



File: 24/31 Date: 27 March 2025

Pearl Energy Pty Ltd C/- Mecone Level 2, 235 Edward Street BRISBANE CITY QLD 4000

Attention: Emma Laing

Dear Emma

Decision Notice –approval (with conditions) Material Change of Use & Reconfiguring a Lot Lot 262 on SP104612, 3-4 Lamberth Road, Goondiwindi

We wish to advise that on 26 March 2025 a decision was made to approve the development application for Material Change of Use for *"Service Station" and "Food and Drink Outlet" (including drive through facility)* and Reconfiguring a Lot (One (1) lot into Two (2) lots) on Lot 262 on SP104612, 2-4 Lamberth Road, Goondiwindi. In accordance with the *Planning Act 2016*, please find attached Council's Decision Notice for the application.

Please read the conditions carefully as these include actions which must be undertaken **prior to the commencement of the use** OR **prior to Council's endorsement of the survey plan**, as applicable, as well as requirements for the ongoing operation of the use.

All conditions are required to be either complied with or bonded prior to the commencement of the use. Please note a letter is required to be submitted to Council prior to commencement of the use OR prior to Council's endorsement of the survey plan, outlining and demonstrating compliance with each condition as applicable.

The applicant is required to **notify Council in writing of the date of the commencement** of the use, within fourteen (14) business days of commencement.

If you require any further information, please contact Council's Manager of Planning Services, Mrs Ronnie McMahon, on (07) 4671 7400 or rmcmahon@grc.qld.gov.au, who will be pleased to assist.

Yours faithfully

RMMIC

Ronnie McMahon Manager Planning Services Goondiwindi Regional Council

Goondlwindi Customer Service Centre07 4671 7400Inglewood Customer Service Centre07 4652 0200Texas Customer Service Centre07 4653 2600

Decision Notice approval Planning Act 2016 section 63

Council File Reference: Council Contact: Council Contact Phone: 24/31 Mrs Ronnie McMahon: (07) 4671 7400

27 March 2025

Applicant Details: Pearl Energy Pty Ltd C/- Mecone Level 2, 235 Edward Street BRISBANE CITY QLD 4000

Attention: Emma Laing

The development application described below was properly made to Goondiwindi Regional Council on 16 August 2024.

Applicant details

Applicant name:	Pearl Energy Pty Ltd
Applicant contact details:	C/- Mecone, Emma Laing Level 2, 235 Edward Street, Brisbane City Q 4000 (07) 3556 4004 <u>elaing@mecone.com.au</u>

Application details

Application number:	24/31
Approval sought:	Development Permit - Material Change of Use and Reconfiguring a Lot
Details of proposed development:	 "Business Activities" "Service Station" and "Food and Drink Outlet" (including drive through facility) Subdivision (One (1) lot into two (2) lots)
Location details	
Street address:	2-4 Lamberth Road, Goondiwindi
Real property description:	Lot 262 on SP104612
Decision	
Date of decision:	26 March 2025
Decision details:	Approved in full with conditions. These conditions are set out in Attachment 1 and are clearly identified to indicate whether the assessment manager or a concurrence agency imposed

them.

Details of the approval

The application is not taken to be approved (a deemed approval) under section 64(5) of the *Planning Act 2016*.

The following approvals are given:

	Planning Regulation 2017 reference	Development Permit	Preliminary Approval
Development assessable under the planning scheme, superseded planning scheme, a temporary local planning instrument, a master plan or a preliminary approval which includes a variation approval	N/A		
 building work assessable under the planning scheme 	I.		
 plumbing or drainage work material change of use reconfiguring a lot operational work 			

Conditions

This approval is subject to the conditions in Attachment 1.

Further development permits

Please be advised that the following development permits are required to be obtained before the development can be carried out:

- 1. Development Permit Building Works
- 2. Compliance Permit Plumbing Works
- 3. Survey Plan Approval

Properly made submissions

Not applicable—No part of the application required public notification.

Referral agencies for the application

The referral agencies for this application are:

For an application involving	Name of referral agency	Address
 As per Schedule 10, Part 9, Division 4, Subdivision 1, Table 1, Item 1 (10.9.4.1.1.1) of the PR: Development application for an aspect of development stated in schedule 20 that is assessable development under a local categorising instrument or section 21, if— (a) the development is for a purpose stated in schedule 20, column 1 for the aspect; and 	Department of Housing, Local Government, Planning and Public Works–	Department of Housing, Local Government, Planning and Public Works, Post: PO Box 825, Visit: 128 Margaret Street, TOOWOOMBA QLD 4350

	For an application involving	Name of referral agency	Address
(b) (c) How purp the t not f	 the development meets or exceeds the threshold— (i) for development in local government area 1—stated in schedule 20, column 2 for the purpose; or (ii) for development in local government area 2—stated in schedule 20, column 3 for the purpose; and for development in local government area 1—the development is not for an accommodation activity or an office at premises wholly or partly in the excluded area rever, if the development is for a combination of poses stated in the same item of schedule 20, hreshold is for the combination of purpose. 	Concurrence Agency	ToowoombaSARA@ dsdilgp.qld.gov.au Ph: (07) 4616 7307
As p 1, Ta Deve is as (a) (b)	 ber Schedule 10, Part 9, Division 4, Subdivision able 1, Item 1 (10.9.4.2.1.1) of the PR: belopment application for reconfiguring a lot that is essable development under section 21, if—all or part of the premises are within 25m of a State transport corridor; and 1 or more of the following apply— (i) the total number of lots is increased; (ii) the total number of lots adjacent to the State transport corridor is increased; (iii) there is a new or changed access between the premises and the State transport corridor; (iv) an easement is created adjacent to a railway as defined under the Transport Infrastructure Act, schedule 6; and the reconfiguration does not relate to government supported transport infrastructure 	Department of Housing, Local Government, Planning and Public Works– <i>Concurrence</i> <i>Agency</i>	Department of Housing, Local Government, Planning and Public Works, Post: PO Box 825, Visit: 128 Margaret Street, TOOWOOMBA QLD 4350 ToowoombaSARA@ dsdilgp.qld.gov.au Ph: (07) 4616 7307
As p 1, Ta Deve is as (a) a	er Schedule 10, Part 9, Division 4, Subdivision able 1, Item 1 (10.9.4.2.3.1) of the PR: elopment application for reconfiguring a lot that sessable development under section 21, if— all or part of the premises are— (i) adjacent to a road (the relevant road) that intersects with a State-controlled road; and (ii) within 100m of the intersection; and	Department of Housing, Local Government, Planning and Public Works– Concurrence Agency	Department of Housing, Local Government, Planning and Public Works, Post: PO Box 825, Visit: 128 Margaret Street, TOOWOOMBA QLD 4350

For an application involving	Name of referral agency	Address
 (i) the total number of lots is increased; (ii) the total number of lots adjacent to the relevant road is increased; (iii) there is a new or changed access between the premises and the relevant road; and (c) the reconfiguration does not relate to government supported transport infrastructure 		ToowoombaSARA@ dsdilgp.qld.gov.au Ph: (07) 4616 7307
As per Schedule 10, Part 9, Division 4, Subdivision 1, Table 1, Item 1 (10.9.4.2.4.1) of the PR: Development application for a material change of use, other than an excluded material change of use, that is assessable development under a local categorising instrument, if all or part of the premises— (a) are within 25m of a State transport corridor; or (b) are a future State transport corridor; or (c) are— (i) adjacent to a road that intersects with a State-controlled road; and (ii) within 100m of the intersection	Department of Housing, Local Government, Planning and Public Works– <i>Concurrence</i> <i>Agency</i>	Department of Housing, Local Government, Planning and Public Works, Post: PO Box 825, Visit: 128 Margaret Street, TOOWOOMBA QLD 4350 <u>ToowoombaSARA@</u> dsdilgp.qld.gov.au Pb: (07) 4616 7307

Approved plans and specifications

Copies of the following plans are enclosed.

Drawing Number	Title	Date
22264, DA01	Proposed Site Plan	10.12.2024
22264, DA02	Proposed Floor Plan – T1	18.07.2024
22264, DA04	Building Elevations & Perspectives	10.12.2024
22264, DA05	Building Elevations & Perspectives	10.12.2024
22264, DA06	Building Elevations & Perspectives	10.12.2024
C_23144 – R001	Stormwater Management Plan	31/01/25
C_23144 - R002	Engineering Services Report	03/02/25
GRC50.02	Water and Wastewater Network Analysis	10/12/2024
24-367	2-4 Lamberth Road, Goondiwindi - Traffic Impact Assessment	12/12/2024
240911D04	Noise Assessment	23 Oct 2024
240911D03	Air Quality and Odour Assessment	23 Oct 2024
22264 DA07	Proposed Subdivision Plan	10.12.2024

Currency period for the approval

This development approval will lapse at the end of the period set out in section 85 of *Planning Act 2016*:

• Material Change of Use

This approval lapses if the first change of use does not happen within **6 years** of this approval taking effect.

• Reconfiguring a Lot

This approval lapses if a plan for the reconfiguration that, under the *Land Title Act 1994*, is required to be given to a local government for approval is not given within **4 years** of this approval taking effect.

Rights of appeal

The rights of an applicant to appeal to a tribunal or the Planning and Environment Court against a decision about a development application are set out in chapter 6, part 1 of the *Planning Act 2016*. For certain applications, there may also be a right to make an application for a declaration by a tribunal (see chapter 6, part 2 of the *Planning Act 2016*).

Appeal by an applicant

An applicant for a development application may appeal to the Planning and Environment Court against the following:

- the refusal of all or part of the development application
- a provision of the development approval
- the decision to give a preliminary approval when a development permit was applied for
- a deemed refusal of the development application.

An applicant may also have a right to appeal to the Development tribunal. For more information, see schedule 1 of the *Planning Act 2016*.

The timeframes for starting an appeal in the Planning and Environment Court are set out in section 229 of the *Planning Act 2016*.

Attachment 5 is an extract from the *Planning Act 2016* that sets out the applicant's appeal rights and the appeal rights of a submitter.

To stay informed about any appeal proceedings which may relate to this decision visit: <u>https://planning.dsdmip.qld.gov.au/planning/our-planning-system/dispute-resolution/pe-</u> <u>court-database</u>.

Attachment 4 is a Notice about decision - Statement of reasons, in accordance with section 63 (5) of the Planning Act 2016.

If you wish to discuss this matter further, please contact Council's Manager of Planning Services, Mrs Ronnie McMahon, on 07 4671 7400.

Yours Sincerely

RMMC

Ronnie McMahon Manager Planning Services Goondiwindi Regional Council

Cc Department of State Development, Infrastructure, Local Government and Planning, PO Box 825, TOOWOOMBA QLD 4350

enc Attachment 1— Assessment manager and concurrence agency conditions

State Assessment and Referral Agency Concurrence Agency Response dated 24 March 2025

Attachment 2—Approved Plans Attachment 3—Infrastructure Charges Notice Attachment 4—Notice about decision – Statement of reasons Attachment 5—*Planning Act 2016* Extracts



ATTACHMENTS

Attachment 1 – Assessment Manager's Conditions

Attachment 2 – Approved Plans

Attachment 3 – Infrastructure Charges Notice

Attachment 4 – Notice about decision - Statement of reasons

Attachment 5 – *Planning Act 2016* Extracts *Planning Act 2016 appeal provisions Planning Act 2016 lapse dates*



Attachment 1 – Assessment Manager's Conditions



Assessment Manager's Conditions

Description:	 Material Change of Use "Service Station"; "Food and Drink Outlet" (including drive through facility); and Reconfiguring a Lot One (1) lot into two (2) lots
Development:	Material Change of Use & Reconfiguring a Lot – Development Permit
Applicant: Pearl Energy Pty Ltd C/- Mecone	
Address:	2-4 Lamberth Road, Goondiwindi
Real Property Description:	Lot 262 on SP104612
Council File Reference:	24/31

MATERIAL CHANGE OF USE

	GENERAL CONDITIONS	
1.	 Approval is granted for the purpose of a Material Change of Use for: "Service Station"; "Food and Drink Outlet" (including drive through facility) as defined in the Goondiwindi Region Planning Scheme 2018 (Version 2). 	
2.	All conditions must be complied with or bonded prior to the commencement of the use unless specified in an individual condition.	

3. Except where changed by conditions of this approval, the development shall be in accordance with supporting information supplied by the applicant with the development application including the following plans and reports:

	Drawing Number	Title	Date	
	22264, DA01	Proposed Site Plan	10.12.2024	
	22264, DA02	Proposed Floor Plan – T1	18.07.2024	
	22264, DA04	Building Elevations & Perspectives	10.12.2024	
	22264, DA05	Building Elevations & Perspectives	10.12.2024	
	22264, DA06	Building Elevations & Perspectives	10.12.2024	
	C 23144 – R001	Stormwater Management Plan	31/01/25	
	C 23144 – R002	Engineering Services Report	03/02/25	
	GRC50.02	Water and Wastewater Network Analysis	10/12/2024	
	24-367	2-4 Lamberth Road, Goondiwindi - Traffic Impact Assessment	12/12/2024	
	240911D04	Noise Assessment	23 Oct 2024	
	240911D03	Air Quality and Odour Assessment	23 Oct 2024	
4.	 Complete and maintain the approved development as follows: (i) Generally in accordance with development approval documents; and (ii) Strictly in accordance with those parts of the approved development which have been specified in detail by Council unless Council agrees in writing that those parts will be adequately complied with by amended specifications. All development shall comply with any relevant provisions in the <i>Goondiwindi Region Planning Scheme 2018 (Version 2),</i> Council's standard designs for applicable work and any relevant Australian Standard that applies to that type of work. The development approval documents are the material contained in the development application, approved plans and supporting documentation including any written and electronic correspondence between applicant, Council or any relevant Agencies during al stages of the development application assessment processes. 		ne ny itd	
5.	It is the developer's responsibility to obtain all other statutory approvals required prior to the commencement of the use.		e	
	OPERATION OF THE USE			
6.	All loading and unloading and v and 6:00pm.	vaste collection shall occur only between th	e hours of 7:00ar	n

7.	The development must ensure that:
	(a) refuelling is carried out in an area where contaminants cannot be released into stormwater drainage, a roadside gutter, a water course or onto unsealed ground;
	(b) any spillage of fuel/contaminants is cleaned up immediately by a method other than hosing, sweeping or otherwise releasing the contaminants into stormwater drainage, a roadside gutter or a water course.
8.	All refuelling areas must be bunded and all runoff must be collected and pass through an approved oil/water separator prior to discharge. Wastes (contaminates and solids) separated from the separator are to be collected and disposed of at a licensed facility. A hydrocarbon sensor must be installed with a shut off valve at the filter outlet.
	ESSENTIAL SERVICES
8.	Prior to the commencement of the use, the development shall be connected to Council's reticulated water supply system, in accordance with Schedule 6.2 Planning Scheme Policy 1 – Land Development Standards in the Goondiwindi Region Planning Scheme 2018 (Version 2), and the Water and Wastewater Network Analysis, prepared by Morris Water Pty Ltd (Reference GRC50.02, dated 10/12/2024), to the satisfaction of and at no cost to Council. The developer shall provide all necessary water infrastructure, including appropriate backflow prevention device at the water meter, to enable the development to be serviced to relevant engineering standards and to the satisfaction of Council.
9.	The development shall be connected to Council's reticulated sewerage system, in accordance with Schedule 6.2 Planning Scheme Policy 1 – Land Development Standards in the Goondiwindi Region Planning Scheme 2018 (Version 2), and the Water and Wastewater Network Analysis, prepared by Morris Water Pty Ltd (Reference GRC50.02, dated 10/12/2024), when required as part of a building approval, to the satisfaction of and at no cost to Council. The developer shall provide all necessary sewer infrastructure, including an appropriately sized grease trap, to enable the development to be serviced to relevant engineering standards and to the satisfaction of Council.
	PUBLIC UTILITIES
10.	The development shall be connected to an adequate electricity and telecommunications supply system, at no cost to Council.

	ROADS AND VEHICLES	
11.	The proposed accesses to the Cunningham Highway shall be designed and constructed to standards determined by the Department of Transport and Main Roads in the Concurrence Agency Response, generally in the location shown in on the approved plans.	
13.	Vehicle manoeuvring areas shall be provided on-site so that all vehicles, up to and including a 36.5m Type 1 Road Train, can enter and leave the site in a forward direction.	
14.	Thirty-seven (37) sealed and delineated car parking spaces shall be supplied within Proposed Lot 13. This area shall be constructed to a sealed standard in accordance with Schedule 6.2 – Planning Scheme Policy 1 – Land Development Standards of the <i>Goondiwindi Region Planning Scheme 2018 (Version 2)</i> , to the satisfaction of and at no cost to Council.	
	Car parking areas shall be constructed prior to the commencement of the use.	
	The developer shall contact Council's Engineering Department to ensure the correct specifications are obtained for all civil works prior to commencement of any works onsite.	
	A qualified Council Officer may inspect construction works at the request of the developer to ensure compliance with this condition.	
15.	Provide service vehicle parking for a 36.5m Type 1 Road Train in accordance with Australian Standard 2890.2 – Off-street Commercial Vehicle Facilities.	
	LANDSCAPING	
16.	Landscaping shall be provided in accordance with Schedule 6.3 – Planning Scheme Policy 1 – Land Development Standards of the Goondiwindi Region Planning Scheme 2018 (Version 2), with a minimum of:	
	• Street frontage landscaping along the site's Cunningham Highway frontage, with areas and dimensions in accordance with areas shown on the approved Site Plan.	
	• Vegetated buffer landscaping along the northern and western boundaries of the development footprint, with a minimum width of 2m and 3m respectively, generally in accordance with the Approved Plan.	
	• Landscaping along the southern boundary of the development footprint, with a minimum width of 2m, planted to street frontage landscaping standards, generally in accordance with areas shown on the approved Site Plan.	
	All landscaping and tree plantings are to be planted and maintained to the satisfaction of a qualified Council Officer. A bond for the amount of \$14,663.12 is to be submitted prior to the issue of a building approval for the maintenance of landscaping.	

If the landscaping complies with Schedule 6.3 – Planning Scheme Policy 1 – Land Development Standards of the Goondiwindi Region Planning Scheme 2018, the applicant will be advised in writing that the bond is accepted.

The bond holding time starts from the acceptance of works. Council must be contacted by the applicant to request an inspection of the landscaping as soon as possible after completion of planting and payment of bond. The bond shall be returned in accordance with the following schedule if the landscaping meets the criteria:

Time from acceptance of landscaping works	Criteria	Bond Refund / Reduction	
	Landscaping conforms to requirements, is established and maintained.		
9 months – From acceptance of works	Adequate provision for on-going watering and growth.	50%	
	Any/all replacement plants are provided.		
18 months – From	Landscaping is well established (as a guide >50% full growth depending on species).		
acceptance of works	All replacement plants are established.	25%	
	The landscaping intent is being achieved.		
24 months – From acceptance of works	Landscaping is fully established, or within 80% depending on species.	25%	

After the required bond holding time has passed, a refund of bond monies will only be considered upon a written request from the person who paid the bond once the required bond holding time has been completed.

A qualified Council Officer may inspect landscaping plantings to ensure compliance with this condition and acceptance of the works.

Council will hold the funds in trust for a maximum of three years, at which time should work not be carried out and maintained to Council's satisfaction, the bond will be used by Council to have the works performed unless an extension of time is requested by the land owner or applicant and approved by Council.

To clarify, bonds can only be refunded upon a written request from the person who paid the bond upon the works being satisfactorily maintained for the required bond holding time.

	STORMWATER
17.	Prior to the commencement of the use, the site shall be adequately drained and all stormwater shall be disposed of to a legal point of discharge in accordance with the approved Stormwater Management Plan, the Concurrence Agency Response and Schedule 6.2 – Planning Scheme Policy 1 – Land Development Standards of the <i>Goondiwindi Region Planning Scheme 2018 (Version 2)</i> , to the satisfaction of and at no cost to Council.
	Any increase in volume, concentration or velocity of stormwater from the site shall be channelled to lawful points of discharge or to other storage or dispersal arrangements which all must be agreed to in writing by Council.
	There shall be no change in direction or increase in the volume, concentration or velocity in any overland flow from the site to any adjoining properties unless agreed in writing by Council and the owners of any adjoining properties affected by these changes.
	The stormwater disposal system shall be designed to include appropriate pollution control devices or methods to ensure no contamination or silting or waterways.
18.	Stormwater shall not be allowed to pond on the site during the development process and after development has been completed unless the type and size of ponding has been agreed in writing by Council.
	No ponding, concentration or redirection of stormwater shall occur on adjoining properties unless specifically agreed to in writing by Council and the owners of any adjoining properties affected by these changes.
	EARTHWORKS AND EROSION CONTROL
19.	Any filling or excavation shall be undertaken in accordance with Schedule 6.2 – Planning Scheme Policy 1 – Land Development Standards of the <i>Goondiwindi Region planning Scheme 2018 (Version 2)</i> or to other relevant engineering standards to the satisfaction of and at no cost to Council.
	Excavation or filling within 1.5 metres of any site boundary is battered or retained by a wall that does not exceed 1 metre in height.
20.	All works associated with the development must be carried out in a manner that minimises erosion and controls sediment. Best practice erosion and sediment control measures shall be in place at the location of all works prior to work commencing and remain until work is completed in accordance with Schedule 6.2 – Planning Scheme Policy 1 – Land Development Standards of the <i>Goondiwindi Region Planning Scheme 2018 (Version 2)</i> to the satisfaction of and at no cost to Council.
	Control procedures are to be established to ensure sediment from the site is not deposited off site. The developer shall ensure no increase in any silt loads or contaminants in overland flow from the site during the development process and after development has been completed.

21.	At all times while the use continues, the development shall be conducted in accordance with the provisions of the <i>Environmental Protection Act 1994</i> (the Act) and all relevant regulations and standards under that Act. All necessary licences under the Act shall be obtained and shall be maintained at all times while the use continues.
22.	Acoustic barriers must be constructed along the northern and western boundaries of the development footprint in accordance with the recommendations of the approved Noise Assessment.
23.	All external lighting is to be compliant with AS/NZS 4282-2019 "Control of obtrusive effect of outdoor lighting".
	All lighting shall be directed or shielded so as to ensure that no glare directly affects nearb properties, motorists or the operational safety of the surrounding road network.
24.	At all times while the use continues it shall be operated in such a manner as to ensure than no nuisance shall arise to adjoining premises as a result of dust, noise, lighting, odour vibration, rubbish, contaminants, stormwater discharge or siltation or any other potentiall detrimental impact.
	Roof water drainage from structures/buildings and the yard area is to be discharged to a Council approved drainage system.
25.	At all times while the use continues, provision must be made on site for the collection of general refuse in covered waste containers with a capacity sufficient for the use.
	Waste receptacles shall be placed in a screened area. The site must maintain a genera tidy appearance.
26.	The operator shall be responsible for mitigating any complaints arising from on-si operations.
27.	Construction works must occur so they do not cause unreasonable interference with the amenity of adjoining premises.
	The site must be kept in a clean and tidy state at all times during construction.
28.	At all times while the use continues, any air conditioned equipment shall be acoustically screened to ensure noise levels do not exceed 5 dB(A) above the background noise level measured at the boundaries of the subject site.

	DEVELOPER'S RESPONSIBILITIES
29.	Any alteration or damage to roads and/or public infrastructure that is attributable to the progress of works or vehicles associated with the development of the site shall be repaired to Council's satisfaction or the cost of repairs paid to Council.
30.	All contractors and subcontractors shall hold current, relevant and appropriate qualification and insurances to carry out the works.
31.	All costs reasonably associated with the approved development, unless there is specific agreement by other parties to meet these costs, shall be met by the developer.
32.	At all times while the use continues, all requirements of the conditions of the developmer approval must be maintained.
	COMMENCEMENT OF USE
33.	At its discretion, Council may accept bonds or other securities to ensure completion of specified development approval conditions or Council may accept cash payments for Counce to undertake the necessary work to ensure completion of specified development approval conditions.
	It may be necessary for Council to use such bonds for the completion of outstanding works without a specific timeframe agreed.
	The decision to accept bonds or other securities to satisfy a condition will be that of Counci not the applicant.
34.	Council must be notified in writing of the date of the commencement of the use within 1- days of commencement.
	This Material Change of Use approval will lapse if the use has not commenced within si years of the date the development approval takes effect, in accordance with the provision contained in sections 85(i)(a) of the <i>Planning Act 2016</i> .
	Section 86 of the <i>Planning Act 2016</i> sets out how an extension to the period of approval can be requested.
35.	A letter outlining and demonstrating that conditions have been, or will be, complied with sha be submitted to Council and approved by a relevant Officer of Council prior to commencement of the use at each relevant stage. Council Officers may require a physical inspection to confirm that all conditions have been satisfied to relevant standards.

RECONFIGURING A LOT

	GENERAL CONDI	TIONS	
1.	Approval is granted One (1) lot i 	I for the purpose of Reconfiguring a Lot for: into two (2) lots.	
2.	The development shall be in accordance with supporting information supplied by the applicant with the development application including the following plans, subject to and modified by the conditions of this approval:		
	Drawing No	Title	Date
	22264 DA07	Proposed Subdivision Plan	10.12.2024
	Where there is any details shown on th Please note this is Attachment 2 .	y conflict between the conditions of this developm he above plans, the conditions must prevail. not an approved Plan of Survey. The approved	ent approval and the plans are included in
3.	Complete and mair	ntain the approved development as follows:	
	(i) Generally ir	accordance with development approval document	s; and
	(ii) Strictly in ac specified in Agency age amended sp	cordance with those parts of the approved developm detail by the Council or Referral Agency unless th rees in writing that those parts will be adequate pecifications.	nent which have been le Council or Referral ely complied with by
	All development m <i>Planning</i> Scheme 2 relevant Australian	nust comply with any relevant provisions in the 2018 (Version 2), Council's standard designs for application of work.	<i>Goondiwindi Region</i> plicable work and any
	The development application, approv electronic correspo of the development	approval documents are the material contained ved plan(s) and supporting documentation includ ndence between applicant, Council or Referral Ager application assessment processes.	in the development ling any written and ncies during all stages
4.	All conditions must of Survey, unless sp	be complied with or bonded prior to the submission becified in an individual condition.	to Council of the Plan

	ESSENTIAL SERVICES
5.	Prior to the submission to Council of the Plan of Survey, each proposed lot shall be serviced by and connected to Council's reticulated water supply system in accordance with Schedule 6.2 – Planning Scheme Policy 1 – Land Development Standards in the <i>Goondiwindi Region Planning Scheme 2018 (Version 2)</i> , to the satisfaction of and at no cost to Council.
	The developer shall provide all necessary water infrastructure to enable all parcels to be serviced by a standard water connection to the satisfaction of Council and to relevant engineering standards.
6.	Prior to the submission to Council of the Plan of Survey, each proposed lot shall be serviced by and connected to Council's reticulated sewerage system, in accordance with Schedule 6.2 – Planning Scheme Policy 1 – Land development Stands of the <i>Goondiwindi Region Planning</i> <i>Scheme 2018 (Version 2)</i> , to the satisfaction of and at no cost to Council.
	The developer shall provide all sewerage infrastructure to enable every parcel within the development to be serviced by Council's sewerage reticulation system.
	PUBLIC UTILITIES
7.	Each proposed lot shall be connected to an adequate electricity supply system, with services to be installed underground when required, at no cost to Council.
8.	Each proposed lot shall be connected to an adequate telecommunications supply system, with services to be installed underground when required, at no cost to Council.
15.	
9.	All proposed lots shall be provided with an industrial vehicle crossover, unless otherwise stipulated in a related development approval, in accordance with Schedule 6.2.1 – Standard Drawing in Schedule 6.2 – Planning Scheme Policy 1 – Land Development Standards of the <i>Goondiwindi Region Planning Scheme 2018 (Version 2)</i> or to other relevant engineering standards to the satisfaction of and at no cost to Council.
	Vehicular access shall be designed to mitigate against bushfire hazards, and crossovers shall be either constructed or bonded prior to the submission of a Building Application.
	The applicant shall contact Council's Department of Engineering to ensure the correct specifications are obtained for all civil works prior to commencement of any works onsite.
	A qualified Council Officer may inspect construction works at the request of the developer to ensure compliance with this condition.

	STORMWATER
11.	The subject site shall be adequately drained and all stormwater shall be disposed of in accordance with the approved Stormwater Management Plan, to the satisfaction of the Director Engineering Services and to relevant engineering standards as outlined in Schedule 6: Planning Scheme Policies, SC6.2.4 – Standards for Stormwater Drainage of the Goondiwindi Region Planning Scheme 2018 (Version 2).
12.	Any fill placed on the subject land in relation to the development shall not cause any ponding of water on any land.
	DEVELOPER'S RESPONSIBILITIES
13.	Prior to the commencement of construction, full detailed design engineering drawings and specifications certified by an RPEQ shall be provided for all roadworks, stormwater drainage, water supply, sewerage works and electricity supply and earthworks for the approval of the Director Engineering Services.
14.	Any alteration or damage to roads and public infrastructure that is attributable to the progress of works or vehicles associated with the development must be repaired to Council's satisfaction or the cost of repairs paid to Council.
15.	The developer shall be responsible for meeting all costs reasonably associated with the approved development, unless there is specific agreement by other parties, including Council, to meeting those costs.
16.	It is the developer's responsibility to ensure that any contractors and subcontractors have current, relevant and appropriate qualifications and insurances in place to carry out the works.
17.	The developer shall be responsible for mitigating any complaints arising from on-site operations during construction.
18.	Construction works must occur so they do not cause unreasonable interference with the amenity of adjoining premises. During construction the site must be kept in a clean and tidy state at all times.
19.	At all times all requirements of the conditions of the development approval must be maintained.
20.	Where appropriate, easements shall be provided in favour of Council to contain infrastructure elements, including water, sewerage and stormwater mains.

	BEFORE PLANS WILL BE ENDORSED
21.	All works necessitated by the conditions of approval for stormwater drainage, water supply, sewerage, utilities and earthworks shall be completed prior to the submission to Council of the Plan of Survey required.
22.	Detailed "As Constructed" plans shall be provided for all roadworks, stormwater drainage, water supply, sewerage works and electricity supply and earthworks in an electronic format suitable for uploading to Council's GIS systems.
23.	The developer shall submit a detailed Plan of Survey, prepared by a licensed surveyor, for the endorsement of Council. In accordance with Schedule 18 of the <i>Planning Regulations 2017</i> .
	The relevant Council Fee for endorsement of the Plan of Survey (currently \$190.00; subject to change).
24.	All outstanding rates and charges shall be paid to Council prior to the submission to Council of the Plan of Survey.
	At its discretion, Council may accept bonds or other securities by way of bank guarantee or cash, to ensure completion of specified development approval conditions to expedite the endorsement of the Plan of Survey.
	It may be necessary for Council to use such bonds for the completion of outstanding works without a specific timeframe agreed.
25.	A letter outlining and demonstrating that each condition has been complied with or how they will be complied with shall be submitted to Council prior to the submission to Council of the Plan of Survey. Council officers may require a physical inspection to confirm that all conditions have been satisfied to relevant standards.
	When approval takes effect
	This approval takes effect in accordance with section 85 of the <i>Planning Act 2016</i> .
	When approval lapses
	The approval will lapse if a plan for the reconfiguration is not given to the local government within four (4) years as specified in section 85(1)(b)(ii) of the <i>Planning Act 2016</i> .
	Section 86 of the <i>Planning Act 2016</i> sets out how an extension to the period of approval can be requested.

NOTES AND ADVICE
When approval takes effect
This approval takes effect in accordance with section 85 of the <i>Planning Act 2016</i> .
When approval lapses
This Material Change of Use approval will lapse if the change of use has not occurred within the following period, in accordance with the provisions contained in section 85(i)(a) of the <i>Planning Act 2016</i> .
(a) If no period stated – 6 years after the approval starts to have effect.
The Reconfiguring a Lot approval will lapse if a plan for the reconfiguration is not given to the local government within the following period, in accordance with the provisions contained in section 85(1)(b) of the Planning Act 2016:
(a) If no period stated – 4 years after the approval starts to have effect.
Section 86 of the <i>Planning Act 2016</i> sets out how an extension to the period of approval can be requested.
Infrastructure charges as outlined in the Infrastructure Charges Notice included in Attachment 3 shall be paid in accordance with the timing specified in the notice.
This approval in no way removes the duty of care responsibility of the applicant under the <i>Aboriginal Cultural Heritage Act 2003</i> . Pursuant to Section 23(1) of the <i>Aboriginal Cultural Heritage Act 2003</i> , a person who carries out an activity must take all reasonable and practicable measures to ensure the activity does not harm Aboriginal cultural heritage (the "cultural heritage duty of care").
This approval in no way authorises the clearing of native vegetation protected under the <i>Vegetation Management Act 1999</i> .
The approved development does not authorise any deviation from the applicable Australian Standards nor from the application of any laws, including laws covering work place health and safety.
All development shall be conducted in accordance with the provisions of the <i>Environmental Protection Act 1994</i> and all relevant regulations and standards under that Act. All necessary licences under the Act shall be obtained and shall be maintained at all times.
It is the applicant's responsibility to obtain all statutory approvals prior to commencement of any works onsite.

It is the applicant's responsibility to contact Council's Health & Environmental Services Department to obtain any relevant approvals required for the preparation and/or sale of food.

Our ref TMR24-043910 Your ref Enquiries Scott McDonald

10 January 2025



Department of Transport and Main Roads

Decision Notice – Permitted Road Access Location (s62(1) Transport Infrastructure Act 1994)

This is not an authorisation to commence work on a state-controlled road¹

Development application reference number 24/31, lodged with Goondiwindi Regional Council involves constructing or changing a vehicular access between Lot 262 SP104612, the land the subject of the application, and the Cunningham Highway (a state-controlled road).

In accordance with section 62A(2) of the *Transport Infrastructure Act 1994* (TIA), this development application is also taken to be an application for a decision under section 62(1) of TIA.

Applicant Details	
Name and address	Pearl Energy Pty Ltd c/- Mecone
	Level 2 235 Edward Street
	Brisbane City QLD 4000
Application Details	
Address of Property	2-4 Lamberth Road, Goondiwindi QLD 4390
Real Property Description	Lot 262 SP104612
Aspect/s of Development	Development Permit for Material Change of Use for Business
	Activities (Service Station and Food and Drink Outlet - Including
	Drive Through) and Subdivide One (1) Lot into Two (2) Lots

Decision (given under section 67 of TIA)

It has been decided to approve the application, subject to the following conditions:

(a) The road access locations are to be located generally in accordance with the Proposed Site Plan prepared by Verve Design Group dated 10 December 2024, reference Drawing No. 22264 – DA01 (Revision D).

(b) The largest design vehicle permitted to enter the site is a Type 1 Road Train.

Reasons for the decision

The reasons for this decision are as follows:

(a) The Department of Transport and Main Roads administer the location of driveway crossovers and vehicular accesses to state-controlled roads.

 Telephone
 +61 (07) 4639 0737

 Website
 www.tmr.qld.gov.au

 Email
 Downs.South.West.IDAS@tmr.qld.gov.au

 ABN:
 39 407 690 291

¹ Please refer to the further approvals required under the heading 'Further approvals'

Please refer to **Attachment A** for the findings on material questions of fact and the evidence or other material on which those findings were based.

Information about the Decision required to be given under section 67(2) of TIA

- 1. There is no guarantee of the continuation of road access arrangements, as this depends on future traffic safety and efficiency circumstances.
- 2. In accordance with section 70 of the TIA, the applicant for the planning application is bound by this decision. A copy of section 70 is attached as **Attachment B**, as required, for information.

Further information about the decision

- 1. In accordance with section 67(7) of TIA, this decision notice:
 - a) starts to have effect when the development approval has effect; and
 - b) stops having effect if the development approval lapses or is cancelled; and
 - c) replaces any earlier decision made under section 62(1) in relation to the land.
- In accordance with section 485 of the TIA and section 31 of the *Transport Planning and Coordination Act 1994* (TPCA), a person whose interests are affected by this decision may apply for a review of this decision only within 28 days after notice of the decision was given under the TIA. A copy of the review provisions under TIA and TPCA are attached in Attachment C for information.
- 3. In accordance with section 485B of the TIA and section 35 of TPCA a person may appeal against a reviewed decision. The person must have applied to have the decision reviewed before an appeal about the decision can be lodged in the Planning and Environment Court. A copy of the Appeal Provisions under TIA and TPCA is attached in Attachment C for information.

Further approvals

The Department of Transport and Main Roads also provides the following information in relation to this approval:

 Road Access Works Approval Required – Written approval is required from the department to carry out road works that are road access works (including driveways) on a state-controlled road in accordance with section 33 of the TIA. This approval must be obtained prior to commencing any works on the state-controlled road. The approval process may require the approval of engineering designs of the proposed works, certified by a Registered Professional Engineer of Queensland (RPEQ). Please contact the department to make an application.

If further information about this approval or any other related query is required, Mr Scott McDonald, Planning Officer should be contacted by email at <u>Scott.A.McDonald@tmr.qld.gov.au</u> or on (07) 4639 0737.

Yours sincerely

Jason McGuire Senior Town Planner

Attachments: Attachment A – Decision evidence and findings Attachment B - Section 70 of TIA Attachment C - Appeal Provisions

Attachment A

Decision Evidence and Findings

Evidence or other material on which findings were based:

- Development application material submitted in support of Goondiwindi Regional Council development application 24/31
- State Development Assessment Provisions State Code 1 (Development in a statecontrolled road environment)
- State Development Assessment Provisions State Code 6 (Protection of state transport networks)
- Department of Transport and Main Roads' Road Planning and Design Manual, 2nd Edition
- Planning Act (2016)
- Planning Regulations (2017)
- Transport Infrastructure Act (1997)

Attachment B

Section 70 of TIA

Transport Infrastructure Act 1994 Chapter 6 Road transport infrastructure Part 5 Management of State-controlled roads

70 Offences about road access locations and road access works, relating to decisions under s 62(1)

- (1) This section applies to a person who has been given notice under section 67 or 68 of a decision under section 62(1) about access between a State-controlled road and adjacent land.
- (2) A person to whom this section applies must not—
 - (a) obtain access between the land and the State-controlled road other than at a location at which access is permitted under the decision; or
 - (b) obtain access using road access works to which the decision applies, if the works do not comply with the decision and the noncompliance was within the person's control; or
 - (c) obtain any other access between the land and the road contrary to the decision; or
 - (d) use a road access location or road access works contrary to the decision; or
 - (e) contravene a condition stated in the decision; or
 - (f) permit another person to do a thing mentioned in paragraphs (a) to (e); or
 - (g) fail to remove road access works in accordance with the decision.

Maximum penalty-200 penalty units.

(3) However, subsection (2)(g) does not apply to a person who is bound by the decision because of section 68.

Attachment C

Appeal Provisions

Transport Infrastructure Act 1994 Chapter 16 General provisions

485 Internal review of decisions

- (1) A person whose interests are affected by a decision described in schedule 3 (the *original decision*) may ask the chief executive to review the decision.
- (2) The person is entitled to receive a statement of reasons for the original decision whether or not the provision under which the decision is made requires that the person be given a statement of reasons for the decision.
- (3) The Transport Planning and Coordination Act 1994, part 5, division 2-
 - (a) applies to the review; and
 - (b) provides-
 - (i) for the procedure for applying for the review and the way it is to be carried out; and
 - (ii) that the person may apply to QCAT to have the original decision stayed.

485B Appeals against decisions

- (1) This section applies in relation to an original decision if a court (the appeal court) is stated in schedule 3 for the decision.
- (2) If the reviewed decision is not the decision sought by the applicant for the review, the applicant may appeal against the reviewed decision to the appeal court.
- (3) The Transport Planning and Coordination Act 1994, part 5, division 3-
 - (a) applies to the appeal; and
 - (b) provides-
 - (i) for the procedure for the appeal and the way it is to be disposed of; and
 - that the person may apply to the appeal court to have the original decision stayed.
- (4) Subsection (5) applies if-
 - (a) a person appeals to the Planning and Environment Court against a decision under section 62(1) on a planning application that is taken, under section 62A(2), to also be an application for a decision under section 62(1); and

- (b) a person appeals to the Planning and Environment Court against a decision under the Planning Act on the planning application.
- (5) 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 is decided.
- (6) Subsection (5) applies even if all or any of the parties to the appeals are not the same.
- (7) In this section—

original decision means a decision described in schedule 3.

reviewed decision means the chief executive's decision on a review under section 485.

