially viable, requiring a viability assessment that includes capital costs, operational costs, sustainable yields to support a family, climate, soils and geological factors affecting crop growth, nutrients, salinity, topography, susceptibility to flooding and erosion and an assessment of market robustness (both recent and projected) and alternative practices in the event of failure. AND **AO2.4** Development is consistent with any Soil Conservation Plan that applies to the locality, as approved by the relevant State agency.	in the fragmentation of agricultural land. A feedlot is defined as "Intensive Animal Industry" under the Planning Scheme, which is a consistent use in the Rural Zone. It is considered that the continuation of the use of the site as a feedlot is a productive use of agricultural land and does not jeopardise the rural production capacity of the land.
PO3	**AO3.1**	**Complies with PO3**

Performance outcomes	Requirements for accepted development and assessment benchmarks	Response
Development does not result in any degradation of the natural environment, in terms of the geotechnical, physical, hydrological and environmental characteristics of the site and its setting.	Uses and associated works are confined to existing lawfully cleared land or areas not supporting regulated vegetation. AND **AO3.2** Uses and associated works are confined to areas outside stormwater discharge points, overland flow paths, watercourses and natural drainage features. AND **AO3.3** Development, excluding forestry activities and permanent plantations, adjacent to National Parks or State Forests is set back a minimum of 100m from the park boundaries in the absence of any current 'Management Plans' for these areas.	The existing feedlot is located on a SO 1 drainage line which includes a Category R vegetation regrowth buffer. The expansion of the existing effluent system is proposed within this buffer. However, this is considered to reduce the potential impacts on the adjacent drainage path and surface water environmental values. The proposed development does not require the clearing of any regulated vegetation.
PO4 Development is not exposed to risk from natural hazard relating to land slip.	**AO4.1** Uses and associated works are confined to slopes not exceeding: (a) 15% for residential uses; (b) 10% for treated effluent disposal areas; (c) 6% for non-residential uses.	**Complies with AO4.1** The slope of the proposed effluent disposal area is less than 10% and the applicant has stated that earthworks and batters will be designed to ensure they are not prone to slippage.
PO5 Development is adequately serviced.	**AO5.1** A 45kl water tank is provided for consumption purposes. AND **AO5.2** On-site sewage treatment is provided. AND **AO5.3** Each dwelling is provided with a service line connection to the electricity supply and telecommunications networks.	**Complies with PO5** The proposed development will continue to utilise water from existing on-site dams for Stage 1. Stage 2 will be reliant upon future upgrades to the regional water supply network. The existing on-site sewage treatment facility will continue to be used. The site is currently serviced by electricity infrastructure and telecommunications, with current connections to be maintained.
PO6 Development is located and designed to ensure that land uses are not exposed to:	**AO6.1** Development does not occur: (a) In areas that pose a health risk from previous activities; and	**Not Applicable.** The site is not listed on the CLR or EMR.

Performance outcomes	Requirements for accepted development and assessment benchmarks	Response
(a) Areas that pose a health risk from previous activities; and (b) Unacceptable levels of contaminants.	(b) On sites listed on the Contaminated Land Register or Environmental Management Register. OR **AO6.2** Areas that pose a health risk from previous activities and contaminated soils which are subject to development are remediated prior to plan sealing, operational works permit, or issuing of building works permit.	
Section 2 Where in the vicinity of an existing intensive animal industry		
PO7 Non-rural development does not compromise the integrity and operations of intensive animal industries.	**AO7.1** Non-rural development does not result in an increase in the number of people living or working within 1km from an existing or approved intensive animal industry facility.	**Not Applicable.** The proposed development is for an expansion to an existing feedlot.
Section 3 Caretaker's accommodation – not applicable (AO8.1 – AO9.5)		
Section 4 Home based business – not applicable (AO10.1 – AO13.4)		
Section 5 Secondary dwelling – not applicable (AO14.1 – AO14.2)		
Section 6 For development affected by one or more overlays		
Agricultural land overlay		
PO15 The productive capacity and utility of agricultural land for rural activities is maintained.	**AO15.1** The proposal is not located on agricultural land as identified on SPP Interactive Mapping (Plan Making). OR **AO15.2** The proposal is necessary for the efficient production and processing of a crop grown in the area. OR **AO15.3** The proposal provides an alternate productive rural activity that supports regionally significant industry. OR **AO15.4** An agricultural sustainability report prepared by a suitably qualified agronomist demonstrates that – (a) The lot is suitability sized for the proposed activity. Including a	**Complies with AO15.3.** The proposed development is for an expansion to an existing feedlot which is considered a productive rural activity.

Performance outcomes	Requirements for accepted development and assessment benchmarks	Response
	dwelling house including yard; and (b) There is sufficient water for the proposed activity; and (c) The allotment is capable of being connected to reticulated electricity; and (d) The proposed activity is financially viable, requiring a viability assessment that includes capital costs, operational costs, sustainable yields to support a family, climate, soils and geological factors affecting crop growth, nutrients, salinity, topography, susceptibility to flooding and erosion and an assessment of market robustness (both recent and projected) and alternative practices in the event of failure. AND **AO15.5** Development is consistent with any Soil Conservation Plan that applies to the locality, as approved by the relevant State agency.	
Airport environs overlay – not applicable (AO16.1 – AO17.3)		
Biodiversity overlay		
PO18 Areas of environmental significance, including biodiversity values, are identified, protected and enhanced.	**AO18.1** Uses and associated works are confined to areas not identified on Overlay Map 05. OR **AO18.2** Development is compatible with the environmental values of the area. OR **AO18.3** Where development within an area identified on Overlay Map 05 is unavoidable, measures recommended by a suitably qualified ecologist are incorporated to protect and retain the environmental values and underlying	**Complies with AO18.2.** The proposed development does not require the clearing of regulated vegetation identified on the Biodiversity overlay.

Performance outcomes	Requirements for accepted development and assessment benchmarks	Response
	ecosystem processes within or adjacent to the development site to the greatest extent practical.	
PO19 Biodiversity values of identified areas of environmental significance are protected from the impacts of development	**AO19.1** Development adjacent to Protected Areas identified on Overlay Map 05 is set back a minimum of 100m from the park boundaries in the absence of any current 'Management Plans' for these areas.	**Not Applicable.** The proposed expansion areas are not within 100 metres of an identified protected area.
PO20 There are no significant adverse effects on water quality, ecological and biodiversity values.	**AO20.1** Uses and associated works are confined to areas outside overland flow paths and natural drainage features. AND **AO20.2** All buildings, on-site effluent disposal, external activities or storage areas are located 100m from the top of the bank of a river, creek, stream or wetland identified on Overlay Map 05. **AO20.3** The Waterway Corridors identified on Overlay Map 05 are maintained in a natural state.	**Performance Outcome.** The existing feedlot is located on a SO 1 drainage line which includes a Category R vegetation regrowth buffer. The expansion of the existing effluent system is proposed within this buffer. However, this is considered to reduce the potential impacts on the adjacent drainage path and surface water environmental values. The proposed development does not require the clearing of any regulated vegetation.
Bushfire hazard overlay		
PO21 Development is not placed at unacceptable risk from bushfire, does not increase the extent or severity of bushfire and maintains the safety of people and property from bushfire	**AO21.1** Development does not occur in areas mapped as Very High or High Potential Bushfire Intensity Areas on the SPP Interactive Mapping (Plan Making). OR **AO21.2** A written assessment by a suitably experienced or qualified person confirms that the site is of Low Potential Bushfire Hazard. OR **AO21.3** For areas mapped as Medium Potential Bushfire Intensity Areas on the SPP Interactive Mapping (Plan Making),	**Complies with AO21.2.** The proposal is supported by bushfire hazard advice stating that the feedlot infrastructure located adjacent to the identified bushfire prone areas is adequately separated from areas of hazardous vegetation, minimising potential exposure to bushfire hazards. The development predominantly occurs in area mapped as Potential Impact buffer, with development mostly clear of adjacent areas of Medium Potential Bushfire Intensity to the southwest and along Memerambi-Barkers Creek Road.

Performance outcomes	Requirements for accepted development and assessment benchmarks	Response
	bushfire risk is mitigated through a Bushfire Management Plan incorporating: (a) Lot design and the siting of buildings and uses so: (i) high intensity uses are located on the least bushfire prone area on the site and activities least susceptible to fire are sited closest to the bushfire hazard; and (ii) efficient emergency access is optimised; and (iii) bushfire risk is effectively minimised having regard to aspect, elevation, slope and vegetation. (b) Including firebreaks that provide adequate: (i) setbacks between buildings/ structures and hazardous vegetation; and (ii) access for fire fighting or other emergency vehicles; and (c) Road access for fire-fighting appliances and firebreaks are provided through a perimeter road that separates the use from areas of bushfire hazard and that road has a minimum cleared width of 20 metres; and (d) Where a reticulated water supply is not available and development involves buildings with a gross floor area greater than $50m^2$, one tank within 100m of each residential building that has: (i) fire brigade tank fittings; and	

Performance outcomes	Requirements for accepted development and assessment benchmarks	Response
	(ii) 25,000 litres dedicated for fire fighting purposes.	
PO22 Community infrastructure in any area mapped as Very High to Medium (Potential Intensity) Areas are able to function effectively during and immediately after bushfire events.	**AO22.1** No outcome specified.	**Not Applicable.** The proposed development does not involve community infrastructure.
PO23 Public safety and the environment are not adversely affected by the detrimental impacts of bushfire on hazardous materials manufactured or stored in bulk.	**AO23.1** No hazardous materials, manufactured or stored in bulk, are on land mapped as Very High to Medium (Potential Intensity) Areas.	**Complies with AO23.1.** The proposed development does not involve the manufacture or storage of hazardous materials in bulk.
PO24 Major risks to the safety or property and to the wellbeing of occupants in areas mapped as Very High to Medium (Potential Intensity) Areas is minimised through appropriate siting, servicing and managing of residential premises.	**AO24.1** New dwellings on land mapped as Very High to Medium (Potential Intensity) Areas are located: (a) Centrally within existing cleared areas on a lot which allows a regular shaped area (with a minimum dimension of 50m) of 5,000m2 to be identified that: (i) is free of highly combustible vegetated areas; and (ii) is on southerly to easterly facing slopes not exceeding 15% gradient; or (iii) on flat lands at the base of north to western facing slopes not exceeding 15% gradient. (b) A fire protection buffer is established around the complete perimeter of the dwelling unit within a lot for a minimum width of 50m.	**Not Applicable.** The proposed development does not involve a new dwelling.
Extractive industry overlay – not applicable (AO25.1 – AO27.2)		
Flood hazard overlay		
PO28 Development is not exposed to risk from flood events by responding to flood potential	**AO28.1** All new allotments include an area of sufficient size to accommodate the intended	**Performance Outcome.** The flood hazard overlay map identifies the site within a flood hazard area in the lower part of

Performance outcomes	Requirements for accepted development and assessment benchmarks	Response
and maintains personal safety at all times.	land use outside the area identified on Overlay Map 03. AND **AO28.2** New buildings are not located within the area identified on Overlay Map 03; OR **AO28.3** Development is sited above the 1%AEP flood event where known, or the highest known flood event, as follows: (a) Habitable floor levels - 500mm; (b) Non-habitable floor levels - 300mm; (c) On-site sewage treatment and storage areas for potential contaminants - 300mm; (d) All other development - 0mm. AND **AO28.4** Building work below the nominated flood level allows for the flow through of flood water at ground level: (a) The structure below flood level is unenclosed; or (b) Any enclosure below flood level aligns with the direction of water flow; or (c) Any enclosure not aligning with the direction of water flow must have openings that are at least 50% of the enclosed area with a minimum opening of 75mm. AND **AO28.5** Resilient building materials are used below the nominated flood level in accordance with the relevant building assessment provisions. AND **AO28.6** Signage is provided on site indicating the position and path of all safe evacuation routes off the site.	the adjacent drainage line. The proposed development does not involve any new structures within the identified flood hazard area.

Performance outcomes	Requirements for accepted development and assessment benchmarks	Response
PO29 Development directly, indirectly and cumulatively avoids any significant increase in water flow, velocity or flood level, and does not increase the potential for flood damage either on site or other properties.	**AO29.1** Works associated with the proposed development do not: (a) involve a net increase in filling greater than 50m3; or (b) result in any reductions of onsite flood storage capacity and contain within the site any changes to depth/duration / velocity of flood waters; or (c) change flood characteristics outside the site in ways that result in: (i) loss of flood storage; (ii) loss of/changes to flow paths; (iii) acceleration or retardation of flows; or (iv) any reduction in flood warning times.	**Complies with AO29.1.** The proposed development will result in the increase in effluent pond capacity, reducing the potential for flood damage to the site and adjoining properties.
PO30 Development avoids the release of hazardous materials into floodwaters.	**AO30.1** Materials manufactured or stored on site are not hazardous in nature. OR **AO30.2** Hazardous materials and any associated manufacturing equipment are located above the nominated flood level.	**Not Applicable.** The proposed development does not result in the manufacture or storage of hazardous materials in bulk.
PO31 Community infrastructure in any area mapped as Flood Hazard is able to function effectively during and immediately after flood.	No outcome specified.	**Not Applicable.** The proposed development is not for community infrastructure.
Historic subdivisions overlay – not applicable (AO32.1 – AO33.7)		
Landslide hazard overlay – not applicable (AO34.1 – AO34.2)		
Regional infrastructure overlay		
PO36 Stock routes and trails identified on Overlay Map 04 are protected from incompatible development on adjoining sites.	No outcome specified.	**Performance Outcome.** The proposed development is for an expansion to an existing feedlot which is an agricultural land use.
PO37 Development is sufficiently separated from major	**AO37.1** Sensitive land use (as defined in the Regulation) maintain the	**Not Applicable.** The proposed development is not for a sensitive land use

Performance outcomes	Requirements for accepted development and assessment benchmarks	Response
electricity infrastructure or substations to minimise the likelihood of nuisance or complaint.	following separation distances from substations or easement for major electricity infrastructure identified on Overlap Map 04: (a) 20 m for transmission lines up to 132 kilovolts (b) 30 m for transmission lines between 133 kilovolts and 275 kilovolts and (c) 40 m for transmission lines exceeding 275 kilovolts.	within proximity to major electricity infrastructure.
PO38 There is sufficient space within the site to establish landscaping which substantively assists in screening and softening obtrusive major electricity infrastructure identified on Overlay Map 04.	**AO38.1** A minimum 3m wide densely planted landscaped buffer is provided along the boundary adjoining the major electricity infrastructure, including provision for advanced trees and shrubs that will grow to a minimum height of 10m.	**Not Applicable.** The proposed development is not within proximity to major electricity infrastructure.
Water catchments overlay		
PO39 There are no significant adverse effects on the water quality of drinking water supply.	**AO39.1** Development within the Bjelke-Petersen Dam Water Resource Catchment Area and the 800m buffer to Boondooma and Gordonbrook Dams shown on Overlay Map 06 has no significant adverse effect on the quantity and availability of raw water for consumption, as determined by a suitably qualified water quality expert. OR **AO39.2** Development within the Cooyar Creek water supply buffer area shown on Overlay Map 06 complies with the specific outcomes and measures of the Seqwater Development Guidelines: Development Guidelines for Water Quality Management in Drinking Water Catchments 2012.	**Not Applicable.** The site is within the Lake Barambah resource catchment area. However, reporting indicates the impact on water quality is anticipated to be negligible.

Summary of Compliance with Rural Zone Code:

The proposed development generally complies with the acceptable outcomes of the Rural Zone Code, with performance outcomes sought in relation to the use of the site being for a feedlot, slope of the land, and the location of infrastructure within an identified watercourse buffer. In each case, sufficient reporting was submitted by the applicant to demonstrate the proposed expansion will result in limited impacts to the surrounding rural locality and environment.

Services and Works Code

8.4.2.3 Criteria for assessment

Table 8.4.3—Assessable development

Performance outcomes	Requirements for accepted development and assessment benchmarks	Response
Section 1 General		
PO1 The development is planned and designed considering the land use constraints of the site for achieving stormwater design objectives.	**AO1.1** A stormwater quality management plan provides for achievable stormwater quality treatment measures that meet the design objectives identified in Table 9.4.4.	**Complies with AO1.1.** The proposal is supported by a Stormwater Management Plan, with reasonable and relevant conditions imposed relating to stormwater management.
PO2 Development does not discharge wastewater to a waterway or off-site unless demonstrated to be best practice environmental management for that site.	**AO2.1** A wastewater management plan prepared by a suitably qualified person and addresses: (a) wastewater type; (b) climatic conditions; (c) water quality objectives; (d) best-practice environmental management; AND **AO2.2** Wastewater is managed in accordance with a waste management hierarchy that: (a) avoids wastewater discharge to waterways; or (b) minimises wastewater discharge to waterways by re-use, recycling, recovery and treatment for disposal to sewer, surface water and groundwater.	**Complies with AO2.1 & AO2.2.** A wastewater management plan has been designed for the feedlot and will be managed in accordance with national guidelines. The existing effluent system will be reconfigured to comply with modern standards.
PO3 Construction activities avoid or minimise adverse impacts on stormwater quality.	**AO3.1** An erosion and sediment control plan addresses the design objectives for the construction phase in Table 9.4.4.	**Complies with PO3** The applicant has advised that an erosion and sediment control plan will be prepared for the subsequent operational works application.
PO4 Operational activities avoid or minimise changes to waterway hydrology from adverse	**AO4.1** Development incorporates stormwater flow control measures to achieve the	**Complies with AO4.1.** The proposal is supported by a Stormwater Management Plan, with reasonable and

Performance outcomes	Requirements for accepted development and assessment benchmarks	Response
impacts of altered stormwater quality and flow.	design objectives for the postconstruction phase in Table 9.4.4.	relevant conditions imposed relating to stormwater management across the site.
Section 2 Infrastructure		
PO5 Development is provided with infrastructure which: (a) conforms with industry standards for quality; (b) is reliable and service failures are minimised; and (c) is functional and readily augmented.	**AO5.1** Except in the Rural zone, all development occurs on a site with frontage to a sealed road. AND **AO5.2** Infrastructure is designed and constructed in accordance with the standards contained in PSP1 – Design and Construction Standards.	**Complies with AO5.2.** The site is accessed via an unsealed road. However, it is within the Rural Zone. **Not Applicable.** The proposal does not involve new or upgraded infrastructure.
Section 3 Vehicle parking		
PO6 Vehicle parking and access is provided to meet the needs of occupants, employees, visitors and other users.	**AO6.1** Vehicle parking spaces are provided on-site in accordance with Table 9.4.5. AND **AO6.2** A service bay is provided on-site for the service vehicle nominated in Table 9.4.5. AND **AO6.3** Driveway crossings are provided to the standard contained in PSP1 – Design and Construction Standards. AND **AO6.4** Vehicle parking and manoeuvring areas are provided in accordance with the standards contained in PSP1 – Design and Construction Standards.	**Complies with PO6** Vehicle parking requirements have not been specified for the proposed use. However, a Traffic Impact Assessment has been provided, demonstrating that the site contains sufficient area for on-site vehicle parking. The assessment also demonstrates the suitability of the surrounding road network for the proposed development.
Section 4 Landscaping		
PO7 Landscaping is appropriate to the setting and enhances local character and amenity.	**AO7.1** Landscaping is provided in accordance with the relevant zone code provisions. AND **AO7.2** Where shade tree planting is required in vehicle parking areas each planting bed has a minimum area of $2m^2$ and is unsealed and permeable. AND **AO7.3**	**Complies with PO7** Due to the rural nature of the use, limited landscaping is proposed, however, existing Category B regulated vegetation in the adjacent road corridor provides sufficient screening from the surrounding road network. A condition has been imposed to ensure the retention of this landscaping to act as a visual buffer.

Performance outcomes	Requirements for accepted development and assessment benchmarks	Response
	Plantings along frontages or boundaries are in the form of defined gardens with three tier planting comprised of groundcovers, shrubs (understorey), and trees (canopy) and provided with a drip irrigation system, mulching and border barriers.	
PO8 Plant species avoid adverse impacts on the natural and built environment, infrastructure and the safety of road networks.	**AO8.1** Landscaping utilises plant species that are appropriate for the location and intended purpose of the landscaping. AND **AO8.2** Species selection avoids non-invasive plants.	**Complies with AO8.1 & AO8.2.** The proposed development will include native vegetation to provide screening, with conditions included to ensure landscaping utilises appropriate plant species.
Section 5 Filling and excavation		
PO9 Development results in ground levels that retain: (a) access to natural light; (b) aesthetic amenity; (c) privacy; and (d) safety.	**AO9.1** The depth of: (a) fill is less than 2m above ground level; or (b) excavation is less than 2m below ground level. AND **AO9.2** The toe of the fill, or top of the excavation is not less than 0.5m inside the site property boundary. AND **AO9.3** Works do not occur on slopes over 15% in grade. AND **AO9.4** Retaining walls over 1m in height are terraced 1.5m for every 1m in height and landscaped. AND **AO9.5** Batter slopes are not steeper than 25% and are grassed and terraced 1.5m for every 1m in height. AND **AO9.6** Filling or excavation for the purpose or retention of water:	**Not Applicable.** The proposed development does not involve earthworks. The applicant has advised that a subsequent operational works application will be lodged with Council.

Performance outcomes	Requirements for accepted development and assessment benchmarks	Response
	(a) is certified by an RPEQ engineer to safely withstand the hydraulic loading; (b) directs overflow such that no scour damage or nuisance occurs on adjoining lots.	
PO10 Filling or excavation does not cause damage to public utilities.	**AO10.1** Filling or excavation does not occur within 2m horizontally of any part of an underground water supply, sewerage, stormwater, electricity or telecommunications system.	**Not Applicable.** The proposed development does not involve earthworks. The applicant has advised that a subsequent operational works application will be lodged with Council.
PO11 Filling and excavation avoids water ponding on the premises or nearby premises that will adversely impact on the health of the community.	**AO11.1** Following filling or excavation: (a) the premises: (i) are self-draining; and, (ii) has a minimum slope of 0.25%; and, (b) surface water flow is: (i) directed away from neighbouring properties; or (ii) discharged into a stormwater drainage system designed and constructed in accordance with AS3500 section 3.2.	**Not Applicable.** The proposed development does not involve earthworks. The applicant has advised that a subsequent operational works application will be lodged with Council.
Section 6 All operational work subject to an overlay – not applicable (AO12.1 – AO18.2)		

Summary of Compliance with the Services and Works Code:

The proposed development generally complies with the Services and Works Code with performance outcomes sought in relation to landscaping and parking. The proposal is supported by a Stormwater Management Plan, Traffic Impact Assessment, and Wastewater Management Plan.

Other Relevant Matters

The consideration of other relevant matters applies to the assessment and decision-making process for this impact assessable development application. The below summarises the matters considered by the planning assessment.

Applicant submitted reports	Development Assessment Report Traffic Impact Assessment Bushfire Hazard Advice
Planning Scheme Amendment v2.0 (Major Amendment)	At Council's General Meeting on 20 July 2022, Council endorsed the proposed Major Amendment to the Planning Scheme, which is currently with the State Government for a State Interest Check per the Minister's Guidelines and Rules. As the amendment is still draft, officers have simply considered this point. However, a merit-based assessment has been provided below to

	complement the assessment against the benchmarks of the current version of the Planning Scheme.
Assessment considerations of merits	Impact assessment under the *Planning Act 2016* is an 'unbounded' assessment. This means relevant matters, other than those prescribed, can also be considered and the weighing and balancing 'inside the box' as well as with factors 'outside the box' can take place in reaching a decision. The discussion below outlines the planning assessment of the merits of the application presented.

Planning Discussion

It is considered that compliance has been demonstrated with the relevant assessment benchmarks of the South Burnett Regional Council Planning Scheme 2017. An Intensive Animal Industry is an anticipated land use in the Rural Zone where not exceeding a prescribed scale. As the proposed development seeks to expand upon an existing Intensive Animal Industry use, the development exceeds the prescribed threshold, triggering Impact Assessment. Notwithstanding, the proposal seeks to establish an anticipated land use in the Rural Zone. As the feedlot is existing, the impact from additional capacity is the primary matter for consideration. Upon application, the Applicant provided specialist reporting to support the proposal, demonstrating appropriate management of any potential impacts (amenity included) to the surrounding rural locality or sensitive land uses.

Operationally, the Applicant has demonstrated that the development can operate in accordance with the relevant standards through the imposition of reasonable and relevant conditions. The Applicant adequately responded to Council's Information Request, the State Assessment and Referral Agency's Information Request and the one (1) properly made submission received during the Public Notification period. With this information, and as detailed within this report, the development has demonstrated appropriate management or mitigation of any identifiable impacts.

6. CONSULTATION

Referral Agencies

State Assessment and Referral Agency	Yes
Other	Not Applicable

Council Referrals

INTERNAL REFERRAL SPECIALIST	*REFERRAL / RESPONSE*
Development Engineer	Council's Development Engineer provided engineering conditions and calculated Infrastructure Charges.
Infrastructure Charges Unit	Council adopted a LGIP on 24 June 2019 which commenced on 1 July 2019. The types of development that may trigger the issuing of an infrastructure charges notice are: a) Reconfiguring a lot; b) Making a Material change of use; and c) Carrying out Building Work. Refer to Infrastructure Charges Notice attached as Attachment B.

Public Notification

Date Notification Commenced	09 May 2024
Date Notification Completed	30 May 2024
Date notice of compliance received	31 May 2024

During the Public Notification period, one (1) properly made submission was received. The matters raised have been discussed in the following table.

Submission Summary	
Submitter Issue	Response

<u>Odour Management</u>
• Covered pens, which is the only proactive strategy proposed to assist in reducing odour emissions, are only proposed in expansion stage 2.
• The environmental risk assessment proposed does not acknowledge the significant increase in overall stocking density for the site.
• Recommend that:
  • The development approval requires both expansion stages 1 and 2 to include covered pens; and
  • The approval should be contingent upon the implementation of additional odour emissions mitigation strategies such as vegetative barriers.
	The applicant advised that current operations include the cleaning of pens every 65 days (weather permitting), which exceeds the 90-day industry standard.
	
	The Applicant, in response to the properly made submission, has offered to vary operations in consultation with the submitter. This matter sits separate to the development assessment process.
	
	The applicant has advised that the proposed stocking density of 9m^2/SCU is expected to provide an appropriate level of moisture with supplementary bedding provided if localised wet patches develop. It is noted that a higher stocking density is necessary to maintain moisture in the manure to prevent excessive dust.
	
	SARA issued the applicant with an Information Request, including an item relating to odour. The applicant provided a response to this item, with the updated EA including conditions relating to odour management (Conditions A1 to A4 of EA Permit).
	
	This matter is considered to have been adequately addressed.

<u>Traffic and Road Safety</u>
• Concern with road safety impacts resulting from the increased usage of Memerambi-Barkers Creek Road, including by B-doubles.
• Proactive improvements to mitigate the increased traffic and associated wear and tear (or safety risks) are not outlined.
• Recommend that:
  • The proposal includes a comprehensive traffic management plan and road maintenance strategy to address these concerns and that Council should enforce these plans to ensure compliance; and
  • The applicant covers the costs of extending the 1.6km of bitumen from the west to Pakaderinga's gate and mandate that all heavy vehicles access the feedlot to/ from the west.
 	
• Proposal does not present specific, effective dust management strategies for the increased truck traffic on the unsealed sections of Memerambi-Barkers Creek Road.
• Recommended that:
  • Condition the applicant to implement enforceable dust management measures for Memerambi-Barkers Creek Road.
	The applicant has identified that due to the minor increase in traffic volumes and prioritisation of B-doubles, traffic related to the feedlot will no longer travel along Memerambi-Barkers Creek Road to or from the Burnett Highway (east) and that all heavy vehicles are to access the property from the Bunya Highway (west).
	
	The applicant identified that the proposal will result in an additional two heavy vehicles along Memerambi-Barkers Creek Road and that the condition of the road is due to the many HRVs which utilise the road daily (not just associated with the feedlot).
	
	A condition has been included in SARA's Decision Notice to ensure all heavy vehicles access the property from the Bunya Highway (west). Further, a condition relating to dust management in and around the site has been included in SARA's Decision Notice to ensure dust emissions do not exceed certain concentrations at any sensitive or commercial place (Condition A2).
	
	This matter is considered to have been adequately addressed.

<u>Shade for Animal Welfare</u> • The current design does not align with the Australian Lot Feeders' Association (ALFA)	Animal welfare is not a relevant planning matter.

Policy, which advocates for all cattle in feedlots to have access to shade to shelter by 2026. • Recommended that: • Condition the applicant to revise their application and install shade structures in all new pens to improve cattle welfare, productivity, and reduce mortalities in severe heat events.	

7. RECOMMENDATION

That Council approve the Development Permit - Material Change of Use for Intensive Animal Industry (Expansion of Existing Feedlot to 6,425 SCU and Associated Infrastructure) at 1270 & 1344 Memerambi Barkers Creek Road WATTLE CAMP (and described as Lots 1, 2, 6 & 7 on RP157322, Lots 3, 4, 5 & 8 on RP157323 and Lots 9, 10 & 11 on RP157327).

Grounds to support the approval of the development application –

- The subject site is identified within the Rural Zone under the South Burnett Regional Council Planning Scheme 2017 version 1.4. The proposal involves an extension to an existing Intensive Animal Industry (Feedlot), which is an anticipated use in the Rural zone. The proposed development will be a continuation of a pre-existing use of the site.
- The extension to the existing Intensive Animal Industry was determined to be consistent with the South Burnett Regional Planning Scheme 2017 v1.4 Strategic Framework. Further, the development demonstrated compliance with the balance of the Planning Scheme.
- Any impacts beyond that already anticipated under the existing operation are considered to be reasonably managed or mitigated through the imposition of reasonable and relevant conditions, obligations under separate permit/s (Environmental Authority, for example) or through compliance with the recommendations of specialist reporting (Traffic Impact Assessment, Stormwater Management Plan, Bushfire Hazard Letter, Wastewater Management Plan, etc.).
- The proposed development maintains existing access arrangements and setbacks to Old Wondai Road. The land use will continue to be adequately screened from the surrounding road network.
- One (1) properly made submission was made to the proposed development, raising issues relating to odour, traffic and road safety and the welfare of animals. These individual matters have been adequately addressed through either response, the imposition of reasonable and relevant conditions, or through obligations under separate permit/s (Environmental Authority).

ATTACHMENTS

1. **Attachment A - Statement of Reasons** ⇩
2. **Attachment B - Infrastructure Changes Notice** ⇩
3. **Attachment C - Approved Plans** ⇩
4. **Attachment D - Traffic Impact Assessment** ⇩
5. **Attachment E - Bushfire Hazard Advice** ⇩
6. **Attachment F - SARA Referrral Agency Response** ⇩

NOTICE ABOUT DECISION – STATEMENT OF REASONS

The following information is provided in accordance with Section 63(4) & (5) of the Planning Act 2016

Applicant:	Pakaderinga Feedlot Q Pty Ltd C/- AgDSA
Application No:	MCU23/0031
Proposal:	Material Change of Use for Intensive Animal Industry (Expansion of Existing Feedlot to 6,425 SCU and Associated Infrastructure)
Street Address:	1270 & 1344 Memerambi Barkers Creek Road WATTLE CAMP
RP Description:	Lots 1, 2, 6 & 7 on RP157322, Lots 3, 4, 5 & 8 on RP157323 and Lots 9, 10 & 11 on RP157327
Assessment Type:	Impact Assessable
Number of Submissions:	One (1) properly made submission received

On 17 July 2024 the above development was recommended for:

☒ Approval
☐ Refusal

1. Reasons for the Decision

The reasons for this decision are:

- The subject site is identified within the Rural Zone under the South Burnett Regional Council Planning Scheme version 1.4. The proposal involves an extension to an existing Intensive Animal Industry (Feedlot), which is an anticipated use in the Rural zone. The proposed development will be a continuation of a pre-existing use of the site.

- The extension to the existing Intensive Animal Industry was determined to be consistent with the South Burnett Regional Planning Scheme 2017 v1.4 Strategic Framework. Further, the development demonstrated compliance with the balance of the Planning Scheme.

- Any impacts beyond that already anticipated under the existing operation are considered to be reasonably managed or mitigated through the imposition of reasonable and relevant conditions, obligations under separate permit/s (Environmental Authority, for example) or through compliance with the recommendations of specialist reporting (Traffic Impact Assessment, Stormwater Management Plan, Bushfire Hazard Letter, Wastewater Management Plan, etc.).

- The proposed development maintains existing access arrangements and setbacks to Old Wondai Road. The land use will continue to be adequately screened from the surrounding road network.

- One (1) properly made submission was made objecting to the proposed development, with issues relating to odour, traffic and road safety and the welfare of animals. These individual matters have been adequately addressed through either response, the imposition of reasonable and relevant conditions or through obligations under separate permit/s (Environmental Authority).

2. Assessment Benchmarks

The following are the benchmarks apply to this development:

- Strategic Framework
- Rural Zone Code
- Services and Works Code

3. Compliance with Benchmarks

The development was assessed against all the assessment benchmarks listed above and complies with all of these or can be conditioned to comply.

Note: Each application submitted to Council is assessed individually on its own merit.

INFRASTRUCTURE CHARGES NOTICE

(Section 119 of the Planning Act 2016)

APPLICANT:	Pakaderinga Feedlot C/- AgDSA - Agricultural Development Services Australia Pty Ltd PO Box 292 TOOWOOMBA QLD 4350	
APPLICATION:	Material change of use for Intensive animal industry (Expansion of existing feedlot - 6,425 SCU and associated infrastructure)	
DATE:	24/07/2024	
FILE REFERENCE:	MCU23/0031	
AMOUNT OF THE LEVIED CHARGE: *(Details of how these charges were calculated are shown overleaf)*	**$0.00**	**Total**
	$0.00	Water Supply Network
	$0.00	Sewerage Network
	$0.00	Transport Network
	$0.00	Parks and Land for Community Facilities Network
	$0.00	Stormwater Network
AUTOMATIC INCREASE OF 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.	
LAND TO WHICH CHARGE APPLIES:		
SITE ADDRESS:	1344 Memerambi-Barkers Ck Road, Wattle Camp	
PAYABLE TO:	**South Burnett Regional Council**	
WHEN PAYABLE: *(In accordance with the timing stated in Section 122 of the Planning Act 2016)*	Material Change of Use – When the change happens.	
OFFSET OR REFUND:	Not Applicable.	

This charge is made in accordance with South Burnett Regional Council's ***Charges Resolution (No. 3) 2019***

DETAILS OF CALCULATION

Water Supply

Adopted Charges

Development Description	Number of Units	Units of Measure	Charge Rate	Reference	Amount
Not Applicable	-	-	$0.00	-	$0.00

Discounts*

Description	Number of Units	Units of Measure	Discount Rate	Reference	Amount
Not Applicable	-	-	$0.00	-	$0.00

Sewerage

Adopted Charges

Development Description	Number of Units	Units of Measure	Charge Rate	Reference	Amount
Not Applicable	-	-	$0.00	-	$0.00

Discounts*

Description	Number of Units	Units of Measure	Discount Rate	Reference	Amount
Not Applicable	-	-	$0.00	-	$0.00

Transport

Adopted Charges

Development Description	Number of Units	Units of Measure	Charge Rate	Reference	Amount
			$0.00	[CR Table X]	$0.00

Discounts*

Description	Number of Units	Units of Measure	Discount Rate	Reference	Amount
			$0.00		$0.00

Parks and Land for Community Facilities

Adopted Charges

Development Description	Number of Units	Units of Measure	Charge Rate	Reference	Amount
Not Applicable	-	-	$0.00	-	$0.00

Discounts*

Description	Number of Units	Units of Measure	Discount Rate	Reference	Amount
Not Applicable	-	-	$0.00	-	$0.00

Stormwater

Adopted Charges

Development Description	Number of Units	Units of Measure	Charge Rate	Reference	Amount
Not Applicable	-	-	$0.00	-	$0.00

Discounts*

Description	Number of Units	Units of Measure	Discount Rate	Reference	Amount
Not Applicable	-	-	$0.00	-	$0.00

Levied Charges

Development Description	Water Supply	Sewerage	Transport	Parks & Land for Community Facilities	Stormwater	Total
High Impact Industry (Feedlot)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Total	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**

** In accordance with Section 3.3 of the Charges Resolution, the discount may not exceed the adopted charge. Any surplus discounts will not be refunded, except at South Burnett Regional Council's discretion.*

INFORMATION NOTICE

Authority and Reasons for Charge	This Infrastructure Charges Notice has been given in accordance with section 119 of the *Planning Act 2016* to support the Local government's long-term infrastructure planning and financial sustainability.
Appeals	Pursuant to section 229 and Schedule 1 of the *Planning Act 2016* a person may appeal an Infrastructure Charges Notice. Attached is an extract from the *Planning Act 2016* that details your appeal rights.
Automatic Increase Provision of charge rate ($)	An infrastructure charge levied by South Burnett Regional Council is to be increased by the difference between the Producer Price Index (PPI) applicable at the time the infrastructure charge was levied, and PPI applicable at the time of payment of the levied charge , adjusted by reference to the 3-yearly PPI average[1]. 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 Authority could have levied for the development at the time the charge is paid.
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.
Making a Payment	This Infrastructure Charges Notice cannot be used to pay your infrastructure charges. To pay the levied charge, you must request an Itemised Breakdown showing the total levied charge payable at the time of payment. An Itemised Breakdown must be presented at the time of payment. An Itemised Breakdown may be requested by emailing info@southburnett.qld.gov.au

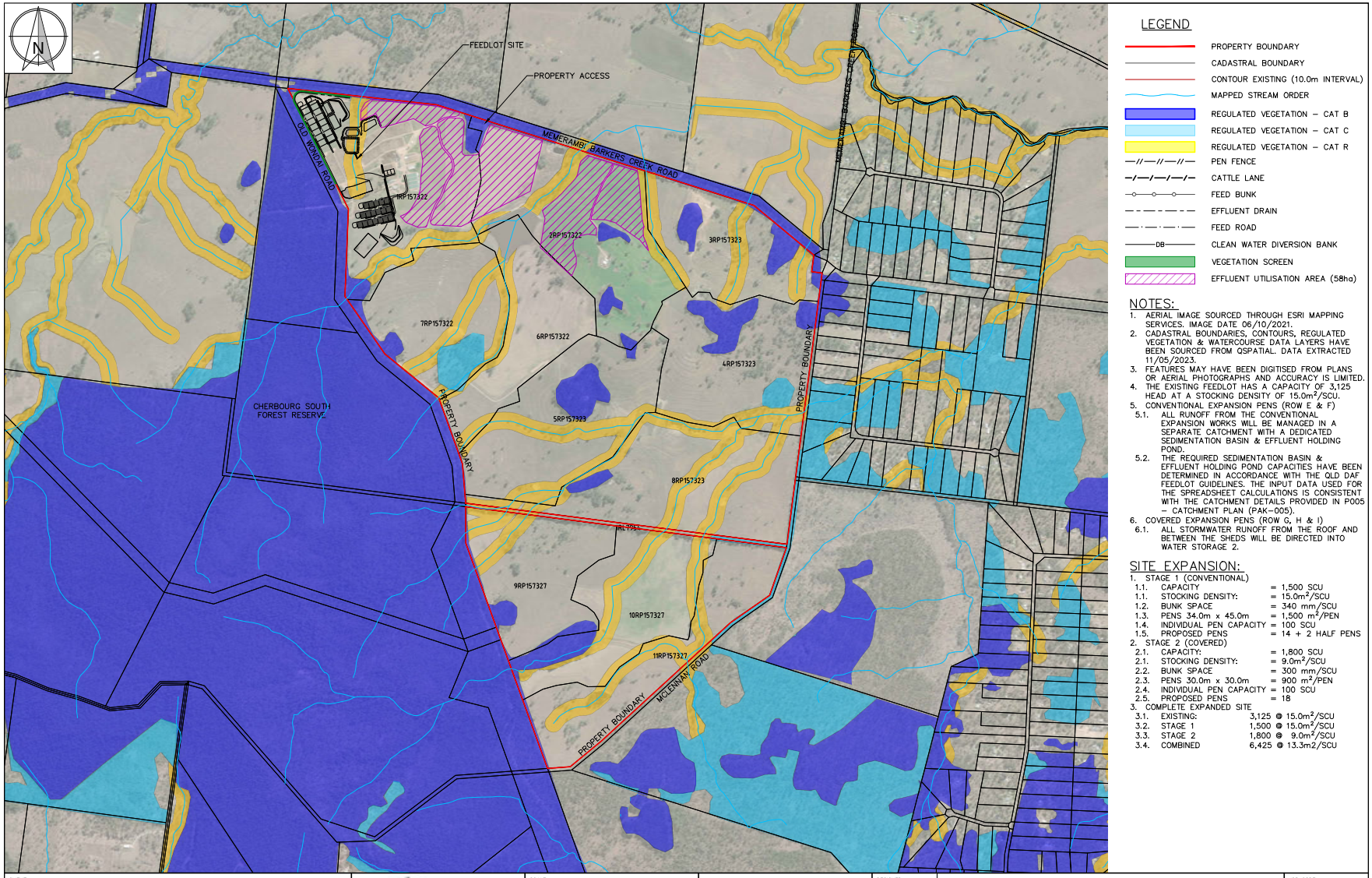
[1] 3-yearly PPI average is defined in section 114 of the *Planning Act 2016* and means the PPI adjusted according to the 3-year moving average quarterly percentage change between financial quarters. PPI Index is the producer price index for construction 6427.0 (ABS PPI) index number 3101 – Road and Bridge construction index for Queensland published by the Australian Bureau of Statistics.

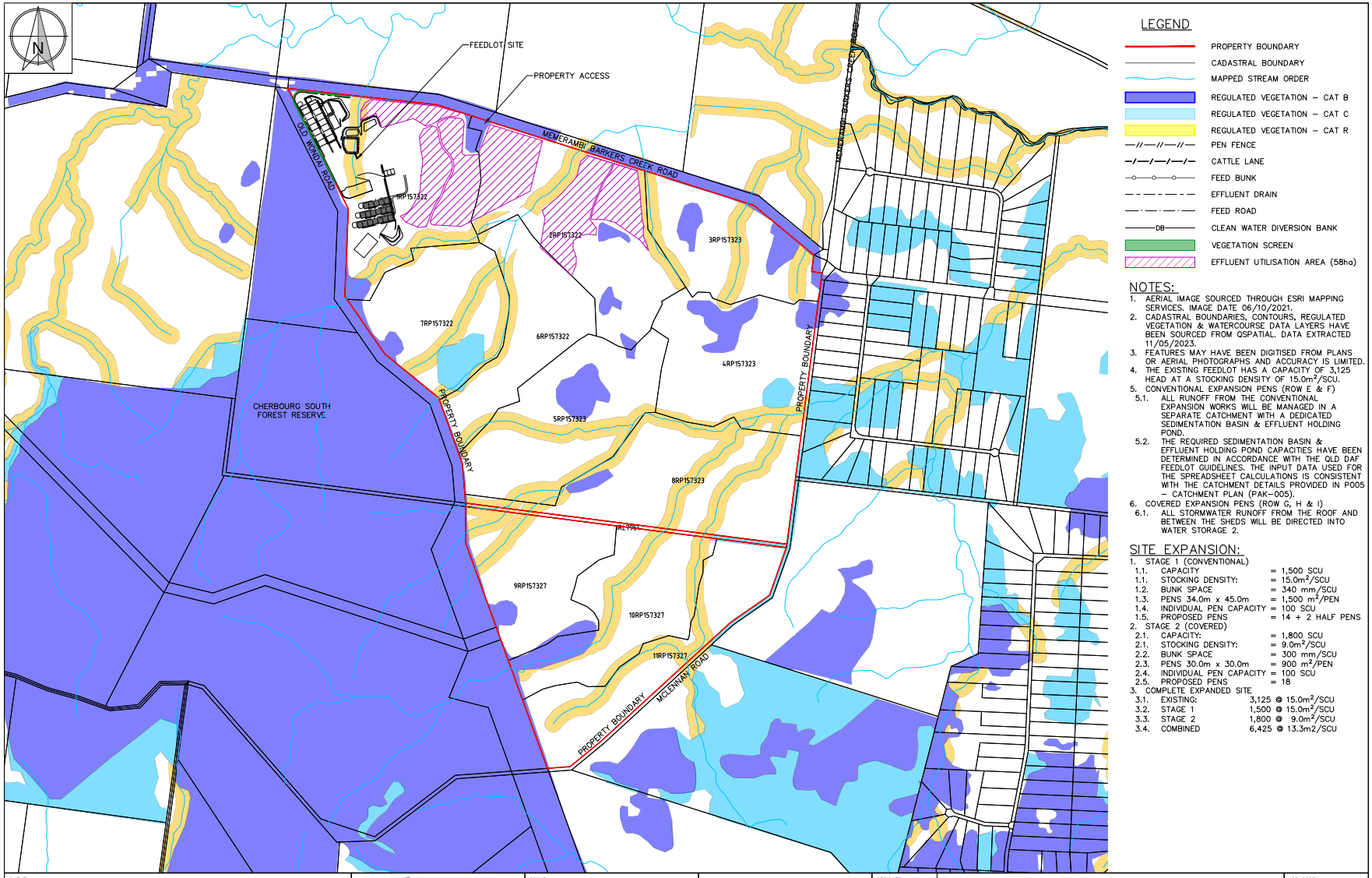
Payment can be made at any of the following South Burnett Regional Council Offices:

- 69 Hart Street, Blackbutt, 4314;
- 45 Glendon Street, Kingaroy, 4610;
- 42 Stephens Street West, Murgon, 4605;
- 48 Drayton Street, Nanango, 4615;
- McKenzie Street, Wondai, 4606; or
- via other methods identified on the Itemised Breakdown.

Enquiries

Enquiries regarding this Infrastructure Charges Notice should be directed to the SOUTH BURNETT REGIONAL COUNCIL, Department of Planning and Land Management, during office hours, Monday to Friday by phoning (07) 4189 9100 or email at info@southburnett.qld.gov.au


N
FEEDLOT SITE
PROPERTY ACCESS
MEMERAMBI BARKERS CREEK ROAD
OLD WONGA ROAD
HERITAGE BARKERS CREEK ROAD
1RP157322
2RP157322
3RP157323
4RP157323
5RP157323
6RP157322
7RP157322
8RP157323
9RP157327
10RP157327
11RP157327
CHERBOURG SOUTH FOREST RESERVE
PROPERTY BOUNDARY
PROPERTY BOUNDARY
PROPERTY BOUNDARY
MCLENNAN ROAD
LEGEND
PROPERTY BOUNDARY
CADASTRAL BOUNDARY
CONTOUR EXISTING (10.0m INTERVAL)
MAPPED STREAM ORDER
REGULATED VEGETATION – CAT B
REGULATED VEGETATION – CAT C
REGULATED VEGETATION – CAT R
PEN FENCE
CATTLE LANE
FEED BUNK
EFFLUENT DRAIN
FEED ROAD
DB
CLEAN WATER DIVERSION BANK
VEGETATION SCREEN
EFFLUENT UTILISATION AREA (58ha)
NOTES:
1. AERIAL IMAGE SOURCED THROUGH ESRI MAPPING SERVICES. IMAGE DATE 06/10/2021.
2. CADASTRAL BOUNDARIES, CONTOURS, REGULATED VEGETATION & WATERCOURSE DATA LAYERS HAVE BEEN SOURCED FROM QSPATIAL. DATA EXTRACTED 11/05/2023.
3. FEATURES MAY HAVE BEEN DIGITISED FROM PLANS OR AERIAL PHOTOGRAPHS AND ACCURACY IS LIMITED.
4. THE EXISTING FEEDLOT HAS A CAPACITY OF 3,125 HEAD AT A STOCKING DENSITY OF 15.0m²/SCU.
5. CONVENTIONAL EXPANSION PENS (ROW E & F)
5.1. ALL RUNOFF FROM THE CONVENTIONAL EXPANSION WORKS WILL BE MANAGED IN A SEPARATE CATCHMENT WITH A DEDICATED SEDIMENTATION BASIN & EFFLUENT HOLDING POND.
5.2. THE REQUIRED SEDIMENTATION BASIN & EFFLUENT HOLDING POND CAPACITIES HAVE BEEN DETERMINED IN ACCORDANCE WITH THE QLD DAF FEEDLOT GUIDELINES. THE INPUT DATA USED FOR THE SPREADSHEET CALCULATIONS IS CONSISTENT WITH THE CATCHMENT DETAILS PROVIDED IN P005 – CATCHMENT PLAN (PAK–005).
6. COVERED EXPANSION PENS (ROW G, H & I)
6.1. ALL STORMWATER RUNOFF FROM THE ROOF AND BETWEEN THE SHEDS WILL BE DIRECTED INTO WATER STORAGE 2.
SITE EXPANSION:
1. STAGE 1 (CONVENTIONAL)
1.1. CAPACITY = 1,500 SCU
1.1. STOCKING DENSITY: = 15.0m²/SCU
1.2. BUNK SPACE = 340 mm/SCU
1.3. PENS 34.0m x 45.0m = 1,500 m²/PEN
1.4. INDIVIDUAL PEN CAPACITY = 100 SCU
1.5. PROPOSED PENS = 14 + 2 HALF PENS
2. STAGE 2 (COVERED)
2.1. CAPACITY: = 1,800 SCU
2.1. STOCKING DENSITY: = 9.0m²/SCU
2.2. BUNK SPACE = 300 mm/SCU
2.3. PENS 30.0m x 30.0m = 900 m²/PEN
2.4. INDIVIDUAL PEN CAPACITY = 100 SCU
2.5. PROPOSED PENS = 18
3. COMPLETE EXPANDED SITE
3.1. EXISTING: 3,125 @ 15.0m²/SCU
3.2. STAGE 1 1,500 @ 15.0m²/SCU
3.3. STAGE 2 1,800 @ 9.0m²/SCU
3.4. COMBINED 6,425 @ 13.3m2/SCU
CLIENT
PAKADERINGA FEEDLOT PTY LTD
PROJECT
PAKADERINGA FEEDLOT EXPANSION
LOCATION
1270 CORNDALE ROAD, NANANGO, QLD 4615
SHEET TITLE
PROPERTY PLAN (AERIAL IMAGERY)
AgDSA
AGRICULTURAL DEVELOPMENT SERVICES AUSTRALIA
PO BOX 292
TOOWOOMBA QLD 4350
PH: +61 473 171 957
E: contact@agdsa.com.au
SCALE
0 200 400 600m
SCALE 1:10,000 (A1) 1:20,000 (A3)
SIGNED
Pakaderinga Feedlot
DESIGNED
TJS
CHECKED
MRN
PROJECT MANAGER
MRN
FOR APPROVAL ONLY
DATE REV DESCRIPTION APP
11/04/2024 B RESPONSE TO RFI MRN
22/09/2023 A ORIGINAL ISSUE FOR APPROVAL ONLY MRN
REVISIONS
JOB CODE
PAK–001
SHEET NUMBER
A001
CURRENT REVISION
B


N
FEEDLOT SITE
PROPERTY ACCESS
OLD MONDA ROAD
MEMERAMBI BARKERS CREEK ROAD
1RP157322
2RP157322
3RP157323
4RP157323
5RP157323
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7RP157322
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MCLENNAN ROAD
LEGEND
PROPERTY BOUNDARY
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MAPPED STREAM ORDER
REGULATED VEGETATION – CAT B
REGULATED VEGETATION – CAT C
REGULATED VEGETATION – CAT R
PEN FENCE
CATTLE LANE
FEED BUNK
EFFLUENT DRAIN
FEED ROAD
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1.3. PENS 34.0m x 45.0m = 1,500 m²/PEN
1.4. INDIVIDUAL PEN CAPACITY = 100 SCU
1.5. PROPOSED PENS = 14 + 2 HALF PENS
2. STAGE 2 (COVERED)
2.1. CAPACITY: = 1,800 SCU
2.1. STOCKING DENSITY: = 9.0m²/SCU
2.2. BUNK SPACE = 300 mm/SCU
2.3. PENS 30.0m x 30.0m = 900 m²/PEN
2.4. INDIVIDUAL PEN CAPACITY = 100 SCU
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3. COMPLETE EXPANDED SITE
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PROJECT
PAKADERINGA FEEDLOT EXPANSION
LOCATION
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SHEET TITLE
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AgDSA
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0 200 400 600m
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Pakaderinga Feedlot
DESIGNED TJS
CHECKED MRN
PROJECT MANAGER MRN
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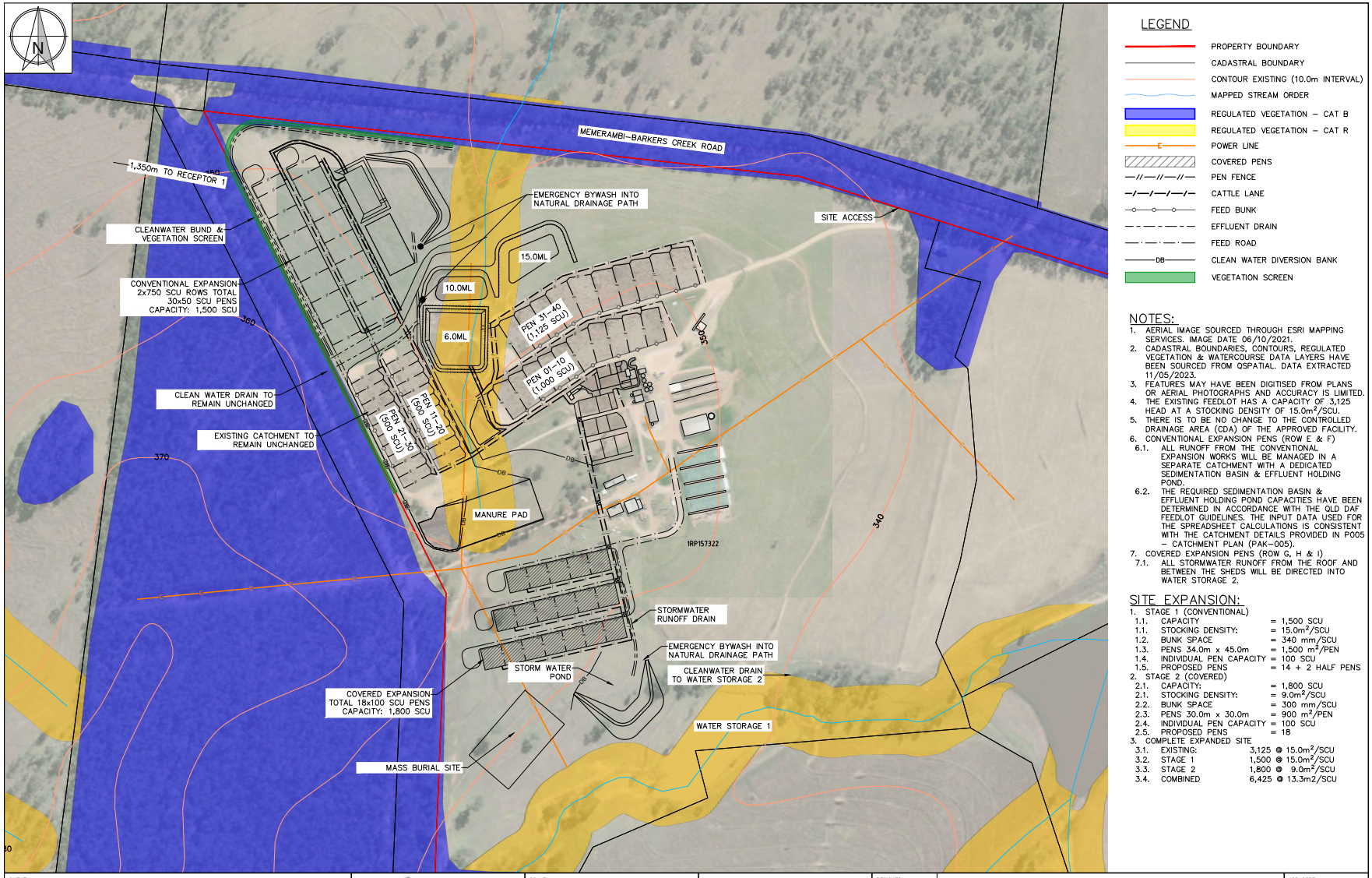
DATE REV DESCRIPTION
11/04/2024 B RESPONSE TO RFI MRN
22/09/2023 A ORIGINAL ISSUE FOR APPROVAL ONLY MRN
REVISIONS
JOB CODE PAK–001
SHEET NUMBER A002
CURRENT REVISION B