31 Applying for review

- (1) A person may apply for a review of an original decision only within 28 days after notice of the original decision was given to the person under the transport Act.
- (2) However, if-
 - (a) the notice did not state the reasons for the original decision; and
 - (b) the person asked for a statement of the reasons within the 28 days mentioned in subsection (1)

the person may apply within 28 days after the person is given the statement of the reasons.

- (3) In addition, the chief executive may extend the period for applying.
- (4) An application must be written and state in detail the grounds on which the person wants the original decision to be reviewed.

32 Stay of operation of original decision

- (1) If a person applies for review of an original decision, the person may immediately apply for a stay of the decision to the relevant entity.
- (2) The relevant entity may stay the original decision to secure the effectiveness of the review and any later appeal to or review by the relevant entity.
- (3) In setting the time for hearing the application, the relevant entity must allow at least 3 business days between the day the application is filed with it and the hearing day.
- (4) The chief executive is a party to the application.
- (5) The person must serve a copy of the application showing the time and place of the hearing and any document filed in the relevant entity with it on the chief executive at least 2 business days before the hearing.
- (6) The stay-
 - (a) may be given on conditions the relevant entity considers appropriate; and
 - (b) operates for the period specified by the relevant entity; and
 - (c) may be revoked or amended by the relevant entity.
- (7) The period of a stay under this section must not extend past the time when the chief executive reviews the original decision and any later period the relevant entity allows the applicant to enable the applicant to appeal against the decision or apply for a review of the decision as provided under the QCAT Act.

- (8) The making of an application does not affect the original decision, or the carrying out of the original decision, unless it is stayed.
- (9) In this section—

relevant entity means-

- (a) if the reviewed decision may be reviewed by QCAT-QCAT; or
- (b) if the reviewed decision may be appealed to the appeal court—the appeal court.

35 Time for making appeals

- (1) A person may appeal against a reviewed decision only within-
 - (a) if a decision notice is given to the person—28 days after the notice was given to the person; or
 - (b) if the chief executive is taken to have confirmed the decision under section 34(5)—56 days after the application was made.
- (2) However, if----
 - (a) the decision notice did not state the reasons for the decision; and
 - (b) the person asked for a statement of the reasons within the 28 days mentioned in subsection (1)(a);

the person may apply within 28 days after the person is given a statement of the reasons.

(3) Also, the appeal court may extend the period for appealing.






Existing Legend

Property Boundary	Existing Surface Contour	Underground Electrical	Undergraund Telecom

Underground Electrical	Undergraund Telecom	Batter Bottom	Batter Top	Swale Invert	

Edge of bitumen

Proposed Legend

Fence

Design Surface Contour 🛑 🛑 💼 💼 Site Boundary -0.1-

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Legend

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Proposed Commercial Development 2 - 4 Lamberth Road, Goondiwindi

Stormwater Management Plan



Prepared For Pearl Energy Pty Ltd



ABN 56 650 431 637

Pearl Energy Pty Ltd



Stormwater Management Plan

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This Document Has Been Approved by The Following Appropriately Qualified and Experienced Professional Civil Engineer:

Malachy McCann BEng (Hons), MIEAust, CPEng, NER, Registered Professional Engineer of Queensland (RPEQ) No. 13357

Report Number: C_23144 - R001

Issue	Date	Details	Author	Checked	Approved
1	29/01/24	Initial Issue	EG	NR	NR
2	27/06/24	Issue for Approval	EG	ММ	MM
3	31/07/24	Updated Architectural Plans	EG	ММ	MM
4	31/01/25	Updated Architectural Plans	JN	EG	ММ



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1. Introduction

This Stormwater Management Plan has been commissioned by Pearl Energy Pty Ltd and forms part of a combined 'Material Change of Use' (MCU) and 'Reconfiguration of Lot' (ROL) application to be lodged with Goondiwindi Regional Council over the following parcels of land:

Property Address:	2 - 4 Lamberth Road, Goondiwindi
Property Description:	Lot 262 on SP104612
Client:	Pearl Energy Pty Ltd
Council:	Goondiwindi Regional Council
Total Site Area:	1.78 ha (1.27 ha developed site area)

The proposed development involves the creation of a new service station and truck refuelling area accessed via the Cunningham Highway ('subject site'). The proposed layout is shown in Figure 1-1 below.



Figure 1-1 Proposed Development Layout (Source: Verve Concept Site Plan)

This report describes the key stormwater management issues associated with the proposed development, with the objectives of investigations listed below:

- Identify existing site conditions and drainage characteristics;
- Identify external catchments impacting the site;
- Identify a Lawful Point of Discharge in accordance with Council requirements;
- Demonstrate that the development can occur such that no actionable nuisance or adverse impact is created (Quantity Management); and
- Demonstrate that appropriate water quality objectives have been achieved (Quality Management).

Based on the outcomes of the above investigations, this report provides stormwater management recommendations to address compliance with Goondiwindi Regional Council requirements.

2. Site Characteristics

2.1 Site Location

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The proposed development is situated on a single existing allotment at 2 - 4 Lamberth Road, Goondiwindi described as Lot 262 on SP104612. The lot is located within the Goondiwindi Regional Council local government area and is zoned as 'High Commercial Precinct' (Centre Zone) under the Goondiwindi Regional Council Planning Scheme.

The site is located in the suburb of Goondiwindi, with the existing allotment bounded by Cunningham Highway to the east, Marshall Street to the south, Lamberth Road to the west and existing residential development to the north.

A general locality plan is presented in Figure 2-1 below, with the corresponding areas indicatively represented via:

- Pink: Existing allotment;
- Purple: Total site area (including 'surplus area'); and
- Dashed Purple: Proposed development area.



Figure 2-1 Site Locality Plan (Source: Nearmap 2023)

2.2 Land Usage

The existing site is undeveloped, vacant land that primarily consists of a well grassed pervious surface with established vegetation, as shown in Figure 2-1 above. The allotment is currently accessed via an existing gravel driveway to Lamberth Road.



2.3 Topography

Survey of the site by SMK QLD (Project No: 23195-I) indicates that the topography of the existing allotment is extremely flat, with an average grade of less than 0.5% across the site. Approximate levels across the developed area range from RL 217.9m AHD in the south-eastern corner of the site fronting Cunningham Highway, to RL 217.3 in the north-western corner of the site.

Other notable existing topographic features of the area include:

- Stockpile \rightarrow Max height 2.2m, partially located within the 'surplus area' of the development;
- Surface drain → Extends from north-eastern corner of the site to EMT A SP104612 to the south; and
- Combined drainage and sewer easement (EMT A SP104612) → Located to the south of the site area and consists of an open channel and sewer pipe.



Figure 2-2 Existing Site Topography (Source: SMK QLD Project No: 23195-I)

2.4 Upstream Catchment

2011 aerial LiDAR survey (1m tiles accessed from EVLIS on 30 October 2023) demonstrate that a portion of the existing allotment to the north described as Lot 111 on RP895883 grades to a low point along the northern boundary of the site. This contributing area from the neighbouring allotment has been measured as approximately 0.3 ha, as shown in blue in Figure 2-3 below.



Figure 2-3 Lot 262 on SP104612 Existing Contours (Source Aerial LiDAR Survey 2011)

Existing Services 2.5

A Before You Dig (BYD) search of the site identified the following services within proximity to the site:

- Underground communications (Telstra, Nextgen and NBN); and
- Overhead electricity (Essential Energy).

The appropriate consultants should be engaged to determine the necessary requirements of connections into this infrastructure.

There was no Council-owned stormwater infrastructure identified on BYD response plans and Goondiwindi LGIP mapping indicates that the existing allotment is outside the service catchment area for the stormwater trunk network, as demonstrated in Figure 2-4 below.



Figure 2-4 Goondiwindi Stormwater Network (Source: GRC LGIP Mapping)



2.6 Flooding

The Goondiwindi Flood Hazard Overlay Map indicates that the allotment is within the '*Area of Floodplain Protected up to a 0.5% AEP Flood Event by Council Town Levee and Council Verified Natural Topographic Features*'. Accordingly, the site is not identified as within any of the following overlays as indicated by Figure 2-5 below:

- High Flood Hazard Area;
- Medium Flood Hazard Area; and
- Low Flood Hazard Area.



Figure 2-5 GoondlwIndl Council Flood Hazard Overlay (Source: Overlay Map - OMCOO1c)

As the site is not within mapped overlays, no further flood investigation or analysis was undertaken for the site.



3. Proposed Drainage



Pearl Energy Pty Ltd

The proposed development will provide internal drainage and stormwater management in accordance with Council requirements and the Queensland Urban Drainage Manual (QUDM).

The minor storm event is identified as the 10% AEP in accordance with a Commercial use category as per Table 7.3.1 of QUDM. The minor drainage system will outlet to a Lawful Point of Discharge and is anticipated to consist of:

- Inlet pits and pipe infrastructure; and
- Surface grading to assist with conveyance.

The major storm event is identified as the 1% AEP, and the development will allow for conveyance of the major flow to a Lawful Point of Discharge in accordance with QUDM requirements.

3.1 Lawful Point of Discharge

Survey of the allotment indicates that the development area is extremely flat, with multiple localised sags and minimal grade along the existing drainage paths. In the existing case, site-based stormwater is conveyed via overland flow to the following discharge locations:

- Location A (approx. 75% of site area): Combined drainage and sewer easement to the south of the development area (EMT A SP104612); and
- Location B (approx. 25% of site area): Cunningham Highway drainage swale to the east.

It is noted that the initial stormwater strategy for development identified Location A as the Lawful Point of Discharge for the site, as this is the primary discharge location. However, it is understood that the vendor of the allotment expressed concern about the drainage path extending outside of the Option boundary as it would limit future development on the remainder of the lot. It was advised that the preferred strategy was to discharge stormwater flow to the Cunningham Highway road reserve, with the existing drainage path in this area to be regraded to direct stormwater around the allotment. This approach was communicated with both Council and DTMR who advised they were generally supportive of the proposal, provided that the development could achieve non-worsening objectives. Refer Appendix F for evidence of correspondence.

Accordingly, the developed Lawful Point of Discharge for the minor storm event has been nominated as Location B, being the existing Cunningham Highway swale to the east of the site. The development will capture and convey site flows via proposed pits and pipes, and ultimately outlet to a regraded drainage swale in the road reserve. In the major storm, flows exceeding the capacity of the piped infrastructure will be directed to the entrance of the site via surface conveyance and discharge across the driveway into the Cunningham Highway verge.

The discharge of runoff from the subject site is considered compliant with the test described in Section 3.9.1 of QUDM, as shown in Table 3-1 below.

Criteria	Response
Will the proposed development alter the	Piped flow to be directed to Cunningham Highway swale in the
site's stormwater discharge characteristics	developed case. This discharge location is within an existing road
in a manner that may substantially damage	reserve and is not anticipated to cause and actionable nuisance as it
a third-party property?	is expected that the drainage channel has sufficient capacity to
	accommodate mitigated developed flows.

Table 3-1 QUDM Lawful Point of Discharge



4. Stormwater Quantity Management

PLANS AND referred to in AGENCY R	DOCUMENTS the REFERRAL ESPONSE
SARA ref:	2409-42278 SRA
Date:	24 March 2025

This section of the report addresses peak stormwater discharging from the site and identifies whether attenuation measures are necessary to ensure "no-worsening" of peak flows on the site.

4.1 Non-Worsening Strategy

Non-worsening of site discharge will be achieved through:

- Consolidating site-based flows to a single discharge location; and
- Mitigating peak flows in all design storm events to predeveloped discharge rates.

4.2 Rational Method Peak Flows

4.2.1 Methodology

The Rational Method has been utilised to estimate the peak flow of event hydrographs for the existing and developed scenario. The results of the Rational Method calculations are used in the following sections to:

- i. Evaluate the impact of the proposed development on the surrounding infrastructure, and;
- ii. Quantify the stormwater flows to each discharge location to ensure non-worsening objectives are achieved.

4.2.2 Catchment

In the existing scenario, approximately 25% of the site area discharges to the Cunningham Highway Swale, with the equivalent catchment area calculated to be 0.283 hectares. The remainder of the site currently discharges to EMT A SP104612 to the south, however this was excluded from the peak flow comparison as stormwater will not be directed to this location in the developed case.

In the developed scenario, all site-based flows will discharge to the Cunningham Highway via piped and sheet flow. Accordingly, the catchment size was adopted as the developed area of 1.297 ha. Refer DA42 in Appendix B for further details.

4.2.3 C₁₀ Value

The C_{10} values for the site have been based on measured Fraction Impervious (fi) areas from the site survey and architectural layouts. Measured imperviousness on the site has been compared to the values in QUDM and interpolated for determination of the C_{10} value.

4.2.4 Time of Concentration

The time of concentration for each existing catchment was determined using methods in accordance with Section 4.6 of QUDM. These are conservative value representing the worst-case scenario of overland flow to the existing discharge location.

For the developed scenario, the time of concentration was reduced to account for the proposed internal pipes and pits within the development.

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4.2.5 Summarised Parameters

The catchment area, fraction impervious and time of concentration of the development area have been summarised in Table 4-1 below.

Table 4-1 Rational Method Input Parameters

Catchment	Parameter	Value	Data Source/ Calculation Method	
	Area	0.283 ha	Site survey	
	Fraction Impervious	0%	Approximated from Nearmap aerial	
Existing	C ₁₀	0.49	QUDM Table 4.5.4	
	Time of Concentration	20 min	QUDM Section 4.5 & 4.6	
	Area	1.297 ha	Site survey	
Developed	Fraction Impervious	89%	Approximated from architectural layout	
	C ₁₀	0.85	QUDM Table 4.5.3	
	Time of Concentration	7 min	QUDM Standard Inlet Time and Section 4.8	

4.2.6 Flow Summary

The resultant flows for each storm event have been summarised in Table 4-2 below.

Table 4-2 Existing and Developed Flows

	Q _{39%} (m ³ /s)	Q _{18%} (m³/s)	Q _{10%} (m ³ /s)	Q _{5%} (m³/s)	Q _{2%} (m ³ /s)	Q _{1%} (m ³ /s)
Existing	0.021	0.029	0.036	0.043	0.057	0.067
Developed	0.260	0.367	0.444	0.540	0.702	0.812
Difference	+0.239	+0.338	+0.408	+0.497	+0.645	+0.745

4.3 Detention Design

4.3.1 Modifiable Inputs

The DRAINS software package has several inputs that can be used to manipulate the hydraulic behaviour of the model. The values adopted in this model are presented in Table 4-3 below:

Table 4-3 DRAINS Modifiable Inputs

Input	Modelled Value	
Antecedent Moisture Condition	3	
Paved Depression Storage (mm)	1	
Supplementary Depression Storage (mm)	1	
Grassed (Pervious) Depression Storage (mm)	3	
Soil Type	2.8	

Proposed Commercial Development - 2 - 4 Lamberth Road, Goondiwindi



4.3.2 DRAINS Calibration – Existing Case

Table 4-4 below provides a summary of the proves of calibration of the DRAINS model against the Rational Method calculations. The results indicate that the DRAINs model is programmed with a satisfactory level of accuracy for the purposes of this exercise.

Table 4-4 DRAINS Calibration - Existing Case

	Q _{39%} (m³/s)	Q _{18%} (m³/s)	Q _{10%} (m ³ /s)	Q _{5%} (m³/s)	Q _{2%} (m³/s)	Q _{1%} (m ³ /s)
Rational Method	0.021	0.029	0.036	0.043	0.057	0.067
DRAINS	0.018	0.031	0.044	0.055	0.069	0.082
Difference (%)	-14%	+7%	+22%	+28%	+21%	+22%

4.3.3 Detention Design Parameters

The detention system will be provided underneath the internal driveway and has been designed to ensure the predevelopment peak flow rates are maintained for the full range of design storm events. Given the site levels and inability to achieve a free draining outlet, it will be necessary to pump low flows from the tank to the Lawful Point of Discharge.

Accordingly, the modelling that was undertaken assumes the following:

- Detention tank base area of 250m²;
- 3 stage pumped outlet:
 - Pump 1 at 15 L/s from base to full tank depth for low flow events;
 - Pump 2 at 15 L/s activated at 1.55m deep; and
 - Pump 3 at 15 L/s activated at 2.18m deep.
- Total flow from combined pump discharge 45 L/s.

Table 4-5 below provides the dimensions of the proposed detention system incorporated into the design model. This configuration is preliminary and is subject to refinement as part of a future details design stage.

Table 4-5 Detention Design Parameters

Feature	Modelled Value			
Base Area	250m ²			
Peak Water Depth (Q100)	3.45m			
Pumped Infrastructure	3 Stage Pump Outlet – 15L/s, 30L/s and 45 L/s			
Weir Size / Level	225mm high flow pipe at 3.33m high			
Outlet	Discharge structure with outlet pipe			
Total Detention Volume	862.5m ³			

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A back-flow prevention device may be required to ensure that all flows from the tank are directed to the lawful point of discharge. Further details to be provided at the detailed design stage.

4.3.4 DRAINS Hydrologic Modelling

The on-site stormwater detention arrangement described in Table 4-5 above has been designed to demonstrate that the proposed storage solution is effective in reducing developed peak stormwater discharge from the site.

The results of this assessment and confirmation of the achievement of the on-site detention objectives are provided in Table 4-6 below.

Table 4-6 Mitigated Peak Flows

	Q _{39%} (m³/s)	Q _{18%} (m³/s)	Q _{10%} (m³/s)	Q _{5%} (m³/s)	Q _{2%} (m ³ /s)	Q _{1%} (m³/s)
Existing	0.018	0.031	0.044	0.055	0.069	0.082
Developed	0.015	0.030	0.040	0.045	0.045	0.082
Difference (%)	-17%	-3%	-9%	-18%	-35%	0%

It is demonstrated above that the proposed detention arrangement is adequate to ensure no increase in peak discharge for all storm events at the lawful point of discharge.

4.3.5 Stormwater Pump Out During Regular Operation

The proposed detention tank has been sized for the developed case to accommodate flows generated on the site. No upstream catchment is considered relevant to this tank.

The 1% AEP 20-minute burst event and 2 hour burst event were adopted as the critical major storm for the pump and storage system respectively. This simulated a conservative 'worst-case' scenario of the detention tank reaching a maximum volume of 862.5m³ at 122 minutes into the storm. The hydrograph of the 10-minute rainfall inflow storm event and reciprocal pump well storage (considering the discharge of pumped stormwater) is presented in Figure 4-1 below.





Figure 4-1 Detention Tank Hydrograph (20 Minute Burst)

4.4 Upstream Catchment Flows

A portion of the adjacent property described as Lot 111 on RP895883 is currently directed to a low point on the northern boundary of the subject site. It noted that this localised low point is at an approximate RL of 217.3m, with the surrounding adjacent area at RL 217.4m or higher. As portion of the allotment is not free draining, the neighbouring development has been assumed to have a higher rate of infiltration and retention of water during storm events in the existing case.

To minimise ponding of stormwater in the developed case, a new drainage channel is proposed along the northern boundary of the development, grading west to east to direct flows to the Cunningham Highway verge. This is considered an appropriate discharge location as the existing development on the allotment is shown to currently outlet to this location, as demonstrated in Figure 4-2 below.



Figure 4-2 Lot 111 on RP895883 Existing Discharge Configuration



4.5 External Flows (Cunningham Highway Swales)

The proposed development includes upgrading the Cunningham Highway adjacent to the site, including provision for a new left-turn lane for north-bound traffic.

Survey of the site indicates that there are existing swales in this area, as shown in Figure 4-3 below.



Figure 4-3 Cunningham Highway Existing Swales

To ensure that the existing drainage configuration within the Cunningham Highway is accounted for in the developed scenario, it is expected that earthworks will be required in the verge to retain the existing capacity of the swales.

The design parameters for these developed swales have been summarised in Table 4-7 below. For areas in which the existing swale exceeds the design parameters (i.e. 1 in 4 batter slope), the existing features will be adopted.

Table 4-7 Bruce Highway Swale Design Parameters

Parameters	Design	
Maximum batter slope	1 in 4	
Bed Width	1m	
Longitudinal Grading	0.17%*	

* It is noted that this development only proposes to regrade the portion of the swale adjacent to the road widening works and will tie in with the existing alignment. It is understood that the ultimate swale alignment will extend to the south of the overall lot boundary, however these works will be completed as part of a future development application.

Further details on the Cunningham Highway road widening and developed swales are included in drawings DA20 – DA21 in Appendix B.

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5. Stormwater Quality Management

The objectives for stormwater quality management are outlined in *Goondiwindi Regional Council Planning Scheme* and the *State Planning Policy* (SPP). This section of the report identifies stormwater quality requirements and treatment devices to satisfy Council and SPP requirements.

5.1 Construction Phase

The development will comply with Construction Phase water quality objectives, and best practise measures will be utilised to minimise the potential impacts of pollutants generated during construction. These may include erosion and sediment control measures in accordance with Internal Erosion Control Association documentation. The pollutants that would typically be generated during construction are outlined in Table 5-1 below.

Pollutants	Source				
Litter	Paper, construction, food packaging, cement bags, off-cuts				
Sediment	Unprotected exposed soils and stockpiles during earthworks and building				
Hydrocarbons	Fuel and oil spills, leaks from construction equipment				
Toxic Materials	Cement slurry, asphalt prime, solvents, cleaning agents, wash waters (eg. from tile works)				
pH Altering Substance	Acid sulfate soils, cement slurry				

Table 5-1 Typical Construction Phase Pollutants

5.2 Operational Phase

Section SC 6.2.4 of the *Goondiwindi Planning Scheme Policy* stipulates that 'a SWMP, consistent with the design objectives stated in Table A (construction phase) and Table B (post construction phase) of SPP Code: Water Quality (Appendix 3 of the State Planning Policy), must be prepared for all development application made to Council'.

Accordingly, Table B of the State Planning Policy was reviewed to determine the applicable operational water quality objectives for the development. The subject site is located in Goondiwindi and identified as within the 'Western Queensland' region in accordance with the State Planning Policy Interactive Mapping System. Note 14 of the SPP highlights that the WQO's for this region are only applicable for population centres that exceed 25,000 persons. Current census data from the Australian Bureau of Statistics shows that the 2021 population of Goondiwindi was 10,310. Accordingly, it has been determined that operational water quality treatment systems are not required for the developed site.

5.3 Hydrocarbon Treatment

The allotment shall be graded to a suitable underground containment and treatment vessel (i.e. sump/tank) compatible with petroleum products and other likely chemicals. It is proposed that an Triceptor containment system (or an approved equivalent product) be installed to capture and retain flows from the fuel dispensing and refuelling areas.

The proposed Triceptor is considered suitable for this application and is to be designed and installed in accordance with requirements and specifications. The maintenance of internal water quality treatment is the responsibility of the developer and/or future landowner. The maintenance of proprietary treatment is to be undertaken in accordance with manufacturer guidelines and specifications.



6. Conclusion

This Stormwater Management Plan has been commissioned by Pearl Energy Pty Ltd for the MCU at 2 - 4 Lamberth Road, Goondiwindi. The proposed development involves the creation of a new service station and truck refuelling area accessed via the Cunningham Highway ('subject site').

A summary of the investigation and outcomes presented in this report are as follows:

- **Proposed Drainage (Section 3):** Lawful point of discharge to Cunningham Highway swale to the east of the site.
- Stormwater Quantity Management (Section 4): Increase in peak discharge from the site from the existing to the development case. Flow mitigation to be provided via proposed stormwater detention tank with pumped system for low flows.
- Stormwater Quality Management (Section 5): Operational water quality treatment devices not required per exemptions outline in the SPP 2017.

7. Disclaimer

This report has been prepared on behalf of and for the exclusive use of Pearl Energy Pty Ltd and is subject to and issued in accordance with the agreement between Context Engineering.

Our investigation and analysis has been specifically catered for the particular requirements of Pearl Energy Pty Ltd and may not be applicable beyond this scope. For this reason, any other third parties are not authorised to utilise this report without further input and advice from Context Engineering.

Context Engineering accepts no liability or responsibility whatsoever for the report in respect of any use of or reliance upon this report by any third party.

The investigation and analysis have relied on information provided by others. We accept no responsibility for the accuracy of material supplied by others. The accuracy of the investigation, analysis and report are dependent upon the accuracy of this information.

2 - 4 Lamberth Road, Goondiwindi Stormwater Management Plan





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2 - 4 Lamberth Road, Goondiwindi Stormwater Management Plan

Appendix B Schematic Drawings





Legend



Legend Existing Surface Design Surface Bulk Earthworks Surface



Property Boundary	Existing Surface Contour	Underground Electrical	Underground Telecom	Batter Bottom	Batter Top	Swale Invert	Edge of bltumen	Fence
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Proposed Legend

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Site Boundary







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Existing Surface

Legend





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Lot 111 RP895883

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Property Boundary	Existing Surface Contour	Underground Electrical	Undergraund Telecom	Batter Bottom	Batter Top	
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Swale Invert Edge of bitumen Fence

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Context Engineering

2-4 Lamberth Road, Goondiwindi

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Developed Catchment Plan

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2 - 4 Lamberth Road, Goondiwindi Stormwater Management Plan

Appendix C Architectural Plans

DA ISSUE THIS DRAWING IS NOT FOR CONSTRUCTION

PROPOSED SERVICE STATION, TRUCK STOP & FOOD & DRINK 2-4 LAMBERTH RD, GOONDIWINDI QLD 4390 ARCHITECTURAL DRAWINGS
















2 - 4 Lamberth Road, Goondiwindi Stormwater Management Plan





Caller	Details					
Contact:	Eneh Gilbert	Caller Id:	3097870	Phone:	0435 397 522	
Company:	Not supplied					
Address:	72 Costin Street Fortitude Valley QLD 4006	Email:	eneh.gilbert@c	ontexteng.com.a	u	
	Fortitude Valley QLD 4006					

2 - 4 Lamberth Road

Dig Site and Enquiry Details

WARNING: The map below only displays the location of the proposed dig site and does not display any asset owners' pipe or cables. The area highlighted has been used only to identify the participating asset owners, who will send information to you directly.

			User Reference:	Goondawindi	
S Charles Aub	1		Working on Behalf of:	Private	
Warden 5r	39	بالا العبو	Enquiry Date:	Start Date:	End Date:
	1		30/10/2023	01/11/2023	02/12/2023
	1	1, A.G.	Address:		
	1	Phate	2-4 Lamberth Road Goondiwindi QLD 4390		
= =	1		Job Purpose:	Onsite Act	ivities:
-	14		Excavation	Mechanical	Excavation
	1		Location of Workplace:	Location in	n Road:
Goondiwindi			Both	Road, Natu	re Strip, Footpath
Redmond Park	ldenan yô		 Check that the location of Should the scope of works enquiry. Do NOT dig without plans. the plans or how to proceed 	the dig site is correct. If not y change, or plan validity dat Safe excavation is your resp d safely, please contact the	vou must submit a new enquiry. es expire, you must submit a new onsibility. If you do not understand relevant asset owners.
- / -	×.		Notes/Description of Works:		
Bollacest.			Not supplied		

Your Responsibilities and Duty of Care

- The lodgement of an enquiry does not authorise the project to commence. You must obtain all necessary information from any and all likely
 impacted asset owners prior to excavation.
- If plans are not received within 2 working days, contact the asset owners directly & quote their Sequence No.
- ALWAYS perform an onsite inspection for the presence of assets. Should you require an onsite location, contact the asset owners directly. Please remember, plans do not detail the exact location of assets.
- Pothole to establish the exact location of all underground assets using a hand shovel, before using heavy machinery.
- Ensure you adhere to any State legislative requirements regarding Duty of Care and safe digging requirements.
- If you damage an underground asset you MUST advise the asset owner immediately.
- By using this service, you agree to Privacy Policy and the terms and disclaimers set out at www.byda.com.au
- For more information on safe excavation practices, visit www.byda.com.au

Asset Owner Details

The assets owners listed below have been requested to contact you with information about their asset locations within 2 working days. Additional time should be allowed for information issued by post. It is **your responsibility** to identify the presence of any underground assets in and around

your proposed dig site. Please be aware, that not all asset owners are registered with the Before You Dig service, so it is **your responsibility** to identify and contact any asset owners not listed here directly.

** Asset owners highlighted by asterisks ** require that you visit their offices to collect plans.

Asset owners highlighted with a hash # require that you call them to discuss your enquiry or to obtain plans.

Seq. No.	Authority Name	Phone	Status
231496120	Essential Energy	13 23 91	NOTIFIED
231496121	NBN Co Qld	1800 687 626	NOTIFIED
231496119	Nextgen NCC - QLD	1800 262 663	NOTIFIED
231496122	Telstra QLD Regional	1800 653 935	NOTIFIED

END OF UTILITIES LIST



То:	Eneh Gilbert
Phone:	Not Supplied
Fax:	Not Supplied
Email:	eneh.gilbert@contexteng.com.au

Dial before you dig Job #:	35363315	
Sequence #	231496121	VOLL DIC
Issue Date:	30/10/2023	
Location:	2-4 Lamberth Road, Goondiwindi, QLD, 4390	

Indicative Plans

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3	7	
4	8	

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	Parcel and the location
3	Pit with size "3"
33	Power Pit with size "2E". Valid PIT Size: e.g. 2E, 5E, 6E, 6E, 8E, 9E, E, null.
	Manhole
\otimes	Filler
2 PO-T-25.0m PRO-20.004	Cable count of trench is 2. One "Other size" PVC conduit (PO) owned by Telstra (-T-), between pits of sizes, "\$" and "\$" are 25.0m spart. One 40mm PVC conduit (P40) owned by NBN, between pits of sizes, "\$" and "\$" are 20.0m spart.
	2 Direct buried cables between pits of sizes ,"5" and "9" are 10.0m apart.
-00	Trench containing any INSERVICE/CONSTRUCTED (Copper/RF/Filing) cables.
-00-	Trench containing only DESIGNED/PLANNED (Copper/RF/Fibre/Power) cables.
-00	Trench containing any INSERVICE/CONSTRUCTED (Power) cables.
ERGAINWAY 51	Road and the street name "Broadway ST"
Scale	0 20 40 60 Meters 1:2000 1 cm equals 20 es

















Emergency Contacts

You must immediately report any damage to the **nbn™** network that you are/become aware of. Notification may be by telephone - 1800 626 329.

















See the Steps- Telstra Duty of Care that was provided in the email response

Mains Cable P	lan de la construction de la con
Report Damage: https://www.taitra.com.uloustongrigeser/themailsourt-demand in Aphter are immediate	Sequence Number: 231496122
Ph - 13 22 03 Email - Telstra.Plans@team.telstra.com Planned Services - ph 1800 653 935 (AEST bus hrs only) General Enquiries TELSTRA LIMITED A.C.N. 086 174 781 Generated On 30/10/2023 14:38:14	CAUTION: Fibre optic and/ or major network present in plot area. Please read the Duty of Care and contact Telstra Plan Services should you require any assistance.

WARNING

Telstra plans and location information conform to Quality Level "D" of the Australian Standard AS 5488-Classification of Subsurface Utility Information.

As such, Telstra supplied location information is indicative only. Spatial accuracy is not applicable to Quality Level D. As such, Telstra supplied location information is indicative only. Spatial accuracy is not applicable to Quality Level D. Refer to AS 5488 for further details. The exact position of Telstra assets can only be validated by physically exposing it. Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy. Further on site investigation is required to validate the exact location of Telstra plant prior to commencing construction work.

A Certified Locating Organisation is an essential part of the process to validate the exact location of Telstra assets and to ensure the asset is protected during construction works.

Stormwater Management Plan



2 - 4 Lamberth Road, Goondiwindi Stormwater Management Plan

Appendix E Code Compliance Report



Proposed Commercial Development 2 - 4 Lamberth Road, Goondiwindi

Code Compliance Report



Prepared For Pearl Energy Pty Ltd





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This Document Has Been Approved by The Following Appropriately Qualified and Experienced Professional Civil Engineer:

-

Malachy McCann

BEng (Hons), MIEAust, CPEng, NER, Registered Professional Engineer of Queensland (RPEQ) No. 13357

Report Number: C_23144 - R003

Issue	Date	Details	Author	Checked	Approved
A	31/01/24	Issue for Approval	EG	NR	NR
В	27/06/24	Issue for Approval	EG	ММ	мм



1. Introduction

This Code Compliance Report has been commissioned by Pearl Energy Pty Ltd and forms part of a combined 'Material Change of Use' (MCU) and 'Reconfiguration of Lot' (ROL) application to be lodged for the proposed development located at 2 - 4 Lamberth Road in Goondiwindi.

The proposed development involves the creation of a new service station and truck refuelling area accessed via the Cunningham Highway.

A summary of the investigation and outcomes presented in this report are as follows:

- 9.4.3 Reconfiguring a Lot Code Development complies with acceptable outcomes or presents performance solutions; and
- **9.4.4 Transport and Infrastructure Code** Development complies with acceptable outcomes or presents performance solutions.

Based on the outcomes of the above investigations, this report provides civil engineering recommendations suitable to address compliance with Goondiwindi Regional Council requirements.

 2. 9.4.3 Reconfiguring a Lot Code. This section of the report assesses the proposed development against the relevant civil engineering items within the 9.4.3 Reconfiguring a Lot Code. 2.1 Utilities 2.1 Utilities 2.2 Utilities 2.3 Utilities 2.3 Utilities 2.4 Utilities 2.5 Utilities 2.6 Utilities 2.8 Acceptable Outcomes 3 Acceptable Outcomes 4 Acceptable Outcomes 3 Acceptable Outcomes 3 Acceptable Outcomes 4 Acceptable Outcomes 4 Acceptable Outcomes 3 adequate for fire acceptable 3 adequate for fire acceptable outcomes 4 Acceptable	ALL			
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Performance Outcomes Acceptable Outcomes Does the proposal meet the acceptable outcomes? Council Use PO3 PO3 PO3 Outcomes? Does the proposal meet the acceptable outcomes? Council Use PO3 PO3 PO3 AO3.1 Does the proposal meet the acceptable outcomes? Council Use PO3 PO3 AO3.1 Rother within an urban area or Rural Residential B precincts) Rother and Rural Residential B precincts) Rother Residential B precincts) Performance Solution Performance Solution 10 meets the needs of fire scriptable strends of fire scriptable strends of fire strends shows the indicative location of the scriptable Council Use Council Use 11 B residential B precincts) Performance Solution Council Use Council Use 12 D rest the needs of fire strends shows the indicative location of the scriptable strends shows the indicative location of the scriptable Council Use 13 meets the health, strend be strends shows the indicative location of the scriptable Council Use 14 Instructure to be provided at detailed D strends strends strends D strends strends 14 Instructure to be provided at detailed D strends strends D strends strends 15 <t< th=""><th>2.1 Utilities</th><th></th><th></th><th></th></t<>	2.1 Utilities			
PO3 A03.1 A03.1 A03.1 Each lot has an adequate trat: Where within an urban area or Rural Residential Zone (Rural Residential B and Rural Residential B and Rural Residential B arech lot is connected to Council's ersers; A Comples a) mets the needs of trat: mets the needs of and Rural Residential B arech lot is connected to Council's ersers; Not Applicable b) is adequate for file fighting purposes; D is adequate for file accordance with SGS – Planning b) is adequate for file or the community; and Context Engineering shows the indicative location of the proposed connections to the existing water main in the Cunningham highway verge. Further information on this infrastructure to be provided at detailed design stage.	Performance Outcomes	Acceptable Outcomes	Does the proposal meet the acceptable outcomes?	Council Use
	 PO3 Each lot has an adequate volume and supply of water that: a) meets the needs of users; b) is adequate for fire fighting purposes; c) ensures the health, safety and convenience of the community; and d) minimises adverse impacts on the receiving environment. 	A03.1 Where within an urban area or Rural Residential Zone (Rural Residential A and Rural Residential B precincts) each lot is connected to Council's reticulated water supply system in accordance with SC6.2 – Planning Scheme Policy 1 – Land Development Standards.	 Complies Performance Solution Not Applicable Not Applicable C_23144 DA50_Sewer and Water Layout Plan by Context Engineering shows the indicative location of the proposed connections to the existing water main in the Cunningham Highway verge. Further information on this infrastructure to be provided at detailed design stage. 	

Context Engineering 2

	Acceptable O	utcomes	Does the proposal meet the accep outcomes?	ptable	Council Use
PO4 Each lot provides for the treatment and disposal of effluent and other waste water that: a) meets the needs of users; b) ensures the health, safety and convenience of the community; and c) minimises adverse impacts on the receiving environment.	A04.1 Where within an urbal is connected to Counc sewerage system in ac SC6.2 – Planning Sch Land Development Sti Land Development Sti	n area each lot cil's reticulated ccordance with sme Policy 1 – andards.	 Complies Performance Solution Not Applicable Not Applicable Sewer and Water Lay C_23144 DA50_Sewer and Water Lay by Context Engineering shows the ind by Context Engineering shows the ind location of the proposed connections existing sewer main in the Cunninghar Highway verge. Further information or infrastructure to be provided at details design stage. 	yout Plan dicative s to the am on this iled	
PO5 Stormwater drainage is designed and managed to avoid adverse impacts on surrounding development or compromise the natural health and functioning of adjoining waterway systems.	AO5 Stormwater drainage accordance with SC6. Scheme Policy 1 – Lan Standards.	is provided in 2 – Planning id Development	 Complies Performance Solution Not Applicable Not Applicable C_23144 R001_Stormwater Manager Plan by Context Engineering addresse stormwater drainage requirements foi site, with reference to SC6.2.4 of the p scheme policy. 	ement es the or the planning	

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Code Compliance Report		Pearl Energy Pty L
3. 9.4.4 Transport	: and Infrastructure Code	
This section of the report assess	es the proposed development against the re	levant civil engineering items within the 9.4.4 Transport and Infrastructure Code.
3.1 Water Supply		
Performance Outcomes	Acceptable Outcomes	Does the proposal meet the acceptable Council Use outcomes?
 PO3 Premises have an adequate volume and supply of water that: a) meets the needs of users; b) ensures the health, safety and convenience of the community; and c) is adequate for fire fighting purposes. 	A03.1 Where within a water supply service area development is connected to a reticulated water supply system in accordance with SC6.2 Planning Scheme Policy.	 Complies Performance Solution Not Applicable Not Applicable C_23144 DA50_Sewer and Water Layout Plan by Context Engineering shows the indicative location of the proposed connections to the existing water main in the Cunningham Highway verge. Further information on this infrastructure to be provided at detailed design stage.

Proposed Commercial Development - Lamberth Road, Goondiwindi

Context Engineering 4

3.2 Wastewater Dispo	sal		
Performance Outcomes	Acceptable Outcomes	Does the proposal meet the acceptable outcomes?	Council Use
PO4 Po4 Premises provide for the treatment and disposal of effluent and other waste water that: a) meets the needs of users; b) ensures the health, safety and convenience of the community; and c) minimizes adverse impacts on the receiving environment. PO5 Development does not discharge wastewater to a waterway or off site unless demonstrated to be best practice environmental management for that site.	A04.1 Where within a sewerage service area development is connected to a reticulated sewerage system in accordance with SC6.2 Planning Scheme Policy 1 – Land Development Standards. N/A – development does not propose to discharge wastewater to a waterway.	 Complies Performance Solution Performance Solution Not Applicable Not Applicable C_23144 DA50_Sewer and Water Layout Plan by Context Engineering shows the indicative location of the proposed connections to the existing sewer main in the Cunningham Highway verge. Further information on this infrastructure to be provided at detailed design stage. Complies Complies Performance Solution NA - development does not propose to discharge wastewater to a waterway. 	
Pronosed Commercial Develorment - Larr	sherth Boad-Goondiwindi		Context Envineeri

Performance Outcomes	Acceptable Outcomes	Does the proposal meet the acceptable outcomes?	Council Use
POG Any treatment and disposal of waste water to a waterway accounts for: a) The applicable water quality objectives for the receiving waters; and b) adverse impacts on ecosystem health or receiving waters; and c) in waters mapped as	N/A – development does not propose to discharge wastewater to a waterway.	 Complies Performance Solution Not Applicable N/A - development does not propose to discharge wastewater to a waterway. 	
being of high ecological value, the adverse impacts of such releases and their offset.			
PO7 Wastewater discharge to a waterway is managed in a way that maintains	N/A – development does not propose to discharge wastewater to a waterway.	 Complies Performance Solution Not Applicable 	
riparian vegetation, waterway integrity, and downstream ecosystem health.		discharge wastewater to a waterway.	

ntext Engineering 6
3.3 Stormwater infra:	structure		
Performance Outcomes	Acceptable Outcomes	Does the proposal meet the acceptable outcomes?	Council Use
POB Stormwater drainage is designed and managed during the construction and operation of development to avoid adverse impacts on surrounding development or compromise the natural health and functioning of adjoining waterway systems.	AOB Development is provided with stormwater infrastructure in accordance with SC6.2 Planning Scheme Policy 1 – Land Development Standards	 Complies Performance Solution Performance Solution Not Applicable Not Applicable C_23144 R001_Stormwater Management Plan by Context Engineering addresses the stormwater drainage requirements for the site, with reference to SC6.2.4 of the planning scheme policy. 	
PO9 Operational activities for the development avoid or minimise changes to waterway hydrology from adverse impacts of altered stormwater quality and flow.	A09 The Stormwater Management Plan prepared in accordance with A08 is implemented.	 Complies Performance Solution Not Applicable It is anticipated that the development will comply. To be addressed at Operational Works Stage. 	