N
MEMERAMBI–BARKERS CREEK ROAD
1,350m TO RECEPTOR 1
CLEANWATER BUND & VEGETATION SCREEN
CONVENTIONAL EXPANSION 2x750 SCU ROWS TOTAL 30x50 SCU PENS CAPACITY: 1,500 SCU
CLEAN WATER DRAIN TO REMAIN UNCHANGED
EXISTING CATCHMENT TO REMAIN UNCHANGED
EMERGENCY BYWASH INTO NATURAL DRAINAGE PATH
SITE ACCESS
15.0ML
10.0ML
6.0ML
PEN 31–40 (1,125 SCU)
PEN 01–10 (1,000 SCU)
PEN 11–20 (500 SCU)
PEN 21–30 (500 SCU)
MANURE PAD
1RP157322
STORMWATER RUNOFF DRAIN
EMERGENCY BYWASH INTO NATURAL DRAINAGE PATH
CLEANWATER DRAIN TO WATER STORAGE 2
STORM WATER POND
COVERED EXPANSION TOTAL 18x100 SCU PENS CAPACITY: 1,800 SCU
WATER STORAGE 1
MASS BURIAL SITE
LEGEND
PROPERTY BOUNDARY
CADASTRAL BOUNDARY
CONTOUR EXISTING (10.0m INTERVAL)
MAPPED STREAM ORDER
REGULATED VEGETATION – CAT B
REGULATED VEGETATION – CAT R
POWER LINE
COVERED PENS
PEN FENCE
CATTLE LANE
FEED BUNK
EFFLUENT DRAIN
FEED ROAD
CLEAN WATER DIVERSION BANK
VEGETATION SCREEN
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4. THE EXISTING FEEDLOT HAS A CAPACITY OF 3,125 HEAD AT A STOCKING DENSITY OF 15.0m²/SCU.
5. THERE IS TO BE NO CHANGE TO THE CONTROLLED DRAINAGE AREA (CDA) OF THE APPROVED FACILITY.
6. CONVENTIONAL EXPANSION PENS (ROW E & F)
6.1. ALL RUNOFF FROM THE CONVENTIONAL EXPANSION WORKS WILL BE MANAGED IN A SEPARATE CATCHMENT WITH A DEDICATED SEDIMENTATION BASIN & EFFLUENT HOLDING POND.
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1.4. INDIVIDUAL PEN CAPACITY = 100 SCU
1.5. PROPOSED PENS = 14 + 2 HALF PENS
2. STAGE 2 (COVERED)
2.1. CAPACITY: = 1,800 SCU
2.1. STOCKING DENSITY: = 9.0m²/SCU
2.2. BUNK SPACE = 300 mm/SCU
2.3. PENS 30.0m x 30.0m = 900 m²/PEN
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3.2. STAGE 1 1,500 @ 15.0m²/SCU
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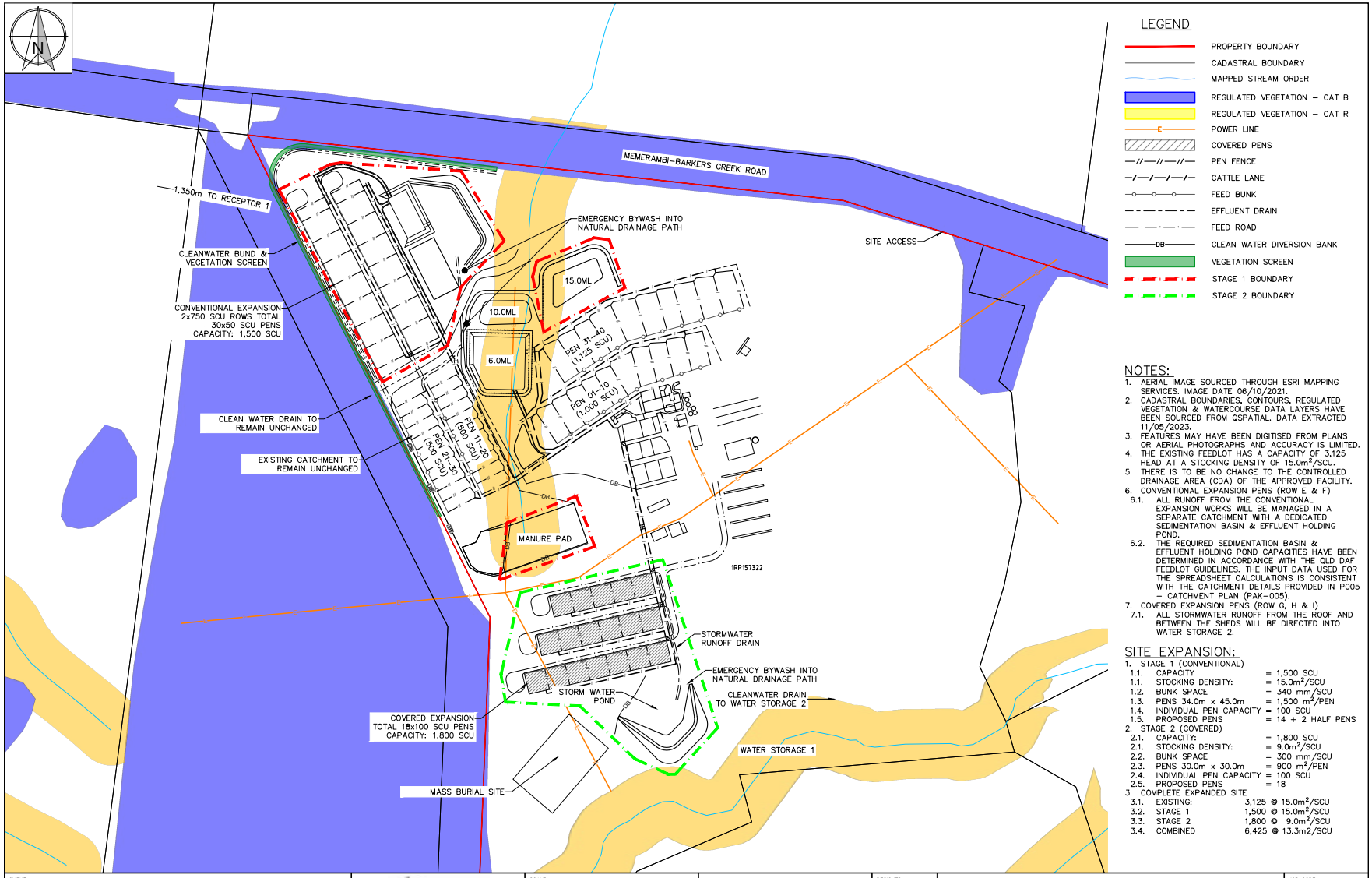
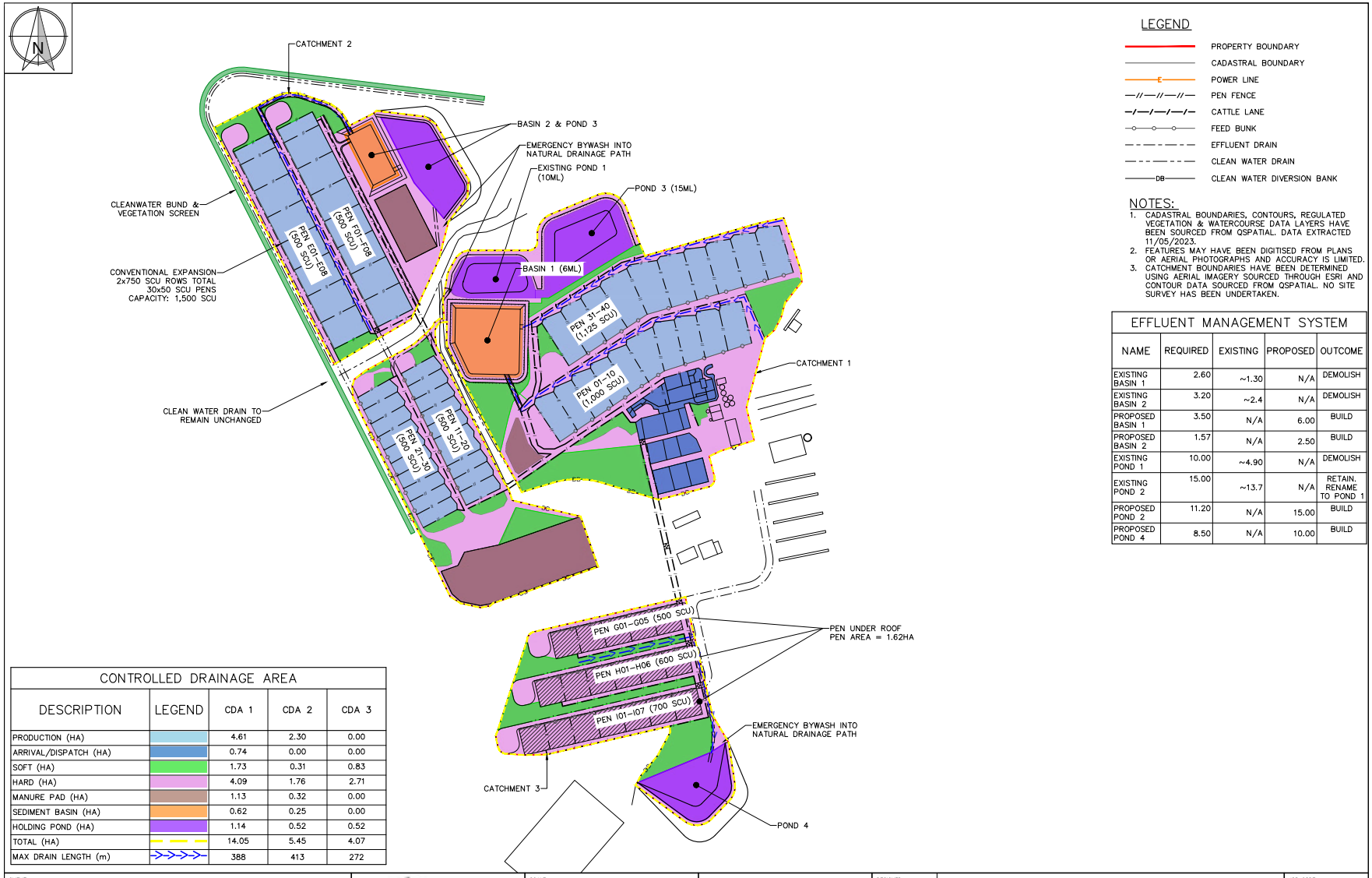
3.4. COMBINED 6,425 @ 13.3m2/SCU
CLIENT PAKADERINGA FEEDLOT PTY LTD
PROJECT PAKADERINGA FEEDLOT EXPANSION
LOCATION 1270 CORNDALE ROAD, NANANGO, QLD 4615
SHEET TITLE CONCEPT PLAN
AgDSA AGRICULTURAL DEVELOPMENT SERVICES AUSTRALIA
PO BOX 292 TOOWOOMBA QLD 4350 PH: +61 473 171 957 E: contact@agdsa.com.au
SCALE 0 40 80 120m
SCALE 1:2,000 (A1) 1:4,000 (A3)
SIGNED
Pakaderinga Feedlot
DESIGNED TJS
CHECKED MRN
PROJECT MANAGER MRN
FOR APPROVAL ONLY
DATE REV DESCRIPTION APP
11/04/2024 B RESPONSE TO RFI MRN
22/09/2023 A ORIGINAL ISSUE FOR APPROVAL ONLY MRN
REVISIONS
JOB CODE PAK–001
SHEET NUMBER A003
CURRENT REVISION B


N
MEMERAMBI–BARKERS CREEK ROAD
1,350m TO RECEPTOR 1
CLEANWATER BUND & VEGETATION SCREEN
CONVENTIONAL EXPANSION 2x750 SCU ROWS TOTAL 30x50 SCU PENS CAPACITY: 1,500 SCU
CLEAN WATER DRAIN TO REMAIN UNCHANGED
EXISTING CATCHMENT TO REMAIN UNCHANGED
EMERGENCY BYWASH INTO NATURAL DRAINAGE PATH
15.0ML
10.0ML
6.0ML
PEN 31–40 (1,125 SCU)
PEN 01–10 (1,000 SCU)
PEN 11–20 (500 SCU)
PEN 21–30 (500 SCU)
MANURE PAD
1RP157322
SITE ACCESS
STORMWATER RUNOFF DRAIN
EMERGENCY BYWASH INTO NATURAL DRAINAGE PATH
STORM WATER POND
CLEANWATER DRAIN TO WATER STORAGE 2
COVERED EXPANSION TOTAL 18x100 SCU PENS CAPACITY: 1,800 SCU
WATER STORAGE 1
MASS BURIAL SITE
LEGEND
PROPERTY BOUNDARY
CADASTRAL BOUNDARY
MAPPED STREAM ORDER
REGULATED VEGETATION – CAT B
REGULATED VEGETATION – CAT R
POWER LINE
COVERED PENS
PEN FENCE
CATTLE LANE
FEED BUNK
EFFLUENT DRAIN
FEED ROAD
CLEAN WATER DIVERSION BANK
VEGETATION SCREEN
STAGE 1 BOUNDARY
STAGE 2 BOUNDARY
NOTES:
1. AERIAL IMAGE SOURCED THROUGH ESRI MAPPING SERVICES. IMAGE DATE 06/10/2021.
2. CADASTRAL BOUNDARIES, CONTOURS, REGULATED VEGETATION & WATERCOURSE DATA LAYERS HAVE BEEN SOURCED FROM QSPATIAL. DATA EXTRACTED 11/05/2023.
3. FEATURES MAY HAVE BEEN DIGITISED FROM PLANS OR AERIAL PHOTOGRAPHS AND ACCURACY IS LIMITED.
4. THE EXISTING FEEDLOT HAS A CAPACITY OF 3,125 HEAD AT A STOCKING DENSITY OF 15.0m²/SCU.
5. THERE IS TO BE NO CHANGE TO THE CONTROLLED DRAINAGE AREA (CDA) OF THE APPROVED FACILITY.
6. CONVENTIONAL EXPANSION PENS (ROW E & F)
6.1. ALL RUNOFF FROM THE CONVENTIONAL EXPANSION WORKS WILL BE MANAGED IN A SEPARATE CATCHMENT WITH A DEDICATED SEDIMENTATION BASIN & EFFLUENT HOLDING POND.
6.2. THE REQUIRED SEDIMENTATION BASIN & EFFLUENT HOLDING POND CAPACITIES HAVE BEEN DETERMINED IN ACCORDANCE WITH THE QLD DAF FEEDLOT GUIDELINES. THE INPUT DATA USED FOR THE SPREADSHEET CALCULATIONS IS CONSISTENT WITH THE CATCHMENT DETAILS PROVIDED IN P005 – CATCHMENT PLAN (PAK–005).
7. COVERED EXPANSION PENS (ROW G, H & I)
7.1. ALL STORMWATER RUNOFF FROM THE ROOF AND BETWEEN THE SHEDS WILL BE DIRECTED INTO WATER STORAGE 2.
SITE EXPANSION:
1. STAGE 1 (CONVENTIONAL)
1.1. CAPACITY = 1,500 SCU
1.1. STOCKING DENSITY: = 15.0m²/SCU
1.2. BUNK SPACE = 340 mm/SCU
1.3. PENS 34.0m x 45.0m = 1,500 m²/PEN
1.4. INDIVIDUAL PEN CAPACITY = 100 SCU
1.5. PROPOSED PENS = 14 + 2 HALF PENS
2. STAGE 2 (COVERED)
2.1. CAPACITY: = 1,800 SCU
2.1. STOCKING DENSITY: = 9.0m²/SCU
2.2. BUNK SPACE = 300 mm/SCU
2.3. PENS 30.0m x 30.0m = 900 m²/PEN
2.4. INDIVIDUAL PEN CAPACITY = 100 SCU
2.5. PROPOSED PENS = 18
3. COMPLETE EXPANDED SITE
3.1. EXISTING: 3,125 @ 15.0m²/SCU
3.2. STAGE 1 1,500 @ 15.0m²/SCU
3.3. STAGE 2 1,800 @ 9.0m²/SCU
3.4. COMBINED 6,425 @ 13.3m2/SCU
CLIENT PAKADERINGA FEEDLOT PTY LTD
PROJECT PAKADERINGA FEEDLOT EXPANSION
LOCATION 1270 CORNDALE ROAD, NANANGO, QLD 4615
SHEET TITLE DESIGN PLAN
AgDSA AGRICULTURAL DEVELOPMENT SERVICES AUSTRALIA
PO BOX 292 TOOWOOMBA QLD 4350 PH: +61 473 171 957 E: contact@agdsa.com.au
SCALE 0 40 80 120m SCALE 1:2,000 (A1) 1:4,000 (A3)
SIGNED
Pakaderinga Feedlot
DESIGNED TJS
CHECKED MRN
PROJECT MANAGER MRN
FOR APPROVAL ONLY
DATE REV DESCRIPTION
11/04/2024 C RESPONSE TO RFI MRN
08/01/2024 B REISSUE WITH STAGE BOUNDARIES MRN
22/09/2023 A ORIGINAL ISSUE FOR APPROVAL ONLY MRN
REVISIONS
JOB CODE PAK–001
SHEET NUMBER A004
CURRENT REVISION C



LEGEND

- PROPERTY BOUNDARY
- CADASTRAL BOUNDARY
- E — POWER LINE
- PEN FENCE
- CATTLE LANE
- FEED BUNK
- EFFLUENT DRAIN
- CLEAN WATER DRAIN
- DB — CLEAN WATER DIVERSION BANK

NOTES:

1. CADASTRAL BOUNDARIES, CONTOURS, REGULATED VEGETATION & WATERCOURSE DATA LAYERS HAVE BEEN SOURCED FROM QSPATIAL. DATA EXTRACTED 11/05/2023.
2. FEATURES MAY HAVE BEEN DIGITISED FROM PLANS OR AERIAL PHOTOGRAPHS AND ACCURACY IS LIMITED.
3. CATCHMENT BOUNDARIES HAVE BEEN DETERMINED USING AERIAL IMAGERY SOURCED THROUGH ESRI AND CONTOUR DATA SOURCED FROM QSPATIAL. NO SITE SURVEY HAS BEEN UNDERTAKEN.

EFFLUENT MANAGEMENT SYSTEM

NAME	REQUIRED	EXISTING	PROPOSED	OUTCOME
EXISTING BASIN 1	2.60	~1.30	N/A	DEMOLISH
EXISTING BASIN 2	3.20	~2.4	N/A	DEMOLISH
PROPOSED BASIN 1	3.50	N/A	6.00	BUILD
PROPOSED BASIN 2	1.57	N/A	2.50	BUILD
EXISTING POND 1	10.00	~4.90	N/A	DEMOLISH
EXISTING POND 2	15.00	~13.7	N/A	RETAIN. RENAME TO POND 1
PROPOSED POND 2	11.20	N/A	15.00	BUILD
PROPOSED POND 4	8.50	N/A	10.00	BUILD

CONTROLLED DRAINAGE AREA

DESCRIPTION	LEGEND	CDA 1	CDA 2	CDA 3
PRODUCTION (HA)		4.61	2.30	0.00
ARRIVAL/DISPATCH (HA)		0.74	0.00	0.00
SOFT (HA)		1.73	0.31	0.83
HARD (HA)		4.09	1.76	2.71
MANURE PAD (HA)		1.13	0.32	0.00
SEDIMENT BASIN (HA)		0.62	0.25	0.00
HOLDING POND (HA)		1.14	0.52	0.52
TOTAL (HA)		14.05	5.45	4.07
MAX DRAIN LENGTH (m)		388	413	272

CLIENT: PAKADERINGA FEEDLOT PTY LTD
PROJECT: PAKADERINGA FEEDLOT EXPANSION
LOCATION: 1270 CORNDALE ROAD, NANANGO, QLD 4615
SHEET TITLE: CONTROLLED DRAINAGE AREA

AgDSA
AGRICULTURAL DEVELOPMENT SERVICES AUSTRALIA
PO BOX 292
TOOWOOMBA QLD 4350
PH: +61 473 171 957
E: contact@agdsa.com.au

SCALE: 0 40 80 120m
SCALE 1:2,000 (A1) 1:4,000 (A3)
SIGNED

Pakaderinga Feedlot

DESIGNED: TJS
CHECKED: MRN
PROJECT MANAGER: MRN

FOR APPROVAL ONLY

DATE	REV	DESCRIPTION	APP
11/04/2024	B	RESPONSE TO RFI	MRN
22/09/2023	A	ORIGINAL ISSUE FOR APPROVAL ONLY	MRN

REVISIONS

JOB CODE: PAK–001
SHEET NUMBER: A005
CURRENT REVISION: B

TRAFFIC IMPACT ASSESSMENT

Pakaderinga Feedlot Development

Traffic Engineering Report

Client Pakaderinga Feedlot Q Pty Ltd
Project Number 23E-0291

REPORT CONTROL SHEET

Report Details	
Report Title:	Traffic Impact Assessment – Pakaderinga Feedlot – Memerambi Barkers Creek Road | Wattle Camp
Project No.:	23E-0291
Site:	1270 Memerambi Barkers Creek Road, Wattle Camp QLD 4615
Author:	Michael Silva

Document Control					
Revision	**Author**	**Reviewer**	**Approved for Issue**		
			Name	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted] NER, CPEng, RPEQ: 15158	25 / 10 / 2023

Disclaimer:

RMA Engineers has undertaken this report based on accepted traffic engineering practices, standards, and information available at the time of writing. It is not intended as a quote, guarantee or warranty and does not cover any latent defects. RMA Engineers do not accept any responsibility for the authentication of accuracy of supplied information or validation of data that is outside the scope of works. RMA Engineers are not accountable for any changes to the standards, physical infrastructure conditions or planning impacts that occur after the completion date of the assessment.

The conclusions in this report should not be read in isolation. We recommend that its contents be reviewed in person with the author so that the assumptions and available information can be discussed in detail to enable the reader to make their own risk assessment in conjunction with information from other sources.

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Contents

1. Introduction

RMA Engineers has been engaged by Pakaderinga Feedlot Q Pty Ltd to undertake a Traffic Impact Assessment (TIA) for the development expansion of an existing feedlot located at 1270 Memerambi Barkers Creek Road, Wattle Camp (the subject site). The site, referred to as 'Pakaderinga', is identified as Lot 1 RP157322 with Lots 2-8 RP157322/3 also included. The feedlot is located within the South Burnett Regional Council (SBRC) area.

The feedlot is proposed to increase capacity from a current maximum of 3,125 standard cattle units (SCU) to 6,425 SCU (i.e. approximately double). The proposed development will be staged and has been designed to allow for future expansion.

This report has been prepared in support of the development application for the proposed material change of use to be lodged with SBRC, including referral to the State Assessment and Referral Agency (SARA).

This assessment has been undertaken in general accordance with the road transport related requirements identified in the DTMR *Guide to Traffic Impact Assessment* (GTIA) (2018) and the SBRC Planning Scheme.

1.1 Report objectives and scope

The purpose of this Traffic Impact Assessment (TIA) is to document an investigation of traffic and transport impacts of the proposed development on the surrounding road network. The assessment considers the following:

- Estimation of traffic generated by the development and distribution on the surrounding road network.
- Review of potential operational impacts at the key intersections with the proposed development influence at the year of completion.
- Review of key intersection layouts and turn warrants.
- Assessment of sight distance at the proposed access intersection in accordance with Australian Standards.
- Safety considerations, review of historical crash data and commentary on required mitigation measures.
- Pavement impacts of the proposed development on the external road network.

Where required, this report makes recommendations for the mitigation of development impacts.

1.2 Reference material

In preparing this report, reference has been made to the following:

- Austroads *Design Vehicles and Turning Path Templates Guide - 2013*
- Austroads Guide to Road Design, Part 4a: *Unsignalised and Signalised Intersections* (2021)
- Austroads Guide to Traffic Engineering Practice Part 5: *Intersections at Grade* (2005)
- Austroads Guide to Traffic Management Part 12: *Traffic Impacts of Developments* (2019)
- Austroads Guide to Traffic Management Part 6*: Intersections, Interchanges & Crossing*s (2017)
- DTMR *Guidelines for Traffic Impact Assessment* (GTIA) (2018)
- DTMR *Road Planning and Design Manual* (RPDM) (2021)
- SBRC *Planning Scheme* (2017)

2. Proposed development

2.1 Location and descriptions

The subject site, referred to as 'Pakaderinga', is situated on Lot 1 RP157322 and Lots 2-8 RP157322/3. Pakaderinga is accessed along Memerambi Barkers Creek Road, approximately halfway between the Bunya Highway (west) and the Burnett Highway (east). The development is located within the SBRC local government area, approximately 12km east of Memerambi and 14.5km north-west of the Kingaroy town centre.

The total area of Lots 1-8 is 515ha and is surrounded by grazing, cropping, and nature conservation land uses as per the SBRC Planning Scheme. The property currently consists of a 3,125 SCU feedlot mostly confined to Lot 1 (refer to **Figure 2-2** for lot layout).

The site and its environs are illustrated on the locality plans in **Figure 2-1**.

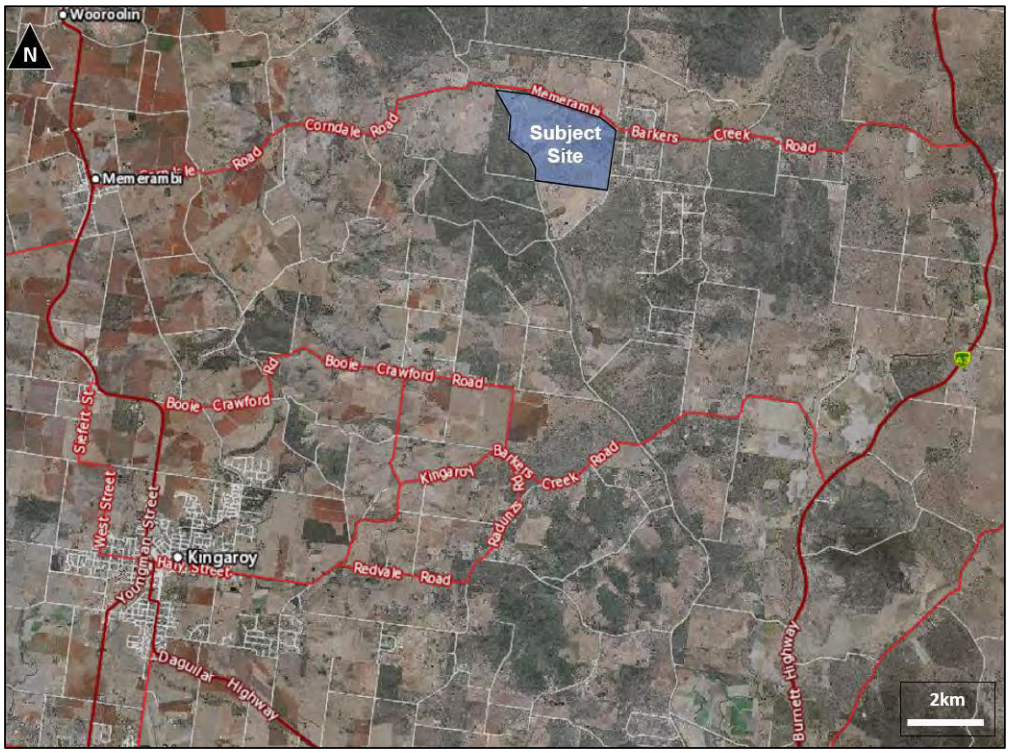


Figure 2-1 Locality plan

2.2 Development details

The proposed development includes a maximum increase of 3,300 standard cattle units (SCU) on the existing 3,125 SCU operation. The development will be formally staged as detailed in **Table 2-1**. It is noted that the market type will not remain the same for each stage. Stages 3 and 4 are expected to be operational in 2024 and 2030, respectively.

Table 2-1: Development yield

	Stage 1	Stage 2	Stage 3	Stage 4	Ultimate total
Description	Existing	Existing	Expansion Stage 1	Expansion Stage 2	Ultimate
SCU	1,800	1,325	1,500	1,800	6,425
Percentage of full capacity	28%	21%	23%	28%	100%

The proposed pen locations associated with each stage are shown in **Figure 2-2** and **Figure 2-3**, and detailed at **Appendix A**.

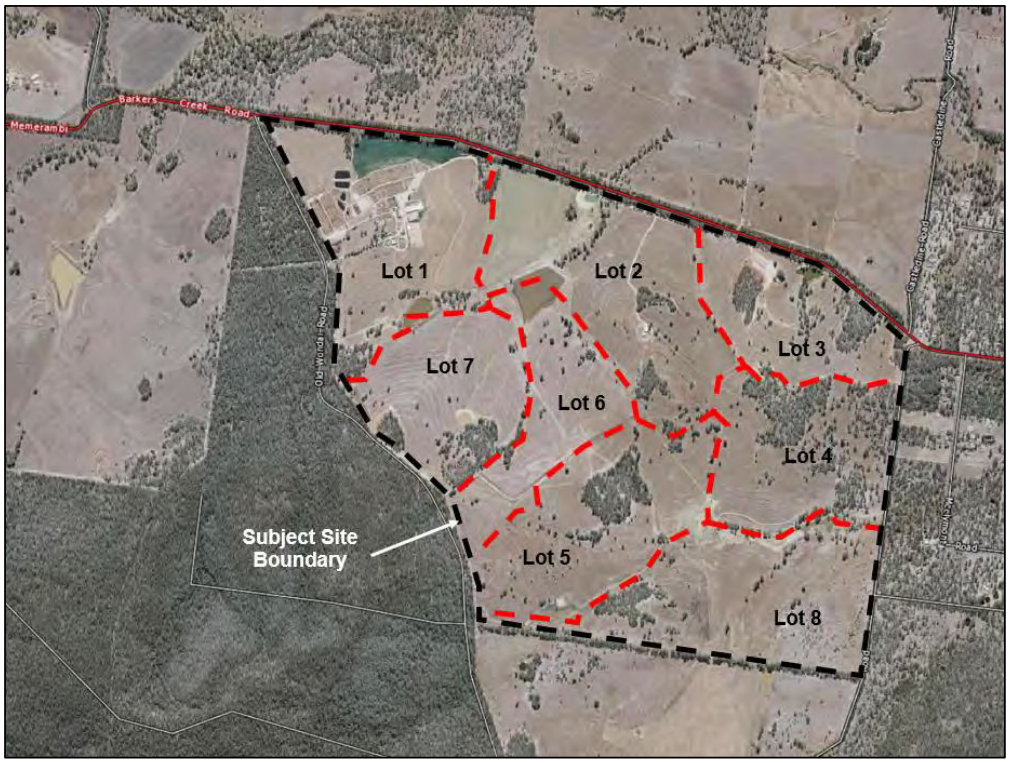


Figure 2-2 Subject site and lot boundaries

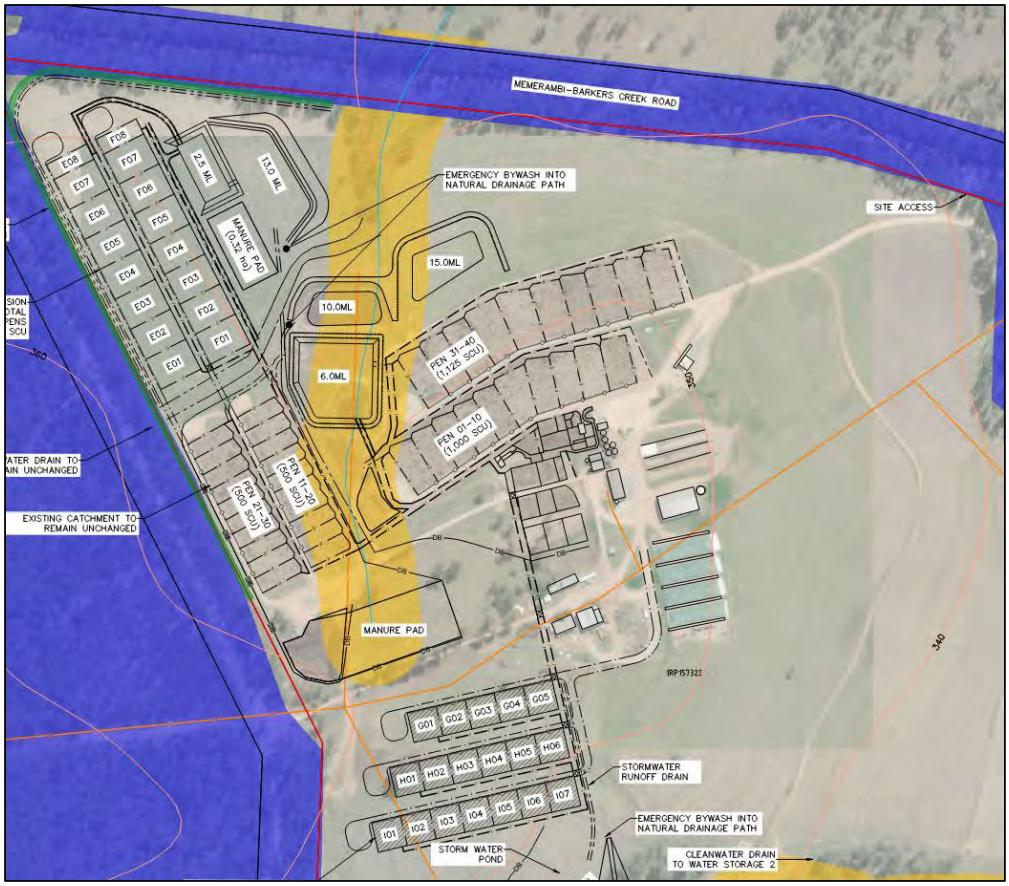


Figure 2-3 Proposed development plan and pen locations

The development has two access locations along Memerambi Barkers Creek Road (one is a direct access and the other is via Old Wondai Road). The main access is located on the north-eastern corner of Lot 1 and will be used for the majority of traffic moments associated with the site. The secondary site access is located approximately 1km west via Old Wondai Road and is used as an ad-hoc emergency/secondary access.

It is anticipated that these accesses will continue as the sites only access locations. The developments site access configurations are discussed further in **Section 8.0**.

2.3 Operational details

As per the existing operation of the feedlot, the expansion will restrict operations, work, and heavy vehicle movements to only occur between the hours of 6am and 6pm (or similar). However, general tasks due to welfare requirements can be required 24 hours a day, 7 days a week. Heavy vehicle movements outside of the aforementioned daylight hours are unlikely.

Cattle and deliveries for the feedlot are via the Bunya Highway in the west, typically by B-Double vehicles (i.e. 26m long).

The average entry weight of cattle is approximately 400kg. As previously mentioned, the feedlot will cater for a variety of cattle markets. Depending on the use, cattle will remain on feed for either 70, 100 or 350 days. The average exit weight of cattle is between 500-650kg for stages 1 and 2, which will be increased to 750kg for Stages 3 and 4. Exiting cattle will be transported by B-Double

vehicles to the south via Memerambi Barkers Creek Road and the Bunya Highway (through Kingaroy). The occupancy of the feedlot depends on market demands and has been estimated at 80% based on experience and current operations. At times, occupancy may be lesser or greater than this estimation.

Five full time equivalent staff are currently employed to oversee the operations of the site. It is expected that the number of staff will increase to 10 full time equivalent staff at the ultimate scenario.

Occasional servicing contractors and visitors also attend the site to provide upkeep and maintenance of the site operations. The traffic generated for this use is ad-hoc and respectively low and can be planned to occur during off-peak times.

The majority of the manure produced by the proposed development will be transported to the site south towards Kingaroy.

2.4 Expected traffic movements and design vehicles

The proposed operational activities on site will generate minimal vehicle movements on the external road network. Details regarding the vehicle movements associated with the development are provided below.

AgDSA has provided a Beef Feedlot Feed, Manure & Traffic Calculator for the Pakaderinga Feedlot based upon the 2019 Meat & Livestock Australia (MLA) “Fit to Load” manual. Shown in **Appendix B**, the AgDSA traffic generation report details the breakdown of developmental traffic for each stage.

2.4.1 Staff

The site has a caretaker’s residence which supports three staff. However, for conservativeness, it is assumed that all staff live off-site within the local area (i.e. Memerambi or Kingaroy). The number of staff vehicle movements anticipated on the external road network will be associated with the staff that commute via Memerambi Barkers Creek Road in the west. The traffic generation associated with these commuter staff trips is expected to be 8 trips each morning and afternoon for the ultimate scenario. This is detailed in **Table 2-2**.

Table 2-2: Anticipated daily development vehicle movements (staff)

Stage	Staff	Expected Am/Pm peak (cumulative)
Stage 1 (Existing)	5	3
Stage 2 (Existing)	5	3
Stage 3	7	5
Stage 4	10	8

The staff numbers shown in **Table 2-2** are supplied from the client and are estimated from existing operations.

The staff travelling to and from the site will arrive shortly before their shift and leave the site when their shift ends in the evening. All commuter staff are situated in the Memerambi and Kingaroy areas to the south-west. The staff will travel to and from the site in private (light) vehicles.

2.4.2 Deliveries and collections

The deliveries to and from the site are expected to involve the operational activities and associated vehicle movements described below.

Cattle

The tables in **Appendix B** illustrate the calculation steps of the number of annual vehicle trips associated with the expected cattle numbers for each stage of the development. The calculations consider the duration that the cattle are in the feedlot, the mortality rate, and the number of cattle heads per vehicle type (taking into account the weight differentials between incoming and outgoing cattle). The operation for the incoming and outgoing cattle is as follows:

- Cattle delivery (incoming cattle): B-Doubles will deliver cattle to the site. The vehicles will all travel from the west via Memerambi Barkers Creek Road. These deliveries are expected to occur at any given time and day between 6am to 6pm from Monday to Sunday. The delivery can be staggered and arranged so that they do not coincide with any other deliveries or collections occurring on the site. The vehicles will enter the site fully loaded and leave the site unloaded (empty). Empty cattle trucks will travel to the west via Memerambi Barkers Creek Road.
- Cattle collection (outgoing cattle): B-Double vehicles will collect cattle from the site. The majority of B-Doubles will travel to and from the south-west towards Kingaroy via the Bunya Highway and Memerambi Barkers Creek Road, with a small proportion coming from the north. These collections are expected to occur at any given time and day between 6am to 6pm from Monday to Sunday. The collections can be staggered and arranged so that they do not coincide with any other deliveries or collections occurring on the site. The vehicles will enter the site unloaded (empty) and leave the site fully loaded.

Table 2-3 summarises the existing vehicle movements associated with cattle. **Table 2-4** summarises the expected cattle vehicle movements associated with the proposed development.

Grain and feedstuffs

The feed for the cattle is a mix of ingredients consisting of grain, roughage, and supplements. For conservativeness, it is assumed all the feedstuffs are delivered to the site (whereas some of the feed such as grain, silage and/or hay can be grown onsite).

The tables in **Appendix B** illustrate the calculation steps of the number of annual vehicle trips associated with the different types of feedstuffs expected for ultimate development. The calculations consider the tonnes of feed per SCU, the breakdown percentage of the mix and the B-Double vehicle capacity for each feedstuff. It should be noted that the hay/straw is governed by the size/volumetric loading rather than weight. The operation for the feed delivery is as follows:

- Feed delivery: B-Doubles will deliver feed to the site. The heavy vehicles will enter the site from the west via Memerambi Barkers Creek Road. The majority of heavy vehicles accessing the site will originate from the south (i.e. via Kingaroy). These deliveries are expected to occur on any given time and day between 6am to 6pm from Monday to Sunday. All exiting heavy vehicles will travel west along Memerambi Barkers Creek Road. The delivery can be staggered and arranged so that it doesn't coincide with any other deliveries or collections occurring on the site. The majority of heavy vehicles exiting the site will travel towards the south (i.e. via Kingaroy). The vehicles will enter the site fully loaded and leave the site unloaded (empty).

Table 2-3 summarises the existing vehicle movements associated with the grain and feedstuffs.

Table 2-4 summarises the expected vehicle movements associated with the grain and feedstuffs.

Manure

Manure is collected from the feedlot and exported off-site. The tables in **Appendix B** detail the calculation of the manure produced and how many vehicle trips are required per annum. To ensure a conservative assessment, it has been assumed that all manure will be exported from the site.

The manure collection is as follows:

- Manure collection: B-Double vehicles will collect manure from the site. The heavy vehicles will enter the site from the west via Memerambi Barkers Creek Road. The majority of heavy vehicles accessing the site will originate from the south (i.e. via Kingaroy). These collections are expected to occur at any given time and day between 6am to 6pm, 7 days a week. The collections can be staggered and arranged so that they don't coincide with any other deliveries or collections occurring on the site, or to occur outside staff movements. All exiting heavy vehicles will travel west along Memerambi Barkers Creek Road. The majority of heavy vehicles exiting the site will travel towards the south (i.e. via Kingaroy). The vehicles will enter the site unloaded (empty) and leave the site fully loaded.

Table 2-3 summarises the existing vehicle movements associated with the manure. **Table 2-4** summarises the expected vehicle movements associated with the manure.

Servicing and visitors

The proposed development is expected to have other ad-hoc trips associated with servicing (such as maintenance, contractors and small deliveries), as well as visitors. On average, these volumes are expected to be relatively low and will occur so that they don't coincide with any other deliveries.

Table 2-3: Existing vehicle movements (deliveries and collections) – Existing development Stages 1 & 2

Stage	Trip type	Vehicle type	Origin	Destination	Timing	No. loads per year	No. vehicle movements (i.e. in/ out)	Estimated annual traffic generation (no. movements)	Estimated weekly traffic generation (no. movements)	Estimated daily traffic generation (no. movements)
Stage 1 (Existing)	Staff	B99 Light Vehicles	100% South	100% South	6am to 6pm (Mon-Sun)	-	2	2,190	42	6
	Incoming cattle	B-Double	10% North 90% South	10% North 90% South		108	2	216	6	2[1]
	Outgoing cattle					134	2	268	6	2[1]
	Grain and feedstuffs					330	2	660	14	2
	Manure					23	2	46	2	2[1]
							Total	**3,380**	**70**	**14 (10[2])**
Stage 2 (Existing)	Staff	B99 Light Vehicles	100% South	100% South	6am to 6pm (Mon-Sun)	-	2	0	0	0
	Incoming cattle	B-Double	10% North 90% South	10% North 90% South		51	2	102	2	2[1]
	Outgoing cattle					79	2	158	4	2[1]
	Grain and feedstuffs					207	2	414	8	2
	Manure					17	2	34	2	2[1]
							Total	**708**	**16**	**8 (4[2])**
Stage 1 + 2							**Total existing**	**4,088**	**86**	**22 (14[2])**

[1] When the minimum estimated daily traffic generation (no. movements) is estimated to be less than 1 per day, a conservative estimate of 2 is adopted.

[2] By rounding all the low daily trip types to a minimum of 2 trips per day is considered to be conservative and a maximum daily demand. Some of these trips may not be undertaken on the same day and therefore a more realistic outcome is determined by spreading the total trips evenly over the weekly period. This even spread of trips result in a realistic estimated daily traffic generation (no. movements) total. This total is displayed in the brackets and would be more reflective of the actual trip demands per day.

Table 2-4: Anticipated development vehicle movements (deliveries and collections) – Proposed development Stages 3 & 4

Stage	Trip type	Vehicle type	Origin	Destination	Timing	No. loads per year	No. vehicle movements (i.e. in/ out)	Estimated annual traffic generation (no. movements)	Estimated weekly traffic generation (no. movements)	Estimated daily traffic generation (no. movements)
Stage 3	**Staff**	B99 Light Vehicles	100% South	100% South	6am to 6pm (Mon-Sun)	-	2	1,460	28	4
	Incoming cattle	B-Double	10% North 90% South	10% North 90% South		15	2	30	2	2[1]
	Outgoing cattle					29	2	58	2	2[1]
	Grain and feedstuffs					219	2	438	10	2
	Manure					19	2	38	2	2[1]
							Total	**2,024**	**44**	**12 (6[2])**
Stage 4	**Staff**	B99 Light Vehicles	100% South	100% South	6am to 6pm (Mon-Sun)	-	2	2,190	42	6
	Incoming cattle	B-Double	10% North 90% South	10% North 90% South		18	2	36	2	2[1]
	Outgoing cattle					34	2	68	2	2[1]
	Grain and feedstuffs					263	2	526	12	2
	Manure					23	2	46	2	2[1]
							Total	**2,866**	**60**	**14 (8[2])**
Stage 3 + 4							**Total proposed**	**4,890**	**104**	**26 (14[2])**

[1] When the minimum estimated daily traffic generation (no. movements) is estimated to be less than 1 per day, a conservative estimate of 2 is adopted.

[2] By rounding all the low daily trip types to a minimum of 2 trips per day is considered to be conservative and a maximum daily demand. Some of these trips may not be undertaken on the same day and therefore a more realistic outcome is determined by spreading the total trips evenly over the weekly period. This even spread of trips result in a realistic estimated daily traffic generation (no. movements) total. This total is displayed in the brackets and would be more reflective of the actual trip demands per day.

From **Table 2-3** and **Table 2-4** it is identified that the ultimate development will generate low daily traffic volumes, totalling an average of 6 heavy vehicles (12 movements) and 8 light vehicles (16 movements) per day. This equates to a total of approximately 28 vehicle trips per day. The maximum number of trips per peak hour is expected to be 8 trips at the start and end of staff shifts.

3. Existing transport environment

The key roads and intersections relevant to the site are discussed in the following sections.

3.1 Key roads

3.1.1 Bunya Highway

The Bunya (45B) is a State-controlled Road (SCR) under the jurisdiction of the DTMR. The road runs predominantly north-south and extends from Murgon 26km north of the site to Kingaroy 10km south of the site.

In the vicinity of the site, the Bunya Highway has the following characteristics (refer to **Figure 3-1**):

- Two-way, two lane, undivided configuration
- Sealed pavement width of approximately 9m with centre line marking
- Lane width of approximately 3.5m
- Shoulder width of approximately 3.0m
- Road reserve width of approximately 20m
- Posted signed speed limit of 100km/h (60km/h within the Memerambi township)
- Daily traffic volumes of approximately 4,258 vehicles per day (2020 DTMR AADT data)

Figure 3-1: Bunya Highway looking north away from Memerambi Barkers Creek Road

3.1.2 Memerambi Barkers Creek Road (Corndale Road)

Memerambi Barkers Creek Road is a council-controlled road running east-west from the Burnett Highway until it transforms into King Street approximately 750m from the Bunya Highway. It is classified as a local road under the jurisdiction of SBRC.

In the vicinity of the site, Memerambi Barkers Creek Road has the following characteristics (refer to **Figure 3-2**):

- Two-way undivided configuration
- Carriageway width of approximately 5m within the unsealed sections and approximately 6.5m for the sealed sections
- A combination of unsealed gravel pavement and sealed sections along the road length
- Unsigned rural default speed limit of 100km/h
- Road reserve width of approximately 20m

Figure 3-2: Memerambi Barkers Creek Road looking east at site entrance

3.1.3 King Street

King Street is a council-controlled road running through the township of Memerambi. King Street extends from the Bunya Highway in the west until it transforms into Corndale Road (Memerambi Barkers Creek Road) in the east. It is classified as a local road under the jurisdiction of SBRC.

In the vicinity of the site, King Street has the following characteristics (refer to **Figure 3-3**):

- Two-way undivided configuration
- Carriageway width of approximately 6m
- Road reserve width of approximately 20m
- Posted speed limit of 50km/h

Figure 3-3: King Street looking east

3.2 Key intersections

The Memerambi Barkers Creek Road / Site Access intersection and the King Street / Bunya Highway intersection are identified as the only two key intersections for this assessment.

It is noted that there are other intersections further from the site that may be utilised by development traffic, however, due to the location and expected distribution of development traffic, the Memerambi Barkers Creek Road / Site Access intersection and the King Street / Bunya Highway intersection are the only intersections where the expected impact of the development is considered of significance (i.e. development traffic being more than five per cent of the background traffic).

3.2.1 Memerambi Barkers Creek Road / Site Access intersection

The intersection of Memerambi Barkers Creek Road and the Site Access consists of a priority-controlled T-intersection located approximately 1km east of the sites north-western boundary. At this location, both the site access and Memerambi Barkers Creek Road are unsealed. The intersection allows all turning movements and does not have any dedicated turning lanes. **Figure 3-4** illustrates the geometry of the intersection.

Figure 3-4: Memerambi Barkers Creek Road / Site Access

3.2.2 Bunya Highway / King Street intersection

The intersection of the Bunya Highway and King Street consists of a priority-controlled T-intersection located approximately 11.5km west of the site access. The intersection allows for all turning movements and does not have any dedicated turning lanes. King Street has 'Give Way' signage and associated line marking to reinforce the priorities at the intersection. **Figure 3-5** shows the geometry of the intersection.

Figure 3-5: Bunya Highway / King Street (Memerambi Barkers Creek Road) source from Queensland Globe

3.3 Crash data

DTMR crash data was reviewed for the previous five years from 1 January 2018 to 31 December 2022 (the most recent available period). Data was obtained from Queensland Globe (transportation – road crash locations). Findings indicate that there are no recorded crashes in the vicinity of the site (1km radius from site access intersection) or at the key intersections.

A fatal crash was recorded along Memerambi Barkers Creek Road approximately 3.2km east of the subject site in 2020 (refer **Table 3-1**).

Table 3-1 Road crash data

Road/ intersection	Location	Year	Severity	Nature	Road and atmospheric condition	Lighting condition	DCA code	DCA description
Memerambi Barkers Creek Road	3.2km East of Site Access	2020	Fatal	Fall from vehicle	Sealed-dry, clear	Daylight	900	Pass & Misc: Other

From the above, no adverse safety issues, crash patterns or mitigation measures could be determined from the crash data review.

4. Traffic operation

4.1 Existing traffic volumes

Traffic data was obtained from DTMR and SBRC to assess the impact of the development on the external road network.

In the absence of intersection turning volume data, directional midblock traffic volumes were utilised for each peak hour.

4.1.1 Memerambi Barkers Creek Road background traffic volumes

Midblock traffic count data was obtained from SBRC for five locations along Memerambi Barkers Creek Road (Corndale Road) which were undertaken between 2015 and 2020. Additional AADT volumes along the Bunya Highway (Site 30031) and the Burnett Highway (Site 20537) were obtained from Queensland Globe. The peak hour volumes along the state-controlled roads were estimated using the Department of Main Roads: Road Planning and Design Manual (Table 5.2). **Table 4-1** below details the sites that have been utilised as part of this investigation.

Table 4-1 Traffic count data

Road	ID	Description	Year	Peak Hour Volume	
				Eastbound	Westbound
Corndale Road	1	Corndale Road – 200m west Klass and Townes Road	2018	11	13
	2	Narrow Section 150m West RAD623 3883	2020	10	11
Memerambi Barkers Creek Road	3	Memerambi Barkers Creek Riad 100m west of Old Wondai Road	2015	8	8
Bunya Highway	Site 30031	Nanango to Goomeri – at Stockyard Creek	2021	323[1]	323[1]

[1] Estimated from Department of Main Roads: Road Planning and Design Manual 30HH% for Rural Arterial

Figure 4-1 shows the location of the traffic census sites in relation to the subject site.

Figure 4-1: Traffic survey location sites

The traffic count surveys are included at **Appendix C**.

4.1.2 Growth rate

From review of the midblock annual average daily traffic (AADT) data for the Bunya Highway Site 20031, obtained from Queensland Globe (transportation – traffic census data), indicated 0.7% compound growth over the latest 5-year period of available data.

Therefore, a compound growth rate of 1.0% per annum has been adopted for the assessment.

4.1.3 Peak hours

From the count data, it was identified that the external road network does not have distinct peak periods as vehicles are spread equally across the daytime (between 9am and 4pm). Development generated peak volumes are expected to be outside these times when the background volumes are low. Conversely, during the 9am-4pm background peaks, development traffic is expected to be low (approximately 1 vehicle per hour) – refer to **Table 2-4**. Therefore, for the purpose of the intersection operational analysis, the worst-case background demand during the hour of 12pm-1pm has been aligned with the peak hour operation of the site at beginning and end of staff shifts. This will result in the highest volume demands at the key intersection.

4.1.4 Anticipated background volumes

The estimated 2030 background traffic on the external road network is illustrated on **Figure 4-2**. These volumes have been derived from the abovementioned traffic count data and growth assumptions, and correspond with the anticipated ultimate opening year of the development (i.e. when Stage 4 is fully operational). The background traffic also includes the existing development traffic volumes (for the operational Stages 1 and 2).

It is noted that the traffic survey data provided is for mid-block of the key roads and does not include turning movement volumes. Therefore, to provide a conservative assessment, a nominal 16 vehicles per hour have been adopted for each of the turning movements at the intersection. This is based on the midblock volumes of Memerambi Barkers Creek Road and through onsite observations, increased to the 2030 ultimate opening year.

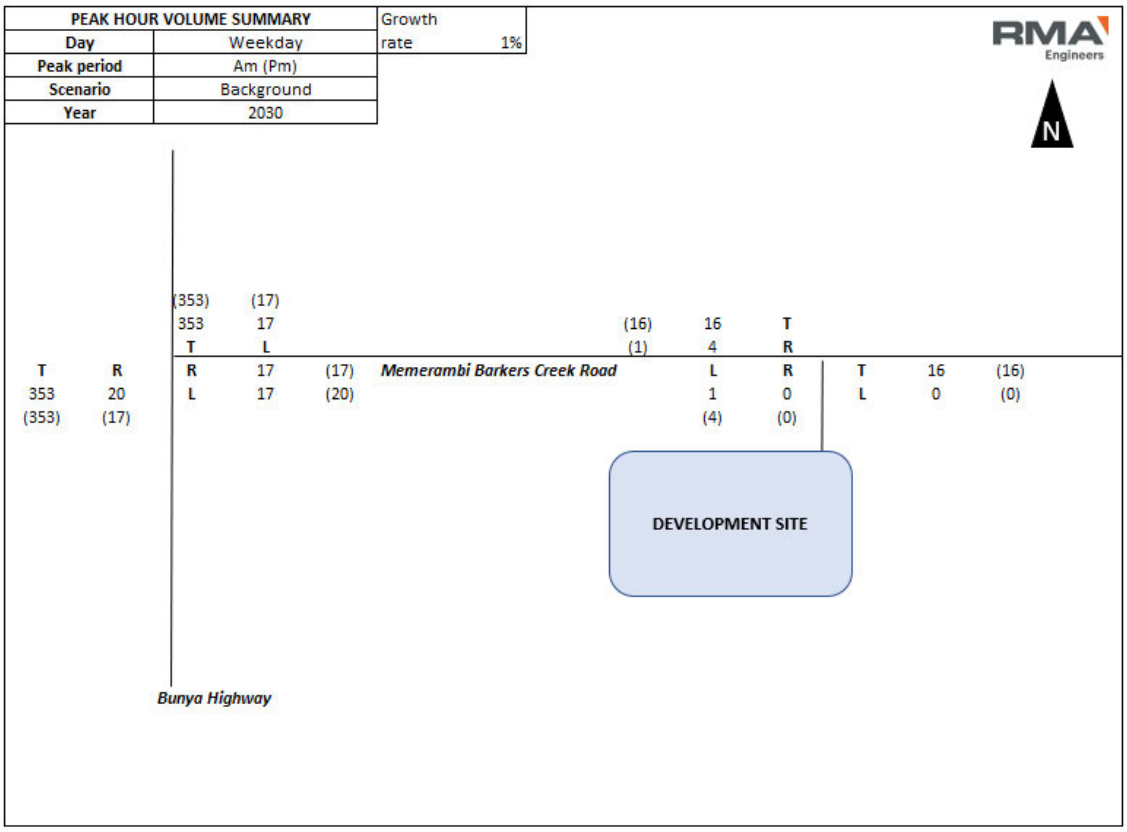


Figure 4-2: 2030 estimated traffic volumes

4.2 Development traffic volumes

From the operational details (refer to **Section 2.4**), the estimated worst case peak hours (6am-7am and 6pm-7pm) occur at the start and end of staff shifts when staff enter and exit the site. It is reasonable to assume that as well as the staff, a heavy vehicle may also enter and/or exit the site during this time. The anticipated development volumes for the ultimate development scenario (Stages 3 and 4) are shown in **Figure 4-3** and detailed at **Appendix D**.

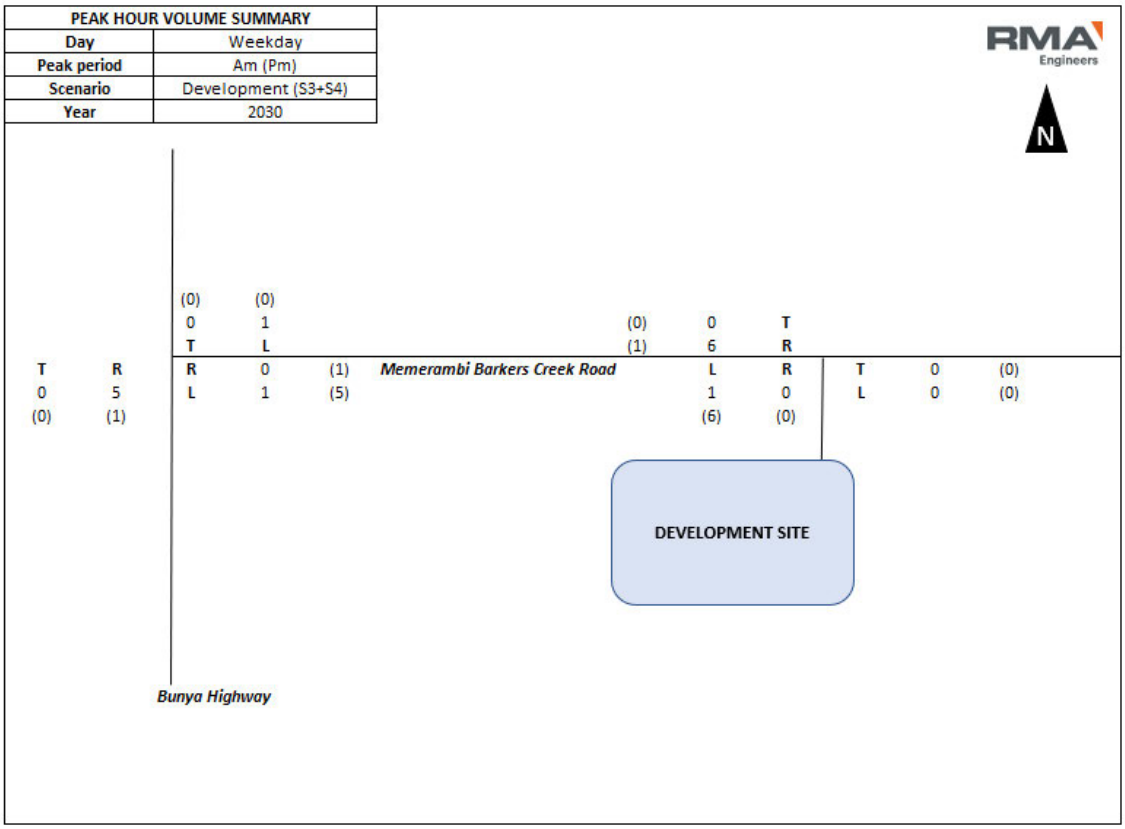


Figure 4-3: Proposed stages 3&4 (ultimate) development traffic volumes

The 'Background with development traffic' volumes for the corresponding 2030 opening year (for the ultimate development scenario) are illustrated in **Figure 4-4**.

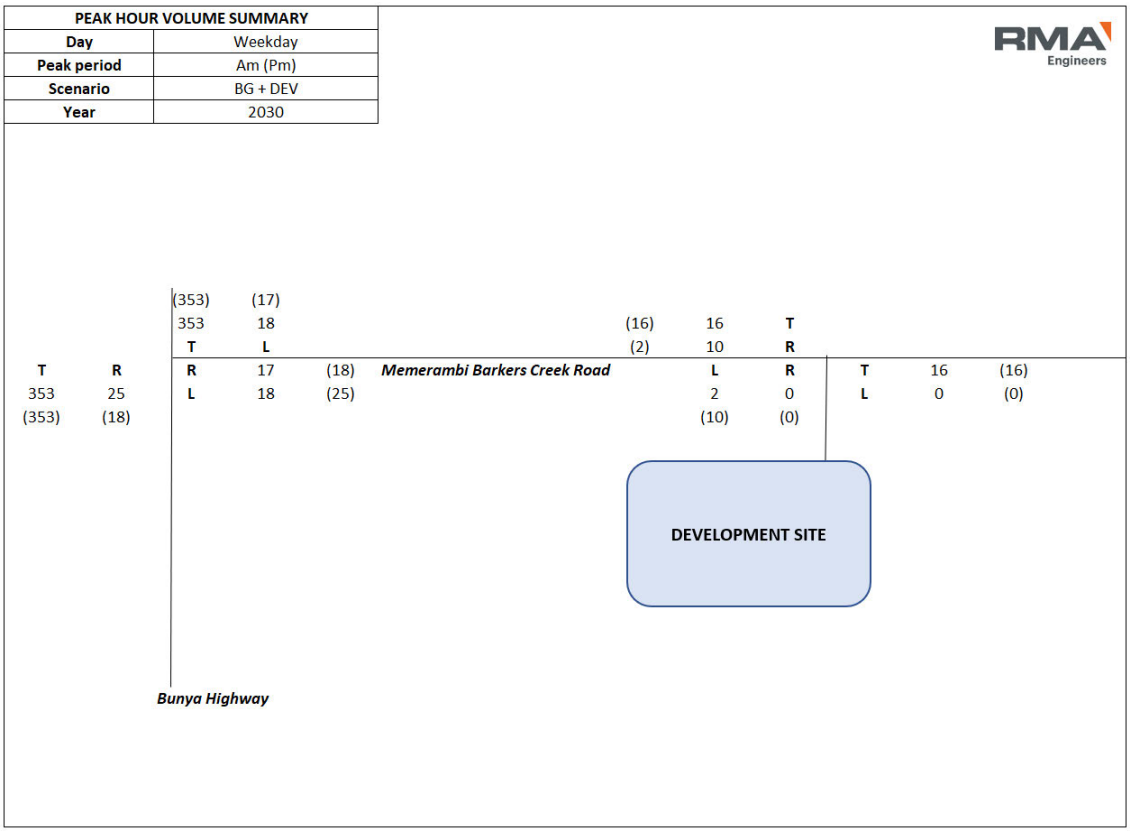


Figure 4-4: 2030 Background with development (ultimate) peak hour traffic volumes

5. Development traffic impact on external road network

The DTMR *Road Planning and Design Manual* Chapter 13.5.4 provides information relating to the maximum traffic volume combinations for uninterrupted traffic flow conditions. These combinations are shown on **Table 5-1** below and provide guidance for unsignalised intersections carrying light crossing and turning volumes. Where the volumes are less than that illustrated in **Table 5-1**, it is considered unnecessary to flare intersection approaches or carry out an intersection analysis.

Table 5-1: Intersection capacity – uninterrupted flow conditions

Major road type[1]	Major road flow (vph)[2]	Minor road flow (vph)[3]
Two-lane	400	250
	500	200
	650	100

1. *Major road is through i.e. has priority*
2. *Major road design volumes include through and turning movements*
3. *Minor road design volumes include through and turning volumes*

The anticipated major road (Bunya Highway) background with development traffic volumes detailed in **Figure 4-4** exceed the hourly volume combinations shown in **Table 5-1** by approximately 50 vehicles per hour in 2030. This indicates that intersection analysis is deemed warranted for the key intersection.

Given the key intersection is expected to operate outside of its maximum uninterrupted flow conditions in the ultimate 2030 background and development scenario, a SIDRA analysis has been undertaken with consideration of turning movement provision and associated potential delays to illustrate the operational impact.

5.1 Bunya Highway / Memerambi Barkers Creek Road SIDRA analysis

The key intersection of Bunya Highway / Memerambi Barkers Creek Road has been assessed using SIDRA 9.0 intersection analysis program. This program calculates the operational performance of intersections based on input parameters such as geometry and traffic volumes. Output values that have been recorded include the degree of saturation (DOS), queues and delays. The DOS is a commonly used value, which is principally a volume to capacity ratio.

The typical desired standards of service (DSS) values for DOS and intersection performance are summarised in **Table 5-2**.

The typical values as recommended by Austroads *Guide to Traffic Management – Part 12* and the DSS specified in the Planning Scheme are summarised. The SIDRA intersection analysis outputs were compared to the typical DOS values, for a conservative assessment. A DOS exceeding these values indicates that the intersection is exceeding its practical capacity and users of the intersection are likely to experience unsatisfactory queuing and delays.

Table 5-2 DSS for intersections

Intersection type	Typical maximum DOS	TRC Planning Scheme
Signalised intersection	90% (0.90)	95% (0.95)
Roundabout	85% (0.85)	95% (0.95)
Unsignalised intersections	80% (0.80)	80% (0.80)

The Bunya Highway / Memerambi Barkers Creek Road (King Street) layout as modelled in SIDRA is shown in **Figure 5-1**.