Proposed Commercial Development - Lamberth Road, Goondiwindi

Context Engineering 7

4. Disclaimer

SHIM

This report has been prepared on behalf of and for the exclusive use of and is subject to and issued in accordance with the agreement between Context Engineering.

Our investigation and analysis has been specifically catered for the particular requirements of Pearl Energy Pty Ltd and may not be applicable beyond this scope. For this reason, any other third parties are not authorised to utilise this report without further input and advice from Context Engineering.

Context Engineering accepts no liability or responsibility whatsoever for the report in respect of any use of or reliance upon this report by any third party.

The investigation and analysis have relied on information provided by others. We accept no responsibility for the accuracy of material supplied by others. The accuracy of the investigation, analysis and report are dependent upon the accuracy of this information.

Stormwater Management Plan

2 - 4 Lamberth Road, Goondiwindi Stormwater Management Plan



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From: Rodney O'Brien <<u>Rodney.OBrien@dsdilgp.qld.gov.au</u>> Sent: Tuesday, June 11, 2024 9:54 AM To: <u>paul.molenda1@optusnet.com.au</u> Subject: RE: Goondiwindi Service Station

Hi Paul

After discussing this with our local DTMR planning team, I can advise that if there is no option other than to discharge to the SCR, generally it will be permitted so long the applicant can demonstrate 'no worsening'.

If you have any preliminary design plans/figures DTMR can seek some initial feedback from their Hydraulic engineers.

I trust this will assist for now.

Regards Rod

Rodney O'Brien

Principal Planning Officer **Planning and Development Services Planning Group** Department of Housing, Local Government, Planning and Public Works

P 07 4616 7304 E rodney.obrien@dsdilgp.qld.gov.au 128 Margaret Street, Toowoomba QLD PO Box 825, Toowoomba QLD 4350





I acknowledge the Traditional Custodians of the land on which we walk, work and live. I pay my respects to Elders past, present, and emerging.

From: paul.molenda1@optusnet.com.au <paul.molenda1@optusnet.com.au>

Sent: Monday, June 10, 2024 12:09 PM

To: Rodney O'Brien <<u>Rodney.OBrien@dsdilgp.qld.gov.au</u>>

Cc: 'Mal McCann' <<u>mal.mccann@contexteng.com.au</u>>; 'Nick Rees' <<u>nick.rees@contexteng.com.au</u>>; 'Emma Laing' <<u>elaing@mecone.com.au</u>>; 'Maurice Hayes' <<u>cutter@hayesspraying.com.au</u>>; <u>ketan@pearlenergy.com.au</u> Subject: RE: Goondiwindi Service Station

Good Afternoon Rodney,

I was hoping to have heard back from you re a meeting in your Toowoomba Office to discuss the new site plan for the Goondiwindi site and implications with the site drainage.

We are OK to hold this meeting face to face or via a Teams meeting – can you please advise if you think this meeting will be held during the course of this week.

Regards,

Paul Molenda PM Property

M 0400 30 20 88 E paul.molenda1@optusnet.com.au

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From: paul.molenda1@optusnet.com.au <paul.molenda1@optusnet.com.au> Sent: Thursday, May 30, 2024 10:42 AM To: 'rodney.obrien@dsdilgp.qld.gov.au' <<u>rodney.obrien@dsdilgp.qld.gov.au</u>> Subject: FW: Goondiwindi Service Station

Good Morning Rodney,

Zinal forwarded me your details re the proposed service station plus DT development for Goondiwindi.

The attached plans are most up to date so wanted to ensure that you had these.

We are obviously keen to sit down with you and your Officers to discuss the site drainage issues asap.

I look forward to hearing from you.

Regards,

Paul Molenda PM Property

M 0400 30 20 88 E paul.molenda1@optusnet.com.au

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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 Rules¹ 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*

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.



Our reference: 2409-42278 SRA Your reference: 24/31

24 March 2025

The Chief Executive Officer Goondiwindi Regional Council LMB 7 INGLEWOOD QLD 4387 mail@grc.qld.gov.au

Attention: Ronnie McMahon

Dear Mrs McMahon

Changed referral agency response—with conditions

(Given under section 28 of the Development Assessment Rules)

On 24 February 2025 the State Assessment and Referral Agency (SARA) received representations from the applicant requesting SARA change its referral agency response. SARA has considered the representations and now provides this changed referral agency response which replaces the response dated 28 January 2025.

Response

Outcome:	Referral agency response – with conditions
Date of response:	24 March 2025
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 Service Station and Food and Drink Outlet
		Reconfiguring a Lot (1 into 2 lots)
SARA role:	Referral agency	
SARA trigger:	ARA trigger: The development application was referred to SARA under the following provisions of the Planning Regulation 2017:	
Page 1 of 7		Darling Downs South West regional office 128 Margaret Street, Toowoomba PO Box 825, Toowoomba QLD 4350

RA29-N

	 Schedule 10, Part 9, Division 4, Subdivision 1, Table 1, Item 1 – Development impacting on state transport infrastructure
	 Schedule 10, Part 9, Division 4, Subdivision 2, Table 1, Item 1 – Reconfiguring a lot near a state transport corridor
	 Schedule 10, Part 9, Division 4, Subdivision 2, Table 3, Item 1 – Reconfiguring a lot near a state-controlled road intersection
	 Schedule 10, Part 9, Division 4, Subdivision 2, Table 4, Item 1 – Material change of use of premises near a state transport corridor
SARA reference:	2409-42278 SRA
Assessment manager:	Goondiwindi Regional Council
Street address:	2 Lamberth Road, Goondiwindi QLD 4390
Real property description:	Lot 262 on SP104612
Applicant name:	Pearl Energy Pty Ltd C/- Mecone
Applicant contact details:	Level 2, 235 Edward Street Brisbane City QLD 4000 brisbane@mecone.com.au
State-controlled road access permit:	 This referral included an application for a road access location, under section 62A(2) of <i>Transport Infrastructure Act 1994</i>. Below are the details of the decision: Approved Reference: TMR24-043910 Date: 10 January 2025
	If you are seeking further information on the road access permit, please contact the Department of Transport and Main Roads at Downs.South.West.IDAS@tmr.qld.gov.au
<i>Human Rights Act 2019</i> considerations:	A consideration of the 23 fundamental human rights protected under the <i>Human Rights Act 2019</i> has been undertaken as part of this decision. It has been determined that this decision does not limit human rights.

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

For further information please contact Danica Clark, Senior Planner, on 3307 6175 or via email ToowoombaSARA@dsdilgp.qld.gov.au who will be pleased to assist.

Yours sincerely

Melinda Rusis Manager

cc Pearl Energy Pty Ltd C/- Mecone, brisbane@mecone.com.au

enc Attachment 1—Changed referral agency conditions Attachment 2—Reasons for referral agency response Attachment 3—Advice to the applicant Documents referenced in conditions

Attachment 1—Changed referral agency conditions

No.	Conditions	Condition timing					
Mater	Material change of use						
Scheo near a the Di for the of any	dule 10, Part 9, Division 4, Subdivision 2, Table 4, Item 1 – Material chan a state transport corridor—The chief executive administering the <i>Planning</i> frector-General of the Department of Transport and Main Roads to be the e development to which this development approval relates for the admini or matter relating to the following conditions:	ge of use of premises g Act 2016 nominates e enforcement authority stration and enforcement					
1.2	 (a) Any excavation, filling/backfilling/compaction, and other earthworks associated with regarding the existing stormwater swale in the Cunningham Highway Road reserve must be undertaken generally in accordance with the following plans: Bulk Earthworks Layout Plan prepared by Context Engineering dated 04/02/25, reference DA10 – Project No. C_23144, Rev. 4 External Roadworks Layout Plan (Sheet 1 of 2) prepared by Context Engineering dated 04/02/25, reference DA20 – Project No. C_23144, Rev. 3 External Roadworks Layout Plan (Sheet 2 of 2) prepared by Context Engineering dated 04/02/25, reference DA21 – Project No. C_23144, Rev. 3 External Roadworks Layout Plan (Sheet 2 of 2) prepared by Context Engineering dated 04/02/25, reference DA21 – Project No. C_23144, Rev. 3 (b) Other works involving ground disturbance must not encroach upon or de-stabilise or cause damage to the state-controlled road, including all transport infrastructure or the land supporting this infrastructure, or cause similar adverse impact. (c) Submit RPEQ certification with supporting documentation to Downs.South.West.IDAS@tmr.qld.gov.au within the Department of Transport and Main Roads, confirming that the development has been constructed in accordance with parts (a) and (b) of this condition. 	(a) and (b) At all times (c) Within 20 business days of the completion of works					
2.	 (a) Provide road works comprising a 1.5m wide raised median generally in accordance with the location shown on Functional Layout Site Access prepared by PTT Traffic & Transport Engineering dated 11/12/24, reference 24-367-001, Rev. B. (b) Design and construct the road works, required in part (a) of this present and the present and	Prior to the commencement of use and to be maintained					
	condition in accordance with the Department of Transport and Main Roads' <i>Road Planning and Design Manual</i> (and any external material referenced therein).						
3.	 (a) Carry out the stormwater management of the development generally in accordance with section 3.1 – Lawful Point of Discharge and section 4 – Stormwater Quantity Management of the Stormwater Management Plan prepared by Context Engineering dated 31/01/25, reference Report No. C_23144-R001 (Issue 4), and the following plan: Stormwater Drainage Layout Plan prepared by Context Engineering dated 03/02/25, reference DA40 - Project No. C_23144, Rev. 4. (b) Submit RPEO certification with supporting documentation to the stormwater of the stormwater of the stormwater of the stormwater of the supporting documentation to the stormwater of the stormwater	 (a) At all times (b) Within 20 business days of the completion of works. 					
	Downs.South.West.IDAS@tmr.qld.gov.au within the Department						

	of Transport and Main Roads, confirming that the developmen has been constructed in accordance with part (a) of this condition.	t
4,	 (a) The road accesses are located generally in accordance with the Proposed Site Plan prepared by Verve Design Group dated 10.12.2024, reference 22264 – DA01, Rev. D. 	e (a) At all times
	 (b) Provide road access works comprising of the following treatment at the road access locations required in part (a) of this condition A northbound Offset CHL with separated heavy vehicle entry-only access and light vehicle entry-only access. A high angle left-out only commercial crossover. 	ents n: Commencement of use
	(c) Design the road access works to accommodate the access / egress of a Type 1 Road Train.	
	(d) Design and construct the road access in accordance with the Department of Transport and Main Roads' Road Planning and Design Manual (and any external material referenced therein).	
5.	(a) Install signage, indicating No Entry – Heavy Vehicles at the he vehicle access location in accordance with the Department of Transport and Main Roads' Manual of Uniform Traffic Control Devices.	avy Prior to the commencement of use and to be maintained
	(b) Install signage and linemarking indicating that the egress locat is restricted to left-out movements only in accordance with the Department of Transport and Main Roads' <i>Manual of Uniform</i> <i>Traffic Control Devices</i> .	ion

Attachment 2—Reasons for referral agency response

The reasons for the SARA's decision are:

The development will comply with State code 1: Development in a state-controlled road environment if carried out in accordance with the proposed conditions. Specifically, the proposed development:

- will not adversely impact the safety, function and efficiency of state-controlled roads, future state
- controlled roads, road transport infrastructure, active transport infrastructure and public passenger
- services on state-controlled roads
- will not adversely impact on the safety of people using, and living or working near, state-controlled
- roads.

The development complies with State code 6: Protection of state transport networks. Specifically, the proposed development will not result in a worsening of the physical condition or operating performance of the state transport network

Material used in the assessment of the application:

- the development application material and submitted plans
- Technical Agency advice
- 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 3—Advice to the applicant

Gene	ral advice
1,-	Terms and phrases used in this document are defined in the <i>Planning Act 2016</i> , its regulation or the State Development Assessment Provisions (SDAP) (version 3.0). If a word remains undefined it has its ordinary meaning.
2.	Under sections 62 and 33 of the <i>Transport Infrastructure Act 1994</i> , written approval is required from the Department of Transport and Main Roads to carry out road works that are road access works (including driveways) on a state-controlled road. Please contact the Department of Transport and Main Roads on 07 4639 0828 to make an application for road works approval. This approval must be obtained prior to commencing any works on the state-controlled road reserve. The approval process may require the approval of engineering designs of the proposed works, certified by a Registered Professional Engineer of Queensland (RPEQ). Please contact Transport and Main Roads as soon as possible to ensure that gaining approval does not delay construction.
3.	An application for a Road Corridor Permit is required for any ancillary works and encroachments on the state-controlled road under section 50(2) and Schedule 6 of the <i>Transport Infrastructure Act 1994</i> and Part 5 and Schedule 1 of the <i>Transport Infrastructure</i> <i>(State-Controlled Roads) Regulation 2006.</i> Please contact the Department of Transport and Main Roads on 4639 0743 to make an application for a Road Corridor Permit. Ancillary works and encroachments include but are not limited to advertising signs or other advertising devices, paths or bikeways, buildings/shelters, vegetation clearing, landscaping and planting.



Attachment 2 – Approved Plans





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Proposed Commercial Development 2 - 4 Lamberth Road, Goondiwindi

Stormwater Management Plan



Prepared For Pearl Energy Pty Ltd

ABN 56 650 431 637

Context Engineering



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This Document Has Been Approved by The Following Appropriately Qualified and Experienced Professional Civil Engineer:

Malachy McCann BEng (Hons), MIEAust, CPEng, NER, Registered Professional Engineer of Queensland (RPEQ) No. 13357

Report Number: C_23144 - R001

Issue	Date	Details	Author	Checked	Approved
1	29/01/24	Initial Issue	EG	NR	NR
2	27/06/24	Issue for Approval	EG	MM	ММ
3	31/07/24	Updated Architectural Plans	EG	MM	ММ
4	31/01/25	Updated Architectural Plans	JN	EG	ММ



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1. Introduction

This Stormwater Management Plan has been commissioned by Pearl Energy Pty Ltd and forms part of a combined 'Material Change of Use' (MCU) and 'Reconfiguration of Lot' (ROL) application to be lodged with Goondiwindi Regional Council over the following parcels of land:

Property Address:	2 - 4 Lamberth Road, Goondiwindi
Property Description:	Lot 262 on SP104612
Client:	Pearl Energy Pty Ltd
Council:	Goondiwindi Regional Council
Total Site Area:	1.78 ha (1.27 ha developed site area)

The proposed development involves the creation of a new service station and truck refuelling area accessed via the Cunningham Highway ('subject site'). The proposed layout is shown in Figure 1-1 below.



Figure 1-1 Proposed Development Layout (Source: Verve Concept Site Plan)

This report describes the key stormwater management issues associated with the proposed development, with the objectives of investigations listed below:

- Identify existing site conditions and drainage characteristics;
- Identify external catchments impacting the site;
- Identify a Lawful Point of Discharge in accordance with Council requirements;
- Demonstrate that the development can occur such that no actionable nuisance or adverse impact is created (Quantity Management); and
- Demonstrate that appropriate water quality objectives have been achieved (Quality Management).

Based on the outcomes of the above investigations, this report provides stormwater management recommendations to address compliance with Goondiwindi Regional Council requirements.



2. Site Characteristics

2.1 Site Location

The proposed development is situated on a single existing allotment at 2 - 4 Lamberth Road, Goondiwindi described as Lot 262 on SP104612. The lot is located within the Goondiwindi Regional Council local government area and is zoned as 'High Commercial Precinct' (Centre Zone) under the Goondiwindi Regional Council Planning Scheme.

The site is located in the suburb of Goondiwindi, with the existing allotment bounded by Cunningham Highway to the east, Marshall Street to the south, Lamberth Road to the west and existing residential development to the north.

A general locality plan is presented in Figure 2-1 below, with the corresponding areas indicatively represented via:

- Pink: Existing allotment;
- Purple: Total site area (including 'surplus area'); and
- Dashed Purple: Proposed development area.



Figure 2-1 Site Locality Plan (Source: Nearmap 2023)

2.2 Land Usage

The existing site is undeveloped, vacant land that primarily consists of a well grassed pervious surface with established vegetation, as shown in Figure 2-1 above. The allotment is currently accessed via an existing gravel driveway to Lamberth Road.

2.3 Topography

Survey of the site by SMK QLD (Project No: 23195-I) indicates that the topography of the existing allotment is extremely flat, with an average grade of less than 0.5% across the site. Approximate levels across the developed area range from RL 217.9m AHD in the south-eastern corner of the site fronting Cunningham Highway, to RL 217.3 in the north-western corner of the site.

Other notable existing topographic features of the area include:

- **Stockpile** \rightarrow Max height 2.2m, partially located within the 'surplus area' of the development;
- Surface drain → Extends from north-eastern corner of the site to EMT A SP104612 to the south; and
- **Combined drainage and sewer easement (EMT A SP104612)** → Located to the south of the site area and consists of an open channel and sewer pipe.



Figure 2-2 Existing Site Topography (Source: SMK QLD Project No: 23195-I)

2.4 Upstream Catchment

2011 aerial LiDAR survey (1m tiles accessed from EVLIS on 30 October 2023) demonstrate that a portion of the existing allotment to the north described as Lot 111 on RP895883 grades to a low point along the northern boundary of the site. This contributing area from the neighbouring allotment has been measured as approximately 0.3 ha, as shown in blue in Figure 2-3 below.

Pearl Energy Pty Ltd





Figure 2-3 Lot 262 on SP104612 Existing Contours (Source Aerial LiDAR Survey 2011)

2.5 Existing Services

A Before You Dig (BYD) search of the site identified the following services within proximity to the site:

- Underground communications (Telstra, Nextgen and NBN); and
- Overhead electricity (Essential Energy).

The appropriate consultants should be engaged to determine the necessary requirements of connections into this infrastructure.

There was no Council-owned stormwater infrastructure identified on BYD response plans and Goondiwindi LGIP mapping indicates that the existing allotment is outside the service catchment area for the stormwater trunk network, as demonstrated in Figure 2-4 below.



Figure 2-4 Goondiwindi Stormwater Network (Source: GRC LGIP Mapping)



2.6 Flooding

The Goondiwindi Flood Hazard Overlay Map indicates that the allotment is within the '*Area of Floodplain Protected up to a 0.5% AEP Flood Event by Council Town Levee and Council Verified Natural Topographic Features*'. Accordingly, the site is not identified as within any of the following overlays as indicated by Figure 2-5 below:

- High Flood Hazard Area;
- Medium Flood Hazard Area; and
- Low Flood Hazard Area.



Figure 2-5 Goondiwindi Council Flood Hazard Overlay (Source: Overlay Map - OMCOO1c)

As the site is not within mapped overlays, no further flood investigation or analysis was undertaken for the site.



3. Proposed Drainage

The proposed development will provide internal drainage and stormwater management in accordance with Council requirements and the Queensland Urban Drainage Manual (QUDM).

The minor storm event is identified as the 10% AEP in accordance with a Commercial use category as per Table 7.3.1 of QUDM. The minor drainage system will outlet to a Lawful Point of Discharge and is anticipated to consist of:

- Inlet pits and pipe infrastructure; and
- Surface grading to assist with conveyance.

The major storm event is identified as the 1% AEP, and the development will allow for conveyance of the major flow to a Lawful Point of Discharge in accordance with QUDM requirements.

3.1 Lawful Point of Discharge

Survey of the allotment indicates that the development area is extremely flat, with multiple localised sags and minimal grade along the existing drainage paths. In the existing case, site-based stormwater is conveyed via overland flow to the following discharge locations:

- Location A (approx. 75% of site area): Combined drainage and sewer easement to the south of the development area (EMT A SP104612); and
- Location B (approx. 25% of site area): Cunningham Highway drainage swale to the east.

It is noted that the initial stormwater strategy for development identified Location A as the Lawful Point of Discharge for the site, as this is the primary discharge location. However, it is understood that the vendor of the allotment expressed concern about the drainage path extending outside of the Option boundary as it would limit future development on the remainder of the lot. It was advised that the preferred strategy was to discharge stormwater flow to the Cunningham Highway road reserve, with the existing drainage path in this area to be regraded to direct stormwater around the allotment. This approach was communicated with both Council and DTMR who advised they were generally supportive of the proposal, provided that the development could achieve non-worsening objectives. Refer Appendix F for evidence of correspondence.

Accordingly, the developed Lawful Point of Discharge for the minor storm event has been nominated as Location B, being the existing Cunningham Highway swale to the east of the site. The development will capture and convey site flows via proposed pits and pipes, and ultimately outlet to a regraded drainage swale in the road reserve. In the major storm, flows exceeding the capacity of the piped infrastructure will be directed to the entrance of the site via surface conveyance and discharge across the driveway into the Cunningham Highway verge.

The discharge of runoff from the subject site is considered compliant with the test described in Section 3.9.1 of QUDM, as shown in Table 3-1 below.

Criteria	Response
Will the proposed development alter the	Piped flow to be directed to Cunningham Highway swale in the
site's stormwater discharge characteristics	developed case. This discharge location is within an existing road
in a manner that may substantially damage	reserve and is not anticipated to cause and actionable nuisance as it
a third-party property?	is expected that the drainage channel has sufficient capacity to
	accommodate mitigated developed flows.

Table 3-1 QUDM Lawful Point of Discharge



4. Stormwater Quantity Management

This section of the report addresses peak stormwater discharging from the site and identifies whether attenuation measures are necessary to ensure "no-worsening" of peak flows on the site.

4.1 Non-Worsening Strategy

Non-worsening of site discharge will be achieved through:

- Consolidating site-based flows to a single discharge location; and
- Mitigating peak flows in all design storm events to predeveloped discharge rates.

4.2 Rational Method Peak Flows

4.2.1 Methodology

The Rational Method has been utilised to estimate the peak flow of event hydrographs for the existing and developed scenario. The results of the Rational Method calculations are used in the following sections to:

- i. Evaluate the impact of the proposed development on the surrounding infrastructure, and;
- ii. Quantify the stormwater flows to each discharge location to ensure non-worsening objectives are achieved.

4.2.2 Catchment

In the existing scenario, approximately 25% of the site area discharges to the Cunningham Highway Swale, with the equivalent catchment area calculated to be 0.283 hectares. The remainder of the site currently discharges to EMT A SP104612 to the south, however this was excluded from the peak flow comparison as stormwater will not be directed to this location in the developed case.

In the developed scenario, all site-based flows will discharge to the Cunningham Highway via piped and sheet flow. Accordingly, the catchment size was adopted as the developed area of 1.297 ha. Refer DA42 in Appendix B for further details.

4.2.3 C₁₀ Value

The C_{10} values for the site have been based on measured Fraction Impervious (fi) areas from the site survey and architectural layouts. Measured imperviousness on the site has been compared to the values in QUDM and interpolated for determination of the C_{10} value.

4.2.4 Time of Concentration

The time of concentration for each existing catchment was determined using methods in accordance with Section 4.6 of QUDM. These are conservative value representing the worst-case scenario of overland flow to the existing discharge location.

For the developed scenario, the time of concentration was reduced to account for the proposed internal pipes and pits within the development.

4.2.5 Summarised Parameters

The catchment area, fraction impervious and time of concentration of the development area have been summarised in Table 4-1 below.

Table 4-1 Rational Method Input Parameters

Catchment	Parameter	Value	Data Source/ Calculation Method
	Area	0.283 ha	Site survey
Eviating	Fraction Impervious	0%	Approximated from Nearmap aerial
Existing	C ₁₀	0.49	QUDM Table 4.5.4
	Time of Concentration	20 min	QUDM Section 4.5 & 4.6
	Area	1.297 ha	Site survey
Doveloped	Fraction Impervious	89%	Approximated from architectural layout
Developed	C ₁₀	0.85	QUDM Table 4.5.3
	Time of Concentration	7 min	QUDM Standard Inlet Time and Section 4.8

4.2.6 Flow Summary

The resultant flows for each storm event have been summarised in Table 4-2 below.

Table 4-2 Existing and Developed Flows

	Q _{39%} (m ³ /s)	Q _{18%} (m³/s)	Q _{10%} (m³/s)	Q _{5%} (m³/s)	Q _{2%} (m³/s)	Q _{1%} (m ³ /s)
Existing	0.021	0.029	0.036	0.043	0.057	0.067
Developed	0.260	0.367	0.444	0.540	0.702	0.812
Difference	+0.239	+0.338	+0.408	+0.497	+0.645	+0.745

4.3 **Detention Design**

4.3.1 Modifiable Inputs

The DRAINS software package has several inputs that can be used to manipulate the hydraulic behaviour of the model. The values adopted in this model are presented in Table 4-3 below:

Table 4-3 DRAINS Modifiable Inputs

Input	Modelled Value
Antecedent Moisture Condition	3
Paved Depression Storage (mm)	1
Supplementary Depression Storage (mm)	1
Grassed (Pervious) Depression Storage (mm)	3
Soil Type	2.8

Depression Storage values of 1mm for paved/supplementary and 3mm for grassed (pervious) areas were adopted. An Antecedent Moisture Condition (AMC) of 3.0 has been adopted as a default value for this site. A soil type classification type of 2.8 is representative of soil with slow infiltration rates.

4.3.2 DRAINS Calibration – Existing Case

Table 4-4 below provides a summary of the proves of calibration of the DRAINS model against the Rational Method calculations. The results indicate that the DRAINs model is programmed with a satisfactory level of accuracy for the purposes of this exercise.

Table 4-4 DRAINS Calibration - Existing Case

	Q _{39%} (m ³ /s)	Q _{18%} (m ³ /s)	Q _{10%} (m³/s)	Q _{5%} (m³/s)	Q _{2%} (m ³ /s)	Q _{1%} (m³/s)
Rational Method	0.021	0.029	0.036	0.043	0.057	0.067
DRAINS	0.018	0.031	0.044	0.055	0.069	0.082
Difference (%)	-14%	+7%	+22%	+28%	+21%	+22%

4.3.3 Detention Design Parameters

The detention system will be provided underneath the internal driveway and has been designed to ensure the predevelopment peak flow rates are maintained for the full range of design storm events. Given the site levels and inability to achieve a free draining outlet, it will be necessary to pump low flows from the tank to the Lawful Point of Discharge.

Accordingly, the modelling that was undertaken assumes the following:

- Detention tank base area of 250m²;
- 3 stage pumped outlet:
 - Pump 1 at 15 L/s from base to full tank depth for low flow events;
 - Pump 2 at 15 L/s activated at 1.55m deep; and
 - Pump 3 at 15 L/s activated at 2.18m deep.
- Total flow from combined pump discharge 45 L/s.

Table 4-5 below provides the dimensions of the proposed detention system incorporated into the design model. This configuration is preliminary and is subject to refinement as part of a future details design stage.

Table 4-5 Detention Design Parameters

Feature	Modelled Value
Base Area	250m ²
Peak Water Depth (Q ₁₀₀)	3.45m
Pumped Infrastructure	3 Stage Pump Outlet – 15L/s, 30L/s and 45 L/s
Weir Size / Level	225mm high flow pipe at 3.33m high
Outlet	Discharge structure with outlet pipe
Total Detention Volume	862.5m ³

A back-flow prevention device may be required to ensure that all flows from the tank are directed to the lawful point of discharge. Further details to be provided at the detailed design stage.

4.3.4 DRAINS Hydrologic Modelling

The on-site stormwater detention arrangement described in Table 4-5 above has been designed to demonstrate that the proposed storage solution is effective in reducing developed peak stormwater discharge from the site.

The results of this assessment and confirmation of the achievement of the on-site detention objectives are provided in Table 4-6 below.

Table 4-6 Mitigated Peak Flows

	Q _{39%} (m ³ /s)	Q _{18%} (m ³ /s)	Q _{10%} (m ³ /s)	Q₅% (m³/s)	Q _{2%} (m ³ /s)	Q _{1%} (m³/s)
Existing	0.018	0.031	0.044	0.055	0.069	0.082
Developed	0.015	0.030	0.040	0.045	0.045	0.082
Difference (%)	-17%	-3%	-9%	-18%	-35%	0%

It is demonstrated above that the proposed detention arrangement is adequate to ensure no increase in peak discharge for all storm events at the lawful point of discharge.

4.3.5 Stormwater Pump Out During Regular Operation

The proposed detention tank has been sized for the developed case to accommodate flows generated on the site. No upstream catchment is considered relevant to this tank.

The 1% AEP 20-minute burst event and 2 hour burst event were adopted as the critical major storm for the pump and storage system respectively. This simulated a conservative 'worst-case' scenario of the detention tank reaching a maximum volume of 862.5m³ at 122 minutes into the storm. The hydrograph of the 10-minute rainfall inflow storm event and reciprocal pump well storage (considering the discharge of pumped stormwater) is presented in Figure 4-1 below.




Figure 4-1 Detention Tank Hydrograph (20 Minute Burst)

4.4 Upstream Catchment Flows

A portion of the adjacent property described as Lot 111 on RP895883 is currently directed to a low point on the northern boundary of the subject site. It noted that this localised low point is at an approximate RL of 217.3m, with the surrounding adjacent area at RL 217.4m or higher. As portion of the allotment is not free draining, the neighbouring development has been assumed to have a higher rate of infiltration and retention of water during storm events in the existing case.

To minimise ponding of stormwater in the developed case, a new drainage channel is proposed along the northern boundary of the development, grading west to east to direct flows to the Cunningham Highway verge. This is considered an appropriate discharge location as the existing development on the allotment is shown to currently outlet to this location, as demonstrated in Figure 4-2 below.





Figure 4-2 Lot 111 on RP895883 Existing Discharge Configuration

4.5 External Flows (Cunningham Highway Swales)

The proposed development includes upgrading the Cunningham Highway adjacent to the site, including provision for a new left-turn lane for north-bound traffic.

Survey of the site indicates that there are existing swales in this area, as shown in Figure 4-3 below.



Figure 4-3 Cunningham Highway Existing Swales

To ensure that the existing drainage configuration within the Cunningham Highway is accounted for in the developed scenario, it is expected that earthworks will be required in the verge to retain the existing capacity of the swales.

The design parameters for these developed swales have been summarised in Table 4-7 below. For areas in which the existing swale exceeds the design parameters (i.e. 1 in 4 batter slope), the existing features will be adopted.

Table 4-7 Bruce Highway Swale Design Parameters

Parameters	Design
Maximum batter slope	1 in 4
Bed Width	1m
Longitudinal Grading	0.17%*

* It is noted that this development only proposes to regrade the portion of the swale adjacent to the road widening works and will tie in with the existing alignment. It is understood that the ultimate swale alignment will extend to the south of the overall lot boundary, however these works will be completed as part of a future development application.

Further details on the Cunningham Highway road widening and developed swales are included in drawings DA20 – DA21 in Appendix B.



5. Stormwater Quality Management

The objectives for stormwater quality management are outlined in *Goondiwindi Regional Council Planning Scheme* and the *State Planning Policy* (SPP). This section of the report identifies stormwater quality requirements and treatment devices to satisfy Council and SPP requirements.

5.1 Construction Phase

The development will comply with Construction Phase water quality objectives, and best practise measures will be utilised to minimise the potential impacts of pollutants generated during construction. These may include erosion and sediment control measures in accordance with Internal Erosion Control Association documentation. The pollutants that would typically be generated during construction are outlined in Table 5-1 below.

Т	abl	e	5-1	Typical	Construction	Phase	Poll	utants

Pollutants	Source
Litter	Paper, construction, food packaging, cement bags, off-cuts
Sediment	Unprotected exposed soils and stockpiles during earthworks and building
Hydrocarbons	Fuel and oil spills, leaks from construction equipment
Toxic Materials	Cement slurry, asphalt prime, solvents, cleaning agents, wash waters (eg. from tile works)
pH Altering Substance	Acid sulfate soils, cement slurry

5.2 Operational Phase

Section SC 6.2.4 of the *Goondiwindi Planning Scheme Policy* stipulates that 'a SWMP, consistent with the design objectives stated in Table A (construction phase) and Table B (post construction phase) of SPP Code: Water Quality (Appendix 3 of the State Planning Policy), must be prepared for all development application made to Council'.

Accordingly, Table B of the State Planning Policy was reviewed to determine the applicable operational water quality objectives for the development. The subject site is located in Goondiwindi and identified as within the 'Western Queensland' region in accordance with the State Planning Policy Interactive Mapping System. Note 14 of the SPP highlights that the WQO's for this region are only applicable for population centres that exceed 25,000 persons. Current census data from the Australian Bureau of Statistics shows that the 2021 population of Goondiwindi was 10,310. Accordingly, it has been determined that operational water quality treatment systems are not required for the developed site.

5.3 Hydrocarbon Treatment

The allotment shall be graded to a suitable underground containment and treatment vessel (i.e. sump/tank) compatible with petroleum products and other likely chemicals. It is proposed that an Triceptor containment system (or an approved equivalent product) be installed to capture and retain flows from the fuel dispensing and refuelling areas.

The proposed Triceptor is considered suitable for this application and is to be designed and installed in accordance with requirements and specifications. The maintenance of internal water quality treatment is the responsibility of the developer and/or future landowner. The maintenance of proprietary treatment is to be undertaken in accordance with manufacturer guidelines and specifications.



6. Conclusion

This Stormwater Management Plan has been commissioned by Pearl Energy Pty Ltd for the MCU at 2 - 4 Lamberth Road, Goondiwindi. The proposed development involves the creation of a new service station and truck refuelling area accessed via the Cunningham Highway ('subject site').

A summary of the investigation and outcomes presented in this report are as follows:

- **Proposed Drainage (Section 3):** Lawful point of discharge to Cunningham Highway swale to the east of the site.
- Stormwater Quantity Management (Section 4): Increase in peak discharge from the site from the existing to the development case. Flow mitigation to be provided via proposed stormwater detention tank with pumped system for low flows.
- **Stormwater Quality Management (Section 5):** Operational water quality treatment devices not required per exemptions outline in the SPP 2017.

7. Disclaimer

This report has been prepared on behalf of and for the exclusive use of Pearl Energy Pty Ltd and is subject to and issued in accordance with the agreement between Context Engineering.

Our investigation and analysis has been specifically catered for the particular requirements of Pearl Energy Pty Ltd and may not be applicable beyond this scope. For this reason, any other third parties are not authorised to utilise this report without further input and advice from Context Engineering.

Context Engineering accepts no liability or responsibility whatsoever for the report in respect of any use of or reliance upon this report by any third party.

The investigation and analysis have relied on information provided by others. We accept no responsibility for the accuracy of material supplied by others. The accuracy of the investigation, analysis and report are dependent upon the accuracy of this information.

2 - 4 Lamberth Road, Goondiwindi Stormwater Management Plan





2 - 4 Lamberth Road, Goondiwindi Stormwater Management Plan

Appendix B Schematic Drawings

	Property Boundary
— — — 0.1 — — —	Existing Surface Contour
— — UGE — — UGE — —	Underground Electrical
— — UGT — — UGT — —	Underground Telecom
	Batter Bottom
	Batter Top
$\rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow -$	Swale Invert
	Edge of bitumen
//	Fence

Proposed Legend

	Site Boundary
0.1	Design Surface Contour
	Retaining Wall

8.8⁷

Bulk Earthworks Legend Hatching from Existing surface to Bulk Earthworks surface							
Cut Fill							
	>15.0m		>15.0m				
	10.0 to 15.0m		10.0 to 15.0m				
	5.0 to 10.0m		5.0 to 10.0m				
	2.0 to 5.0m		2.0 to 5.0m				
	1.0 to 2.0m		1.0 to 2.0m				
	0.5 to 1.0m		0.5 to 1.0m				
	0.25 to 0.5m		0.25 to 0.5m				
	0.0 to 0.25m		0.0 to 0.25m				

Earthworks Schedule Volumes measured from Existing Surface to Bulk Earthworks surface Volume (m³) Туре -268 Cut Fill 14,624 Total Balance 14,356 Assume no strip, 200mm pavement, 200mm structural slab depth and 200mm Footpath.

Note:

Note:

Note This conju Repor prelin issue under	e: drav ncti rt by nina and rtake	ving is conceptual only and must be viewed on with C_23144 R002_Engineering Servic y Context Engineering. The proposed design ry, based on available information at the time I is subject to change as part of refinement en within the detailed design phase.	in ces is of nts			/ / 			Bulk Earthwo
Notw show Super has b inform of an respo	e: ithst n on rinte been mation ny u onsib	anding that existing services may or may not the job drawings, no responsibility is taken by ndent or the Principal for this information wh supplied by others. The details are provided on only. The Contractor shall ascertain the posit nderground services in this area and shall le for making good any damage thereto.	be the iich for iion be						1:40
Revision	Date	Issue Details	Drawn	Designed	QR Code	Status		Scale	Client
1 29 2 27	0.01.24	Issued For Approval Issued For Approval	CG CG	CG CG					Deerl Free
3 30	.07.24	Issued For Approval	CG	CG			Issued for Approval	1:400 4 0 4 8 12 16 20M A1	Pearl Ene
4 03	.02.25	Issued For Approval (Updated Architectural Layout)	CG	CG			Not for Construction	A3	



Legend	
	Existing Surface
	Design Surface
	Bulk Earthworks Surface
	Retaining Wall

- RP BDY





	Internal	Truck Fuel Forecourt	Internal Driveway Drivethru	\ _	Tenancy 1		Tenancy 2	Landscaping	Internal	4
_	Driveway				Service Station		Food and Drink	-	Driveway E	1
0.7n	2.0%		2.4% 2.0%	1.9%	FFL 218.750m AHD	Design Surface	FFL 218.950m AHD	-0.7%	ـــــــــــــــــــــــــــــــــــــ	 -9
		4			BEW 218.550m AHD		BEW 218.750m AHD			E
	Retaining wall	Bulk Earthworks Surl	face			Existing Surfac	ce _		Retaining Wall -	
Datum RL	. 215.00m AHD					5				



Section Horizontal: 1:125 Vertical: 1:125 Note: This drawing is conceptual only and must be viewed in conjunction with C_23144 R002_Engineering Services Report by Context Engineering. The proposed design is preliminary, based on available information at the time of issue and is subject to change as part of refinements undertaken within the detailed design phase. Revision Date Issue Details Drawn Designed QR Code 29.01.24 Issued For Approva CG CG CG CG CG CG CG 27.06.24 Issued For Approval 1:125 2.5 0 1:250 2-4 Lamberth Road, Pearl Energy Pty Ltd 2.5 5m A1 **Issued for Approval** 30.07.24 Issued For Approval 03.02.25 Issued For Approval (Updated Architectural Layout) Goondiwindi Not for Construction Disclaimer All dimensions to be checked o dimensions only, do not scale.



Legend	
	Existing Surface
	Design Surface
	Bulk Earthworks Surface
	Retaining Wall



Section Horizontal: 1:125 Vertical: 1:125

Note: This drawing is conceptual only and must be viewed in conjunction with C_23144 R002_Engineering Services Report by Context Engineering. The proposed design is preliminary, based on available information at the time of issue and is subject to change as part of refinements undertaken within the detailed design phase. Revision Date Issue Details Drawn Designed QR Code 29.01.24 Issued For Approva CG CG CG CG CG CG CG 27.06.24 Issued For Approval 2 1:125 2.5 0 1:250 2-4 Lamberth Road, Pearl Energy Pty Ltd 2.5 5m A1 **Issued for Approval** 30.07.24 Issued For Approval 03.02.25 Issued For Approval (Updated Architectural Layout) Goondiwindi Not for Construction Disclaimer All dimensions to be checked of dimensions only, do not scale.