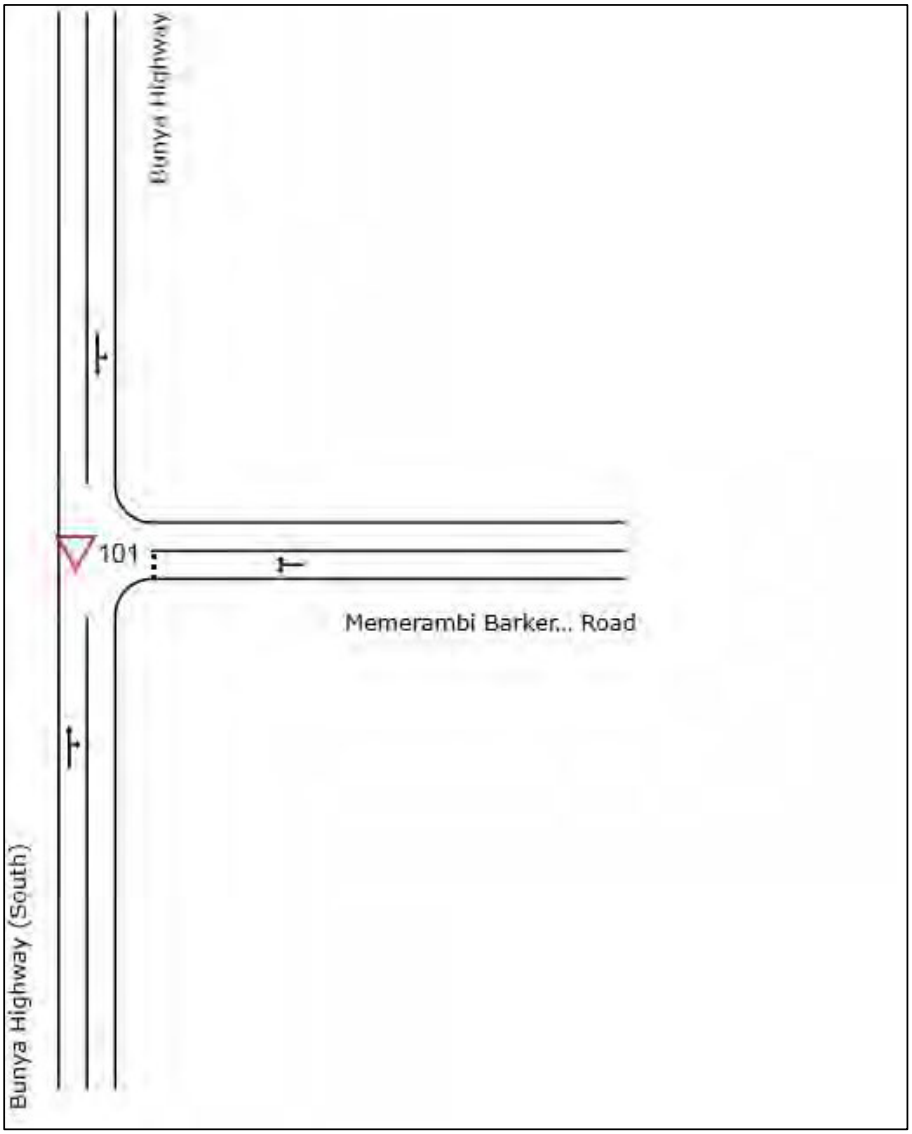


Figure 5-1: Bunya Highway / Memerambi Barkers Creek Road intersection SIDRA layout

Table 5-3 summarises the SIDRA results for the AM and PM peak hours for 2030 'background' and 'background with development' traffic scenarios.

The models have been run with a 20% heavy vehicle rate (based on DTMR traffic census data). Detailed outputs are provided in **Appendix E.**

Table 5-3 Bunya Highway / Memerambi Barkers Creek Road intersection SIDRA summary

Year	Scenario	Peak	Demand flow (vph)	SIDRA output			
				Degree of saturation	Avg. delay (s)	Max. delay (s)	95%ile queue (m)
2030	Background	AM	818	0.237	0.9	11.7	2.2
	Background with Development traffic		825	0.242	1.0	11.8	2.8
	Background	PM	818	0.233	0.9	11.7	1.9
	Background with Development traffic		825	0.234	1.0	11.7	2.0

The SIDRA models shows that the intersection operates within performance standards for the 2030 ultimate scenario. Average delays for the intersection are estimated to be 1.0 seconds in both the AM and PM ultimate design scenario, an increase of 0.1 seconds on the estimated 2030 background scenarios. No individual movements exceed the 42-second delay threshold described in the GTIA.

From the above, the development impact on this intersection does not cause any adverse operational issues. The intersection operates well within performance thresholds and therefore, no mitigation of operational impacts or upgrades are required for this intersection.

6. Safety considerations

6.1 Turn warrant assessment

Turn warrants are used to identify the need to provide separate turning provisions from a functionality and safety perspective. The warrants are essentially the relationship between the turning volumes versus the major road traffic volumes.

In accordance with Austroads, turn warrants are based on the construction of new roads (i.e. greenfield sites) and is also used as a reference for intervention levels for updating existing intersection turn treatments. Turn warrant assessment is usually undertaken at these intersections to determine if protected turning lanes (i.e. channelisation) are required from a safety perspective.

Given the key intersection is considered a brownfield site with minimal traffic volumes and existing constraints (such as a culvert headwall within close proximity to the Bunya Highway northbound travel lane), a turn warrant assessment has been undertaken using the extended design domain (EDD) criteria.

The EDD warrants for turn treatments are detailed in the *Supplement to Austroads Guide to Road Design Part 4A: Unsignalised and Signalised Intersections* (RPDM) published by DTMR and include consideration of simple left (SL) and simple right (SR) turning movement provision.

Figures 6-1 and **6-2** summarise the left and right turn warrant treatments required at the key Bunya Highway and Memerambi Barkers Creek Road intersection (using a design speed of 70km/h) with respect to the 2030 background traffic scenario and the background with development scenario. AM peak scenarios are provided previously at **Figure 4-2** and **Figure 4-4**. Detailed turn warrant calculations are shown at **Appendix F**.

It should be noted that the PM peak hour was not assessed as the AM peak hour is the critical peak for turning movements into Memerambi Barkers Creek Road.

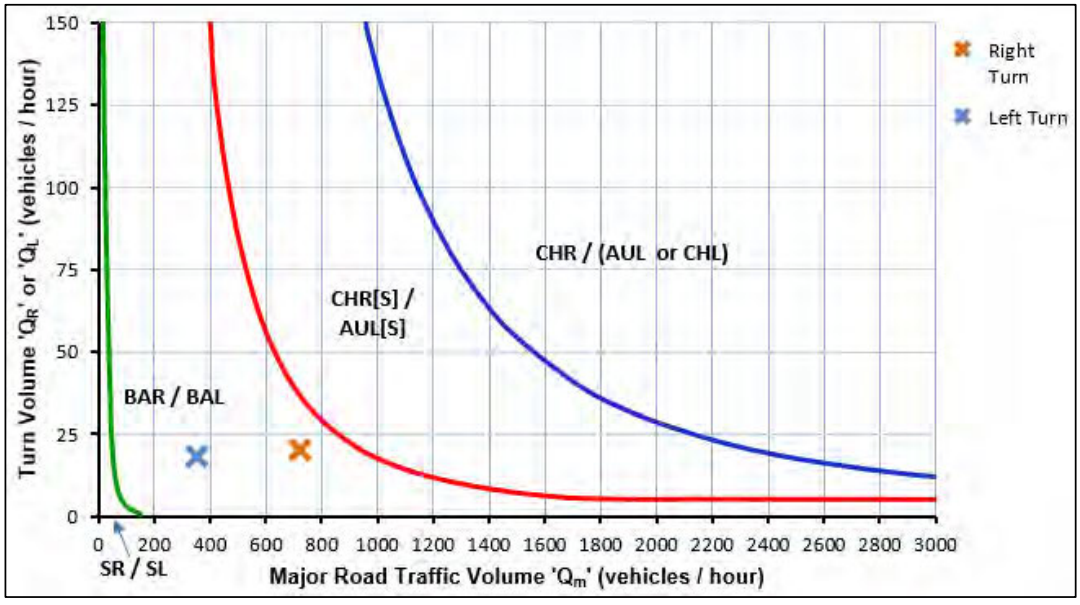


Figure 6-1: Bunya Highway / Memerambi Barkers Creek Road 2030 background turn warrant graph

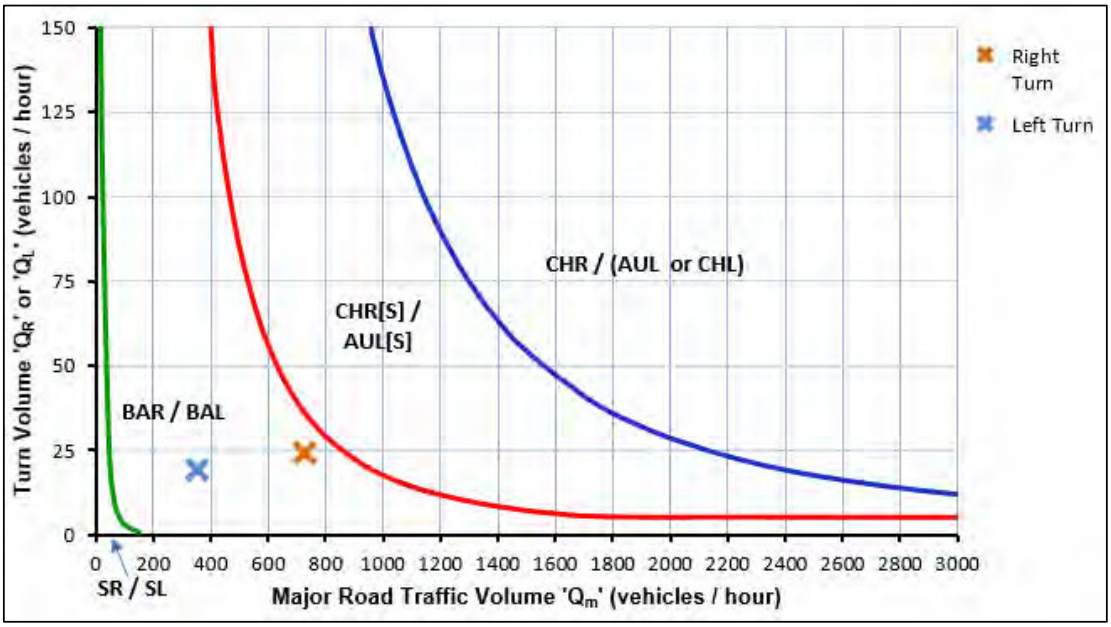


Figure 6-2: Bunya Highway / Memerambi Barkers Creek Road intersection 2030 background + development turn warrant graph

Table 6-1 summarises the right and left turn warrant treatments required at the key Bunya Highway / Memerambi Barkers Creek Road intersection (using a design speed of 70km/h).

Table 6-1: Bunya Highway / Memerambi Barkers Creek Road intersection turn warrant summary – 2030 Ultimate development

Scenario	Peak	2030 Background with Development Traffic	
		Left turn*	Right turn
2030 Background	AM peak	BAL	BAR
		BAL	BAR
2030 Background + Development	AM Peak	BAL	BAR
		BAL	BAR

From the assessment, and as illustrated in **Table 6-1**, the left turning movements at the Bunya Highway / Memerambi Barkers Creek Road intersection trigger the need for basic left turn treatment (BAL) for both the 2030 background and the background with development scenarios. Therefore, the additional development volumes in the ultimate stage do not significantly impact the existing operation of the intersection. Similarly, a basic right turn treatment (BAR) is triggered for both the 2030 ‘background’ and ‘background with development’ scenarios.

The development impact on this intersection does not cause any adverse operational or safety issues. The BAL and BAR treatments are triggered in the background scenarios regardless of the proposed development, and the development does not cause the requirement for additional turning treatments or channelisation.

It is noted that the Bunya Highway / Memerambi Barkers Creek Road intersection has existing shoulders which vehicles are using as BAL and BAR treatments (refer to **Figure 6-3** and **Figure 6-4**).

Figure 6-3: Bunya Highway / Memerambi Barkers Creek Road intersection existing BAR provision

Figure 6-4: Bunya Highway / Memerambi Barkers Creek Road intersection existing BAL provision

Therefore, from the above, no upgrades are required for this intersection.

6.2 Sight distance assessment

Sight distance has been reviewed for the Bunya Highway / Memerambi Barkers Creek Road intersection. The review was completed to confirm applicable sight distance requirements in accordance with Austroads requirements.

Table 6-2 summarises the variables used for this calculation.

Table 6-2 : Variables adopted for sight distance assessment

Variable symbol	Description	Value adopted for assessment		Unit of measure
		Truck	Car	
DT	Decision time (s) = observation time (3 s) + reaction time (s)	5	5	seconds
V	Operating (85th percentile) speed	70	70	km/hr
d	Coefficient of deceleration for cars / trucks *(Guide to Road Design – Part 3: Geometric Design (Austroads 2016))*	0.29	0.362	
a	Longitudinal grade in % (in direction of travel: positive for uphill grade, negative for downhill grade)	0	0	%
R_T	perception/reaction time *(Guide to Road Design – Part 3: Geometric Design (Austroads 2016))*	2.0	2.0	seconds
SISD	$SISD = \frac{D_T \times V}{3.6} + \frac{V^2}{254 \times (d + 0.01 \times a)}$ (Equation 2 *Guide to Road Design - Part 4a*)			

The outcomes of this review are summarised in **Table 6-3**. Available SISD has been estimated based on online mapping and site photos.

Table 6-3: Austroads sight distance requirements

Intersection	Approach leg	Vehicle type	Direction	Available SISD (m)	Required SISD (m)	Compliance
Bunya Highway / Memerambi Barkers Creek Road	Bunya Highway	Car	North	>350m	151	Compliant
			South	>350m	151	Compliant
		Truck	North	>350m	164	Compliant
			South	>350m	164	Compliant

The review indicates that the sight distance available at the key Bunya Highway / Memerambi Barkers Creek Road intersection is satisfactory and meets the minimum SISD requirements for both the north-east and south-west directions.

6.3 Suitability of the surrounding road network

As outlined in **Section 2.3** and **Section 2.4**, the predominant route for heavy vehicles and staff travelling to/from the site is via the western section of Memerambi Barkers Creek Road. It is noted that the Pakaderinga Feedlot has an existing B-Double permit along Memerambi Barkers Creek Road.

The majority of Memerambi Barkers Creek Road is sealed, with several small sections of unsealed areas. The road width is typically 5 - 6.5 m with varying widths of formal and informal shoulder provisions. Given that the mutual sight distance along Memerambi Barkers Creek Road is generally sufficient, the existing road width is deemed adequate with the option for vehicles to utilise the shoulders if required. Aerial imagery shows that in recent years curves and sharp corners have been realigned and widened for greater road safety.

From the above and given that no current issues with larger vehicles using the road have been identified (i.e. no near misses), the formation and alignment is considered suitable for the proposed development and no high risk safety deficiencies have been identified.

6.4 Risk assessment

A risk assessment examining the increase in turning movements at the relevant Bunya Highway / Memerambi Barkers Creek Road intersection has been considered as per the GTIA process. The safety risk score matrix as extracted from the GTIA is shown in **Figure 6-5**.

		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

Figure 6-5: Safety risk score matrix (GTIA)

The risk items examined (refer to **Table 6-4**) consider the potential to increase crashes and the safety deficiencies on the road network.

Table 6-4: Risk assessment item/s

Risk item	Without development			With development			With development and mitigation			
	Likelihood	Consequence	Risk score	Likelihood	Consequence	Risk score	Mitigation measures	Likelihood	Consequence	Risk score
Risk of angle or rear end crash due to increase in traffic movements to/from Memerambi Barkers Creek Road.	1	4	M	2	4	M	No action as the proposed development does not increase the current risk score.	2	4	M
Non-frangible trees close to the carriageway	1	4	M	1.5	4	M	No action as the proposed development does not increase the current risk score.	1.5	4	M

As shown, there is no change in the risk scores due to the addition of development traffic, and no high risks are identified.

From the above, no adverse safety issues were identified relating to the proposed development, and no mitigation measures are required by the development.

6.5 Swept path assessment

A swept path assessment was undertaken for the largest design vehicle (26m long B-Double) that will be utilising the Memerambi Barkers Creek Road / Site Access intersection. The high-level desktop review of the design vehicle entering and exiting the site are shown in **Figure 6-6** and **Figure 6-7** below and demonstrate that the intersection configurations and geometry is suitable.

Note that the intersection configuration and road extents are estimated from aerial imagery and on-site measurements (not surveys). A site visit measured the cattle grid to be 3.4m wide which the heavy vehicle can manoeuvre through.

Aerial imagery proved difficult to accurately determine the exact road extents due to the unsealed configuration and extensive tree canopy. However, Stage 1 and Stage 2 currently operate under B-Double permits and access the site without any noted issues.

Figure 6-6: Swept path assessment (26m B-Double) – Right into Site Access from Memerambi Barkers Creek Road

Figure 6-7: Swept path assessment (26m B-Double) – Left out of Site Access onto Memerambi Barkers Creek Road

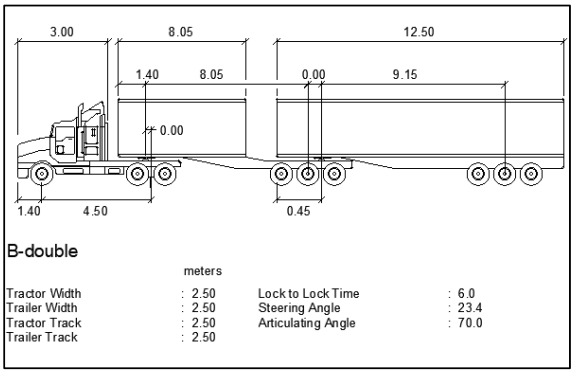


Figure 6-6: 26m B-Double design vehicle

Although no issues have been noted with regards to existing vehicles utilising the site access, if required the 3.4 m wide access gate can be widened to provide an additional buffer for heavy vehicle turning movements. This can be investigated further and assessed during the future detailed design (operational works) stage of the development when detailed site survey is available.

7. Pavement Impact Assessment

The Guide to Traffic Impact Assessment (GTIA) indicates that a Pavement Impact Assessment (PIA) is required for developments increasing the heavy vehicle traffic on state-controlled roads (SCR), in order to ensure that there is no worsening on the pavement's condition.

The proposed development will increase the number of heavy vehicles on the external road network by an average of approximately 2 vehicles per day. This increase is minimal and is expected to have a negligible impact on the external road pavement. To further prove this, the GTIA PIA method was undertaken for the increase in development heavy vehicle traffic on the Bunya Highway.

The background SAR4s (ESAs) were calculated utilising the heavy vehicle weekly volume reports provided by the Department of Transport and Main Roads. Using the GTIA methodology, background SAR4s on the Bunya Highway in the vicinity of the subject site were calculated, as shown in **Table 7-1**. The estimated daily number of background SAR4's along the Bunya Highway in the vicinity of the subject site is 329,620 in both the northbound and southbound directions for 2030.

Table 7-1: Bunya Highway background SAR4s/ESAs

Road Name	Year	Direction	HV AADT	SAR per HV	Directionality	SAR per year
Bunya Highway	2030	Northbound	283	3.2	50%	329,620
		Southbound	283		50%	329,620

This assessment has considered the ultimate 2030 development scenario (Stage 3 and 4) on the Bunya Highway as shown in **Table 7-2**, using the below assumptions:

- Traffic distribution split at Bunya Highway / Memerambi Barkers Creek Road Intersection
  - North (to/from Wondai) = 10%
  - South (to/from Kingaroy) = 90%
- Incoming Cattle: B-Doubles (total trips per annum)
  - Incoming SARs = 6.3
  - Outgoing SARs = 0.53
- Outgoing Cattle: B-Doubles
  - Incoming SARs = 0.53
  - Outgoing SARs = 6.3
- Feed and Grain stuff: B-Doubles
  - Incoming SARs = 6.3
  - Outgoing SARs = 0.53
- Manure: B-Doubles
  - Incoming SARs = 0.53
  - Outgoing SARs = 6.3

The PIA calculations are shown in **Appendix G**.

Table 7-2: Bunya Highway developmental SARs impact

Road Name	Road Section	Direction	Background SARs per year	Development SARs per year	% increase
Bunya Highway	North of Memerambi Barkers Creek Road	Northbound	329,620	93	0.03%
		Southbound	329,620	330	0.10%
	South of Memerambi Barkers Creek Road	Northbound	329,620	2,970	0.90%
		Southbound	329,620	841	0.26%

Table 7-2 shows that the heavy vehicle impact relating to the operation of the proposed development is not expected to have an adverse impact on the external road network pavement. This is because the nett increase of SAR4s related to the development is less than 5.0% of the existing background SAR4s on the network.

Therefore, given the low number of development heavy vehicle movements (approximately 2 vehicles per day increase), with the consideration of the existing low background traffic volumes, it can be determined that the development will not have any adverse pavement impacts on the Bunya Highway and surrounding road network.

It is anticipated that the proposed development will also have a negligible impact on the Council owned Memerambi Barkers Creek Road (similar to the above outcome) due to the minimal increase in heavy vehicle movements.

8. Internal site layout review

A high-level review of the proposed site layout has been undertaken to determine if there are any safety concerns associated with the operation of the site.

8.1 Sight distance

Sight distance at the Memerambi Barkers Creek Road / Site Access intersection has been estimated using site visit, site photos and online imagery. This section of road has an unposted speed limit of 100 km/h. However, it is unlikely that vehicles will reach this speed within the vicinity of the site given the unformed configuration of the road. Traffic data received from SBRC details that at the count site 1km east of the site access, the average vehicle speed is approximately 55 km/h. Therefore, a conservative design speed of 70 km/h has been adopted. It is expected that vehicle traffic travelling from the west through the intersection will be infrequent.

The outcomes of this review are summarised in **Table 8-1**. Available SISD has been estimated based on online mapping and site photos.

Table 8-1: Memerambi Barkers Creek Road / Site Access sight distance

Intersection	Approach leg	Vehicle type	Section	Available SISD (m)	Required SISD (m)	Compliance
Memerambi Barkers Creek Road / Site Access	Memerambi Barkers Creek Road	Car	East of access	Approx 200m	151	Compliant
			West of access	Approx 175m	151	Compliant
		Truck	East of access	Approx. 200m	164	Compliant
			West of access	Approx 175m	164	Compliant

The review indicates that the sight distance available at the site access location is satisfactory and meets the minimum SISD requirements.

8.2 Site Access swept paths

A swept path assessment for the largest design vehicle (26m long B-Double) that may be utilising the Memerambi barkers Creek Road / Site Access intersection are detailed in **Section 6.4.** The swept path assessments are shown in **Figure 6-4** and **Figure 6-5** demonstrate that the intersection configurations and geometry is suitable for the design vehicle movements.

8.3 Internal access road type and formation

The internal access road is approximately 8 m wide. This existing configuration of the internal access road currently caters for B-Doubles and is therefore considered sufficient for the ultimate development. The internal access roads unformed configuration is deemed appropriate given the use of the site, relatively low vehicle volumes, continued use of B-Double vehicles, and also the frequency of the entering and exiting vehicles.

Online imagery shows that there is ample internal area and space to provide for heavy vehicle manoeuvring.

8.4 Internal informal parking

The South Burnett Regional Council Planning Scheme Development Codes outline the minimum number of car parking spaces required for developments described as of 'animal keeping' use. The number of required parking spaces as per the SBRC Planning Scheme are shown below on **Table 8-2**.

Table 8-2: SBRC Parking Scheme parking rate

Use	SBRC Minimum Car Parking Rate	Number of Staff	Average number of cattle (head) in feedlot (Ultimate Stages 1-4)	Required Spaces
Animal keeping	1 space per employee and 1 space per 30 animals	10	5,762	202

Given the number of parked vehicles on-site at any one time is only expected to be 8 (for staff) and 2 (for ad-hoc visitors and maintenance), the provision of 202 spaces per the SBRC Planning Scheme is deemed excessive for the site and for feedlots in general. Therefore, it is reasonable that the required number of parking spaces be amended to reflect 10 spaces to cater for the expected staff and visitor/maintenance vehicles that will park on-site. Given the large area of the site, it is understood that the informal parking areas can be increased if necessary, and therefore the required parking demands (for both staff and visitors) can be achieved.

The parking area should be constructed to a standard of gravel hardstand.

Further considerations of the internal layout of the proposed development will be undertaken in the detailed design stage.

9. Summary and recommendations

RMA Engineers has been engaged by Pakaderinga Feedlot Q Pty Ltd to undertake a Traffic Impact Assessment (TIA) in support of a development application for the proposed feedlot development located at 1270 Memerambi Barkers Creek Road, Wattle Camp (the subject site). The site is identified as Lot 1 RP157322 with Lots 2-8 RP157322/3 also included and situated within the South Burnett Regional Council (SBRC) area.

This TIA report documents an investigation of traffic and transport impacts of the proposed development on the external road network in general accordance with the road transport related requirements identified in the DTMR Guide to Traffic Impact Assessment (GTIA) (2017).

The following is a summary of the findings and recommendations of the TIA:

Operational impacts

- The ultimate development will generate low daily traffic volumes, totalling an average of 6 heavy vehicles (12 movements) and 8 light vehicles (16 movements) per day. This equates to a total of approximately 28 vehicle trips per day.
- The maximum number of trips per peak hour is expected to be 8 trips at the start and end of staff shifts.
- SIDRA analysis results indicate that the key Bunya Highway / Memerambi Barkers Creek Road intersection operates well within performance thresholds and therefore, no mitigation of operational impacts or upgrades are required for this intersection.

Safety impacts

- A turn warrant assessment indicates that the key Bunya Highway / Memerambi Barkers Creek Road intersection triggers BAR and BAL treatments. These treatments are triggered in the background scenarios regardless of the proposed development, and the development does not cause the requirement for additional turning treatments or channelisation.
- It is noted that the Bunya Highway / Memerambi Barkers Creek Road intersection has existing shoulders which vehicles are using as BAL and BAR treatments. Therefore, from the above, no upgrades are required for this intersection.
- The sight distance available at the key Bunya Highway / Memerambi Barkers Creek Road intersection is satisfactory and meets the minimum SISD requirements for both the north-east and south-west directions.
- The formation and alignment of Memerambi Barkers Creek Road is considered suitable for the proposed development vehicles and no high risk safety deficiencies have been identified. The mutual sight distance along Memerambi Barkers Creek Road is generally sufficient, the existing road width is deemed adequate with the option for vehicles to utilise the shoulders if required. Aerial imagery shows that in recent years curves and sharp corners have been realigned and widened for greater road safety.
- From a risk assessment (refer to Section 6.4), no adverse safety issues were identified relating to the proposed development, and no mitigation measures are required by the development.
- The high-level desktop review via a swept path assessment of the design vehicle entering and exiting the site demonstrate that the intersection configurations and geometry is suitable. Stage 1 and Stage 2 also currently operate under B-Double permits and access the site without any noted issues.

- Although no issues have been noted with regards to existing vehicles utilising the site access, if required the 3.4 m wide access gate can be widened to provide an additional buffer for heavy vehicle turning movements. This can be investigated further and assessed during the future detailed design (operational works) stage of the development when detailed site survey is available.

Pavement impacts

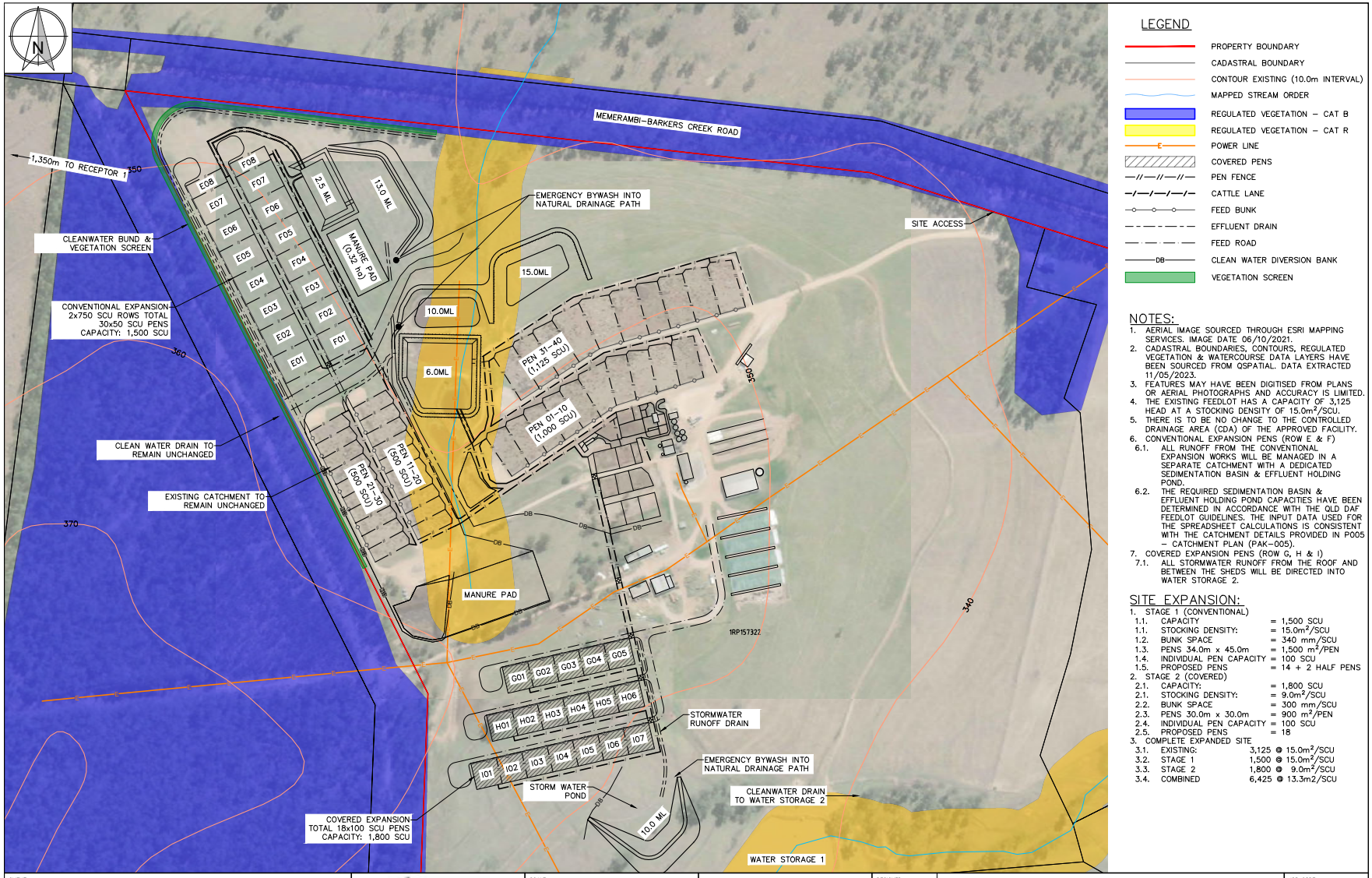
- Given the low number of development heavy vehicle movements (approximately 2 vehicles per day increase), with the consideration of the existing low background traffic volumes, it can be determined that the development will not have any adverse pavement impacts on the Bunya Highway and surrounding road network.
- It is anticipated that the proposed development will also have a negligible impact on the Council owned Memerambi Barkers Creek Road (similar to the above outcome) due to the minimal increase in heavy vehicle movements.

Site layout

- The sight distance available at the site access location is satisfactory and meets the minimum SISD requirements.
- The internal access road is approximately 8 m wide. This existing configuration of the internal access road currently caters for B-Doubles and is therefore considered sufficient for the ultimate development. The internal access roads unformed configuration is deemed appropriate given the use of the site, relatively low vehicle volumes, continued use of B-Double vehicles, and also the frequency of the entering and exiting vehicles.
- Online imagery shows that there is ample internal area and space to provide for heavy vehicle manoeuvring.
- It is recommended that the required number of parking spaces be amended to reflect 10 spaces to cater for the expected staff and visitor/maintenance vehicles that will park on-site. Given the large area of the site, it is understood that the informal parking areas can be increased if necessary, and therefore the required parking demands (for both staff and visitors) can be achieved.
- The parking area should be constructed to a standard of gravel hardstand and further considerations of the internal layout of the proposed development will be undertaken in the detailed design stage.

With respect to the above findings and recommendations of this TIA report, the proposed development can proceed without any unacceptable or adverse impacts on the external road network. No traffic and transport engineering matters have been identified that should preclude approval of the proposed development at this location.

Appendix A Development layout



NOTES:

1. AERIAL IMAGE SOURCED THROUGH ESRI MAPPING SERVICES. IMAGE DATE 06/10/2021.
2. CADASTRAL BOUNDARIES, CONTOURS, REGULATED VEGETATION & WATERCOURSE DATA LAYERS HAVE BEEN SOURCED FROM QSPATIAL. DATA EXTRACTED 11/05/2023.
3. FEATURES MAY HAVE BEEN DIGITISED FROM PLANS OR AERIAL PHOTOGRAPHS AND ACCURACY IS LIMITED.
4. THE EXISTING FEEDLOT HAS A CAPACITY OF 3,125 HEAD AT A STOCKING DENSITY OF 15.0m²/SCU.
5. THERE IS TO BE NO CHANGE TO THE CONTROLLED DRAINAGE AREA (CDA) OF THE APPROVED FACILITY.
6. CONVENTIONAL EXPANSION PENS (ROW E & F)
   - 6.1. ALL RUNOFF FROM THE CONVENTIONAL EXPANSION WORKS WILL BE MANAGED IN A SEPARATE CATCHMENT WITH A DEDICATED SEDIMENTATION BASIN & EFFLUENT HOLDING POND.
   - 6.2. THE REQUIRED SEDIMENTATION BASIN & EFFLUENT HOLDING POND CAPACITIES HAVE BEEN DETERMINED IN ACCORDANCE WITH THE QLD DAF FEEDLOT GUIDELINES. THE INPUT DATA USED FOR THE SPREADSHEET CALCULATIONS IS CONSISTENT WITH THE CATCHMENT DETAILS PROVIDED IN P005 – CATCHMENT PLAN (PAK–005).
7. COVERED EXPANSION PENS (ROW G, H & I)
   - 7.1. ALL STORMWATER RUNOFF FROM THE ROOF AND BETWEEN THE SHEDS WILL BE DIRECTED INTO WATER STORAGE 2.

SITE EXPANSION:

1. STAGE 1 (CONVENTIONAL)		
1.1.	CAPACITY	= 1,500 SCU
1.1.	STOCKING DENSITY:	= 15.0m²/SCU
1.2.	BUNK SPACE	= 340 mm/SCU
1.3.	PENS 34.0m x 45.0m	= 1,500 m²/PEN
1.4.	INDIVIDUAL PEN CAPACITY	= 100 SCU
1.5.	PROPOSED PENS	= 14 + 2 HALF PENS
2. STAGE 2 (COVERED)		
2.1.	CAPACITY:	= 1,800 SCU
2.1.	STOCKING DENSITY:	= 9.0m²/SCU
2.2.	BUNK SPACE	= 300 mm/SCU
2.3.	PENS 30.0m x 30.0m	= 900 m²/PEN
2.4.	INDIVIDUAL PEN CAPACITY	= 100 SCU
2.5.	PROPOSED PENS	= 18
3. COMPLETE EXPANDED SITE		
3.1.	EXISTING:	3,125 @ 15.0m²/SCU
3.2.	STAGE 1	1,500 @ 15.0m²/SCU
3.3.	STAGE 2	1,800 @ 9.0m²/SCU
3.4.	COMBINED	6,425 @ 13.3m2/SCU

CLIENT: PAKADERINGA FEEDLOT PTY LTD
PROJECT: PAKADERINGA FEEDLOT EXPANSION
LOCATION: 1270 CORNDALE ROAD, NANANGO, QLD 4615
SHEET TITLE: CONCEPT PLAN

AGRICULTURAL DEVELOPMENT SERVICES AUSTRALIA
PO BOX 292 TOOWOOMBA QLD 4350
PH: +61 473 171 957
E: contact@agdsa.com.au

SCALE: 0 40 80 120m
SCALE 1:2,000 (A1) 1:4,000 (A3)
SIGNED

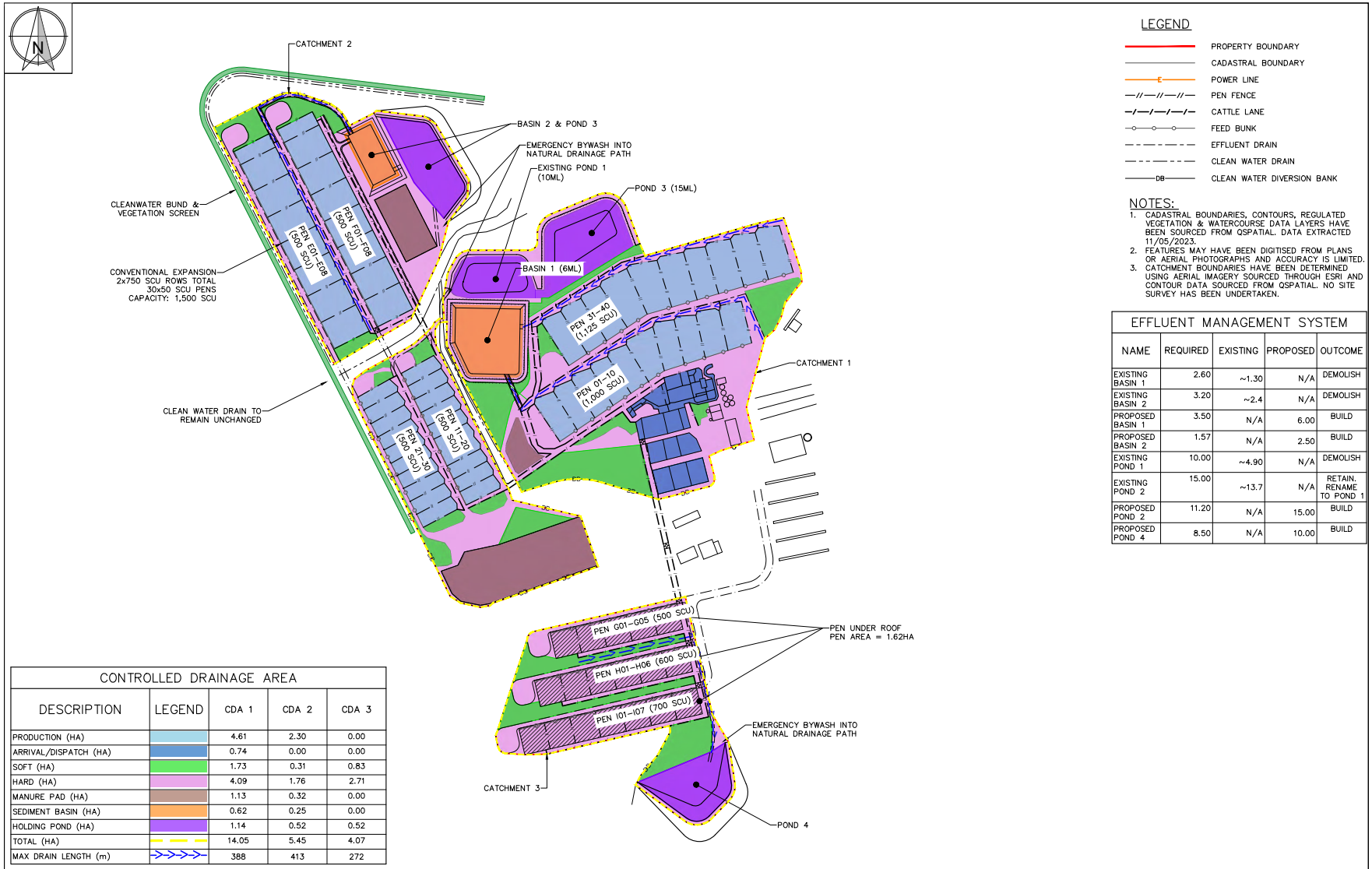
DESIGNED: TJS
CHECKED: MRN
PROJECT MANAGER: MRN

FOR APPROVAL ONLY

DATE	REV	DESCRIPTION	APP
22/09/2023	A	ORIGINAL ISSUE FOR APPROVAL ONLY	MRN

REVISIONS

JOB CODE: PAK–001
SHEET NUMBER: A003
CURRENT REVISION: A



LEGEND

- PROPERTY BOUNDARY
- CADASTRAL BOUNDARY
- E — POWER LINE
- PEN FENCE
- CATTLE LANE
- FEED BUNK
- EFFLUENT DRAIN
- CLEAN WATER DRAIN
- DB — CLEAN WATER DIVERSION BANK

NOTES:

1. CADASTRAL BOUNDARIES, CONTOURS, REGULATED VEGETATION & WATERCOURSE DATA LAYERS HAVE BEEN SOURCED FROM QSPATIAL. DATA EXTRACTED 11/05/2023.
2. FEATURES MAY HAVE BEEN DIGITISED FROM PLANS OR AERIAL PHOTOGRAPHS AND ACCURACY IS LIMITED.
3. CATCHMENT BOUNDARIES HAVE BEEN DETERMINED USING AERIAL IMAGERY SOURCED THROUGH ESRI AND CONTOUR DATA SOURCED FROM QSPATIAL. NO SITE SURVEY HAS BEEN UNDERTAKEN.

EFFLUENT MANAGEMENT SYSTEM

NAME	REQUIRED	EXISTING	PROPOSED	OUTCOME
EXISTING BASIN 1	2.60	~1.30	N/A	DEMOLISH
EXISTING BASIN 2	3.20	~2.4	N/A	DEMOLISH
PROPOSED BASIN 1	3.50	N/A	6.00	BUILD
PROPOSED BASIN 2	1.57	N/A	2.50	BUILD
EXISTING POND 1	10.00	~4.90	N/A	DEMOLISH
EXISTING POND 2	15.00	~13.7	N/A	RETAIN. RENAME TO POND 1
PROPOSED POND 2	11.20	N/A	15.00	BUILD
PROPOSED POND 4	8.50	N/A	10.00	BUILD

CONTROLLED DRAINAGE AREA

DESCRIPTION	LEGEND	CDA 1	CDA 2	CDA 3
PRODUCTION (HA)		4.61	2.30	0.00
ARRIVAL/DISPATCH (HA)		0.74	0.00	0.00
SOFT (HA)		1.73	0.31	0.83
HARD (HA)		4.09	1.76	2.71
MANURE PAD (HA)		1.13	0.32	0.00
SEDIMENT BASIN (HA)		0.62	0.25	0.00
HOLDING POND (HA)		1.14	0.52	0.52
TOTAL (HA)		14.05	5.45	4.07
MAX DRAIN LENGTH (m)		388	413	272

CLIENT: PAKADERINGA FEEDLOT PTY LTD
PROJECT: PAKADERINGA FEEDLOT EXPANSION
LOCATION: 1270 CORNDALE ROAD, NANANGO, QLD 4615
SHEET TITLE: CONTROLLED DRAINAGE AREA

AgDSA
AGRICULTURAL DEVELOPMENT SERVICES AUSTRALIA
PO BOX 292
TOOWOOMBA QLD 4350
PH: +61 473 171 957
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SCALE: 0 40 80 120m
SCALE 1:2,000 (A1) 1:4,000 (A3)
SIGNED

Pakaderinga Feedlot

DESIGNED: TJS
CHECKED: MRN
PROJECT MANAGER: MRN

FOR APPROVAL ONLY

DATE	REV	DESCRIPTION	APP
22/09/2023	A	ORIGINAL ISSUE FOR APPROVAL ONLY	MRN

REVISIONS

JOB CODE: PAK–001
SHEET NUMBER: A005
CURRENT REVISION: A

Appendix B AgDSA calculations

Beef Feedlot
Feed, Manure & Traffic Calculator

The AgDSA Beef Feedlot Feed, Manure & Traffic Calculator has been developed to assist the preparation of development applications for beef feedlots in Australia.

Cattle stocking rates used to estimate cattle capacities per truck are based on the 2019 Meat & Livestock Australia (MLA) "Fit to Load" manual. Cattle weights above or below those provided in the manual have been interpolated or extrapolated as required.

Legend

Data is to be entered into all of the grey cells, starting with the '1 - General' worksheet and proceeding through the other worksheets from left to right, using the tabs on the bottom of the screen.

Scroll over these cells. For assistance with the selection of appropriate input data, scroll over the cells that have red triangles in the upper right corner to view explanatory comments.

Developed by: Tim Sullivan
Principal Agricultural Engineer
AgDSA
Email: tim.sullivan@agdsa.com.au

General Feedlot Information

Feedlot Details

Landholders' name(s):	**Pakaderinga**
Cattle feedlot name:	**Pakaderinga**
Feedlot address:	**Memerambi-Barkers Creek Rc**
Feedlot locality:	
Feedlot State:	
Feedlot Local Government Area:	**SBRC**
Spreadsheet user name	**MRN**
Assessment date	**21/06/2023**

Feedlot Development

Is the feedlot developed in stages: **Yes**

	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Total
Cattle capacity per stage (SCU)	1,800	1,200	1,500	1,800		6,300
Percentage of full capacity	29%	19%	24%	29%		
Description (i.e Pen Numbers &/or Market Type)	Existing (70 day)	Existing (100 day)	Stage 1 (wagyu)	Stage 2 (sheds)		
Anticipated completion date	N/A	N/A	2024	2030		

Cattle Movements

Expansion Stage	1	2	3	4	5	Total	Units
Maximum SCU Capacity	1,800	1,325	1,500	1,800	-	**6,425**	SCU
Maximum SCU Stage Split	28%	21%	23%	28%		**100%**	%
Animal Performance Data							
Entry Weight	350	400	400	400			kg
Exit Weight	500	650	750	750			kg
Average Weight	425	525	575	575	-		kg
SCU Conversion (at average weight)	0.77	0.90	0.97	0.97	-		
Maximum Head Capacity	2,331	1,465	1,549	1,858	-	**7,203**	Head
Maximum Head Stage Split	32%	20%	22%	26%		**100%**	%
Total Days on Feed	70	100	350	350			Days
Feed cycles per year	5.21	3.65	1.04	1.04	-		
Average Occupancy Rate			80%			**80%**	%
Average SCU in Feedlot	1,440	1,060	1,200	1,440	-	**5,140**	SCU
Average Head in Feedlot	1,865	1,172	1,239	1,487	-	**5,762**	Head
Maximum Head in Feedlot (100% Occupancy)	2,331	1,465	1,549	1,858	-	**7,203**	Head
Total Cattle Entering the Feedlot	9,725	4,277	1,292	1,550	-	**16,844**	Head
Average Mortality			0.50%			**0.50%**	%
Annual Deaths	49	21	6	8	-	**84**	Head
Outgoing Cattle	9,676	4,255	1,286	1,543	-	**16,760**	Head
Cattle Procurement							
Cattle Produced Onsite			0				Head
Cattle Produced Per Stage	0	0	0	0	0	**-**	Head
Cattle Produced Onsite	0.0%	0.0%	0.0%	0.0%		**0.0%**	%
Cattle Transported In	9,725	4,277	1,292	1,550	-	**16,844**	Head
Cattle Transported In	100.0%	100.0%	100.0%	100.0%		**100.0%**	%
Incoming Cattle Trucks							
Incoming Cattle	9,725	4,277	1,292	1,550	-		
Incoming Cattle Truck Type	B Double	B Double	B Double	B Double			Type
Total Decks / Truck Type	3	3	3	3	-		kg
Incoming Cattle Weight	350	400	400	400	-		kg
Incoming Cattle Floor Area	0.98	1.05	1.05	1.05	-		m^2/head
Incoming Cattle/Deck	30	28	28	28	-		Head
Incoming Cattle/Truck (Space Limiting)	90	84	84	84	-		Head
Incoming Cattle/Truck	90	84	84	84			Head
Incoming Cattle Trucks/year	108	51	15.38	18.46	-	**193**	Trucks/year
Outgoing Cattle Trucks							
Outgoing Cattle	9,676	4,255	1,286	1,543	-		
Outgoing Cattle Truck Type	B Double	B Double	B Double	B Double			Type
Total Decks / Truck Type	3	3	3	3	-		kg
Outgoing Cattle Weight	500	650	750	750	-		kg
Outgoing Cattle Floor Area	1.23	1.63	1.94	1.94	#N/A		m^2/head
Outgoing Cattle/Deck	24	18	15	15	#N/A		
Outgoing Cattle/Truck (Space Limiting)	72	54	45	45	#N/A		Head
Outgoing Cattle/Truck	72	54	45	45			Head
Outgoing Cattle Trucks/Year	134	79	29	34	-	**276**	Trucks/year

Feedstuff Requirements

Expansion Stage	1	2	3	4	5	Total	Units
Maximum SCU Capacity	1,800	1,325	1,500	1,800	-	**6,425**	SCU
Animal Performance Data							
Entry Weight	350	400	400	400	-		kg
Exit Weight	500	650	750	750	-		kg
Average Weight	425	525	575	575	-		kg
SCU Conversion (at average weight)	0.77	0.90	0.97	0.97	-		
Average Occupancy Rate			80%			**80%**	%
Average SCU in Feedlot	1,440	1,060	1,200	1,440	-	**5,140**	SCU
Average Head in Feedlot	1,865	1,172	1,239	1,487	-	**5,762**	Head
Maximum Head Capacity	2,331	1,465	1,549	1,858	-	**7,203**	Head
Animal Feed Intake							
As fed intake	3.5%	2.9%	2.6%	2.6%	0.0%		% Avg. LWT
As fed intake	15.0	15.0	15.0	15.0			kg/day
Ration Dry Matter	90%	90%	90%	90%			%
DM feed intake	13.5	13.5	13.5	13.5	-		kg/day
Days on Feed	70.0	100.0	350.0	350.0	-		days
Daily Gain	2.1	2.5	1.0	1.0	-		kg/day
FCR (as fed basis)	7.0	6.0	15.0	15.0	-		x:1
FCR (DM basis)	6.3	5.4	13.5	13.5	#DIV/0!		x:1
Feed consumed onsite/day	28.0	17.6	18.6	22.3	-	**86.4**	t/day
Feed consumed onsite/week	195.8	123.0	130.1	156.1	-	**605.0**	t/week
Feed consumed onsite/year	10,211.0	6,414.8	6,783.1	8,139.7	-	**31,548.6**	t/year
Diet & Ingredient Volumes							
Grain	75.0%	75.0%	75.0%	75.0%			%
Roughage (Hay/Straw)	6.0%	6.0%	6.0%	6.0%			%
Roughage (Silage)	10.0%	10.0%	10.0%	10.0%			%
Liquids + Supplements	9.0%	9.0%	9.0%	9.0%			%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**0.0%**		%
Annual Feed Requirements							
Grain	7,658.3	4,811.1	5,087.3	6,104.8	-	**23,661.5**	t/year
Roughage (Hay/Straw)	612.7	384.9	407.0	488.4	-	**1,892.9**	t/year
Roughage (Silage)	1,021.1	641.5	678.3	814.0	-	**3,154.9**	t/year
Liquids + Supplements	919.0	577.3	610.5	732.6	-	**2,839.4**	t/year
Total	10,211.0	6,414.8	6,783.1	8,139.7	-	**31,548.6**	t/year
	OK	OK	OK	OK	OK	OK	
Annual Feed Grown Onsite							
Grains produced onsite			0			-	t/year
	-	-	-	-	-		t/stage/year
							% supplied from onsite
Roughage (Hay/Straw) produced onsite			0			-	t/year
	-	-	-	-	-		t/stage/year
							% supplied from onsite
Roughage (Silage) produced onsite			0			-	t/year
	-	-	-	-	-		t/stage/year
							% supplied from onsite
Liquid + Supplements produced onsite			0			-	t/year
	-	-	-	-	-		t/stage/year
							% supplied from onsite
Total feed produced onsite						-	t/year
							% supplied from onsite
Commodity Truck Movements							
Grain - *Ex. Farm Grown*	7,658	4,811	5,087	6,105	-	**23,661**	t/year
Grain Truck Type	B Double	B Double	B Double	B Double			Type
Grain Truck Capacity (Suggested)	36	36	36	36	-		t/vehicle
Grain Truck Capacity (Used)	36	36	36	36			t/vehicle
Grain Truck Loads	213	134	141	170	-	**657**	Trucks/yr
Roughage (Hay/Straw) - *Ex. Farm Grown*	613	385	407	488	-	**1,893**	t/year
Roughage (Hay/Straw) Truck Type	Semi Trailer	Semi Trailer	Semi Trailer	Semi Trailer			Type
Roughage (Hay/Straw) Truck Capacity (Suggested)	12	12	12	12	-		t/vehicle
Roughage (Hay/Straw) Truck Capacity (Used)	12	12	12	12			t/vehicle
Rough (Hay/Straw) Truck Loads	51	32	34	41	-	**158**	Trucks/yr
Roughage (Silage) - *Ex. Farm Grown*	1,021	641	678	814	-	**3,155**	t/year
Roughage (Silage) Truck Type	Semi Trailer	Semi Trailer	Semi Trailer	Semi Trailer			Type
Roughage (Silage) Truck Capacity (Suggested)	25	25	25	25	-		t/vehicle
Roughage (Silage) Truck Capacity (Used)	25	25	25	25			t/vehicle
Rough (Silage) Truck Loads	41	26	27	33	-	**126**	Trucks/yr
Liquids + Supplements - *Ex. Farm Grown*	919	577	610	733	-	**2,839**	t/year
Liquids + Supplements Truck Type	B Double	B Double	B Double	B Double			Type
Liquids + Supplements Truck Capacity (Suggested)	36	36	36	36	-		t/vehicle
Liquids + Supplements Truck Capacity (Used)	36	36	36	36			t/vehicle
Liquids + Supplements Truck Loads	26	16	17	20	-	**79**	Trucks/yr

Manure Production Details

Expansion Stage	1	2	3	4	5	Total	Units
Maximum SCU Capacity	1,800	1,325	1,500	1,800	-	**6,425**	SCU
Occupancy Rate			80%			**80%**	%
Average SCU in Feedlot	1,440	1,060	1,200	1,440	-	**5,140**	SCU
Manure Production							
Average raw manure harvested per SCU	0.80	0.80	0.80	0.80	0.80	**0.80**	t/SCU/yr
Average annual raw manure harvested	1,152	848	960	1,152	-	**4,112**	t/year
Manure processing utilised	Stockpiled	Stockpiled	Stockpiled	Stockpiled	Stockpiled		
Average raw/processed manure per scu	0.56	0.56	0.56	0.56	0.56		t/SCU/yr
Average annual manure for reuse	806	594	672	806	-	**2,878**	
Manure exported off-site annually	810.0	595.0	673.0	810.0	0.0	**2,888**	t/yr
Manure exported off-site annually	100%	100%	100%	100%		**100%**	%
Manure transport typical truck type	B double	B double	B double	B double	B double		
Tonnes of manure/truckload	36	36	36	36	-		t/vehicle
No. outgoing trucks/year	22.5	16.5	18.7	22.5	-	**80.2**	truck/yr

Traffic Generation - Individual Stages

xpansion Stage	1	2	3	4	5	Total	Units
ıcoming Cattle (Excludes farm grown)							
verage Occupancy	80%	80%	80%	80%	0%		%
attle per year	9,725	4,277	1,292	1,550	-	16,844	head/year
ypical truck type	B Double	B Double	B Double	B Double	-		
o. of head/truck	90	84	84	84	-		head/truck
o. of trucks/year	108	51	15	18	-	193	trucks/year
o. of trucks/week	2.1	1.0	0.3	0.4	-	3.7	trucks/week
o. of trucks/day	0.3	0.1	0.0	0.1	-	0.5	trucks/day
lutgoing Cattle							
attle out per year	9,676	4,255	1,286	1,543	-	16,760	head/year
ypical truck type	B Double	B Double	B Double	B Double	-		
o. of Head/truck	72	54	45	45	-		head/truck
o. of trucks/year	134	79	29	34	-	276	trucks/year
o. of trucks/week	2.6	1.5	0.5	0.7	-	5.3	trucks/week
o. of trucks/day	0.4	0.2	0.1	0.1	-	0.8	trucks/day
ırain and Feedstuffs							
otal feed Imported *Ex. Farm Grown*	10,211	6,415	6,783	8,140	-	31,549	t/year
ypical truck type	B Double	B Double	B Double	B Double	-		
o. of trucks/year	330	207	219	263	-	1,020	trucks/year
o. of trucks/week	6.3	4.0	4.2	5.1	-	19.6	trucks/week
o. of trucks/day	0.9	0.6	0.6	0.7	-	2.8	trucks/day
lutgoing Manure							
ıanure transported off-site	810	595	673	810	-	2,888	t/year
ypical truck type	B double	B double	B double	B double	B double		
o. of trucks/year	23	17	19	23	-	80	trucks/year
o. of trucks/week	0.4	0.3	0.4	0.4	-	1.5	trucks/week
o. of trucks/day	0.1	0.0	0.1	0.1	-	0.2	trucks/day
otal - Incoming and Outgoing Trucks							
o. of trucks - Incoming Cattle & Incoming Feed	438	258	235	282	-	1,213	trucks/year
ommodities	8	5	5	5	-	23	trucks/week
	1.2	0.7	0.6	0.8	-	3.3	trucks/day
ıcoming Annual Average Daily Traffic (AADT)	2.4	1.4	1.3	1.5	-	6.6	trucks/day
o. of trucks - Outgoing Cattle & Manure taken for offsite	157	95	47	57	-	356	trucks/year
isposal	3	2	1	1	-	7	trucks/week
	0.4	0.3	0.1	0.2	-	1.0	trucks/day
utgoing Annual Average Daily Traffic (AADT)	0.9	0.5	0.3	0.3	-	2.0	trucks/day
otal - Incoming & Outgoing Trucks	595	354	282	338	-	1,569	trucks/year
	11	7	5	7	-	30	trucks/week
	1.6	1.0	0.8	0.9	-	4.3	trucks/day
otal Annual Average Daily Traffic (AADT)	3.3	1.9	1.5	1.9	-	8.6	trucks/day
otal AADT (Rounded to Nearest Complete Trip)	4.0	2.0	2.0	2.0	-	10.0	trucks/day

Traffic Generation - Cumulative Stages

Expansion Stage	1	1+2	1+2+3	1+2+3+4	1+2+3+4+5	Units
Incoming Cattle (Excludes farm grown)						
Average Occupancy	80%	80%	80%	80%	0%	%
Cattle per year	9,725	14,001	15,293	16,844	-	head/year
Typical truck type	B Double	B Double	B Double	B Double	-	
No. of head/truck	90	84	84	84	-	head/truck
No. of trucks/year	108	159	174	193	-	trucks/year
No. of trucks/week	2.1	3.1	3.4	3.7	-	trucks/week
No. of trucks/day	0.3	0.4	0.5	0.5	-	trucks/day
Outgoing Cattle						
Cattle out per year	9,676	13,931	15,217	16,760	-	head/year
Typical truck type	B Double	B Double	B Double	B Double	-	
No. of Head/truck	72	54	45	45	-	head/truck
No. of trucks/year	134	213	242	276	-	trucks/year
No. of trucks/week	2.6	4.1	4.6	5.3	-	trucks/week
No. of trucks/day	0.4	0.6	0.7	0.8	-	trucks/day
Grain and Feedstuffs						
Total feed Imported *Ex. Farm Grown*	10,211	16,626	23,409	31,549	-	t/year
Typical truck type	B Double	B Double	B Double	B Double	-	
No. of trucks/year	330	538	757	1,020	-	trucks/year
No. of trucks/week	6.3	10.3	14.6	19.6	-	trucks/week
No. of trucks/day	0.9	1.5	2.1	2.8	-	trucks/day
Outgoing Manure						
Manure transported off-site	810	1,405	2,078	2,888	-	t/year
Typical truck type	B double	B double	B double	B double	B double	
No. of trucks/year	23	39	58	80	-	trucks/year
No. of trucks/week	0.4	0.8	1.1	1.5	-	trucks/week
No. of trucks/day	0.1	0.1	0.2	0.2	-	trucks/day
Total - Incoming and Outgoing Trucks						
No. of trucks - Incoming Cattle & Incoming Feed	438	697	931	1,213	-	trucks/ye
Commodities	8	13	18	23	-	trucks/we
	1.2	1.9	2.6	3.3	-	trucks/da
Incoming Annual Average Daily Traffic (AADT)	2.4	3.8	5.1	6.6	-	trucks/da
No. of trucks - Outgoing Cattle & Manure taken for offsite	157	252	299	356	-	trucks/ye
disposal	3	5	6	7	-	trucks/we
	0.4	0.7	0.8	1.0	-	trucks/da
Outgoing Annual Average Daily Traffic (AADT)	0.9	1.4	1.6	2.0	-	trucks/da
Total - Incoming & Outgoing Trucks	595	949	1,231	1,569	-	trucks/ye
	11	18	24	30	-	trucks/we
	1.6	2.6	3.4	4.3	-	trucks/da
Total Annual Average Daily Traffic (AADT)	3.3	5.2	6.7	8.6	-	trucks/da
Total AADT (Rounded to Nearest Complete Trip)	4.0	6.0	8.0	10.0	-	trucks/da

Average Annual Daily Traffic (AADT) Vehicle Comparison

Project Background Traffic

Design Horizon	Growth Year	AADT	Heavy Vehicles/Day	Light Vehicles/Day
2020	0	4424	575	3849
2021	1	4497	585	3912
2022	2	4571	594	3977
2023	3	4645	604	4041
2024	4	4721	614	4107
2025	5	4799	624	4175
2026	6	4877	634	4243
2027	7	4957	644	4313
2028	8	5038	655	4383
2029	9	5121	666	4455
2030	10	5204	677	4527
2031	11	5290	688	4602
2032	12	5376	699	4677
2033	13	5464	710	4754
2034	14	5553	722	4831
2035	15	5644	734	4910
2036	16	5737	746	4991
2037	17	5831	758	5073
2038	18	5926	770	5156
2039	19	6023	783	5240
2040	20	6122	796	5326

Historical Road Census Data

Traffic Census Year	AADT	Growth Rate
2015	3934	
2016	4102	4.27%
2017	4201	2.41%
2018	4359	3.76%
2019	4424	1.49%
2020	4258	-3.75%
5		1.64%

Census Traffic Assumptions

Traffic Growth Rate	% Heavy Vehicle
1.64%	13%

Staff Travel Assumptions

Stage	Offsite Staff	Offsite Daily Vehicles	Offsite AADT (Light)
Stage 1	5	3	6
Stage 1+2	5	3	6
Stage 1+2+3	7	5	10
Stage 1+2+3+4	10	8	16
Stage 1+2+3+4+5			0

Proposed Traffic Impacts

Parameter	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
Anticipated Development Year	2023	2023	2024	2030	
Background Light Traffic	4041	4041	4107	4527	
Feedlot AADT Light Traffic	6	6	10	16	
Total AADT Light Post Construction	4047	4047	4117	4543	
Increase in Light Traffic	0.15%	0.15%	0.24%	0.35%	#VALUE!
Background Heavy Traffic	603.9	603.9	613.7	676.5	
Feedlot AADT Heavy Traffic	0	0	2	4	
Total AADT Heavy Post Construction	603.9	603.9	615.7	680.5	#VALUE!
Increase in Heavy Traffic	0.00%	0.00%	0.33%	0.59%	#VALUE!
Background Total Traffic	4645.0	4645.0	4721.0	5204.0	
Feedlot AADT Total Traffic	6	6	12	20	#VALUE!
Total AADT Total Post Construction	4651.0	4651.0	4733.0	5224.0	#VALUE!
Increase in Total Traffic	0.13%	0.13%	0.25%	0.38%	#VALUE!

Assumptions

Table 1. Incoming cattle truck floor areas

Truck Type	Table Top	Semi Trailer (Single Deck)	Semi Trailer (Double Deck)	B Double	Road Train
Configuration	1 Deck	1 Deck	2 Decks	3 Decks	4 Decks
Total 12.5 x 2.4m decks	0.17	1	2	3	4
Total Floor Area (m^2)	5	29.3	58.5	87.8	117

Table 2. Minimum floor area by animal size

Mean liveweight (kg)	Area required (m^2/head)	Using Regression	% Difference	Head / Standard Deck
100	0.31	0.31	-0.9%	94
150	0.42	0.41	-1.8%	70
200	0.53	0.55	4.6%	55
250	0.77	0.79	2.7%	38
300	0.86	0.86	0.6%	34
350	0.98	0.95	-3.4%	30
400	1.05	1.04	-1.4%	28
450	1.13	1.13	0.3%	26
500	1.23	1.24	0.8%	24
550	1.34	1.36	1.2%	22
600	1.47	1.48	1.0%	20
650	1.63	1.62	-0.4%	18
700	1.78	1.78		16
750	1.94	1.94		15
800	2.13	2.13		13
850	2.33	2.33		12
900	2.55	2.55		11
950	2.79	2.79		10
1000	3.05	3.05		9

Table 3. Incoming Grain truck loading rates

Commodity	Body Truck	Truck & Dog	Semi Trailer	B Double	Road Train
Grain (tonnes)	12	24	24	36	48

Table 4. Incoming Roughage - Hay/Straw truck loading rates

Commodity	Body Truck	Truck & Dog	Semi Trailer	B Double	Road Train
Roughage - Hay/Straw (tonnes)	6	12	12	18	24

Table 5. Incoming Roughage - Silage truck loading rates

Commodity	Body Truck	Truck & Dog	Semi Trailer	B Double	Road Train
Roughage - Silage (tonnes)	12	25	25	36	50

Table 6. Incoming Other - Liquids truck loading rates

Commodity	Body Truck	Truck & Dog	Semi Trailer	B Double	Road Train
Other - Liquids (tonnes)	12	24	24	36	48

Table 7. Manure quantities depending on manure treatment process

Truck Type	Tonne/SCU
Immediate Disposal	0.8
Stockpiled	0.56
Composted	0.35

Table 8. Outgoing manure truck loading rates

Truck Type	Tonne / truck
Body Truck	12
Truck & Dog	18
Semi Trailer	24
B double	36

Appendix C Traffic mid-block count data

Received data from SBRC

Site ID	Unit_No	Location	Direction	AADT	Peak_Hr_C	Peak_Hour	Peak_Hour	Commercia	Speed_by_	Easting	Northing	Put_Down	Picked_Up
1	MH9359A4 MC56-L5 [MC	[Corndale Rd] 200m West Klass and Townes Rd	Eastbound	56.4	12	Monday	15:00-16:0	19.68	101.1	385286	7074201	18/04/2018	4/05/2018
			Westbound	62.6	15	Friday	08:00-09:0	25.65	105.7	385286	7074201	18/04/2018	4/05/2018
			Bi-directional	119									
2	V6228G3R MC56-L5 [MC	[Corndale Rd] Narrow Section 150m West RAD623 3883	Eastbound	49.6	11	Tuesday	12:00-13:0	19.61	105.3	388367	7075417	2/06/2020	16/06/2020
			Westbound	51.1	11	Thursday	16:00-17:0	26.63	102.9	388367	7075417	2/06/2020	16/06/2020
			Bi-directional	100.7									
3	V6228G3R MC56-L5 [MC	[Memerambi Barkers CK] 100m west Old Wondai Rd nor	Eastbound	37.8	9	Thursday	08:00-09:0	21.75	54.6	392376.1	7076443	14/10/2015	22/10/2015
			Westbound	39.1	10	Monday	08:00-09:0	28.42	59.6	392375.2	7076445	14/10/2015	22/10/2015
			Bi-directional	76.9									
4	KY38WZ89 MC56-L5 [MC	[Memerambi Barkers] 200m east of Wattlecamp Rd E39	Eastbound	45.5	9	Friday	07:00-08:0	11.43	93.1	399006	7075234	8/11/2016	22/11/2016
			Westbound	48.2	13	Sunday	11:00-12:0	12.97	87.1	399006	7075234	8/11/2016	22/11/2016
			Bi-directional	93.7									
5	V6228G3R MC56-L5 [MC	[Memerambi Barkers] Between Birch and Wattlecamp e	Eastbound	66.4	16	Friday	08:00-09:0	11.11	96.3	397733	7075192	8/11/2016	22/11/2016
			Westbound	68.5	12	Wednesday	12:00-13:0	9.34	98.6	397733	7075192	8/11/2016	22/11/2016
			Bi-directional	134.9									
			Av.	105.04	10.504								

Appendix D Traffic generation calculations

TRAFFIC GENERATION CONTROL SHEET

Project	Pakadering	Days per year	365
Number	23E-0291'		
Date	25/10/2023		

1. Development yield and generation

Heavy Vehicle movements

			Per year					Per Day					Assumed Peak Hour	
Stage	SCU/Stage	Cumulative	Cattle Truck in	Cattle truck out	Grain In	Manure Out	Cumulative	Cattle Truck in	Cattle truck out	Grain In	Manure Out	Cumulative	Staged	Cumulative
1 (Existing)	1800	1800	108	134	330	23	595	0.3	0.4	0.9	0.1	1.6	1	1
2 (Existing)	1325	3125	51	79	207	17	949	0.1	0.2	0.6	0.0	2.6	0	1
3	1500	4625	15	29	219	19	1231	0.0	0.1	0.6	0.1	3.4	1	2
4	1800	6425	18	34	263	23	1569	0.0	0.1	0.7	0.1	4.3	0	2
		3300												

Staff Movements

Stage	Staff	Cumulative	Carpooling rate	Per day	Staff Out	Per day Cumulative	Staff Out
1 (Existing)	5	5	65%	3	3	3	3
2 (Existing)	0	5	65%	0	0	3	3
3	2	7	75%	2	2	5	5
4	3	10	75%	3	3	8	8

2. Distribution assumptions

Trip Rates

					Cumulative			
	Am peak volumes		Pm peak volumes		Am peak volumes		Pm peak volumes	
Stage	In	Out	In	Out	In	Out	In	Out
1 (Existing)	4	1	1	4	4	1	1	4
2 (Existing)	0	0	0	0	4	1	1	4
3	3	1	1	3	7	2	2	7
4	3	0	0	3	10	2	2	10
Total		10	2	2	10			

Growth Rate (sourced from QG)

Site 30031	
Year	AADT
2020	4258
2019	4424
2018	4359
2017	4201
2016	4102
2015	3934
2014	3901
2013	3879
5yr Av.	0.7%

Distribution

				Stage 1+2				Stage 3				Stage 4				TOTAL			
				AM Peak volumes		PM Peak volumes		AM Peak volumes		PM Peak volumes		AM Peak volumes		PM Peak volumes		AM Peak volumes		PM Peak volumes	
Direction	ID	Split	Origin/Destination	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
East	Burnett Highway	0%	Burnett Highway	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
West	MBC Road	100%	Memerambi	4	1	1	4	3	1	1	3	3	0	0	3	10	2	2	10
North	*Bunya Hgihway*	*10%*	*Wondai*	*1*	*0*	*0*	*1*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*1*	*0*	*0*	*1*
South	*Bunya Highway*	*90%*	*Kingaroy*	*4*	*1*	*1*	*4*	*2*	*1*	*1*	*2*	*3*	*0*	*0*	*3*	*9*	*2*	*2*	*9*
			Total	4	1	1	4	3	1	1	3	3	0	0	3	10	2	2	10

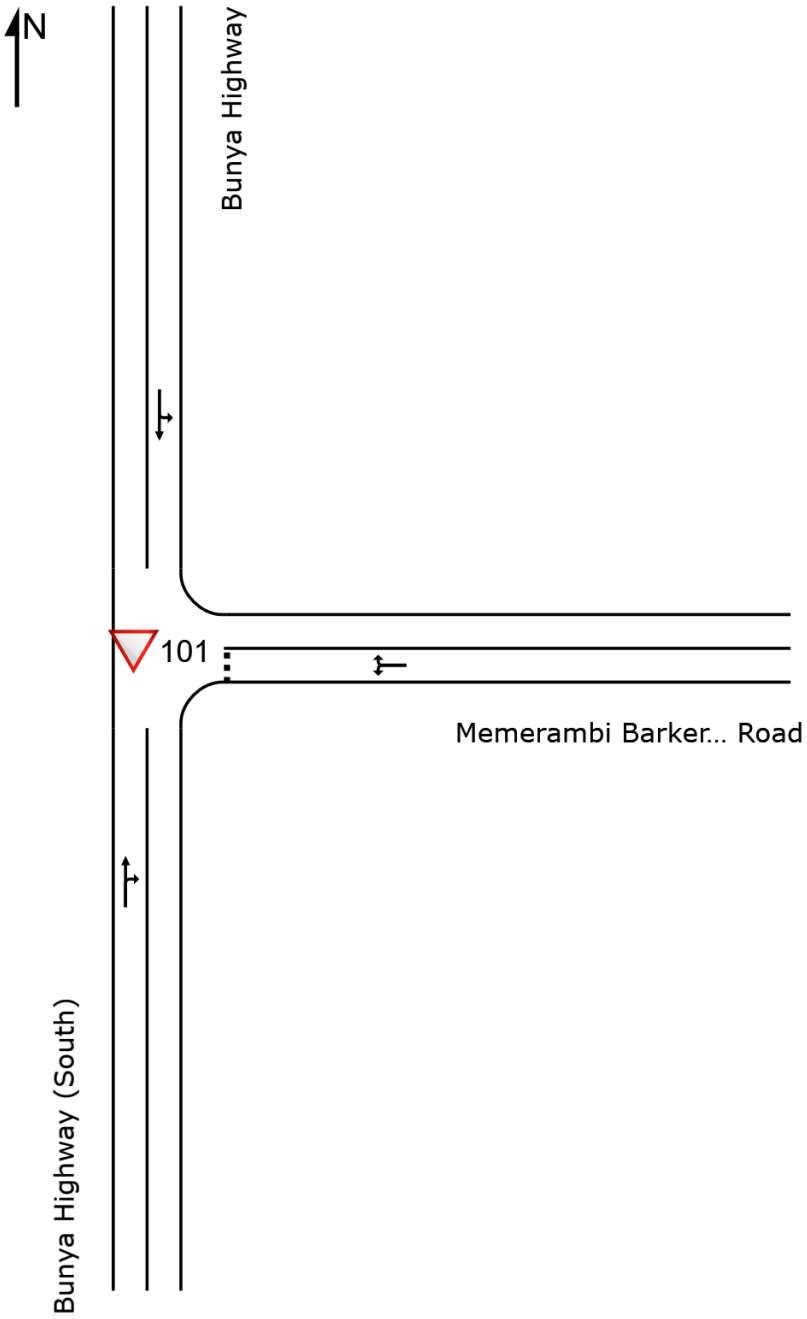
Appendix E SIDRA results

SITE LAYOUT

Site: 101 [2030 AM True BGD (Site Folder: General)]

Bunya Highway / Memerambi Barkers Creek Road Intersection
Site Category: (None)
Give-Way (Two-Way)

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



MOVEMENT SUMMARY

Site: 101 [2030 AM True BGD (Site Folder: General)]

Bunya Highway / Memerambi Barkers Creek Road Intersection
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Bunya Highway (South)														
2	T1	353	20.0	372	20.0	0.237	0.2	LOS A	0.3	2.2	0.08	0.03	0.08	59.4
3	R2	20	20.0	21	20.0	0.237	8.3	LOS A	0.3	2.2	0.08	0.03	0.08	56.1
Approach		373	20.0	393	20.0	0.237	0.7	NA	0.3	2.2	0.08	0.03	0.08	59.2
East: Memerambi Barkers Creek Road														
4	L2	17	20.0	18	20.0	0.059	7.6	LOS A	0.2	1.6	0.51	0.74	0.51	50.0
6	R2	17	20.0	18	20.0	0.059	11.7	LOS B	0.2	1.6	0.51	0.74	0.51	49.5
Approach		34	20.0	36	20.0	0.059	9.6	LOS A	0.2	1.6	0.51	0.74	0.51	49.7
North: Bunya Highway														
7	L2	17	20.0	18	20.0	0.226	5.8	LOS A	0.0	0.0	0.00	0.03	0.00	57.0
8	T1	353	20.0	372	20.0	0.226	0.1	LOS A	0.0	0.0	0.00	0.03	0.00	59.6
Approach		370	20.0	389	20.0	0.226	0.3	NA	0.0	0.0	0.00	0.03	0.00	59.5
All Vehicles		777	20.0	818	20.0	0.237	0.9	NA	0.3	2.2	0.06	0.06	0.06	58.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Organisation: RMA ENGINEERS PTY LTD | Licence: NETWORK / 1PC | Processed: Tuesday, 24 October 2023 12:20:17 PM
Project: N:\Synergy\Projects\23E-0291 Pakaderinga Feedlot\4 Design\Traffic\Sidra\Bunya HWY Memerambi Barkers Creek Rd.sip9

MOVEMENT SUMMARY

Site: 101 [2030 PM True BGD (Site Folder: General)]

Bunya Highway / Memerambi Barkers Creek Road Intersection
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Bunya Highway (South)														
2	T1	353	20.0	372	20.0	0.233	0.2	LOS A	0.2	1.9	0.07	0.03	0.07	59.4
3	R2	17	20.0	18	20.0	0.233	8.3	LOS A	0.2	1.9	0.07	0.03	0.07	56.2
Approach		370	20.0	389	20.0	0.233	0.6	NA	0.2	1.9	0.07	0.03	0.07	59.3
East: Memerambi Barkers Creek Road														
4	L2	20	20.0	21	20.0	0.062	7.6	LOS A	0.2	1.7	0.51	0.73	0.51	50.1
6	R2	17	20.0	18	20.0	0.062	11.7	LOS B	0.2	1.7	0.51	0.73	0.51	49.6
Approach		37	20.0	39	20.0	0.062	9.5	LOS A	0.2	1.7	0.51	0.73	0.51	49.9
North: Bunya Highway														
7	L2	17	20.0	18	20.0	0.226	5.8	LOS A	0.0	0.0	0.00	0.03	0.00	57.0
8	T1	353	20.0	372	20.0	0.226	0.1	LOS A	0.0	0.0	0.00	0.03	0.00	59.6
Approach		370	20.0	389	20.0	0.226	0.3	NA	0.0	0.0	0.00	0.03	0.00	59.5
All Vehicles		777	20.0	818	20.0	0.233	0.9	NA	0.2	1.9	0.06	0.06	0.06	58.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Organisation: RMA ENGINEERS PTY LTD | Licence: NETWORK / 1PC | Processed: Tuesday, 24 October 2023 12:20:18 PM
Project: N:\Synergy\Projects\23E-0291 Pakaderinga Feedlot\4 Design\Traffic\Sidra\Bunya HWY Memerambi Barkers Creek Rd.sip9

MOVEMENT SUMMARY

Site: 101 [2030 AM True BGD + DEV (Site Folder: General)]

Bunya Highway / Memerambi Barkers Creek Road Intersection
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Bunya Highway (South)														
2	T1	353	20.0	372	20.0	0.242	0.3	LOS A	0.3	2.8	0.10	0.04	0.10	59.2
3	R2	25	20.0	26	20.0	0.242	8.3	LOS A	0.3	2.8	0.10	0.04	0.10	56.0
Approach		378	20.0	398	20.0	0.242	0.8	NA	0.3	2.8	0.10	0.04	0.10	59.0
East: Memerambi Barkers Creek Road														
4	L2	18	20.0	19	20.0	0.060	7.6	LOS A	0.2	1.6	0.51	0.73	0.51	50.0
6	R2	17	20.0	18	20.0	0.060	11.8	LOS B	0.2	1.6	0.51	0.73	0.51	49.5
Approach		35	20.0	37	20.0	0.060	9.6	LOS A	0.2	1.6	0.51	0.73	0.51	49.7
North: Bunya Highway														
7	L2	18	20.0	19	20.0	0.227	5.8	LOS A	0.0	0.0	0.00	0.03	0.00	57.0
8	T1	353	20.0	372	20.0	0.227	0.1	LOS A	0.0	0.0	0.00	0.03	0.00	59.6
Approach		371	20.0	391	20.0	0.227	0.3	NA	0.0	0.0	0.00	0.03	0.00	59.5
All Vehicles		784	20.0	825	20.0	0.242	1.0	NA	0.3	2.8	0.07	0.07	0.07	58.7

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Organisation: RMA ENGINEERS PTY LTD | Licence: NETWORK / 1PC | Processed: Tuesday, 24 October 2023 12:20:18 PM
Project: N:\Synergy\Projects\23E-0291 Pakaderinga Feedlot\4 Design\Traffic\Sidra\Bunya HWY Memerambi Barkers Creek Rd.sip9

MOVEMENT SUMMARY

Site: 101 [2030 PM True BGD + DEV (Site Folder: General)]

Bunya Highway / Memerambi Barkers Creek Road Intersection
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Bunya Highway (South)														
2	T1	353	20.0	372	20.0	0.234	0.2	LOS A	0.2	2.0	0.07	0.03	0.07	59.4
3	R2	18	20.0	19	20.0	0.234	8.3	LOS A	0.2	2.0	0.07	0.03	0.07	56.2
Approach		371	20.0	391	20.0	0.234	0.6	NA	0.2	2.0	0.07	0.03	0.07	59.3
East: Memerambi Barkers Creek Road														
4	L2	25	20.0	26	20.0	0.070	7.6	LOS A	0.2	1.9	0.51	0.73	0.51	50.2
6	R2	18	20.0	19	20.0	0.070	11.7	LOS B	0.2	1.9	0.51	0.73	0.51	49.7
Approach		43	20.0	45	20.0	0.070	9.3	LOS A	0.2	1.9	0.51	0.73	0.51	50.0
North: Bunya Highway														
7	L2	17	20.0	18	20.0	0.226	5.8	LOS A	0.0	0.0	0.00	0.03	0.00	57.0
8	T1	353	20.0	372	20.0	0.226	0.1	LOS A	0.0	0.0	0.00	0.03	0.00	59.6
Approach		370	20.0	389	20.0	0.226	0.3	NA	0.0	0.0	0.00	0.03	0.00	59.5
All Vehicles		784	20.0	825	20.0	0.234	1.0	NA	0.2	2.0	0.06	0.07	0.06	58.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Project: N:\Synergy\Projects\23E-0291 Pakaderinga Feedlot\4 Design\Traffic\Sidra\Bunya HWY Memerambi Barkers Creek Rd.sip9

Appendix F Turn warrant assessment

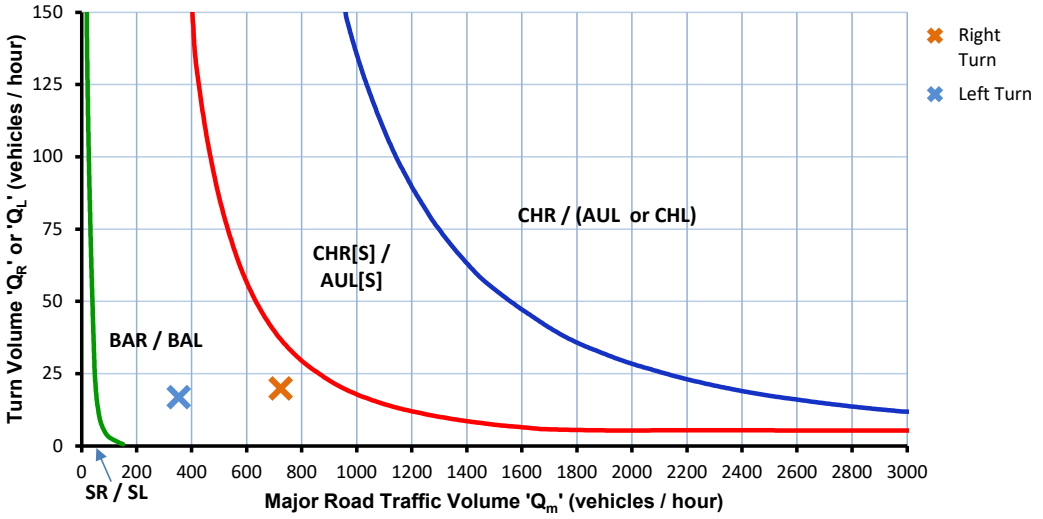
WARRANTS FOR TURN TREATMENTS CALCULATOR

PROJECT: 23E-0291

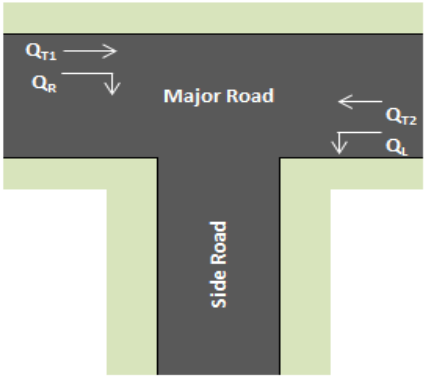
Scenario: 2030 AM Background

INTERSECTION DETAILS		
Major Road		Bunya Highway
Side Road		Memerambi Barkers Creek Road
Splitter Island on Major Road	Yes or No	No
Design Domain	NDD or EDD	EDD
Major Road Design Speed	(km/h)	Less than/equal to 70
TRAFFIC VOLUMES (Vehicles/Hour)		
Major Road approaching through traffic Flow	Q_{T1}	353
Major Road opposing through traffic flow	Q_{T2}	353
Right Turn Traffic Flow	Q_R	20
Left Turn Traffic Flow	Q_L	17
Major Road Traffic Volume for Right Turn	Q_M	723
Major Road Traffic Volume for Left Turn	Q_M	353

Turn Warrant Graph (as adapted from RPDM Figure 13.22)



CALCULATION OF MAJOR ROAD TRAFFICE VOLUME PARAMETER



TURN TYPE	SPLITTER ISLAND	Q_M
Right	No	$Q_{T1} + Q_{T2} + Q_L$
Right	Yes	$Q_{T1} + Q_{T2}$
Left	No/Yes	Q_{T2}

NOTES:

Right turn: BAR

Left turn: BAL

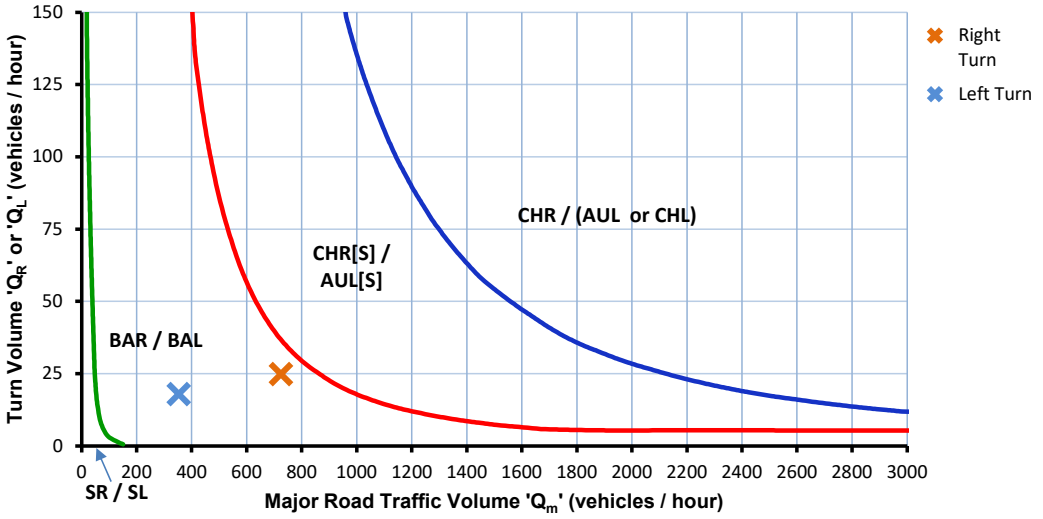
WARRANTS FOR TURN TREATMENTS CALCULATOR

PROJECT: 23E-0291

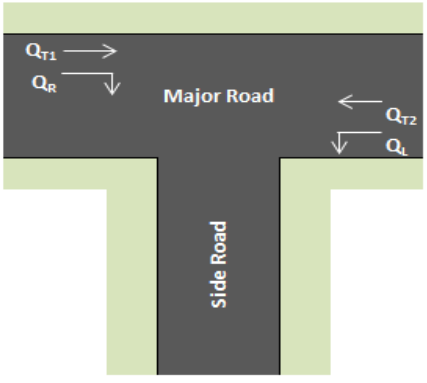
Scenario: 2030 AM Background + Dev Stages 3&4

INTERSECTION DETAILS		
Major Road		Bunya Highway
Side Road		Memerambi Barkers Creek Road
Splitter Island on Major Road	Yes or No	No
Design Domain	NDD or EDD	EDD
Major Road Design Speed	(km/h)	Less than/equal to 70
TRAFFIC VOLUMES (Vehicles/Hour)		
Major Road approaching through traffic Flow	Q_{T1}	353
Major Road opposing through traffic flow	Q_{T2}	353
Right Turn Traffic Flow	Q_R	25
Left Turn Traffic Flow	Q_L	18
Major Road Traffic Volume for Right Turn	Q_M	724
Major Road Traffic Volume for Left Turn	Q_M	353

Turn Warrant Graph (as adapted from RPDM Figure 13.22)



CALCULATION OF MAJOR ROAD TRAFFICE VOLUME PARAMETER



TURN TYPE	SPLITTER ISLAND	Q_M
Right	No	$Q_{T1} + Q_{T2} + Q_L$
Right	Yes	$Q_{T1} + Q_{T2}$
Left	No/Yes	Q_{T2}

NOTES:

Right turn: BAR

Left turn: BAL

Appendix G Pavement Impact Assessment calculations

Background trips & SAR4s

Road Name	Leg	Direction	2030 AADT	HV%	2030 HV AADT	SAR/HV	SAR4s/Day	SAR4s/Annum
	North	Northbound	2352	12%	282	3.2	903	329620
		Southbound	2352	12%	282	3.2	903	329620
	South	Northbound	2352	12%	282	3.2	903	329620
Bunya Highway		Southbound	2352	12%	282	3.2	903	329620

Development trips

Road Name	Leg	Direction	Cattle In	Cattle Out	Feedstuff	Manure
	North	Northbound	3.3	6.3	48.2	4.2
		Southbound	3.3	6.3	48.2	4.2
	South	Northbound	29.7	56.7	433.8	37.8
Bunya Highway		Southbound	29.7	56.7	433.8	37.8

Development SAR4s

Road Name	Leg	Direction	Cattle In	Cattle Out	Feedstuff	Manure	Total
	North	Northbound	1.749	39.69	25.546	26.46	93.445
		Southbound	20.79	3.339	303.66	2.226	330.015
	South	Northbound	187.11	30.051	2732.94	20.034	2970.135
Bunya Highway		Southbound	15.741	357.21	229.914	238.14	841.005

Development increase

Road Name	Leg	Direction	BG annual SAR4s	Dev annual SAR4s	% increase	>5%?
	North	Northbound	329620	93.445	0.0%	NO
		Southbound	329620	330.015	0.1%	NO
	South	Northbound	329620	2970.135	0.9%	NO
Bunya Highway		Southbound	329620	841.005	0.3%	NO

range environmental consultants

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Toowoomba QLD 4350

BRISBANE
Unit 1, 7 Birubi St,
Coorparoo QLD 4151

(07) 4588 6711

C/- Matt Norton
Pakaderinga Feedlot
1270 Memerambi-Barkers Creek Road
Nanango, QLD 4615

Our Reference: J001523
Date: 3 October 2023

BUSHFIRE HAZARD ADVICE LETTER FOR 1270 MEMERAMBI-BARKERS CREEK ROAD, NANANGO (LOT 1 ON RP157322)

Dear Matt,

Range Environmental was recently engaged to undertake a site assessment and prepare a Bushfire Hazard Assessment for 1270 Memerambi-Barkers Creek Road, Nanango (lot 1 on RP157322) for Pakaderinga Feedlot. This letter has been prepared to include a desktop assessment and review of the potential bushfire hazard exposure in relation to proposed development on the site. This letter includes the following structure:

- Introduction to the proposed development;
- Results of a basic desktop bushfire hazard exposure assessment;
- Assessment of development compliance with the South Burnett Regional Council (SBRC) and State Planning Policy (SPP) bushfire hazard codes; and
- Recommendations to maintain an acceptable bushfire hazard exposure outcome.

Introduction to the proposed development

The site occurs on 80.45 ha of land currently zoned as Rural under the SBRC (2017 Version 1.4). The site is bounded by Memerabmi Barkers Creek Road to the north and Old Wondal Road to the west. Rural properties surround the site, with areas of Environmental Management and Conservation further to the north and south. Vegetation to the north, west and south of the site contains unmanaged woodland vegetation. The mapped regional ecosystems and their descriptions are detailed in Table 1.

The site currently contains an existing cattle feedlot, with the proposed development intending to expand associated infrastructure. The site is adjacent to areas of unmanaged vegetation directly to the southwest of the existing and proposed infrastructure.

The development site occurs on a gently sloping area, with the land falling from the southwest to the northeast with underlying slopes in the order of 5% or 3°.

Table 1 Description of regional ecosystems surrounding the site

Regional Ecosystem	Description
12.12.24	*Angophora leiocarpa, Eucalyptus crebra* +/- *Corymbia intermedia, E. longirostrata, E. major, E. tereticornis*, *E. acmenoides* or *E. portuensis, C. citriodora* subsp. *variegata* woodland to open forest. Occurs on Mesozoic to Proterozoic igneous rocks including granite.
12.12.5	Open forest to woodland of *Corymbia citriodora subsp. variegata*, usually with *Eucalyptus crebra*. Other species such as *Eucalyptus exserta* and *E. moluccana* present in scattered patches or in low densities. Understorey generally grassy. Occurs on hills and ranges on Mesozoic to Proterozoic igneous rocks.
12.12.12	*Eucalyptus tereticornis, Corymbia intermedia, E. crebra* open forest to woodland. Other species present can include *Eucalyptus melanophloia, Corymbia tessellaris, Angophora subvelutina, A. leiocarpa, C. clarksoniana* (central and northern parts) and *E. siderophloia* with *Melaleuca quinquenervia, Lophostemon suaveolens* near drainage lines in moister areas. Occurs on Mesozoic to Proterozoic igneous rocks usually on lower slopes, especially granite lowlands and basins. Contains Palustrine.

Results of a desktop bushfire hazard exposure assessment

The bushfire hazard that development could potentially be exposed to was calculated using the Australian Standard Construction of buildings in bushfire-prone areas (AS3959-2018) Method 2 and fuel loads consistent with the post-development VHCs as set out in SPP technical reference guide 'Bushfire Resilient Communities' (2019). AS 3959-2018 identifies the level of construction required for the purpose of ensuring that a building is constructed to withstand a potential bushfire attack. This Standard is primarily concerned with improving the ability of buildings in designated bushfire-prone areas to better withstand attack from bushfire, thus giving a measure of protection to the building occupants (until the fire front passes) as well as to the building itself. AS3959-2018 requires that vegetation be assessed within 100 metres of a building when determining the Bushfire Attack Level.

Bushfire Resilient Communities Technical Reference Guide for the State Planning Policy State Interest 'Natural Hazards, Risk and Resilience - Bushfire' (2019) requires that bushfire hazard is to be assessed within 150m of the development footprint.

The following details summarise the steps that were carried out using information collected from the relevant site and apply this information to the conditions required and set out in Australian Standard '*Construction of Buildings in Bushfire-prone areas*' (AS 3959-2018) to identify the relevant bushfire hazard exposure for the proposed development. The calculations of bushfire hazard exposure are detailed in Attachment 2.

Table 2 Summary of attributes to determine bushfire hazard exposure

Step	Procedure	Value southwest	Value northeast
1	Fire Danger Index (FDI)	60	60
2	Vegetation Hazard Class (VHC)	9.2	9.2
3	Overall fuel load (t/ha)	17.2	17.2
4	Minimum Separation Distance from potentially hazardous vegetation	>15m	>25m
5	Location of vegetation (Upslope/Downslope)	Upslope	Downslope

6	Effective slope of land under classified vegetation	0 degrees	3 degrees
7	Radiant heat flux[3]	28.50kW/m^2	18.77kW/m^2

Vegetation Hazard Class

The new methodology for State-wide mapping of bushfire prone areas in Queensland identifies Potential Fuel Loads that are assigned to vegetation categories (Vegetation Hazard Classes) formed by amalgamating land use and vegetation types with a moderately consistent fuel load and structure. The Potential Fuel Load assigned to each Vegetation Hazard Class (VHC) is generally representative of the higher fuel load expected for the typical vegetation types, landscape and site conditions within each Vegetation Hazard Class. This Potential Fuel Load of each Vegetation Hazard Class would approximate the 80th percentile fuel load of the "long unburnt condition" for the class (generally greater than 10 years without burning). The Vegetation Hazard Classes (VHC) applicable for the site were identified to be VHC 9.2 *Moist to dry eucalypt woodlands on costal lowlands and ranges.* Table 3 provides a brief description of VHCs and their potential fuel load characteristics.

Table 3 Vegetation hazard class description and 80th percentile potential fuel load

Vegetation Hazard Class (VHC)	Surface (t/ha)	Near surface (t/ha)	Elevated	Bark	Total
9.2 *Moist to dry eucalypt woodlands on costal lowlands and ranges*	11.4	3.5	1.3	1.0	17.2

Fuel load data sources from Bushfire Resilient Communities Technical Reference Guide October 2019

The overall bushfire hazard exposure in relation to the proposed development is a maximum of 28.50kW/m^2**.**

Development compliance with bushfire hazard codes

South Burnett Regional Council (SBRC)

The South Burnett Regional Council Planning Scheme (SBRC) (2021 V 1.4) contains a rural zone code which includes a Bushfire hazard overlay code.

The purpose of the rural residential zone code is to

a. provide for rural uses and activities;

b. provide for or other uses and activities that are compatible with

   i. Existing and future rural uses and activities; and
   ii. The character and environmental features of the zone; and

c. Maintain the capacity of land for rural uses and activities by protecting and managing significant natural resources and processes.

This code identifies performance outcomes and acceptable outcomes. Where appropriate, this Code has been applied to the development and outcomes proposed to comply with the accepted development and assessment benchmarks. Table 4 provides responses to the bushfire hazard overlay code.

Table 4 SBRC Rural Zone Bushfire Hazard Overlay Code – Accepted development subject to requirements and assessable development

Performance outcomes	Acceptable Outcomes	Proposed solutions
PO21 Development is not placed at unacceptable risk from bushfire, does not increase the extent or severity of bushfire and maintains the safety of people and property from bushfire	**AO21.1** Development does not occur in areas mapped as Very High or High Potential Bushfire Intensity Areas on the SPP Interactive Mapping (Plan Making). or **AO21.2** A written assessment by a suitably experienced or qualified person confirms that the site is of Low Potential Bushfire Hazard. or **AO21.3** For areas mapped as Medium Potential Bushfire Intensity Areas on the SPP Interactive Mapping (Plan Making), bushfire risk is mitigated through a Bushfire Management Plan incorporating: a. Lot design and the siting of buildings and uses so: i. high intensity uses are located on the least bushfire prone area on the site and activities least susceptible to fire are sited closest to the bushfire hazard; and ii. efficient emergency access is optimised; and iii. bushfire risk is effectively minimised having regard to aspect, elevation, slope and vegetation. b. Including firebreaks that provide adequate: i. setbacks between buildings/ structures and hazardous vegetation; and ii. access for fire fighting or other emergency vehicles; and c. Road access for fire-fighting appliances and firebreaks are provided through a perimeter road that separates the use from areas of bushfire hazard and that road has a minimum cleared width of 20 metres; and d. Where a reticulated water supply is not available and development involves	**PS21.1** Development largely occurs in an area mapped as Potential Impact buffer, with adjacent areas of Medium Potential Bushfire Intensity to the southwest. Following desktop analysis, the site occurs in areas of Potential Impact Buffer. **PS21.2** NA **PS21.3** NA The site is identified as being wholly contained within an area of Potential Impact Buffer.

	buildings with a gross floor area greater than 50m2, one tank within 100m of each residential building that has: i. fire brigade tank fittings; and ii. 25,000 litres dedicated for fire fighting purposes.	
PO22 Community infrastructure in any area mapped as Very High to Medium (Potential Intensity) Areas are able to function effectively during and immediately after bushfire events.	**AO22.1** No outcome specified.	NA
PO23 Public safety and the environment are not adversely affected by the detrimental impacts of bushfire on hazardous materials manufactured or stored in bulk.	**AO23.1** No hazardous materials, manufactured or stored in bulk, are on land mapped as Very High to Medium (Potential Intensity) Areas.	**PS23.1** NA. The site is identified as being wholly contained within an area of Potential Impact Buffer. Areas containing potentially hazardous vegetation are located in the surrounding landscape. Adequate separation from areas of hazardous vegetation can be achieved that minimise potential exposure to bushfire hazards.
PO24 Major risks to the safety or property and to the wellbeing of occupants in areas mapped as Very High to Medium (Potential Intensity) Areas is minimised through appropriate siting, servicing and managing of residential premises	**AO24.1** New dwellings on land mapped as Very High to Medium (Potential Intensity) Areas are located: a. Centrally within existing cleared areas on a lot which allows a regular shaped area (with a minimum dimension of 50m) of 5,000m2 to be identified that: i. is free of highly combustible vegetated areas; and ii. is on southerly to easterly facing slopes not exceeding 15% gradient; or iii. on flat lands at the base of north to western facing slopes not exceeding 15% gradient. b. A fire protection buffer is established around the complete perimeter of the dwelling unit within a lot for a minimum width of 50m.	NA. The development does not include the construction of a dwelling.

State Planning Policy (SPP)

The Queensland Government's State Planning Policy (SPP) for Natural Hazards (Bushfire) contains development assessment requirements that developments in bushfire prone areas are required to address. The Code proposes Performance outcomes and Acceptable outcomes which have been addressed through Proposed Solutions.

The State Planning Policy (July 2017) provides a comprehensive set of principles which underpin Queensland's planning system to guide local government and the state government in land use planning and development assessment. The State's interest in relation to natural hazards is: "The risks associated with natural hazards are avoided or mitigated to protect people and property and enhance the community's resilience to natural hazards". The State Planning Policy (July 2017) development assessment requirements have been addressed in Table 5.

Table 5 State Planning Policy development assessment requirements (Natural hazards, risk and resilience - Bushfire)

Assessment Benchmark	Development Assessment Requirement	Proposed Solution
Applicable development	A development application for a material change of use, reconfiguration of a lot or operational works on premises in any of the following: 2. bushfire prone areas 3. flood hazard areas 4. landslide hazard areas 5. storm tide inundation areas 6. erosion prone area.	Development constitutes an MCU in an area identified as a bushfire prone land.
3	Bushfire, flood, landslide, storm tide inundation, and erosion prone areas outside the coastal management district: Development other than that assessed against (1) above, avoids natural hazard areas, or where it is not possible to avoid the natural hazard area, development mitigates the risks to people and property to an acceptable or tolerable level.	PS1. The development is located in an area of mapped Potential Impact Buffer with adjacent areas of Medium Potential Bushfire Intensity by the Queensland Government Development Assessment Mapping System Natural Hazards Risk and Resilience mapping (Bushfire). The South Burnett Regional Council utilises the State mapping system for bushfire hazard. A desktop assessment was conducted to identify the mapped VHC classes and the level of potential bushfire hazard present. Advice to determine the Bushfire Hazard Exposure of the proposed development was prepared to identify measures to mitigate the risks to people and property to an acceptable level. The proposed development avoids natural hazard areas by the minimum setback of 15 metres from potentially hazardous vegetation to the southwest and 25 metres to the northeast.
4	All natural hazard areas: Development supports and does not hinder disaster management response or recovery capacity and of capabilities.	PS2. Development, comprising the extension of an existing cattle feedlot is proposed to occur at the site in an area mapped by the Queensland Government Development Assessment Mapping System as comprising Potential Impact Buffer and

		adjacent areas of Medium Potential Bushfire Intensity. The development actively assists and supports disaster management capacity and capabilities by: 1. The site retains a water supply on site which exceeds the minimum required 10,000 litres; 2. Providing ready access to a water supply suitable for fire-fighting purposes. This can be achieved by provision of a dedicated on-site water storage system that permanently holds a minimum of 10,000 litres for fire fighting purposes; and 3. Managing potentially hazardous fuel loads on the site.
5	All natural hazard areas: Development directly, indirectly and cumulatively avoids an increase in the severity of the natural hazard and the potential for damage on the site or to other properties	PS3. The development takes into consideration topography, location of existing vegetation and potential natural hazards. The site comprises mown/grazed grass with scattered trees, areas of woodland are present in the surrounding landscape to the southwest and northeast. Mitigation measures identified include: 4. Maintenance of vegetation (including understorey) on the site to prevent the accumulation of hazardous fuel loads; and 5. Landscaping near buildings to consist of plants that have low flammability.
6	All natural hazard areas: Risks to public safety and the environment from the location of hazardous materials and the release of these materials as a result of a natural hazard are avoided.	PS4. Development comprises the extension of an existing cattle feedlot. It does not involve the location or use of hazardous materials within areas of potential bushfire hazard.
7	All natural hazard areas: The natural processes and the protective function of landforms and the vegetation that can mitigate risks associated with the natural hazard are maintained or enhanced.	PS5 The development seeks to maintain the protective function of landforms and vegetation present on the site by: 6. Ongoing and effective management of vegetation on the site; 7. Separation from hazardous, upslope vegetation, 8. Retaining the natural landform by minimising the extent of major earthworks required; and 9. Ensuring that any landscape plantings are compatible with the natural environment and do not contribute to an elevated bushfire hazard.

		The existing Old Wondai Road located approximately 34 metres southwest of the site provides additional bushfire hazard mitigation opportunities/capacity. This existing road reserve fragments the hazardous vegetation, providing additional protection in the event of a bushfire. Incorporation of these measures in the development will enable natural processes and functions to continue and aid in the mitigation of risks associated with potential natural hazards.

Recommendations to maintain an acceptable bushfire hazard exposure outcome

The following recommendations are made for the proposed development with reference to the potential bushfire hazard exposure of the site:

- The proposed development can be sited over the majority of the lot while maintaining a maximum radiant heat flux of <29 kW/m2, ensuring that a minimum 15m setback between structures and the western boundary is maintained;
- That potential buildings are designed and constructed to meet the requirements of the relevant building standards prevailing at the time. This includes AS3959 – 2018, the BCA and relevant Council bylaws and building regulations.
- Class 10 buildings or structures (e.g. fences) are constructed using non-combustible materials (.e.g. steel cattle rail panels)
- That vegetation be managed on the site to minimise the accumulation of hazardous fuel loads and to control understory woody and highly flammable weeds such as lantana.
- That any landscaping works utilise plant species and design principles suitable for bushfire prone areas.
- That the site maintains a dedicated permanent water supply with a minimum 10,000L which is capable of supplying water for fire-fighting purposes.

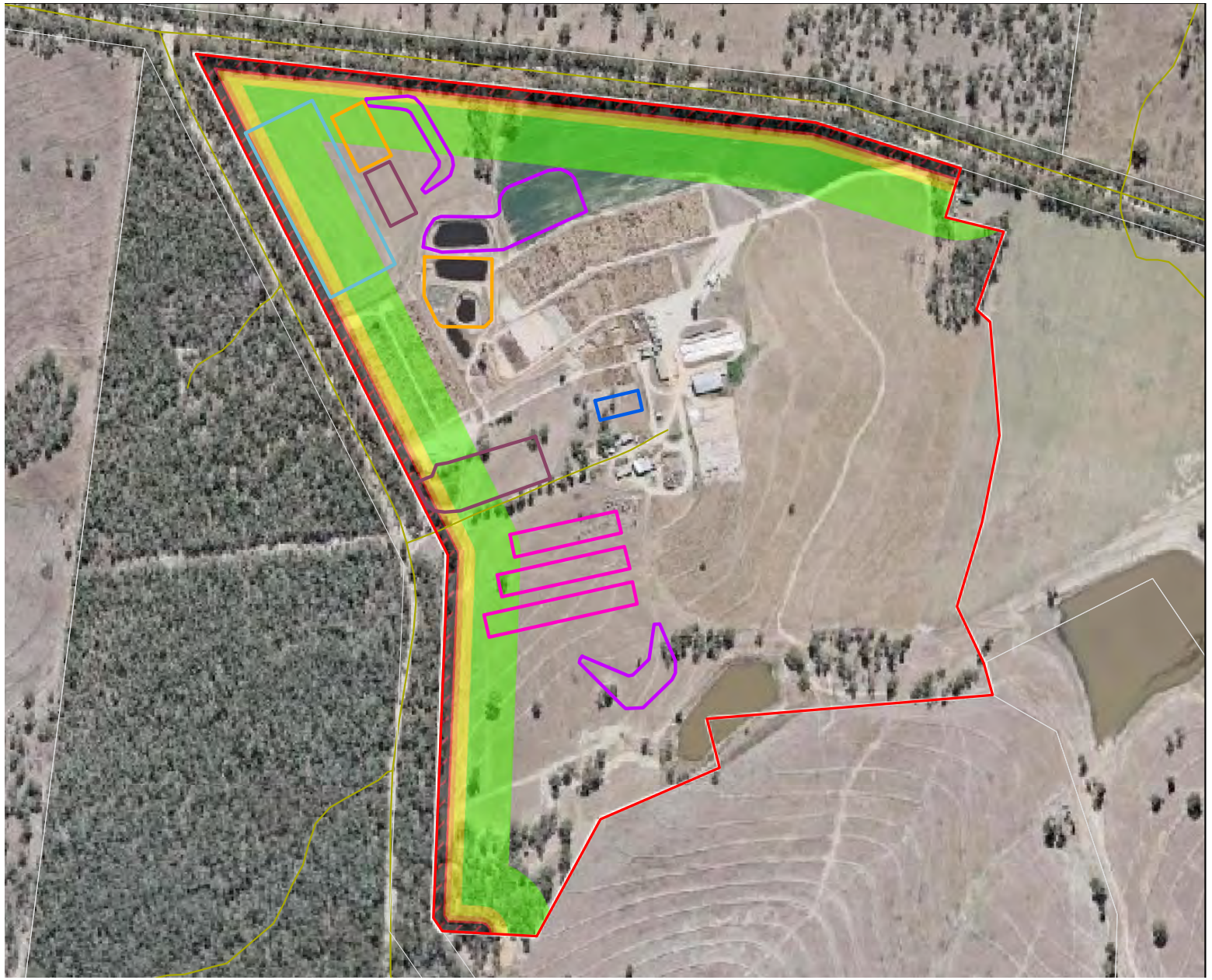
We trust that the enclosed information is suitable for your purposes. Please do not hesitate to contact the author if you have any further queries on 0400 451 600 or will.gibson@rangeenviro.com.au.

Yours sincerely,

Will Gibson
Senior Ecologist
Range Environmental Consultants

- Attachment 1 - Bushfire Hazard Exposure Map
- Attachment 2 – Calculation of Bushfire Hazard
- Attachment 3 – SPP Bushfire Hazard Map
- Attachment 4 – DA plans

Attachment 1 Bushfire Hazard Exposure Map



Attachment 1 Bushfire Hazard Exposure

Project: Pakaderinga Feedlot

Client: Pakaderinga Feedlot

Project No.: J001523

Compiled by: HB Date: 21/09/2023
Approved by: WG Date: 21/09/2023

Metres
0 90 180

Legend

- Cadastre
- Roads
- Site Boundary

Proposed Development

- Holding Pond
- Manure Pad
- Pens
- Covered Pens
- Arrival/Dispatch
- Basin

Bushfire Hazard Exposure

- <12.5 kW/m2
- <19 kW/m2
- <29 kW/m2
- <40 kW/m2
- >40 kW/m2

Source: Cadastral data sourced from DNRME (2021)

N

range environmental consultants

Attachment 2 Calculation of Bushfire Hazard

In accordance with SPP guidance material (Bushfire Resilient Communities (QFES 2019) the vegetation hazard class (VHC) mapping was reviewed and confirmed to accurately represent the on-ground matters through a field assessment.

Vegetation hazard class and 80th percentile potential fuel load inputs from QFES (2019) were utilised to determine the radiant heat exposure using a Method 2 Calculator.

Attributes taken into consideration when calculating bushfire hazards include bark fuel, elevated fuel, near-surface fuel, and surface fuel as illustrated in Figure 1.

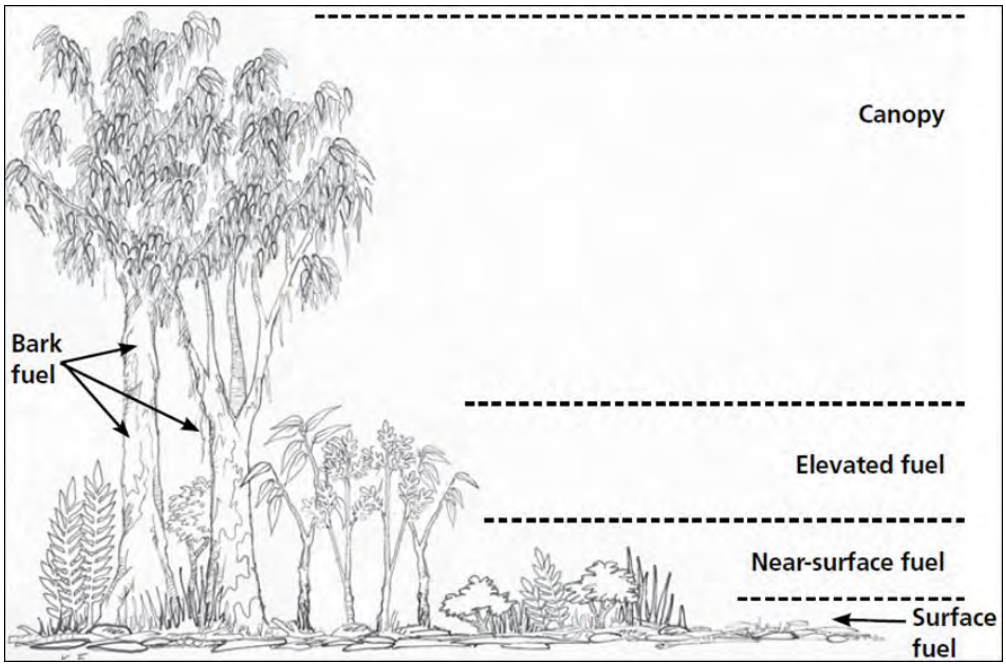


Figure 1 Fuel hazard layers used to determine the overall fuel hazard for a site. (Image from Overall fuel hazard assessment guide 2010).

Determination of Bushfire Attack Level – AS3959-2018

The bushfire hazard that buildings could potentially be exposed to was calculated using the Australian Standard Construction of buildings in bushfire-prone areas (AS3959-2018) Method 2 and fuel loads consistent with the post-development VHCs as set out in SPP technical reference guide 'Bushfire Resilient Communities' (2019). AS 3959-2018 identifies the level of construction required for the purpose of ensuring that a building is constructed to withstand a potential bushfire attack. This Standard is primarily concerned with improving the ability of buildings in designated bushfire-prone areas to better withstand attack from bushfire, thus giving a measure of protection to the building occupants (until the fire front passes) as well as to the building itself. AS3959-2018 requires that vegetation be assessed within 100 metres of a building when determining the Bushfire Attack Level.

Bushfire Resilient Communities Technical Reference Guide for the State Planning Policy State Interest 'Natural Hazards, Risk and Resilience - Bushfire' (2019) requires that bushfire hazard is to be assessed within 150m of the development footprint.

Determination of FDI

Adopting a worst case scenario, an FDI of 57 was used for the site when calculating Bushfire Attack Levels (BAL) for 'the site'. Figure 2 provides a Fire Danger Index (FDI) map of Southeast Queensland and identifies the location of the site.

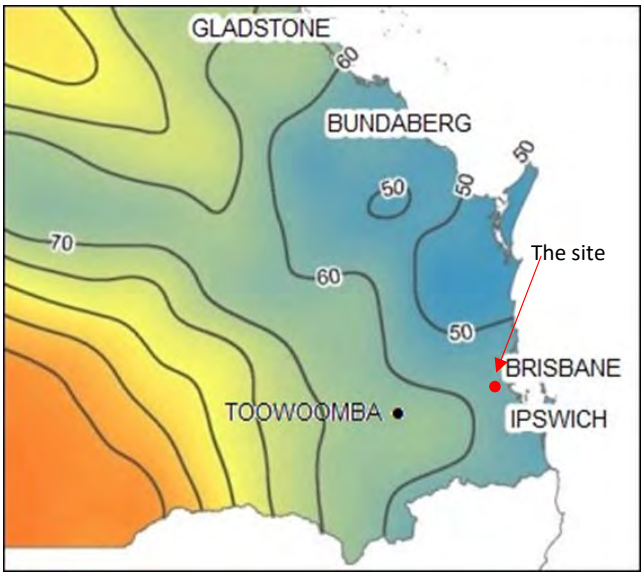


Figure 2 FDI map for Southeast Queensland. Leonard. J. A New Methodology for State-wide Mapping of Bushfire Prone Areas in Queensland. 2014

The potential radiant heat flux was calculated using the Australian Standard Construction of buildings in bushfire-prone areas (AS3959-2018) Method 2 for representative areas level with, and upslope of the site.

In assessing vegetation classes for forests, woodlands and rainforests, the classified vegetation will be determined by the unmanaged understorey rather than either the canopy (drip line) or trunk of any trees. (AS3959-2018).

The desktop assessment identified that vegetation surrounding the site aligned with VHC 9.2 *Moist to dry eucalypt woodlands on costal lowlands and ranges*. Figure 3 shows the Method 2 calculations in relation to the area of southwest of the development using an effective slope and a site slope of 0°. Figure 4 shows the method 2 calculations in relation to the area to the northeast of the development using an effective slope and a site slope of 3°.

SPP Bushfire Asset Protection Zone Width Calculator			
VARIABLE DESCRIPTION	**VARIABLE**	**UNITS**	**VALUE**
Input Values			
FIRE WEATHER SEVERITY	**FDI**		60.00
VEGETATION HAZARD CLASS	**VHC**	-	9.2 Moist to dry eucalypt woodland on coastal lowlands and ranges
REMNANT STATUS	**-**	-	Remnant
SLOPE TYPE (UPSLOPE OR DOWNSLOPE)	**ST**	-	Upslope
EFFECTIVE SLOPE UNDER THE HAZARDOUS VEGETATION	**eSlope**	degrees	1.00
SLOPE BETWEEN SITE AND HAZARDOUS VEGETATION	**θ**	degrees	1.00
DISTANCE OF THE SITE FROM HAZARDOUS VEGETATION	**d**	m	15.00
Output Values			
SURFACE FUEL LOAD	**-**	t/ha	11.40
NEAR SURFACE FUEL LOAD	**-**	t/ha	3.50
BARK FUEL LOAD	**-**	t/ha	1.30
ELEVATED FUEL LOAD	**-**	t/ha	1.00
TOTAL OVERALL FUEL LOAD	**W**	t/ha	17.20
TOTAL SURFACE FUEL LOAD	**w**	t/ha	14.90
POTENTIAL FIRE LINE INTENSITY	**I**	kW/m	9534
RADIANT HEAT FLUX	**q**	kW/m^2	28.50
BUSHFIRE ATTACK LEVEL (AS 3959-2018)	**BAL**	-	BAL 29

DISCLAIMER: Fire-line intensity and radiant heat calculations where effective slope exceeds 20 degrees (downslope) or 15 degrees (upslope) may be unreliable. In these locations, specialist assessment is warranted.