	Property Boundary
— — — 0.2 — — —	Existing Surface Contour
	Underground Electrical
— — UGT — — UGT — —	Underground Telecom
	Batter Bottom
	Batter Top
$\rightarrow \rightarrow $	Swale Invert
	Edge of bitumen
//	Fence

Proposed Legend

	Site Boundary
0.1	Design Surface Contour
	Retaining Wall





No she Su has inf of res	Dte: twiths own or perinte been ormati any u ponsil	tanding that existing services may or may not n the job drawings, no responsibility is taken by t endent or the Principal for this information wh n supplied by others. The details are provided ion only. The Contractor shall ascertain the posit underground services in this area and shall ble for making good any damage thereto.	be the ich for ion be	No This con Rep prel issu und	te: s drawing is conce junction with C_ iort by Context Er liminary, based on le and is subject lertaken within the	eptual 23144 ngineer availat to cha detailee	only and must be viewed in ROO2_Engineering Services ing. The proposed design is ble information at the time of ange as part of refinements d design phase.	Inset A - External Roadv 1:250 Scal	vorks Layout Plan e	ENERGY SERVICE MAGL Origin Note: Service locations are approx provider plans. Locations are to be start of construction. Refer Before location plans - available at www.
Revision	Date	Issue Details	Drawn	Designed	QR Code	Status		Scale	Client	Project
1 2 3	27.06.24 30.07.24 03.02.25	Issued For Approval Issued For Approval Issued For Approval (Updated Architectural Layout)	CG CG CG	CG CG CG			Issued for Approval Not for Construction	1:250 5 0 5 10m A1 1:500 A3 1:2000 20 0 20 40 60 80 100m A1 1:4000 A3	Pearl Energy Pty Ltd	2-4 Lamberth Road, Goondiwindi Disclaimer Ald Immersions to be checked on site by contractor prior to construction. Use written dimensions only, do not scale.



Drawing Title Exte	rnal					
Roadworks Layout						
Plan (Sheet 2 of 2)						
Project No.	Drawing No.	Revision				
C_23144	DA21	3				



Proposed Legend

	Site Boundary
0.1	Design Surface Contour
1/1	Indicative Structure Label
	Proposed Maintenance Hole
	Indicative Inlet Pit
	Indicative Internal Stormwat

 $\rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow -$ Indicative Drainage Path



Note:

This drawing is conceptual only and must be viewed in conjunction with C_23144 R001_Stormwater Management Plan by Context Engineering. The proposed design is preliminary, based on available information at the time of issue and is subject to change as part of refinements undertaken within the detailed design phase.

Revision	Date	Issue Details	Drawn	Designed	QR Code	Status		Scale	Client	Project
1	29.01.24	Issued For Approval	CG	CG						
2	27.06.24	Issued For Approval	CG	CG						
3	30.07.24	Issued For Approval	CG	CG			Issued for Approval	1:400 4 0 4 8 12 16 20m A1	Pearl Energy Pty Ltd	2-4 Lamberth Road,
4	03.02.25	Issued For Approval (Updated Architectural Layout)	CG	CG			Not for Construction	1:800 A3		Goondiwindi
										Disclaimer All dimensions to be checked on site by contractor prior to construction. Use written dimensions only, do not scale.

	Property Boundary
— — — 0.2 — — —	Existing Surface Contour
	Underground Electrical
— — UGT — — UGT — —	Underground Telecom
	Batter Bottom
	Batter Top
$\rightarrow \rightarrow $	Swale Invert
	Edge of bitumen
//	Fence

Proposed Legend

_		Site Boundary
	_	Catchment Boundary

Developed Catchment Area									
Legend	Description	Area (ha)	Total Area (ha)	Total % Imperviou					
	Roof	0.070							
	Hardstand	0.022							
	Driveway	1.008	1.297	89					
	High Risk Fuel	0.052							
	Pervious	0.145							



Note:

This drawing is conceptual only and must be viewed in conjunction with C_23144 R001_Stormwater Management Plan by Context Engineering. The proposed design is preliminary, based on available information at the time of issue and is subject to change as part of refinements undertaken within the detailed design phase.

Note:

Notwithstanding that existing services may or may not be shown on the job drawings, no responsibility is taken by the Superintendent or the Principal for this information which has been supplied by others. The details are provided for information only. The Contractor shall ascertain the position of any underground services in this area and shall be responsible for making good any damage thereto.

	_								
Revision	Date	Issue Details	Drawn	Designed	QR Code	Status	Scale	Client	Project
1	29.01.24	Issued For Approval	CG	CG					
2	27.06.24	Issued For Approval	CG	CG			4.050 5 400 41	Decid Free Decided	O (Laurh auth David
3	30.07.24	Issued For Approval	CG	CG		Issued for Approval	1:250 5 0 5 10m A1	Pearl Energy Pty Ltd	2-4 Lamberth Road,
4	03.02.25	Issued For Approval (Updated Architectural Layout)	CG	CG		Not for Construction	1:500 A3		Goondiwindi
									Disclaimer All dimensions to be checked on site by contractor prior to construction. Use written dimensions only, do not scale.



Proposed Legend

	Site Boundary
	Design Surface Contour
S S	Proposed Sewer Line
\bigcirc	Proposed Sewer Manhole
W	Proposed Water Line



Note:

This drawing is conceptual only and must be viewed in conjunction with C_23144 R002_Engineering Services Report by Context Engineering. The proposed design is preliminary, based on available information at the time of issue and is subject to change as part of refinements undertaken within the detailed design phase.

Revisio	on Date	Issue Details	Drawn	Designed	QR Code	Status	Scale	Client	Project
1	29.01.24	Issued For Approval	CG	CG					
2	27.06.24	Issued For Approval	CG	CG				Decod Free Dec 1 del	O (Lowella Decad
3	30.07.24	Issued For Approval	CG	CG		Issued for Approval	1:400 4 0 4 8 12 16 20m A1	Pearl Energy Pty Ltd	2-4 Lamberth Road,
4	03.02.25	Issued For Approval (Updated Architectural Layout)	CG	CG		Not for Construction	1:800 A3		Goondiwindi
									Disclaimer All dimensions to be checked on site by contractor prior to construction. Use written dimensions only, do not scale.

	Property Boundary
— — — 0.1 — — —	Existing Surface Contour
— — UGE — — UGE — —	Underground Electrical
— — UGT — — UGT — —	Underground Telecom
	Batter Bottom
	Batter Top
$\rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow -$	Swale Invert
	Edge of bitumen
//	Fence

Proposed Legend

	Site Boundary
X X	Proposed Sediment Fence (or as directed by Site Superintendent)
	Temporary Exit Washdown Grate

Proposed Area of Disturbance

Note:

03.02.25

This drawing is conceptual only and must be viewed in conjunction with C_23144 R002_Engineering Services Report by Context Engineering. The proposed design is preliminary, based on available information at the time of issue and is subject to change as part of refinements undertaken within the detailed design phase.

Sediment Basin Calculations

1.	Sediment Basin	= "Type D"
2.	Settling Volume	= 400 * 0.5 * 1.3 Area (Ha) = 260m ³
	Where: Cv Area	= 0.5 (Open Soil) = 1.3ha
3.	Sediment Storage Vol	ume = 50% * Settling Volume = 130m ³



Revision Date Issue Details Drawn Designed QR Code 29.01.24 Issued For Approv 27.06.24 Issued For Approval CG CG CG CG ued For Approva

2 - 4 Lamberth Road, Goondiwindi Stormwater Management Plan

Appendix C Architectural Plans

ARCHITECTURAL DRAWINGS PROPOSED SERVICE STATION, TRUCK STOP & FOOD & DRINK 2-4 LAMBERTH RD, GOONDIWINDI QLD 4390



ONSULTING ENGINEE

LOCATION MAP

DA ARCHITECTURAL DRAWINGS				
DRG No.	DRAWING TITLE			
DA00	COVER PAGE			
DA01	PROPOSED SITE PLAN			
DA02	PROPOSED FLOOR PLAN - T1			
DA04	BUILDING ELEVATIONS & PERSPECTIVES			
DA05	BUILDING ELEVATIONS & PERSPECTIVES			
DA06	BUILDING ELEVATIONS & PERSPECTIVES			



This drawing package is for <u>D.A. Purposes only</u> and is <u>M</u> <u>ALL</u> design components are shown indicative only and ari any pricing based upon the details shown in these drawi verve building design co. Shall not be held responsible F

VERVE SCHEDULES DISCLAIMER:

 ALL SCHEDULES SHOULD BE CHECKED WITH THE REMAINDER OF THE DRAWING SET.
 SCHEDULED RATES AND AREAS ARE INTENDED FOR ASSISTANCE ONLY. NO

RESPONSIBILITY IS TAKEN FOR THE ACCURACY OF QUANTITIES. ANY DISCREPANCIES IN SCHEDULES SHOULD BE IDENTIFIED TO THE AUTHOR

4. ALL AREAS ARE GROSS AREAS, UNLESS NOTED OTHERWISE



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DA ISSUE THIS DRAWING IS NOT FOR CONSTRUCTION

3D PERSPECTIVE FOR ILLUSTRATION ONLY

<u>DT</u> TO BE USED FOR TENDER PURPOSES. E SUBJECT TO FINAL DESIGN DURING DETAILED DESIGN BY THE RESPECTIVE CONSULTANT. NGS ARE COMPLETELY AT THE RESPONSIBILITY OF THE TENDERER. OR ANY REQUIRED CHANGES OR UPDATES TO THE DESIGN, POST D.A. THAT ARE PRICE IMPACTED.					
roject Description PROPOSED SERVICE STOP & FOOD & DR 2-4 LAMBERTH RD,	STATION, TRUCK INK GOONDIWINDI	Drawing Title COVER PAGE			
cale @A1 1:1 rawn	Date MAR 2024 Approved By	Job Number - Drawing Number		Revision	



ALL SCHEDULES SHOULD BE CHECKED WITH THE REMAINDER OF THE DRAWIN SET.
 SCHEDULED RATES AND AREAS ARE INTENDED FOR ASSISTANCE ONLY. NO RESPONSIBILITY IS TAKEN FOR THE ACCURACY OF QUANTITIES.
 ANY DISCREPANCIES IN SCHEDULES SHOULD BE IDENTIFIED TO THE AUTHOR WORTH

LANDSCAPING SHOWN IS FOR 'ARTIST IMPRESSION' PURPOSES ONLY.

REFERENCE SHOULD BE MADE TO THE LANDSCAPE DRAWINGS

NOTED. 4. ALL AREAS ARE GROSS AREAS, UNLESS NOTED OTHERWISE



DESIGN GROUP

THIS DRAWING PACKAGE IS FOR <u>D.A. PURPOSES ONLY</u> AND IS <u>NOT</u> TO BE USED FOR TENDER PURPOSES. <u>ALL</u> DESIGN COMPONENTS ARE SHOWN INDICATIVE ONLY AND ARE SUBJECT TO FINAL DESIGN DURING DETAILED DESIGN BY THE RESPECTIVE CONSULTANT.

Unruce 1, Level 1, 498 LUI WICHE 4000 Info@www.eseigngroup.com.au Imagine □ create □ deliver □ industrial □ large format retail procommended works

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21.06.2024 LN DA ISSUE
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 PRELIMINARY ISSU

 18.07.2024
 LN
 DA ISSUE

 26.07.2024
 LN
 DA ISSUE
 10.12.2024 LN ISSUE IN RE NSE TO SARA AND COUNCI

		SSUE
	THIS DRAW	ING IS NOT
CUNNINGHAM HIGHWAY	FUR LUNS RPD LOT 262 ON SP104612 PARISH: GOONDIWINDI COUNTY: MARSH COUNCIL: GOONDIWINDI REGIONAL DEVELOPMENT ASSESSM TOTAL SITE AREA DEVELOPED AREA SURPLUS AREA (CALCULATED OVER DEVELOPED AREA) INCLUDES ALL ROOFED AREAS (CALCULATED OVER DEVELOPED AREA) IMPERVIOUS AREAS (CALCULATED OVER DEVELOPED AREA) IMPERVIOUS AREAS (CALCULATED OVER DEVELOPED AREA) DEVELOPED OVER DEVELOPED AREAS	ENT - 17,793m ² - 12,974m ² - 4,819m ² - 1,368m ² - 7.5%
ND	PRE STIE DEVELOPMENT (INCLUDES BUILDING ROOFED AREAS) POST SITE DEVELOPMENT (INCLUDES BUILDING ROOFED AREAS) BUILDING AREAS T1 SERVICE STATION T2 FOOD & DRINK TOTAL BUILDING GEA	- 000 ⁻ - 16,437m ²) - <u>395m²</u> - <u>163m²</u> - 558m ²
	EXTERNAL STRUCTURES CAR FORECOURT (UNENCLOSED BUILDING FOOTPRINT) TRUCK FORECOURT (UNENCLOSED BUILDING FOOTPRINT) T1 REFUSE/SERVICES T2 REFUSE TOTAL EXTERNAL STRUCTURES	- 290m ² - 230m ² - 30m ² - 16m ² - 566m ²
	CAR PARKING PARKING REQUIRED (REFER TO TRAFFIC REPORT) PARKING PROVIDED TRUCK PARKING CAR REFUELLING TRUCK REFUELLING (DOUBLE SIDED REFUELLING)	- 37 - 12 - 6 - 3

GN

Appr	Project Description PROPOSED SERVICE	STATION, TRUCK	Drawing Title PROPOSED SIT	E PLAN	
GN GN	STOP & FOOD & DR 2-4 LAMBERTH RD,	NK Goondiwindi			
GN GN GN	Scale @A1 1:400 Drawn IN	Date MAR 2024 Approved By GN	Job Number - Drawing Number	DA01	Revision D





roject Description PROPOSED SERVICE TOP & FOOD & DR -4 LAMBERTH RD,	STATION, TRUCK INK GOONDIWINDI	Drawing Title BUILDING ELEVATIONS & PERSPECTIVES		
cale @A1 As indicated rawn LN	Date MAR 2024 Approved By GN	Job Number - Drawing Number 22264	DA04	Revision C









NOTED.

roject Description PROPOSED SERVICE STOP & FOOD & DRI 2-4 LAMBERTH RD,	STATION, TRUCK NK GOONDIWINDI	Drawing Title BUILDING ELEV PERSPECTIVES	ATIONS	&
cale @A1 As indicated rawn LN	Date MAR 2024 Approved By GN	Job Number - Drawing Number 22264	DA06	Revision

DA ISSU this dra FOR CONSTRUCTION

- NOTE: 1. ALL EXTERNAL MATERIALS & FINISHES SHOWN INDICATIVE ONLY & SUBJECT TO FINAL TENANT STANDARDS
- 2. ALL DIMENSIONS MEASURED FROM FINISHED GROUND FLOOR LEVEL UNLESS NOTED OTHERWISE
- 3. ALL SIGNAGE INCLUSING LOCATIONS & HEIGHTS ARE SUBJECT TO A SEPERATE SIGNAGE APPLICATION & APPROVAL BY LOCAL AUTHORITY
- 4. LANDSCAPING IS SHOWN FOR "ARTIST IMPRESSION" PURPOSES ONLY. REFERENCE SHOULD BE MADE TO THE LANDSCAPE DRWAINGS PREPARED BY THE RELEVANT CONSULTANT



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<u>RPD</u>

LOT 262 ON SP104612 PARISH: GOONDIWINDI COUNTY: MARSH COUNCIL: GOONDIWINDI REGIONAL

SCHEDULE OF LOT AREAS

LOT 13- 12,974m² LOT 1 - 52,755m²

Project Description PROPOSED SERVICE STATION, TRUCK STOP & FOOD & DRINK 2-4 LAMBERTH RD, GOONDIWINDI			DROPOSED SUBDIVISION PLAN		
	Scale @A1 As indicated Drawn NJG	Date JULY 2024 Approved By GN	Job Number - Drawing Number 22264	DA07	Revision B

Stormwater Management Plan

2 - 4 Lamberth Road, Goondiwindi Stormwater Management Plan



Proposed Commercial Development - 2 - 4 Lamberth Road, Goondiwindi



Job No 35363315

Caller	Caller Details								
Contact:	Eneh Gilbert	Caller Id:	3097870	Phone:	0435 397 522				
Company:	Not supplied								
Address:	72 Costin Street Fortitude Valley QLD 4006	Email:	eneh.gilbert@conte	xteng.com.au					

2 - 4 Lamberth Road,

Dig Site and Enquiry Details

WARNING: The map below only displays the location of the proposed dig site and does not display any asset owners' pipe or cables. The area highlighted has been used only to identify the participating asset owners, who will send information to you directly.

	User Reference:	2 - 4 Lamberth Road, Goondawindi	
Charles Ave	Working on Behalf of:	Private	
Warden St 39	Enquiry Date:	Start Date:	End Date:
	30/10/2023	01/11/2023	02/12/2023
Ha I	Address:		
Tofunts.	2-4 Lamberth Road Goondiwindi QLD 4390		
# /	Job Purpose:	Onsite Activ	ities:
1 10	Excavation	Mechanical E	xcavation
	Location of Workplace:	Location in l	Road:
Goondiwindi	Both	Road, Nature	Strip, Footpath
Redmond Park	 Check that the location Should the scope of we enquiry. Do NOT dig without of 	n of the dig site is correct. If not yo orks change, or plan validity dates	u must submit a new enquiry. expire, you must submit a new psibility. If you do not understanc
10.1	the plans or how to pr	oceed safely, please contact the re	levant asset owners.
- V 🔶 *	Notes/Description of Wo	rks:	
Mathabre Rive	Not supplied		

Your Responsibilities and Duty of Care

- The lodgement of an enquiry does not authorise the project to commence. You must obtain all necessary information from any and all likely impacted asset owners prior to excavation.
- If plans are not received within 2 working days, contact the asset owners directly & quote their Sequence No.
- ALWAYS perform an onsite inspection for the presence of assets. Should you require an onsite location, contact the asset owners directly. Please remember, plans do not detail the exact location of assets.
- Pothole to establish the exact location of all underground assets using a hand shovel, before using heavy machinery.
- Ensure you adhere to any State legislative requirements regarding Duty of Care and safe digging requirements.
- If you damage an underground asset you MUST advise the asset owner immediately.
- By using this service, you agree to Privacy Policy and the terms and disclaimers set out at www.byda.com.au
- For more information on safe excavation practices, visit www.byda.com.au

Asset Owner Details

The assets owners listed below have been requested to contact you with information about their asset locations within 2 working days.

Additional time should be allowed for information issued by post. It is your responsibility to identify the presence of any underground assets in and around your proposed dig site. Please be aware, that not all asset owners are registered with the Before You Dig service, so it is your responsibility to identify and contact any asset owners not listed here directly.

** Asset owners highlighted by asterisks ** require that you visit their offices to collect plans.

Asset owners highlighted with a hash # require that you call them to discuss your enquiry or to obtain plans.

Seq. No.	Authority Name	Phone	Status
231496120	Essential Energy	13 23 91	NOTIFIED
231496121	NBN Co Qld	1800 687 626	NOTIFIED
231496119	Nextgen NCC - QLD	1800 262 663	NOTIFIED
231496122	Telstra QLD Regional	1800 653 935	NOTIFIED

END OF LITILITIES LIST

Lodge Your Free Enquiry Online - 24 Hours a Day, Seven Days a Week



То:	Eneh Gilbert
Phone:	Not Supplied
Fax:	Not Supplied
Email:	eneh.gilbert@contexteng.com.au

Dial before you dig Job #:	35363315	
Sequence #	231496121	VOLL DIC
Issue Date:	30/10/2023	WWW.1100.com.au
Location:	2-4 Lamberth Road, Goondiwindi, QLD, 4390	

Indicative Plans



	Parcel and the location
3	Pit with size "5"
35	Power Pit with size "2E". Valid PIT Size: e.g. 2E, 5E, 6E, 8E, 9E, E, null.
	Manhole
\otimes	Filler
2 PO-T-25.0m P40-20.0m	Cable count of trench is 2. One "Other size" PVC conduit (PO) owned by Telstra (-T-), between pits of sizes, "5" and "9" are 25.0m apart. One 40mm PVC conduit (P40) owned by NBN, between pits of sizes, "5" and "9" are 20.0m spart.
-0 1 0	2 Direct buried cables between pits of sizes , "5" and "9" are 10.9m apart.
-00	Trench containing any INSERVICE/CONSTRUCTED (Copper/RF/Fibre) cables.
-00-	Trench containing only DESIGNED/PLANNED (Copper/RF/Fibre/Power) cables.
-0-0-	Trench containing any INSERVICE/CONSTRUCTED (Power) cables.
BROADWAY ST	Road and the street name "Broadway ST"
Scale	0 20 40 60 Meters 1:2000
















Emergency Contacts

You must immediately report any damage to the **nbn**[™] network that you are/become aware of. Notification may be by telephone - 1800 626 329.

















-	Report Damage: https://service.telstra.com.au/customer/general/forms/report-damage-to-telstra-equipment Ph - 13 22 03	Sequence Number: 231496122
	Email - Telstra.Plans@team.telstra.com Planned Services - ph 1800 653 935 (AEST bus hrs only) General Enquiries	CAUTION: Fibre optic and/ or major network present
	TELSTRA LIMITED A.C.N. 086 174 781	- In plot area. Flease read the Duty of Care and
	Generated On 30/10/2023 14:38:12	any assistance.

The above plan must be viewed in conjunction with the Mains Cable Plan on the following page

WARNING

Telstra plans and location information conform to Quality Level "D" of the Australian Standard AS 5488-Classification of Subsurface Utility Information.

As such, Telstra supplied location information is indicative only. Spatial accuracy is not applicable to Quality Level D.

Refer to AS 5488 for further details. The exact position of Telstra assets can only be validated by physically exposing it.

Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy.

Further on site investigation is required to validate the exact location of Telstra plant prior to commencing construction work.

A Certified Locating Organisation is an essential part of the process to validate the exact location of Telstra assets and to ensure the asset is protected during construction works.

See the Steps- Telstra Duty of Care that was provided in the email response.



		/	
	Report Damage: https://service.telstra.com.au/customer/general/forms/report-damage-to-telstra-equipment Ph - 13 22 03 Email - Telstra.Plans@team.telstra.com Planned Services - ph 1800 653 935 (AEST bus hrs only) General Enquiries	Sequence Number: 231496122	
		CAUTION: Fibre optic and/ or major network present	
TELSTRA LIMITED A.C.N. 086 174 781		in plot area. Flease read the Duty of Care and	
Generated On 30/10/2023 14:38:14		any assistance.	

WARNING

Telstra plans and location information conform to Quality Level "D" of the Australian Standard AS 5488-Classification of Subsurface Utility Information.

As such, Telstra supplied location information is indicative only. Spatial accuracy is not applicable to Quality Level D.

Refer to AS 5488 for further details. The exact position of Telstra assets can only be validated by physically exposing it.

Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy.

Further on site investigation is required to validate the exact location of Telstra plant prior to commencing construction work.

A Certified Locating Organisation is an essential part of the process to validate the exact location of Telstra assets and to ensure the asset is protected during construction works.

See the Steps- Telstra Duty of Care that was provided in the email response.

2 - 4 Lamberth Road, Goondiwindi Stormwater Management Plan

Appendix E Code Compliance Report



Proposed Commercial Development 2 - 4 Lamberth Road, Goondiwindi

Code Compliance Report



Prepared For Pearl Energy Pty Ltd



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This Document Has Been Approved by The Following Appropriately Qualified and Experienced Professional Civil Engineer:

2

Malachy McCann BEng (Hons), MIEAust, CPEng, NER, Registered Professional Engineer of Queensland (RPEQ) No. 13357

Report Number: C_23144 - R003

Issue	Date	Details	Author	Checked	Approved
А	31/01/24	Issue for Approval	EG	NR	NR
В	27/06/24	Issue for Approval	EG	ММ	ММ



1. Introduction

This Code Compliance Report has been commissioned by Pearl Energy Pty Ltd and forms part of a combined 'Material Change of Use' (MCU) and 'Reconfiguration of Lot' (ROL) application to be lodged for the proposed development located at 2 - 4 Lamberth Road in Goondiwindi.

The proposed development involves the creation of a new service station and truck refuelling area accessed via the Cunningham Highway.

A summary of the investigation and outcomes presented in this report are as follows:

- **9.4.3 Reconfiguring a Lot Code** Development complies with acceptable outcomes or presents performance solutions; and
- **9.4.4 Transport and Infrastructure Code** Development complies with acceptable outcomes or presents performance solutions.

Based on the outcomes of the above investigations, this report provides civil engineering recommendations suitable to address compliance with Goondiwindi Regional Council requirements.



2. 9.4.3 Reconfiguring a Lot Code

This section of the report assesses the proposed development against the relevant civil engineering items within the 9.4.3 Reconfiguring a Lot Code.

2.1 Utilities

Performance Outcomes	Acceptable Outcomes	Does the proposal meet the acceptable outcomes?	Council Use
<pre>PO3 Each lot has an adequate volume and supply of water that: a) meets the needs of users; b) is adequate for fire fighting purposes; c) ensures the health, safety and convenience of the community; and d) minimises adverse impacts on the receiving environment.</pre>	AO3.1 Where within an urban area or Rural Residential Zone (Rural Residential A and Rural Residential B precincts) each lot is connected to Council's reticulated water supply system in accordance with SC6.2 – Planning Scheme Policy 1 – Land Development Standards.	 Complies Performance Solution Not Applicable C_23144 DA50_Sewer and Water Layout Plan by Context Engineering shows the indicative location of the proposed connections to the existing water main in the Cunningham Highway verge. Further information on this infrastructure to be provided at detailed design stage. 	



Performance Outcomes	Acceptable Outcomes	Does the proposal meet the acceptable outcomes?	Council Use
 PO4 Each lot provides for the treatment and disposal of effluent and other waste water that: a) meets the needs of users; b) ensures the health, safety and convenience of the community; and c) minimises adverse impacts on the receiving environment. 	AO4.1 Where within an urban area each lot is connected to Council's reticulated sewerage system in accordance with SC6.2 – Planning Scheme Policy 1 – Land Development Standards.	 Complies Performance Solution Not Applicable C_23144 DA50_Sewer and Water Layout Plan by Context Engineering shows the indicative location of the proposed connections to the existing sewer main in the Cunningham Highway verge. Further information on this infrastructure to be provided at detailed design stage. 	
PO5 Stormwater drainage is designed and managed to avoid adverse impacts on surrounding development or compromise the natural health and functioning of	AO5 Stormwater drainage is provided in accordance with SC6.2 – Planning Scheme Policy 1 – Land Development Standards.	 Complies Performance Solution Not Applicable C_23144 R001_Stormwater Management Plan by Context Engineering addresses the stormwater drainage requirements for the site, with reference to SC6.2.4 of the planning 	

scheme policy.

adjoining waterway

systems.



3. 9.4.4 Transport and Infrastructure Code

This section of the report assesses the proposed development against the relevant civil engineering items within the 9.4.4 Transport and Infrastructure Code.

3.1 Water Supply

Performance Outcomes	Acceptable Outcomes	Does the proposal meet the acceptable outcomes?	Council Use
 PO3 Premises have an adequate volume and supply of water that: a) meets the needs of users; b) ensures the health, safety and convenience of the community; and c) is adequate for fire fighting purposes. 	AO3.1 Where within a water supply service area development is connected to a reticulated water supply system in accordance with SC6.2 Planning Scheme Policy.	 Complies Performance Solution Not Applicable C_23144 DA50_Sewer and Water Layout Plan by Context Engineering shows the indicative location of the proposed connections to the existing water main in the Cunningham Highway verge. Further information on this infrastructure to be provided at detailed design stage. 	



3.2 Wastewater Disposal

Performance Outcomes	Acceptable Outcomes	Does the proposal meet the acceptable outcomes?	Council Use
 PO4 Premises provide for the treatment and disposal of effluent and other waste water that: a) meets the needs of users; b) ensures the health, safety and convenience of the community; and c) minimizes adverse impacts on the receiving environment. 	AO4.1 Where within a sewerage service area development is connected to a reticulated sewerage system in accordance with SC6.2 Planning Scheme Policy 1 – Land Development Standards.	 Complies Performance Solution Not Applicable C_23144 DA50_Sewer and Water Layout Plan by Context Engineering shows the indicative location of the proposed connections to the existing sewer main in the Cunningham Highway verge. Further information on this infrastructure to be provided at detailed design stage. 	
PO5 Development does not discharge wastewater to a waterway or off site unless demonstrated to be best practice environmental management for that site.	N/A – development does not propose to discharge wastewater to a waterway.	 Complies Performance Solution Not Applicable N/A – development does not propose to discharge wastewater to a waterway. 	



Performance Outcomes	Acceptable Outcomes	Does the proposal meet the acceptable outcomes?	Council Use
 PO6 Any treatment and disposal of waste water to a waterway accounts for: a) The applicable water quality objectives for the receiving waters; and b) adverse impacts on ecosystem health or receiving waters; and c) in waters mapped as being of high ecological value, the adverse impacts of such releases and their offset. 	N/A – development does not propose to discharge wastewater to a waterway.	 Complies Performance Solution Not Applicable N/A - development does not propose to discharge wastewater to a waterway. 	
PO7 Wastewater discharge to a waterway is managed in a way that maintains ecological processes, riparian vegetation, waterway integrity, and downstream ecosystem health.	N/A – development does not propose to discharge wastewater to a waterway.	 Complies Performance Solution Not Applicable N/A – development does not propose to discharge wastewater to a waterway. 	



3.3 Stormwater infrastructure

Performance Outcomes	Acceptable Outcomes	Does the proposal meet the acceptable outcomes?	Council Use
PO8 Stormwater drainage is designed and managed during the construction and operation of development to avoid adverse impacts on surrounding development or compromise the natural health and functioning of adjoining waterway systems.	AO8 Development is provided with stormwater infrastructure in accordance with SC6.2 Planning Scheme Policy 1 – Land Development Standards	 Complies Performance Solution Not Applicable C_23144 R001_Stormwater Management Plan by Context Engineering addresses the stormwater drainage requirements for the site, with reference to SC6.2.4 of the planning scheme policy. 	
PO9 Operational activities for the development avoid or minimise changes to waterway hydrology from adverse impacts of altered stormwater quality and flow.	AO9 The Stormwater Management Plan prepared in accordance with AO8 is implemented.	 Complies Performance Solution Not Applicable It is anticipated that the development will comply. To be addressed at Operational Works Stage. 	



4. Disclaimer

This report has been prepared on behalf of and for the exclusive use of and is subject to and issued in accordance with the agreement between Context Engineering.

Our investigation and analysis has been specifically catered for the particular requirements of Pearl Energy Pty Ltd and may not be applicable beyond this scope. For this reason, any other third parties are not authorised to utilise this report without further input and advice from Context Engineering.

Context Engineering accepts no liability or responsibility whatsoever for the report in respect of any use of or reliance upon this report by any third party.

The investigation and analysis have relied on information provided by others. We accept no responsibility for the accuracy of material supplied by others. The accuracy of the investigation, analysis and report are dependent upon the accuracy of this information.

Stormwater Management Plan

2 - 4 Lamberth Road, Goondiwindi Stormwater Management Plan

Appendix F Correspondence

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From: Rodney O'Brien <<u>Rodney.OBrien@dsdilgp.qld.gov.au</u>> Sent: Tuesday, June 11, 2024 9:54 AM To: <u>paul.molenda1@optusnet.com.au</u> Subject: RE: Goondiwindi Service Station

Hi Paul

After discussing this with our local DTMR planning team, I can advise that if there is no option other than to discharge to the SCR, generally it will be permitted so long the applicant can demonstrate 'no worsening'.

If you have any preliminary design plans/figures DTMR can seek some initial feedback from their Hydraulic engineers.

I trust this will assist for now.

Regards Rod

Rodney O'Brien

Principal Planning Officer **Planning and Development Services Planning Group** Department of Housing, Local Government, Planning and Public Works

P 07 4616 7304 E rodney.obrien@dsdilgp.qld.gov.au 128 Margaret Street, Toowoomba QLD PO Box 825, Toowoomba QLD 4350





I acknowledge the Traditional Custodians of the land on which we walk, work and live. I pay my respects to Elders past, present, and emerging.

From: paul.molenda1@optusnet.com.au <paul.molenda1@optusnet.com.au>

Sent: Monday, June 10, 2024 12:09 PM

To: Rodney O'Brien <<u>Rodney.OBrien@dsdilgp.qld.gov.au</u>>

Cc: 'Mal McCann' <<u>mal.mccann@contexteng.com.au</u>>; 'Nick Rees' <<u>nick.rees@contexteng.com.au</u>>; 'Emma Laing' <<u>elaing@mecone.com.au</u>>; 'Maurice Hayes' <<u>cutter@hayesspraying.com.au</u>>; <u>ketan@pearlenergy.com.au</u> **Subject:** RE: Goondiwindi Service Station

Good Afternoon Rodney,

I was hoping to have heard back from you re a meeting in your Toowoomba Office to discuss the new site plan for the Goondiwindi site and implications with the site drainage.

We are OK to hold this meeting face to face or via a Teams meeting – can you please advise if you think this meeting will be held during the course of this week.

Regards,

Paul Molenda PM Property

M 0400 30 20 88 E paul.molenda1@optusnet.com.au

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From: paul.molenda1@optusnet.com.au <paul.molenda1@optusnet.com.au>
Sent: Thursday, May 30, 2024 10:42 AM
To: 'rodney.obrien@dsdilgp.qld.gov.au' <rodney.obrien@dsdilgp.qld.gov.au>
Subject: FW: Goondiwindi Service Station

Good Morning Rodney,

Zinal forwarded me your details re the proposed service station plus DT development for Goondiwindi.

The attached plans are most up to date so wanted to ensure that you had these.

We are obviously keen to sit down with you and your Officers to discuss the site drainage issues asap.

I look forward to hearing from you.

Regards,

Paul Molenda PM Property

M 0400 30 20 88 E paul.molenda1@optusnet.com.au

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Proposed Commercial Development 2 - 4 Lamberth Road, Goondiwindi

Engineering Services Report

Prepared For Pearl Energy Pty Ltd



Context Engineering



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This Document Has Been Approved by The Following Appropriately Qualified and Experienced Professional Civil Engineer:

Malachy McCann BEng (Hons), MIEAust, CPEng, NER, Registered Professional Engineer of Queensland (RPEQ) No. 13357

Report Number: C_23144 - R002

Issue	Date	Details	Author	Checked	Approved
1	29/01/24	Initial Issue	EG	NR	NR
2	27/06/24	Issue for Approval	EG	MM	ММ
3	31/07/24	Updated Architectural Plans	EG	MM	ММ
4	03/02/25	Updated Architectural Plans	JN	EG	ММ



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	2.4	Upstream Catchment	3
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Appendix D	DBYD
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1. Introduction

This Engineering Services Report has been commissioned by Pearl Energy Pty Ltd and forms part of a combined 'Material Change of Use' (MCU) and 'Reconfiguration of Lot' (ROL) application to be lodged with Goondiwindi Regional Council over the following parcels of land:

Property Address:	2 - 4 Lamberth Road, Goondiwindi
Property Description:	Lot 262 on SP104612
Client:	Pearl Energy Pty Ltd
Council:	Goondiwindi Regional Council
Total Site Area:	1.78 ha (1.27 ha developed site area)

The proposed development involves the creation of a new service station and truck refuelling area accessed via the Cunningham Highway ('subject site'). The proposed layout is shown in Figure 1-1 below.



Figure 1-1 Proposed Development Layout (Source: Verve Concept Site Plan)

This report describes the key engineering servicing issues associated with the proposed development, with the objectives of investigations listed below:

- Identify existing site conditions;
- Provide a schematic earthworks design of the site and identify associated erosion and sediment control requirements; and
- Identify proposed service connection locations.

Based on the outcomes of the above investigations, this report provides engineering servicing recommendations to address compliance with Goondiwindi Regional Council requirements.



2. Site Characteristics

2.1 Site Location

The proposed development is situated on a single existing allotment at 2 - 4 Lamberth Road, Goondiwindi described as Lot 262 on SP104612. The lot is located within the Goondiwindi Regional Council local government area and is zoned as 'High Commercial Precinct' (Centre Zone) under the Goondiwindi Regional Council Planning Scheme.

The site is located in the suburb of Goondiwindi, with the existing allotment bounded by Cunningham Highway to the east, Marshall Street to the south, Lamberth Road to the west and existing residential development to the north.

A general locality plan is presented in Figure 2-1 below, with the corresponding areas indicatively represented via:

- Pink: Existing allotment;
- Purple: Total site area (including 'surplus area'); and
- Dashed Purple: Proposed development area.



Figure 2-1 Site Locality Plan (Source: Nearmap 2023)

2.2 Land Usage

The existing site is undeveloped, vacant land that primarily consists of a well grassed pervious surface with established vegetation, as shown in Figure 2-1 above. The allotment is currently accessed via an existing gravel driveway to Lamberth Road.

2.3 Topography

Survey of the site by SMK QLD (Project No: 23195-I) indicates that the topography of the existing allotment is extremely flat, with an average grade of less than 0.5% across the site. Approximate levels across the developed area range from RL 217.9m AHD in the south-eastern corner of the site fronting Cunningham Highway, to RL 217.3 in the north-western corner of the site.

Other notable existing topographic features of the area include:

- **Stockpile** \rightarrow Max height 2.2m, partially located within the 'surplus area' of the development;
- Surface drain \rightarrow Extends from north-eastern corner of the site to EMT A SP104612 to the south; and
- **Combined drainage and sewer easement (EMT A SP104612)** → Located to the south of the site area and consists of an open channel and sewer pipe.



Figure 2-2 Existing Site Topography (Source: SMK QLD Project No: 23195-I)

2.4 Upstream Catchment

2011 aerial LiDAR survey (1m tiles accessed from EVLIS on 30 October 2023) demonstrate that a portion of the existing allotment to the north described as Lot 111 on RP895883 grades to a low point along the northern boundary of the site. This contributing area from the neighbouring allotment has been measured as approximately 0.3 ha, as shown in blue in Figure 2-3 below.







Figure 2-3 Lot 262 on SP104612 Existing Contours (Source Aerial LiDAR Survey 2011)

2.5 Existing Services

Council infrastructure mapping indicates that there is existing water and sewer infrastructure surrounding the site. This includes an existing water main to the north, and an existing sewer main to the south contained within EMT A SP104612. Survey of the site by SMK QLD (Project No: 23195-I) indicates that there is also an existing sewer main within the Cunningham Highway verge to the north of the site.



Figure 2-4 Water and Sewer Infrastructure (Source: Goondiwindi Network Mapping)

A Before You Dig (BYD) search of the site identified the following services within proximity to the site:

- Underground communications (Telstra, Nextgen and NBN); and
- Overhead electricity (Essential Energy).

The appropriate consultants should be engaged to determine the necessary requirements of connections into this infrastructure.



2.6 Flooding

The Goondiwindi Flood Hazard Overlay Map indicates that the allotment is within the '*Area of Floodplain Protected up to a 0.5% AEP Flood Event by Council Town Levee and Council Verified Natural Topographic Features*'. Accordingly, the site is not identified as within any of the following overlays as indicated by Figure 2-5 below:

- High Flood Hazard Area;
- Medium Flood Hazard Area; and
- Low Flood Hazard Area.



Figure 2-5 Goondiwindi Council Flood Hazard Overlay (Source: Overlay Map - OMCOO1c)

As the site is not within mapped overlays, no further flood investigation or analysis was undertaken for the site.



3. Stormwater Drainage

A separate report has been prepared for submission with the development application to address the stormwater management plan for this site.

The report prepared by Context Engineering (Ref: C_23144 RO01_Stormwater Management Plan) identified the lawful point of discharge and describes the stormwater quantity and quality mitigation methods for the development, ensuring compliance with Goondiwindi Regional Council development guidelines.



4. Engineering Constraints

4.1 Earthworks

The earthworks associated with the development will predominantly involve raising the site to accommodate the proposed building pad and internal carparking areas. A preliminary earthworks volume for the internal site works has been estimated from the survey surface to the underside of the pads and pavement. This volume has been calculated as approximately 14,356m³ of imported material.