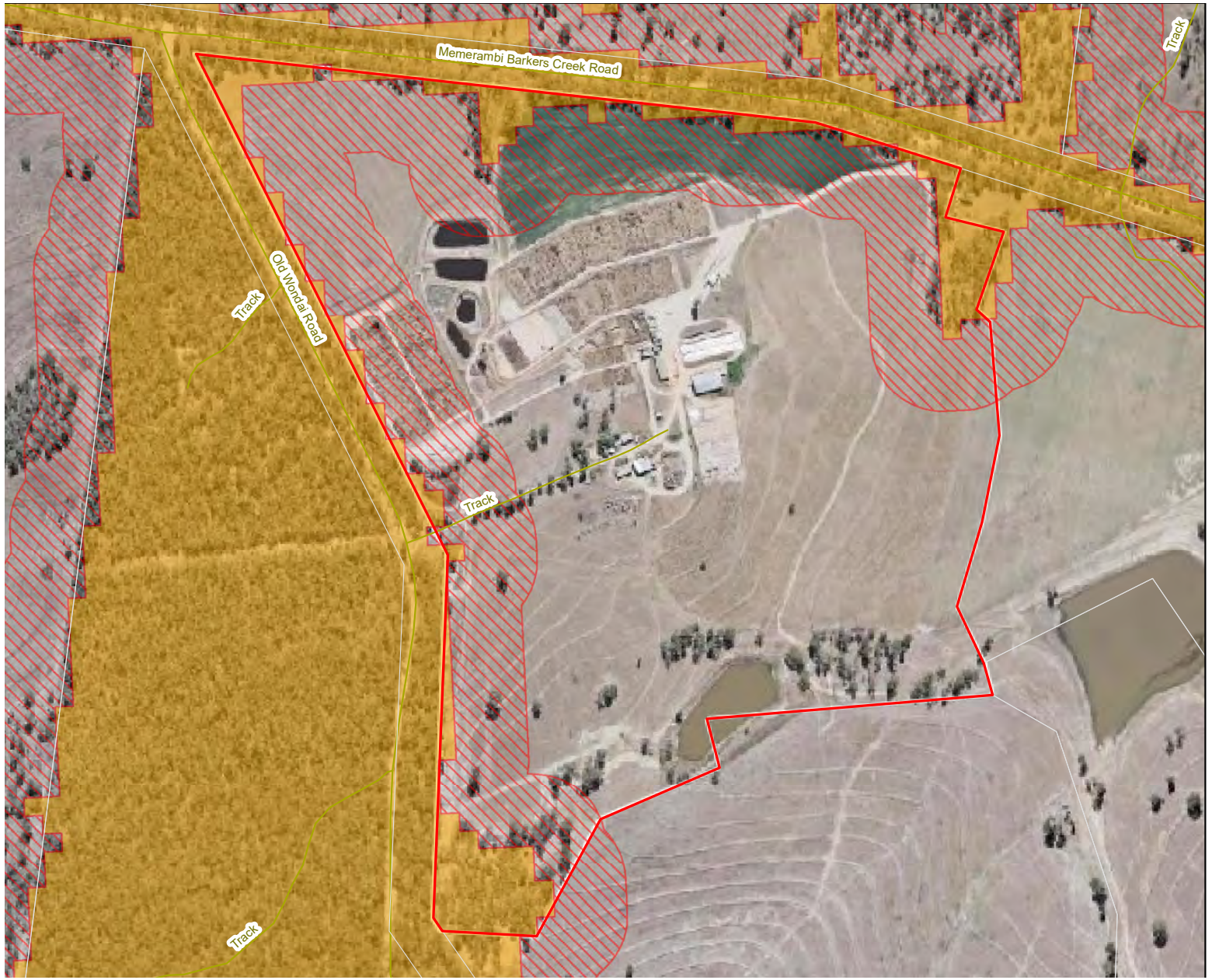
Figure 3 Method 2 calculations (VHC 9.2 upslope of the proposed development to the southwest)

SPP Bushfire Asset Protection Zone Width Calculator			
VARIABLE DESCRIPTION	**VARIABLE**	**UNITS**	**VALUE**
Input Values			
FIRE WEATHER SEVERITY	**FDI**		60.00
VEGETATION HAZARD CLASS	**VHC**	-	9.2 Moist to dry eucalypt woodland on coastal lowlands and ranges
REMNANT STATUS	**-**	-	Remnant
SLOPE TYPE (UPSLOPE OR DOWNSLOPE)	**ST**	-	Downslope
EFFECTIVE SLOPE UNDER THE HAZARDOUS VEGETATION	**eSlope**	degrees	3.00
SLOPE BETWEEN SITE AND HAZARDOUS VEGETATION	**θ**	degrees	3.00
DISTANCE OF THE SITE FROM HAZARDOUS VEGETATION	**d**	m	25.00
Output Values			
SURFACE FUEL LOAD	**-**	t/ha	11.40
NEAR SURFACE FUEL LOAD	**-**	t/ha	3.50
BARK FUEL LOAD	**-**	t/ha	1.30
ELEVATED FUEL LOAD	**-**	t/ha	1.00
TOTAL OVERALL FUEL LOAD	**W**	t/ha	17.20
TOTAL SURFACE FUEL LOAD	**w**	t/ha	14.90
POTENTIAL FIRE LINE INTENSITY	**I**	kW/m	11726
RADIANT HEAT FLUX	**q**	kW/m^2	18.77
BUSHFIRE ATTACK LEVEL (AS 3959-2018)	**BAL**	-	BAL 19

DISCLAIMER: Fire-line intensity and radiant heat calculations where effective slope exceeds 20 degrees (downslope) or 15 degrees (upslope) may be unreliable. In these locations, specialist assessment is warranted.

Figure 4 Method 2 calculations (VHC 9.2 downslope of the proposed development to the northeast)

Attachment 3 SPP Bushfire Hazard Map



Attachment 3 SPP Bushfire Hazard Map

Project: Pakaderinga Feedlot

Client: Pakaderinga Feedlot

Project No.: J001523

Compiled by: HB Date: 21/09/2023
Approved by: WG Date: 21/09/2023

Metres
0 90 180

Legend

- Cadastre
- Roads
- Site Boundary

Bushfire Hazard

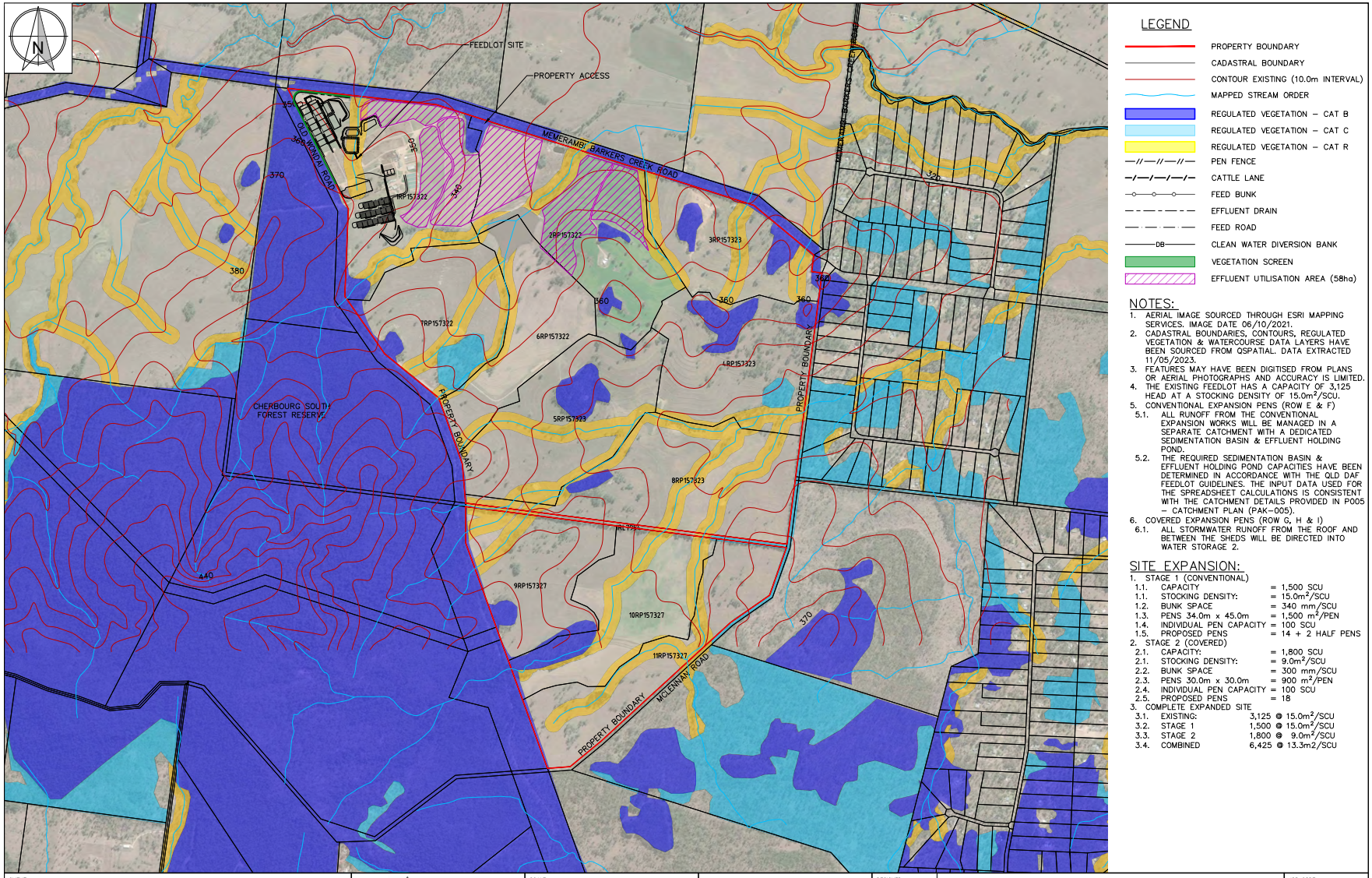
- Very High Potential Bushfire Intensity
- High Potential Bushfire Intensity
- Medium Potential Bushfire Intensity
- Potential Impact Buffer

Source: Cadastral data sourced from DNRME (2021)

N

range environmental consultants

Attachment 4 – DA plan


N
FEEDLOT SITE
PROPERTY ACCESS
MEMERAMBI BARKERS CREEK ROAD
OLD MOUNDA ROAD
MEMERAMBI BARKERS CREEK ROAD
CHERBOURG SOUTH FOREST RESERVE
PROPERTY BOUNDARY
PROPERTY BOUNDARY
PROPERTY BOUNDARY
MCLENNAN ROAD
1RP157322
2RP157322
3RP157323
TRP157322
6RP157322
4RP157323
5RP157323
8RP157323
9RP157327
10RP157327
11RP157327
RL 7951
LEGEND
PROPERTY BOUNDARY
CADASTRAL BOUNDARY
CONTOUR EXISTING (10.0m INTERVAL)
MAPPED STREAM ORDER
REGULATED VEGETATION – CAT B
REGULATED VEGETATION – CAT C
REGULATED VEGETATION – CAT R
PEN FENCE
CATTLE LANE
FEED BUNK
EFFLUENT DRAIN
FEED ROAD
DB
CLEAN WATER DIVERSION BANK
VEGETATION SCREEN
EFFLUENT UTILISATION AREA (58ha)
NOTES:
1. AERIAL IMAGE SOURCED THROUGH ESRI MAPPING SERVICES. IMAGE DATE 06/10/2021.
2. CADASTRAL BOUNDARIES, CONTOURS, REGULATED VEGETATION & WATERCOURSE DATA LAYERS HAVE BEEN SOURCED FROM QSPATIAL. DATA EXTRACTED 11/05/2023.
3. FEATURES MAY HAVE BEEN DIGITISED FROM PLANS OR AERIAL PHOTOGRAPHS AND ACCURACY IS LIMITED.
4. THE EXISTING FEEDLOT HAS A CAPACITY OF 3,125 HEAD AT A STOCKING DENSITY OF 15.0m²/SCU.
5. CONVENTIONAL EXPANSION PENS (ROW E & F)
5.1. ALL RUNOFF FROM THE CONVENTIONAL EXPANSION WORKS WILL BE MANAGED IN A SEPARATE CATCHMENT WITH A DEDICATED SEDIMENTATION BASIN & EFFLUENT HOLDING POND.
5.2. THE REQUIRED SEDIMENTATION BASIN & EFFLUENT HOLDING POND CAPACITIES HAVE BEEN DETERMINED IN ACCORDANCE WITH THE QLD DAF FEEDLOT GUIDELINES. THE INPUT DATA USED FOR THE SPREADSHEET CALCULATIONS IS CONSISTENT WITH THE CATCHMENT DETAILS PROVIDED IN P005 – CATCHMENT PLAN (PAK–005).
6. COVERED EXPANSION PENS (ROW G, H & I)
6.1. ALL STORMWATER RUNOFF FROM THE ROOF AND BETWEEN THE SHEDS WILL BE DIRECTED INTO WATER STORAGE 2.
SITE EXPANSION:
1. STAGE 1 (CONVENTIONAL)
1.1. CAPACITY = 1,500 SCU
1.1. STOCKING DENSITY: = 15.0m²/SCU
1.2. BUNK SPACE = 340 mm/SCU
1.3. PENS 34.0m x 45.0m = 1,500 m²/PEN
1.4. INDIVIDUAL PEN CAPACITY = 100 SCU
1.5. PROPOSED PENS = 14 + 2 HALF PENS
2. STAGE 2 (COVERED)
2.1. CAPACITY: = 1,800 SCU
2.1. STOCKING DENSITY: = 9.0m²/SCU
2.2. BUNK SPACE = 300 mm/SCU
2.3. PENS 30.0m x 30.0m = 900 m²/PEN
2.4. INDIVIDUAL PEN CAPACITY = 100 SCU
2.5. PROPOSED PENS = 18
3. COMPLETE EXPANDED SITE
3.1. EXISTING: 3,125 @ 15.0m²/SCU
3.2. STAGE 1 1,500 @ 15.0m²/SCU
3.3. STAGE 2 1,800 @ 9.0m²/SCU
3.4. COMBINED 6,425 @ 13.3m2/SCU
CLIENT
PAKADERINGA FEEDLOT PTY LTD
PROJECT
PAKADERINGA FEEDLOT EXPANSION
LOCATION
1270 CORNDALE ROAD, NANANGO, QLD 4615
SHEET TITLE
PROPERTY PLAN (AERIAL IMAGERY)
AgDSA
AGRICULTURAL DEVELOPMENT SERVICES AUSTRALIA
PO BOX 292
TOOWOOMBA QLD 4350
PH: +61 473 171 957
E: contact@agdsa.com.au
SCALE
0 200 400 600m
SCALE 1:10,000 (A1) 1:20,000 (A3)
SIGNED
Pakaderinga Feedlot
DESIGNED
TJS
CHECKED
MRN
PROJECT MANAGER
MRN
DRAFT DA PLANS – FOR CLIENT REVIEW
07/09/2023 D1 DRAFT DA PLANS – FOR CLIENT REVIEW MRN
DATE REV DESCRIPTION APP
REVISIONS
JOB CODE
PAK–001
SHEET NUMBER
A001
CURRENT REVISION
DRAFT 1

RA6-N

Queensland Government

SARA reference: 2312-38335 SRA
Council reference: MCU23/0031

24 May 2024

Chief Executive Officer
South Burnett Regional Council
PO Box 336
KINGAROY QLD 4610
info@sbrc.qld.gov.au

Attention: Darryl Brooks

Dear Mr Brooks,

SARA referral agency response—Pakaderinga Feedlot, 1270 Memerambi Barkers Creek Road, Wattle Camp

(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 31 January 2024.

Response

Outcome:	Referral agency response – with conditions
Date of response:	24 May 2024
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 (Expansion of existing feedlot to 6,425 SCU and associated infrastructure)
SARA role:	Referral agency
SARA trigger:	Schedule 10, Part 5, Division 4, Table 2, Item 1 (Planning Regulation 2017)

Wide Bay Burnett regional office
Level 1, 7 Takalvan Street, Bundaberg
PO Box 979, Bundaberg QLD 4670

	Non-devolved environmentally relevant activities Schedule 10, Part 9, Division 4, Subdivision 1, Table 1, Item 1 (Planning Regulation 2017) Development impacting on State transport infrastructure and thresholds
SARA reference:	2312-38335 SRA
Assessment manager:	South Burnett Regional Council
Street address:	1270 Memerambi Barkers Creek Road, Wattle Camp
Real property description:	Lot 1 on RP157322; Lot 2 on RP157322; Lot 3 on RP157323; Lot 4 on RP157323; Lot 5 on RP157323; Lot 6 on RP157322; Lot 7 on RP157322; Lot 8 on RP157323; Lot 9 on RP157327; Lot 10 on RP157327; Lot 11 on RP157327
Applicant name:	Pakaderinga Feedlot Q Pty Ltd
Applicant contact details:	c/- AgDSA PO Box 292 TOOWOOMBA QLD 4350 matt.norton@qgdsa.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: 2024-08 • Effective date: In accordance with Section 200 of the *Environmental Protection Act 1994* • Prescribed environmentally relevant activity (ERA): ERA 2 – Intensive animal feedlotting 1. keeping the following number of standard cattle units in a feedlot – (b) more than 1,000 but not more than 10,000 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 (s.30 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.

2312-38335 SRA

For further information please contact Lawson Costello, Planning Officer, on (07) 3452 7584 or via email WBBSARA@dsdilgp.qld.gov.au who will be pleased to assist.

[redacted]

Luke Lankowski
Manager, Planning – Wide Bay Burnett

cc Pakaderinga Feedlot Q Pty Ltd, matt.norton@agdsa.com.au

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

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
Material change of use for Intensive animal industry (Expansion of existing feedlot to 6,425 SCU and associated infrastructure)		
10.9.4.1.1.1 – Development impacting on State transport infrastructure and thresholds—The chief executive administering the *Planning Act 2016* nominates the Director-General of the 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(s):		
1.	The development must be carried out generally in accordance with the following plans: • *Figure 2-1 Locality Plan* of *Traffic Impact Assessment Pakaderinga Feedlot Development* prepared by RMA Engineers, dated 25/10/2023, project no. 23E-0291, revision 1, as amended in red by SARA on 24 May 2024.	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.
National Heavy Vehicle Regulator	
2.	Information submitted with the development application indicates use of B-double type vehicles is intended to service the site. Memerambi-Barkers Creek Road is not identified as an as-of-right route for 26 metre B-double vehicles. It is recommended that you contact the National Heavy Vehicle Regulator to investigate the permits necessary for 26 metre B-double vehicles to access the subject site.

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 can comply with relevant performance outcomes of State code 6: Protection of state transport networks and State code 22: Environmentally relevant activity (SDAP v3.0). Specifically:

- The development is conditioned to ensure is does not adversely impact the safety, physical condition or operating performance of the state-controlled road network.
- The development does not result in a material worsening of stormwater, overland flow or flooding impacts on the state-controlled road network.
- The development does not impede delivery of any planned upgrades of state transport infrastructure.
- The development is suitably located and designed to avoid environmental harm to the acoustic or air environments, adjacent sensitive land uses caused by odour, or receiving waters.
- The development is sited to avoid 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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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.

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.

Attachment 5—Documents referenced in conditions

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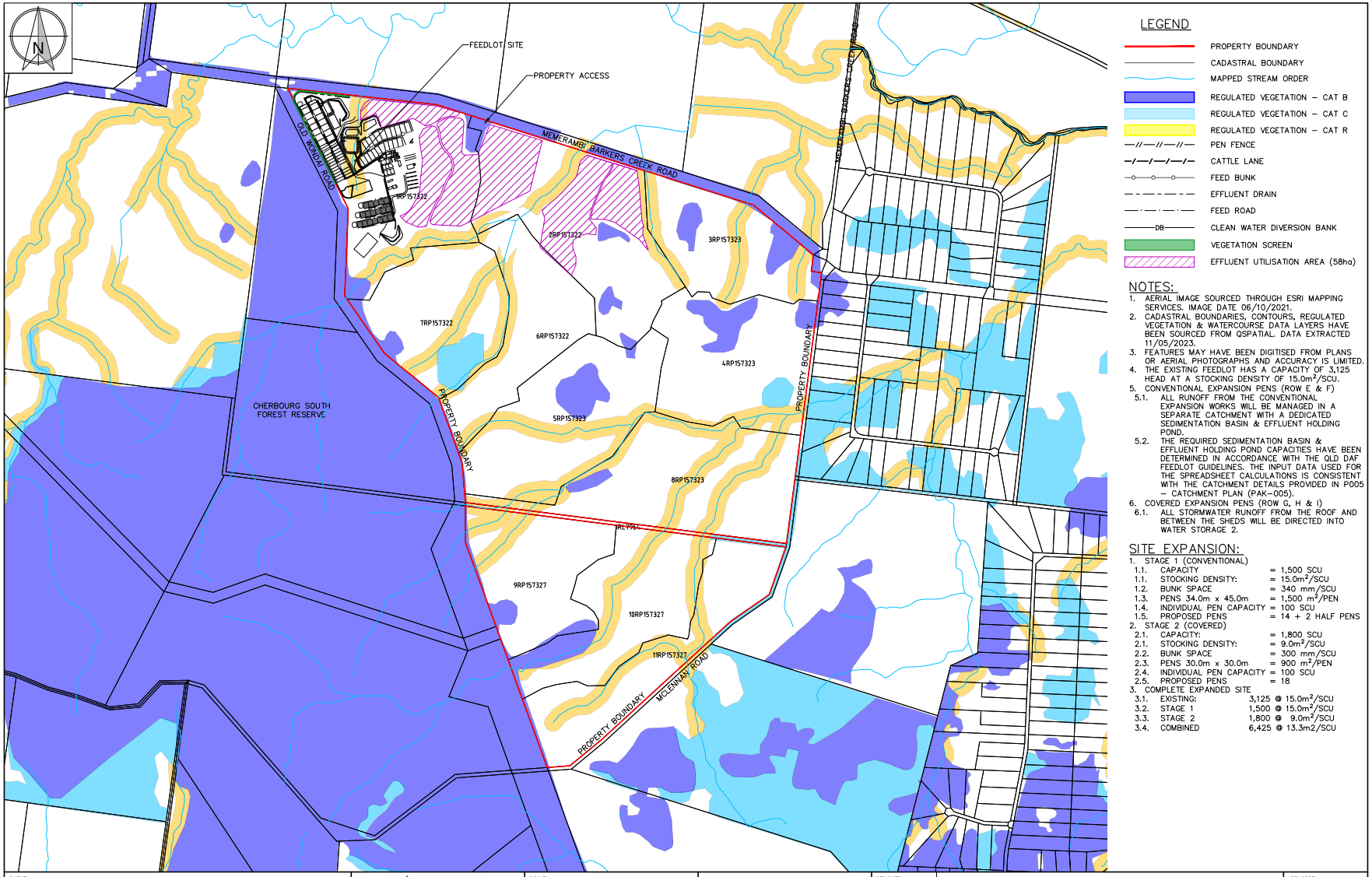
N
FEEDLOT SITE
PROPERTY ACCESS
MEMERAMBI BARKERS CREEK ROAD
OLD WONDAI ROAD
1RP157322
2RP157322
3RP157323
4RP157323
5RP157323
6RP157322
7RP157322
8RP157323
9RP157327
10RP157327
11RP157327
CHERBOURG SOUTH FOREST RESERVE
PROPERTY BOUNDARY
MCLENNAN ROAD
LEGEND
PROPERTY BOUNDARY
CADASTRAL BOUNDARY
MAPPED STREAM ORDER
REGULATED VEGETATION – CAT B
REGULATED VEGETATION – CAT C
REGULATED VEGETATION – CAT R
PEN FENCE
CATTLE LANE
FEED BUNK
EFFLUENT DRAIN
FEED ROAD
DB CLEAN WATER DIVERSION BANK
VEGETATION SCREEN
EFFLUENT UTILISATION AREA (58ha)
NOTES:
1. AERIAL IMAGE SOURCED THROUGH ESRI MAPPING SERVICES. IMAGE DATE 06/10/2021.
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SITE EXPANSION:
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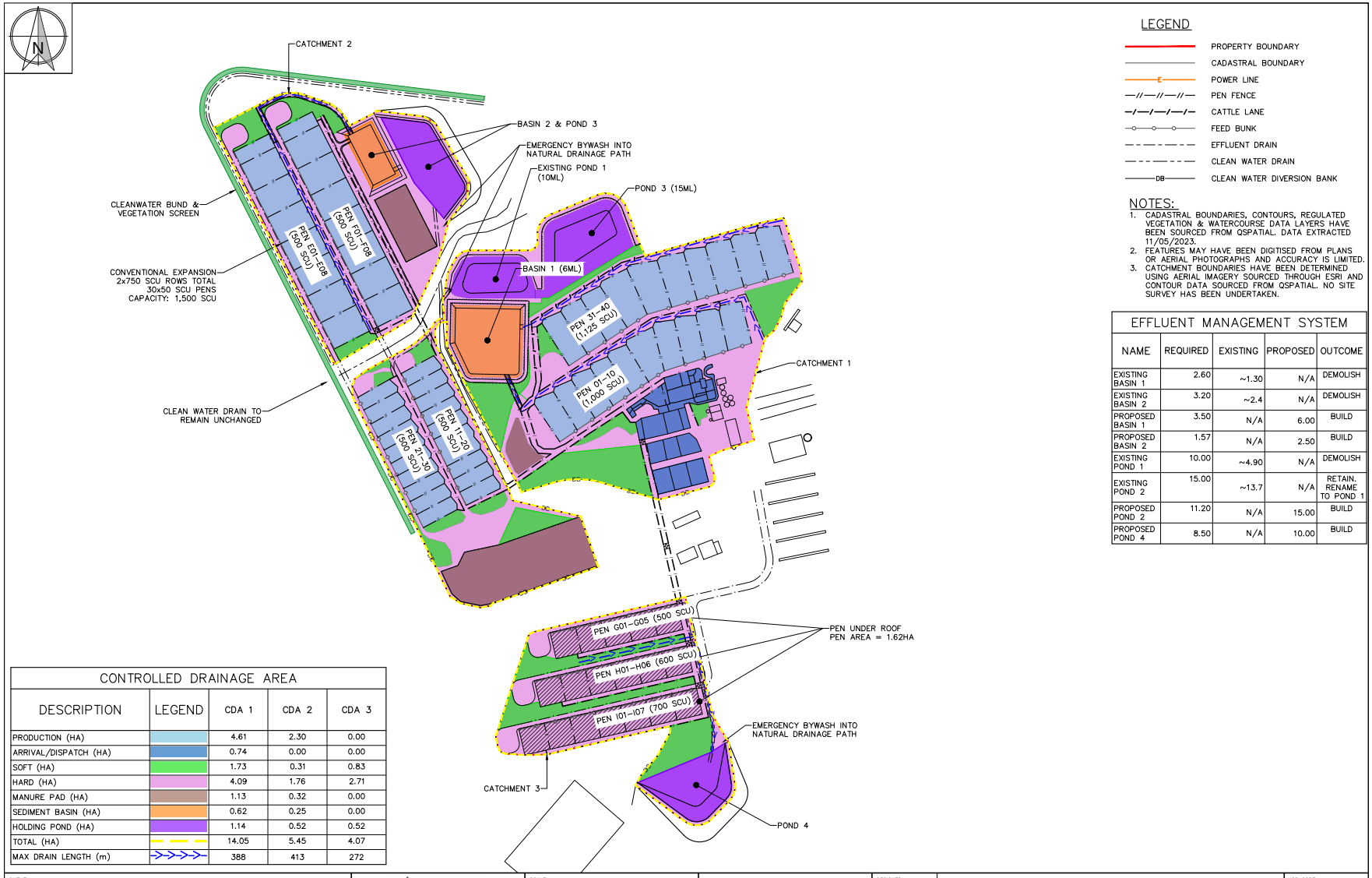
1.1. STOCKING DENSITY: = 15.0m²/SCU
1.2. BUNK SPACE = 340 mm/SCU
1.3. PENS 34.0m x 45.0m = 1,500 m²/PEN
1.4. INDIVIDUAL PEN CAPACITY = 100 SCU
1.5. PROPOSED PENS = 14 + 2 HALF PENS
2. STAGE 2 (COVERED)
2.1. CAPACITY: = 1,800 SCU
2.1. STOCKING DENSITY: = 9.0m²/SCU
2.2. BUNK SPACE = 300 mm/SCU
2.3. PENS 30.0m x 30.0m = 900 m²/PEN
2.4. INDIVIDUAL PEN CAPACITY = 100 SCU
2.5. PROPOSED PENS = 18
3. COMPLETE EXPANDED SITE
3.1. EXISTING: 3,125 @ 15.0m²/SCU
3.2. STAGE 1 1,500 @ 15.0m²/SCU
3.3. STAGE 2 1,800 @ 9.0m²/SCU
3.4. COMBINED 6,425 @ 13.3m2/SCU
CLIENT
PAKADERINGA FEEDLOT PTY LTD
PROJECT
PAKADERINGA FEEDLOT EXPANSION
LOCATION
1270 CORNDALE ROAD, NANANGO, QLD 4615
SHEET TITLE
PROPERTY PLAN
AgDSA
AGRICULTURAL DEVELOPMENT SERVICES AUSTRALIA
PO BOX 292
TOOWOOMBA QLD 4350
PH: +61 473 171 957
E: contact@agdsa.com.au
SCALE
0 200 400 600m
SCALE 1:10,000 (A1) 1:20,000 (A3)
SIGNED
Pakaderinga Feedlot
DESIGNED TJS
CHECKED MRN
PROJECT MANAGER MRN
FOR APPROVAL ONLY
DATE REV DESCRIPTION
11/04/2024 B RESPONSE TO RFI MRN
22/09/2023 A ORIGINAL ISSUE FOR APPROVAL ONLY MRN
REVISIONS
JOB CODE PAK–001
SHEET NUMBER A002
CURRENT REVISION B



EFFLUENT MANAGEMENT SYSTEM

NAME	REQUIRED	EXISTING	PROPOSED	OUTCOME
EXISTING BASIN 1	2.60	~1.30	N/A	DEMOLISH
EXISTING BASIN 2	3.20	~2.4	N/A	DEMOLISH
PROPOSED BASIN 1	3.50	N/A	6.00	BUILD
PROPOSED BASIN 2	1.57	N/A	2.50	BUILD
EXISTING POND 1	10.00	~4.90	N/A	DEMOLISH
EXISTING POND 2	15.00	~13.7	N/A	RETAIN. RENAME TO POND 1
PROPOSED POND 2	11.20	N/A	15.00	BUILD
PROPOSED POND 4	8.50	N/A	10.00	BUILD

CONTROLLED DRAINAGE AREA

DESCRIPTION	LEGEND	CDA 1	CDA 2	CDA 3
PRODUCTION (HA)		4.61	2.30	0.00
ARRIVAL/DISPATCH (HA)		0.74	0.00	0.00
SOFT (HA)		1.73	0.31	0.83
HARD (HA)		4.09	1.76	2.71
MANURE PAD (HA)		1.13	0.32	0.00
SEDIMENT BASIN (HA)		0.62	0.25	0.00
HOLDING POND (HA)		1.14	0.52	0.52
TOTAL (HA)		14.05	5.45	4.07
MAX DRAIN LENGTH (m)		388	413	272

CLIENT: PAKADERINGA FEEDLOT PTY LTD
PROJECT: PAKADERINGA FEEDLOT EXPANSION
LOCATION: 1270 CORNDALE ROAD, NANANGO, QLD 4615
SHEET TITLE: CONTROLLED DRAINAGE AREA

AgDSA
AGRICULTURAL DEVELOPMENT SERVICES AUSTRALIA
PO BOX 292
TOOWOOMBA QLD 4350
PH: +61 473 171 957
E: contact@agdsa.com.au

SCALE: 0 40 80 120m
SCALE 1:2,000 (A1) 1:4,000 (A3)
SIGNED

Pakaderinga Feedlot

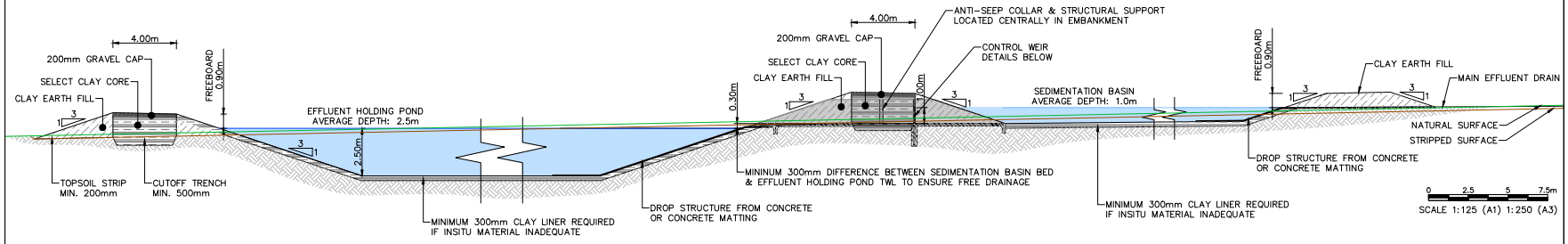
DESIGNED: TJS
CHECKED: MRN
PROJECT MANAGER: MRN

FOR APPROVAL ONLY

DATE	REV	DESCRIPTION	APP
11/04/2024	B	RESPONSE TO RFI	MRN
22/09/2023	A	ORIGINAL ISSUE FOR APPROVAL ONLY	MRN

REVISIONS

JOB CODE: PAK–001
SHEET NUMBER: A005
CURRENT REVISION: B



TYPICAL CROSS SECTION THROUGH EFFLUENT MANAGEMENT SYSTEM

TABLES 1, 2 & 3 DETAIL POTENTIAL FLOW CAPACITIES OF VARIOUS DRAIN CONFIGURATIONS. A MINIMUM DRAIN WIDTH OF 2.5m IS RECOMMENDED TO ALLOW FOR EASE OF MAINTENANCE.

TABLE 1 – 0.50% DRAIN CAPACITY (m^3/s)

DEPTH (m)	DRAIN BED WIDTH (m)						
	2.0	2.5	3.0	3.5	4.0	4.5	5.0
0.10	0.130	0.16	0.19	0.22	0.25	0.28	0.31
0.20	0.430	0.53	0.62	0.72	0.81	0.91	1.01
0.30	0.910	1.09	1.27	1.46	1.65	1.83	2.02
0.40	1.560	1.85	2.15	2.44	2.74	3.04	3.35
0.50	2.410	2.83	3.25	3.68	4.11	*4.54	*4.98

DRAINS ASSUMED TO HAVE COMPACTED GRAVEL BASE & INTERNAL BATTERS OF 1:3.
* IDENTIFIES FLOW VELOCITIES GREATER THAN 1.5 m/s WHICH REQUIRE SPECIFIC DRAIN LINING.

TABLE 2 – 0.75% DRAIN CAPACITY (m^3/s)

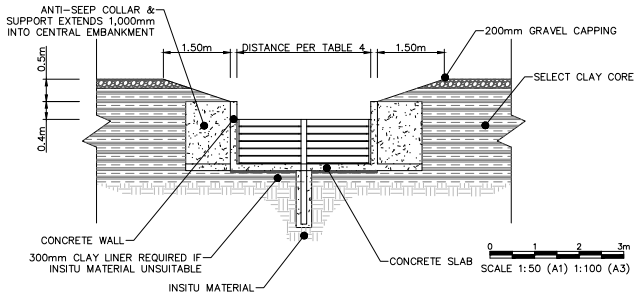
DEPTH (m)	DRAIN BED WIDTH (m)						
	2.0	2.5	3.0	3.5	4.0	4.5	5.0
0.10	0.160	0.190	0.230	0.270	0.310	0.340	0.380
0.20	0.530	0.650	0.760	0.880	1	1.110	1.230
0.30	1.110	1.330	1.560	1.790	2.020	2.250	2.480
0.40	1.910	*2.27	*2.63	*2.99	*3.36	*3.73	*4.10
0.50	*2.95	*3.46	*3.98	*4.51	*5.03	*5.56	*6.09

DRAINS ASSUMED TO HAVE COMPACTED GRAVEL BASE & INTERNAL BATTERS OF 1:3.
* IDENTIFIES FLOW VELOCITIES GREATER THAN 1.5 m/s WHICH REQUIRE SPECIFIC DRAIN LINING.

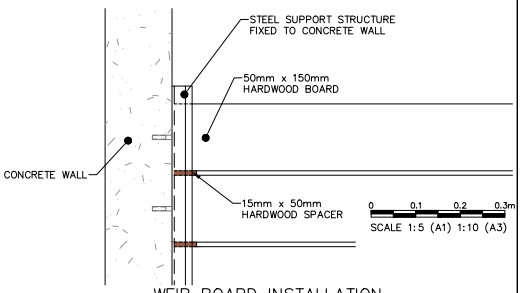
TABLE 3 – 1.0% DRAIN CAPACITY (m^3/s)

DEPTH (m)	DRAIN BED WIDTH (m)						
	2.0	2.5	3.0	3.5	4.0	4.5	5.0
0.10	0.180	0.22	0.27	0.31	0.35	0.40	0.44
0.20	0.610	0.75	0.88	1.01	1.15	1.29	1.42
0.30	1.280	*1.54	*1.80	*2.06	*2.33	*2.59	*2.86
0.40	*2.20	*2.62	*3.04	*3.46	*3.88	*4.31	*4.73
0.50	*3.40	*4.00	*4.60	*5.20	*5.81	*6.42	*7.02

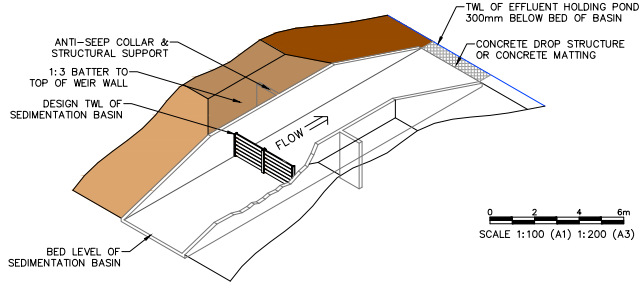
DRAINS ASSUMED TO HAVE COMPACTED GRAVEL BASE & INTERNAL BATTERS OF 1:3.
* IDENTIFIES FLOW VELOCITIES GREATER THAN 1.5 m/s WHICH REQUIRE SPECIFIC DRAIN LINING.



CONTROL WEIR – FRONT ELEVATION



WEIR BOARD INSTALLATION



WEIR INSTALLATION

TABLE 4 DETAILS THE CAPACITY OF VARIOUS RECTANGULAR WEIR CONFIGURATIONS. A MAXIMUM WEIR DEPTH OF 0.5m IS RECOMMENDED. WEIR WIDTH IS DIRECTLY PROPORTIONAL TO FLOW CAPACITY, THEREFORE, THE CAPACITY OF TWO 5.0m WEIR WIDTHS ARE EQUAL TO A SINGLE 10.0m WEIR.

TABLE 4 – WEIR CAPACITY (m^3/s)

DEPTH (m)	WEIR WIDTH (m)						
	2.0	2.5	3.0	3.5	4.0	4.5	5.0
0.1	0.11	0.13	0.16	0.19	0.22	0.24	0.27
0.2	0.30	0.38	0.46	0.53	0.61	0.68	0.76
0.3	0.56	0.70	0.84	0.98	1.12	1.26	1.40
0.4	0.86	1.08	1.29	1.51	1.72	1.94	2.15
0.5	1.20	1.50	1.80	2.10	2.40	2.70	3.01
0.6	1.58	1.98	2.37	2.77	3.16	3.56	3.95
0.7	1.99	2.49	2.99	3.48	3.98	4.48	4.98
0.8	2.43	3.04	3.65	4.26	4.87	5.47	6.08

CLIENT: PAKADERINGA FEEDLOT PTY LTD
PROJECT: PAKADERINGA FEEDLOT EXPANSION
LOCATION: 1270 CORNDALE ROAD, NANANGO, QLD 4615
SHEET TITLE: TYPICAL EFFLUENT MANAGEMENT SYSTEM DESIGN

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PH: +61 473 171 957
E: contact@agdsa.com.au

SCALE: AS SHOWN
SIGNED:

Pakaderinga Feedlot

DESIGNED: TJS
CHECKED: MRN
PROJECT MANAGER: MRN

FOR APPROVAL ONLY

DATE	REV	DESCRIPTION	APP
22/09/2023	A	ORIGINAL ISSUE FOR APPROVAL ONLY	MRN

REVISIONS

JOB CODE: PAK–001
SHEET NUMBER: A007
CURRENT REVISION: A

PLANS AND DOCUMENTS
referred to in the REFERRAL
AGENCY RESPONSE

Queensland Government

SARA ref: 2312-38335 SRA

Date: 24 May 2024

RMA Engineers

TRAFFIC IMPACT ASSESSMENT

Pakaderinga Feedlot Development

Traffic Engineering Report

Client Pakaderinga Feedlot Q Pty Ltd
Project Number 23E-0291

REPORT CONTROL SHEET

Report Details	
Report Title:	Traffic Impact Assessment – Pakaderinga Feedlot – Memerambi Barkers Creek Road | Wattle Camp
Project No.:	23E-0291
Site:	1270 Memerambi Barkers Creek Road, Wattle Camp QLD 4615
Author:	Michael Silva

Document Control					
Revision	**Author**	**Reviewer**	**Approved for Issue**		
			Name	**[redacted]ignature**	**Date**
1	M Silva	A Gwatking	A Gwatking	[redacted] NER, CPEng, RPEQ: 15158	25 / 10 / 2023

Disclaimer:

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The conclusions in this report should not be read in isolation. We recommend that its contents be reviewed in person with the author so that the assumptions and available information can be discussed in detail to enable the reader to make their own risk assessment in conjunction with information from other sources.

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2. Proposed development

2.1 Location and descriptions

The subject site, referred to as 'Pakaderinga', is situated on Lot 1 RP157322 and Lots 2-8 RP157322/3. Pakaderinga is accessed along Memerambi Barkers Creek Road, approximately halfway between the Bunya Highway (west) and the Burnett Highway (east). The development is located within the SBRC local government area, approximately 12km east of Memerambi and 14.5km north-west of the Kingaroy town centre.

The total area of Lots 1-8 is 515ha and is surrounded by grazing, cropping, and nature conservation land uses as per the SBRC Planning Scheme. The property currently consists of a 3,125 SCU feedlot mostly confined to Lot 1 (refer to **Figure 2-2** for lot layout).

The site and its environs are illustrated on the locality plans in **Figure 2-1**.

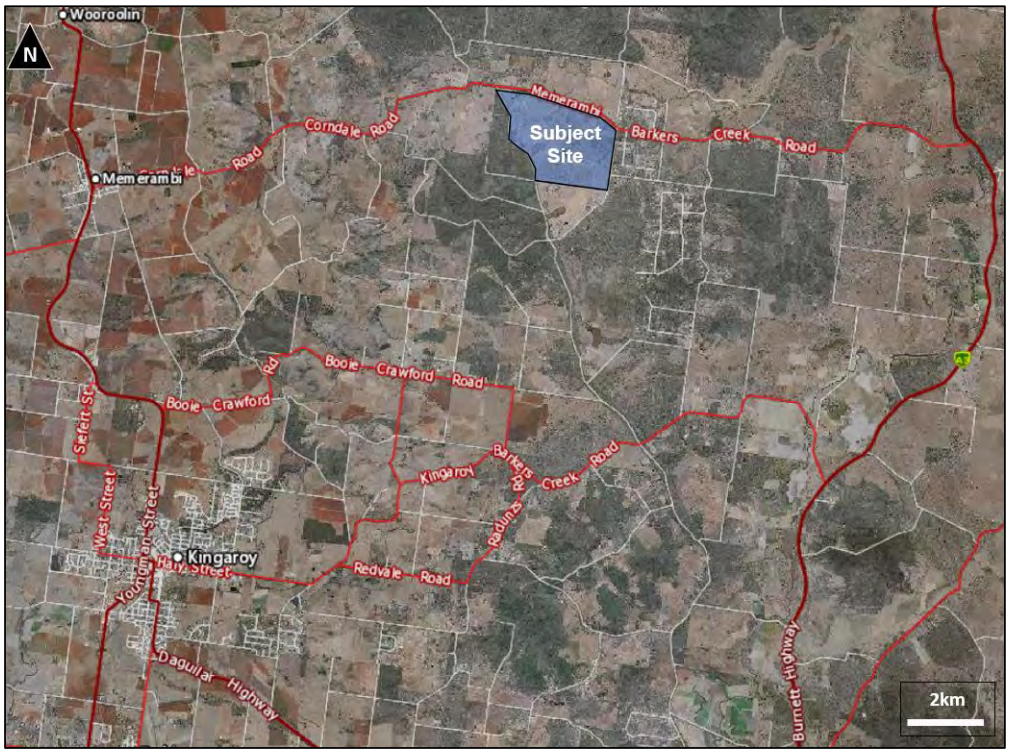
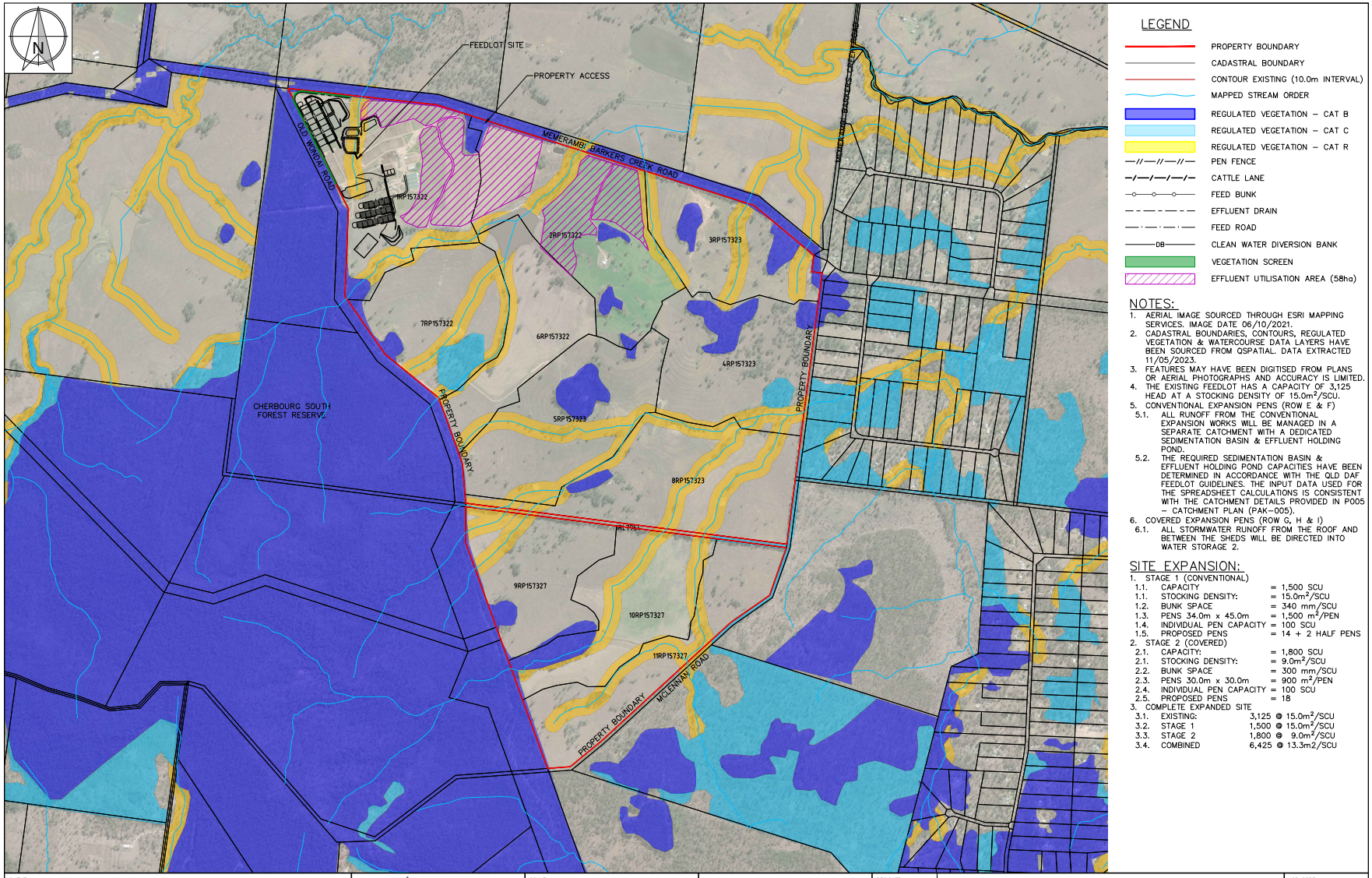
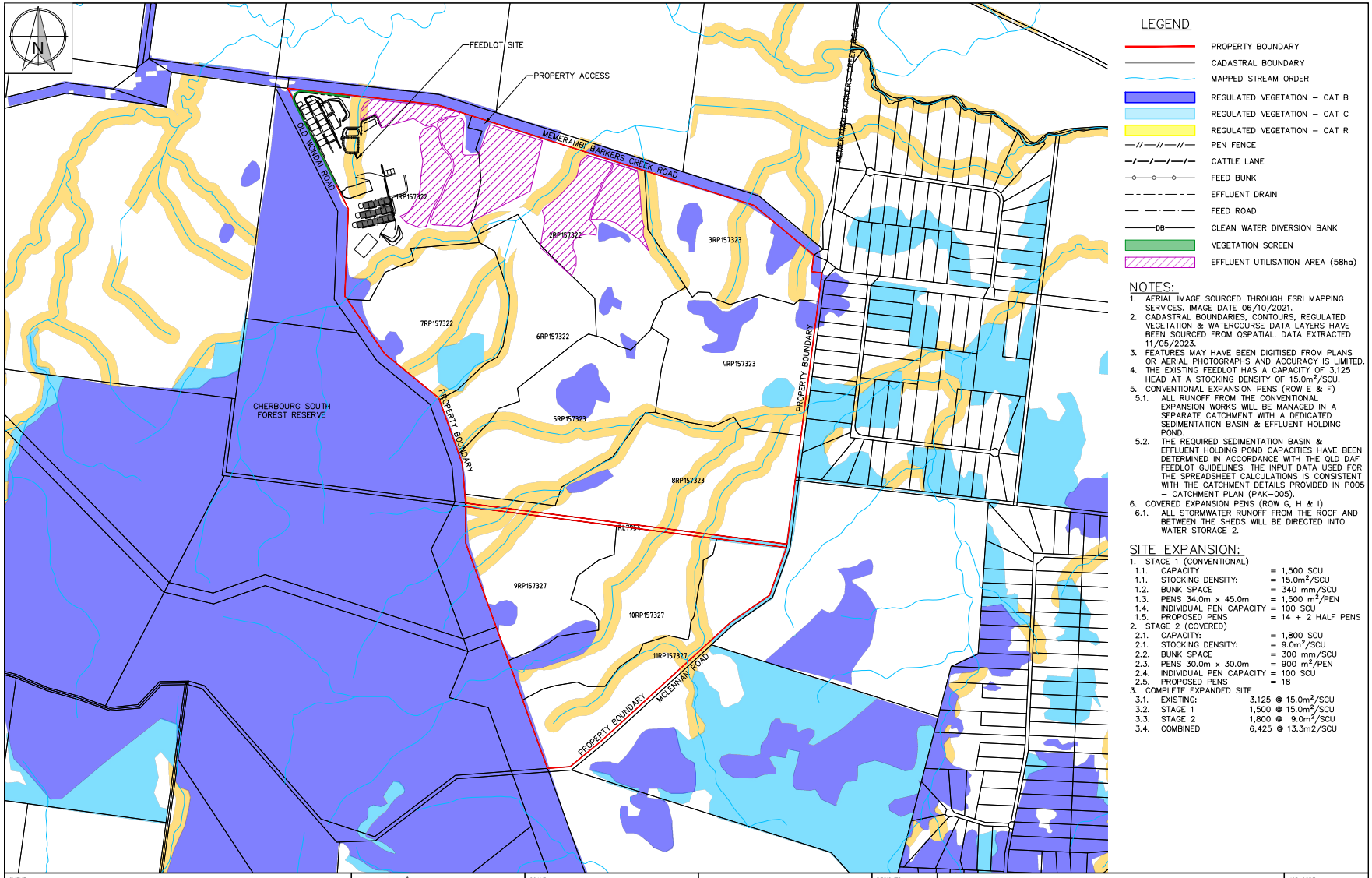
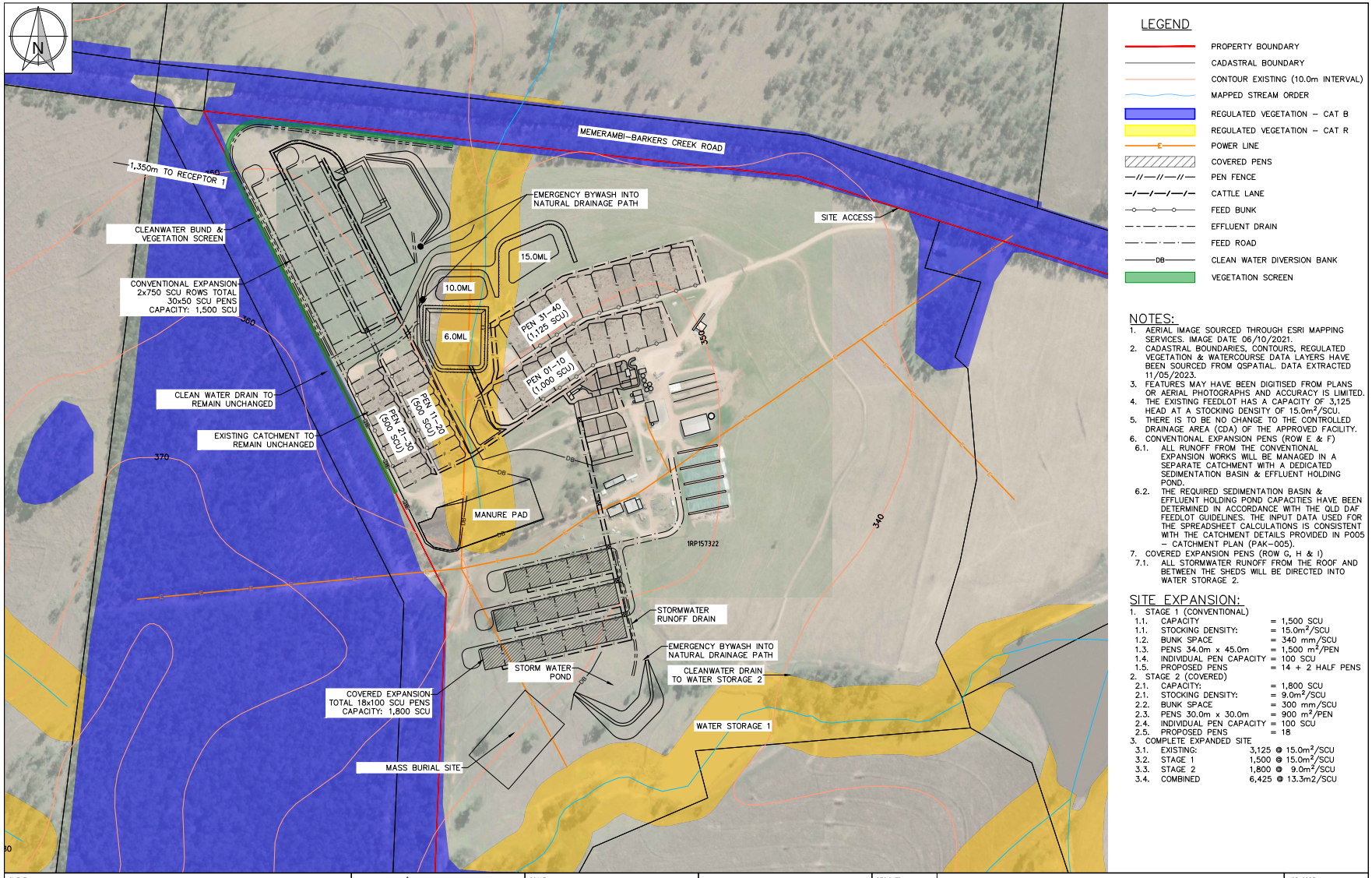


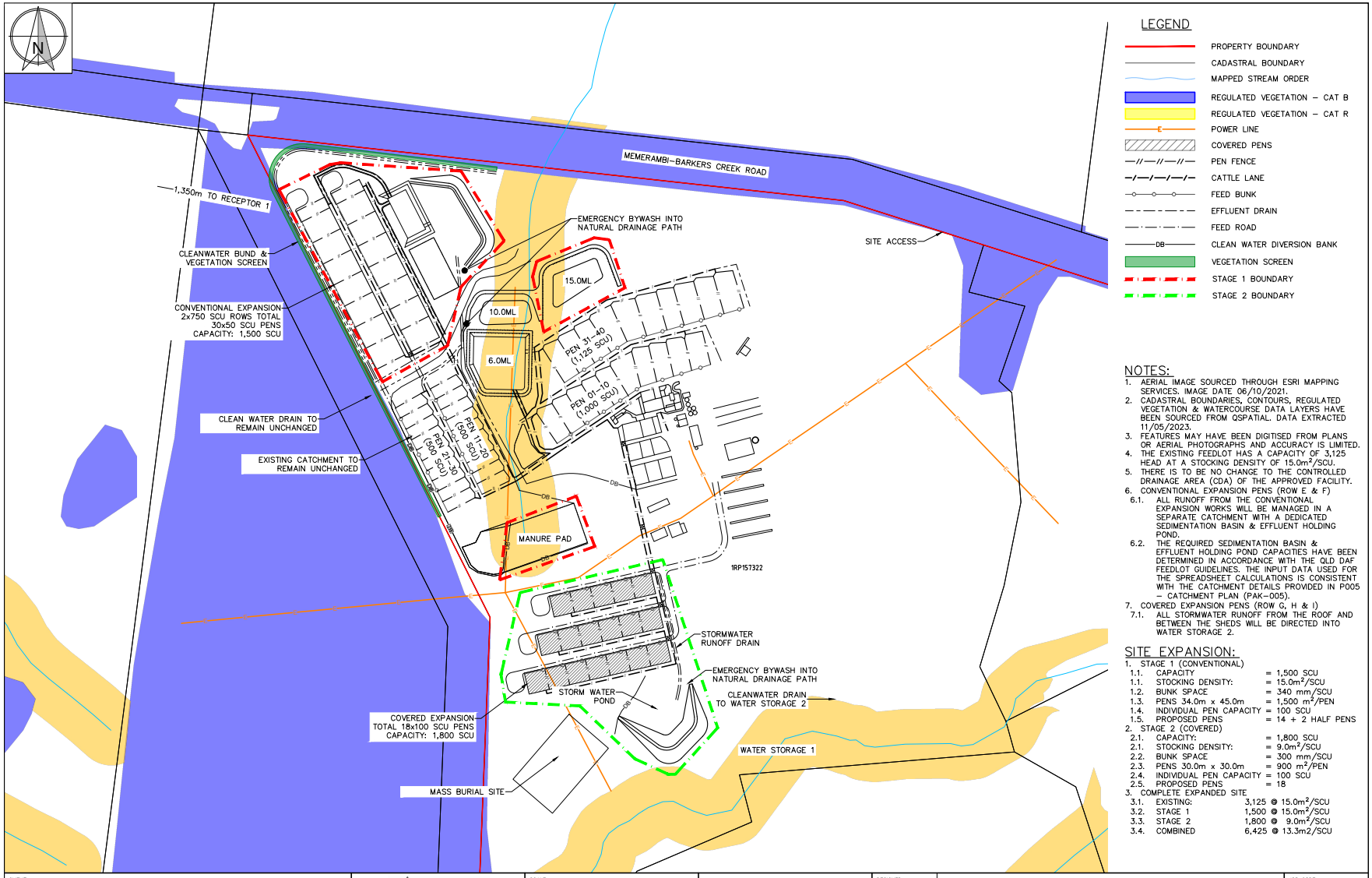
Figure 2-1 Locality plan

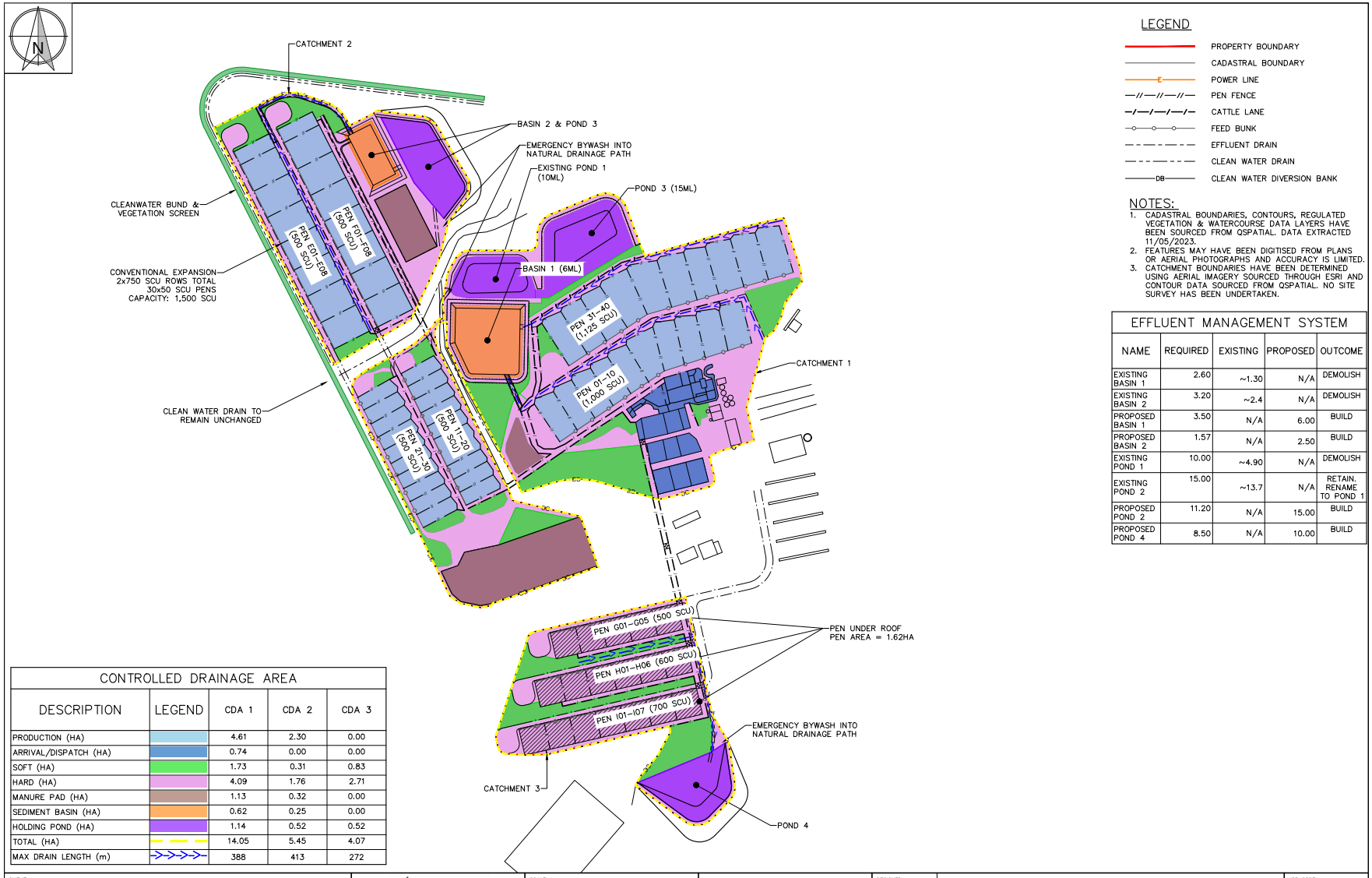
Amended in red by SARA on
24 May 2024


N
FEEDLOT SITE
PROPERTY ACCESS
OLD WONDAI ROAD
MEMERAMBI BARKERS CREEK ROAD
HERITAGE BARKERS CREEK
1RP157322
2RP157322
3RP157323
4RP157323
5RP157323
6RP157322
7RP157322
8RP157323
9RP157327
10RP157327
11RP157327
CHERBOURG SOUTH FOREST RESERVE
PROPERTY BOUNDARY
PROPERTY BOUNDARY
PROPERTY BOUNDARY
MCLENNAN ROAD
LEGEND
PROPERTY BOUNDARY
CADASTRAL BOUNDARY
CONTOUR EXISTING (10.0m INTERVAL)
MAPPED STREAM ORDER
REGULATED VEGETATION – CAT B
REGULATED VEGETATION – CAT C
REGULATED VEGETATION – CAT R
PEN FENCE
CATTLE LANE
FEED BUNK
EFFLUENT DRAIN
FEED ROAD
DB
CLEAN WATER DIVERSION BANK
VEGETATION SCREEN
EFFLUENT UTILISATION AREA (58ha)
NOTES:
1. AERIAL IMAGE SOURCED THROUGH ESRI MAPPING SERVICES. IMAGE DATE 06/10/2021.
2. CADASTRAL BOUNDARIES, CONTOURS, REGULATED VEGETATION & WATERCOURSE DATA LAYERS HAVE BEEN SOURCED FROM QSPATIAL. DATA EXTRACTED 11/05/2023.
3. FEATURES MAY HAVE BEEN DIGITISED FROM PLANS OR AERIAL PHOTOGRAPHS AND ACCURACY IS LIMITED.
4. THE EXISTING FEEDLOT HAS A CAPACITY OF 3,125 HEAD AT A STOCKING DENSITY OF 15.0m²/SCU.
5. CONVENTIONAL EXPANSION PENS (ROW E & F)
5.1. ALL RUNOFF FROM THE CONVENTIONAL EXPANSION WORKS WILL BE MANAGED IN A SEPARATE CATCHMENT WITH A DEDICATED SEDIMENTATION BASIN & EFFLUENT HOLDING POND.
5.2. THE REQUIRED SEDIMENTATION BASIN & EFFLUENT HOLDING POND CAPACITIES HAVE BEEN DETERMINED IN ACCORDANCE WITH THE QLD DAF FEEDLOT GUIDELINES. THE INPUT DATA USED FOR THE SPREADSHEET CALCULATIONS IS CONSISTENT WITH THE CATCHMENT DETAILS PROVIDED IN P005 – CATCHMENT PLAN (PAK–005).
6. COVERED EXPANSION PENS (ROW G, H & I)
6.1. ALL STORMWATER RUNOFF FROM THE ROOF AND BETWEEN THE SHEDS WILL BE DIRECTED INTO WATER STORAGE 2.
SITE EXPANSION:
1. STAGE 1 (CONVENTIONAL)
1.1. CAPACITY = 1,500 SCU
1.1. STOCKING DENSITY: = 15.0m²/SCU
1.2. BUNK SPACE = 340 mm/SCU
1.3. PENS 34.0m x 45.0m = 1,500 m²/PEN
1.4. INDIVIDUAL PEN CAPACITY = 100 SCU
1.5. PROPOSED PENS = 14 + 2 HALF PENS
2. STAGE 2 (COVERED)
2.1. CAPACITY: = 1,800 SCU
2.1. STOCKING DENSITY: = 9.0m²/SCU
2.2. BUNK SPACE = 300 mm/SCU
2.3. PENS 30.0m x 30.0m = 900 m²/PEN
2.4. INDIVIDUAL PEN CAPACITY = 100 SCU
2.5. PROPOSED PENS = 18
3. COMPLETE EXPANDED SITE
3.1. EXISTING: 3,125 @ 15.0m²/SCU
3.2. STAGE 1 1,500 @ 15.0m²/SCU
3.3. STAGE 2 1,800 @ 9.0m²/SCU
3.4. COMBINED 6,425 @ 13.3m2/SCU
CLIENT
PAKADERINGA FEEDLOT PTY LTD
PROJECT
PAKADERINGA FEEDLOT EXPANSION
LOCATION
1270 CORNDALE ROAD, NANANGO, QLD 4615
SHEET TITLE
PROPERTY PLAN (AERIAL IMAGERY)
AgDSA
AGRICULTURAL DEVELOPMENT SERVICES AUSTRALIA
PO BOX 292
TOOWOOMBA QLD 4350
PH: +61 473 171 957
E: contact@agdsa.com.au
SCALE
0 200 400 600m
SCALE 1:10,000 (A1) 1:20,000 (A3)
SIGNED
Pakaderinga Feedlot
DESIGNED
TJS
CHECKED
MRN
PROJECT MANAGER
MRN
FOR APPROVAL ONLY
DATE REV DESCRIPTION APP
11/04/2024 B RESPONSE TO RFI MRN
22/09/2023 A ORIGINAL ISSUE FOR APPROVAL ONLY MRN
REVISIONS
JOB CODE
PAK–001
SHEET NUMBER
A001
CURRENT REVISION
B


N
FEEDLOT SITE
PROPERTY ACCESS
OLD MONDA ROAD
MEMERAMBI BARKERS CREEK ROAD
1RP157322
2RP157322
3RP157323
4RP157323
5RP157323
6RP157322
7RP157322
8RP157323
9RP157327
10RP157327
11RP157327
CHERBOURG SOUTH FOREST RESERVE
PROPERTY BOUNDARY
PROPERTY BOUNDARY
PROPERTY BOUNDARY
MCLENNAN ROAD
LEGEND
PROPERTY BOUNDARY
CADASTRAL BOUNDARY
MAPPED STREAM ORDER
REGULATED VEGETATION – CAT B
REGULATED VEGETATION – CAT C
REGULATED VEGETATION – CAT R
PEN FENCE
CATTLE LANE
FEED BUNK
EFFLUENT DRAIN
FEED ROAD
DB CLEAN WATER DIVERSION BANK
VEGETATION SCREEN
EFFLUENT UTILISATION AREA (58ha)
NOTES:
1. AERIAL IMAGE SOURCED THROUGH ESRI MAPPING SERVICES. IMAGE DATE 06/10/2021.
2. CADASTRAL BOUNDARIES, CONTOURS, REGULATED VEGETATION & WATERCOURSE DATA LAYERS HAVE BEEN SOURCED FROM QSPATIAL. DATA EXTRACTED 11/05/2023.
3. FEATURES MAY HAVE BEEN DIGITISED FROM PLANS OR AERIAL PHOTOGRAPHS AND ACCURACY IS LIMITED.
4. THE EXISTING FEEDLOT HAS A CAPACITY OF 3,125 HEAD AT A STOCKING DENSITY OF 15.0m²/SCU.
5. CONVENTIONAL EXPANSION PENS (ROW E & F)
5.1. ALL RUNOFF FROM THE CONVENTIONAL EXPANSION WORKS WILL BE MANAGED IN A SEPARATE CATCHMENT WITH A DEDICATED SEDIMENTATION BASIN & EFFLUENT HOLDING POND.
5.2. THE REQUIRED SEDIMENTATION BASIN & EFFLUENT HOLDING POND CAPACITIES HAVE BEEN DETERMINED IN ACCORDANCE WITH THE QLD DAF FEEDLOT GUIDELINES. THE INPUT DATA USED FOR THE SPREADSHEET CALCULATIONS IS CONSISTENT WITH THE CATCHMENT DETAILS PROVIDED IN P005 – CATCHMENT PLAN (PAK–005).
6. COVERED EXPANSION PENS (ROW G, H & I)
6.1. ALL STORMWATER RUNOFF FROM THE ROOF AND BETWEEN THE SHEDS WILL BE DIRECTED INTO WATER STORAGE 2.
SITE EXPANSION:
1. STAGE 1 (CONVENTIONAL)
1.1. CAPACITY = 1,500 SCU
1.1. STOCKING DENSITY: = 15.0m²/SCU
1.2. BUNK SPACE = 340 mm/SCU
1.3. PENS 34.0m x 45.0m = 1,500 m²/PEN
1.4. INDIVIDUAL PEN CAPACITY = 100 SCU
1.5. PROPOSED PENS = 14 + 2 HALF PENS
2. STAGE 2 (COVERED)
2.1. CAPACITY: = 1,800 SCU
2.1. STOCKING DENSITY: = 9.0m²/SCU
2.2. BUNK SPACE = 300 mm/SCU
2.3. PENS 30.0m x 30.0m = 900 m²/PEN
2.4. INDIVIDUAL PEN CAPACITY = 100 SCU
2.5. PROPOSED PENS = 18
3. COMPLETE EXPANDED SITE
3.1. EXISTING: 3,125 @ 15.0m²/SCU
3.2. STAGE 1 1,500 @ 15.0m²/SCU
3.3. STAGE 2 1,800 @ 9.0m²/SCU
3.4. COMBINED 6,425 @ 13.3m2/SCU
CLIENT PAKADERINGA FEEDLOT PTY LTD
PROJECT PAKADERINGA FEEDLOT EXPANSION
LOCATION 1270 CORNDALE ROAD, NANANGO, QLD 4615
SHEET TITLE PROPERTY PLAN
AgDSA AGRICULTURAL DEVELOPMENT SERVICES AUSTRALIA
PO BOX 292 TOOWOOMBA QLD 4350 PH: +61 473 171 957 E: contact@agdsa.com.au
SCALE 0 200 400 600m
SCALE 1:10,000 (A1) 1:20,000 (A3)
SIGNED
Pakaderinga Feedlot
DESIGNED TJS
CHECKED MRN
PROJECT MANAGER MRN
FOR APPROVAL ONLY
DATE REV DESCRIPTION
11/04/2024 B RESPONSE TO RFI MRN
22/09/2023 A ORIGINAL ISSUE FOR APPROVAL ONLY MRN
REVISIONS
JOB CODE PAK–001
SHEET NUMBER A002
CURRENT REVISION B


N
MEMERAMBI–BARKERS CREEK ROAD
1,350m TO RECEPTOR 1
CLEANWATER BUND & VEGETATION SCREEN
CONVENTIONAL EXPANSION 2x750 SCU ROWS TOTAL 30x50 SCU PENS CAPACITY: 1,500 SCU
CLEAN WATER DRAIN TO REMAIN UNCHANGED
EXISTING CATCHMENT TO REMAIN UNCHANGED
EMERGENCY BYWASH INTO NATURAL DRAINAGE PATH
SITE ACCESS
15.0ML
10.0ML
6.0ML
PEN 31–40 (1,125 SCU)
PEN 01–10 (1,000 SCU)
PEN 11–20 (500 SCU)
PEN 21–30 (500 SCU)
MANURE PAD
1RP157322
STORMWATER RUNOFF DRAIN
EMERGENCY BYWASH INTO NATURAL DRAINAGE PATH
CLEANWATER DRAIN TO WATER STORAGE 2
STORM WATER POND
COVERED EXPANSION TOTAL 18x100 SCU PENS CAPACITY: 1,800 SCU
WATER STORAGE 1
MASS BURIAL SITE
LEGEND
PROPERTY BOUNDARY
CADASTRAL BOUNDARY
CONTOUR EXISTING (10.0m INTERVAL)
MAPPED STREAM ORDER
REGULATED VEGETATION – CAT B
REGULATED VEGETATION – CAT R
POWER LINE
COVERED PENS
PEN FENCE
CATTLE LANE
FEED BUNK
EFFLUENT DRAIN
FEED ROAD
CLEAN WATER DIVERSION BANK
VEGETATION SCREEN
NOTES:
1. AERIAL IMAGE SOURCED THROUGH ESRI MAPPING SERVICES. IMAGE DATE 06/10/2021.
2. CADASTRAL BOUNDARIES, CONTOURS, REGULATED VEGETATION & WATERCOURSE DATA LAYERS HAVE BEEN SOURCED FROM QSPATIAL. DATA EXTRACTED 11/05/2023.
3. FEATURES MAY HAVE BEEN DIGITISED FROM PLANS OR AERIAL PHOTOGRAPHS AND ACCURACY IS LIMITED.
4. THE EXISTING FEEDLOT HAS A CAPACITY OF 3,125 HEAD AT A STOCKING DENSITY OF 15.0m²/SCU.
5. THERE IS TO BE NO CHANGE TO THE CONTROLLED DRAINAGE AREA (CDA) OF THE APPROVED FACILITY.
6. CONVENTIONAL EXPANSION PENS (ROW E & F)
6.1. ALL RUNOFF FROM THE CONVENTIONAL EXPANSION WORKS WILL BE MANAGED IN A SEPARATE CATCHMENT WITH A DEDICATED SEDIMENTATION BASIN & EFFLUENT HOLDING POND.
6.2. THE REQUIRED SEDIMENTATION BASIN & EFFLUENT HOLDING POND CAPACITIES HAVE BEEN DETERMINED IN ACCORDANCE WITH THE QLD DAF FEEDLOT GUIDELINES. THE INPUT DATA USED FOR THE SPREADSHEET CALCULATIONS IS CONSISTENT WITH THE CATCHMENT DETAILS PROVIDED IN P005 – CATCHMENT PLAN (PAK–005).
7. COVERED EXPANSION PENS (ROW G, H & I)
7.1. ALL STORMWATER RUNOFF FROM THE ROOF AND BETWEEN THE SHEDS WILL BE DIRECTED INTO WATER STORAGE 2.
SITE EXPANSION:
1. STAGE 1 (CONVENTIONAL)
1.1. CAPACITY = 1,500 SCU
1.1. STOCKING DENSITY: = 15.0m²/SCU
1.2. BUNK SPACE = 340 mm/SCU
1.3. PENS 34.0m x 45.0m = 1,500 m²/PEN
1.4. INDIVIDUAL PEN CAPACITY = 100 SCU
1.5. PROPOSED PENS = 14 + 2 HALF PENS
2. STAGE 2 (COVERED)
2.1. CAPACITY: = 1,800 SCU
2.1. STOCKING DENSITY: = 9.0m²/SCU
2.2. BUNK SPACE = 300 mm/SCU
2.3. PENS 30.0m x 30.0m = 900 m²/PEN
2.4. INDIVIDUAL PEN CAPACITY = 100 SCU
2.5. PROPOSED PENS = 18
3. COMPLETE EXPANDED SITE
3.1. EXISTING: 3,125 @ 15.0m²/SCU
3.2. STAGE 1 1,500 @ 15.0m²/SCU
3.3. STAGE 2 1,800 @ 9.0m²/SCU
3.4. COMBINED 6,425 @ 13.3m2/SCU
CLIENT PAKADERINGA FEEDLOT PTY LTD
PROJECT PAKADERINGA FEEDLOT EXPANSION
LOCATION 1270 CORNDALE ROAD, NANANGO, QLD 4615
SHEET TITLE CONCEPT PLAN
AgDSA AGRICULTURAL DEVELOPMENT SERVICES AUSTRALIA
PO BOX 292 TOOWOOMBA QLD 4350 PH: +61 473 171 957 E: contact@agdsa.com.au
SCALE 0 40 80 120m SCALE 1:2,000 (A1) 1:4,000 (A3)
SIGNED
Pakaderinga Feedlot
DESIGNED TJS
CHECKED MRN
PROJECT MANAGER MRN
FOR APPROVAL ONLY
11/04/2024 B RESPONSE TO RFI MRN
22/09/2023 A ORIGINAL ISSUE FOR APPROVAL ONLY MRN
DATE REV DESCRIPTION APP
REVISIONS
JOB CODE PAK–001
SHEET NUMBER A003
CURRENT REVISION B


N
MEMERAMBI–BARKERS CREEK ROAD
1,350m TO RECEPTOR 1
CLEANWATER BUND & VEGETATION SCREEN
CONVENTIONAL EXPANSION 2x750 SCU ROWS TOTAL 30x50 SCU PENS CAPACITY: 1,500 SCU
CLEAN WATER DRAIN TO REMAIN UNCHANGED
EXISTING CATCHMENT TO REMAIN UNCHANGED
EMERGENCY BYWASH INTO NATURAL DRAINAGE PATH
15.0ML
10.0ML
6.0ML
PEN 31–40 (1,125 SCU)
PEN 01–10 (1,000 SCU)
PEN 11–20 (500 SCU)
PEN 21–30 (500 SCU)
MANURE PAD
1RP157322
SITE ACCESS
STORMWATER RUNOFF DRAIN
EMERGENCY BYWASH INTO NATURAL DRAINAGE PATH
STORM WATER POND
CLEANWATER DRAIN TO WATER STORAGE 2
COVERED EXPANSION TOTAL 18x100 SCU PENS CAPACITY: 1,800 SCU
WATER STORAGE 1
MASS BURIAL SITE
LEGEND
PROPERTY BOUNDARY
CADASTRAL BOUNDARY
MAPPED STREAM ORDER
REGULATED VEGETATION – CAT B
REGULATED VEGETATION – CAT R
POWER LINE
COVERED PENS
PEN FENCE
CATTLE LANE
FEED BUNK
EFFLUENT DRAIN
FEED ROAD
CLEAN WATER DIVERSION BANK
VEGETATION SCREEN
STAGE 1 BOUNDARY
STAGE 2 BOUNDARY
NOTES:
1. AERIAL IMAGE SOURCED THROUGH ESRI MAPPING SERVICES. IMAGE DATE 06/10/2021.
2. CADASTRAL BOUNDARIES, CONTOURS, REGULATED VEGETATION & WATERCOURSE DATA LAYERS HAVE BEEN SOURCED FROM QSPATIAL. DATA EXTRACTED 11/05/2023.
3. FEATURES MAY HAVE BEEN DIGITISED FROM PLANS OR AERIAL PHOTOGRAPHS AND ACCURACY IS LIMITED.
4. THE EXISTING FEEDLOT HAS A CAPACITY OF 3,125 HEAD AT A STOCKING DENSITY OF 15.0m²/SCU.
5. THERE IS TO BE NO CHANGE TO THE CONTROLLED DRAINAGE AREA (CDA) OF THE APPROVED FACILITY.
6. CONVENTIONAL EXPANSION PENS (ROW E & F)
6.1. ALL RUNOFF FROM THE CONVENTIONAL EXPANSION WORKS WILL BE MANAGED IN A SEPARATE CATCHMENT WITH A DEDICATED SEDIMENTATION BASIN & EFFLUENT HOLDING POND.
6.2. THE REQUIRED SEDIMENTATION BASIN & EFFLUENT HOLDING POND CAPACITIES HAVE BEEN DETERMINED IN ACCORDANCE WITH THE QLD DAF FEEDLOT GUIDELINES. THE INPUT DATA USED FOR THE SPREADSHEET CALCULATIONS IS CONSISTENT WITH THE CATCHMENT DETAILS PROVIDED IN P005 – CATCHMENT PLAN (PAK–005).
7. COVERED EXPANSION PENS (ROW G, H & I)
7.1. ALL STORMWATER RUNOFF FROM THE ROOF AND BETWEEN THE SHEDS WILL BE DIRECTED INTO WATER STORAGE 2.
SITE EXPANSION:
1. STAGE 1 (CONVENTIONAL)
1.1. CAPACITY = 1,500 SCU
1.1. STOCKING DENSITY: = 15.0m²/SCU
1.2. BUNK SPACE = 340 mm/SCU
1.3. PENS 34.0m x 45.0m = 1,500 m²/PEN
1.4. INDIVIDUAL PEN CAPACITY = 100 SCU
1.5. PROPOSED PENS = 14 + 2 HALF PENS
2. STAGE 2 (COVERED)
2.1. CAPACITY: = 1,800 SCU
2.1. STOCKING DENSITY: = 9.0m²/SCU
2.2. BUNK SPACE = 300 mm/SCU
2.3. PENS 30.0m x 30.0m = 900 m²/PEN
2.4. INDIVIDUAL PEN CAPACITY = 100 SCU
2.5. PROPOSED PENS = 18
3. COMPLETE EXPANDED SITE
3.1. EXISTING: 3,125 @ 15.0m²/SCU
3.2. STAGE 1 1,500 @ 15.0m²/SCU
3.3. STAGE 2 1,800 @ 9.0m²/SCU
3.4. COMBINED 6,425 @ 13.3m2/SCU
CLIENT
PAKADERINGA FEEDLOT PTY LTD
PROJECT
PAKADERINGA FEEDLOT EXPANSION
LOCATION
1270 CORNDALE ROAD, NANANGO, QLD 4615
SHEET TITLE
DESIGN PLAN
AgDSA
AGRICULTURAL DEVELOPMENT SERVICES AUSTRALIA
PO BOX 292
TOOWOOMBA QLD 4350
PH: +61 473 171 957
E: contact@agdsa.com.au
SCALE
0 40 80 120m
SCALE 1:2,000 (A1) 1:4,000 (A3)
SIGNED
Pakaderinga Feedlot
DESIGNED TJS
CHECKED MRN
PROJECT MANAGER MRN
FOR APPROVAL ONLY
DATE REV DESCRIPTION
11/04/2024 C RESPONSE TO RFI MRN
08/01/2024 B REISSUE WITH STAGE BOUNDARIES MRN
22/09/2023 A ORIGINAL ISSUE FOR APPROVAL ONLY MRN
REVISIONS
JOB CODE PAK–001
SHEET NUMBER A004
CURRENT REVISION C



LEGEND

- PROPERTY BOUNDARY
- CADASTRAL BOUNDARY
- POWER LINE
- PEN FENCE
- CATTLE LANE
- FEED BUNK
- EFFLUENT DRAIN
- CLEAN WATER DRAIN
- DB — CLEAN WATER DIVERSION BANK

NOTES:

1. CADASTRAL BOUNDARIES, CONTOURS, REGULATED VEGETATION & WATERCOURSE DATA LAYERS HAVE BEEN SOURCED FROM QSPATIAL. DATA EXTRACTED 11/05/2023.
2. FEATURES MAY HAVE BEEN DIGITISED FROM PLANS OR AERIAL PHOTOGRAPHS AND ACCURACY IS LIMITED.
3. CATCHMENT BOUNDARIES HAVE BEEN DETERMINED USING AERIAL IMAGERY SOURCED THROUGH ESRI AND CONTOUR DATA SOURCED FROM QSPATIAL. NO SITE SURVEY HAS BEEN UNDERTAKEN.

EFFLUENT MANAGEMENT SYSTEM

NAME	REQUIRED	EXISTING	PROPOSED	OUTCOME
EXISTING BASIN 1	2.60	~1.30	N/A	DEMOLISH
EXISTING BASIN 2	3.20	~2.4	N/A	DEMOLISH
PROPOSED BASIN 1	3.50	N/A	6.00	BUILD
PROPOSED BASIN 2	1.57	N/A	2.50	BUILD
EXISTING POND 1	10.00	~4.90	N/A	DEMOLISH
EXISTING POND 2	15.00	~13.7	N/A	RETAIN. RENAME TO POND 1
PROPOSED POND 2	11.20	N/A	15.00	BUILD
PROPOSED POND 4	8.50	N/A	10.00	BUILD

CONTROLLED DRAINAGE AREA

DESCRIPTION	LEGEND	CDA 1	CDA 2	CDA 3
PRODUCTION (HA)		4.61	2.30	0.00
ARRIVAL/DISPATCH (HA)		0.74	0.00	0.00
SOFT (HA)		1.73	0.31	0.83
HARD (HA)		4.09	1.76	2.71
MANURE PAD (HA)		1.13	0.32	0.00
SEDIMENT BASIN (HA)		0.62	0.25	0.00
HOLDING POND (HA)		1.14	0.52	0.52
TOTAL (HA)		14.05	5.45	4.07
MAX DRAIN LENGTH (m)		388	413	272

CLIENT: PAKADERINGA FEEDLOT PTY LTD
PROJECT: PAKADERINGA FEEDLOT EXPANSION
LOCATION: 1270 CORNDALE ROAD, NANANGO, QLD 4615
SHEET TITLE: CONTROLLED DRAINAGE AREA

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SCALE: 0 40 80 120m
SCALE 1:2,000 (A1) 1:4,000 (A3)
SIGNED

Pakaderinga Feedlot

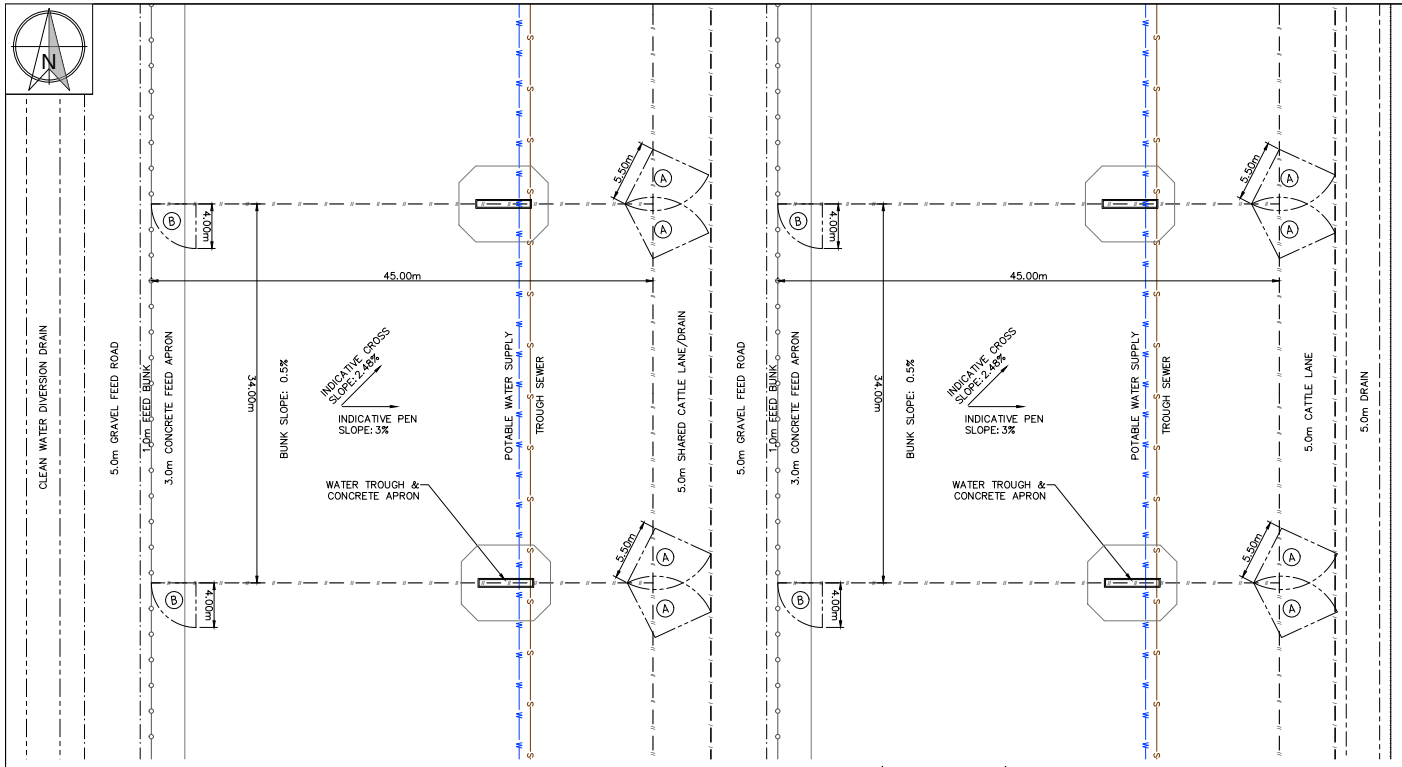
DESIGNED: TJS
CHECKED: MRN
PROJECT MANAGER: MRN

FOR APPROVAL ONLY

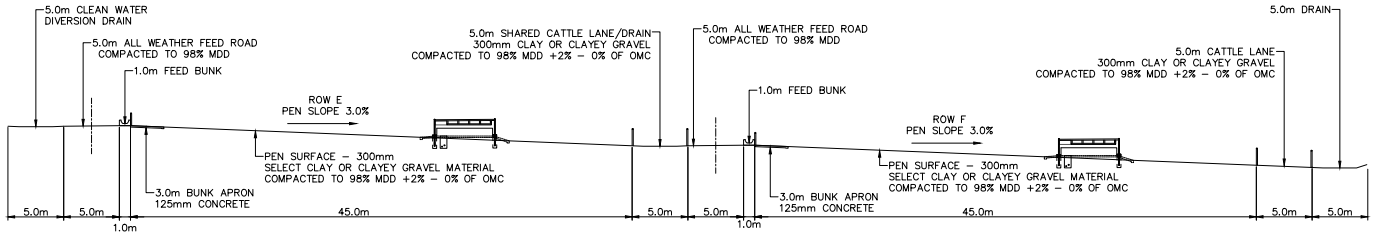
DATE	REV	DESCRIPTION	APP
11/04/2024	B	RESPONSE TO RFI	MRN
22/09/2023	A	ORIGINAL ISSUE FOR APPROVAL ONLY	MRN

REVISIONS

JOB CODE: PAK–001
SHEET NUMBER: A005
CURRENT REVISION: B



TYPICAL PLAN – CONVENTIONAL PRODUCTION PENS (ROW E AND F)



TYPICAL SECTION – CONVENTIONAL PRODUCTION PENS (ROW E AND F)

LEGEND

- PEN FENCE
- CATTLE LANE
- FEED BUNK
- FEED ROAD
- (A) GATE – 4.0m ACROSS BUNK APRON
- (B) GATE – 5.5m CATTLE ACCESS
- WATER LINE
- TROUGH SEWER LINE

MATERIALS

1. THE MATERIALS USED FOR THE CONSTRUCTION OF THE COMPOST PAD SHALL BE CLASSIFIED AS EITHER CL, CI, CH, SC OR GC IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM. IT SHALL COMPLY WITH THE FOLLOWING PARTICLE SIZE & PLASTICITY LIMITS.
2. PARTICLE SIZE DISTRIBUTION

37.5	100
19.0	70–700
2.36	40–100
0.075	25–90

3. FINES PLASTICITY LIMITS FINES (PASSING 0.425mm)

LIQUID LIMIT:	30–60%
PLASTICITY INDEX:	>10%

CONSTRUCTION REQUIREMENTS

1. TOPSOIL STRIPPING SHALL BE UNDERTAKEN TO A SUITABLE DEPTH TO CLEAR THE SITE OF TREES, SCRUB, STUMPS, GRASS & ORGANIC MATTER.
2. AFTER TOPSOIL STRIPPING HOLES RESULTING FROM THE STRIPPING SHALL BE FILLED.
3. RIPPING TO A DEPTH OF 150mm IS TO BE UNDERTAKEN AND WATER ADDED TO ENSURE MATERIAL IS WITHIN ±2% OF THE OPTIMUM MOISTURE CONTENT (OMC).
4. AFTER WATERING COMPACTION IS TO BE UNDERTAKEN TO PRODUCE FIELD DRY DENSITY OF AT LEAST 98% OF THE STANDARD MAXIMUM DRY DENSITY (MDD).
5. SUITABLE FILL MATERIAL SHOULD BE PLACED IN LAYERS OF 200mm (PRIOR TO COMPACTION). EACH LAYER SHOULD BE TINED, WETTED TO ±2% OF OPTIMUM MOISTURE CONTENT (AS 1289 5.1.1) AND COMPACTED TO REACH THE REQUIRED COMPACTION RELATIVE TO THE MAXIMUM DRY DENSITY (AS1289 5.4.2).
6. THE FINAL SURFACE OF THE PAD MUST HAVE A MINIMUM CBR (CALIFORNIA BEARING RATIO) OF 20, & BE OF SUFFICIENT DEPTH TO ENSURE THE INTEGRITY OF THE STRUCTURE IS MAINTAINED THROUGHOUT THE GENERAL OPERATION OF THE FEEDLOT.
7. IRRESPECTIVE OF THE FINISHED PEN SURFACE, THE UNDERLYING SOILS MUST HAVE A MAXIMUM PERMEABILITY OF 1 x 10^{-9}m/s (0.1mm/day) FOR DISTILLED WATER WITH 1.0m OF PRESSURE HEAD.

SITE EXPANSION:

1. STAGE 1 (CONVENTIONAL)
   - 1.1. CAPACITY = 1,500 SCU
   - 1.1. STOCKING DENSITY: = 15.0m²/SCU
   - 1.2. BUNK SPACE = 340 mm/SCU
   - 1.3. PENS 34.0m x 45.0m = 1,500 m²/PEN
   - 1.4. INDIVIDUAL PEN CAPACITY = 100 SCU
   - 1.5. PROPOSED PENS = 14 + 2 HALF PENS
2. STAGE 2 (COVERED)
   - 2.1. CAPACITY: = 1,800 SCU
   - 2.1. STOCKING DENSITY: = 9.0m²/SCU
   - 2.2. BUNK SPACE = 300 mm/SCU
   - 2.3. PENS 30.0m x 30.0m = 900 m²/PEN
   - 2.4. INDIVIDUAL PEN CAPACITY = 100 SCU
   - 2.5. PROPOSED PENS = 18
3. COMPLETE EXPANDED SITE
   - 3.1. EXISTING: 3,125 @ 15.0m²/SCU
   - 3.2. STAGE 1 1,500 @ 15.0m²/SCU
   - 3.3. STAGE 2 1,800 @ 9.0m²/SCU
   - 3.4. COMBINED 6,425 @ 13.3m2/SCU

CLIENT: PAKADERINGA FEEDLOT PTY LTD
PROJECT: PAKADERINGA FEEDLOT EXPANSION
LOCATION: 1270 CORNDALE ROAD, NANANGO, QLD 4615
SHEET TITLE: TYPICAL CONVENTIONAL PEN DESIGN & CROSS SECTION

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SCALE: 0 4 8 12m
SCALE 1:200 (A1) 1:400 (A3)
SIGNED

Pakaderinga Feedlot

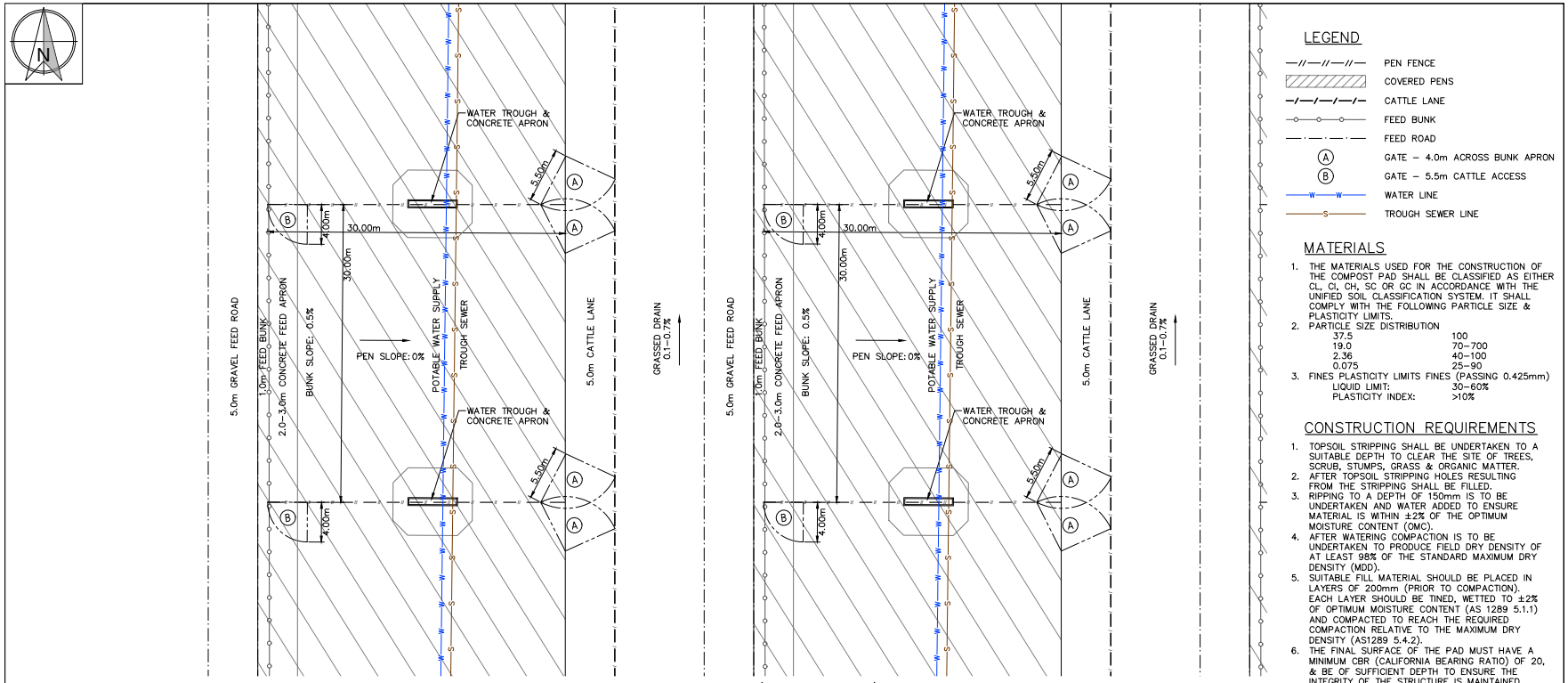
DESIGNED: TJS
CHECKED: MRN
PROJECT MANAGER: MRN

DRAFT DA PLANS – FOR CLIENT REVIEW

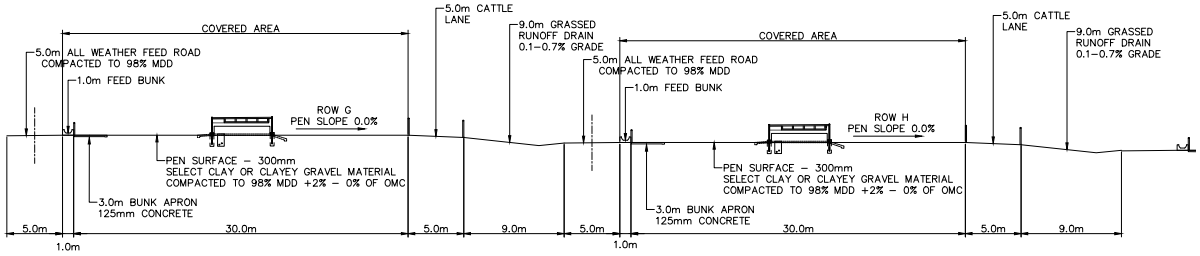
DATE	REV	DESCRIPTION	APP
07/09/2023	D1	DRAFT DA PLANS – FOR CLIENT REVIEW	MRN

REVISIONS

JOB CODE: PAK–001
SHEET NUMBER: A006.1
CURRENT REVISION: DRAFT 1



TYPICAL PLAN – COVERED PRODUCTION PENS (ROW G AND H)



TYPICAL SECTION – COVERED PRODUCTION PENS (ROW G AND H)

MATERIALS

1. THE MATERIALS USED FOR THE CONSTRUCTION OF THE COMPOST PAD SHALL BE CLASSIFIED AS EITHER CL, CI, CH, SC OR GC IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM. IT SHALL COMPLY WITH THE FOLLOWING PARTICLE SIZE & PLASTICITY LIMITS.
2. PARTICLE SIZE DISTRIBUTION

37.5	100
19.0	70–700
2.36	40–100
0.075	25–90

3. FINES PLASTICITY LIMITS FINES (PASSING 0.425mm)

LIQUID LIMIT:	30–60%
PLASTICITY INDEX:	>10%

CONSTRUCTION REQUIREMENTS

1. TOPSOIL STRIPPING SHALL BE UNDERTAKEN TO A SUITABLE DEPTH TO CLEAR THE SITE OF TREES, SCRUB, STUMPS, GRASS & ORGANIC MATTER.
2. AFTER TOPSOIL STRIPPING HOLES RESULTING FROM THE STRIPPING SHALL BE FILLED.
3. RIPPING TO A DEPTH OF 150mm IS TO BE UNDERTAKEN AND WATER ADDED TO ENSURE MATERIAL IS WITHIN ±2% OF THE OPTIMUM MOISTURE CONTENT (OMC).
4. AFTER WATERING COMPACTION IS TO BE UNDERTAKEN TO PRODUCE FIELD DRY DENSITY OF AT LEAST 98% OF THE STANDARD MAXIMUM DRY DENSITY (MDD).
5. SUITABLE FILL MATERIAL SHOULD BE PLACED IN LAYERS OF 200mm (PRIOR TO COMPACTION). EACH LAYER SHOULD BE TINED, WETTED TO ±2% OF OPTIMUM MOISTURE CONTENT (AS 1289 5.1.1) AND COMPACTED TO REACH THE REQUIRED COMPACTION RELATIVE TO THE MAXIMUM DRY DENSITY (AS1289 5.4.2).
6. THE FINAL SURFACE OF THE PAD MUST HAVE A MINIMUM CBR (CALIFORNIA BEARING RATIO) OF 20, & BE OF SUFFICIENT DEPTH TO ENSURE THE INTEGRITY OF THE STRUCTURE IS MAINTAINED THROUGHOUT THE GENERAL OPERATION OF THE FEEDLOT.
7. IRRESPECTIVE OF THE FINISHED PEN SURFACE, THE UNDERLYING SOILS MUST HAVE A MAXIMUM PERMEABILITY OF 1 x 10^{-9}m/s (0.1mm/day) FOR DISTILLED WATER WITH 1.0m OF PRESSURE HEAD.

SITE EXPANSION:

1. STAGE 1 (CONVENTIONAL)
   - 1.1. CAPACITY = 1,500 SCU
   - 1.1. STOCKING DENSITY: = 15.0m²/SCU
   - 1.2. BUNK SPACE = 340 mm/SCU
   - 1.3. PENS 34.0m x 45.0m = 1,500 m²/PEN
   - 1.4. INDIVIDUAL PEN CAPACITY = 100 SCU
   - 1.5. PROPOSED PENS = 14 + 2 HALF PENS
2. STAGE 2 (COVERED)
   - 2.1. CAPACITY: = 1,800 SCU
   - 2.1. STOCKING DENSITY: = 9.0m²/SCU
   - 2.2. BUNK SPACE = 300 mm/SCU
   - 2.3. PENS 30.0m x 30.0m = 900 m²/PEN
   - 2.4. INDIVIDUAL PEN CAPACITY = 100 SCU
   - 2.5. PROPOSED PENS = 18
3. COMPLETE EXPANDED SITE
   - 3.1. EXISTING: 3,125 @ 15.0m²/SCU
   - 3.2. STAGE 1 1,500 @ 15.0m²/SCU
   - 3.3. STAGE 2 1,800 @ 9.0m²/SCU
   - 3.4. COMBINED 6,425 @ 13.3m2/SCU

CLIENT: PAKADERINGA FEEDLOT PTY LTD
PROJECT: PAKADERINGA FEEDLOT EXPANSION
LOCATION: 1270 CORNDALE ROAD, NANANGO, QLD 4615
SHEET TITLE: TYPICAL COVERED PEN DESIGN & CROSS SECTION

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SCALE: 0 4 8 12m
SCALE 1:200 (A1) 1:400 (A3)
SIGNED

Pakaderinga Feedlot

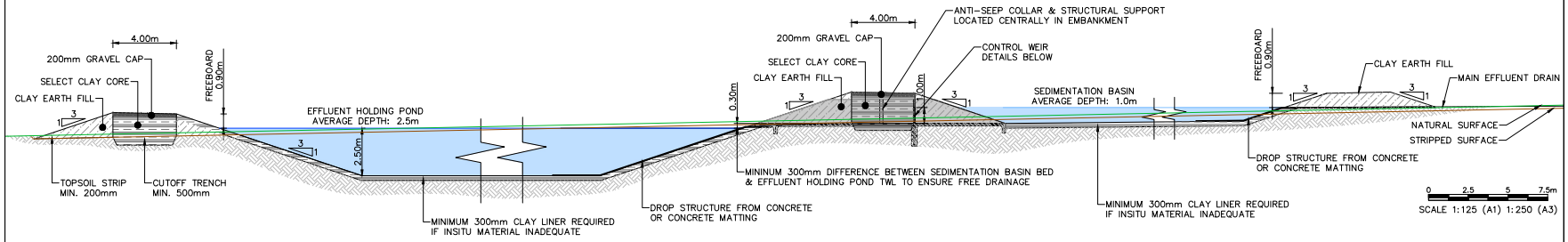
DESIGNED: TJS
CHECKED: MRN
PROJECT MANAGER: MRN

DRAFT DA PLANS – FOR CLIENT REVIEW

DATE	REV	DESCRIPTION	APP
07/09/2023	D1	DRAFT DA PLANS – FOR CLIENT REVIEW	MRN

REVISIONS

JOB CODE: PAK–001
SHEET NUMBER: A006.2
CURRENT REVISION: DRAFT 1



TYPICAL CROSS SECTION THROUGH EFFLUENT MANAGEMENT SYSTEM

TABLES 1, 2 & 3 DETAIL POTENTIAL FLOW CAPACITIES OF VARIOUS DRAIN CONFIGURATIONS. A MINIMUM DRAIN WIDTH OF 2.5m IS RECOMMENDED TO ALLOW FOR EASE OF MAINTENANCE.

TABLE 1 – 0.50% DRAIN CAPACITY (m^3/s)

DEPTH (m)	DRAIN BED WIDTH (m)						
	2.0	2.5	3.0	3.5	4.0	4.5	5.0
0.10	0.130	0.16	0.19	0.22	0.25	0.28	0.31
0.20	0.430	0.53	0.62	0.72	0.81	0.91	1.01
0.30	0.910	1.09	1.27	1.46	1.65	1.83	2.02
0.40	1.560	1.85	2.15	2.44	2.74	3.04	3.35
0.50	2.410	2.83	3.25	3.68	4.11	*4.54	*4.98

DRAINS ASSUMED TO HAVE COMPACTED GRAVEL BASE & INTERNAL BATTERS OF 1:3.
* IDENTIFIES FLOW VELOCITIES GREATER THAN 1.5 m/s WHICH REQUIRE SPECIFIC DRAIN LINING.

TABLE 2 – 0.75% DRAIN CAPACITY (m^3/s)

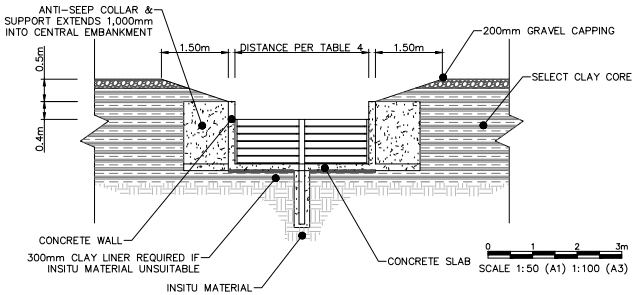
DEPTH (m)	DRAIN BED WIDTH (m)						
	2.0	2.5	3.0	3.5	4.0	4.5	5.0
0.10	0.160	0.190	0.230	0.270	0.310	0.340	0.380
0.20	0.530	0.650	0.760	0.880	1	1.110	1.230
0.30	1.110	1.330	1.560	1.790	2.020	2.250	2.480
0.40	1.910	*2.27	*2.63	*2.99	*3.36	*3.73	*4.10
0.50	*2.95	*3.46	*3.98	*4.51	*5.03	*5.56	*6.09

DRAINS ASSUMED TO HAVE COMPACTED GRAVEL BASE & INTERNAL BATTERS OF 1:3.
* IDENTIFIES FLOW VELOCITIES GREATER THAN 1.5 m/s WHICH REQUIRE SPECIFIC DRAIN LINING.

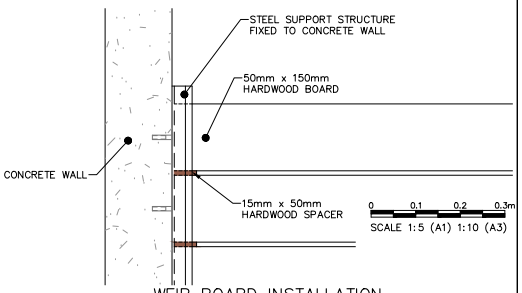
TABLE 3 – 1.0% DRAIN CAPACITY (m^3/s)

DEPTH (m)	DRAIN BED WIDTH (m)						
	2.0	2.5	3.0	3.5	4.0	4.5	5.0
0.10	0.180	0.22	0.27	0.31	0.35	0.40	0.44
0.20	0.610	0.75	0.88	1.01	1.15	1.29	1.42
0.30	1.280	*1.54	*1.80	*2.06	*2.33	*2.59	*2.86
0.40	*2.20	*2.62	*3.04	*3.46	*3.88	*4.31	*4.73
0.50	*3.40	*4.00	*4.60	*5.20	*5.81	*6.42	*7.02

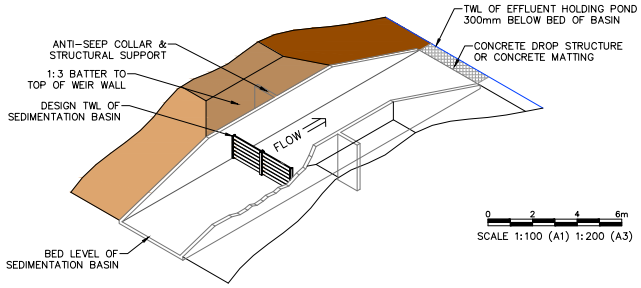
DRAINS ASSUMED TO HAVE COMPACTED GRAVEL BASE & INTERNAL BATTERS OF 1:3.
* IDENTIFIES FLOW VELOCITIES GREATER THAN 1.5 m/s WHICH REQUIRE SPECIFIC DRAIN LINING.



CONTROL WEIR – FRONT ELEVATION



WEIR BOARD INSTALLATION



WEIR INSTALLATION

TABLE 4 DETAILS THE CAPACITY OF VARIOUS RECTANGULAR WEIR CONFIGURATIONS. A MAXIMUM WEIR DEPTH OF 0.5m IS RECOMMENDED. WEIR WIDTH IS DIRECTLY PROPORTIONAL TO FLOW CAPACITY, THEREFORE, THE CAPACITY OF TWO 5.0m WEIR WIDTHS ARE EQUAL TO A SINGLE 10.0m WEIR.

TABLE 4 – WEIR CAPACITY (m^3/s)

DEPTH (m)	WEIR WIDTH (m)						
	2.0	2.5	3.0	3.5	4.0	4.5	5.0
0.1	0.11	0.13	0.16	0.19	0.22	0.24	0.27
0.2	0.30	0.38	0.46	0.53	0.61	0.68	0.76
0.3	0.56	0.70	0.84	0.98	1.12	1.26	1.40
0.4	0.86	1.08	1.29	1.51	1.72	1.94	2.15
0.5	1.20	1.50	1.80	2.10	2.40	2.70	3.01
0.6	1.58	1.98	2.37	2.77	3.16	3.56	3.95
0.7	1.99	2.49	2.99	3.48	3.98	4.48	4.98
0.8	2.43	3.04	3.65	4.26	4.87	5.47	6.08

CLIENT: PAKADERINGA FEEDLOT PTY LTD
PROJECT: PAKADERINGA FEEDLOT EXPANSION
LOCATION: 1270 CORNDALE ROAD, NANANGO, QLD 4615
SHEET TITLE: TYPICAL EFFLUENT MANAGEMENT SYSTEM DESIGN

AgDSA
AGRICULTURAL DEVELOPMENT SERVICES AUSTRALIA
PO BOX 292
TOOWOOMBA QLD 4350
PH: +61 473 171 957
E: contact@agdsa.com.au

SCALE: AS SHOWN
SIGNED:

Pakaderinga Feedlot

DESIGNED: TJS
CHECKED: MRN
PROJECT MANAGER: MRN

DRAFT DA PLANS – FOR CLIENT REVIEW

DATE	REV	DESCRIPTION	APP
07/09/2023	D1	DRAFT DA PLANS – FOR CLIENT REVIEW	MRN

REVISIONS

JOB CODE: PAK–001
SHEET NUMBER: A007
CURRENT REVISION: DRAFT 1

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:
Pakaderinga Feedlot Q Pty Ltd
1270 Memerambi Barkers Creek Road
WATTLE CAMP QLD 4615

Email: lachlan@pakaderinga.com
Attention: Mr Lachlan Brown

Our Reference: 2024-08

Decision about an application for an environmental authority

1 Application details

The application for an environmental authority was received by the administering authority on 31 January 2024

Application reference number: MCU23/0031

Land description: Lot 1 RP157322; Lot 2 RP157322; Lot 6 RP157322; Lot 7 RP157322; Lot 3 RP157323; Lot 4 RP157323; Lot 5RP157323; Lot 8 RP157323; Lot 9 RP157327; Lot 10 RP157327; Lot 11 RP157327.

1270 Memerambi Barkers Creek Road Wattle Camp 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

Queensland Government

your review and appeal rights is attached to this notice. This information is guidance only and you may have other legal rights and obligations.

[redacted]

Luke Boucher
Manager, Environmental Regulation

22 May 2024

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 2024-08

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

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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Queensland Government

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)
Email: palm@des.qld.gov.au

[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.

Permit

Environmental Protection Act 1994

Environmental authority 2024-08

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

Environmental authority number: 2024-08

Environmental authority takes effect on the date that your related development approval MCU23/0031 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
Pakaderinga Feedlot Q Pty Ltd Suitable operator reference: 100535976	1270 Memerambi Barkers Creek Road WATTLE CAMP QLD 4615

Environmentally relevant activity and location details

Environmentally relevant activity	Location
ERA 2 – Intensive animal feedlotting 1 keeping the following number of standard cattle units in a feedlot – (b) more than 1,000 but not more than 10,000	Lot 1 RP157322; Lot 2 RP157322; Lot 6 RP157322; Lot 7 RP157322; Lot 3 RP157323; Lot 4 RP157323; Lot 5RP157323; Lot 8 RP157323; Lot 9 RP157327; Lot 10 RP157327; Lot 11 RP157327. 1270 Memerambi Barkers Creek Road Wattle Camp Queensland.

Queensland Government

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 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.

Stocking Density

Please be aware that Schedule 2B, Part 5, Section 24(1) of the *Animal Care and Protection Regulation 2012* states the following:

24 Floor area

(1) A person in charge of cattle kept in a beef feedlot must ensure a minimum floor area of 9m2 for each standard cattle unit in the feedlot.

Luke Boucher
Manager, Environmental Regulation

22 May 2024

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.

<table>
<tr><th colspan="2">Agency interest: General</th></tr>
<tr><th>Condition number</th><th>Condition</th></tr>
<tr><td>G1</td><td>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.</td></tr>
<tr><td>G2</td><td>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.</td></tr>
<tr><td>G3</td><td>All reasonable and practicable measures must be taken to prevent or minimise environmental harm caused by the activities.</td></tr>
<tr><td>G4</td><td>a) The number of cattle kept in the feedlot at any time, expressed in terms of Standard Cattle Units (SCU) must not be more than the number shown opposite the feedlot location in the table below;
<table>
<tr><th>Feedlot Location</th><th>Number of SCU</th><th>Average stocking density across total production pen area (m^2/SCU)</th></tr>
<tr><td>1 RP157322</td><td>6425</td><td>13.3</td></tr>
</table>
</td></tr>
</table>

G5	The feedlot **controlled drainage areas** and associated facilities must be constructed generally in accordance with the following plans: 1. Property Plan, Prepared by AgDSA, Job Code PAK-001, Sheet Number A002, Revision B and Dated 11 April 2024; and 2. Controlled Drainage Area, Prepared by AgDSA, Job Code PAK-001, Sheet Number A005, Revision B and Dated 11 April 2024; and 3. Typical Effluent Management System Design, Prepared by AgDSA, Job Code PAK-001, Sheet Number A007, Revision A and Dated 22 September 2023. **Note:** Prior to stocking the expanded feedlot areas or modifying controlled drainage areas in a way that would change the existing catchment areas, the required waste management infrastructure including drains, sedimentations basins and effluent holding ponds must be constructed in accordance with the plans above.
G6	Feedlot **controlled drainage areas** 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 Appendix C & G of the National Guidelines for Beef Cattle Feedlots in Australia 3rd Edition. The holder of the environmental authority is to submit compaction testing for approval to the **administering authority** to demonstrate compliance with this specification prior to stocking the expanded facility.
G7	Following the completion of the proposed feedlot complex, the holder of this environmental authority shall arrange for 'as-built' surveys to be carried out to confirm the size of the feedlot complex, all associated waste management facilities, the storage volumes of all effluent treatment systems and storage ponds. The results of these surveys shall be submitted to the **administering authority** for approval prior to stocking the expanded feedlot **controlled drainage area**.
G8	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**.
G9	Prior to stocking the expanded feedlot production pens with cattle, all proposed effluent irrigation areas must be developed and the required pumps and irrigators must be installed to ensure that effluent irrigation can be conducted to manage effluent pond volumes in accord with condition G13 below.

Feedlot Controlled Drainage Area and Pen Management	
G10	General Operating Requirements: • Feeding out equipment shall be operated to minimise spillage; • Stock watering facilities shall be maintained to minimise overflows and spillage; • Facilities shall be managed to ensure that wastewater generated by routine water trough cleaning operations is disposed of without causing erosion or significant ponding on the pen surface; • Levee banks, diversion banks and drains shall be maintained as soon as practically possible following any damage; • Deposited sediment shall be removed from drains if the flow of liquid effluent is being impeded; • Erosion damage of feedlot drains shall be rectified as soon as practically possible.
G11	Feedlot pens must be managed to: a) minimise the amount of organic matter available for decomposition, and b) minimise the amount of water that mixes with organic matter, and c) maximise the rate of drying of wet organic matter.
G12	Animal carcasses shall be disposed of so as not to cause **environmental harm** or **nuisance**.
G13	Runoff storage ponds (effluent holding ponds) shall be managed to prevent over-topping. Ponds are to be managed to ensure they are generally empty. Effluent is not to be held in ponds for periods of time such that an odour **nuisance** may occur.
G14	Sedimentation basins shall be cleaned and maintained following the deposition of sediment.
G15	Any **release** of effluent from containment structures must be reported to the **administering authority** within 24 hours of becoming aware of the **release**. **Records** must be kept including full details of the **release** and any subsequent actions taken.
G16	Details (including the date and location) of the following feedlot operations are to be recorded: • Pen management practices described in Condition G10; and • Number and average weight of cattle introduced and removed from the premises; and • Effluent irrigation events; and • Manure utilisation events; and • Sediment basin and effluent holding pond desludging events.
G17	Feedlot **controlled drainage areas** must be suitably designed to be protected from a 1% AEP flood event.

Monitoring	
G18	All analyses required under this environmental authority must be carried out by a laboratory that has National Association of Testing Authorities certification, or an equivalent certification, for such analyses.
G19	Monitoring as described below must be undertaken when requested by the **administering authority**, in the manner prescribed by the **administering authority**. • Standard agronomic soil chemistry of lands the subject of this environmental authority that receive waste generated by the environmentally relevant activity; and • A chemical analysis of relevant water courses. The monitoring results must be provided within 10 business days to the **administering authority** upon its request.
G20	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.
G21	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	Odours or airborne contaminants must not cause **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	Feedlot liquid waste containment structures must be managed at all times to prevent or minimise odour **nuisance**.
A4	To prevent or minimise odour **nuisance,** the feedlot solid waste storage area must be managed at all times to achieve the following: • minimise the amount of organic matter available for decomposition; • minimise water pooling; • maximise the rate of drying of wet solids.

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.
WT4	Effluent and solid waste shall be applied to crops or pastures using a managed waste application program. The waste application program shall ensure the effluent and solid waste is applied sustainably across the whole of the available waste utilisation area. The rate and volume of effluent and solid waste applied to utilisation areas shall be such that surface pooling and runoff is kept to a practical minimum and excessive deep percolation is avoided.

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	Feedlot waste products must be applied to **land** in a manner that does not result in leaching or overland flow of contaminants to **waters**.
WS5	The rate of application of effluent and solid wastes from the **activity** must not exceed the rates at which the critical constituents of the wastes, that is, water, nutrients (especially nitrogen and phosphorus) and salts, are: (a) taken up by plants and removed from the waste utilisation areas by harvesting; (b) safely stored within the soil profile; or (c) released into the surrounding environment in an acceptable form.
WS6	Manure and sludge removed from the feedlot pens, drains, sedimentation system(s) and holding pond(s), and spilt and/or spoilt feedstuffs, shall be either: • stored in a manner that minimises the risk of harm to environmental values; or • exported from the feedlot property; or • applied immediately, at sustainable rates, to crop or pasture on the feedlot property.
WS7	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**.
WS8	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. Property Plan, Prepared by AgDSA, Job Code PAK-001, Sheet Number A002, Revision B and Dated 11 April 2024.
2. Controlled Drainage Area, Prepared by AgDSA, Job Code PAK-001, Sheet Number A005, Revision B and Dated 11 April 2024.
3. Typical Effluent Management System Design, Prepared by AgDSA, Job Code PAK-001, Sheet Number A007, Revision A and Dated 22 September 2023.