These values are preliminary, based on conceptual design and is subject to change as part of refinements undertaken as part of the detailed design phase.

4.2 Acid Sulfate Soils

The allotment was not identified as being located within the projected boundaries of acid sulfate soils mapped by Queensland Globe. As such, an Acid Sulfate Soil Management Plan is not expected to be required for the site, and no further investigations were undertaken.

4.3 Erosion and Sediment Control

During earthworks, there will be an inevitable area of exposed earth, stripped areas and stockpiles. Appropriate methods to manage this process and ensure minimal impacts to surrounding properties, infrastructure and receiving water will therefore be required.

A conceptual Erosion and Sediment Control Plan is included in Appendix B, in accordance with the requirements of Schedule 6.2 – Planning Scheme Policy 1 – *Land Development Standards of the Goondiwindi Planning Scheme*. Further documentation will be prepared as part of the detailed design phase for this site and be included in the Construction Management Plan.

4.4 Vehicular Access

External roadworks within the Cunningham Highway will be required to accommodate the development, with vehicular access to be provided along the western boundary of the site. Refer traffic engineering consultant documentation for further details.
5. Water and Sewer

5.1 Capacity

The proposed development has been assessed under the Queensland Government *Planning Guidelines for Water Supply and Sewerage* to provide an indicative estimation of the expected demand rates for the subject site. *Table A- Indicative average demands/flows from commercial/institutional developments (litres/day)* of this document was used to calculate expected water and sewer loading of the development, as summarised in Table 5-1 below.

Table 5-1 Expected Sewer and Water Demand

Item	Service Station (T1)	Food & Drink (T2)	Total	
GFA (Buildings Only)	395m ²	163m ²	558m²	
Water Demand Rate	700 (Litres/day per 100 sqm GFA)	4000 (Litres/day per 100 sqm GFA)	-	
Water Demand	2,765 Litres/ Day	6,520 Litres/ Day	9,285 Litres/ Day	
Sewer Demand Rate	350 (Litres/day per 100 sqm GFA)	2,000 (Litres/day per 100 sqm GFA)	-	
Sewer Demand	1,383 Litres/ Day	3,260 Litres/ Day	4,643 Litres/ Day	

This demonstrates that the additional water and sewer demand from the development is expected to be 9,285 litres/day and 4,643 litres/day respectively. As the allotment is zoned as 'High Commercial Precinct', is anticipated that the existing infrastructure surrounding the site will have sufficient capacity to accommodate the increase in demand.

5.2 Connection

It is anticipated that the sewer and water connections for the site will be provided via connection to the existing mains in the Cunningham Highway verge to the north of the site. Refer C_23144 DA50_Sewer and Water Layout Plan in Appendix B for further details.

6. Conclusion

This Engineering Services Report has been commissioned by Pearl Energy Pty Ltd for the MCU at 2 - 4 Lamberth Road, Goondiwindi. The proposed development involves the creation of a new service station and truck refuelling area accessed via the Cunningham Highway ('subject site').

A summary of the investigation and outcomes presented in this report are as follows:

- **Engineering Constraints (Section 5):** Imported fill required to raise site. Site within low probability of Acid Sulfate Soil area. ESCP requirements to be undertaken in accordance with Council guidelines.
- Water and Sewer (Section 6): Water and sewer servicing for the site to be provided via connection to the existing infrastructure in the Cunningham Highway verge.

7. Disclaimer

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Engineering Services Report











	Property Boundary
— — — 0.1 — — —	Existing Surface Contour
— — UGE — — UGE — —	Underground Electrical
— — UGT — — UGT — —	Underground Telecom
	Batter Bottom
	Batter Top
$\rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow -$	Swale Invert
	Edge of bitumen
//	Fence

Proposed Legend

	Site Boundary
0.1	Design Surface Contour
	Retaining Wall

Bulk Earthworks Legend Hatching from Existing surface to Bulk Earthworks surface					
	Cut		Fill		
	>15.0m		> 15.0m		
	10.0 to 15.0m		10.0 to 15.0r		
	5.0 to 10.0m		5.0 to 10.0m		
	2.0 to 5.0m		2.0 to 5.0m		
	1.0 to 2.0m		1.0 to 2.0m		
	0.5 to 1.0m		0.5 to 1.0m		
	0.25 to 0.5m		0.25 to 0.5m		
	0.0 to 0.25m		0.0 to 0.25n		

 Earthworks Schedule

 Volumes measured from Existing Surface to Bulk Earthworks surface

 Type
 Volume (m³)

 Cut
 -267

 Fill
 14,627

 Total Balance
 14,360

 Assume no strip, 200mm pavement, 200mm structural slab

Assume no strip, 200mm pavement, 200mm structural slab depth and 200mm Footpath.

Note:

This drawing is conceptual only and must be viewed in conjunction with C_23144 R002_Engineering Services Report by Context Engineering. The proposed design is preliminary, based on available information at the time of issue and is subject to change as part of refinements undertaken within the detailed design phase.

Note:

Notwithstanding that existing services may or may not be shown on the job drawings, no responsibility is taken by the Superintendent or the Principal for this information which has been supplied by others. The details are provided for information only. The Contractor shall ascertain the position of any underground services in this area and shall be responsible for making good any damage thereto.

evision	Date	Issue Details	Drawn	Designed	QR Code
1	29.01.24	Issued For Approval	CG	CG	
2	27.06.24	Issued For Approval	CG	CG	
3	30.07.24	Issued For Approval	CG	CG	
4	04.02.25	Issued For Approval (Updated Architectural Layout)	CG	CG	





Legend	
	Existing Surface
	Design Surface
	Bulk Earthworks Surface
	Retaining Wall



Section Horizontal: 1:125 Vertical: 1:125

Note: This drawing is conceptual only and must be viewed in conjunction with C_23144 R002_Engineering Services Report by Context Engineering. The proposed design is preliminary, based on available information at the time of issue and is subject to change as part of refinements undertaken within the detailed design phase. Revision Date Issue Details Drawn Designed QR Code 29.01.24 Issued For Approva CG CG CG CG CG CG CG 27.06.24 Issued For Approval 2 1:125 2.5 0 1:250 2-4 Lamberth Road, Pearl Energy Pty Ltd 2.5 5m A1 **Issued for Approval** 30.07.24 Issued For Approval 04.02.25 Issued For Approval (Updated Architectural Layout) Goondiwindi Not for Construction Disclaimer All dimensions to be checked of dimensions only, do not scale.



	Property Boundary
— — — 0.2 — — —	Existing Surface Contour
	Underground Electrical
— — UGT — — UGT — —	Underground Telecom
	Batter Bottom
	Batter Top
$\rightarrow \rightarrow $	Swale Invert
	Edge of bitumen
//	Fence

Proposed Legend

	Site Boundary
0.1	Design Surface Contour
	Retaining Wall





								Inset A - External Roadw	vor	ks Layout Plan		
No sho Suj has info of res	ite: withs wn or berinte been ormati any u consik	standing that existing services may or may not n the job drawings, no responsibility is taken by t endent or the Principal for this information whi n supplied by others. The details are provided f ion only. The Contractor shall ascertain the positi underground services in this area and shall ble for making good any damage thereto.	be he ich for on be	NO This con Rep prel issu und	te: s drawing is conc junction with C_ ort by Context E liminary, based on le and is subject ertaken within the	eptual _23144 ngineer availat to cha detaile	only and must be viewed in R002_Engineering Services ring. The proposed design is ole information at the time of ange as part of refinements d design phase.	1:250 Scale	le			ENERGY SERVICE
Revision	Date	Issue Details	Drawn	Designed	QR Code	Status		Scale	Clie	nt	Project	
1 2 3	27.06.24 30.07.24 04.02.25	Issued For Approval Issued For Approval Issued For Approval (Updated Architectural Layout)	CG CG CG	CG CG CG			Issued for Approval Not for Construction	1:250 5 0 5 10m A1 1:500 40 60 80 100m A1 1:2000 20 0 20 40 60 80 100m A1 1:4000 40 40 60 80 100m A1 A3		Pearl Energy Pty Ltd	2-1 <u>Disclaimer</u> All dimensions to be chee dimensions only, do not s	4 Lamberth Road, Goondiwindi



Drawing Title External					
Roadworks Layout					
Plan (Sheet 2 of 2)					
Project No.	Drawing No.	Revision			
C_23144 DA21 3					





Indicative Structure Label (1/1) **Proposed Maintenance Hole** Indicative Inlet Pit Indicative Internal Stormwater Drainage Indicative Drainage Path

Indicative Strip Drain



Note:

This drawing is conceptual only and must be viewed in conjunction with C_23144 R001_Stormwater Management Plan by Context Engineering. The proposed design is preliminary, based on available information at the time of issue and is subject to change as part of refinements undertaken within the detailed design phase.

									location plans - available at www
Revision	Date	Issue Details	Drawn	Designed	QR Code	Status	Scale	Client	Project
1	29.01.24	Issued For Approval	CG	CG					
2	27.06.24	Issued For Approval	CG	CG				Decid Freeman Division	O (Law barth David
3	30.07.24	Issued For Approval	CG	CG		Issued for Approval	1:400 4 0 4 8 12 16 20m A1	Pearl Energy Pty Ltd	2-4 Lamberth Road,
4	04.02.25	Issued For Approval (Updated Architectural Layout)	CG	CG		Not for Construction	1:800 A3		Goondiwindi
									Disclaimer All dimensions to be checked on site by contractor prior to construction. Use written dimensions only, do not scale.

	Property Boundary
— — — 0.2 — — —	Existing Surface Contour
	Underground Electrical
— — UGT — — UGT — —	Underground Telecom
	Batter Bottom
	Batter Top
$\rightarrow \rightarrow $	Swale Invert
	Edge of bitumen
//	Fence

Proposed Legend

_		Site Boundary
	_	Catchment Boundary

Developed Catchment Area										
Legend	Description	Area (ha)	Total Area (ha)	Total % Imperviou						
	Roof	0.070								
	Hardstand	0.022								
	Driveway	1.008	1.297	89						
	High Risk Fuel	0.052								
	Pervious	0.145								



Note:

This drawing is conceptual only and must be viewed in conjunction with C_23144 R001_Stormwater Management Plan by Context Engineering. The proposed design is preliminary, based on available information at the time of issue and is subject to change as part of refinements undertaken within the detailed design phase.

Note:

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1	29.01.24	Issued For Approval	CG	CG					
2	27.06.24	Issued For Approval	CG	CG			4.050 5 40 5 40 40	Decad Freewood Division	O (Laurela anti- Daniel
3	30.07.24	Issued For Approval	CG	CG		Issued for Approval	1:250 5 0 5 10m A1	Pearl Energy Pty Ltd	2-4 Lamberth Road,
4	04.02.25	Issued For Approval (Updated Architectural Layout)	CG	CG		Not for Construction	1:500 A3		Goondiwindi
									Disclaimer All dimensions to be checked on site by contractor prior to construction. Use written dimensions only, do not scale.

	Property Boundary
— — — 0.1 — — —	Existing Surface Contour
— — UGE — — UGE — —	Underground Electrical
— — UGT — — UGT — —	Underground Telecom
	Batter Bottom
	Batter Top
$\rightarrow \rightarrow $	Swale Invert
	Edge of bitumen
//	Fence

Proposed Legend

	Site Boundary
0.1	Design Surface Contour
S S	Proposed Sewer Line
\bigcirc	Proposed Sewer Manhole
	Proposed Water Line



Note:

This drawing is conceptual only and must be viewed in conjunction with C_23144 R002_Engineering Services Report by Context Engineering. The proposed design is preliminary, based on available information at the time of issue and is subject to change as part of refinements undertaken within the detailed design phase.

										location plans available at www
Revision	Date	Issue Details	Drawn	Designed	QR Code	Status	Scale	Client	Project	
1	29.01.24	Issued For Approval	CG	CG						
2	27.06.24	Issued For Approval	CG	CG				Decid Francis Division		Level and Based
3	30.07.24	Issued For Approval	CG	CG		Issued for Approval	1:400 4 0 4 8 12 16 20m A1	Pearl Energy Pty Ltd	2-4	F Lamberth Road,
4	04.02.25	Issued For Approval (Updated Architectural Layout)	CG	CG		Not for Construction	1:800 A3			Goondiwindi
									Disclaimer All dimensions to be check dimensions only, do not sca	ed on site by contractor prior to construction. Use written ale.

	Property Boundary
— — — 0.1 — — —	Existing Surface Contour
— — UGE — — UGE — —	Underground Electrical
— — UGT — — UGT — —	Underground Telecom
	Batter Bottom
	Batter Top
$\rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow -$	Swale Invert
	Edge of bitumen
//	Fence

Proposed Legend

	Site Boundary
-×	Proposed Sediment Fence (or as directed by Site Superintendent)
	Temporary Exit Washdown Grate

Proposed Area of Disturbance

Note:

This drawing is conceptual only and must be viewed in conjunction with C_23144 R002_Engineering Services Report by Context Engineering. The proposed design is preliminary, based on available information at the time of issue and is subject to change as part of refinements undertaken within the detailed design phase.

Sediment Basin Calculations

1.	Sediment Basin	= "Type D"	
2.	Settling Volume	= 400 * 0.5 * 1.3 Area (Ha) = 260m ³	
	Where: Cv Area	= 0.5 (Open Soil) = 1.3ha	
3.	Sediment Storage Volume	= 50% * Settling Volume = 130m ³	



									location plans - available at
vision	Date	Issue Details	Drawn	Designed	QR Code	Status	Scale	Client	Project
1 2 3	29.01.24 27.06.24 04.02.25	Issued For Approval Issued For Approval Issued For Approval (Updated Architectural Layout)	CG CG CG	CG CG CG		Issued for Approval	1:250 5 0 5 10m A1 1:500 A3	Pearl Energy Pty Ltd	2-4 Lamberth Road, Goondiwindi
									Disclaimer All dimensions to be checked on site by contractor prior to construction. Use writte dimensions only, do not scale.





ARCHITECTURAL DRAWINGS PROPOSED SERVICE STATION, TRUCK STOP & FOOD & DRINK 2-4 LAMBERTH RD, GOONDIWINDI QLD 4390



ONSULTING ENGINEE

LOCATION MAP

DA ARCHITECTURAL DRAWINGS									
DRG No.	DRAWING TITLE								
DA00	COVER PAGE								
DA01	PROPOSED SITE PLAN								
DA02	PROPOSED FLOOR PLAN - T1								
DA04	BUILDING ELEVATIONS & PERSPECTIVES								
DA05	BUILDING ELEVATIONS & PERSPECTIVES								
DA06	BUILDING ELEVATIONS & PERSPECTIVES								



This drawing package is for <u>D.A. Purposes only</u> and is <u>M</u> <u>ALL</u> design components are shown indicative only and ari any pricing based upon the details shown in these drawi verve building design co. Shall not be held responsible F

VERVE SCHEDULES DISCLAIMER:

 ALL SCHEDULES SHOULD BE CHECKED WITH THE REMAINDER OF THE DRAWING SET.
 SCHEDULED RATES AND AREAS ARE INTENDED FOR ASSISTANCE ONLY. NO

RESPONSIBILITY IS TAKEN FOR THE ACCURACY OF QUANTITIES. ANY DISCREPANCIES IN SCHEDULES SHOULD BE IDENTIFIED TO THE AUTHOR

4. ALL AREAS ARE GROSS AREAS, UNLESS NOTED OTHERWISE



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DA ISSUE THIS DRAWING IS NOT FOR CONSTRUCTION

3D PERSPECTIVE FOR ILLUSTRATION ONLY

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oject Description ROPOSED SERVICE STATION, TRUCK TOP & FOOD & DRINK -4 LAMBERTH RD. GOONDIWINDI				
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NOTED. 4. ALL AREAS ARE GROSS AREAS, UNLESS NOTED OTHERWISE



DESIGN GROUP

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CUNNINGHAM HIGHWAY	FUR LUNS RPD LOT 262 ON SP104612 PARISH: GOONDIWINDI COUNTY: MARSH COUNCIL: GOONDIWINDI REGIONAL DEVELOPMENT ASSESSM TOTAL SITE AREA DEVELOPED AREA SURPLUS AREA (CALCULATED OVER DEVELOPED AREA) INCLUDES ALL ROOFED AREAS (CALCULATED OVER DEVELOPED AREA) IMPERVIOUS AREAS (CALCULATED OVER DEVELOPED AREA) IMPERVIOUS AREAS (CALCULATED OVER DEVELOPED AREA) DEVELOPED OVER DEVELOPED AREAS	ENT - 17,793m ² - 12,974m ² - 4,819m ² - 1,368m ² - 7.5%
ND	PRE STIE DEVELOPMENT (INCLUDES BUILDING ROOFED AREAS) POST SITE DEVELOPMENT (INCLUDES BUILDING ROOFED AREAS) BUILDING AREAS T1 SERVICE STATION T2 FOOD & DRINK TOTAL BUILDING GEA	- 000 ⁻ - 16,437m ²) - <u>395m²</u> - <u>163m²</u> - 558m ²
	EXTERNAL STRUCTURES CAR FORECOURT (UNENCLOSED BUILDING FOOTPRINT) TRUCK FORECOURT (UNENCLOSED BUILDING FOOTPRINT) T1 REFUSE/SERVICES T2 REFUSE TOTAL EXTERNAL STRUCTURES	- 290m ² - 230m ² - 30m ² - 16m ² - 566m ²
	CAR PARKING PARKING REQUIRED (REFER TO TRAFFIC REPORT) PARKING PROVIDED TRUCK PARKING CAR REFUELLING TRUCK REFUELLING (DOUBLE SIDED REFUELLING)	- 37 - 12 - 6 - 3

GN

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GN GN	STOP & FOOD & DRINK				
GN GN GN	Scale @A1 1:400 Drawn IN	Date MAR 2024 Approved By GN	Job Number - Drawing Number	DA01	Revision D





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- NOTE: 1. ALL EXTERNAL MATERIALS & FINISHES SHOWN INDICATIVE ONLY & SUBJECT TO FINAL TENANT STANDARDS
- 2. ALL DIMENSIONS MEASURED FROM FINISHED GROUND FLOOR LEVEL UNLESS NOTED OTHERWISE
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<u>RPD</u>

LOT 262 ON SP104612 PARISH: GOONDIWINDI COUNTY: MARSH COUNCIL: GOONDIWINDI REGIONAL

SCHEDULE OF LOT AREAS

LOT 13- 12,974m² LOT 1 - 52,755m²

Project Description PROPOSED SERVICE STOP & FOOD & DR 2-4 LAMBERTH RD,	STATION, TRUCK INK GOONDIWINDI	PROPOSED SU	BDIVISION	I PLAN
Scale @A1 As indicated Drawn NJG	Date JULY 2024 Approved By GN	Job Number - Drawing Number 22264	DA07	Revision B

Engineering Services Report







Job No 35363315

Caller	Details				
Contact:	Eneh Gilbert	Caller Id:	3097870	Phone:	0435 397 522
Company:	Not supplied				
Address:	72 Costin Street Fortitude Valley QLD 4006	Email:	eneh.gilbert@conte	xteng.com.au	

2 - 4 Lamberth Road,

Dig Site and Enquiry Details

WARNING: The map below only displays the location of the proposed dig site and does not display any asset owners' pipe or cables. The area highlighted has been used only to identify the participating asset owners, who will send information to you directly.

	User Reference:	2 - 4 Lamberth Road, Goondawindi	
Charles Ave	Working on Behalf of:	Private	
Warden St 39	Enquiry Date:	Start Date:	End Date:
	30/10/2023	01/11/2023	02/12/2023
Ha I	Address:		
Tofunts.	2-4 Lamberth Road Goondiwindi QLD 4390		
# /	Job Purpose:	Onsite Activ	ities:
1 10	Excavation	Mechanical E	xcavation
	Location of Workplace:	Location in l	Road:
Goondiwindi	Both	Road, Nature	Strip, Footpath
Redmond Park	 Check that the location Should the scope of we enquiry. Do NOT dig without of 	n of the dig site is correct. If not yo orks change, or plan validity dates	u must submit a new enquiry. expire, you must submit a new psibility. If you do not understanc
10.1	the plans or how to pr	oceed safely, please contact the re	levant asset owners.
- V 🔶 *	Notes/Description of Wo	rks:	
Mathabre Rive	Not supplied		

Your Responsibilities and Duty of Care

- The lodgement of an enquiry does not authorise the project to commence. You must obtain all necessary information from any and all likely impacted asset owners prior to excavation.
- If plans are not received within 2 working days, contact the asset owners directly & quote their Sequence No.
- ALWAYS perform an onsite inspection for the presence of assets. Should you require an onsite location, contact the asset owners directly. Please remember, plans do not detail the exact location of assets.
- Pothole to establish the exact location of all underground assets using a hand shovel, before using heavy machinery.
- Ensure you adhere to any State legislative requirements regarding Duty of Care and safe digging requirements.
- If you damage an underground asset you MUST advise the asset owner immediately.
- By using this service, you agree to Privacy Policy and the terms and disclaimers set out at www.byda.com.au
- For more information on safe excavation practices, visit www.byda.com.au

Asset Owner Details

The assets owners listed below have been requested to contact you with information about their asset locations within 2 working days.

Additional time should be allowed for information issued by post. It is your responsibility to identify the presence of any underground assets in and around your proposed dig site. Please be aware, that not all asset owners are registered with the Before You Dig service, so it is your responsibility to identify and contact any asset owners not listed here directly.

** Asset owners highlighted by asterisks ** require that you visit their offices to collect plans.

Asset owners highlighted with a hash # require that you call them to discuss your enquiry or to obtain plans.

Seq. No.	Authority Name	Phone	Status
231496120	Essential Energy	13 23 91	NOTIFIED
231496121	NBN Co Qld	1800 687 626	NOTIFIED
231496119	Nextgen NCC - QLD	1800 262 663	NOTIFIED
231496122	Telstra QLD Regional	1800 653 935	NOTIFIED

END OF LITILITIES LIST

Lodge Your Free Enquiry Online - 24 Hours a Day, Seven Days a Week



То:	Eneh Gilbert
Phone:	Not Supplied
Fax:	Not Supplied
Email:	eneh.gilbert@contexteng.com.au

Dial before you dig Job #:	35363315	
Sequence #	231496121	VOLL DIC
Issue Date:	30/10/2023	WWW.1100.com.au
Location:	2-4 Lamberth Road, Goondiwindi, QLD, 4390	

Indicative Plans



	Parcel and the location
3	Pit with size "5"
35	Power Pit with size "2E". Valid PIT Size: e.g. 2E, 5E, 6E, 8E, 9E, E, null.
	Manhole
\otimes	Filler
-3 PO-T-25.0m P40-20.0m	Cable count of trench is 2. One "Other size" PVC conduit (PO) owned by Telstra (-T-), between pits of sizes, "5" and "9" are 25.0m apart. One 40mm PVC conduit (P40) owned by NBN, between pits of sizes, "5" and "9" are 20.0m spart.
-0-1-0-	2 Direct buried cables between pits of sizes ,"5" and "9" are 10.9m apart.
-00	Trench containing any INSERVICE/CONSTRUCTED (Copper/RF/Fibre) cables.
-00-	Trench containing only DESIGNED/PLANNED (Copper/RF/Fibre/Power) cables.
-00	Trench containing any INSERVICE/CONSTRUCTED (Power) cables.
BROADWAY ST	Road and the street name "Broadway ST"
Scale	0 20 40 60 Meters 1:2000 1 cm equals 20 m

















Emergency Contacts

You must immediately report any damage to the **nbn**[™] network that you are/become aware of. Notification may be by telephone - 1800 626 329.
















-	Report Damage: https://service.telstra.com.au/customer/general/forms/report-damage-to-telstra-equipment Ph - 13 22 03	Sequence Number: 231496122
	Email - Telstra.Plans@team.telstra.com Planned Services - ph 1800 653 935 (AEST bus hrs only) General Enquiries	CAUTION: Fibre optic and/ or major network present
	TELSTRA LIMITED A.C.N. 086 174 781	- In plot area. Flease read the Duty of Care and
	Generated On 30/10/2023 14:38:12	any assistance.

The above plan must be viewed in conjunction with the Mains Cable Plan on the following page

WARNING

Telstra plans and location information conform to Quality Level "D" of the Australian Standard AS 5488-Classification of Subsurface Utility Information.

As such, Telstra supplied location information is indicative only. Spatial accuracy is not applicable to Quality Level D.

Refer to AS 5488 for further details. The exact position of Telstra assets can only be validated by physically exposing it.

Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy.

Further on site investigation is required to validate the exact location of Telstra plant prior to commencing construction work.

A Certified Locating Organisation is an essential part of the process to validate the exact location of Telstra assets and to ensure the asset is protected during construction works.

See the Steps- Telstra Duty of Care that was provided in the email response.



		/
-	Report Damage: https://service.telstra.com.au/customer/general/forms/report-damage-to-telstra-equipment Ph - 13 22 03	Sequence Number: 231496122
	Email - Telstra.Plans@team.telstra.com Planned Services - ph 1800 653 935 (AEST bus hrs only) General Enquiries	CAUTION: Fibre optic and/ or major network present
	TELSTRA LIMITED A.C.N. 086 174 781	in plot area. Flease read the Duty of Care and
Generated On 30/10/2023 14:38:14		any assistance.

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See the Steps- Telstra Duty of Care that was provided in the email response.

Engineering Services Report







Proposed Commercial Development 2 - 4 Lamberth Road, Goondiwindi

Code Compliance Report



Prepared For Pearl Energy Pty Ltd



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This Document Has Been Approved by The Following Appropriately Qualified and Experienced Professional Civil Engineer:

2

Malachy McCann BEng (Hons), MIEAust, CPEng, NER, Registered Professional Engineer of Queensland (RPEQ) No. 13357

Report Number: C_23144 - R003

Issue	Date	Details	Author	Checked	Approved
А	31/01/24	Issue for Approval	EG	NR	NR
В	27/06/24	Issue for Approval	EG	ММ	ММ



1. Introduction

This Code Compliance Report has been commissioned by Pearl Energy Pty Ltd and forms part of a combined 'Material Change of Use' (MCU) and 'Reconfiguration of Lot' (ROL) application to be lodged for the proposed development located at 2 - 4 Lamberth Road in Goondiwindi.

The proposed development involves the creation of a new service station and truck refuelling area accessed via the Cunningham Highway.

A summary of the investigation and outcomes presented in this report are as follows:

- **9.4.3 Reconfiguring a Lot Code** Development complies with acceptable outcomes or presents performance solutions; and
- **9.4.4 Transport and Infrastructure Code** Development complies with acceptable outcomes or presents performance solutions.

Based on the outcomes of the above investigations, this report provides civil engineering recommendations suitable to address compliance with Goondiwindi Regional Council requirements.



2. 9.4.3 Reconfiguring a Lot Code

This section of the report assesses the proposed development against the relevant civil engineering items within the 9.4.3 Reconfiguring a Lot Code.

2.1 Utilities

Performance Outcomes	Acceptable Outcomes	Does the proposal meet the acceptable outcomes?	Council Use
<pre>PO3 Each lot has an adequate volume and supply of water that: a) meets the needs of users; b) is adequate for fire fighting purposes; c) ensures the health, safety and convenience of the community; and d) minimises adverse impacts on the receiving environment.</pre>	AO3.1 Where within an urban area or Rural Residential Zone (Rural Residential A and Rural Residential B precincts) each lot is connected to Council's reticulated water supply system in accordance with SC6.2 – Planning Scheme Policy 1 – Land Development Standards.	 Complies Performance Solution Not Applicable C_23144 DA50_Sewer and Water Layout Plan by Context Engineering shows the indicative location of the proposed connections to the existing water main in the Cunningham Highway verge. Further information on this infrastructure to be provided at detailed design stage. 	



Performance Outcomes	Acceptable Outcomes	Does the proposal meet the acceptable outcomes?	Council Use
 PO4 Each lot provides for the treatment and disposal of effluent and other waste water that: a) meets the needs of users; b) ensures the health, safety and convenience of the community; and c) minimises adverse impacts on the receiving environment. 	AO4.1 Where within an urban area each lot is connected to Council's reticulated sewerage system in accordance with SC6.2 – Planning Scheme Policy 1 – Land Development Standards.	 Complies Performance Solution Not Applicable C_23144 DA50_Sewer and Water Layout Plan by Context Engineering shows the indicative location of the proposed connections to the existing sewer main in the Cunningham Highway verge. Further information on this infrastructure to be provided at detailed design stage. 	
PO5 Stormwater drainage is designed and managed to avoid adverse impacts on surrounding development or compromise the natural health and functioning of	AO5 Stormwater drainage is provided in accordance with SC6.2 – Planning Scheme Policy 1 – Land Development Standards.	 Complies Performance Solution Not Applicable C_23144 R001_Stormwater Management Plan by Context Engineering addresses the stormwater drainage requirements for the site, with reference to SC6.2.4 of the planning 	

scheme policy.

adjoining waterway

systems.



3. 9.4.4 Transport and Infrastructure Code

This section of the report assesses the proposed development against the relevant civil engineering items within the 9.4.4 Transport and Infrastructure Code.

3.1 Water Supply

Performance Outcomes	Acceptable Outcomes	Does the proposal meet the acceptable outcomes?	Council Use
 PO3 Premises have an adequate volume and supply of water that: a) meets the needs of users; b) ensures the health, safety and convenience of the community; and c) is adequate for fire fighting purposes. 	AO3.1 Where within a water supply service area development is connected to a reticulated water supply system in accordance with SC6.2 Planning Scheme Policy.	 Complies Performance Solution Not Applicable C_23144 DA50_Sewer and Water Layout Plan by Context Engineering shows the indicative location of the proposed connections to the existing water main in the Cunningham Highway verge. Further information on this infrastructure to be provided at detailed design stage. 	



3.2 Wastewater Disposal

Performance Outcomes	Acceptable Outcomes	Does the proposal meet the acceptable outcomes?	Council Use
 PO4 Premises provide for the treatment and disposal of effluent and other waste water that: a) meets the needs of users; b) ensures the health, safety and convenience of the community; and c) minimizes adverse impacts on the receiving environment. 	AO4.1 Where within a sewerage service area development is connected to a reticulated sewerage system in accordance with SC6.2 Planning Scheme Policy 1 – Land Development Standards.	 Complies Performance Solution Not Applicable C_23144 DA50_Sewer and Water Layout Plan by Context Engineering shows the indicative location of the proposed connections to the existing sewer main in the Cunningham Highway verge. Further information on this infrastructure to be provided at detailed design stage. 	
PO5 Development does not discharge wastewater to a waterway or off site unless demonstrated to be best practice environmental management for that site.	N/A – development does not propose to discharge wastewater to a waterway.	 Complies Performance Solution Not Applicable N/A – development does not propose to discharge wastewater to a waterway. 	



Performance Outcomes	Acceptable Outcomes	Does the proposal meet the acceptable outcomes?	Council Use
 PO6 Any treatment and disposal of waste water to a waterway accounts for: a) The applicable water quality objectives for the receiving waters; and b) adverse impacts on ecosystem health or receiving waters; and c) in waters mapped as being of high ecological value, the adverse impacts of such releases and their offset. 	N/A – development does not propose to discharge wastewater to a waterway.	 Complies Performance Solution Not Applicable N/A - development does not propose to discharge wastewater to a waterway. 	
PO7 Wastewater discharge to a waterway is managed in a way that maintains ecological processes, riparian vegetation, waterway integrity, and downstream ecosystem health.	N/A – development does not propose to discharge wastewater to a waterway.	 Complies Performance Solution Not Applicable N/A – development does not propose to discharge wastewater to a waterway. 	



3.3 Stormwater infrastructure

Performance Outcomes	Acceptable Outcomes	Does the proposal meet the acceptable outcomes?	Council Use
PO8 Stormwater drainage is designed and managed during the construction and operation of development to avoid adverse impacts on surrounding development or compromise the natural health and functioning of adjoining waterway systems.	AO8 Development is provided with stormwater infrastructure in accordance with SC6.2 Planning Scheme Policy 1 – Land Development Standards	 Complies Performance Solution Not Applicable C_23144 R001_Stormwater Management Plan by Context Engineering addresses the stormwater drainage requirements for the site, with reference to SC6.2.4 of the planning scheme policy. 	
PO9 Operational activities for the development avoid or minimise changes to waterway hydrology from adverse impacts of altered stormwater quality and flow.	AO9 The Stormwater Management Plan prepared in accordance with AO8 is implemented.	 Complies Performance Solution Not Applicable It is anticipated that the development will comply. To be addressed at Operational Works Stage. 	



4. Disclaimer

This report has been prepared on behalf of and for the exclusive use of and is subject to and issued in accordance with the agreement between Context Engineering.

Our investigation and analysis has been specifically catered for the particular requirements of Pearl Energy Pty Ltd and may not be applicable beyond this scope. For this reason, any other third parties are not authorised to utilise this report without further input and advice from Context Engineering.

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The investigation and analysis have relied on information provided by others. We accept no responsibility for the accuracy of material supplied by others. The accuracy of the investigation, analysis and report are dependent upon the accuracy of this information.

Lamberth Road Commercial Development, Goondiwindi





WATER AND WASTEWATER NETWORK ANALYSIS

Prepared for Pearl Property No.1 Pty Ltd ATF Property No.1 Unit Trust



COMMERCIAL IN CONFIDENCE

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Morris Water Pty Ltd ABN: 84 625 420 135

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MORRIS WATER PROJECT NUMBER:

GRC50.02

Version	Date	Issue Details
1	28/11/2024	Draft Report
2	10/12/2024	Site plan updated



EXECUTIVE SUMMARY

Morris Water Pty Ltd was commissioned by Pearl Property No.1 Pty Ltd ATF Property No.1 Unit Trust to prepare a water supply and wastewater analysis for a proposed commercial development on 2 - 4 Lamberth Road, Goondiwindi.

The following analyses were undertaken:

- Added proposed internal infrastructure to the models.
- Added proposed water demands and wastewater loads to the models. At Council's request, the EP was increased to assess worst-case conditions and provide contingency in the modelling.
- Hydraulic analysis using WaterGEMS to determine minimum and maximum service pressures across the site.
- Hydraulic analysis using SewerGEMS to determine if emergency storage and maximum full flow requirements are met.
- Confirmation of capacities of external infrastructure to service the site.

Based on the results of the water analysis, the following recommendations have been made:

- The connection to the existing network should be made using DN100 mains.
- No upgrades to the existing network are required.

Based on the results of the wastewater analysis the following recommendations have been made:

- The connection to the existing network should be made using DN150 mains.
- No upgrades to the existing network are required.



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5	INFRASTRUCTURE ASSESSMENT 5.1 Model Updates 5.2 Hydraulic Modelling Results	9 9 10
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1 INTRODUCTION

Morris Water Pty Ltd was commissioned by Pearl Property No.1 Pty Ltd ATF Property No.1 Unit Trust to prepare a water and wastewater network analysis for a proposed service station and truck refuelling area development on Lamberth Road, Goondiwindi.

This report investigates and addresses the requirements for water and wastewater management for the development in accordance with relevant Local and State Government Standards. It provides strategies for providing adequate standards of service across the development in accordance with the GRC Planning Scheme, the Water Services Association of Australia (WSAA) Water Supply Code of Australia (WSA 03), Sewerage Code of Australia (WSA 02) and the Department of Energy and Water Supply Planning Guidelines for Water and Sewerage.



2 SITE CHARACTERISTICS

2.1 LOCATION

The site is located next to the Cunningham Highway, Goondiwindi. The proposed commercial development is on Lot 262 SP104612, and the proposed site has a total area of 1.78 ha.

The site is bordered by Lamberth Road to the west, Marshall Street to the south, Cunningham Highway to the east and an existing residential development to the north. The site location is shown in Figure 2-1 and Figure 2-2.



Figure 2-1: Locality Plan (Regional Scale)



In the below figure, the blue area is the boundary of the existing allotment, and the red area indicates the proposed development area within the allotment, in accordance with the proposed reconfiguration of a lot.



Figure 2-2: Locality Plan (QLDGlobe)



3 MINIMUM STANDARDS OF SERVICE

The minimum standards of service prescribed in the GRC Planning Criteria for Water Supply and Sewerage have been adopted.

Table 3-1: Minimum Standards of Service Requirements - Water

Standard	Criteria
Minimum Peak Hour Service Pressure	22 m
Maximum Service Pressure (preferred)	50 m
Minimum Residual Fire Flow Pressure	12 m

Table 3-2: Minimum Standards of Service Requirements - Wastewater

Standard	Criteria
Emergency Storage	ADWF for 4 hours
Maximum Depth of Flow at PWWF	Existing Mains: Pipe full and surcharge of manholes to a maximum of 1 m below manhole lid with no overflows from designated overflow locations New Mains: Depth by Diameter less than 0.75

The minimum standards of service requirements have been used to assess the proposed development as outlined in Table 3-1 and Table 3-2.



4 PROPOSED DEVELOPMENT

4.1 DEVELOPMENT LAYOUT PLAN

The proposed development is shown in Figure 4-1.



Figure 4-1: Lot Layout Plan (Verve Design Group)

4.2 PROPOSED INFRASTRUCTURE AND DEMANDS

It is proposed that the development will connect to the existing DN225 water main connecting between Lamberth Rd and Cunningham Hwy along the road reserve to the north. This connection is proposed to be made by a new dedicated water main running along the Cunningham Hwy road reserve.

The wastewater connection is proposed in a similar fashion, with a new dedicated connection main from the development to the DN150 wastewater main crossing the Cunningham Hwy. The proposed connections are shown in Figure 4-2 below.





Figure 4-2: Connection Plan (Context Engineering)

From the Engineering Services Report prepared by Context Engineering, the estimated water and wastewater demand for this development is a total of 12,215 L per day and 5,883 L per day respectively.

Using the unit demands for Goondiwindi for water and wastewater, 499 L/EP/day and 275 L/EP/day respectively, the Equivalent Persons (EP) demand for this development is 24.5 EP for water and 21.4 EP for wastewater.

For a 3.5 EP/lot allocation for Goondiwindi Regional Council, for modelling purposes we used 30 EP for a worst-case scenario contingency.



5 INFRASTRUCTURE ASSESSMENT

5.1 MODEL UPDATES

5.1.1 Water Model Updates

Council's existing WaterGEMS model was used to review the proposed development impacts.

The proposed development was added to the model. The proposed new dedicated water main connection to the development was added to the model and the demand with appropriate demand curve was added to the last node on the main, node J-470.

A WaterGEMS model screenshot is shown in Figure 5-1.



Figure 5-1: WaterGEMS Model

The colour of property connections represents the type of land use.



5.1.2 Wastewater Model Updates

Council's existing SewerGEMS model was used to review the proposed development impacts.

The proposed development was added to the model. The proposed new dedicated wastewater main connection to the development was added to the model and the demand with appropriate demand curve was added to the last manhole on the main, manhole MH-45.

A SewerGEMS model screenshot is shown in Figure 5-2. Flow moves from the right side to the left side of the below figure. The flow from the development and surrounding area gravitates to SPS07 from where it is pumped to the SPS01 catchment, and flows to the SPS01 wet well. which is located on the far-left top corner of the below figure. From there wastewater is pumped to SPS02 where it joins in to the SPS02 rising main and is transported via a common rising main to the WWTP.



Figure 5-2: SewerGEMS Model

5.2 HYDRAULIC MODELLING RESULTS

Hydraulic analyses were undertaken using WaterGEMS and SewerGEMS to determine the potential impacts of the development. The analyses were undertaken to demonstrate no adverse impacts and to ensure the site and the existing connections will be serviced in accordance with Council's standards of service.

5.2.1 Water

The following investigations were undertaken, for the addition of the development in the existing and ultimate scenarios:

- Check for minimum pressure for the development and the surrounding area.
- Check for maximum pressure for the development and the surrounding area.
- Check fire flow residual pressure for the development and the surrounding area.

The modelling results are summarised in Table 5-1 and Table 5-2.