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.

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.

production pen area – means all feedlot pens excluding hospital pens and handling facilities.

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.

standard cattle unit meaning and calculation

(1) A *standard cattle unit* is a unit of measurement based on the live weight of cattle.
(2) The number of standard cattle units that is equivalent to an animal of a live weight mentioned in column 1 of the following table is stated opposite in column 2.

Column 1	Column 2
Live weight (kg)	**Number of standard cattle units**
up to 350	0.67
more than 350 to 400	0.74
more than 400 to 450	0.81
more than 450 to 500	0.87
more than 500 to 550	0.94
more than 550 to 600	1.00
more than 600 to 650	1.06
more than 650 to 700	1.12
more than 700	1.18

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.

14.14 LIST OF CORRESPONDENCE PENDING COMPLETION OF ASSESSMENT REPORT

File Number: **17-07-2024**

Author: **Acting Manager Environment & Planning**

Authoriser: **Chief Executive Officer**

PRECIS

List of correspondence pending completion of assessment report.

SUMMARY

Reports pending completion of assessment as of 30 June 2024.

Should Councillors wish to enquire about any of these applications, requests for information may be submitted via Executive Services support to raise an enquiry in the Council's request system. This process will greatly assist the team in managing enquiries received through one system and track timely responses.

OFFICER'S RECOMMENDATION

That Council resolve to:

1. Receive and note the List of correspondence pending completion of assessment report as of 30 June 2024.

REPORT

Reconfiguration of a Lot (RAL) applications

1. RAL23/0023 – Reconfiguration of a Lot – Subdivision (5 Lots into 25 Lots), New Road and Drainage Easements at 70, 84 & 104 Crumpton Drive BLACKBUTT NORTH
2. RAL23/0034 – Reconfiguration of a Lot – Subdivision (1 Lot into 2 Lots) at Haager Drive MOFFATDALE
3. RAL24/0001 – Reconfiguration of a Lot – Subdivision (1 Lot into 31 Lots) at 22-30 Bridget Carroll Road KINGAROY
4. RAL24/0002 – Reconfiguration of a Lot – Boundary Realignment (3 Lots into 3 Lots) at 866 Manumbar Road & Scotts Lane RUNNYMEDE
5. RAL24/0003 – Reconfiguration of a Lot – Boundary Realignment (3 Lots into 3 Lots) at Runnymede Estate Road & 1354 Runnymede Road RUNNYMEDE
6. RAL24/0007 – Reconfiguration of a Lot – Boundary Realignment (2 Lots into 2 Lots) at 591 Ellesmere Road & Druce Road ELLESMERE
7. RAL24/0009 – Reconfiguration of a Lot – Subdivision (1 Lot into 2 Lots) at 281 Haly Street KINGAROY
8. RAL24/0010 – Reconfiguration of a Lot – Subdivision (1 Lot into 2 Lots) at 271 Radunzs Road BOOIE
9. RAL24/0011 – Reconfiguration of a Lot – Subdivision (1 Lot into 2 Lots) at 41 Elouera Drive SOUTH NANANGO
10. RAL24/0012 – Reconfiguration of a Lot – Subdivision (1 Lot into 3 Lots) at 38 Couchmans Road KINGAROY
11. RAL24/0013 – Reconfiguration of a Lot – Subdivision (1 Lot into 18 Lots), New Road and Drainage Easements at 162 Bowman Road KINGAROY
12. RAL24/0014 – Reconfiguration of a Lot – Subdivision (1 Lot into 2 Lots) at 1 Kearney Street KINGAROY
13. RAL24/0016 – Reconfiguration of a Lot – Subdivision (2 Lots into 13 Lots) at Old Esk North Road SOUTH EAST NANANGO

14. RAL24/0017 – Reconfiguration of a Lot – Subdivision (1 Lot into 5 Lots) at 322 Crumpton Drive BLACKBUTT NORTH
15. RAL24/0018 – Reconfiguration of a Lot – Subdivision (1 Lot into 2 Lots) at 1-3 Avoca Street KINGAROY
16. RAL24/0019 – Reconfiguration of a Lot – Subdivision (1 Lot into 2 Lots) at 369 Izzards Road SOUTH NANANGO
17. RAL24/0020 – Reconfiguration of a Lot – Subdivision (1 Lot into 3 Lots) over two (2) stages at 119 Bowman Road BLACKBUTT NORTH
18. RAL24/0021 – Reconfiguration of a Lot – Access Easement at 91-97, 99-105, 107 & 111 Lamb Street & Palmer Street MURGON

Material Change of Use (MCU) Applications

1. MCU21/0017 – Material Change of Use – Expansion of the existing piggery (57,000SPU) at 592 Morgans Road, WINDERA (and described as Lot 49 on MZ555 & Lot 203 on SP251979)

2. MCU21/0019 – Other Change to Existing Approval – Material Change of Use (Master Planned Community and Development Permit for Reconfiguration of a lot (1 lot into 6 lots plus parkland dedication) at Corner Bunya Highway & Taylors Road KINGAROY

3. MCU22/0011 – Motorsport and Ancillary Facilities and Caretakers' Residence and ERA (63) for Sewerage Treatment at Lewis Duff Road BALLOGIE

4. MCU23/0018 – Material Change of Use – Multiple Dwelling (15 Units) at 44 Stephens Street West MURGON (not properly made)

5. MCU23/0025 – Material Change of Use – High Impact Industry (Wooden & Laminated Manufacturing) & ERA at 2-30 Kemp Street WONDAI

6. MCU23/0031 – Material Change of Use – Extension of Feedlot at 1344 Memerambi Barkers Creek Road WATTLE CAMP

7. MCU23/0034 – Material Change of Use – Sawmill at 157 Boonenne Road GOODGER

8. MCU24/0002 – Preliminary Approval (including Variation Request) at 22-30 Bridget Carroll Road KINGAROY

9. MCU24/0009 – Material Change of Use – Hotel Extension (Carrollee Hotel) and Shop Extension (Bottle Shop) at 2, 4 & 6-12 King Street and 2 Mary Street KINGAROY

10. MCU24/0012 – Minor Change for "Direct to Boot" Service for Woolworths Kingaroy at 29-45 Alford Street KINGAROY

11. MCU24/0013 – Material Change of Use – Multiple Dwelling (3 x 2-bedroom units) at 10 Agnes Street KINGAROY

12. MCU24/0015 – Material Change of Use – medium Impact Industry (Glass & Aluminium Manufacturing) at 60 King Street NANANGO

13. MCU24/0016 – Material Change of Use – Major Electricity Infrastructure (BESS) at Ellesmere Road ELLESMERE

14. MCU24/0017 – Material Change of Use – Short-term Accommodation (4 x Cabins) at 297 Birt Road CORNDALE

15. MCU24/0018 – Minor Change to Existing Approval – Material Change of Use – Motor Vehicle (Showroom) at 77-81 & 75 Kingaroy Street KINGAROY

16. MCU24/0019 – Material Change of Use – Short-term Accommodation (3 x Cottages) at 40 Steinhardts Road MOFFATDALE

17. MCU24/0020 – Material Change of Use – Dual Occupancy at 7 Bunya Drive KINGAROY

18. MCU24/0021 – Material Change of Use – Dual Occupancy at 3 Bunya Drive KINGAROY

Operational Work (OPW) Applications

1. OPW24/0001 – Operational Work – Bulk Earthworks at 95 Markwell Street KINGAROY

ATTACHMENTS

Nil

14.15 DELEGATED AUTHORITY REPORTS (1 JUNE 2024 TO 30 JUNE 2024)

File Number: **17-07-2024**

Author: **Acting Manager Environment & Planning**

Authoriser: **Chief Executive Officer**

PRECIS

This report provides a list of all planning and development related reports signed by the Chief Executive Officer under delegated authority from 1 June 2024 to 30 June 2024.

SUMMARY

This report comprises a listing of reports approved by delegated authority from 1 June 2024 to 30 June 2024.

OFFICER'S RECOMMENDATION

That the Delegated Authority report, for the month of June 2024 be received.

BACKGROUND

ATTACHMENTS

1. **MCU23/0026 & OPW23/0015 - Material Change of Use for Showroom and Operational Work for Road Work, Stormwater, Drainage Work, Earthworks, Landscaping and Access/Driveway) at 5-13 Rogers Drive KINGAROY (and described as Lots 9, 26, 27, 28 & 29 on SP18064).** ⇩
2. **OPW24/0004 - Operational Work (Earthworks) at 1 Kelvyn Street KINGAROY (and described as Lot 101 on SP257227).** ⇩
3. **RAL23/0002 - Reconfiguring a Lot - Boundary Realignment (3 Lots into 3 Lots) at 858 Memerambi Gordonbrook Road GORDONBROOK (and described as Lot 3 on RP205528, Lot 394 on FY805 and Lot 396 on FY2911).** ⇩
4. **RAL24/0015 - Minor Change to Existing Approval for Reconfiguring a Lot - Subdivision (1 Lot into 2 Lots) at 23 Anita Road BLACKBUTT (and described as Lot 55 on RP174024).** ⇩

Delegate Authority Date: 4 June 2024

0.0 COMBINED APPLICATION FOR MATERIAL CHANGE OF USE (SHOWROOM) AND OPERATION WORK (ROAD WORK, STORMWATER, DRAINAGE WORK, EARTHWORKS, LANDSCAPING AND ACCESS/DRIVEWAY AT 5-13 ROGERS DRIVE KINGAROY (AND DESCRIBED AS LOTS 9, 26, 27, 28 AND 29 SP180642). APPLICANT: CAPE MORETON COMPANY PTY LTD C/- ADAPT PLANNING PTY LTD

	SIGNATURE	DATE
Acting MANAGER	[redacted]	4/6/24
Acting GM		4/6/24
CEO		4-6-2024

File Number: **MCU23/0026 & OPW23/0015**

Author: **Acting Manager Environment & Planning**

Authoriser: **Chief Executive Officer**

PRECIS

Development application for Development Permit for a Material Change of Use (Showroom) and Operational Work (Road Work, Stormwater, Drainage Work, Earthworks, Landscaping and Access/Driveway) at 5-13 Rogers Drive KINGAROY (and described as Lots 9, 26, 27, 28 and 29 on SP180642).

SUMMARY

- The application is for a Development Permit for Material Change of Use for a Showroom and Operational Work for Road Work, Stormwater, Drainage Work, Earthworks, Landscaping, and Access/Driveway.
- The proposal seeks to establish a Showroom with a site cover of 43% and a gross floor area of 2,765m^2.
  - The proposed hours of operation for the development will be 8:30am to 5:00pm, Monday to Wednesday and Friday to Sunday, and 8:00am to 9:00pm on Thursdays;
  - Landscaping is to be provided at a rate of 10%; and
  - Seventy (70) on-site car parks proposed and access to be provided via two vehicle crossovers to Rogers Drive.
- The subject site is located in the Specialised centre zone under the South Burnett Regional Council Planning Scheme and the application triggered Code assessment as per Table 5.5.15 of the Planning Scheme.
- The subject sites have a combined site area of 6,383m^2.
- The development application is assessed against the relevant codes of the South Burnett Regional Council Planning Scheme. Relevant codes in this case include:
  - Specialised centre zone code; and
  - Services and works code.
- The application did not require referral to any external referral agencies.
- Council issued an Information Request on 12 December 2023.
- The Applicant provided an Information Request Response on 11 March 2024.
- Council's Development Engineer sought further information from the Applicant regarding the Information Request Response, providing an email to the Applicant on 2 April 2024. The additional information sought was regarding water supply (Item 1) and traffic (Item 2).
- The Applicant provided a response to Item 1 on 2 April 2024 and to Item 2 on 30 April 2024.
- The application has been assessed and the proposal generally meets the requirements of the Planning Scheme and relevant codes or has been conditioned to comply (refer to Attachment A – Statement Reasons).
- Refer Attachment B – Infrastructure Charges Notice.
- Refer to Attachment C – Approved Plans.
- The application is recommended for approval, subject to reasonable and relevant conditions.

OFFICER'S RECOMMENDATION

That Council approve the application for a Development Permit for Material Change of Use for a Showroom and Operational Work (Road Work, Stormwater, Drainage Work, Earthworks, Landscaping, and Access/Driveway) over land described as Lots 9, 26, 27, 28, and 29 on SP180642

and situated at 5-13 Rogers Drive, Kingaroy – Applicant – W Cape Moreton Company Pty Ltd c/- Adapt Planning Pty Ltd, subject to the following conditions.

MATERIAL CHANGE OF USE – MCU23/0026

GENERAL

GEN1. The approved development must be maintained generally in accordance with the approved plans and documents, except where amended by the conditions of this permit:

Drawing/ Document Title	Prepared By	Plan No.	Rev.	Date
Proposal Plans – Site Plan	Husband Architects	DA10	B	19/12/23
Proposal Plans – Ground Floor Plan	Husband Architects	DA20	B	19/12/23
Proposal Plans – Roof Plan	Husband Architects	DA21	A	09/10/23
Proposal Plans - Elevations	Husband Architects	DA30	A	09/10/23
Operational Works Plans – Site Survey & Existing Services	SCG Consulting Engineers	33153-OW1.1	–	Sept 23
Operational Works Plans – Silt & Sediment Erosion Plan	SCG Consulting Engineers	33153-OW2.1	A	Sept 23
Operational Works Plans – Earthworks Plan	SCG Consulting Engineers	33153-OW3.1	A	Sept 23
Operational Works Plans – Driveway & Access Plan	SCG Consulting Engineers	33153-OW4.1	B	Sept 23
Operational Works Plans – Driveway Levels	SCG Consulting Engineers	33153-OW4.2	B	Sept 23
Operational Works Plans – Driveway Details	SCG Consulting Engineers	33153-OW4.3	–	Sept 23
Operational Works Plans – Driveway Long section	SCG Consulting Engineers	33153-OW4.4	A	Sept 23
Operational Works Plans – Vehicle Turning Plan	SCG Consulting Engineers	33153-OW5.1	B	Sept 23
Operational Works Plans – Stormwater Management Plan	SCG Consulting Engineers	33153-SW1.1	B	Sept 23
Landscape Concept Plan – Cover Sheet & Drawing Index	LAUD ink	2309-001-SK001	B	23/02/24
Landscape Concept Plan – Ground Floor Planting Plan	LAUD ink	2309-001-SK002	B	23/02/24
Landscape Concept Plan – Plant Species Schedule, Images and Notes	LAUD ink	2309-001-SK010	B	23/02/24

Timing: At all times.

GEN2. The development herein approved may not start until the following development permits have been issued and complied with as required:

- Development Permit for Building Works; and
- Permit for Plumbing and Drainage Works.

GEN3. Prior to the issue of a Development Permit for Building Work, amalgamate Lot 9 on SP180642, Lot 26 on SP180642, Lot 27 on SP180642, Lot 28 on SP180642 and Lot 29 on SP180642 into one (1) lot and register the Plan of Subdivision.

GEN4. The approved development is a Material Change of Use for Showroom and Operational Work (Road Work, Stormwater, Drainage Work, Earthworks, Landscaping, and Access/Driveway), as shown on the approved plans and does not imply approval for other similar uses.

COMPLIANCE, TIMING, AND COSTS

GEN5. All conditions of the approval shall be complied with before the change occurs (prior to the commencement of the use) and while the use continues, unless otherwise noted within these conditions.

GEN6. The development (including landscaping, parking, driveway and other external spaces) shall be maintained in accordance with the Approved Plans, subject to and modified conditions of this approval.

GEN7. Maintain the site in a clean and orderly state at all times.

GEN8. All works, including the repair or relocation of services is to be completed at no cost to Council.

HOURS OF OPERATION

GEN9. The approved hours of operation (including staff movements and deliveries/servicing/waste collection) are 8:30am to 5:00pm, Monday to Wednesday and Friday to Sunday and 8:00am to 9:00pm on Thursdays.

MECHANICAL PLANT

MCU1. Mechanical plant (air conditioning, refrigeration equipment and pumps) must comply with the *Environmental Protection Act 1994* and be constructed in accordance with the recommendations of the approved Noise Impact Assessment.

Air conditioning and refrigeration equipment must achieve no more than 3dB(A) above the background level from 10pm to 7am and no more than 5dB(A) above the background level from 7am to 10pm when measured at an affected building.

Pumps (including heat pumps) must not be audible from 10pm to 7am, no more than 5dB(A) above the background level from 7am to 7pm and no more than 3dB(A) above the background level from 7pm to 10pm when measured at an affected building.

LIGHTING

MCU2. Design all external lighting in accordance with *AS4282-1997 "Control of the Obtrusive Effects of Outdoor Lighting"*.

Artificial illumination is not to cause a nuisance to occupants of nearby premises and any passing traffic. Direct security and flood lighting away from adjacent premises to minimise the protrusion of light outside the street.

REFUSE STORAGE COLLECTION

MCU3. Provision must be made for the storage and removal of refuse in accordance with the Waste Reduction and Recycling Regulation 2011.

MCU4. Refuse storage is to be included generally in accordance with the approved plans.

MCU5. Any areas that are dedicated for the collection and/or storage of solid waste on the premises are to be:

a) level;
b) provided with impervious hard stand and drained; and
c) if facing either the street frontage or adjoining properties, screened by a 1.8m high fence around the full perimeter.

MCU6. Refuse bin areas are to be provided for the washing out of the refuse bins and in connection with this:

a) all tap outlets must be fitted with backflow prevention devices;

b) the floor areas are to be drained to sewer; and
c) areas are to be covered and drainage designed such that water not associated with the washing out process (e.g. rainfall) does not enter the sewer.

MCU7. Refuse areas are to include screening at a minimum of 0.2 metres above the height of the refuse receptacles.

SCREENING

MCU8. Screening is to be included throughout the approved development generally in accordance with the approved plans.

LANDSCAPING

MCU9. Landscaping is to be generally in accordance with the approved plans. Prior to commencement of use, a suitably qualified Landscape Architect/Designer must provide written confirmation that the planted vegetation buffer complies with Council's Branching Out Guide and the provided landscaping plan.

Note: The submitted landscape plan for the vegetation buffer must include the tree selection and how the plantings are placed, irrigated and post planting care in accordance with Council's Branching Out Guide. Please provide the above details referencing suitable plant species, planting and establishment process from the aforementioned document.

Timing: Prior to commencement of the use, a suitably qualified Landscape Architect/Designer must provide written confirmation that the planted vegetation buffer complies with Council's Branching Out Guide and the provided landscaping plan.

ENGINEERING WORKS

ENG1. Complete all works approved and works required by conditions of this development approval and/or any related approvals at no cost to Council, prior to commencement of the use unless stated otherwise.

ENG2. Undertake Engineering designs and construction in accordance with the Planning Scheme, Council's standards, relevant design guides, and Australian Standards.

ENG3. Be responsible for the full cost of any alterations necessary to electricity, telephone, water mains, sewer mains, stormwater drainage systems or easements and/or other public utility installations resulting from the development or from road and drainage works required in connection with the development.

LOCATION, PROTECTION AND REPAIR OF DAMAGE TO COUNCIL AND PUBLIC UTILITY SERVICES INFRASTRUCTURE AND ASSETS

ENG4. Be responsible for the location and protection of any Council and public utility services infrastructure and assets that may be impacted on during construction of the development.

ENG5. Repair all damages incurred to Council and public utility services infrastructure and assets, as a result of the proposed development immediately should hazards exist for public health and safety or vehicular safety. Otherwise, repair all damages immediately upon completion of works associated with the development.

STORMWATER MANAGEMENT

ENG6. Connect the development to the existing underground stormwater system.

ENG7. Provide overland flow paths that do not adversely alter the characteristics of existing overland flows on other properties or that create an increase in flood damage on other properties.

ENG8. Ensure that adjoining properties and roadways are protected from ponding or nuisance from stormwater as a result of any site works undertaken as part of the proposed development.

ENG9. Discharge all minor storm flows that fall or pass onto the site to the lawful point of discharge in accordance with the Queensland Urban Drainage Manual (QUDM).

ENG10. Except for the stormwater manhole in Lot 26 on SP180642, all other existing stormwater infrastructure shall become private infrastructure for the purposes of the development.

WATER SUPPLY

ENG11. Connect the development to Council's reticulated water supply system via a single connection.

Comment: Whilst it is expected that suitable water pressure is available for firefighting purposes at the time the application was being assessed, due to the effects of aging infrastructure networks, changes in network flow characteristics and demands, the suitability of the water reticulation network to continually provide adequate flow and pressure requirements for firefighting purposes may not be guaranteed into the future. Hence it is the property owner's responsibility to periodically test the water pressure available to ensure that firefighting requirements are maintained, and to carry out remedial works if required e.g. onsite break tanks.

SEWERAGE

ENG12. Connect the development to Council's reticulated sewerage system via a single connection. The connection must be designed in accordance with Council's standards and be approved by Council's Utility Services Section.

ENG13. Actual connection to Council's live sewerage infrastructure must be undertaken by or under the supervision of Council.

ENG14. Do not build works within 1.5 metres from the centre of any existing sewer pipework or within the Zone of Influence, whichever is the greater (measured horizontally).

ENG15. Maintain a minimum of a 3 metre wide corridor to be maintained for maintenance/upgrade purposes.

ENG16. Ensure that a clear level area of a minimum of a 2.5 metre radius surrounding any existing sewer manholes on the site is provided for future maintenance/upgrade purposes.

ENG17. The above minimum clearances to Council's sewer infrastructure do not preclude the need for works to proposed structures to prevent loading to the sewer system.

ENG18. The existing sewer main between MH 2065/2 and MH 2065/1 shall be decommissioned, and either removed or core filled with flowable concrete. MH2065/2 shall also be decommissioned, and either removed or filled in.

PARKING AND ACCESS - GENERAL

ENG19. Design all access driveways, circulation driveways, parking aisles and car parking spaces in accordance with Australian Standard 2890.1 - Parking Facilities - Off Street Car Parking.

ENG20. Design and construct all carparking and manoeuvring areas with concrete, asphalt or a two-coat bitumen seal.

ENG21. Provide a minimum of seventy (70) car parking spaces including a minimum of two (2) person with disability (PWD) car parking spaces.

ENG22. Design & construct all PWD car parking spaces in accordance with AS2890.6.

ENG23. Provide vehicle bollards or tyre stops to control vehicular access and to protect landscaping or pedestrian areas where appropriate.

ENG24. Ensure access to car parking spaces, vehicle loading and manoeuvring areas and driveways remain unobstructed and available for their intended purpose during the hours of operation.

ENG25. Staff of the building's tenants shall be directed to park in the allocated staff carparking.

PARKING AND ACCESS - SERVICING

ENG26. Provide loading facilities for an Articulated Vehicle in the location generally shown on the approved plan(s) of development that are designed in accordance with Australian Standard 2890.2 – Off-street Commercial Vehicle Facilities.

ENG27. Design along the route to and from all loading bay facilities and the external road network, all access driveways, circulation driveways, parking aisles and the like with a layout that accommodates the turning movements of an Articulated Vehicle and ensure that all vehicles are able to enter and exit the site in a forward direction.

ENG28. Ensure loading and unloading operations are conducted wholly within the site and vehicles enter and exit the site in a forward direction.

ENG29. The accesses for the internal road along the southern boundary of the site shall be signed to indicate one-way vehicles movement from west to east. All signage shall be in accordance with the AS1742 Manual of Uniform Traffic Control Devices.

VEHICLE ACCESS

ENG30. Construct commercial crossovers between the property boundary and the edge of the Rogers Drive road pavement, in accordance with Standard Drawing IPWEAQ Std Dwg RS-051, Rev F. The width of the crossovers shall in accordance with the access details shown on SCG Consulting Engineers Drawing No 33153-OW4.1 B.

ENG31. Construct any new crossovers such that the edge of the crossover is no closer than 1 metre to any existing or proposed infrastructure, including any stormwater gully pit, manhole, service infrastructure (eg power pole, telecommunications pit), road infrastructure (eg street sign, street tree, etc).

ROADWORKS AND PEDESTRIAN SAFETY

ENG32. Carry out works so that the sight lines shown in Appendix A of the Rytenskild Traffic Engineering letter (Response to Council's Further Information Request) are maintained at all times. This includes:

a) The construction of a solid yellow barrier line on Rogers Drive to prevent vehicle parking. The line marking shall be installed in accordance with the AS1742.2:2022 Manual of Uniform Traffic Control Devices.

b) All fencing, landscaping and site operations shall be designed and constructed so that sight lines are not impeded at any time.

ENG33. Install signage for all works on or near roadways in accordance with the Manual for Uniform Traffic Control Devices – Part 3, Works on Roads.

ENG34. Submit to Council, an application for any footpath, road or lane closures, and ensure all conditions of that approval are complied with during construction of the works.

ENG35. Maintain safe pedestrian access along Council's footpaths at all times.

ELECTRICITY AND TELECOMMUNICATION

ENG36. Connect the development to electricity and telecommunication services.

EROSION AND SEDIMENT CONTROL - GENERAL

ENG37. Ensure that all reasonable actions are taken to prevent sediment or sediment laden water from being transported to adjoining properties, roads and/or stormwater drainage systems.

ENG38. Remove and clean-up sediment or other pollutants in the event that sediment or other pollutants are tracked/released onto adjoining streets or stormwater systems, at no cost to Council.

EASEMENTS

ENG39. The following easements shall be extinguished:

a) Emt L SP180642;
b) Emt M SP180642;
c) Emt N SP180642;
d) Emt O SP180642.

A new drainage easement shall be created over the stormwater manhole in Lot 26 on SP180642.

OPERATIONAL WORKS – OPW23/0015

GENERAL

ENG1. Compliance with the plans and specifications submitted with Development Application OPW23/0015 approval conditions, all Council Planning Scheme Policies and Material Change of Use Approval No. MCU23/0026.

ENG2. This approval extends to Engineering works for Earthworks, Stormwater, Accesses, and Carparking as detailed, and is conditional upon a set of "Issued for Construction" drawings, amended if required by the conditions of this approval, being submitted to Council for endorsement, prior to pre-start meeting.

ENG3. Undertake all approved works and works required by conditions of this development approval at no cost to Council.

ENG4. Submit to Council for approval, an Inspection and Test Plan certified by a suitably qualified Engineer (RPEQ – Civil) prior to commencement of any work and prior to any pre-start meeting.

ENG5. Pay to Council, inspection fees based on Council's Fees and Charges current at the time of commencement of works and based on the estimated project cost as estimated or accepted by Council prior to the pre-start meeting.

ENG6. Ensure that supervision of all construction works are carried out by a suitably qualified and experienced Engineer (RPEQ).

ENG7. Adhere to the following hours of construction unless otherwise approved in writing by Council:

Monday to Saturday:	6.30am to 6.30pm	Noise permitted
Monday to Sunday:	6.30pm to 6.30am	No noise permitted
Sunday and Public Holidays:		No noise permitted

Do not conduct work or business that causes audible noise from or on the site outside the above hours.

ENG8. Be responsible to carry out Work Health and Safety legislative requirements.

ENG9. Ensure all work sites are maintained in a clean, orderly state at all times.

ENG10. Manage all waste in accordance with the relevant legislation and regulations and dispose of regulated waste at a licensed facility of South Burnett Regional Council by a licensed regulated waste disposal contractor.

ENG11. Be responsible for the location and protection of any Council and public utility services infrastructure and assets that may be impacted on during construction of the development.

ENG12. Repair all damages incurred to Council and public utility services infrastructure and assets, as a result of the proposed development, immediately should hazards exist for public health and safety or vehicular safety. Otherwise, repair all damage immediately upon completion of works associated with the development.

ENG13. Works are to be constructed generally in accordance with the specification requirements outlined in Aus-Spec #1 and the IPWEAQ Standard Drawings unless otherwise approved by South Burnett Regional Council.

STORMWATER

ENG14. Ensure that earthworks and fill on the subject land do not lead to ponding of stormwater or actionable nuisance and drain freely to a lawful point of discharge in accordance with the Queensland Urban Drainage Manual.

ENG15. Do not concentrate stormwater onto adjoining properties.

ENG16. Provide appropriate energy dissipation and scour protection measures at stormwater outlets.

ROADWORKS

ENG17. Construct a solid yellow barrier line on Rogers Drive to prevent vehicle parking to achieve the sight lines shown in Appendix A of the Rytenskild Traffic Engineering letter (Response to Council's Further Information Request) are maintained at all times. The line marking shall be installed in accordance with the AS1742.2:2022 Manual of Uniform Traffic Control Devices.

DEVELOPMENT WORKS

ENG18. Maintain erosion and sedimentation controls at all times during the course of the project and the ensuing defects liability period. Council Officers will inspect and assess the sediment and erosion control measures and temporary fencing implemented, and any alterations and/or supplementary works required must be incorporated.

ENG19. Implement measures to prevent site vehicles tracking sediment and other pollutants from the site onto adjoining streets during the course of the project, and to prevent dust nuisance during construction and the ensuing defects liability period.

ENG20. Be responsible for protecting nearby property owners from dust pollution arising from construction and maintenance of the works required by this approval and comply with any lawful instructions from the Assessment Manager if, in his opinion, a dust nuisance exists.

ENG21. Waste material as a result of demolition work and excavation work must not be used as fill as described within the *Waste Reduction and Recycling Act 2011*.

EARTHWORKS

ENG22. Supervise bulk earthworks to Level 1 or Level 2 as applicable and have a frequency of field density testing carried out in accordance with Table 8.1 of AS3798.

ENG23. Contain cut or fill batters wholly within the subject land. Do not place fill on adjacent properties without providing Council with written permission from the respective property owner(s).

ENG24. Do not store plant or material on adjoining lands without written permission from the respective property owner(s).

ENG25. Do not use contaminated material as fill on the site. Undertake any filling using inert materials only, with a maximum particle size of 75mm.

ENG26. Ensure open drains and fill platforms are constructed with a longitudinal grade on no less than 0.1%.

ENG27. Submit to Council, the following for approval in the event it is proposed to import material to or export material from the site, prior to commencement of the work:

a) details of the location of any material to be sourced for fill including the volume of fill to be moved from any particular source site;

b) details of the final location for any material to be exported from the site from excavations including the volume to be moved to any particular site; and

c) the proposed haulage route(s) and truck sizes for carting of the material.

Note: Further Development Applications may be required to be submitted to and approved by Council for sites proposed to import material from or export material to, or conditions may be applied to any sites endorsed in accordance with this condition, eg. submit a Traffic Management Plan to Council for acceptance, or rehabilitation of the site. Any required approvals are to be in place prior to commencement of the work.

This approval does not extend to any material proposed to be imported to or exported from the site:

a) other than from or to site(s) that have a current Development Approval enabling them to export/accept any material; or

b) the material is being exported to and accepted at a licensed Council refuse facility.

SEWER

ENG28. The existing sewer main between MH 2065/2 and MH 2065/1 shall be decommissioned, and either removed or core filled with flowable concrete. MH2065/2 shall also be decommissioned, and either removed or filled in.

INSPECTIONS AND TESTING

ENG29. Submit to Council the pre-start meeting agenda at the confirmation of a date and time for the meeting.

ENG30. Provide Council with a minimum of two clear working days notice to undertake compulsory inspections and meetings at the following stages:

(a) Pre-start meeting with Council, Contractor, Supervising Engineer and developer;
(b) at the point of completion of all work.

ENG31. Submit to Council, all inspection and test data in its entirety prepared by the applicant, Engineer, Principal Contractor or by Subcontractors in relation to the Operational Work or as described in the application prior to commencement of the use. Undertake any further

inspection, testing or analysis required, due to failure of work to meet specifications or where the testing previously provided is considered insufficient on behalf of the Principal Contractor by a NATA accredited entity (where applicable).

ENG32. Uncover all works covered prior to inspection to allow inspection by Council at Council's sole discretion.

ENG33. Allow Council to enter a work site to which this approval relates and undertake testing or analysis of any part of the construction, and Council is not liable for the rectification of or compensation for any damage caused in the testing or analysis process. Should work be found to be not constructed to specification or of poor quality, any reasonable instruction given by Council Officers must be considered to be a condition of approval and undertaken by the Principal Contractor.

ENG34. Where complete or incomplete works under this approval adversely affect adjoining properties, Council land, roads or other infrastructure, Council requires by notice, works to be completed.

ENG35. Undertake any works for the safety or health of the community or protection of infrastructure where Council deems it necessary.

AS CONSTRUCTED INFORMATION

ENG36. Submit to Council within 10 working days of completion of the operational work, suitable "As Constructed" drawings in hard copy and AutoCAD format and on GDA Zone 56 co-ordinates. The "As Constructed" drawings or data capture methods as required by Council must be certified by a Registered Professional Engineer of Queensland (RPEQ) on every drawing and shall be to an appropriate electronic format and standard as required by Council's Infrastructure Services General Manager.

The approval is subject to construction being undertaken in accordance with the Approved Plans prepared by SCG Consulting Engineers as listed below:

Drawing No.	***Rev***	***Drawing/Plan Title***	***Date***
33153-CS	–	*Cover sheet*	*Sept 23*
33153-CN	–	*Construction Notes*	*Sept 23*
33153-OW1.1	–	*Site Survey & Existing Services*	*Sept 23*
33153-OW2.1	*A*	*Silt & Sediment Erosion Plan*	*Sept 23*
33153-OW3.1	*A*	*Earthworks Plan*	*Sept 23*
33153-OW4.1	*B*	*Driveway & Access Plan*	*Sept 23*
33153-OW4.2	*B*	*Driveway Levels*	*Sept 23*
33153-OW4.3	–	*Driveway Details*	*Sept 23*
33153-OW4.4	*A*	*Driveway Longsection*	*Sept 23*
33153-OW5.1	*B*	*Vehicle Turning Plan*	*Sept 23*
33153-SW1.1	*B*	*Stormwater Management Plan*	*Sept 23*

ADVICE NOTES

The applicant be advised that:

(a) Prior to commencement of the use or endorsement of the survey plan as applicable, the applicant shall contact Council to arrange a Development Compliance Inspection.

(b) The applicant must ensure compliance with environmental conditions whether required to hold an Environmental Authority or not. These include, but are not limited to water quality, air quality, noise levels, waste waters, lighting and visual quality as a result of any activity or by-product or storage of materials within the confines of the building(s) and property boundaries.

Any amendment, alteration or addition to the development approval will require further consideration by Council in assessing any changes to the environmental conditions.

(c) The *Aboriginal Cultural Heritage Act 2003* (ACHA) is administered by the Department of Aboriginal and Torres Strait Islander and Multicultural Affairs (DATSIMA). The ACHA establishes a duty of care to take all reasonable and practicable measures to ensure any activity does not harm Aboriginal cultural heritage. This duty of care:
(i) is not negated by the issuing of this development approval;
(ii) applies on all land and water, including freehold land;
(iii) lies with the person or entity conducting an activity; and
(iv) if breached, is subject to criminal offence penalties.

Those proposing an activity involving surface disturbance beyond that which has already occurred at the proposed site must observe this duty of care. Details of how to fulfil this duty of care are outlined in the duty of care guidelines gazetted with the ACHA. The applicant should contact DATSIP's Cultural Heritage Co-ordination Unit on telephone (07) 3224 2070 for further information on the responsibilities of developers under the ACHA.

(d) The ***relevant period*** for the development approval (Material Change of Use) shall be **six (6) years** starting the day the approval is granted or takes effect. In accordance with Section 85(1)(a) of the *Planning Act 2016* (PA), the development approval for Material change of Use lapses if the change of use does not happen within the abovementioned ***relevant period.***

An applicant may request Council to extend the ***relevant period*** provided that such request is made in accordance with Section 86 of PA and before the development approval lapses under Section 85 of the PA.

(e) The ***relevant period*** for the development approval (Operational Work) shall be **two (2) years** starting the day the approval is granted or takes effect. In accordance with Section 85(1)(c) of the *Planning Act 2016* (PA), the development approval for Operational Work lapses if the development does not substantially start within the abovementioned ***relevant period.***

An applicant may request Council to extend the ***relevant period*** provided that such request is made in accordance with Section 86 of PA and before the development approval lapses under Section 85 of the PA.

(e) Council is to be indemnified against any claims arising from works carried out by the applicant on Council's property.

(f) The relevant Planning Scheme for this Development Permit is the South Burnett Regional Council Planning Scheme 2017. All references to the Planning Scheme and Schedules within these conditions refer to the above Planning Scheme.

(g) Infrastructure charges are now levied by way of an infrastructure charges notice, issued pursuant to section 119 of the Planning Act 2016.

(h) Council is offering a reduction in infrastructure charges payable through the development incentive scheme which is available between 1 December 2020 and 31 December 2025. Eligible development under this scheme is required to be completed by 31 December 2025.

For further information or application form please refer to the rules and procedures available on Council's website.

FINANCIAL AND RESOURCE IMPLICATIONS

No implication can be identified.

LINK TO CORPORATE/OPERATIONAL PLAN

Growing our Region's Economy and Prosperity

- GR8 Support and advocate for appropriate growth and development with responsive planning schemes, process, customer service and other initiatives.

COMMUNICATION/CONSULTATION (INTERNAL/EXTERNAL)

Refer to CONSULTATION in this report.

LEGAL IMPLICATIONS (STATUTORY BASIS, LEGAL RISKS)

No implication identified.

POLICY/LOCAL LAW/DELEGATION IMPLICATIONS

No implication can be identified.

ASSET MANAGEMENT IMPLICATIONS

No implication can be identified.

Delegate Authority Date: 4 June 2024

REPORT

1. APPLICATION DETAILS

Site address	5-13 Rogers Drive KINGAROY
Real property description	Lots 9, 26, 27, 28 and 29 SP180642
Easements or encumbrances on title	Lot 9 – Easement Q: Stormwater Drainage purposes Lot 26 – Easement L: Stormwater Drainage purposes (Sewerage also contained within) Lot 27 – Easement M: Stormwater Drainage purposes (Sewerage also contained within) Lot 28 – Easement N: Stormwater Drainage purposes Lot 29 – Easement O: Stormwater Drainage purposes
Area of Site	6,383sqm Current configuration of lots are: Lot 9 – 1,032m^2 Lot 26 – 1,517m^2 Lot 27 – 1,312m^2 Lot 28 – 1,268m^2 Lot 29 – 1,254m^2
Current Use	Vacant land
Environmental Management Register or Contaminated Land Register	No known listing
Applicant's name	Cape Moreton Company Pty Ltd C/- Adapt Planning Pty Ltd
Zone	Specialised Centre Zone
Applicable Overlays	Airport Environs Overlay • Distance from airport – 3km Agricultural Land Overlay • Important Agricultural Areas • Agricultural Land Classification Class A Flood Hazard Overlay • Flood Hazard Area
Proposed use as defined	**Showroom** *Premises used for the sale of goods that are of—* *(a) a related product line; and* *(b) a size, shape or weight that requires—* *(i) a large area for handling, display or storage; and* *(ii) direct vehicle access to the building that contains the goods by members of the public, to enable the loading and unloading of the goods.*
Details of proposal	Material Change of Use (MCU's)
	▪ Gross Floor Area (GFA) 2,765sqm
	▪ Building height 9.3 metres

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	▪ Site Cover	43%
	▪ Access	Two (2) new crossovers to Roger Drive for general parking and two (2) new crossovers for a service lane at the rear of the development.
	▪ Landscaping	10%
	▪ Number of car parks	Seventy (70) on-site spaces
	▪ Number of tenancies	Three (3) tenancies

Application type	Aspects of Development	Type of Approval Requested	
		Preliminary Approval	Development Permit
	Material Change of Use (MCU)		X
	Reconfiguration of a Lot (RAL)		
	Building Work (BW)		
	Operational Work (OPW)		X

Level of Assessment	Code Assessment	
Pre-lodgement / Consultation history	Not applicable	
Key planning issues e.g. vegetation, waterway corridors, overland flow	- Pedestrian safety - Car parking provision	
Referral agencies	Agency	Concurrence/ Advice
	NA	NA
Public notification	Not applicable	

2. THE SITE

This section of the report provides a description of the site, details about the existing use and notable characteristics of the site, the standard of servicing, and the form of development in the immediately locality.

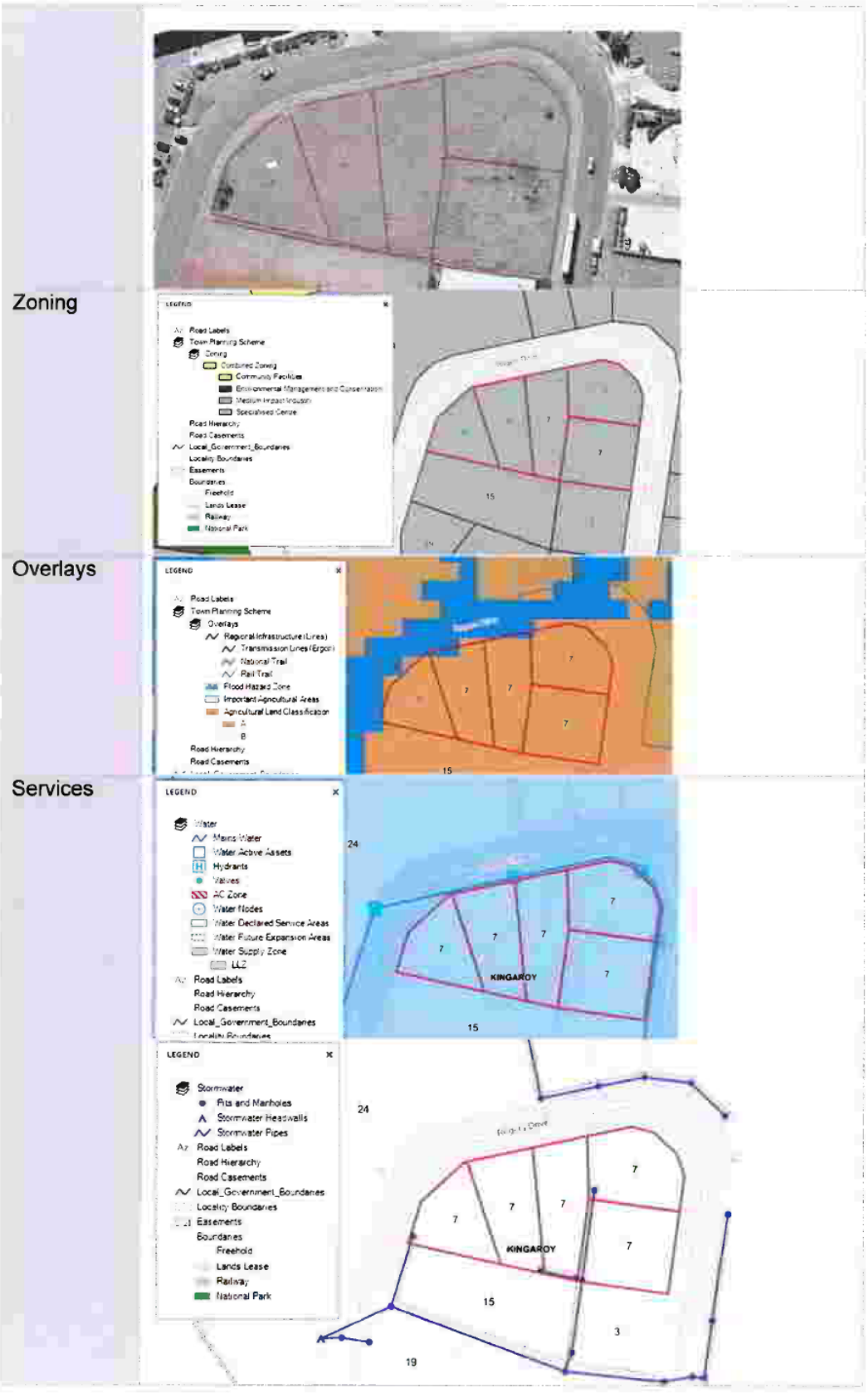
2.1. SITE DESCRIPTION & EXISTING USE

The subject site is located at 5-13 Rogers Drive, Kingaroy, and is formally described as Lots 9, 26, 27, 28, and 29 on SP180642 (refer to **Table 1**). The site has an area of 6,383m^2 and exhibits a frontage of approximately 210 metres to Rogers Drive with no established vehicle crossovers/access points. The subject site is currently vacant and is devoid of significant vegetation.

Table 1 – Maps & Descriptions (Source: Intramaps)

Site	

Delegate Authority Date: 4 June 2024



Delegate Authority Date: 4 June 2024

2.2. DEVELOPMENT HISTORY OF THE SITE

The subject site is currently vacant and no past development applications are recorded against the site.

3. PROPOSAL DETAILS

The development application seeks a Development Permit for a Showroom, as defined under the South Burnett Regional Council Planning Scheme, comprising three (3) tenancies described as follows:

- Tenancy 01 – 1,801m^2;
- Tenancy 02 – 496m^2;
- Tenancy 03 – 468m^2.

In addition to the Material Change of Use component, the development application also seeks a Development Permit for Operational Work for Road Work, Stormwater, Drainage Work, Earthworks, Landscaping and Access/Driveway.

The development proposes a site cover of 43% and gross floor area of 2,765m^2. Landscaping is proposed at a rate of 10% of the site area and is provided along the site frontage.

The proposed hours of operation are 8:30am to 5:00pm, Monday to Wednesday and Friday to Sunday and 8:00am to 9:00pm on Thursdays.

The development and associated parking area will be accessed via two new 7-metre-wide vehicle crossovers to Rogers Drive (for general public / users). Separate access is provided in the south-eastern and south-western corners for a servicing access lane which runs adjacent the southern boundary to accommodate service vehicles up to a Heavy Rigid Vehicle (HRV) and staff carparking. Seventy (70) on-site car parking spaces are to be provided, including one (1) PWD space, in lieu of the prescribed one-hundred and fifty-one (151) spaces per Table 9.4.5 of the Planning Scheme.

A Traffic Impact Assessment prepared by a suitably qualified person (RPEQ) has been provided addressing the shortfall. It is noted that an Information Request was issued requesting parking be revised to a minimum of 1 space per 40m^2 of GFA (70 spaces), as the application originally proposed 1 space per 40m^2 of GFA (60 spaces). The final Traffic Impact Assessment included recommendations / conclusions stating that the rate prescribed under the Planning Scheme is typical for higher density retail uses (supermarkets and specialty shops) and is not reflective of the demand generated for bulky goods retailers. The report instead suggests the rate for conventional bulky goods retailers is appropriately 1 per approx. 40m^2 of GFA as uses of this nature tend to have reduced vehicle trips. It is considered that the proposed parking will meet the needs of the occupants, employees, visitors and other users.

The proposal details are set out in **Table 2** below.

Table 2. Proposal Details.

Development Component	Proposed
Tenancies	Three (3) – Individual tenancies
Gross Floor Area	2,765m^2 comprising: • Tenancy 01: 1,801m^2; • Tenancy 02: 496m^2; and • Tenancy 03: 468m^2.
Building height	Maximum 9.3 metres
Number of parking spaces	Seventy (70) on-site parking spaces
Access	Vehicle access (multiple) via Rogers Drive
Site Cover	43%

Figure 1 to **Figure 3** below include the proposed site plan, floor plan, and elevations for the development.

Figure 1. Proposed Site Plan.

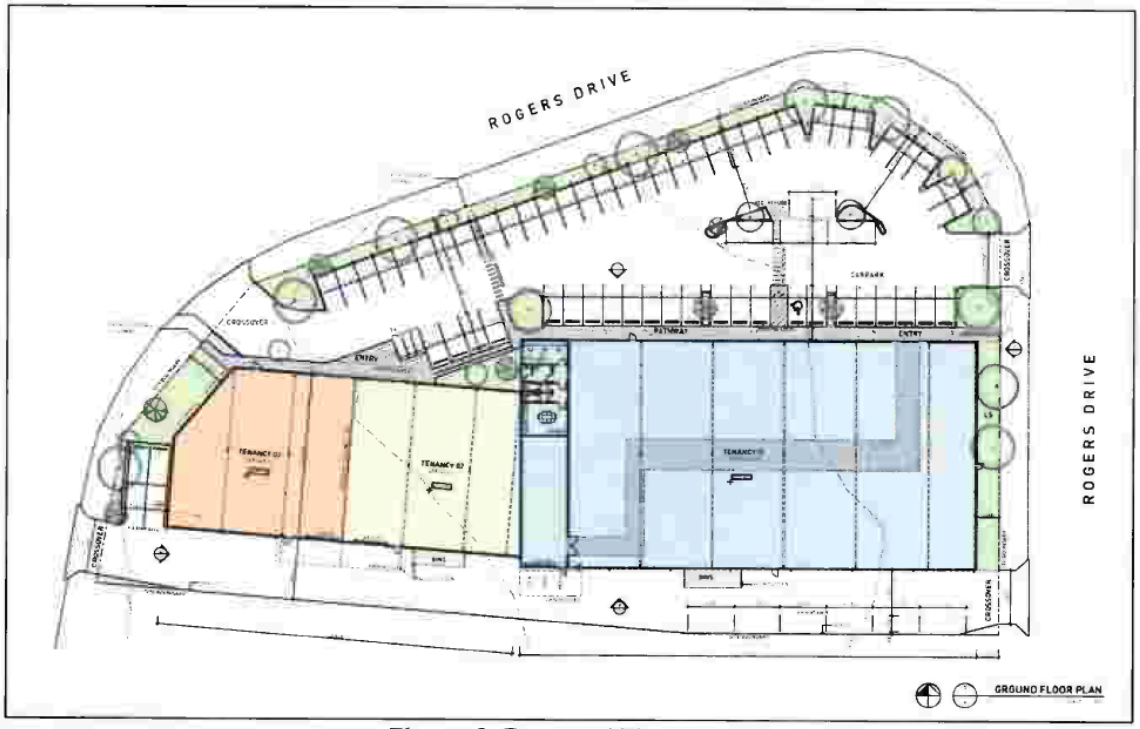


Figure 2. Proposed Floor Plan.

Figure 3. Elevation Plans.

4. ASSESSMENT OF ASSESSMENT BENCHMARKS

Framework for Assessment
Categorising Instruments for Statutory Assessment

For the *Planning Act 2016*, the following Categorising Instruments may contain Assessment Benchmarks applicable to development applications:

- the *Planning Regulation 2017*
- the Planning Scheme for the local government area
- any Temporary Local Planning Instrument
- any Variation Approval

Of these, the planning instruments relevant to this application are discussed in this report.

Planning Act 2016, Section 26 – Assessment Benchmarks generally

(1) For section 45(3)(a) of the Act, the code assessment must be carried out against the assessment benchmarks for the development stated in schedules 9 and 10.

(2) Also, if the prescribed assessment manager is the local government, the code assessment must be carried out against the following assessment benchmarks—

(a) the assessment benchmarks stated in—

(i) the regional plan for a region, to the extent the regional plan is not identified in the planning scheme as being appropriately integrated in the planning scheme; and

(ii) the State Planning Policy, part E, to the extent part E is not identified in the planning scheme as being appropriately integrated in the planning scheme; and

(iii) a temporary State planning policy applying to the premises;

(b) if the local government is an infrastructure provider—the local government's LGIP.

(3) However, an assessment manager may, in assessing development requiring code assessment, consider an assessment benchmark only to the extent the assessment benchmark is relevant to the development.

4.1. PLANNING REGULATION 2017

The Planning Regulation 2017 forms the mechanism by which the provisions of the Act are administered. The Regulation has the ability to regulate and prohibit development and determines the assessment manager and the matters that trigger State interests.

PLANNING REGULATION 2017 DETAILS	
WBB Regional Plan Designation:	Wide Bay Burnett Regional Plan 2011 – Urban Footprint The Urban Footprint identifies land that can meet the region's projected urban development needs to at least 2031. By 2031, it is anticipated that an additional 4300 dwellings will be required to house growth within the South Burnett region. Urban and rural living broad hectare land can accommodate a significant proportion of the required dwellings. Urban Footprint Principles: • The Urban Footprint is a tool for managing, rather than simply accommodating, regional growth. • The Urban Footprint is consistent with achieving a compact settlement pattern, consolidating urban development within established communities, and the strategic directions and regional policies set out in the regional plan. • The Urban Footprint is designed to accommodate all of the region's urban development needs consistent with the policy framework of the regional plan. This includes all housing, employment and open space

	to 2031, based on population, housing and employment projections and reasonable assumptions available to predict future growth. • To amend Urban Footprint boundaries, local adjustments can be considered through the regional and local plan-making processes to reflect changed, new or better information, correct anomalies or recognise constraints. • Opportunities for increasing the capacity of the existing Urban Footprint should be given higher priority than expanding the Urban Footprint, which should only be done if there is insufficient capacity to accommodate the planned distribution of regional growth. • Areas to be considered in the Urban Footprint should: o be physically suitable; o exclude areas with an unacceptable risk from natural hazards, including the predicted impacts of climate change; o exclude areas of high ecological significance; o exclude areas with high Indigenous and non-Indigenous cultural heritage values that significantly conflict with urban use; o be appropriately separated from incompatible land uses; o be adjacent to, and a logical expansion of, an existing urban area o have access to the transport network and services reflective of the development type. • New areas of Urban Footprint land should be located to: o achieve an appropriate balance of urban development in the region and associated subregions; o maintain a well-planned region of distinct cities, towns and villages; o maintain the integrity of inter-urban breaks; o minimise impacts on natural resources; o maximise the use of existing and planned urban infrastructure; o enable the efficient provision of physical and social infrastructure, including public transport; o have ready access to services and employment ; o ensure significant non-residential activities achieve specific locational, infrastructure and site requirements. • Priority for new Urban Footprint areas should be given to Identified Growth Areas (IGAs) where supported by specific investigations. • The boundary of the Urban Footprint should be: o based on property boundaries or otherwise clearly defined, preferably using a major feature such as a road or stream to provide a clear boundary and buffer between urban and non-urban land uses; o consistent with existing planning scheme designations or development commitments, where appropriate; o continuous around each discrete urban area. As the proposed development is for a Showroom in the Specialised centre zone, the proposal is considered consistent with the Regional Plan. In late 2023, the Wide Bay Burnett Regional Plan 2023 was released. Given the nature of the proposed development, it is unlikely to conflict with the goals of the new Regional Plan, noting the site is outside any priority agricultural or environmental areas and that it is not applicable to the assessment of the proposed development given the Regional Plan was adopted post-lodgement of the development application.

4.2. REFERRAL AGENCIES

To determine whether the development application requires referral to the State Assessment and Referral Agency (SARA) or 'another entity', an assessment of the proposal against Schedule 10 of the Regulation has been undertaken.

The application does not require referral to any referral agencies prescribed under Schedule 10, as demonstrated in Table 3.

4.3. STATE PLANNING POLICY

The State Planning Policy (July 2017) (SPP) commenced on the 3 July 2017 and is effective at the time of writing this report. The Planning Regulation 2017 (PR 2017) states the assessment must be carried out against the assessment benchmarks stated in Part E of the State Planning Policy to the extent Part E is not appropriately integrated into the planning scheme.

In accordance with section (8)(4)(a) of the Act, the State Planning Policy applies to the extent of any inconsistency with the Planning Scheme.

State Planning Policy Part E	
Liveable communities and housing	No applicable assessment benchmarks
Economic growth • Agriculture. • Development and construction. • Mining and extractive resources. • Tourism.	**Complies** The site is identified as containing Class A agricultural land. However, this site is in the Specialised Centre zone and is surrounded by existing commercial land uses. There will be no further impact on agricultural values.
Planning for the environment and heritage. • Biodiversity. • Coastal environment. • Cultural heritage. • Water quality	No applicable assessment benchmarks
Safety and resilience to hazards • Emissions and hazardous activities • Natural hazards, risk, and resilience.	No applicable assessment benchmarks
Infrastructure • Energy and water supply. • Infrastructure integration. • Transport infrastructure. • Strategic airports and aviation facilities. • Strategic ports.	**Complies** The site is connected to all necessary urban infrastructure including water, electricity, sewerage and telecommunications.

4.4. DEVELOPMENT CODE ASSESSMENTS

Pursuant to Section 5.5 – Table 5.5.15 - Level of Assessment in the Specialised Centre Zone, an application for Material Change of Use for a Showroom is subject to Code Assessment. Pursuant to Section 5.8 – Table 5.8.1 – Level of Assessment for Operational Work, an application for Operational Work is subject to Code Assessment.

The relevant assessment benchmarks are:

- Specialised Centre Zone Code; and
- Services and Works Code.

Specialised Centre Zone Code

The subject site is situated in the Specialised Centre Zone of the Planning Scheme. The purpose of the Specialised Centre Zone provides for 1 or more specialised uses including, for example, conference centres, entertainment centres, education and research facilities or university campuses. Whilst there is no particular definition for a 'specialised use', the proposal is considered appropriate for the zone as it involves a Showroom, being a contemplated use within the zone (categorised as such by the prescribed level of assessment).

The following table sets out an assessment of the proposal against the Acceptable Outcomes and Performance Outcomes for the Specialised Centre Zone Code.

Table 6.2.15.3 Criteria for Assessment

Performance outcomes	**Requirements for accepted development and assessment benchmarks**	**Response**
Section 1 General		
PO1 The scale, bulk and design of buildings provides a safe and welcoming built environment that reflects a commercial environment despite the industrial scaled and proportioned buildings.	**AO1.1** Buildings are a maximum of 10m high. AND **AO1.2** Buildings are set back at least 6m from the street alignment. AND **AO1.3** Architectural features are used to make building entrances clearly distinguishable from the street. AND **AO1.4** At least 50% of parking sits behind the front building line. AND **AO1.5** The façade incorporates substantial articulation or fenestration.	**Complies with AO1.1.** The proposed development includes a maximum building height of 9.3 metres to the top of the parapet. **Performance Outcome.** As the subject site is a corner lot (located on a bend), the site has sole frontage to Rogers Drive for a majority of the property boundary (northern, eastern and western). As such, the eastern and western setbacks are 3 metres and 5.12 metres respectively. The northern setback is a minimum of 1.5 metres to the carparking area. The proposed development incorporates landscaping along the entire street frontage to Rogers Drive and throughout the car park to limit visual impact from the streetscape and buffer the bulk of the development. The proposal is therefore considered to comply with PO1 of the Specialised Centre Zone Code and is consistent with surrounding development and development in an industrial context. **Performance Outcome.** The majority of parking is located forward of the building line, toward Rogers Drive. Despite this, however, landscaping is to be provided around the entire frontage to Rogers Drive with a width of

Performance outcomes	Requirements for accepted development and assessment benchmarks	Response
	AND	between 1.5m and 5.12m. The proposal is therefore considered to comply with the performance outcome as the landscaping will soften the built form.
	AO1.6 Plant and service equipment (air conditioning, exhaust fans, lift motor rooms, refuse bins, telecommunication devices, etc) are integrated into buildings.	**Complies with AO1.6.** Refuse bins are located at the rear of the site, with a dedicated servicing lane, separated from the customer parking lot at the front of the site.
PO2 Development provides a safe and secure environment.	**AO2.1** Development provides: (a) opportunities for casual surveillance and sightlines to and from open spaces, streets and adjacent development; (b) activity areas adjacent to pedestrian pathways; (c) pathways, underpasses and other spaces that minimise sudden changes of grade and blind corners; (d) lighting of external areas; (e) increased visibility of high risk areas such as car parks, stairwells and the like; (f) entrances to buildings that are oriented to face open or 'active' spaces; and (g) clear sight lines from within the building at the entry point. AND **AO2.2** Parking areas with more than 20 parking spaces provide dedicated, obvious and direct pedestrian paths linking parking spaces with public streets and/or entry points to on-site commercial premises. AND **AO2.3** Pedestrian movement areas involve minimal vehicle conflict points and facilitate equitable access. AND	**Complies with AO2.1.** The proposed development is oriented to Rogers Drive, with parking located at the front of the building, allowing for casual surveillance opportunities. **Complies with AO2.2.** The proposed development includes 70 car parking spaces, with pedestrian paths included, safely connecting the entry points of the development with Rogers Drive. **Complies with AO2.3.** The proposed development incorporates pedestrian crossings safely connecting the entry points of the

Performance outcomes	Requirements for accepted development and assessment benchmarks	Response
		development with Rogers Drive.
	AO2.4 The ground level of buildings facing the primary frontage comprises at least 50% glass.	**Performance Outcome.** The proposed development is oriented to the street frontage, incorporating glass entry doors and pedestrian pathways leading from Rogers Drive.
PO3 Development is adequately serviced.	**AO3.1** Development is connected to reticulated water supply and sewerage. AND **AO3.2** Stormwater is discharged to a lawful point of discharge.	**Complies with AO3.1.** The proposed development is able to be connected to all essential services. **Complies with AO3.2.** A Stormwater Management Plan was prepared in support of the application demonstrating a lawful point of discharge.
PO4 Refuse storage areas are located for convenient collection, screened from public view and provided with facilities for self-contained cleaning.	**AO4.1** Refuse storage areas allow the appropriately-sized collection vehicle to enter and exit in a forward gear. The use of staff car parking areas to accommodate internal manoeuvring is permissible. AND **AO4.2** The refuse storage area is provided in a building or other enclosed structure screened to a minimum height of 0.2m above the height of the refuse receptacles. AND **AO4.3** Refuse storage areas are provided with an impervious base that is drained to an approved waste disposal system and provided within a dedicated hose cock.	**Complies with AO4.1.** Refuse storage is included at the rear of the site, with service vehicles proposed to access the site via separate access crossovers at the south-western and south-eastern corners of the site, allowing HRVs to enter and exit the site in forward gear. **Condition Imposed.** The proposed refuse storage area is at the rear of the site and is to be screened. A condition has been included to ensure the screening is a minimum of 0.2 metres above the height of the refuse receptacles. **Condition Imposed.** A condition has been included to ensure compliance with AO4.3.
PO5 Development is located and designed to ensure that land uses are not exposed to:	**AO5.1** Development does not occur: (a) In areas that pose a health risk from previous activities; and	**Complies with AO5.1.** The proposed development is not located on land that poses a health risk or is listed on the Contaminated Land Register

Performance outcomes	Requirements for accepted development and assessment benchmarks	Response
(a) Areas that pose a health risk from previous activities; and (b) Unacceptable levels of contaminants.	(b) On sites listed on the Contaminated Land Register or Environmental Management Register. OR **AO5.2** Areas that pose a health risk from previous activities and contaminated soils which are subject to development are remediated prior to plan sealing, operational works permit, or issuing of building works permit.	or Environmental Management Register. **Not Applicable.**
Section 2 For development affected by one or more overlays		
Airport environs overlay		
Wildlife hazards sub-area		
PO6 Development does not significantly increase the risk of wildlife hazard particularly flying vertebrates, such as birds and bats, intruding within an airport operational airspace.	No outcome specified.	**Complies with PO6.** The proposed development includes a refuse storage area at the rear of the site which is screened and enclosed. The development does not increase the risk of wildlife hazard intruding within operational airspace.