Node	Existing Scenario Existing (with development)		Ultimate Scenario				
	Minimum Pressure (m)						
346	43.6	43.6	35.6				
362	44.1	44.1	36.1				
363	43.9	43.9	35.9				
389	43.9	43.9	35.7				
391	44.1	44.1	35.9				
392	44.6	44.6	36.5				
J-278	44.6	44.6	36.5				
J-470	N/A	43.4	35.2				

Table 5-1: Modelling Results – Peak Hour Pressure

Table 5-2: Modelling Results – Residual Fire Flow Pressure

Nede		Existing Scenario	Existing (with development)	Ultimate Scenario			
Node	Fire Flow Demand (L/s)	Residual Pressure (m)					
346	15	34.7	34.7	21.8			
362	15	28.5	28.5	12.0			
363	15	29.1	29.1	13.5			
389	30/15	25.1	25.1	10.4/28.3			
391	30	26.3	26.3	12.0			
392	30	25.8	25.8	11.5			
J-278	15	25.5	25.5	21.7			
J-470	30	N/A	43.4	35.2			

For all nodes in both scenarios the minimum pressure is above the required 22 m and the maximum pressures are below the preferred maximum of 50 m. Modelling indicates no upgrades to the existing network will be required to service this development. For the additional commercial fire flow requirements of 30 L/s, no pressure issues were identified.

The proposed development has a negligent influence on both the peak hour and residual fire flow pressure in the existing and ultimate scenarios. This is due to its supply coming off the DN225 main north of the development.

However, other potential developments that were included in the ultimate scenario for ultimate growth and demand will have a higher influence on the fire flow pressures. These requirements should be revisited by Council at the time of request for development and some infrastructure upgrades might be required such as pipe replacements or construction of a new pump.



5.2.2 Wastewater

The proposed development is located within the SPS07 catchment which is upstream of the SPS01 and SPS02 catchments.

The following investigations were undertaken, for the addition of the development in the existing scenario:

- Check for overflow/surcharge at manholes.
- Check for emergency storage capacity.
- Check for pipe full flow/maximum depth of flow at PWWF.

The modelling results are summarised in Table 5-3 and Table 5-4. The location of each manhole is as per Figure 5-2 above.

Table 5-3: SewerGEMS Modelling Results

	Dim	Invort	Diameter	Max	Flow		Max Depth	Flow Rate	
Manhole			of DS	Depth –	Rate –	d/D -		-	d/D -
Wannoic	(m)	(m)	Pipe	existing	existing	existing	developed	developed	developed
	(11)	(111)	(mm)	(m)	(L/s)		(m)	(L/s)	
SP01MH0051	217.4	207.5	225	0.15	26.535	0.67	0.15	26.940	0.67
SP01MH0036	217.4	207.77	225	0.15	24.270	0.67	0.15	24.674	0.67
SP01MH0035	217.4	207.97	225	0.17	24.270	0.76	0.17	24.678	0.76
SP01MH0136	217.4	209.89	150	0.14	12.918	0.93	0.19	13.245	1.27
SP01MH0135	217.4	210.51	150	0.12	12.556	0.8	0.13	12.909	0.87
SP01MH0134	217.4	211.13	150	0.12	12.250	0.8	0.13	12.611	0.87
SP01MH0133	217.4	211.91	150	0.11	12.092	0.73	0.11	12.455	0.73
SP01MH0132	217.4	212.83	150	0.1	11.961	0.67	0.1	12.339	0.67
SP01MH0111	217.4	213.08	150	0.1	9.967	0.67	0.11	10.350	0.73
SP01MH0110	217.4	213.54	150	0.1	9.885	0.67	0.11	10.364	0.73
SP01MH0109	217.4	214.24	150	0.08	9.774	0.53	0.09	10.266	0.6
SP01MH0107	217.4	214.4	150	0.09	9.712	0.6	0.09	10.211	0.6
SP01MH0106	217.5	214.83	150	0.1	10.033	0.67	0.11	10.461	0.73
SP01MH0099	217.4	215.07	150	0.1	10.402	0.67	0.11	11.053	0.73
SP01MH0098									
(includes									
other inflows)	217.2	215.57	150	0.11	21.655	0.73	0.12	21.658	0.8
SP07MH0097	217.2	211.02	225	0.09	4.360	0.4	0.09	4.678	0.4
Z-045	217.03	211.26	225	0.05	2.508	0.22	0.05	3.089	0.22
SP07MH0083	217.02	211.59	225	0.05	2.569	0.22	0.06	3.157	0.27
SP07MH0082	217.1	211.88	225	0.05	2.621	0.22	0.06	3.214	0.27
SP07MH0081	217.5	212.22	225	0.05	2.705	0.22	0.06	3.309	0.27
SP07MH0080	217.5	212.72	150	0.05	2.736	0.33	0.05	3.344	0.33
SP07MH0073	218	213.22	150	0.05	2.839	0.33	0.05	3.465	0.33
SP07MH0072	218.86	213.76	150	0.02	0.456	0.13	0.03	0.797	0.2
MH-43	217.7	214	150	0.03	0.456	0.2	0.03	0.797	0.2
MH-44	217.8	214.35	150	N/A	N/A	N/A	0.02	0.356	0.13
MH-45	218	214.49	150	N/A	N/A	N/A	0.02	0.340	0.13

The modelling checks resulted in a compliant network with no manhole surcharges or overflows. The existing SPS07 allows for sufficient emergency storage; both scenarios provide more than 4 hours of storage capacity for Average Dry Weather Flow (ADWF). For the SPS7 catchment, the maximum flow depth at PWWF does not exceed the maximum depth to diameter ration (d/D) of 0.75 for gravity wastewater flow, this applies for both existing and ultimate scenarios. However, the receiving manhole after SPS7, SP01MH0098 and the connected downstream pipe exceed the diameter ration slightly.

The flow increase due to the development at each location is different due to the difference in grade, the change in pipe diameter and the different pump station flows. As can be seen, three pipes leading up to SPS1 are above the diameter ration capacity for the existing scenario, worsening slightly after introducing the development, future works might be required to upgrade the pipe diameters to help reduce the diameter ration.



6 SUMMARY

Morris Water Pty Ltd has prepared this infrastructure assessment report to determine the impacts of the proposed service station and truck refuelling area development on Lamberth Road and determine if infrastructure upgrades are required.

The following analyses were undertaken:

- Added proposed internal infrastructure to the models.
- Added proposed water demands and wastewater loads to the models. The EP was increased to assess worstcase conditions and provide contingency in the modelling.
- Hydraulic analysis using WaterGEMS to determine minimum and maximum service pressures across the site.
- Hydraulic analysis using SewerGEMS to determine if emergency storage and maximum full flow requirements are met.
- Confirmation of capacities of external infrastructure to service the site.

7 RECOMMENDATIONS

Based on the results of the water analysis, the following recommendations have been made:

- The connection to the existing network should be made using DN100 mains.
- No upgrades to the existing network are required.

Based on the results of the wastewater analysis the following recommendations have been made:

- The connection to the existing network should be made using DN150 mains.
- No upgrades to the existing network are required.



2-4 LAMBERTH ROAD, GOONDIWINDI TRAFFIC IMPACT ASSESSMENT

12 DECEMBER 2024

PREPARED FOR PEARL ENERGY







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EXECUTIVE SUMMARY

This revised Traffic Impact Assessment has been prepared in response to information requests issued by Goondiwindi Regional Council (GRC), dated 6 September 2024 (Reference: 24/31) and the State Assessment and Referral Agency (SARA), dated 29 October 2024 (Reference: 2409-42278 SRA). Table E1 outlines the information request items addressed in this revised report and includes a summary of the response to each item with a reference to the relevant section of the report. The proposed access on the Cunningham Highway and heavy vehicle parking area has been redesigned in response to the information requests.

RFI ITEM / ISSUE	RELEVANT SECTION	SUMMARY RESPONSE
GRC Items		
Item 2 Parking Provision	Section 3.3.2	The proposed scale of uses has reduced. A total of 37 car parking spaces are proposed, which is 0.2 spaces short of GRC's minimum requirement. The proposed small shortfall in parking is considered appropriate, considering ample heavy vehicle parking also proposed on-site.
Item 3 Heavy Vehicle Manoeuvring	Section 3.4.1	The revised site layout can cater for the circulation of a 36.5m long Type 1 Road Train (ie the maximum design vehicle). Additional swept paths of a 42m PBS Class 3B vehicle are not considered necessary, in accordance with NHVR guidance.
Item 4 Drive-through Queuing	Section 3.3.5	The proposed drive-through caters for a total of 13 queued vehicles which complies with the strict application of GRC's Planning Scheme. Sufficient queue storage would be available at the order point to cater for the expected 95th percentile queue. The proposed queueing arrangements are also consistent with other recently approved drive-throughs in the surrounding area.
SARA Issues		
Issue 1 Access operations	Section 3.2.1	The proposed site access has been revised to only cater for left- in / left-out movements, which would remove potential conflicts on the Cunningham Highway.
Issue 2 Access Location	Section 3.2.1	The proposed access location and associated offset channelised left-turn lane would be located outside of the functional area of the downstream Marshall Street roundabout, which accords with Austroads guidance.
Issue 3 Acceleration Lanes	Section 3.2.5	There is no scope to provide a compliant acceleration lane at the proposed access that does not encroach surrounding intersections. Based on Austroads guidance, an acceleration lane is not considered necessary to support exit movements to the Cunningham Highway.

Table E1: INFORMATION REQUEST ITEMS



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1.0 INTRODUCTION

1.1 BACKGROUND

In March 2024, PTT was commissioned by Pearl Energy to undertake a traffic impact assessment (TIA) for a proposed service station and food and drink outlet located at 2-4 Lamberth Road, Goondiwindi. The location of the subject site is shown in Figure 1.1.





1.2 AIM

The aim of this assessment is to evaluate the proposed development in terms of its access, parking and servicing arrangements, pedestrian / cyclist facilities, peak hour traffic generation and impact on the surrounding road network.

1.3 SCOPE OF REPORT

This report begins by summarising the characteristics of the existing road network (Chapter 2), followed by a description of the scope and scale of the proposed development, including a consideration of the site access arrangements, parking provision and design, servicing arrangements and pedestrian / cyclist facilities (Chapter 3). The likely traffic generation of the site is quantified, and its impact to network operations and road safety is considered (Chapter 4). The report concludes with a summary of key findings (Chapter 5).



2.0 EXISTING CONDITIONS

2.1 SUBJECT SITE

The subject site is located at 2-4 Lamberth Road, Goondiwindi and is formally identified as Lot 262 on SP104612. The site is within a centre zone according to GRC's Planning Scheme. An aerial view of the site is shown in Figure 2.1.

Figure 2.1: SUBJECT SITE



The subject site is bounded as follows:

- centre uses to the north
- Cunningham Highway to the east
- Marshall Street to the south
- Lamberth Road to the west



The surrounding area consists of residential and commercial uses.

2.2 ACCESS

There is currently no formalised access to the site.

2.3 ROAD NETWORK

Key attributes of the surrounding road network are summarised in Table 2.1.

ATTRIBUTE	CUNNINGHAM HWY	MARSHALL ST	LAMBERTH RD
Road Hierarchy	State-Controlled	Collector	Local Street
Cross-Section	Divided, with one lane of traffic in each direction	Undivided, with one lane of traffic in each direction	Undivided, with one lane of traffic in each direction
Jurisdiction	TMR	GRC	GRC
Speed Limit (km/h)	80	50	50
Predominant Land Use	Rural / Commercial	Residential	Residential
Formal On-Street Parking	No	No	No
Footpaths	No	No	Yes (western side only)
Bicycle Lanes	No	No	No
Bus Route	No	No	No

Table 2.1: ROAD NETWORK ATTRIBUTES

The GRC Planning Scheme does not include a road hierarchy overlay map. A desktop review of the site indicates that Marshall Street likely operates as a collector road (ie major road) and Lamberth Road operates as a local street (ie minor road).

The Cunningham Highway forms part of the State-controlled road network administered by the Department of Transport and Main Roads (TMR). It is an important trade and freight route and, therefore, carries a large proportion of heavy vehicles, including B-doubles.

The Cunningham Highway / Marshall Street roundabout is located south-east of the subject site, as shown in Figure 2.1. The posted speed on the Cunningham Highway is 80km/h. However, the posted speed does not reduce on approach to the roundabout, nor are there any advisory speed signs installed in the vicinity of the roundabout on the approaches (ie to inform drivers to negotiate the roundabout at lower speeds). The roundabout has a circulating radius of approximately 100m. In accordance with TMR's Road Planning and Design Manual (RPDM) Chapter 11: Horizontal Alignment, the maximum speed that can achieved on this bend is approximately 50km/h (based on a coefficient of side friction of 0.19 and a 3% superelevation for drainage). Accordingly, vehicles approaching the site from the south, having just exited the



roundabout, are expected to be travelling at speeds significantly lower than the posted speed (ie between 50km/h to 60km/h).

2.4 TRAFFIC VOLUMES

We have obtained 2022 average annual daily traffic (AADT) data from TMR for the adjacent section of the Cunningham Highway (Counter Site ID: 50027). This counter site is located approximately 650m south of the subject site. The data is included in Appendix A and shows that the 2022 AADT volumes on this section of the Cunningham Highway were as follows:

- 3,405 vehicles per day (two-way)
- 255 vehicles per hour (two-way) during the peak hour (11:00am 12:00pm)
- 135 vehicles per hour (northbound) during the peak hour
- 121 vehicles per hour (southbound) during the peak hour

A 2020 segment report for the same counter site indicates the following breakdown of vehicle classes in the northbound (against gazettal) direction:

_	Short 2-Axle (Class 2A):	54.0%
_	Short Vehicles Towing (Class 2B):	4.1%
—	Rigid Trucks / Buses (Classes 2C – 2E):	8.7%
_	Articulated Trucks (Classes 2F – 2I):	7.7%
_	B-Doubles (Class 2J):	18.7%
_	A-Doubles (Class 2K):	6.8%
_	A-Triples (Class 2L):	0.0%



3.0 PROPOSED DEVELOPMENT

3.1 SITE LAYOUT

The development application seeks approval for a Material Change of Use for a service station and food and drink outlet on the subject site. The development would comprise of the following components:

- separate light and heavy vehicle refuelling canopies
- a service station comprising 395m² gross floor area (GFA)
- a food and drink outlet (with drive-through facility) comprising 163m² GFA
- 42 car parking bays
- 14 heavy vehicle parking bays

The proposed development layout is shown in Figure 3.1, with dimensioned architectural plans included in Appendix B.

Figure 3.1: PROPOSED SITE LAYOUT



3.2 ACCESS

3.2.1 Location

The proposed development access has been revised to only cater for left-in / left-out movements, as requested by SARA and TMR. The access would be centrally located along the Cunningham Highway site frontage. A separate left-in heavy vehicle access is also proposed, south of the main vehicular access.

The proposed channelised left-turn lane serving the proposed access creates a new decision point for drivers travelling northbound on the Cunningham Highway downstream of the Marshall Street roundabout. Section 7.2.1 of Austroads Guide to Road Design Part 4: Intersections and



Crossings, deals with the location of private access driveways with respect to the functional area of nearby intersections. According to Austroads, the downstream functional area is governed by stopping distance as 'this allows a driver to pass through the intersection before having to decide that it is necessary to stop because of a conflict at a downstream access connection.'

As discussed, northbound vehicles exiting the roundabout and approaching the site access would be travelling between 50km/h and 60km/h. Section 5.3 of Austroads Guide to Road Design Part 3: Geometric Design, outlines the stopping sight distance requirements for both cars and trucks. For a 60km/h speed environment, a minimum stopping sight distance of 73m and 82m is required for cars and trucks, respectively (based on a 2.0 second reaction time and a coefficient of deceleration of 0.36). The proposed channelised left-turn entry lane is located approximately 130m north of the roundabout. Thus, the location of the channelised left-turn entry lane is considered appropriate because (a) it is positioned outside of the functional area of the roundabout and (b) sufficient stopping distance would be available between the roundabout and the start of the channelised left-turn lane.

The revised access arrangement is considered appropriate because:

- the left-in / left-out arrangement conforms with pre-lodgement advice provided by SARA / TMR
- sufficient sight distance would be achieved to the south on the Cunningham Highway, as discussed in Section 3.2.3
- the access would be supported by an offset channelised left turn treatment, as discussed in Sections 3.2.4 and 4.3
- the access would be located outside of the functional area of the nearby roundabout
- sufficient stopping distance would be available between the roundabout and the channelised left-turn lane serving the proposed development
- the access would not be located in close proximity to existing intersections or driveways
- no crashes have been reported on the Cunningham Highway within 150m of the subject site over the past five years
- northbound traffic volumes on the Cunningham Highway are low (for a highway standard road), which suggests there would be sufficient gaps in through traffic to safely cater for left-turn exit movements

3.2.2 Design

The proposed entry and exit widths and driveway tapers would adequately cater for the access / egress of a 26.0m B-Double and 36.5m Type 1 Road Train (ie the design vehicle), as demonstrated in drawing 24-367-004 and 24-367-008 included in Appendix C.

A separate left-in heavy vehicle access is proposed, which would:

- remove potential internal conflicts between light and heavy vehicles
- be supported by a short auxiliary left-turn (AUL(s)) treatment (ie which would reduce impacts on the Cunningham Highway northbound through movements)
- comprise sufficient width to cater for a 36.5m long Type 1 Road Train
- be signed and line marked to restrict access to heavy vehicles only, as demonstrated in drawing 24-367-001 included in Appendix C



3.2.3 Sight Distance

Based on a 90km/h design speed (ie posted speed plus 10km/h), Austroads Guide to Road Design Part 4A: Unsignalised and Signalised Intersections identifies a desirable safe intersection sight distance (SISD) of 214m (based on a two second driver reaction time). As demonstrated in drawings 24-367-002, 214m SISD would be readily achieved to the south of the site access on the Cunningham Highway in accordance with Austroads.

A reverse horizontal curve is located south of the proposed access on the Cunningham Highway. An offset channelised left-turn lane is proposed at the site access to ensure left turning vehicles (into the site) do not obstruct sightlines between vehicles travelling northbound on the Cunningham Highway and vehicles exiting the site.

3.2.4 Turn Treatments

Section C9.2 of the Austroads Guide to Traffic Management Part 6: Intersections, Interchanges and Crossings deals with the application of warrants for turn lanes. With respect to the use of these warrants, Austroads states that they are based on the construction of new intersections on new roads (ie greenfield sites) and:

"although not intended for direct application to accesses and driveways, they may be used as a reference for such."

This confirms that the warrants are primarily for the construction of intersections on new roads and Austroads does not mandate the application of the warrants for turn lanes with respect to the site access driveways. This guidance is accepted by the TMR Road Planning and Design Manual 2nd Edition (RPDM). Nevertheless, we have undertaken a turn warrants assessment in accordance with the Normal Design Domain included in Austroads Guide to Road Design Part 4A: Unsignalised and Signalised Intersections. The results of the assessment are discussed in Section 4.3 and indicates that a basic auxiliary right and left (BAR and BAL) treatment are warranted at the site access.

The proposed site access would be supported by an offset channelised left (CHL) treatment, which exceeds Austroads NDD turn warrants. The proposed left-in heavy vehicle access would be supported by an AUL(s) which also exceeds the NDD turn warrants.

3.2.5 Acceleration Lanes

It is SARA and TMR's preference that an acceleration lane be provided at the site access to better cater for exiting heavy vehicles, given that the Cunningham Highway is a designated Type 1 Road Train designated route.

Section 2.3.5 of Austroads Guide to Traffic Management Part 6: Intersections, Interchanges and Crossings deals with determining the need for acceleration lanes and confirms that there are no simple numerical warrants for their provision. Typically, they are only provided where:

- insufficient gaps exist for vehicles to enter a traffic stream
- turning volumes are high (eg 300 to 500 vehicles per hour)
- the observation angle falls below the requirements of the minimum gap sight distance model (for example, inside of horizontal curves)
- heavy vehicles pulling into the traffic stream would cause excessive slowing of major road vehicles



Therefore, we must turn our attention to a subjective assessment of the four dot points listed above. In the subject case, the first three triggers for an acceleration lane are not met, and it is questionable whether the movement of trucks from the subject site onto the Cunningham Highway would result in the excessive slowing of major road traffic. This is because of:

- the low number of truck movements anticipated per hour (ie around seven exiting heavy vehicle movements per hour)
- the low northbound traffic volumes on the adjacent section of the Cunningham Highway (ie in the order of 175 vehicles per hour during peak times)
- the excellent sight distance available at the access to the south (noting that a CHL is provided to improve sight distance)
- the significant gaps available for trucks to turn onto the Cunningham Highway without impeding other vehicles

Based on the Austroads requirements for new acceleration lanes to provide sufficient length to allow heavy vehicles to accelerate to a speed no less than 20km/h less than the mean free flow speed (ie 80km/h), the acceleration lane would need to be in the order of 330m (based on a flat grade).

The proposed development would generate a small number of truck movements turning left from the subject site travelling northbound on the Cunningham Highway (ie an estimated seven trucks per hour). It is estimated that the length of any acceleration lane to the north would be restricted to around 100m. The available length is limited by the existing AUL(s) and channelised right turn (CHR) treatment associated with the upstream four-way priority-controlled intersection. Accordingly, there is no scope to provide an acceleration lane (serving northbound exiting movements) at the site access that is (a) compliant with Austroads and (b) clear of the functional area of the upstream priority-controlled intersection.

It is our view that an acceleration lane is not required at the proposed access because:

- there would be no opportunity to provide an Austroads compliant acceleration lane whilst also providing an Austroads compliant access location on the Cunningham Highway
- vehicles approaching the site from the south are expected to be travelling at speeds less than the posted speed, having just exiting the nearby roundabout
- an Austroads compliant offset CHL treatment is provided at the access to ensure sufficient SISD is available to drivers on the Cunningham Highway to visualise cars and trucks exiting the proposed development
- northbound traffic volumes on the adjacent section of the Cunningham Highway are very low during the future peak hours (ie in the order of 175 vehicles per hour) and as such, there would be ample gaps for cars and trucks to exit toward the Cunningham Highway without the need of an acceleration lane

3.3 PARKING

3.3.1 Requirement

The parking requirement for the proposed development has been determined based on the parking provision rates provided in GRC's Planning Scheme. As shown in Table 3.1, 37.2 parking spaces are required (rounded up to 38 spaces) to support the proposed service station and food and drink outlet.



USE	SCALE	PARKING RATE	REQUIREMENT
Service Station	395m ² GFA	4 spaces per service bay plus 1 space per 15m ² GFA	26.3
Food and Drink Outlet	163m ² GFA	1 space per 15m ² GFA	10.9
Total			37.2 spaces (38 spaces

Table 3.1: CAR PARKING REQUIREMENT

3.3.2 Provision

A total of 37 parking spaces are proposed on-site, including one persons with disability (PWD) bay and nine staff parking spaces. Thus, the proposed parking provision is just short of GRC's minimum requirement.

It is our view that the proposed short fall in parking is acceptable. The proposed parking provision would adequately cater for 595m² GFA in accordance with GRC's Planning Scheme and the additional 3m² GFA is not expected to significantly increase parking demand to warrant an additional bay.

3.3.3 Persons with Disability Parking

The National Construction Code (NCC) requires Class 6 buildings (ie shop / food and drink outlet) to provide persons with disabilities (PWD) parking at a rate of one space per 50 regular parking spaces, designed in accordance with Australian Standard AS2890.6 for Off-Street Parking for People with Disabilities. The proposed layout provides one PWD bay, which is consistent with the NCC.

3.3.4 Design

The proposed on-site parking has been designed generally in accordance with GRC's Planning Scheme and Australian Standards AS2890.1 Parking Facilities Part 1: Off-Street Car Parking in terms of parking bay dimensions, aisle widths, vehicle circulation and manoeuvring. This is typified by:

- standard parking bays dimensioned 2.6m wide by 5.4m long
- staff parking bays dimensioned 2.4m wide by 5.4m long
- PWD parking bay dimensioned 2.4m wide by 5.4m long with an adjacent shared bay
- heavy vehicle parking bays dimensioned 4.5m by 19.0m to 26.0m long
- parking aisle dimensioned minimum 6.6m wide
- one-way circulation aisle (for heavy vehicles) dimensioned 5.5m wide

3.3.5 Queuing

It is expected that the proposed service station forecourt would cater for two queued vehicles behind each bowser position (not including vehicles standing at the bowsers). The proposed light vehicle re-fuelling forecourt is not expected to impede traffic flow and entry circulation at the site access, which reduces the likelihood of vehicles queuing onto the State-controlled road network.







GRC's Transport and Infrastructure Code requires drive-through facilities cater for at least 10 queued vehicles. However, the Code does not prescribe whether this queue is to be measured from the order point or the pick-up point. As a reference, the New South Wales Guide to Transport Impact Assessment states that a range of five to 12 car lengths, measured from the pick-up, may be considered dependant on turnover and four car lengths, measured from the order point may be considered as a guide.

As shown in Figure 3.2, the proposed drive-through facility caters for a total of 13 queued vehicles and four queued vehicles at the order point, which exceeds the strict application of GRC's Planning Scheme and aligns with the NSW Guide.

GRC has requested that queueing associated with the proposed Food and Drink outlet be calculated from the first conflict point (ie the order point), despite this specific requirement not being outlined in their Transport and Infrastructure Code. To confirm the adequacy of the proposed drive-through facility, we have undertaken a queuing assessment to determine the expected 95th percentile queue at the proposed order point.

The predicted 95th percentile queue at the drive-through has been calculated based on 18 vehicles (ie the total predicted peak hour arrivals) arriving during the peak hour, using the queuing theory outlined the in PTT Queuing Practice Note included in Appendix D. This is very conservative, as a significant proportion of customers would (a) only use the service station and



(b) park on-site and walk into the food and drink outlet. A conservative service time of 100 seconds has been adopted (ie the time it takes a customer to place their order).

The results of the analysis indicate a 95th percentile queue of four vehicles (including the vehicle standing at the order point). As shown in Figure 3.2, sufficient queue storage would be available between the order point and the start of the drive-through lane to cater for four queued vehicles. Thus, the available queue storage prior to the order point is considered adequate.

We also note that GRC recently approved a food and drink outlet (with drive-through) in 2023 at 8 Mill Street, Goondiwindi (Reference: 22/32). This approved development is currently under construction. The approved site plan, prepared by Verve Building Design, caters for 13 queued cars (over the entire drive-through facility). This approved drive-through does not cater for 10 vehicles, measured from the order point. Accordingly, the proposed drive-through queuing arrangements are consistent with recently approved food and drink outlets in the surrounding area.

3.4 SERVICING

3.4.1 Service Station

The Cunningham Highway is gazetted for Type 1 Road Trains (up to 36.5m in length). Accordingly, the largest vehicle expected to access the site is a 36.5m long Type 1 Road Train. A swept path of a Type 1 Road Train accessing the site, circulating through the heavy vehicle refuelling forecourt and exiting toward the Cunningham Highway is shown in drawing 24-367-008, included in Appendix C. Additional swept paths of a 26.0m long B-Double accessing and egressing typical heavy vehicle parking bays (on the western side of the site) and an Articulated vehicle accessing the bulk tank re-fuelling point are shown in drawings 24-367-004 and 24-367-006.

GRC state that the relevant check vehicle for the development site is a 42.0m Performance Based Standard (PBS) Class 3B Vehicle. However, with respect to Class B vehicles, the National Heavy Vehicle Regulator's (NHVR) Performance based Standards: An introduction for road managers states:

'Class B vehicles exceed prescriptive lengths yet achieve equal or better geometrical performance than an equivalent prescriptive combination vehicle, with the exception of overall combination length. Despite increased length, geometrically Class B vehicles perform no worse than the requirements for that access level.'

Accordingly, as the site layout can cater for a 36.5m Type 1 Road Train (ie Class 3A vehicle), it is expected that the site layout can also cater for a 42.0m PBS Class 3B vehicle, as per the guidance provided by the NHVR. Thus, no additional swept paths of a Class 3B vehicle are considered necessary.

3.4.2 Refuse Collection

A refuse store comprising bulk bins is located in proximity to the service station and food and drink tenancies. Refuse would be collected by a private refuse contractor. A swept path of a 10.5m front-lift refuse collection vehicle circulating through the site and accessing the refuse store is shown in drawing 24-367-007.



It is expected that smaller delivery vehicles (ie Medium Rigid Vehicle) would follow a similar path to the RCV when servicing the site.

Accordingly, the proposed commercial vehicle servicing arrangements are considered adequate for the proposed scale of development.

3.5 ACTIVE TRANSPORT

3.5.2 Pedestrians

The Cunningham Highway does not cater for safe pedestrian movements (ie no pedestrian footpaths are located within the road reserve). The proposal, therefore, does not cater for external pedestrian movements (ie no pedestrian site access is proposed).

All customer car parking is proposed in close proximity to the service station / food and drink outlet tenancies, to contain pedestrian movements within the site. Internal pedestrian pathways are proposed to connect between the heavy vehicle parking / heavy vehicle re-fuelling forecourt and the proposed tenancies. Accordingly, the proposed site layout generally caters for safe on-site pedestrian movements.

3.5.3 Cyclists

No bicycle parking has been provided on-site, which is considered appropriate given no cyclist facilities (ie bicycle lanes) are located on the Cunningham Highway.



4.0 TRAFFIC OPERATIONS

4.1 TRAFFIC GENERATION

The TMR Road Planning and Design Manual (RPDM) and NSW Roads and Traffic Authority (RTA) Guide to Traffic Generating Developments Version 2.2 (2002) provide traffic generation rates for service stations (with a convenience store) and food and drink outlets in urban locations. There are no corresponding rates for service stations located on rural highways. These facilities experience significantly different traffic generation rates and patterns to those in urban areas.

We have previously undertaken surveys of traffic generation for three highway service centres located on the Pacific Highway at Coomera and Staplyton, and on the Bruce Highway at Morayfield. The surveys identified the number of vehicles entering each site on a typical weekday, between the hours of 7am – 5pm. The traffic volumes along the adjacent section of highway were also collected to calculate the site traffic generation as a proportion of the passing highway traffic.

Figure 4.1 shows the percentage of turn-in traffic as a proportion of passing highway traffic for each of the three service centre sites during the network peak hours. The data indicates that during the typical morning and afternoon peak hours, the volume of vehicles entering from the highway did not exceed 9% of the passing traffic.



Figure 4.1: PERCENTAGE OF TURN-INS AS A PROPORTION OF PASSING TRAFFIC

Therefore, for this assessment we have adopted a conservative traffic generation rate of 10% of the passing (two-way) traffic on the Cunningham Highway for the proposed service station to account for un-diverted pass-by trips in both directions.



The AADT data summarised in Section 2.4 is from 2022. The proposed development is expected to be completed in a single stage and would open in 2027. A background traffic growth rate of 2.0% per annum has been adopted to estimate passing traffic in opening year (2027) and future year (2037). This reflects historic traffic growth trends on the adjacent section of the Cunningham Highway, as reported by TMR.

The expected site traffic generation during the opening and future years is summarised in Table 4.1.

YFAR	PASSING TRAFFIC	ARRIVAI RATE	P۷	ASS BY TRIPS	
YEAR 2027	(NORTHBOUND)		ARRIVALS	DEPARTURES	TOTAL
2027	147 vph	10% of 147 vph	15	15	30
2037	174 vph	10% of 326 vph	18	18	36

Table 4.1: PEAK HOUR TRAFFIC GENERATION

4.2 TRAFFIC IMPACT

The proposed development is predicted to generate up to 36 two-way trips during weekday peak hours. Given the surrounding area, the vast majority trips are expected to be un-diverted pass by trips, with the development generating a negligible number of "new" trips. Therefore, the majority of the demand associated with the proposed development would come from vehicles already on the adjacent road network and as such, the proposed development is not predicted to have any significant impact on the amenity or capacity of the surrounding road network.

4.3 ACCESS AND FRONTAGE

In accordance with Section 10.3 of the GTIA, new accesses are required to (a) minimise impacts on the through carrying function of the State-controlled road and (b) not worsen the safety and efficiency of the State-controlled road. TMR's Guide to Traffic Impact Assessment (GTIA) Policy recommends that a turn warrant assessment be undertaken at new private accesses where the major road comprises two traffic lanes (ie one lane in each direction). This contradicts Austroads, which suggests the application of the turn warrants is not intended for private access driveways.

We have undertaken a turn warrants assessment at the site access in accordance with the Normal Design Domain warrants included in Austroads Guide to Traffic Management Part 6. The assessment has been undertaken based on post-development peak volumes during and the opening (2027) and future (2037) years, as summarised in Figure 4.2. The results of the assessment, as shown in Figure 4.3, indicate that a basic auxiliary left turn treatment is warranted.

A functional layout of the proposed site access is shown in drawing 24-367-001 included in Appendix C. The proposed site access would be supported by an offset CHL treatment, designed in accordance with Austroads. The proposed left-turn treatment exceeds the warranted treatments and would fully separate left turning vehicles from through traffic on the Cunningham Highway. This would reduce the likelihood of rear-end crashes associated with vehicles entering the proposed development. The proposed CHL treatment would also ensure that vehicles turning left into the site do not reduce the availability of SISD at the site access. This would reduce the likelihood of side swipe crashes associated with vehicles exiting the site. Thus, proposed access



is expected to operate sufficiently during both the opening and future years in accordance with Section 10.3 of TMRs' GTIA. No additional changes to the proposed access design are considered necessary.









4.4 ROAD SAFETY

A road safety risk assessment has been undertaken in accordance with TMR's GTIA (2018). The GTIA outlines that:

'Safety is not readily quantifiable as efficiency and is scored based on expert opinion on the changes to likelihood and / or consequence of a risk being realised. The condition of road cannot be defined absolutely as being safe or unsafe. Rather, road safety is a relative measure benchmarked against an existing condition or an acceptable risk threshold.'

The traffic safety risks were identified and then scored using the risk scoring matrix outlined in the GTIA, as shown in Figure 4.4. These identified risks relate to the increase in traffic movements at the site access.



			P	otential conseque	nce		
Dootential L: Low risk M: Medium H: High risk		Property only (1)	Minor injury (2)	Medical treatment (3)	Hospitalisation (4)	Fatality (5	
	Almost certain (5)	м	м	н	н	н	
elihood	Likely (4)	м	м	м	н	н	
tial like	Moderate (3)	L	м	м	м	н	
Poten	Unlikely (2)	L	L	м	м	м	
	Rare (1)	L	L	L	м	м	
w ris Aediu	k Im risk						

Figure 4.4: SAFETY RISK SCORE MATRIX

The road safety assessment specifically addresses the:

- risk of side-swipe crashes along the adjacent section of Cunningham Highway associated with vehicles turning left out of the site
- risk of rear-end crashes along the adjacent section of Cunningham Highway associated with vehicles turning left into the site

The consequence of each crash is based on crash risk scores included in TMRs' Manual of Uniform Traffic Control Devices (MUTCD) for different crash types (ie DCA Codes). The outcomes of the road safety assessment are identified in Table 4.2.

Table 4.2: ROAD SAFETY RISK ASSESSMENT

	P	RE-DE	V	РС	DST -D	EV
RISK ITEM	LIKELIHOOD	CONSEQUENCE	RISK SCORE	LIKELIHOOD	CONSEQUENCE	RISK SCORE
side-swipe crashes associated with vehicles turning left from the site	-	2	L	1	2	L
rear-end crashes associated with vehicles turning left into the site	-	2	L	1	2	L

The likelihood of each crash is expected to be low because:

- an offset CHL is proposed to separate turning movements from through movements on the Cunningham Highway
- vehicle queues would be contained within the site
- sufficient sight distance is achieved to the south of the access in accordance with Austroads
- the low through volumes on the Cunningham Highway suggests that there would be ample gaps in through movements to safely cater for exit movements



- there have been no reported crashes on this section of the Cunningham Highway

The proposal seeks to provide a new left-in / left-out access on the Cunningham Highway, which would introduce the rear-end and side swipe crashes. However, the likelihood of all potential crashes is expected to be low, resulting in a low-risk score for each crash. Thus, the proposed access is expected to have a negligible impact to road safety on the adjacent road network. No additional upgrades to the network are considered necessary to cater for the proposal.



5.0 CONCLUSION

The proposed development at 2-4 Lamberth Road, Goondiwindi has been evaluated in terms of its site access arrangements, internal layout and impact on the surrounding road network. The main points to note are:

- the development application seeks approval for a service station and food and drink outlet (with drive-through)
- vehicular access is proposed via a left-in / left-out driveway on the Cunningham Highway
- the proposed access would be supported by channelised left turn treatment designed in accordance with Austroads
- the proposed access achieves sufficient sight distance in accordance with Austroads and would cater for the access/egress of a Type 1 Road Train
- a total of 37 car parking spaces are proposed on-site, including one PWD bay, which results in a shortfall of 0.2 spaces compared to Council's minimum parking requirement
- the proposed shortfall in car parking is considered appropriate for the proposed scale of uses
- the on-site parking layout has been designed generally in accordance with GRC's Planning Scheme and AS2890.1
- sufficient queue storage would be provided at the light vehicle re-fuelling forecourt and proposed drive-through
- the proposed layout can cater a Type 1 Road Train, B-double, RCV and MRV, in accordance with GRC's Planning Scheme
- the vast majority of traffic generated by the proposal would be un-diverted pass-by trips and the proposal is not expected to significantly impact traffic operations on the Cunningham Highway
- the proposed all-movements access is expected to have a negligible impact to road safety on the adjacent road network

APPENDIX A TRAFFIC DATA

SITE_ID DESCRIPTION	SITE_DISTANCE LONGITUDE	LATITUDE RSEC	T_ID_ROAD_NAME	TDIST_START	TDIST_END GAZETTAL_DIRECTION	HOURS	MON TUE	WED	THU FI	RI SA	T SUN	WEEKDAY_AVERAGE	WEEKEND_AVERAGE
50027 17D-40m N of McIntyre Bridge (PPS)	90.76 150.3199999	-28.55561591 17D	CUNNINGHAM HIGHWAY (INGLEWOO	90.14	90.87 AGAINST GAZETTAL	0 to 1	11	9 17	18	18	13 11	. 15	12
50027 17D-40m N of McIntyre Bridge (PPS)	90.76 150.3199999	-28.55561591 17D	CUNNINGHAM HIGHWAY (INGLEWOO	90.14	90.87 AGAINST GAZETTAL	1 to 2	8	7 12	13	13	10 9)	10
50027 17D-40m N of McIntyre Bridge (PPS)	90.76 150.3199999	-28.55561591 17D	CUNNINGHAM HIGHWAY (INGLEWOO	90.14	90.87 AGAINST GAZETTAL	2 to 3	7	6 9	10	11	8 8	ب 9	8
50027 17D-40m N of McIntyre Bridge (PPS)	90.76 150.3199999	-28.55561591 17D	CUNNINGHAM HIGHWAY (INGLEWOO	90.14	90.87 AGAINST GAZETTAL	3 to 4	7	69	10	10	86	8	7
50027 17D-40m N of McIntyre Bridge (PPS)	90.76 150.3199999	-28.55561591 17D	CUNNINGHAM HIGHWAY (INGLEWOO	90.14	90.87 AGAINST GAZETTAL	4 to 5	10 1	.0 13	14	15	10 7	12	9
50027 17D-40m N of McIntyre Bridge (PPS)	90.76 150.3199999	-28.55561591 17D	CUNNINGHAM HIGHWAY (INGLEWOO	90.14	90.87 AGAINST GAZETTAL	5 to 6	20 2	21 24	25	27	16 13	23	15
50027 17D-40m N of McIntyre Bridge (PPS)	90.76 150.3199999	-28.55561591 17D	CUNNINGHAM HIGHWAY (INGLEWOO	90.14	90.87 AGAINST GAZETTAL	6 to 7	37 4	1 44	44	48	31 23	43	27
50027 17D-40m N of McIntyre Bridge (PPS)	90.76 150.3199999	-28.55561591 17D	CUNNINGHAM HIGHWAY (INGLEWOO	90.14	90.87 AGAINST GAZETTAL	7 to 8	65 6	69 75	78	76	51 40	73	46
50027 17D-40m N of McIntyre Bridge (PPS)	90.76 150.3199999	-28.55561591 17D	CUNNINGHAM HIGHWAY (INGLEWOO	90.14	90.87 AGAINST GAZETTAL	8 to 9	91 9	9 101	104	112	82 62	101	72
50027 17D-40m N of McIntyre Bridge (PPS)	90.76 150.3199999	-28.55561591 17D	CUNNINGHAM HIGHWAY (INGLEWOO	90.14	90.87 AGAINST GAZETTAL	9 to 10	111 11	9 120	125	124 1	.02 86	120	94
50027 17D-40m N of McIntyre Bridge (PPS)	90.76 150.3199999	-28.55561591 17D	CUNNINGHAM HIGHWAY (INGLEWOO	90.14	90.87 AGAINST GAZETTAL	10 to 11	126 13	85 137	144	135 1	12 106	135	109
50027 17D-40m N of McIntyre Bridge (PPS)	90.76 150.3199999	-28.55561591 17D	CUNNINGHAM HIGHWAY (INGLEWOO	90.14	90.87 AGAINST GAZETTAL	11 to 12	129 12	9 132	141	138 1	05 115	, 134	110
50027 17D-40m N of McIntyre Bridge (PPS)	90.76 150.3199999	-28.55561591 17D	CUNNINGHAM HIGHWAY (INGLEWOO	90.14	90.87 AGAINST GAZETTAL	12 to 13	119 13	80 135	136	126 1	01 114	129	107
50027 17D-40m N of McIntyre Bridge (PPS)	90.76 150.3199999	-28.55561591 17D	CUNNINGHAM HIGHWAY (INGLEWOO	90.14	90.87 AGAINST GAZETTAL	13 to 14	115 12	128	134	123	95 110	125	102
50027 17D-40m N of McIntyre Bridge (PPS)	90.76 150.3199999	-28.55561591 17D	CUNNINGHAM HIGHWAY (INGLEWOO	90.14	90.87 AGAINST GAZETTAL	14 to 15	114 13	80 131	136	119	94 111	. 126	102
50027 17D-40m N of McIntyre Bridge (PPS)	90.76 150.3199999	-28.55561591 17D	CUNNINGHAM HIGHWAY (INGLEWOO	90.14	90.87 AGAINST GAZETTAL	15 to 16	125 13	3 134	138	116	85 105	, 129	95
50027 17D-40m N of McIntyre Bridge (PPS)	90.76 150.3199999	-28.55561591 17D	CUNNINGHAM HIGHWAY (INGLEWOO	90.14	90.87 AGAINST GAZETTAL	16 to 17	117 13	130	141	107	76 96	125	86
50027 17D-40m N of McIntyre Bridge (PPS)	90.76 150.3199999	-28.55561591 17D	CUNNINGHAM HIGHWAY (INGLEWOO	90.14	90.87 AGAINST GAZETTAL	17 to 18	101 11	.8 114	117	91	68 86	108	77
50027 17D-40m N of McIntyre Bridge (PPS)	90.76 150.3199999	-28.55561591 17D	CUNNINGHAM HIGHWAY (INGLEWOO	90.14	90.87 AGAINST GAZETTAL	18 to 19	79 9	97 95	98	73	57 73	89	65
50027 17D-40m N of McIntyre Bridge (PPS)	90.76 150.3199999	-28.55561591 17D	CUNNINGHAM HIGHWAY (INGLEWOO	90.14	90.87 AGAINST GAZETTAL	19 to 20	56 7	1 71	73	52	43 56	65	50
50027 17D-40m N of McIntyre Bridge (PPS)	90.76 150.3199999	-28.55561591 17D	CUNNINGHAM HIGHWAY (INGLEWOO	90.14	90.87 AGAINST GAZETTAL	20 to 21	43 5	6 57	58	41	35 43	51	39
50027 17D-40m N of McIntyre Bridge (PPS)	90.76 150.3199999	-28.55561591 17D	CUNNINGHAM HIGHWAY (INGLEWOO	90.14	90.87 AGAINST GAZETTAL	21 to 22	31 4	4 44	47	32	28 31	40	30
50027 17D-40m N of McIntyre Bridge (PPS)	90.76 150.3199999	-28.55561591 17D	CUNNINGHAM HIGHWAY (INGLEWOC	90.14	90.87 AGAINST GAZETTAL	22 to 23	21 3	32 34	35	23	22 23	29	22
50027 17D-40m N of McIntyre Bridge (PPS)	90.76 150.3199999	-28.55561591 17D	CUNNINGHAM HIGHWAY (INGLEWOO	90.14	90.87 AGAINST GAZETTAL	23 to 24	15 2	23 23	25	16	15 15	, 20	15
50027 17D-40m N of McIntyre Bridge (PPS)	90.76 150.3199999	-28.55561591 17D	CUNNINGHAM HIGHWAY (INGLEWOO	90.14	90.87 GAZETTAL	0 to 1	7 1	.5 16	17	14	14 10	J 14	12
50027 17D-40m N of McIntyre Bridge (PPS)	90.76 150.3199999	-28.55561591 17D	CUNNINGHAM HIGHWAY (INGLEWOO	90.14	90.87 GAZETTAL	1 to 2	5 1	.1 12	14	9	12 10	J 10	11
50027 17D-40m N of McIntyre Bridge (PPS)	90.76 150.3199999	-28.55561591 17D	CUNNINGHAM HIGHWAY (INGLEWOO	90.14	90.87 GAZETTAL	2 to 3	5 1	.0 10	12	8	9 8	<i>s</i> 9	8
50027 17D-40m N of McIntyre Bridge (PPS)	90.76 150.3199999	-28.55561591 17D	CUNNINGHAM HIGHWAY (INGLEWOO	90.14	90.87 GAZETTAL	3 to 4	7	9 11	10	10	96	9	7
50027 17D-40m N of McIntyre Bridge (PPS)	90.76 150.3199999	-28.55561591 17D	CUNNINGHAM HIGHWAY (INGLEWOO	90.14	90.87 GAZETTAL	4 to 5	15 1	.8 20	20	20	13 10	J 19	12
50027 17D-40m N of McIntyre Bridge (PPS)	90.76 150.3199999	-28.55561591 17D	CUNNINGHAM HIGHWAY (INGLEWOO	90.14	90.87 GAZETTAL	5 to 6	37 4	6 47	45	39	27 17	43	22
50027 17D-40m N of McIntyre Bridge (PPS)	90.76 150.3199999	-28.55561591 17D	CUNNINGHAM HIGHWAY (INGLEWOO	90.14	90.87 GAZETTAL	6 to 7	69 7	9 81	79	70	43 31	. 76	37
50027 17D-40m N of McIntyre Bridge (PPS)	90.76 150.3199999	-28.55561591 17D	CUNNINGHAM HIGHWAY (INGLEWOO	90.14	90.87 GAZETTAL	7 to 8	87 9	95 97	97	86	57 46	92	52
50027 17D-40m N of McIntyre Bridge (PPS)	90.76 150.3199999	-28.55561591 17D	CUNNINGHAM HIGHWAY (INGLEWOO	90.14	90.87 GAZETTAL	8 to 9	106 11	.2 115	113	103	74 64	110	69
50027 17D-40m N of McIntyre Bridge (PPS)	90.76 150.3199999	-28.55561591 17D	CUNNINGHAM HIGHWAY (INGLEWOO	90.14	90.87 GAZETTAL	9 to 10	116 11	.3 113	114	104	90 83	112	87
50027 17D-40m N of McIntyre Bridge (PPS)	90.76 150.3199999	-28.55561591 17D	CUNNINGHAM HIGHWAY (INGLEWOO	90.14	90.87 GAZETTAL	10 to 11	120 11	5 117	113	107 1	02 93	. 114	97
50027 17D-40m N of McIntyre Bridge (PPS)	90.76 150.3199999	-28.55561591 17D	CUNNINGHAM HIGHWAY (INGLEWOO	90.14	90.87 GAZETTAL	11 to 12	126 12	121 121	122	111 1	04 100	121	102
50027 17D-40m N of McIntyre Bridge (PPS)	90.76 150.3199999	-28.55561591 17D	CUNNINGHAM HIGHWAY (INGLEWOO	90.14	90.87 GAZETTAL	12 to 13	133 12	28 126	126	114 1	02 97	125	99
50027 17D-40m N of McIntyre Bridge (PPS)	90.76 150.3199999	-28.55561591 17D	CUNNINGHAM HIGHWAY (INGLEWOO	90.14	90.87 GAZETTAL	13 to 14	134 13	81 128	124	117	96 100	127	98
50027 17D-40m N of McIntyre Bridge (PPS)	90.76 150.3199999	-28.55561591 17D	CUNNINGHAM HIGHWAY (INGLEWOO	90.14	90.87 GAZETTAL	14 to 15	133 12	4 123	119	112	89 92	. 122	91
50027 17D-40m N of McIntyre Bridge (PPS)	90.76 150.3199999	-28.55561591 17D	CUNNINGHAM HIGHWAY (INGLEWOO	90.14	90.87 GAZETTAL	15 to 16	124 11	.6 116	116	103	77 87	115	82
50027 17D-40m N of McIntyre Bridge (PPS)	90.76 150.3199999	-28.55561591 17D	CUNNINGHAM HIGHWAY (INGLEWOO	90.14	90.87 GAZETTAL	16 to 17	109 10	02 102	103	94	66 78	102	72
50027 17D-40m N of McIntyre Bridge (PPS)	90.76 150.3199999	-28.55561591 17D	CUNNINGHAM HIGHWAY (INGLEWOO	90.14	90.87 GAZETTAL	17 to 18	95 8	88 94	91	79	56 64	+ 89	60
50027 17D-40m N of McIntyre Bridge (PPS)	90.76 150.3199999	-28.55561591 17D	CUNNINGHAM HIGHWAY (INGLEWOO	90.14	90.87 GAZETTAL	18 to 19	75 7	2 71	70	59	45 50	70	48
50027 17D-40m N of McIntyre Bridge (PPS)	90.76 150.3199999	-28.55561591 17D	CUNNINGHAM HIGHWAY (INGLEWOO	90.14	90.87 GAZETTAL	19 to 20	63 6	65 62	59	48	39 43	59	41
50027 17D-40m N of McIntyre Bridge (PPS)	90.76 150.3199999	-28.55561591 17D	CUNNINGHAM HIGHWAY (INGLEWOO	90.14	90.87 GAZETTAL	20 to 21	55 5	54 58	51	45	37 34	, 53	36
50027 17D-40m N of McIntyre Bridge (PPS)	90.76 150.3199999	-28.55561591 17D	CUNNINGHAM HIGHWAY (INGLEWOO	90.14	90.87 GAZETTAL	21 to 22	44 4	4 44	42	36	29 25	, 42	27
50027 17D-40m N of McIntyre Bridge (PPS)	90.76 150.3199999	-28.55561591 17D	CUNNINGHAM HIGHWAY (INGLEWOO	90.14	90.87 GAZETTAL	22 to 23	30 3	32 34	29	28	21 17	31	19
50027 17D-40m N of McIntyre Bridge (PPS)	90.76 150.3199999	-28.55561591 17D	CUNNINGHAM HIGHWAY (INGLEWOO	90.14	90.87 GAZETTAL	23 to 24	21 2	4 25	23	22	14 10	23	12

APPENDIX B PLANS OF DEVELOPMENT

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	 CAR PARKING PARKING REQUIRED (REFER TO TRAFFIC REPORT) PARKING PROVIDED TRUCK PARKING CAR REFUELLING TRUCK REFUELLING (DOUBLE SIDED REFUELLING) 	- 37 - 12 - 6 - 3
BOAD BOAD		1 HIGHWAY

Project Description PROPOSED SERVICE STOP & FOOD & DRI 2-4 LAMBERTH RD,	STATION, TRUCK NK GOONDIWINDI	Drawing Title PROPOSED SIT	E PLAN	
Scale @A1 1:400 Drawn LN	Date MAR 2024 Approved By GN	Job Number - Drawing Number 22264	DA01	Revision D

APPENDIX C SWEPT PATH ANALYSES













APPENDIX D PTT QUEUING PRACTICE NOTE



BACKGROUND

On-site queuing areas are required at site access locations to ensure that vehicles do not queue across pedestrian paths or back onto the frontage road.

However, with queuing requirements in planning scheme policies becoming increasingly onerous, the usage of these figures can result in excessive queuing areas which can unnecessarily have an adverse effect construction costs and development yields.

This practice note demonstrates how conventional queuing theory can be used in traffic engineering to determine the anticipated queue length at access locations as a function of local conditions.

QUEUING THEORY

To calculate the amount of queuing space required, we must estimate the probability of a number of vehicles in a queue (n) exceeding a specified number of vehicles (N) at any instant. This is calculated using the following formula:

$$Pr (n > N) = \rho^{N+1} \le \alpha$$

Where:

ρ is the queue utilisation factor

α is the probability of a queue of N vehicles being exceeded

Rearranging this formula enables the calculation of the design queue length in terms of the number of vehicles as follows:

$$N = \frac{\log(\alpha)}{\log(\rho)} - 1$$

The **minimum** design queue would be calculated as N vehicles, which may include a fraction of a vehicle (eg 1.2 vehicles). This

design queue could be applied subject to engineering judgment.

The **desirable** design queue would be the smallest integer which contains the value, N (ie rounded up to the nearest integer).

Application of a standard vehicle length of 6m per vehicle results in a design queue length in metres.

QUEUE UTILISATION FACTOR

The utilisation factor, ρ , is the ratio of the mean arrival rate (r) and the mean service rate (s), ie:

$$\rho = \frac{r}{s}$$

The mean arrival rate (veh/hr) varies for each situation. It is calculated using the peak hour trip generation for the facility. This is expressed in vehicles per hour.

The mean service rate (veh/hr) is determined by observing the operations of similar facilities.

PTT has calculated the mean service rate for a non-controlled (ie no boom gate) parking facility by surveying the average time taken for cars to enter and leave from visitor parks in a residential development.

This survey was undertaken at a recently approved and constructed mixed use commercial/residential development at Nundah on a Wednesday in July 2014 between 4:30-6:00pm. A minimum of 30 observations were made for both "parking" and "unparking" manoeuvres The results of this analysis are shown in Table 1.



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QUEUING CHARACTERISTICS AT SITE ACCESSES

Table 1: MEAN VEHICLE MANOEUVRING TIME (seconds/vehicle)					UVRING
MANOEL	JVRE	MEAN TIME	STD DEV	MIN	MAX
Parking		12.2	13.8	1.1	69.5
Unparking	g	14.7	7.1	2.1	37.2

The application of the mean "unparking" value from Table 1 assumes that each vehicle which enters the access will be waiting for a car to "unpark" from the space nearest to the access. This is an extremely conservative assumption, which will result in an overestimate of queue lengths.

The mean service time for car parks with entrance controls such as boom gates, ticket dispensing machines, car stackers and mechanical parking installations can usually be provided by the supplier of the product.

PROBABILITY OF EXCEEDANCE

The queuing formula is used to calculate the queue length given a specified probability (α) .

Generally, the 95th percentile queue is considered an adequate measure of an acceptable queue at access driveways. This infers that there is a 5% probability that the queue length will be exceeded (ie α =0.05).

Australian Standards, AS2890.1, outlines the requirement to provide a 98^{th} percentile queue for situations where mechanical parking installations such as car stackers are used (ie $\alpha = 0.02$).

EXAMPLE

A development with a mean peak hour trip generation of 100 veh/hr and a 80:20 in:out split results in a vehicle arrival rate of 80 veh/hr. The service rates from Table 1 can be applied to calculate the queue utilisation factor. However common units are required to find a ratio.

Therefore, the service rate, s, is:

$$\frac{vehicle}{hour} = 3,600 \left(\frac{seconds}{vehicle}\right)^{-1}$$
$$s = \frac{3,600}{14.7} = 244.9 \text{ vehicles per hour}$$

The queue utilisation factor is:

$$\rho = \frac{r}{s} = \frac{80}{244.9} = 0.327$$

The 95th percentile design queue:

$$N = \frac{\log(\alpha)}{\log(\rho)} - 1$$
$$N = \frac{\log(0.05)}{\log(0.327)} - 1$$

N = 1.68 vehicles

Therefore, desirably, the development should be designed to allow for an entrance queue of two vehicles (ie 12m). However, an available queuing distance of 1.68 vehicles (ie 10.1m) would be considered acceptable to cater for the 95th percentile queue, subject to engineering judgment.



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CONCLUSION

Conventional traffic engineering queuing theory can be used to determine the anticipated queue length at access locations. This ensures that queuing does not adversely impact on nearby traffic or pedestrian flows whilst ensuring that the queuing area is not excessive.

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DISCLAIMER

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1 Introduction

Pearl Energy Pty Ltd (PE) is undertaking an application for a service station to be located on lot 262 on SP104612, 3-4 Lamberth Road, Goondiwindi, known as the service station. SEG Consulting Engineers has been retained by PE to assess noise impacts associated with the proposed use.

This report provides:

- Measurements of existing noise levels,
- Environmental values to be protected,
- Proposed noise goals,
- 3D Noise modelling of the service station, and
- Noise mitigation recommendations.

The report addresses normal operations as well as the noise aspects of bulk fuel delivery and waste removal. The assessed hours of operation of the site comprises:

• 24 hours, 7 days a week.

Simpson Engineering Group is a consulting engineering group specialising in noise, vibration, lighting and air quality assessments. The principal of SEG is a consulting mechanical engineer with over 35 years consulting experience in Queensland.

1.1 Layout Site Description

As per the Goondiwindi Regional Council Planning Scheme 2018 (Version 2), the site is situated in the Precinct 2 – Highway Commercial Precinct, see Figure 1. The zoning to the north-west comprises general residential zone.





Figure 1: Zoning Map for Subject Site and Surrounds

The proposed site layout is shown in Figure 2. The layout comprises a service station and three double sided bowsers for refuelling cars and light commercial vehicles and four double sided bowsers for refuelling large articulated trucks.

There is a motel to the north as well as a McDonalds restaurant and a large BP service station. The residential land to the NW and immediately adjacent to the motel, McDonalds and the BP Service centre is currently vacant. The closest residences in west to north-west of the site and along the western side of Lamberth Road.





Figure 2: Proposed Layout (Architectural Drawing: Verve)

1.2 Goondiwindi Regional Council Information Request 6 Sept 2024

Goondiwindi Regional Council has determined that the following additional information is needed to assess the application:

Amenity

1. The proposed development is for the establishment of a 24-hour Service Station and Food and Drink Outlet. Provide an assessment from a suitably qualified person against the relevant Environmental Protection Policies that demonstrates noise and odour emissions from the development will not adversely impact on surrounding sensitive receptors.



2 Existing Noise Environment

SEG undertook measurements of existing noise over a 9-day period 25 Sept 2024 to 4 Oct 2024. The measurements were obtained at a dwelling at the corner of Lamberth Road and Bernborough Place. A Norsonic 139 was deployed on the subject site and configured to record 15-minute statistics. There were several periods of adverse weather the late afternoon of the 27 Sept 2024 and concluding at during the during the early morning of 28 Sept 2024. Thus, the evening of 27th September and night of the 27th/28th September have not been included in the assessment of the Rating Background Noise level. Similarly, the evening period of 2nd Oct has also been excluded due to adverse weather. At other times the adverse weather was of short duration and did not influence the calculated period background noise level. The tabulation of the measured noise levels is contained in Table 1. A chart of the measured noise levels is shown in Figure 3.

Date	LA90		LA90 LAeq		LA10			LA01					
	Day	Evening	Night	Day	Evening	Night	Day	Evening	Night	18Hour	Day	Evening	Night
25/09/2024	44	41	39	55	49	47	58	50	48	49	65	61	54
26/09/2024	36	39	34	52	51	41	55	49	40	46	65	63	49
27/09/2024	37	47	34	53	54	37	56	55	39	52	66	65	43
28/09/2024	38	40	36	53	48	42	52	48	44	49	65	59	50
29/09/2024	37	39	35	50	48	39	50	48	40	47	64	61	46
30/09/2024	36	39	36	53	45	39	54	46	40	46	66	53	46
1/10/2024	38	41	39	50	47	42	51	49	43	49	60	51	47
2/10/2024	40	43	37	53	51	43	56	53	45	53	65	63	50
3/10/2024	40	44	37	54	52	42	56	53	45	53	65	63	50
4/10/2024	38		37	53		42	56		44	55	65		50
Median/RBN	38	40	37	53	49	42	55	49	43	49	65	61	49
Week Day	38	41	37	53	49	42	55	49	43	49	65	61	49

 Table 1: Free-Field Ambient Noise Level Measurements in Lamberth Road.





Figure 3: Chart of Free Field Noise Level Measurements

The noise monitoring site is west of the existing BP Service station, refer to Photograph 1. The intervening area is flat, with scattered trees. There appears to be an earth mound near the boundary of the BP service station. Since the photograph was obtained at a height of 1.5m and obscures the lower 1.5m of vehicles and buildings it is estimated the mound is approximately 1.5m high.

The background noise level during each 15-minute period is taken to be the L_{90} , the noise level exceeded 10% of the time. Then the background noise level for each date and for each time period (day, evening and night) is the lowest 10 percentile of the 15-minute measurements. Hence the Rating Background Noise Level is strongly biased towards the lowest noise levels occurring at the monitoring location. It is interesting to note that the rating background noise levels are similar throughout the day, evening and night. This is typical for noise monitoring locations that are within the sound precinct of major roads especially those roads with high proportion of heavy vehicles, i.e. >10%. In this instance the noise monitoring location is within the sound precinct of two noise sources, namely the Cunningham Highway carrying typically 40% heavy vehicles as well as the nearby BP 24-hour service station also with the trucks travelling over the site.

It considered that the RBL measured at the monitoring site would be applicable to all dwellings along Lamberth Road.

The L_{A10} noise level (the noise level exceed 10% of the time) is biassed towards the short duration noise sources occurring at the monitoring location. For 15 minute statistics it is the noise level that is exceeded for 1.5 minutes in a 15 minute period. The type of noises that influence the L_{A10} during the day is local traffic, birds noise and to a lesser extent more distant traffic noise. Since the difference between the L_{Aeq} and the L_{A10} is 3 dB(A), then it is likely local traffic noise is the dominant daytime noise source. The L_{A10} noise level during the evening is significantly lower than day L_{A10} suggesting that local road traffic is much less. Additional since the L_{Aeq} and L_{A10} are similar, then the noise source is likely due to pseudo-continuous noise sources such as vehicles idling or mechanical plant. Similar observations hold true for the night period.

In summary during the day and night the background noise levels are dominated by traffic on the Cunningham Highway, while during the evening it is likely the background noise levels are influence by local household and community noise. The foreground or high noise levels during the day are caused by local road traffic



while during the evening and night it is caused by Cunningham Highway traffic and local pseudo-continuous noises such as engine idle or mechanical plant.



Photograph 1: View to Existing BP Service Station from Near Monitoring Location





Photograph 2: View From Lamberth Road Towards Noise Logger (No Fencing on Property Boundary)



3 Noise Criteria

The measurements of ambient noise are considered representative of the noise levels in the vicinity of the site. These measurements help form an opinion regarding the environmental values to be preserved.

3.1 Goondiwindi Regional Council

The Goondiwindi Regional Council Planning Scheme 2018 (Version 2) section 6.2.1.3 Assessment benchmarks and requirements outlines a series of performance outcomes and acceptable outcomes for developments in Centre Zone. Of specific interest for this report is PO4 that states¹

Development does not detract from the amenity of the local area through unacceptable impacts relating to:

- (a) noise;
- (b) hours of operation;
- (c) traffic;
- (d) advertising devices
- (e) lighting;
- (f) visual amenity;
- (g) privacy;
- (h) odour; or
- (i) emissions.

For this performance outcome no acceptable outcome is provided. However, the information requests states the assessment against the relevant Environmental Protection Policies that demonstrates noise emissions from the development will not adversely impact on surrounding sensitive receptors.

3.2 Environmental Protection Act 1994

The objective of the EP Act is to protect Queensland's environment while allowing for development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends.

The EP Act states a person must not carry out any activity that causes, or is likely to cause, environmental harm unless the person takes all reasonable and practicable measures to prevent or minimise the harm. This is termed the 'general environmental duty'.

Environmental harm is defined as any adverse effect, or potential adverse effect (whether temporary or permanent and of whatever magnitude, duration or frequency) on an environmental value, and includes environmental nuisance.

3.2.1 Mechanical Plant Noise

The Environmental Protection Act 1994 specifies criteria for pumps and air conditioning plant as follows:

440T Pumps

- 1. This section applies to premises at or for which there is a pump.
- 2. An occupier of the premises must not use, or permit the use of, the pump on any day
 - (a) before 7a.m, if it makes an audible noise; or
 - (b) from 7a.m. to 7p.m, if it makes a noise of more than 5dB(A) above the background level; or

¹ Goondiwindi Regional Council Planning Scheme 2018 (Version 2) 6.1 Zone codes, https://www.grc.qld.gov.au/downloads/file/1449/09-gps-part-6-zones



- (c) from 7p.m. to 10p.m, if it makes a noise of more than 3dB(A) above the background level; or
- (d) after 10p.m, if it makes an audible noise.
- 3. Subsection (2)(a), (c) and (d) do not apply to a noise made at an educational institution, that is not more than 5dB(A) above the background level.
- 4. In this section Pump
 - (a) means an electrical, mechanical or pneumatic pump; and Examples liquid pump, air pump, heat pump
 - (b) includes a swimming pool pump and a spa blower.

440U Air-conditioning equipment

- 1. This section applies to premises at or for which there is air-conditioning equipment.
- 2. An occupier of the premises must not use, or permit the use of, the equipment on any day
 - (a) before 7a.m, if it makes a noise of more than 3dB(A) above the background level; or
 - (b) from 7a.m. to 10p.m, if it makes a noise of more than 5dB(A) above the background level; or
 - (c) after 10p.m, if it makes a noise of more than 3dB(A) above the background level.

440V Refrigeration equipment

- 1. This section applies to a person who is
 - (a) an occupier of premises at or for which there is plant or equipment for refrigeration (refrigeration equipment); or
 - (b) an owner of refrigeration equipment that is on or in a vehicle, other than a vehicle used or to be used on a railway.
- 2. The person must not use, or permit the use of, the refrigeration equipment on any day
 - (a) before 7a.m, if it makes a noise of more than 3dB(A) above the background level; or
 - (b) from 7a.m. to 10p.m, if it makes a noise of more than 5dB(A) above the background level; or
 - (c) after 10p.m, if it makes a noise of more than 3dB(A) above the background level.
- 3. In this section vehicle includes a trailer.

3.3 Environmental Protection (Noise) Policy 2019

The noise level goals for operations are informed from the Environmental Protection (Noise) Policy 2019 (EPP (Noise)) which seeks to achieve the object of the EP Act by:

- Identifying environmental values to be enhanced or protected
- Stating acoustic quality objectives for enhancing or protecting the environmental values
- Providing a framework for making consistent, equitable and informed decisions about the acoustic environment.

The EP Noise Policy identifies specific Acoustic Quality Objectives for sensitive receptors. Sensitive land uses/receptors identified in the policy include:

- a dwelling (detached or attached) including house, townhouse, unit, reformatory institution, caravan park or retirement village
- a library, child care centre, kindergarten, school, school playground, college, university, museum, art gallery or other educational institution, hospital, respite care facility, nursing home, aged care facility, surgery or other medical centre
- a community building including a place of public worship
- a court of law
- a hotel, motel or other premises which provides accommodation for the public
- a commercial (office) or retail facility
- a protected area, or an area identified under a conservation plan as a critical habitat or an area of major interest under the Nature Conservation Act 1992



• an outdoor recreational area (such as public park or gardens open to the public, whether or not on payment of a fee, for passive recreation other than for sport or organised entertainment) or a private open space.

The environmental values to be enhanced or protected under the EPP(Noise) are:

- (a) the qualities of the acoustic environment that are conducive to protecting the health and biodiversity of ecosystems; and
- (b) the qualities of the acoustic environment that are conducive to human health and wellbeing, including by ensuring a suitable acoustic environment for individuals to do any of the following
 - a. sleep;
 - b. study or learn;
 - c. be involved in recreation, including relaxation and conversation; and
- (c) the qualities of the acoustic environment that are conducive to protecting the amenity of the community.

There are two main considerations namely:

- 1. Acoustic quality objective (noise levels that are conducive to human health and well-being, ensuring a suitable acoustic environment for individuals to sleep, study or learn, be involved in recreation, including relaxation and conversation; and preserve the qualities of the acoustic environment that are conducive to protecting the amenity of the community); and
- 2. Management Intent

3.3.1 Acoustic Quality Objectives

The 'Acoustic Quality Objectives' seek to protect the amenity of an acoustic environment. The indoor nighttime goals effectively address sleep disturbance and sleep awakenings, while during the day it protects conversation. It should be noted that these are not strictly design limits for individual sources but objectives that are considered to provide acceptable health and wellbeing for the community

The acoustic quality objectives are expressed as indoor noise level goals for dwellings at Night (10pm to 7am) and outdoor noise level goals during the Day (7 am to 6 pm) and Evening (6 pm to 10 pm. These objectives are all contained in Table 2.

Table 2: Acoustic Quality Objectives for Residences During the Day (7 am to 6 pm), Evening (6 pm to 10 pm) and Night (10 pm to 7 am).

Location	Time of Day	Acoustic Qua at th	ality Objective e receptors) di	Environmental Value	
		LAeq, adj, 1 hr	LA10, adj, 1 hr	LA1, adj, 1 hr	
Residence outdoors	Daytime & evening	50	55	65	Health and wellbeing
Residence indoors	Daytime & evening	35	40	45	Health and wellbeing
Residence indoors	Night-time	30	35	40	Health wellbeing in relation to the ability to sleep

Source: EPP (Noise) 2019



3.3.2 Management Intent

It is intended that noise from an activity that affects or may affect an environmental value to be enhanced or protected under the EPP(Noise) be appropriately managed.

To the extent it is reasonable to do so, noise must be dealt with in a way that ensures-

- a) the noise does not have any adverse effect, or potential adverse effect, on an environmental value under this policy; and
- b) background creep in an area or place is prevented or minimised.

In the situation where existing noise levels exceed the Acoustic Quality objectives, to the extent it is reasonable to do so, noise at that sensitive place must be dealt with in a way that progressively improves the acoustic environment of the area or place.

Background creep, for noise in an area or place, is described as a gradual increase in the total amount of background noise in the area or place.

The EPP(Noise) does not provide any guidance nor limits regarding how to address background creep.

However, the guiding principles are:

- i. Background creep in an area is to be prevented or minimised.
- ii. Any control requirements are to be reasonable.

Background creep can be prevented by ensuring the noise from activity is always below the background noise level. However, this may be excessively onerous for many situations. The EPP(Noise) does not include any guidance regarding how to assess "reasonable" noise control. A work practice or abatement measure is feasible if it is capable of being put into practice or of being engineered and is practical to build given project constraints such as safety and maintenance requirements. Selecting reasonable measures from those that are feasible involves making a judgement to determine whether the overall noise-reduction benefits outweigh the overall adverse social, economic and environmental effects, including the cost of the noise abatement measure. To make such a judgement, consideration may be given to aspects such as noise level impacts, noise mitigation benefits, cost effectiveness and community views.

3.4 Sleep Disturbance WHO Guidelines

Research has shown that the ability to get to sleep and, when asleep, the probability of experiencing a change of sleep state or ultimately of awakening are related to both the ambient and maximum instantaneous noise levels at the ear of the sleeper and the number of events during the night-time period (WHO 1999).

In planning for short-term or transient noise events, for good sleep over eight hours, the indoor sound pressure level measured as a maximum instantaneous value should not exceed approximately 45dBA L_{Amax} more than 10-15 times per night. According to Guideline Ecoaccess Planning for Noise Control (EPA 2004), the corresponding external noise level, assuming partially closed windows, is 52dBA L_{Amax}, measured in the free field.



3.5 Summary of Adopted Noise Goals

3.5.1 Overall Noise Emissions

From the noise level measurements, it is evident that the existing noise levels are well below the EPA Acoustic Quality objectives for residences. The guidance of the EPP(Noise) for the current situation where existing noise levels are below the Acoustic Quality objectives, to the extent it is reasonable to do so, noise environment at a sensitive place is to be preserved. This ensures that the amenity of the residential areas is protected.

The usual intrusive noise limits comprise:

- Day (7am to 6pm) 38 dB(A)+3 dB(A) = $L_{Aeq(1 hour)}$ of 41 dB(A)
- Evening (6pm to 10pm) 40 dB(A) + 3 dB(A) = L_{Aeq(1 hour)} of 44 dB(A))
- Night (10 to 7am) 37 dB(A) + 3 dB(A) = L_{Aeq(1 hour)} of 40 dB(A)

3.5.2 Sleep Disturbance

It is assumed there are 10 maximum noise level events at night associated with door slams and car starts. Consequently, to preserve sleep the L_{Amax} goal at night is 52 dB(A) (free field) outside all existing nearby noise sensitive receptors.

3.5.3 Mechanical Plant

The noise level goals for air conditioners, mechanical plant and pump/blowers etc are contained in Table 3. The noise level goal for pumps at night is no audible noise. Typically noises with tonal or impulsive characteristics are audible at noise levels well below the background noise level, while broad-band noise (i.e. white noise) may not be audible even above background noise level. The design target at night is 5 dB(A) below background noise level and without any tonal or impulsive characteristics. The main pump noise source at most service stations is typically the tyre inflation pump. This pump is usually be situated inside a building, not externally. The fuel bowsers are also "pumps" however the noise is usually only audible a few metres from the unit during use. The night goal for continuous noise sources has been set well below the background noise level to help avoid background creep from the combined effect of all noise sources operating on the site.

Noise Source	Sound Pressure Level $L_{Aeq(1hour)} dB(A)$ during Time Periods			
	Before 7am and	From 7am to 6pm	From 6pm to	
	After 10pm Note (a)		10pm	
Measured Background Noise	37	38	40	
Level				
Pumps (i.e. tyre inflation pump)	No audible noise,	RBL + 5 = 43	RBL + 3 = 43	
	i.e. 32			
Air conditioning (including	RBL - 5 = 32	RBL + 5 = 43	RBL + 5 = 45	
exhaust fans)				
Refrigeration	RBL - 5 = 32	RBL + 5 = 43	RBL + 5 = 45	

Table 3: Applicable Noise Level Goals LAeq(1hour) from Environmental Protection Act

Note: (a) To permit night operation the design goal for mechanical plant is the night period.



4 Sensitive receptors

The subject site is situated on the Cunningham Highway, refer to Figure 4.

The closest noise sensitive receptors are situated at:

- North of site Country Roads Motor Inn, Accommodation is Single storey and air conditioned.
- West and North-west of site, Lamberth Road dwellings, NCC Early Learners childcare centre, Best Western Motor Inn
- South West of site, Jolly Swagman Motel



Figure 4:Sensitive Receptors Near Site (Map source: State Planning Policy Interactive Mapping System)



5 Predicted Noise Levels

5.1 Noise Sources

The noise sources associated with a service station are associated with car and light truck use, pedestrians, air conditioning and mechanical plant. Some noise sources such as door slams and car starts are short duration noises. Whereas vehicles driving over the site and air conditioning plant are longer duration noises. Short duration noises are assessed via short duration noise level goals (i.e. sleep disturbance) while long-duration noises are assessed using noise level goals having a longer duration.

The various noise occurring on the site are contained in Table 4. Each noise source is expressed in terms of both the $L_{Aeq(60 \text{ minute})}$ and the L_{Amax} . For instance, a car start makes an L_{Amax} noise level of approximately 67 dB(A) at 7.5 m. The contribution to the $L_{Aeq(60 \text{ minute})}$ is determined by the duration of the noise and after accounting for the short time it takes to start an internal combustion engine vehicle the $L_{Aeq(60 \text{ minute})}$ becomes 35 dB(A) at 7.5m. The noise generation from vehicles in motion is based on the paper "Traffic Noise Emission Modelling At Lower Speeds" by Hammer, Egger, Saurer & Buhlmann presented at 23rd International Congress on Sound and Vibration (2016). It is noted the dominant noise at 10km/h is propulsion noise, i.e. engine noise and exhaust, refer to Figure 5



Figure 5: Noise Profile For Petrol Cars at Low Speeds

Noise from cars has been modelled at a height of 0.5m. Noise from light commercial vehicles has been modelled at two heights, having equal noise contribution, namely 1m representative of the engine and 3.5m representative of the exhaust. The maximum noise level from the waste collection truck is modelled at a height 4m. Vehicles speeds are limited to 20 km/h over the site.



Noise Source	Source Noise Levels at 7.5 m in dB(A)			
	LAeq(60 minute)	L _{Amax}		
Car idling (for 15 minutes)	53	59		
Light truck idling (for 15 minutes) (Including delivery trucks and vans)	56	62		
Car bypass (10 km/hr) 10 seconds	30	56		
Light truck and vans bypass (10 km/hr) 10 seconds	36	62		
Petrol pump pumping (for 15 minutes)	37	43		
Air hiss during tyre fill (for 1 minute)	46	64		
Car start	34	67		
Light truck start	35	68		
Car and truck door slam	-	67		
Tyre inflator beep (10 seconds)	47	73		
Waste collection truck (max from metal-on-metal impact)	-	77		
Bulk refuelling truck	-	70		

Table 4: Typical Noise Levels at 7.5m in dB(A)

Table 5 describes typical noise use profile of the service station. The 3D noise model method is described in Appendix A: Noise Model of Service Station.

Bulk refuelling is carried out by gravity feed from the delivery trucks. This is a low noise generating activity since all truck engines are off during the bulk refuelling and the main noise is associated with the truck motion on the site.



Table 5: Peak Hourly Activities - Day Evening and Night for Noise Modelling Purposes

Activity	Units	Day	Night	Evening
Light vehicles accessing site and using fuel and carparks ^{Note 2}	Number of vehicles/events	60	40	40
Light vehicles for fast food drive through		30	30	30
Heavy Vehicles		15	10	10
Fuel pump - Light vehicles ^{Note 1}	Duration in Minutes	75	50	50
Light vehicles idling in queue for fuel	Minutes	30	15	20
Light vehicles idling in queue for fast food takeaway		60	60	60
Light vehicles Idling and manoeuvring at car parks		30	20	20
Fuel pumps - heavy vehicles		120	90	90
Trucks idle at fuel pump		30	20	20
Refrigerated transport in carpark		120	120	120
Delivery truck idling (near buildings)		10	0	0
Waste collection truck idling		10	0	0
Tyre inflation		10	5	5

Note 1: Time taken to fill the number of cars per hour each comprising an 60l fuel tank at a dispensing rate of 40 lpm

The noise model includes property boundary noise barriers comprising:

- 2.5m high western boundary
- 2.5m high for 20m northern boundary, western end
- 5m high for 50m northern boundary, central parts
- 4.5m high for 50m northern boundary, eastern parts. The barrier finishes approximately 5m from the front (eastern boundary)

The height is specified relative to the neighbouring property boundary or the site boundary whichever is the greater.

The calculated L_{Amax} noise levels contained in Table 6 are for each of three closest sensitive receptors. It is desirable to keep the L_{Amax} at night below 52 dB(A) to preserve sleep. The are not any goals during the day nor evening for the L_{Amax} .



Table 6: Calculated L_{Amax} Noise Levels (Highest Maximum) with Multi-height property boundary noise barriers

Sensitive Receptor	Highest L _{Amax} Noise Level in dB(A)			
	Truck movements, Engine Starts, Door Slams, etc			
North (Country Roads Motor Inn)	44			
NW and W (Dwellings, Motor Inn and CCC)	42			
SW Jolly Swagman Motel	43			



The calculated L_{Aeq} noise levels contained in Table 7 are for the closest sensitive receptors. The noise goals for each time period are also contained in the Table.

Table 7: Detailed Calculated L_{Aeq} Noise Levels with property boundary noise barriers on northern boundary and western boundary.