Summary of Compliance with Specialised Centre Zone Code

The proposed development generally complies with the acceptable outcomes of the Specialised Centre Zone Code. Performance Outcomes are sought in relation to setbacks and the location of parking. In each case, sufficient reporting was submitted from the applicant and/or conditions imposed to demonstrate compliance.

Services and Works Code

Table 8.4.2—Assessable development

Performance outcomes	Requirements for accepted development and assessment benchmarks	Response
Section 1 General		
PO1 The development is planned and designed considering the land use constraints of the site for achieving stormwater design objectives.	**AO1.1** A stormwater quality management plan provides for achievable stormwater quality treatment measures that meet the design objectives identified in Table 9.4.4.	**Complies with AO1.1.** The proposal is supported by a Stormwater Management Plan, with reasonable and relevant conditions imposed relating to stormwater management.
PO2 Development does not discharge wastewater to a waterway or off-site unless demonstrated to be best	**AO2.1** A wastewater management plan prepared by a suitably qualified person and addresses: (a) wastewater type;	**Performance Outcome** A wastewater management plan has not been provided however the proposal is able to be connected to reticulated sewer.

Performance outcomes	Requirements for accepted development and assessment benchmarks	Response
practice environmental management for that site.	(b) climatic conditions; (c) water quality objectives; (d) best-practice environmental management; AND **AO2.2** Wastewater is managed in accordance with a waste management hierarchy that: (a) avoids wastewater discharge to waterways; or (b) minimises wastewater discharge to waterways by re-use, recycling, recovery and treatment for disposal to sewer, surface water and groundwater.	
PO3 Construction activities avoid or minimise adverse impacts on stormwater quality.	**AO3.1** An erosion and sediment control plan addresses the design objectives for the construction phase in Table 9.4.4.	**Complies with AO3.1.** The proposal is supported by a Silt and Sediment Erosion Plan, with reasonable and relevant conditions imposed relating to erosion and sediment control.
PO4 Operational activities avoid or minimise changes to waterway hydrology from adverse impacts of altered stormwater quality and flow.	**AO4.1** Development incorporates stormwater flow control measures to achieve the design objectives for the postconstruction phase in Table 9.4.4.	**Complies with AO4.1.** The proposal is supported by a Stormwater Management Plan, with reasonable and relevant conditions imposed relating to stormwater management across the site.
Section 2 Infrastructure		
PO5 Development is provided with infrastructure which: (a) conforms with industry standards for quality; (b) is reliable and service failures are minimised; and (c) is functional and readily augmented.	**AO5.1** Except in the Rural zone, all development occurs on a site with frontage to a sealed road. AND **AO5.2** Infrastructure is designed and constructed in accordance with the standards contained in PSP1 – Design and Construction Standards.	**Complies.** The site frontage is to Rogers Drive, a sealed road. **Not Applicable.** The proposal does not involve new or upgraded infrastructure.
Section 3 Vehicle parking		
PO6 Vehicle parking and access is provided to meet the needs of occupants, employees, visitors and other users.	**AO6.1** Vehicle parking spaces are provided on-site in accordance with Table 9.4.5. AND **AO6.2** A service bay is provided on-site for the service vehicle nominated in Table 9.4.5.	**Performance Outcome.** The proposal includes 70 vehicle parking spaces, falling short of the prescribed 151 spaces per Table 9.4.5. A Traffic Impact Assessment has been provided, prepared by an RPEQ, demonstrating that the

Performance outcomes	Requirements for accepted development and assessment benchmarks	Response
	AND **AO6.3** Driveway crossings are provided to the standard contained in PSP1 – Design and Construction Standards. AND **AO6.4** Vehicle parking and manoeuvring areas are provided in accordance with the standards contained in PSP1 – Design and Construction Standards.	proposed number of car parks is sufficient for the use. It is noted that an Information Request was issued requesting parking be revised to a minimum of 1 space per 40m^2 of GFA (70 spaces), as the application originally proposed 1 space per 40m^2 of GFA (60 spaces). The final Traffic Impact Assessment included recommendations/conclusions stating that the rate prescribed under the Planning Scheme is typical for higher density retail uses (supermarkets and specialty shops) and is not reflective of the demand generated for bulky goods retailers. The report instead suggests the rate for conventional bulky goods retailers is appropriately 1 per approx. 40m^2 of GFA as uses of this nature tend to have reduced vehicle trips. It is considered that compliance with PO6 is achieved, in that the proposed parking will meet the needs of the occupants, employees, visitors and other users. Additionally, a service bay has been provided at the rear of the site, while all vehicle crossovers have been designed in accordance with the relevant standards.
Section 4 Landscaping		
PO7 Landscaping is appropriate to the setting and enhances local character and amenity.	**AO7.1** Landscaping is provided in accordance with the relevant zone code provisions. AND **AO7.2** Where shade tree planting is required in vehicle parking areas each planting bed has a minimum area of 2m^2 and is unsealed and permeable.	**Not Applicable.** The Specialised centre zone code does not identify specific landscaping requirements. However, landscaping has been included around the frontage of the site at a rate of 10%, providing shading for the car park.

Performance outcomes	Requirements for accepted development and assessment benchmarks	Response
	AND **AO7.3** Plantings along frontages or boundaries are in the form of defined gardens with three tier planting comprised of groundcovers, shrubs (understorey), and trees (canopy) and provided with a drip irrigation system, mulching and border barriers.	A Landscape Concept Plan has been provided by the Applicant, demonstrating the selection of appropriate plant species.
PO8 Plant species avoid adverse impacts on the natural and built environment, infrastructure and the safety of road networks.	**AO8.1** Landscaping utilises plant species that are appropriate for the location and intended purpose of the landscaping. AND **AO8.2** Species selection avoids non-invasive plants.	**Complies with AO8.1.** A Landscape Concept Plan has been provided by the Applicant, demonstrating the selection of appropriate plant species. **Complies with AO8.2.** A Landscape Concept Plan has been provided by the Applicant, demonstrating the selection of appropriate plant species.
Section 5 Filling and excavation		
PO9 Development results in ground levels that retain: (a) access to natural light; (b) aesthetic amenity; (c) privacy; and (d) safety.	**AO9.1** The depth of: (a) fill is less than 2m above ground level; or (b) excavation is less than 2m below ground level. AND **AO9.2** The toe of the fill, or top of the excavation is not less than 0.5m inside the site property boundary. AND **AO9.3** Works do not occur on slopes over 15% in grade. AND **AO9.4** Retaining walls over 1m in height are terraced 1.5m for every 1m in height and landscaped. AND **AO9.5** Batter slopes are not steeper than 25% and are grassed and terraced 1.5m for every 1m in height. AND	**Complies with AO9.1.** An Earthworks Plan prepared by an RPEQ has been provided, demonstrating the depth of cut and fill to be less than 2 metres. **Complies with AO9.1.** An Earthworks Plan prepared by an RPEQ has been provided demonstrating the extent of cut and fill. **Complies with AO9.3.** The site does not include a slope of over 15%. **Not Applicable.** The proposed development does not include retaining walls. **Not Applicable.** The proposed development does not incorporate batter slopes.

Performance outcomes	Requirements for accepted development and assessment benchmarks	Response
	AO9.6 Filling or excavation for the purpose or retention of water: (a) is certified by an RPEQ engineer to safely withstand the hydraulic loading; (b) directs overflow such that no scour damage or nuisance occurs on adjoining lots.	**Not Applicable.** The proposed filling and excavation is not for the purpose or retention of water.
PO10 Filling or excavation does not cause damage to public utilities.	**AO10.1** Filling or excavation does not occur within 2m horizontally of any part of an underground water supply, sewerage, stormwater, electricity or telecommunications system.	**Complies with AO10.1.** An Earthworks Plan has been prepared, demonstrating the depth and extent of cut and fill clear of the listed infrastructure.
PO11 Filling and excavation avoids water ponding on the premises or nearby premises that will adversely impact on the health of the community.	**AO11.1** Following filling or excavation: (a) the premises: (i) are self-draining; and, (ii) has a minimum slope of 0.25%; and, (b) surface water flow is: (i) directed away from neighbouring properties; or (ii) discharged into a stormwater drainage system designed and constructed in accordance with AS3500 section 3.2.	**Complies with AO11.1.** An Earthworks Plan has been prepared, demonstrating the depth and extent of cut and fill compliant with Acceptable Outcome AO11.1.

Summary of Compliance with the Services and Works Code:

The proposed development generally complies with the Services and Works Code. Performance Outcomes are sought in relation to wastewater management and the provision of carparking. In each case sufficient reporting was submitted from the applicant and/or conditions imposed to demonstrate compliance.

5. CONSULTATION

Referral Agencies

State Assessment and Referral Agency	Not applicable
Other	Not applicable

Council Referrals

INTERNAL REFERRAL SPECIALIST	*REFERRAL / RESPONSE*
Development Engineer	Council's Development Engineer provided engineering conditions and calculated Infrastructure Charges
Infrastructure Charges Unit	Council adopted the LGIP on 24 June 2019 which commenced on 1 July 2019. The types of developments that may trigger the issuing of an infrastructure charges notice are: ▪ Reconfiguring a lot; ▪ Making a Material change of use; ▪ Carrying out building work. Refer to Attachment B for the Infrastructure Charges Notice.

6. CONCLUSION

That Council approve the Development Permit for Material Change of Use for a Showroom and Operational Work (Road Work, Stormwater, Drainage Work, Earthworks, Landscaping, and Access/Driveway) at 5-13 Rogers Drive KINGAROY (and described as Lots 9, 26, 27, 28, and 29 on SP180642) is recommended for approval subject to the reasons outlined in the Statement of Reasons and / or conditions of approval.

ATTACHMENTS

1. **Attachment A - Statement of Reasons**
2. **Attachment B - Infrastructure Charges Notice**
3. **Attachment C - Approved Plans**

NOTICE ABOUT DECISION – STATEMENT OF REASONS

The following information is provided in accordance with Section 63(4) & (5) of the Planning Act 2016

Applicant:	Cape Moreton Company Pty Ltd C/- Adapt Planning Pty Ltd
Application No:	MCU23/0026 & OPW23/0015
Proposal:	• Material Change of Use (Showroom) • Operational Work (Road Work, Stormwater, Drainage Work, Earthworks, Landscaping and Access/Driveway)
Street Address:	5-13 Rogers Drive KINGAROY
RP Description:	Lots 9, 26, 27, 28 & 29 on SP180642
Assessment Type:	Code Assessable
Number of Submissions:	Not Applicable

On 4 June 24 the above development was recommended for:

☒ Approval
☐ Refusal

1. Reasons for the Decision

The reasons for this decision are:

- The proposal involves a Showroom, which is an anticipated use in the Specialised centre zone. It is considered that there will be minimal or no impact to the industrial amenity and character of the surrounding locality. Any anticipated impacts are adequately addressed through design elements and the imposition of reasonable and relevant conditions.
- The use complies with all acceptable outcomes and performance outcomes within the current planning framework, including the South Burnett Regional Council Planning Scheme 2017.
- The proposed development includes adequate access arrangements and provides sufficient parking for the intended use.
- Stormwater flows are appropriately managed, with no adverse impacts on upstream, downstream, or adjoining properties anticipated. Stormwater flows are able to be directed to the existing lawful point of discharge along Rogers Drive.

2. Assessment Benchmarks

The following are the benchmarks apply to this development:

- Specialised Centre Zone Code
- Services and Works Code

3. Compliance with Benchmarks

The development was assessed against all the assessment benchmarks listed above and complies with all of these or can be conditioned to comply.

Note: Each application submitted to Council is assessed individually on its own merit.

INFRASTRUCTURE CHARGES NOTICE

(Section 119 of the Planning Act 2016)

APPLICANT:	Cape Moreton Company Pty Ltd C/- Adapt Planning Pty Ltd PO Box 7618 SIPPY DOWNS QLD 4556
APPLICATION:	Combined Application for Material Change of Use (Showroom) and Operation Work (Road work, Stormwater, Drainage work, Earthworks, Landscaping & Access/driveway) -- Code Assessable
DATE:	[Insert Date of DN]
FILE REFERENCE:	MCU23/0026
AMOUNT OF THE LEVIED CHARGE: *(Details of how these charges were calculated are shown overleaf)*	**$187,391.00** **Total**

$86,275.00	Water Supply Network
$47,540.00	Sewerage Network
$43,905.00	Transport Network
$0.00	Parks and Land for Community Facilities Network
$9,671.00	Stormwater Network

AUTOMATIC INCREASE OF 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.
LAND TO WHICH CHARGE APPLIES:	Los 9, 26, 27, 28, 29 on SP180642
SITE ADDRESS:	5-13 Rogers Dr, Kingaroy
PAYABLE TO:	**South Burnett Regional Council**
WHEN PAYABLE: *(In accordance with the timing stated in Section 122 of the Planning Act 2016)*	Material Change of Use – When the change happens.
OFFSET OR REFUND:	Not Applicable.

This charge is made in accordance with South Burnett Regional Council's ***Charges Resolution (No. 3) 2019***

DETAILS OF CALCULATION

Water Supply

Adopted Charges

Development Description	Number of Units	Units of Measure	Charge Rate	Reference	Amount
Commercial Bulk Goods (Showroom)	2,765	m² GFA	$49.00	CR Table 2.2	$135,485.00

Discounts*

Description	Number of Units	Units of Measure	Discount Rate	Reference	Amount
Vacant land	5	Allotments	$9,842.00	CR Table 2.3	$49,210.00

Sewerage

Adopted Charges

Development Description	Number of Units	Units of Measure	Charge Rate	Reference	Amount
Commercial Bulk Goods (Showroom)	2,765	m² GFA	$27.00	CR Table 2.2	$74,655.00

Discounts*

Description	Number of Units	Units of Measure	Discount Rate	Reference	Amount
Vacant land	5	Allotments	$5,423.00	CR Table 2.3	$27,115.00

Transport

Adopted Charges

Development Description	Number of Units	Units of Measure	Charge Rate	Reference	Amount
Commercial Bulk Goods (Showroom)	2,765	m² GFA	$24.00	CR Table 2.2	$66,360.00

Discounts*

Description	Number of Units	Units of Measure	Discount Rate	Reference	Amount
Vacant land	5	Allotments	$4,491.00	CR Table 2.3	$22,455.00

Parks and Land for Community Facilities

Adopted Charges

Development Description	Number of Units	Units of Measure	Charge Rate	Reference	Amount
Commercial Bulk Goods (Showroom)	2,765	m² GFA	$0.00	CR Table 2.2	$0.00

Discounts*

Description	Number of Units	Units of Measure	Discount Rate	Reference	Amount
Vacant land	5	Allotments	$2,009.00	CR Table 2.3	$10,045.00

Stormwater

Adopted Charges

Development Description	Number of Units	Units of Measure	Charge Rate	Reference	Amount
Commercial Bulk Goods (Showroom)	5838	m^2 impervious	$2.00	CR Table 2.2	$11,676.00

Discounts*

Description	Number of Units	Units of Measure	Discount Rate	Reference	Amount
Vacant land	5	Allotments	$401.00	CR Table 2.3	$2,005.00

Levied Charges

Development Description	Water Supply	Sewerage	Transport	Parks & Land for Community Facilities	Stormwater	Total
Commercial Bulk Goods (Showroom)	$86,275.00	$47,540.00	$43,905.00	$0.00	$9,671.00	$187,391.00
Total	**$86,275.00**	**$47,540.00**	**$43,905.00**	**$0.00**	**$9,671.00**	**$187,391.00**

** In accordance with Section 3.3 of the Charges Resolution, the discount may not exceed the adopted charge. Any surplus discounts will not be refunded, except at South Burnett Regional Council's discretion.*

INFORMATION NOTICE

Authority and Reasons for Charge	This Infrastructure Charges Notice has been given in accordance with section 119 of the *Planning Act 2016* to support the Local government's long-term infrastructure planning and financial sustainability.
Appeals	Pursuant to section 229 and Schedule 1 of the *Planning Act 2016* a person may appeal an Infrastructure Charges Notice. Attached is an extract from the *Planning Act 2016* that details your appeal rights.
Automatic Increase Provision of charge rate ($)	An infrastructure charge levied by South Burnett Regional Council is to be increased by the difference between the Producer Price Index (PPI) applicable at the time the infrastructure charge was levied, and PPI applicable at the time of payment of the levied charge, adjusted by reference to the 3-yearly PPI average[1]. 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 Authority could have levied for the development at the time the charge is paid.
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.
Making a Payment	This Infrastructure Charges Notice cannot be used to pay your infrastructure charges. To pay the levied charge, you must request an Itemised Breakdown showing the total levied charge payable at the time of payment. An Itemised Breakdown must be presented at the time of payment. An Itemised Breakdown may be requested by emailing info@southburnett.qld.gov.au

[1] 3-yearly PPI average is defined in section 114 of the *Planning Act 2016* and means the PPI adjusted according to the 3-year moving average quarterly percentage change between financial 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.

Payment can be made at any of the following South Burnett Regional Council Offices:

- 69 Hart Street, Blackbutt, 4314;
- 45 Glendon Street, Kingaroy, 4610;
- 42 Stephens Street West, Murgon, 4605;
- 48 Drayton Street, Nanango, 4615;
- McKenzie Street, Wondai, 4606; or
- via other methods identified on the Itemised Breakdown.

Enquiries

Enquiries regarding this Infrastructure Charges Notice should be directed to the SOUTH BURNETT REGIONAL COUNCIL, Department of Planning and Land Management, during office hours, Monday to Friday by phoning (07) 4189 9100 or email at info@southburnett.qld.gov.au

SITE PLAN
SCALE: 1:500

DEVELOPMENT SCHEDULE

ADDRESS:
5-13 ROGERS DRIVE KINGAROY QLD 4610

RPD DATA:
LOT 9; 26; 27; 28+29 ON SP180642

SITE AREA:
6382m²

CARPARKING SCHEDULE

PROVIDED CAR PARKING:
70 CARS

GFA CALCULATIONS

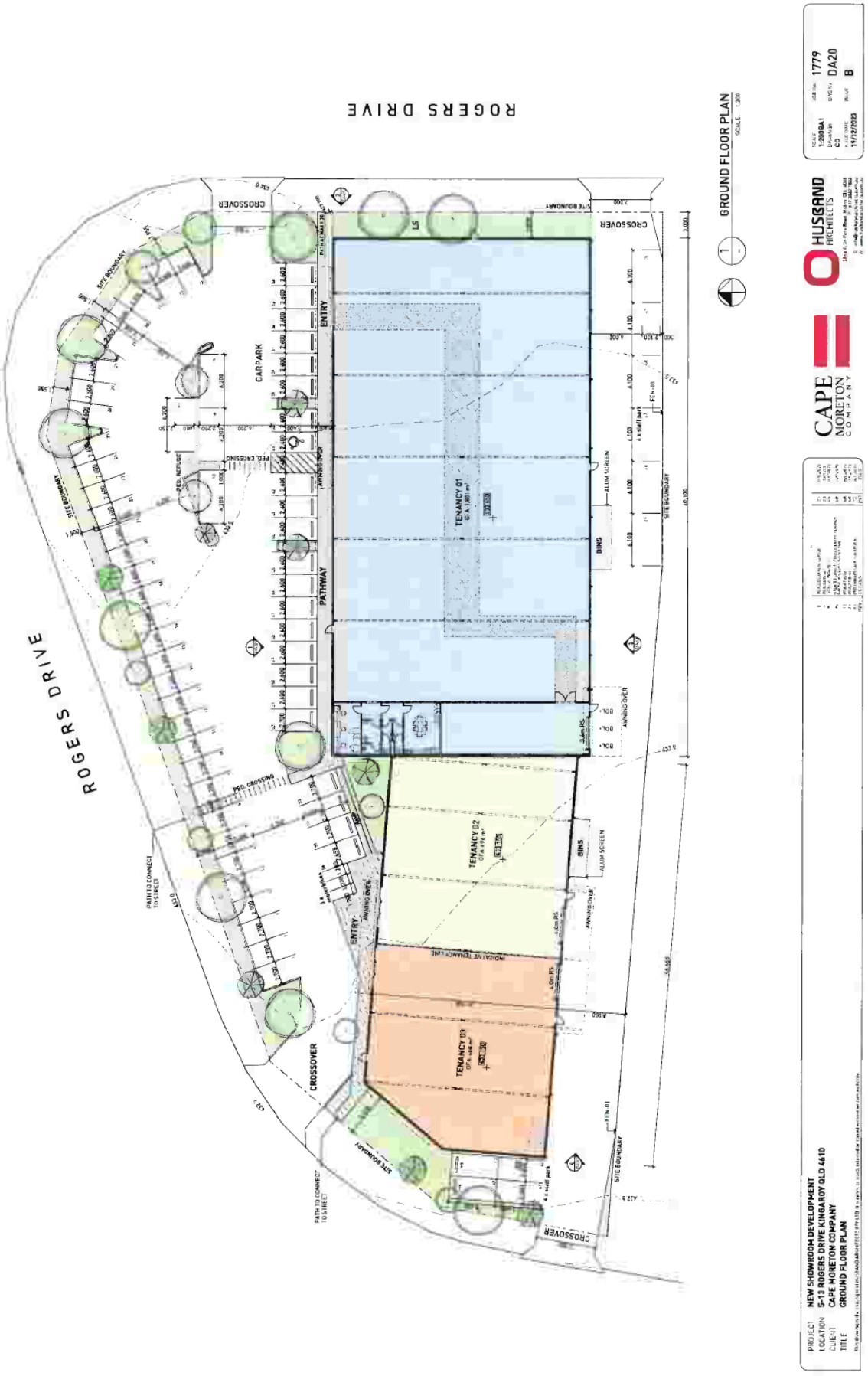
TENANCY 01	1,801
TENANCY 02	496
TENANCY 03	468
	2,765 m²

PROJECT	NEW SHOWROOM DEVELOPMENT
LOCATION	5-13 ROGERS DRIVE KINGAROY QLD 4610
CLIENT	CAPE MORETON COMPANY
TITLE	SITE PLAN

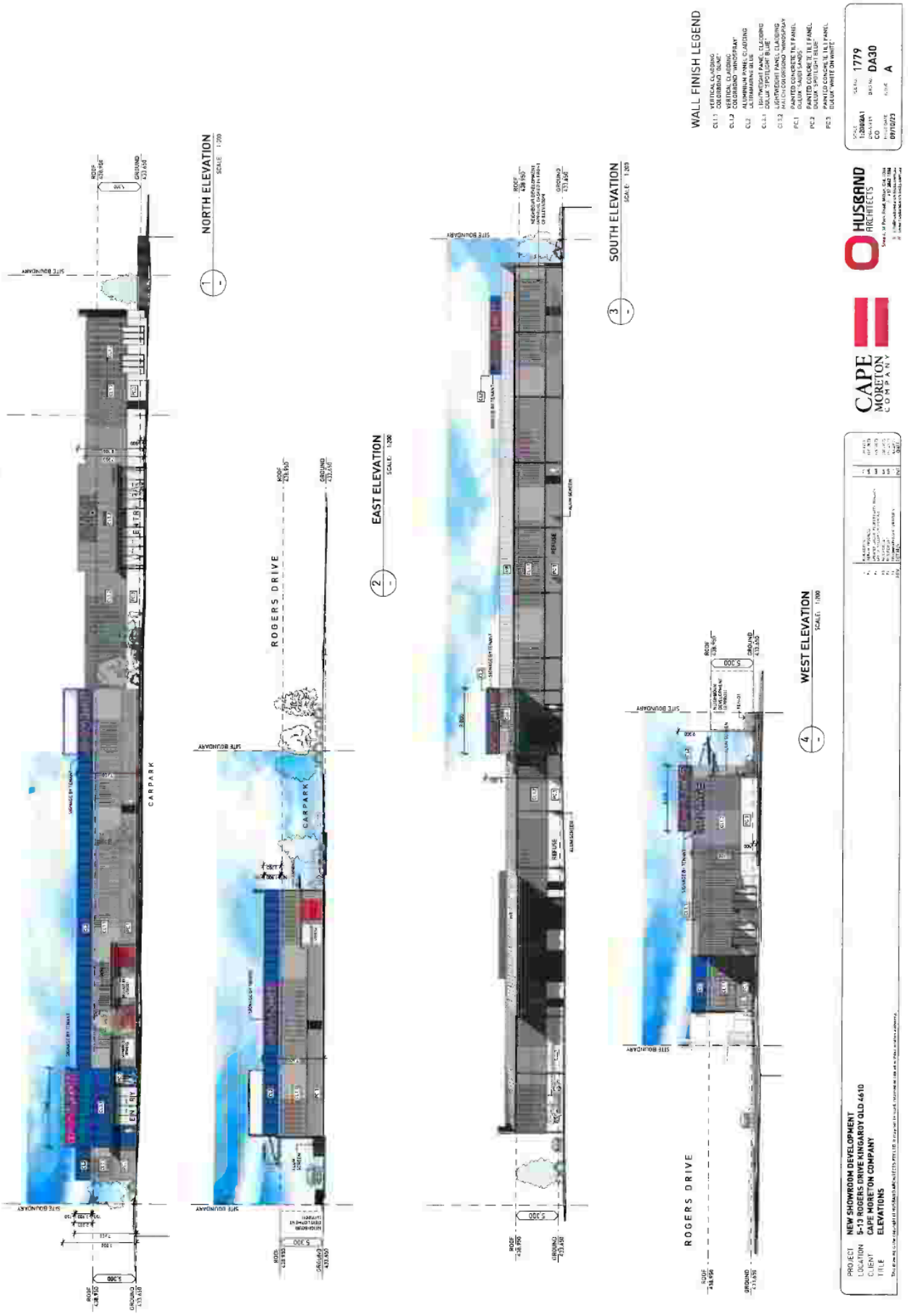
CAPE MORETON COMPANY

HUSBAND ARCHITECTS

SCALE	1:500@A1
JOB No.	1779
DRAWN BY	CO
DWG No.	DA10
ISSUE DATE	19/12/2023
ISSUE	B


ROGERS DRIVE
GROUND FLOOR PLAN
SCALE 1:200
CROSSOVER
ENTRY
CARPARK
PATHWAY
TENANCY 01
TENANCY 02
TENANCY 03
BINS
ALUM SCREEN
AWNING OVER
SITE BOUNDARY
PED CROSSING
PATH TO CONNECT TO STREET
HUSBAND ARCHITECTS
CAPE MORETON COMPANY
PROJECT NEW SHOWROOM DEVELOPMENT
LOCATION 5-13 ROGERS DRIVE KINGAROY QLD 4610
CLIENT CAPE MORETON COMPANY
TITLE GROUND FLOOR PLAN
JOB No. 1779
DWG No. DA20
ISSUE B
19/12/2023

ROGERS DRIVE
ROOF PLAN
SCALE 1:200
SITE BOUNDARY
HUSBAND ARCHITECTS
CAPE MORETON COMPANY
PROJECT NEW SHOWROOM DEVELOPMENT
LOCATION 5-13 ROGERS DRIVE KINGAROY QLD 4610
CLIENT CAPE MORETON COMPANY
TITLE ROOF PLAN
1779
DA21
A
1:200@A1
01/10/23


NORTH ELEVATION
SCALE 1:200
EAST ELEVATION
SCALE 1:200
SOUTH ELEVATION
SCALE 1:200
WEST ELEVATION
SCALE 1:200
ROGERS DRIVE
CARPARK
SITE BOUNDARY
ROOF
GROUND
WALL FINISH LEGEND
CL1.1 VERTICAL CLADDING COLORBOND 'DUNE'
CL1.2 VERTICAL CLADDING COLORBOND 'CHARCOAL'
CL2 ALUMINIUM PANEL CLADDING ULTRAMARINE BLUE
CL3.1 LIGHTWEIGHT PANEL CLADDING DULUX 'SPOTLIGHT BLUE'
CL3.2 LIGHTWEIGHT PANEL CLADDING MANUFACTURERS STANDARD
PC1 PAINTED CONCRETE TILT PANEL DULUX 'SAUDI SANDS'
PC2 PAINTED CONCRETE TILT PANEL DULUX 'ARCHIVE BLUE'
PC3 PAINTED CONCRETE TILT PANEL DULUX 'WHITE ON WHITE'
HUSBAND ARCHITECTS
CAPE MORETON COMPANY
PROJECT NEW SHOWROOM DEVELOPMENT
LOCATION 5-13 ROGERS DRIVE KINGAROY QLD 4610
CLIENT CAPE MORETON COMPANY
TITLE ELEVATIONS
1779
DA30
A
09/10/23

DRAWING SIZE - A1

OPERATIONAL WORKS FOR INDUSTRIAL DEVELOPMENT LOTS 26–29 & 9 ON SP 180642 ROGERS DR, KINGAROY

LOCALITY PLAN
Scale N.T.S.

HEIGHT DATUM
LOT 26–29 & 9 ON SP 180642
Level Datum AHD
Level Origin PSM 165113
Rogers Dr, Kingaroy
Survey information provided by
CMF SURVEYORS

N

SHEET LIST

33153–CS	COVER SHEET
33153–CN	CONSTRUCTION NOTES
33153–OW1.1	EXISTING SURVEY & SERVICES
33153–OW2.1	SILT & SEDIMENT EROSION
33153–OW3.1	EARTHWORKS
33153–OW4.1	DRIVEWAY & ACCESS
33153–OW4.2	DRIVEWAY LEVELS & LINE MARKING
33153–OW4.3	DRIVEWAY DETAILS
33153–OW4.4	DRIVEWAY LONGSECTION
33153–OW5.1	VEHICLE MANEUVERING
33153–SW1.1	STORMWATER MANAGEMENT

THIS DRAWING AND ASSOCIATED DETAILS MUST BE READ IN CONJUNCTION WITH THE NOTES CONTAINED ON 33153-CN

www.dialbeforeyoudig.com.au
DIAL 1100 BEFORE YOU DIG

1:100 @ A1
1:200 @ A3

Issue: FOR APPROVAL

DO NOT SCALE FROM THIS DRAWING

SCG

Title: COVER SHEET

Project: 5–13 ROGERS DR, KINGAROY

Date: Sept 23 | Drawn: TH | Design: TH

Dwg No: 33153 –CS

DRAWING SIZE – A1

CONSTRUCTION NOTES

GENERAL:

1. DO NOT SCALE FROM THIS DRAWING.
2. ALL DIMENSIONS IN MILLIMETRES
3. SETTING OUT DIMENSIONS ARE TO BE OBTAINED FROM THE ARCHITECTURAL DRAWINGS.
4. ANY DISCREPANCIES BETWEEN THESE DRAWING AND THE ARCHITECTURAL DRAWINGS ARE TO BE REFERRED TO THE ENGINEER IMMEDIATELY.
5. THE BUILDER IS RESPONSIBLE FOR LOCATING ALL EXISTING SERVICES WITHIN AND ADJACENT THE ALLOTMENT AND SHALL ENSURE THAT ALL NEW WORKS ARE IN ACCORDANCE WITH THE ATTACHED CRITICAL DEPTH LINE DIAGRAM.
6. ALL EXCAVATIONS ARE TO REMAIN DRY AND FREE OF ALL LOOSE MATERIAL PRIOR TO THE PLACEMENT OF CONCRETE.
7. WHERE COMPACTED FILL IS NOTED ON THIS AND ASSOCIATED PLANS, COMPACTION TO ACHIEVE 98% MINIMUM DENSITY RATIO TO BE ACHIEVED FOR COHESIVE (CLAY) SOILS AND 95% MINIMUM DENSITY INDEX FOR COHESIONLESS (SANDY) SOILS IN ACCORDANCE WITH AS3798–2007.
8. UNLESS NOTED OTHERWISE A MINIMUM BEARING CAPACITY OF 100kPa SHOULD BE ACHIEVED WITHIN COMPLETED FILLING. COMPACTION AND BEARING CAPACITY TEST RESULTS MUST BE PRESENTED TO SCC CONSULTING ENGINEERS FOR APPROVAL PRIOR TO WORKS PROCEEDING.
9. CHEMSET OR EPOXY BOLTING TO CONCRETE OR BLOCK WORK MEMBERS NOMINATED ON THE ATTACHED PLANS ARE TO UTILISE HARDSET CHEMSET INJECTION BOLT SERIES OR EQUALLY APPROVED. ALL WORK TO BE IN STRICT ACCORDANCE WITH THE MANUFACTURERS REQUIREMENTS.
10. THE BUILDER MUST PROTECT ALL EXISTING NEIGHBOURING STRUCTURES/BUILDINGS THROUGHOUT THE WORKS, PARTICULARLY DURING EARTHWORKS. REFERENCE SHOULD BE MADE TO OUR CRITICAL DEPTH LINE DIAGRAM OR SEEK GUIDANCE DIRECTLY FROM THIS OFFICE.
11. THE BUILDER MUST HAVE A B.A APPROVAL FOR THE PROPOSED WORKS FROM EITHER A PRIVATE CERTIFIER OR LOCAL COUNCIL BUT ONE ANY SITE INSPECTION CAN BE CARRIED OUT.

HYDRAULICS

1. HYDRAULIC SERVICES SHOWN ARE DIAGRAMATIC ONLY REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF FIXTURES.
2. ALL SANITARY HYDRAULICS AND WATER RETICULATION WITHIN THE ALLOTMENT BOUNDARY TO BE IN ACCORDANCE WITH AS3500.
3. ALL WORK SHALL COMPLY WITH THE REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION, AFTER OBTAINING ALL NECESSARY PERMITS AND APPROVALS.
4. THE CONTRACTOR IS TO CONFIRM THE POSITION OF ALL EXISTING SERVICES AS INDICATED ON THESE AND ASSOCIATED PLANS PRIOR TO THE COMMENCING OF WORK.
5. STORMWATER DRAINAGE PIPES SHALL BE CLASS 5H UPVC OR RUBBER RING JOINTED REINFORCED CONCRETE PIPE LAID AT A MINIMUM GRADE OF 1 IN 100 U.N.O. JOINS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE MANUFACTURERS REQUIREMENTS.
6. SEWERS 100mm DIAM. UPVC ULAD AND LAID AT A MINIMUM GRADE OF 1 IN 60.
11. CLEAN–OUTS, INSPECTION OPENINGS AND CLOSING CAPS SITUATED IN ROADWAY OR PEDESTRIAN PAVEMENTS ARE TO BE FITTED WITH EITHER BRASS OR CAST–IRON COVERS.
12. ALL IN–GROUND VALVES SHALL BE IN ACCORDANCE IN APPROVED CONCRETE PAIN BOXES.
13. ALL WASTE PIPES AND WATER SERVICES PENETRATING SLABS TO BE SHROUDED IN AN APPROVED FLEXIBLE JOINT JOINT WRAPPING.
14. THE TERM 'SERVICE' REFERS TO THE MINIMUM INTERNAL PIPE DIAMETER UNLESS NOTED OTHERWISE.

GENERAL FILLING NOTES

–THE SITE IS TO BE SCRAPED CLEAR OF ALL ORGANIC MATERIAL AND DEBRIS.
–THE SUBGRADE IS TO BE ROLLED WITH A VIBRATING STEEL DRUM ROLLER TO ACHIEVE A MINIMUM RELATIVE FIELD DENSITY OF 95%. THE COMPACTION IS TO BE SUFFICIENT TO ACHIEVE A BLOW COUNT OF 3 BLOWS PER 300mm WITH AN APPROVED PERTH SAND PENETROMETER FOR A DEPTH OF 1.0m BELOW FINISHED LEVEL. COPIES OF COMPACTION TEST RESULTS SHALL BE PRESENTED TO SCC CONSULTING ENGINEERS FOR APPROVAL.
–UNLESS NOTED OTHERWISE A MINIMUM BEARING CAPACITY OF 100kPa SHOULD BE ACHIEVED WITHIN COMPACTED FILLING. COMPACTION & BEARING CAPACITY TEST RESULTS MUST BE PRESENTED TO SCC CONSULTING ENGINEERS FOR APPROVAL PRIOR TO WORKS PROCEEDING.
–THE FILL MATERIAL IS TO BE APPROVED MATERIAL SOURCED FROM SITE OR IMPORTED CLEAN GRANULAR MATERIAL (I.E. SAND TO A CLAYEY SAND IN ACCORDANCE WITH AS1726) BE FREE OF ANY ORGANIC MATERIAL AND HAVE A CLAY CONTENT OF LESS THAN 12% (PLASTICITY INDEX LESS THAN 250, LINEAR SHRINKAGE OF 15%). THE PROPOSED MATERIAL IS TO BE INSPECTED BY SCC CONSULTING ENGINEERS PRIOR TO ITS USE TO ENSURE ITS COMPATIBILITY.
–THE FILL IS TO BE PLACED AND COMPACTED IN ACCORDANCE WITH AS3798–1996 TO A LEVEL SUFFICIENT TO ACHIEVE A LEVEL 1 CERTIFICATION WITH A MINIMUM RELATIVE FIELD DENSITY OF 95%. (REFER PAVEMENT EARTHWORKS NOTES FOR PAVEMENT AREAS). COPIES OF COMPACTION TEST RESULTS SHALL BE PRESENTED TO SCC CONSULTING ENGINEERS FOR APPROVAL.
–FILLING AND COMPACTING ADJACENT EXISTING STRUCTURES IS TO BE IN STRICT ACCORDANCE WITH THE ASSOCIATED DETAILS AND SPECIFICATIONS.
–AREAS WHERE EXISTING STRUCTURES OR SHEDS ARE REMOVED SHALL BE BACKFILLED WITH THE APPROVED FILL MATERIAL COMPACTED IN ACCORDANCE WITH AS2870–1996 TO ACHIEVE A MINIMUM RELATIVE FIELD DENSITY OF 95%.
–ANY LOOSE OR SOFT MATERIAL UNCOVERED IN THE SITE PREPARATION SHALL BE REMOVED AND REPLACED WITH THE APPROVED FILL MATERIAL COMPACTED IN ACCORDANCE WITH AS2870–1996. TO ACHIEVE A MINIMUM RELATIVE FIELD DENSITY OF 95%.
–SITE DRAINAGE AND SILT PROTECTION MEASURES MUST BE INSTALLED PRIOR TO CONSTRUCTION COMMENCING.

PAVEMENT EARTHWORKS NOTES

– THE PAVEMENT AREA IS TO BE SCRAPED CLEAR OF ALL ORGANIC MATERIAL AND DEBRIS.
–ANY STOCKPILED SOILS MUST BE COVERED TO PROTECT AGAINST WIND BLOWN OR STORMWATER RUNOFF OF SILT/FINES FROM THE SITE.
– THE EXPOSED SURFACE MUST BE TESTED BY A GEOTECHNICAL ENGINEER FOR SUB–GRADE ADEQUACY (min CBR 5)
–ANY AREAS REQUIRING FILLING TO THE UNDERSIDE OF PAVEMENT SHOULD USE APPROVED STOCKPILED MATERIAL FREE OF TOPSOIL/VEGETATION OR IMPORTED CLEAN GRANULAR MATERIAL (I.E. SAND TO A CLAYEY SAND IN ACCORDANCE WITH AS1726). ALL FILL IS TO BE FREE OF ANY ORGANIC OR DELETERIOUS MATERIAL AND HAVE A CLAY CONTENT OF LESS THAN 12% (PLASTICITY INDEX LESS THAN 150, LINEAR SHRINKAGE OF 15%). THE PROPOSED MATERIAL IS TO BE INSPECTED BY SCC CONSULTING ENGINEERS PRIOR TO ITS USE TO ENSURE ITS COMPATIBILITY.
– THE FILL IS TO BE PLACED AND COMPACTED IN MAX 150mm THICK LAYERS ACCORDANCE WITH AS3798–2007 TO ACHIEVE LEVEL 1 CERTIFICATION WITH A MINIMUM STANDARD DENSITY RATIO OF 100%. COPIES OF COMPACTION TEST RESULTS SHALL BE PRESENTED TO SCC CONSULTING ENGINEERS FOR APPROVAL PRIOR TO FURTHER PAVEMENT WORKS.
– THE PREPARED SUB–GRADE SHOULD BE PROOF ROLLED AND ANY IDENTIFIED SOFT AREAS REMOVED AND BACKFILLED IN ACCORDANCE WITH THE ABOVE SPECIFICATIONS
–FILLING AND COMPACTING ADJACENT EXISTING STRUCTURES IS TO BE IN STRICT ACCORDANCE WITH THE ASSOCIATED DETAILS AND SPECIFICATIONS.
–AREAS WHERE EXISTING STRUCTURES OR SHEDS ARE REMOVED SHOULD BE REMOVED AND BACKFILLED IN ACCORDANCE WITH THE ABOVE SPECIFICATIONS
–PAVEMENT BASE AND SUB–BASE MATERIAL SHALL BE PLACED AND COMPACTED IN MAX 150mm THICK LAYERS IN ACCORDANCE WITH AS3798–2007 TO ACHIEVE LEVEL 1 CERTIFICATION WITH A MINIMUM STANDARD DENSITY RATIO OF 100%. COPIES OF COMPACTION TEST RESULTS SHALL BE PRESENTED TO SCC CONSULTING ENGINEERS FOR APPROVAL PRIOR TO PAVEMENT WORKS CONTINUING.
–FOR AC PAVEMENTS THE COMPACTED BASE COURSES SHOULD BE PROOF ROLLED WITH A FULL WATER TRUCK IN THE PRESENCE OF THE DESIGN ENGINEER TO CONFIRM ADEQUACY PRIOR TO AC PLACEMENT.
–SITE DRAINAGE AND SILT PROTECTION MEASURES MUST BE INSTALLED PRIOR TO CONSTRUCTION COMMENCING.

FOOTPATHS AND DRIVEWAYS

1. EXISTING FOOTPATHS TO BE SAW CUT PRIOR TO REMOVAL
2. MINIMUM CONCRETE THICKNESSES:

PAVEMENT (VEHICLES):	150mm U.N.O.
FOOTPATHS:	125mm U.N.O.

3. CONCRETE IN ACCORDANCE WITH AS3610 AND AS1379 AND MINIMUM STRENGTHS AS FOLLOWS:

PAVEMENT (VEHICLES):	32 MPa
FOOTPATHS:	25 MPa

4. CONCRETE SURFACE TOLERANCE +5.0mm OVER 3.0m
5. REINFORCEMENT FABRIC TO AS 1304, PLACED CENTRAL SLAB DEPTH.
6. MAX. 1 in 40 CROSSFALL (ACCROSS) ON FOOTPATHS.
7. EXPANSION JOINTS AS NOTED (TJ#) ON PLANS TO BE 10mm WIDE WET TOOLED WITH EVERY 3RD MESH WIRE CUT ALONG JOINT. REFER DETAIL
8. ONE ACCESS POINT PERMITTED FOR EACH ALLOTMENT.
9. FOR CURVED DRIVEWAYS, MAXIMUM GRADES APPLY TO INSIDE EDGE OF CURVE
10. ALL EXISTING SERVICES TO BE LOCATED AND PROTECTED AS REQUIRED PRIOR TO WORK COMMENCING

EXISTING CONDITION SURVEY
A PHOTOGRAPHIC SURVEY OF THE EXISTING KERB & CHANNEL AND FOOTPATHS FRONTING THE SITE IS TO BE COMPLETED AND ISSUED TO COUNCIL PRIOR TO THE PRE–START WORKS MEETING WITH COUNCIL.

CONCRETE :

1. ALL WORKMANSHIP AND MATERIALS SHALL COMPLY WITH AS3600 – CONCRETE STRUCTURES
2. ADDITIVES INCLUDING FLY ASH CAN ONLY BE ADDED TO THE CONCRETE UPON THE APPROVAL OF THE ENGINEER.
3. ALL CONCRETE SHALL BE NORMAL CLASS CONCRETE UNLESS NOTED OTHERWISE. CONCRETE GRADES, MAXIMUM SLUMPS AND MAXIMUM AGGREGATE SIZE ARE AS FOLLOWS:
FOOTINGS – 25MPa, MAX SLUMP 120mm & 20mm MAX AGG. SIZE.
GROUND FLOOR SLABS 100–150THK. – 32MPa, MAX SLUMP 80mm & 20mm MAX. AGG. SIZE.
PAVEMENTS – 20MPa, MAX SLUMP, 80mm & 20mm MAX. AGG. SIZE.
BLOCKWORK GROUT – N25, MAX SLUMP, 100mm & 10mm MAX. AGG. SIZE.
4. ALL CONCRETE MEMBERS GREATER THAN 100mm IN THICKNESS MUST BE MECHANICALLY VIBRATED.
5. IN NO INSTANCE SHALL THE CONCRETE BE RETED UP PRIOR TO OR DURING PLACEMENT.
6. SLAB CONCRETE SHALL BE CURED FOR A MINIMUM OF SEVEN (7) DAYS BY AN APPROVED METHOD. DETAILS AVAILABLE UPON REQUEST.
7. FORMWORK TO BE IN ACCORDANCE WITH AS3610, DESIGN AND CERTIFICATION IS BY OTHERS AND MUST BE INSPECTED AND APPROVED BY THE FORMWORK DESIGNER PRIOR TO THE PLACEMENT OF ANY CONCRETE.
8. FORMWORK STRIPPING AND BACK–PROPPING OF SUSPENDED FLOOR SLABS TO THE APPROVAL OF THE ENGINEER.

REINFORCEMENT :

1. THE FOLLOWING RANKS ARE USED TO IDENTIFY THE VARIOUS REINFORCING STEELS USED, CONFORMING STANDARD FOR USE ALSO LISTED;
R – TRENCH MESH, min 450MPa (AS1304)
F – MESH/FABRIC, MIN. 450MPa (AS1304)
N – DEFORMED BAR, MIN. 300MPa (AS1302)
R – PLAIN BAR, MIN 250MPa (AS1302)
D – HARD DRAWN WIRE, MIN 450MPa (AS1303)
2. ALL REINFORCEMENT SHALL BE CHAIRED, TIED AND RESTRAINED IN THE CORRECT LOCATION TO ENSURE NO MOVEMENT DURING CONCRETE PLACEMENT. SLAB MESH CHAIRS AT 800mm CTRS. MAX IN BOTH DIRECTIONS.
3. MINIMUM COVER TO REINFORCEMENT IS AS FOLLOWS;
FOOTINGS & PIERS – 40mm ALL FACES
SLABS ON GROUND – 30mm TOP (INTERNAL SURFACES)
– 30mm BOTTOM (ONCE POLY. DPM)
– 40mm (EXPOSED SURFACES).
SUSPENDED SLABS – 30mm (INTERNAL SURFACES).
– 40mm (EXPOSED SURFACES).
PAVEMENTS – 40mm (EXPOSED SURFACES).
– 30mm (INTERNAL SURFACES).
4. MINIMUM LAP LENGTHS ARE 220mm (ONE PANEL PLUS 25mm) FOR SLAB MESH, 500mm FOR TRENCH MESH AND 40 TIMES THE BAR DIAMETER OR 500mm WHICHEVER GREATER FOR REINFORCING BARS.
5. ALL EXPOSED STARTER BAR LEGS TO BE FITTED WITH PROTECTIVE END CAPS UNTIL ENCASED IN CONCRETE

STEEL WORK :

1. ALL WORKMANSHIP INCLUDING FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH AS4100 & AS5131 WITH ALL MEMBERS AND SECTIONS BEING NEW AND FREE OF RUST AND DAMAGE. ANY VARIATION TO THIS MUST BE CONFIRMED IN WRITING BY THE ENGINEER PRIOR TO ANY WORK COMMENCING.
2. UNLESS NOTED OTHERWISE THE CONSTRUCTION CATEGORY IS CC2 IN ACCORDANCE WITH AS5131
3. ALL STEELWORK UNLESS NOTED OTHERWISE SHALL CLEANED OF RUST AND MILL SCALE AND COATED WITH ONE COAT OF PCUP.
4. EXPOSED STEELWORK INCLUDING BOLTS SHOULD BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH AS4680 AS APPLICABLE.
5. ALL RHS TS UNLESS NOTED OTHERWISE SHALL BE GRADE 4.0/S GALVANIZED (S–SMLS TIGHT IN ACCORDANCE WITH AS5131). WHERE GRADE 8.8/S ARE SPECIFIED ARE TO BE GALVANIZED AND IN ACCORDANCE WITH AS1252.1 (S–SMLS TIGHT IN ACCORDANCE WITH AS5131)
6. TEMPORARY BRACING AND SUPPORT SHALL BE PROVIDED TO THE STRUCTURE UNTIL ALL BOLTS ARE INSTALLED AND TIGHTENED AS SPECIFIED.
7. ALL STRUCTURAL STEEL MEMBERS TO CONFORM WITH THE FOLLOWING AUSTRALIAN STANDARDS AND MINIMUM STRENGTHS GRADES (MPa);
SHS/RHS/CHS HOLLOW SECTIONS – AS1163, MIN GRADE C350.0
UB/UC/PFC/EA/UEA HOT ROLLED SECTIONS – AS3679, MIN GRADE 300
PLATE SECTIONS – AS3678, MIN GRADE 250
COLD FORMED PURLINS/GIRTS (C OR Z) – AS1397, MIN GRADE 450
8. ALL WELDING SHALL BE CARRIED OUT IN ACCORDANCE WITH AS1674. ON–SITE WELDING IS NOT PERMITTED WITHOUT APPROVAL FROM THE ENGINEER. UNLESS NOTED OTHERWISE ALL WELDS ARE TO BE 5.0mm CONTINUOUS FILLET WELDS (C.F.W.).
9. ALL PERIMETRAL CONSTRUCTION (CLASS 1) WELDS TO BE CATEGORY SP UNLESS NOTED OTHERWISE. ALL INDUSTRIAL (CLASS 8) WELDS TO BE CATEGORY SP UNLESS NOTED OTHERWISE. ALL OTHER WELDS NOT SPECIFIED TO BE CATEGORY SP UNLESS NOTED OTHERWISE.
10. THE ENGINEER IS TO BE PROVIDED WITH STEELWORK SHOP DRAWINGS FOR REVIEW AND COMMENT PRIOR TO FABRICATION.

REINFORCED BLOCKWORK :

1. ALL MATERIALS AND WORKMANSHIP TO BE IN ACCORDANCE WITH AS3700 1998.
2. MINIMUM MASONRY STRENGTH f'm=20MPa (350kg/m3 min. CEMENT) WITH A MAXIMUM AGGREGATE SIZE OF 10mm. COMPACT GROUT 100mm FULL DEPTH OF CORE WITH PLAIN BOD OR SIMILAR.
3. MORTAR MIX 1 : 1/2 : 5 (CEMENT:LIME:SAND)
4. ALL CORES TO BE CLEANED AND FREE OF ALL MORTAR FINS PRIOR TO GROUTING VIA CLEAN–OUT BLOCKS AT THE BASE OF THE WALL.
5. MINIMUM GROUT STRENGTH f'c=20MPa (350kg/m3 min. CEMENT) WITH A MAXIMUM AGGREGATE SIZE OF 10mm. COMPACT GROUT 100mm FULL DEPTH OF CORE WITH PLAIN BOD OR SIMILAR.
7. MINIMUM COVER TO REINFORCING, in 20mm FROM INSIDE FACE OF BLOCK. BARS TO BE ARRANGED AS SHOWN ON ASSOCIATED DETAILS.
8. WALLS TO BE WATERPROOFED WHERE INDICATED ON THE DRAWINGS. WATERPROOF MEMBRANES INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURERS REQUIREMENTS.
9. UNLESS NOTED OTHERWISE ALL WALL VERTICAL STARTER BARS ARE TO BE CAST INTO THE SUPPORTING FOOTING OR FLOOR SLAB UNDER AS APPLICABLE.
10. ALL MASONRY WALLS DURING CONSTRUCTION TO BE TEMPORARY BRACED OR GRADIENSE STABILISED AS NECESSARY TO RESIST WIND LOADS OR LATERAL FORCES, IN ACCORDANCE WITH LOCAL AUTHORITIES WORK PLACE HEALTH AND SAFETY GUIDE LINES.

BIO–RETENTION BED MAINTENANCE REQUIREMENTS

Vegetation plays a key role in maximising the porosity of the filter media of a bioretention basin and a varying healthy growth of vegetation is critical to its performance. Therefore the most intensive period of maintenance is during the plant establishment period (first two years) when weed removal and replanting may be required.
When systems and overflow pits require careful monitoring, as these can be prone to scour and litter build up. Debris can block inlets or outlets and can be unsightly, particularly in high visibility areas. Inspection and removal of debris should be done regularly, and debris should be removed whenever it is observed on a site. Where sediment loadings are expected, regular inspection of the lavatory is required (3 monthly) with removal of accumulated sediment undertaken as required.
For larger bioretention basins, it is essential that a maintenance access point is designed for and
maintained in the bioretention basin. The size and complexity of the system will guide its design and may involve provision of a reinforced concrete ramp/ pad for truck or machinery access.
2025 Edition
Amended June 2027
Policy 11: Land Development Guidelines
Section 13.8 –Bioretention Basins
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Typical maintenance of bioretention basin elements will involve:

- routine inspection of the bioretention basin profile to identify any areas of obvious increased sediment deposition, scouring from storm flows, rill erosion of the batters from lateral inflows,damage to the profile from vehicles and stepping of the bioretention basin (evident by a boggy filter media surface);
- routine inspection of inflow systems, overflow pits and under–drains to identify and clean any areas of scour, litter build up and blockages;
- removal of sediment where it is smothering the bioretention basin vegetation;
- where a sediment forebay is adopted, removal of accumulated sediment;
- repairing any damage to the profile resulting from scour, rill erosion or vehicle damage by replacement of appropriate fill (to match exists soils) and revegetating;
- filling of the bioretention basin surface, or removal of the surface layer, if there is evidence of clogging;
- regular watering/ irrigation of vegetation until plants are established and actively growing;
- removal and management of invasive weeds (herbicides should not be used);
- removal of plants that have died and replacement with plants of equivalent size and species as detailed in the plant schedule;
- pruning to remove dead or diseased vegetation material and to stimulate growth;
- vegetation pest monitoring and control.

Resetting (ie. complete reconstruction) of the bioretention basin will be required if the system fails to drain adequately after filling of the surface. Maintenance should only occur after a reasonably rain has ponded where the soil in the bioretention system is dry. Inspections are also recommended following large storm events to check for scour and other damage.
All maintenance activities must be specified in a maintenance plan (and associated maintenance
inspection forms) to be documented and submitted to Council as part of the Development Approval
process. Maintenance personnel and asset managers will use this plan to ensure the bioretention
basins continue to function as designed. An example operations and maintenance inspection form is
included in the checking tools provided in Section 13.6.7. These forms must be developed on a site
specific basis as the nature and configuration of bioretention basins varies significantly.
For Detailed Maintenance Requirements & Scheduling Checklist refer to 'Water by Design – Maintaining Vegetated Stormwater Assets. 2020'

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Revision	Description	Date
Issue	FOR APPROVAL	

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Title: CONSTRUCTION NOTES

Project: 5–13 ROGERS DR, KINGAROY

Date: Sept 23	Drawn: TH	Design: TH	
Checked: BPEQ NER S Richardson	Dig No: 33153 –CN	No: .	

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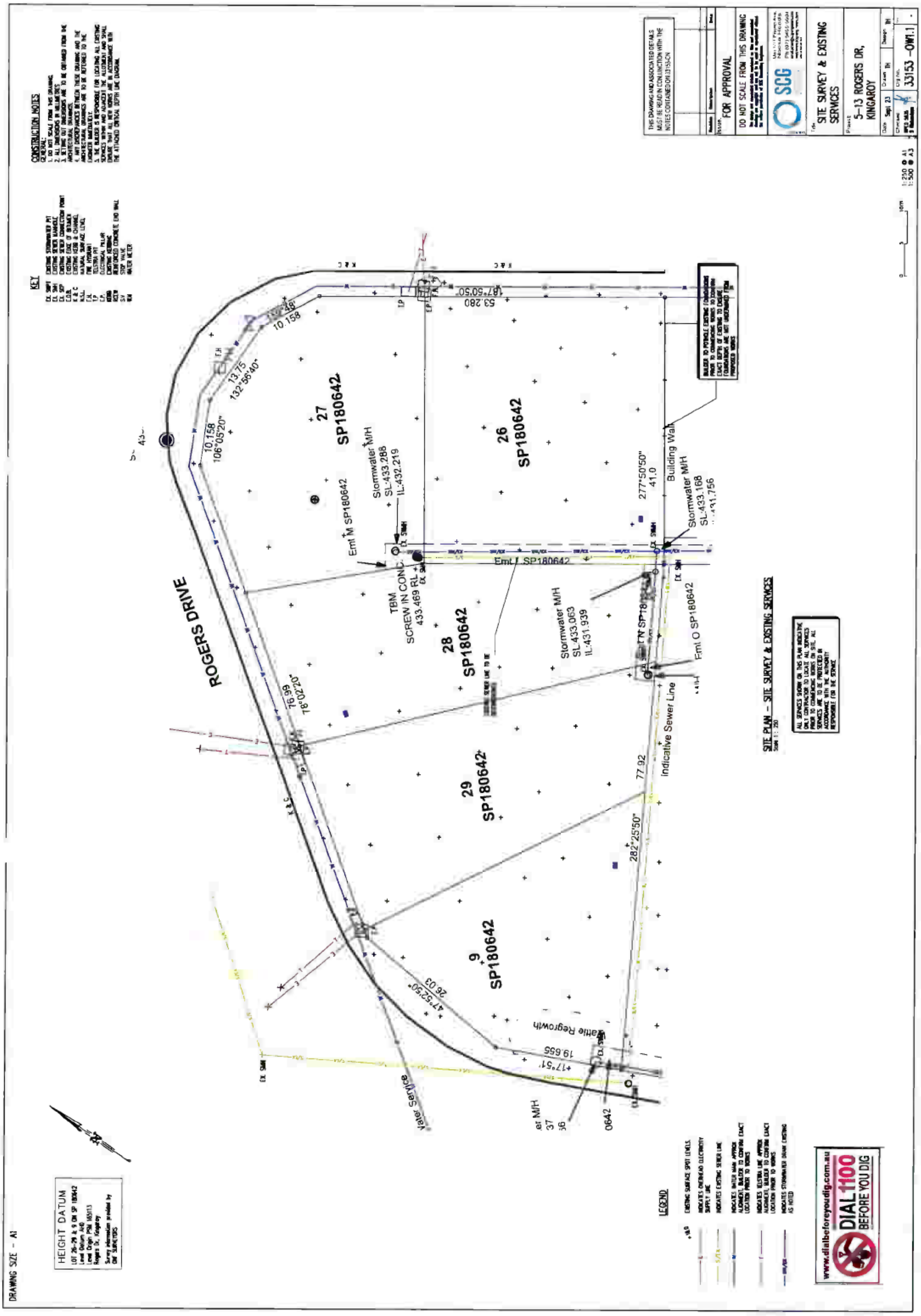
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Building Wall
Indicative Sewer Line
Wattle Regrowth
Water Service
SITE PLAN - SITE SURVEY & EXISTING SERVICES
FOR APPROVAL
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SITE SURVEY & EXISTING SERVICES
5-13 ROGERS DR, KINGAROY
33153 -OW1.1
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