Noise Source	Calculated LAeq (1 hour) [dB(A)] at Sensitive Receptors					
	Motel North	North West to	South West Motor			
	Country Roads	west, Dwelling,	Inn			
		CCC and Motor				
		Inn				
Day (Peak hour use) Noise Goal 41 dB(A)						
Cars motion (including food drive through)	29	22	23			
Trucks vehicles in motion	38	35	34			
Engine starts and door slams	25	13	13			
Cars parking idle	26	14	15			
Cars fuel idle queue	23	10	13			
Trucks fuel idle queue	28	27	31			
Delivery truck Idle	26	22	19			
Waste truck idle	26	22	19			
Trucks starts and door slams	14	10	10			
Refrigeration trucks parked	35	34	30			
Tyre beeper	5	5	2			
Bowser	5	5	2			
Total	41	39	37			
Evening 6pm to 10pm Noise Goal 44 dB(A), Nig	ght 5am to 7am Noise	Goal 40 dB(A)				
Cars motion (including food drive through)	28	22	23			
Trucks vehicles in motion	37	33	32			
Engine starts and door slams	24	12	11			
Cars parking idle	25	13	15			
Cars fuel idle queue	20	7	10			
Trucks fuel idle queue	26	25	30			
Trucks starts and door slams	14	10	10			
Refrigeration trucks parked	35	34	30			
Bowser	5	5	2			
Total	40	37	35			



The calculated noise levels from activities on the subject site at all nearby sensitive receptors are contained in Table 8

Location	Predicted $L_{Aeq(1 hour)}$ noise Levels for All Dwellings and all Time Periods in dB(A)		
	Day	Evening	Night
Noise Goal in dB(A)	41	44	40
North (Country Roads Motor Inn)	41	40	40
NW and W (Dwellings, Motor Inn and CCC)	39	37	37
SW Jolly Swagman Motel	37	35	35

The contours of the $L_{Aeq(1 hour)}$ for the peak period of activity are contained in:

- Figure 6: L_{Aeq(1 hour)} Daytime Peak Use, including 2 parked truck mounted refrigeration units
- Figure 7: L_{Aeq(1 hour)} Evening and Night Periods Peak Hourly Activities including 2 parked truck mounted refrigeration units





Figure 6: L_{Aeq(1 hour)} Daytime – Peak Use, including 2 parked truck mounted refrigeration units





Figure 7: LAeq(1 hour) Evening and Night Periods – Peak Hourly Activities including 2 parked truck mounted refrigeration units



6 Assessment

The calculated maximum noise levels demonstrate compliance with the noise levels to preserve sleep, i.e. the maximum noise levels are likely to be below 52 dB(A) at all sensitive receptors (at night) and readily comply with the sleep disturbance goals.

It is recommended that waste removal and deliveries should only occur between 7am and 6pm and not during the night nor during the evening.

The calculated $L_{Aeq(1 hour)}$ noise levels are expected to comply with the noise level goals for the predicted peak usage during the day, evening and the night morning period subject to the provision of the property boundary noise barriers.

The noise model has included the noise from long-term parking of large truck-mounted refrigeration units (reefers) in the rearmost truck parking area. The proposed 5m high noise barriers along parts of the northern are designed to permit these reefers to park and operate the refrigeration units while at the same time meet acceptable levels at the motel to the north of the site. The 4.5m high noise barriers are to address truck movements over the subject site.

The air conditioning, refrigeration and mechanical plant has not been selected at this stage. It is anticipated that any air compressor will be located within the service building. Any new exhaust fans, air conditioning and refrigeration plant will be selected to comply with the nominated noise level goals for operation at the night, i.e. to comply with a noise level of less than 32 dB(A) at all nearby sensitive receptors. This will ensure that when air conditioning noise is combined with other noise sources the total noise from the site complies with the overall noise level goals.



7 Conclusions and Recommendations

The existing noise levels have been measured at a nearby dwelling and the measured noise levels demonstrate the site and surroundings are mostly impacted by local traffic during the day and highway traffic at night. These measurements have been accepted as being representative of the site and surroundings.

The proponent has provided plans and details of the proposed service station development. The future noise levels from the use of the site have been assessed to the noise level goals contained in the, the Environmental Protection Act, EPP(Noise) and WHO standards to protect sleep as required by Council.

It was determined that subject to the following recommendations the forecourt relocation readily complies with all noise objectives for the proposed operating hours 4am to 11pm 7 days per week:

- 1. Provision of a 2.5m high property boundary noise along the western property boundary and multi height barrier (2.5m high and 20m, 5m high and 50m long and 4.5m high and 50m long) on the northern boundary. The acoustic barrier height has been specified relative to the finished elevation of the site boundary or the neighbouring property, whichever is the greater.
- 2. That all paved surfaces on the site be a smooth as possible and free from discontinuities to avoid rattles and tonal vibrations on the vehicles traversing the site.
- 3. That any water grates on the site be bolted down to avoid rattles of the grate.
- 4. That any speed humps also contain advice to limit speeds to less than 20 km/h.
- 5. That waste removal and deliveries to be limited to daytime only.

Bulk refuelling is carried out by gravity feed from the delivery trucks. This is a low noise generating activity since all truck engines are off during the bulk refuelling. It may occur at any time.

The air conditioning and mechanical plant has not been selected at this stage. It is anticipated that any air compressor will be located within the service building. Any exhaust fans, air conditioning and refrigeration plant will be selected to comply with the nominated noise level goals for operation at the night, i.e. to comply with a combined noise level of less than 32 dB(A) at all nearby sensitive receptors.

Subject to the above conditions the proposed development complies with noise level goals throughout the assessed hours of operation. Thus, the proposed development is acceptable from a noise perspective.

There are a number of alternative building materials for noise barriers. These include lapped and capped timber, brick, concrete masonry, fibrous cement, toughened glass or earth mounds. The minimum acoustic requirement of any noise barrier is that it be solid and continuous without any gaps between palings, panels, or between the ground and barrier itself.

Finally, the specific acoustical requirements for the acoustic fence are:

- It should have a surface density of at least 15 kg/m².
- There should be a horizontal rail every 500mm in elevation (pickets should be fixed to each rail);
- There should not be any gaps between the elements of the fence and the ground; and,
- The fence should be robustly supported and constructed to ensure that the fence does not warp or bend when exposed to weathering.

It should be noted that the Department of Transport is less willing to accept timber fences due to concerns relating to longevity. However, this is of greater concern for fences along highways, rather than adjacent to commercial premises where aesthetic concerns regarding a warping and gaps forming in the fence would render the fence unacceptable.



Appendix A: Noise Model of Service Station

The service station is relatively complex to model via hand calculations due to the complex motion of potential noise sources over the subject site and the interaction of the acoustic fences with the various noise sources. As a consequence, PEN3D environmental noise model was used to model the operation of the service station. SEG (incorporating Noise Mapping Australia) are the developers of PEN3D and it is a commercially available noise modelling package.

The noise model was developed utilising the available online mapping. The development building and all surrounding buildings were accurately located relative to each other by aerial mapping from the Queensland Property Boundary Database and associated web mapping services.

To facilitate modelling using PEN3D a frequency spectrum representative of the relevant sources was adopted. PEN3D was configured for neutral meteorology. Typically, meteorological effects over short distances are minor. In the case of where there is a barrier effect, four potential noise paths are considered:

- 1. source, top of barrier, receiver;
- 2. source, reflection from ground (source side), top of barrier, receiver;
- 3. source, top of barrier, reflection from ground (receiver side), receiver; and,
- 4. source, reflection from ground (source side), top of barrier, reflection from ground (receiver side), receiver.

The reported attenuations associated with the barrier is determined by logarithmic combination of attenuations and is a conservative approach to the attenuation provided by noise barriers. Many hand calculations and spreadsheet methods optimistically consider only noise path 1.











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1 Introduction

Pearl Energy Pty Ltd (PE) is undertaking an application for a service station located a lot 262 on SP104612, 3-4 Lamberth Road, Goondiwindi, known as the service station. SEG Consulting Engineers has been retained by PE to assess air quality impacts associated with the proposed use.

This report provides:

- Description of existing environment
- Identification of appropriate assessment criteria
- Modelling of meteorology for the site using TAPM and Calmet
- Modelling of air pollution and odour emissions using Calpuff
- An assessment of air quality and odour from the forecourt

SEG specifically has assessed air quality and odour impacts from the site onto all nearby sensitive receptors.

1.1 Layout & Site Description

The proposed layout is shown in Figure 1. The layout comprises a service station and three double sided bousers for refuelling cars and trucks and space for refuelling three trucks with two single sided bowsers and two double sided bowsers.

There is a commercial use to the north and is currently used as a motel and fast-food store. There are dwellings, child care centre and motels on the western side of Lamberth St.

It is proposed to construct three two-bay multi-product bowser ranks, two double sided truck dispensers and two single sided truck bowser ranks to service three truck refuelling locations, refer to Figure 1.

The service station developers advise:

- VR1 is to be installed.
- Annual throughput less than 10,000,00ML.
- Opening Hours is 24 hours.
- Bulk fuel unloading is between 7am and 10pm
- 9 fuelling locations
- Underground fuel vent 4.5m high stack close to the truck fuelling forecourt

1.2 Council Request

In the request dated 6 September 2024 from Goondiwindi Regional Council to Pearl Energy, the council has determined that the following information is needed to assess the application:

Amenity

 The proposed development is for the establishment of a 24-hour Service Station and Food and Drink Outlet. Provide an assessment from suitably qualified person against the relevant Environmental Protection Policies that demonstrate noise and odour emissions from the development will not adversely impact on surrounding sensitive receptors.





Figure 1: Proposed Layout (Architectural Drawing: Verve)



2 Air Quality Criteria – Service Station Code

As per the Goondiwindi Regional Council Planning Scheme 2018 (Version 2), the site is situated in the Precinct 2 – Highway Commercial Precinct, see Figure 2. The residential properties to the west are zoned General Residential.



Figure 2: Zoning Map for Subject Site and Surrounds



The Goondiwindi Regional Council Planning Scheme 2018 (Version 2) section 6.2.1.3 Assessment benchmarks and requirements outlines a series of performance outcomes and acceptable outcomes for developments in Centre Zone. Of specific interest for this report is PO4 that states¹

Development does not detract from the amenity of the local area through unacceptable impacts relating to:

- (a) noise;
- (b) hours of operation;
- (c) traffic;
- (d) advertising devices
- (e) lighting;
- (f) visual amenity;
- (g) privacy;
- (h) odour; or
- (i) emissions.

For this performance outcome no acceptable outcome is provided.

In cases where a Council's planning scheme identifies a performance outcome relating to dust, odour and other air borne emissions (for a service station) but does not have an air quality assessment policy it is usual to apply Environmental Protection (Air) Policy 2019². The EEP(Air) outlines in Schedule 1 Air quality objectives. The selected and relevant air quality objectives are included in Table 1.

Table 1: Selected Design Ground Level Concentrations for Sensitive Receptors (EPP(Air) Air quality objectives)

Pollutant Type	Design Concentration (including background)	Averaging Period	Limit To Address
Benzene	29 µg/m³	1 hour	Health and wellbeing
	5.4 µg/m ³	Annual Average	Health and wellbeing
Ethylbenzene	8,000 μg/m³	1 hour	Health and wellbeing
Cyclohexane	19,000 µg/m³	1 hour	Health and wellbeing
n-Hexane	3,200 μg/m³	1 hour	Health and wellbeing
Styrene	65 μg/m³	1 hour	Odour
	284 µg/m³	7 days	Health and wellbeing
Toluene	958 µg/m³	1 hour	Odour
	4,100 μg/m³	24 hour	Health and wellbeing
	410 μg/m³	Annual Average	Health and wellbeing

¹ Goondiwindi Regional Council Planning Scheme 2018 (Version 2) 6.1 Zone codes, https://www.grc.qld.gov.au/downloads/file/1449/09-gps-part-6-zones

² Environmental Protection (Air) Policy 2019, https://www.legislation.qld.gov.au/view/whole/html/asmade/sl-2019-0153



Pollutant Type	Design Concentration (including background)	Averaging Period	Limit To Address
Xylenes	1,200 μg/m³	24 hour	Health and wellbeing
	950 μg/m³	Annual Average	Health and wellbeing

Note 1: µg/m³ is a measure of the concentration of pollutant in the atmosphere and is in micrograms per cubic meter of air

The styrene and toluene limits having an averaging time of 1 hour are odour related.

Odour Limits

The odour limits are described in the Queensland Guideline - Odour Impact Assessment from Developments. Specifically, the modelled odour concentrations at the "most exposed sensitive receptors" should be compared with the following guideline values.

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

These guideline values are based on the default annoyance threshold of 5 OU, of conservative default peak to mean ratios 10:1 for tall stacks and 2:1 for ground-level or down-washed plumes from short stacks.

An OU is an odour unit and is defined as the concentration of odourant(s) at standard conditions that is just detectable by 50% of the population. This is detection limit, not an odour identification limit which is usually significantly higher.

A sensitive receptor includes residential dwellings and residential premises and the curtilage attached to the premises.

The applicable goal on the development site from odour is 2.5 OU, 1-hour average, 99.5th percentile at the sensitive receptor boundary.



3 Air Pollution

3.1 Air Emissions Inventory

3.1.1 Service Station

The service station utilises at a minimum VR1 vapour recovery associated with filling the underground tanks. For conservatism, the model has assumed annual fuel sales to be 10,000,000 litres per annum and only comprising petrol. This value is considered conservative for the proposed operation of the site.

There are three pump ranks with a maximum of four filling locations for vehicles and two double sided and two single sided pumps for three dedicated truck filling locations. The service station opening hours modelled are 24-hours seven days a week. For conservativeness all pump ranks have been assumed to dispense petrol.

Since daily data for fuel sales and hourly distribution are not available, the conservative Brisbane City Council method (Method 2) to establish these parameters, i.e., the daily profiles etc, are presented in the tables. Fuel dispensing is modulated using the hourly profile for hours of operations presented in Table 2.

SEG understood fuel delivery may occur between 7 am and 10 pm Monday to Sunday. To support this level of fuel dispensing the model has incorporated underground tank loading at a rolling 7-day loading schedule between the hours of 7 am and 10 pm. That is 7 am on day 1, 8 am on day 2, 9am on day 3, etc. This then loops around for loading again at 2 pm on day 1, 3 pm on day 2, etc. This approach greatly overestimates the annual quantity loaded with on average 2.3 loading movements per day with each loading of 40,000L per hour. This is the equivalent of 33,300,000L per year or 91,000 L/day, well in excess of the projected or physically possible fuel sales for the site. This is shown in Table 3.


Hour	Hourly Profile (%)	Opening hours	Modelled Throughput (L/hour)
1	1.2	yes	329
2	0.8	yes	220
3	0.6	yes	165
4	0.8	yes	220
5	1.9	yes	522
6	4.6	yes	1,263
7	5.5	yes	1,510
8	5.7	yes	1,565
9	5.5	yes	1,510
10	5.7	yes	1,565
11	6.0	yes	1,647
12	6.0	yes	1,647
13	5.7	yes	1,565
14	5.6	yes	1,537
15	5.9	yes	1,620
16	6.1	yes	1,675
17	6.0	yes	1,647
18	5.8	yes	1,592
19	5.1	yes	1,400
20	4.0	yes	1,098
21	3.5	yes	961
22	3.4	yes	933
23	2.6	yes	714
24	1.8	yes	494
Total	100		Approx. 27,400 L/day

Table 2: Hourly Profile and Modelled Throughput



Hour				Day			
	1	2	3	4	5	6	7
1							
2							
3							
4							
5							
6							
7	40,000						
8		40,000					
9			40,000				
10				40,000			
11					40,000		
12						40,000	
13							40,000
14	40,000						
15		40,000					
16			40,000				
17				40,000			
18					40,000		
19						40,000	
20	40,000						40,000
21		40,000					
22							
23							
24							

Table 3: Summary of Fuel Loading (L/hr) on Rolling Schedule

The VOC emissions for the service station are drawn from the NPI "Emission Estimation Technique Manual for Aggregated Emissions from Service Stations" from November 1999 and from Gasoline Service Station Industrywide Risk Assessment Guidelines 1998³, refer to Table 4 for emission factors and Table 5 for composition of petrol.

³ Gasoline Service Station Industrywide Risk Assessment Guidelines https://www.arb.ca.gov/ab2588/rrapiwra/GasIWRA.pdf



Emissions have been broken down into 5 different emission locations. These are:

- 1. Loading From the truck loading of petrol to the storage tanks, vapour is emitted from the vent pipe. This operation includes VR1 controls.
- 2. Breathing Vapour emissions from the vent pipe due to temperature and pressure changes.
- 3. Refuelling Vapour is displaced from the tank of the vehicle being refuelled. This operation does <u>not</u> include VR2 controls.
- 4. Spillage Vapour from spillage that occurs in normal refuelling operations
- 5. "Whoosh" Vapour emissions from the opening of fuel caps. The rate used is the highest presented in the 1998 CARB report.

Table 4: Emission factors for Service Stations

Emission Source	NPI	NPI CAPCOA (Type 5B) Emission Rate		Modelled Level
	VOC (mg/L)	VOC (lbs per 1000 gal)	VOC (mg/L)	VOC (mg/L)
Underground tank filling (Submerged filling and vapour balance)	40	0.084	10	40
Underground tank breathing/emptying	120	0.21	101	120
Vehicle refuelling (petrol)	1320	8.4	1007	1320
Vehicle refuelling (diesel)	176	-	-	176
Vehicle refuelling (lpg)	0.04	-	-	0.04
Spillage	80	0.61	73	80
Whoosh Emission	-	0.258 - 0.658	79	79

Table 5: Composition of Petrol

Species	Petrol Liquid (% weight)	Petrol vapour (% weight)
Benzene	1	0.39
Cyclohexane	0.2	0.0637
Ethylbenzene	2	0.0791
n-Hexane	3.5	1.73
Styrene	0.1	0.00282
Toluene	10.4	1.08
Xylenes	12.2	0.433

For the purposes of this report it is assumed that all the fuel sold is petrol. Diesel has much lower emission factors. It is assumed that the tanker unloads 40,000L in 1 hour, between 7am and 10pm on the defined schedule.

Thus, the hourly maximum emission rates are presented in Table 6 and Table 7. Refuelling and whoosh emissions have been combined as they emanate in the same volume source. Whoosh occurs during opening of vehicle fuel caps by customers.



Hour	Refuelling & Whoosh	Spillage	Breathing
1	0.46	0.03	0.04
2	0.31	0.02	0.03
3	0.23	0.01	0.02
4	0.31	0.02	0.03
5	0.73	0.04	0.06
6	1.77	0.10	0.15
7	2.11	0.12	0.18
8	2.19	0.13	0.19
9	2.11	0.12	0.18
10	2.19	0.13	0.19
11	2.30	0.13	0.20
12	2.30	0.13	0.20
13	2.19	0.13	0.19
14	2.15	0.12	0.18
15	2.27	0.13	0.19
16	2.34	0.13	0.20
17	2.30	0.13	0.20
18	2.23	0.13	0.19
19	1.96	0.11	0.17
20	1.54	0.09	0.13
21	1.34	0.08	0.12
22	1.31	0.07	0.11
23	1.00	0.06	0.09
24	0.69	0.04	0.06

Table 6: Modelled Emission Rate of VOC (kg/hr)



Hour	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
1							
2							
3							
4							
5							
6	1.6						
7		1.6					
8			1.6				
9				1.6			
10					1.6		
11						1.6	
12							1.6
13	1.6						
14		1.6					
15			1.6				
16				1.6			
17					1.6		
18						1.6	
19							1.6
20	1.6						
21		1.6					
22							
23							
24							

Table 7: Modelled Emission Rate of VOC (kg/hr) from Underground Loading (VR1)



3.2 Odour Conversion Rates

The odour detection threshold of Unleaded Fuel was determined by engineering consultants Air Noise Environment, MWA Environmental and The Odour Unit and based on testing of fuel conducted in April 2015. The consultants determined the odour detection threshold to be 2357 μ g/m³. MWA noted the calculated result is similar to the Neumann Fuels Unleaded Petrol MSDS NC317ECP odour threshold of 0.25ppm (2150 ug/m³). Refer to Air Quality Assessment Proposed Service Station, Showroom and Fast Food Restaurants Settlement Road, Keperra 7 December 2017, by MWA Environmental⁴.

The US NAC/AEGL Committee report Acute Exposure Guideline Levels (AEGLS) For Automotive Gasoline (Unleaded), 2009 states the odour detection threshold for gasoline is 0.5-0.6ppm. There are other references indicating the odour threshold for gasoline vapour is 0.25 ppm.

Thus 2357 μ g/m³ is equal to 1 OU. For ground-based emission sources the odour limit is 2.5 OU or 5892 μ g/m³. Alternatively, 1 g/m³ of VOC emissions is equivalent to 423 OU.

3.3 Background Air Quality

The Department of Environment, Science and Innovation (DESI) conducts monitoring of various air pollution at several sites throughout Queensland. The background concentrations for relevant pollutants from the DESI monitoring site Gladstone are contained in Table 8. Gladstone is the closest site that measures the species of interest. The use of Gladstone data is considered to be conservative. Conservatively, the maximum of the five years 2019 to 2023 has been taken as the background level for the relevant time periods and is shown in Table 9.

Pollutant	Time Period	2019	2020	2021	2022	2023	Maximum
Benzene	Annual Average	1.3	1.1	1.2	0.7	0.8	1.3
Toluene	Annual Average	2.0	1.7	1.6	1.2	1.1	2.0
	24 Hour 70 th Percentile	2.1	1.8	1.8	1.3	1.2	2.1
	1 Hour 70 th Percentile	2.3	1.9	1.8	1.4	1.2	2.3
Xylene	Annual Average	7.7	6.9	6.5	3.8	4.1	7.7
	24 Hour 70 th Percentile	9.0	7.7	7.0	3.9	4.5	9.0

Table 8: Measured Air Pollutant Concentrations from Springwood DES site (in PPB).

The subject site is located 180m south of another service station, BP Truckstop at Lot 11/11 Cunningham Hwy. The other service station site has the potential to impact the local airshed. This report is not addressing the impacts from these sites, but in order to incorporate the potential impacts, the assumed background levels have been increased by 100% from those measured at Gladstone. This should be a conservative approach.

<u>https://pdonline.brisbane.qld.gov.au/MasterViewUl/Modules/documentmaster/viewdocumentftp.aspx?key=p4j9mRT%</u> <u>2fiFbv%2b0NpwcdmnoOPy%2bJJNeGEuD4IItt14FbaXRRDJqWj2A%3d%3d</u>



⁴MWA Environmental, "Air Quality Assessment Proposed Service Station, Showroom And Fast Food Restaurants", 2017,

Table 9: Assumed Background Levels

Pollutant	Time Period	Value [ug/m³]
Benzene	Annual Average	4.1
Toluene	Annual Average	7.4
	24 Hour 70 th Percentile	8.0
	1 Hour 70 th Percentile	8.7
Xylene	Annual Average	33.5
	24 Hour 70 th Percentile	38.9

3.4 Air Pollution Model

The model Calpuff was used to model the dispersion of VOC's from the service station. The model is an approved model for modelling these types of sources. Due to the cartesian nature of Calpuff volume sources each pump rank was modelled separately and each rank with volume size and parameters as per the recommendations of the LORAX report⁵ Specifically, the model comprised:

- (i) Seven equal rate volume sources for each of the pump ranks with emission height at 1m for refuelling and whoosh emissions with the total emission rate equal to that in Table 6.
- (ii) Seven equal rate volume sources, the same dimensions with release height of 0m for spills with the total rate equal to that in Table 6.
- (iii) To represent the vent stack, a point source as per the built environment, 4.5m from the ground, with an exit diameter of 0.01m and rain cap option set. Underground tank Breathing occurs during operating hours of the service station.
- (iv) Tank loading occurs as per Table 7.

Since diesel has a much lower emission rate (and odour generation) than gasoline the high flow diesel pumps modelled as petrol pumps, see Table 4 for comparison of emission factors. Thus, assuming gasoline only implies the highest possible emission rates have been modelled.

Refer to Figure 3 for the location of the service station sources. Also shown are the buildings included in the model to address downwash. The Lakes Environment Pre/Processor was used to prepare all datafiles for Calpuff as well as Calmet.

⁵ ANALYSIS OF WAKE EFFECTS AT RETAIL GASOLINE OUTLETS, LORAX ENVIRONMENTAL, 1997





Figure 3: Source Locations for Pumps and Vent Stacks - Service Station



3.4.1 Receptor Locations

Calpuff provides results on a computational grid as well as at discrete receptors. The computational grid is approximately 10km by 10km and grid spacing of 200m. The modelling domain greatly exceeds the site. However, the discrete receptors are used to produce contours and detailed calculation output of results.

Contours have been calculated using a modelling grid. The grid is at 20m spacing and covers over the pumps and closest receptors. Refer to Figure 4 for the discrete receptor grid and the point modelling locations. It should be noted that there are 782 discrete receptors on the site and near surrounds, each blue cross in Figure 4 representing the x,y location of the discrete, additionally sampling gridded receptors at the meteorological grid spacing has also been processed.

Since it is not possible to present all receptor of data in tabular form, this report provides the contours relating to the highest exposure level and extracted the highest exposure discrete receptor (from large group of discrete receptors) in the tables. Contouring of the pollution levels is based on the discrete receptors.



Figure 4: Modelling Locations – Narrow Domain Discrete receptors (blue cross)



3.5 Meteorology

To determine the likely meteorology for the site a TAPM meteorological model was developed. Specifically, the TAPM model based on a 2-year modelling simulation period 2022 & 2023 and was resolved to a 300m inner grid with 30 by 30 grid points. Five nested gridded domains were processed with grid spacings of 30000m, 10000m, 3000m, 1000m and 300m. Since the terrain surrounding the site is gently undulating a grid finer than 300m is unlikely to produce significantly different results. Additionally, the adoption of 300m grid means that the closest grid point to the subject site is 150m away from the site, improving interpolation accuracy. Simulation tests carried by Hurley et al (2005) indicate that even with a 3 km grid spacing, winds are predicted well, with no significant bias. Hence the adoption of 300m inner grid is expected to provide an accurate prediction of winds for the subject site.

TAPM predicts meteorology and optionally pollutant concentration for a range of pollutants important for air pollution applications. The model consists of coupled prognostic meteorological and air pollution concentration components, eliminating the need to have site-specific meteorological observations. Instead, the model predicts the flows important to local-scale air pollution, such as sea breezes and terrain induced flows, against a background of larger-scale meteorology provided by synoptic analyses.

The years 2022 & 2023 was adopted as the modelling year for the service station. Initially the 3D wind data was transferred from TAPM into Calmet (using Caltapm). Within Calmet a 200m wind grid of 50 by 50 points adopted.

3.5.1 Meteorology Validation

Wind roses for the site were prepared for the subject year. This is included in Appendix A: Wind Roses and Meteorological Data Analysis. The wind roses for Goondiwindi Airport⁶ from the Bureau of Meteorology for years 1991 to 2015 are also included in the appendix.

The two wind roses show high correlation for wind speed and wind direction. This validates that the meteorology modelled for 2022 & 2023 is representative for the site and the general trends of the area.

⁶ Wind and direction rose Goondiwindi Airport, https://reg.bom.gov.au/climate/averages/tables/cw_041521.shtml



3.6 Calculated Pollutant Concentration

The calculated pollutant concentrations are contained in Table 6. A summary of the input data comprises:

- (i) Service station 7 volume sources for refuelling and whoosh emissions (one for each pump rank with emission height at 1m with emission dimensions as per LORAX recommendations)
- (ii) Service station 7 volume sources for spillage emissions (one for each pump rank with emission height at 0m with emission dimensions as per LORAX recommendations)
- (iii) Service station 1 stack source for breathing and refuelling
- (iv) Service station Filling rate and volume as per discussions with operators
- (v) Service station Filling of underground tanks occurs at all hours at a rate of 40,000L/hour;
- (vi) Service station Emissions based on NPI and CAPCOA;

The calculation mesh is shown in Figure 3 and has been carried out at several elevations representing the ground and first floor breathing heights. Both years 2022 and 2023 was adopted for modelling VOC's from the service station.

The calculated pollution contours are contained in **Appendix C** and are for each of the individual receptor heights and comprise:

- (i) VOC_(annual average) plots for the meteorological modelling year 2022 & 2023
- (ii) VOC_(7 day) maximum plots for the meteorological modelling year 2022 & 2023
- (iii) VOC_(24 hour) maximum plots for the meteorological modelling year 2022 & 2023
- (iv) VOC_(1 hour) 99.9th percentile plots for the meteorological modelling year 2022 & 2023



As the model contains hundreds of discrete receptors, the maximum value on each of the boundary elements has been determined from this array of data. This contrasts with the common approach of only considering a single modelling point per boundary. The referenced boundary elements are shown in Figure 5. Table 10 contains the VOC exposure along the boundary of the nearest sensitive receptors at the various receptor heights. Table 10 addresses the OUs from service station.



Figure 5: Map with Boundary Elements



Table 10: VOC (in µg/m3) at Property Boundary Locations from Service Station Operations

Metric	North	West	Southwest
Annual Average	45	9	7
7 Day Maximum	270	35	20
24 hr Maximum	850	130	110
1 Hour 99.9th %ile	3,300	500	480
1 Hour 99.5th %ile	1,800	240	210

The results in Table 10 provide the total VOC's and to obtain the speciation composition it is necessary to multiply by the appropriate fraction based on the composition of petrol, Table 5. Table 10 is the speciated total VOC and represents the maximum likely exposure at the site boundary.



Component	Period	Background ^{#1}	Goal (µg/m³)	Pollution Levels Highest Exposure Sensitive Receptor Boundary (µg/m3)		re Sensitive m3)
				North	West	Southwest
Benzene	1 hour		29	12.9	2.0	1.9
	Annual Average	8.2	10	8.4	8.2	8.2
Ethylbenzene	1 hour	-	8,000	2.6	0.4	0.4
Cyclohexane	1 hour	-	19,000	2.1	0.3	0.3
n-Hexane	1 hour	-	3200	57.1	8.7	8.3
Styrene	1 hour	-	65	0.1	<0.1	<0.1
	7 days	-	280	<0.1	<0.1	<0.1
	Annual Average	-	270	<0.1	<0.1	<0.1
Toluene	1 hour	17.4	958	53.0	22.8	22.6
	24 hour	16.0	4,100	25.2	17.4	17.2
	Annual Average	14.8	410	15.3	14.9	14.9
Xylenes	24 hour	77.8	1,200	92.1	80.0	79.9
	Annual Average	67.0	950	67.2	67.0	67.0

Table 11: Modelled Pollution Exposure and Goals from Service Station (Including applicable background)

Note 1: Scaled up background levels.



3.6.1 Odour Concentration

Based on the odour conversion rate of 2,357 μ g/m³ is equal to 1 OU the 1 hour 99.5th percentile odour units for the various property boundaries is presented in Table 12. The limit for ground-based emission sources is 2.5 OU.

Table 12: Modelled Odour in OU on boundary elements

Receptor Group	North	West	Southwest
Odour Concentration (OU)	0.8	0.1	0.1

The maximum odour level has been extracted and contoured. The odour contour are contained in Figure 6.



237750 237800 237850 237900 237950 238000 238050 238100 238150 238200 238250

Figure 6: Odour Exposure (Max of 0.0m, 1.5m, 3.0m, 4.5m elevation)



3.7 Air Quality Assessment

Most of the VOC species from the service station are only a minor fraction of the VOC emissions and orders of magnitude lower than the goal. All locations along the sensitive receptor boundary readily comply for the fuel volume modelled. Similarly, the odour goal of 2.5 OU is readily met along all boundaries of the sensitive receptors.

Hence the site is expected to readily comply with limits designed to protect both health and welfare and against adverse odour nuisance.

3.8 Air Quality Recommendations

The site does not require any additional controls to address air quality from service station other than that inherent as part of the design, i.e. VR1.



4 Conclusions

The proposed service station development site was investigated with regards to air quality impacts.

The background air quality is based on the recent and relevant publication of long-term monitoring conducted by DSITI.

The meteorology for the site was predicted using TAPM over a two-year period, 2022 & 2023. The modelling of the pollution utilised the approved model Calpuff configured in according to the recommended settings.

The service station was modelled at the projected future maximum fuel sales with all fuel sales being petrol.

It was found that the air quality and odour at the proposed development boundary readily meets all air quality and odour goals for realistic meteorological conditions both now and into the future.

Thus, the service station may proceed without any adverse air quality impacts onto nearby sensitive uses.



5 References

Brisbane City Council (2016) Schedule 6 Planning Scheme Policies (PSP) Air Quality PSP <u>http://eplan.brisbane.qld.gov.au/?doc=TransportAirQualityOC</u>

Department of Science, Information Technology and Innovation (2015) Queensland air monitoring report 2014

Department of Science, Information Technology and Innovation (2018), Meteorological Monitoring data for Mountain Creek

Department of Transport and Main Roads (June 2014), Manual Road Traffic Air Quality Management

Hurley PJ, Physick WL, Luhar AK Edwards M (2005) The Air Pollution Model (TAPM) Version 3. Part 2: Summary of Some Verification Studies. CSIRO Atmospheric Research

NPI (Nov 1999), Emissions Estimation Technique Manual for Aggregated Emissions from Service Stations <u>http://www.npi.gov.au/resource/emission-estimation-technique-manual-aggregated-emissions-service-stations</u>

NPI (Nov 1999), Emissions Estimation Technique Manual for Fibreglass Product Manufacturing http://www.npi.gov.au

NPI (Nov 1999), Emissions Estimation Technique Manual for Shipbuilding Repair and Maintenance http://www.npi.gov.au

State of QLD (2008), Environmental Protection (Air) Policy 2008



Appendix A: Wind Roses and Meteorological Data Analysis



Figure 7: Wind Rose All Hours



Figure 8: Wind Rose 9am and 3pm



Rose of Wind direction versus Wind speed in km/h (27 Jun 1991 to 31 Jul 2015)

Custom times selected, refer to attached note for details

GOONDIWINDI AIRPORT

Site No: 041521 • Opened Jun 1991 • Closed Aug 2015 • Latitude: -28.5211° • Longitude: 150.3256° • Elevation 217.m

An asterisk (*) indicates that calm is less than 0.5%. Other important info about this analysis is available in the accompanying notes.





Rose of Wind direction versus Wind speed in km/h (27 Jun 1991 to 31 Jul 2015)

Custom times selected, refer to attached note for details

GOONDIWINDI AIRPORT

Site No: 041521 • Opened Jun 1991 • Closed Aug 2015 • Latitude: -28.5211° • Longitude: 150.3256° • Elevation 217.m

An asterisk (*) indicates that calm is less than 0.5%. Other important info about this analysis is available in the accompanying notes.





The general features of winds affecting plume dispersion are illustrated in the wind rose diagrams. The wind roses summarise the wind statistics at a 10m height on site, as calculated by the TAPM meteorological model.

The wind roses show the frequency of occurrence of winds by direction and strength. The bars correspond to the 16 compass points – N, NNE, NE, ENE ,E etc. The length of the bar represents the frequency of occurrence of winds from that direction, and the colour of the bar sections correspond to wind speed categories. It is noted that the predominant wind direction during the year is from the north-east through to the south-east.

The 9am and 3pm wind roses from TAPM compare favourably with the BOM wind roses for the same time periods. However, there will be differences involved since the two locations are separated by some distance and the proximity to major terrain features that influence wind flows.

The representative frequency of Pasquil stability classes for the region is based on data from TAPM. Pasquil stability classes represent the stability of the atmosphere. The stability Class F conditions (stable conditions), which result in poor dispersion of pollutants does not occur during the day.

Table 13 shows the frequency of stability classes for the site.

Table 13: Stability Distribution

Stability	Description	Percentage of Time
А	Very unstable	6%
В	Moderately unstable	12%
С	Slightly unstable	16%
D	Neutral	39%
E	Slightly stable	13%
F	Stable	15%

The diurnal distribution of the mixing height is contained in Figure 9. The mixing height is defined as the height of the layer closest to the ground which will contain all non-buoyant pollutants emitted within the layer.



Figure 9: Mixing Height Distribution from Meteorological File (2020-2021)

Note: The closest BoM meteorological station is situated at Emerald Airport, approximately 10km from the site and the wind roses for this location are provided.



Appendix B: Modelled Air Quality - Contours



Proposed Service Station at 3-4 Lamberth Road, Goondiwindi Annual Average VOC



Proposed Service Station at 3-4 Lamberth Road, Goondiwindi 7 Day Maximum VOC



Proposed Service Station at 3-4 Lamberth Road, Goondiwindi 24 Hour Maximum VOC



Proposed Service Station at 3-4 Lamberth Road, Goondiwindi 1 Hour 99.9th Percentile VOC



CALPUFF View - Lakes Environmental Software

Proposed Service Station at 3-4 Lamberth Road, Goondiwindi 1 Hour 99.5th Percentile VOC

6839.6 6839.5 6839.4 6839.3 UTM North [km] 6839.1 6839.2 6839 6838.9 6838.8 6838.7 237.8 237.9 238.1 238.2 238.5 237.7 238 238.3 238.4 237.6 UTM East [km] VALUE 99.50TH PERCENTILE 1 HOUR AVERAGE CONCENTRATION (VOC) ug/m**3 Max = 8847 [ug/m**3] at (X = 238147.00, Y = 6839136.00) 600 60 100 200 300 400 1000 2000 3000 4000 6000 COMMENTS: COMPANY NAME: Simpson Engineering Group MODELER: **Chris Simpson** SCALE: 1:6,641 10.2 km 0 Simpson Engineering Group DATE: PROJECT NO .: 17/10/2024 240911



Attachment 3 – Infrastructure Charges Notice





Goondiwindi Customer Service Centre 4 McLean Street Goondiwindi Inglewood Customer Service Centre 18 Elizabeth Street Inglewood

Telephone: 07 4671 7400 Fax: 07 4671 7433

Email: mail@grc.qld.gov.au

Infrastructure Charges Notice

Address	2-4 Lamberth Road, Goondiwindi	
Owner	M & J Hayes Pty Ltd & CM & MC Clark Pty Ltd	
Applicant	Pearl Energy Pty Ltd C/- Mecone	
Application No.	24/31	
Lot and Survey Plan	Lot 262 on SP104612	
Date	27 March 2025	
Approval	Development Permit – Material Change of Use & Reconfiguring a Lot	

100	Development Application Details
	Reconfiguring a Lot – Subdivision (One (1) lot into two (2) lots)

Type of Charge	Charge Area (A, B, C, D or E)	Charge Amount per lot (\$)	Number of additional lots	Charge (\$)
Reconfiguring a Lot	А	5,000	1	5,000

Due Date When Goondiwindi Regional Council approves the plan of subdivision		Total	
Charge to be paid to	Goondiwindi Regional Council	Charge (\$)	5,000
Lapse Date	27 March 2029	_ (Ψ)	

An offset has been applied to this notice, where the existing lot has not been charged.

Print Name: Mrs Ronnie McMahon Manager Planning Services

In accordance the Planning Act 2016

Office Use – Receipt Number

Subdivisions - 1250-1150-0000





Goondiwindi Customer Service Centre 4 McLean Street Goondiwindi Inglewood Customer Service Centre 18 Elizabeth Street Inglewood

Telephone: 07 4671 7400 Fax: 07 4671 7433

Email: mail@grc.qld.gov.au

Infrastructure Charges Notice

Address	2-4 Lamberth Road, Goondiwindi
Owner	M & J Hayes Pty Ltd & CM & MC Clark Pty Ltd
Applicant	Pearl Energy Pty Ltd C/- Mecone
Application No.	24/31
Lot and Survey Plan	Lot 262 on SP104612
Date	27 March 2025
Approval	Development Permit – Material Change of Use & Reconfiguring a Lot

Development Application Details

Material Change of Use - "Service Station" and "Food and Drink Outlet" (including drive through facility)

Proposed Use	Charge Area	Type of Charge	Charge Amount (\$)	Unit	Total Charge (\$)
Service A Station A	Δ	Water, sewerage, transport and parks	8.00 per m ² of GFA	395m²	3,160
	~	Stormwater	1.00 per m ² of IA	16,437m²	16,437
Food and Drink Outlet	A	Water, sewerage, transport and parks	8.00 per m ² of GFA	163m²	1,304
		Stormwater	1.00 per m ² of IA	0m² additional	0



Goondiwindi Customer Service Centre 4 McLean Street Goondiwindi Inglewood Customer Service Centre 18 Elizabeth Street Inglewood

Locked Mail Bag 7 Inglewood QLD 4387

Telephone: 07 4671 7400 Fax: 07 4671 7433

Email: mail@grc.qld.gov.au

Due Date	When the change happens	Tetal	
Charge to be paid to	Goondiwindi Regional Council	Charge	\$15,901*
Lapse Date	27 March 2031	(\$)	

Authorised by: RM M

Print Name: Mrs Ronnie McMahon Manager Planning Services

*An offset has been applied to this notice, subject to the Reconfiguring a Lot component being completed prior to the Material Change of Use charges becoming payable.

In accordance the Planning Act 2016

Office Use – Receipt Number

Charges - 1250-1150-0000





Attachment 4 –

Notice about decision - Statement of reasons



Notice about decision - Statement of reasons

The following information is provided in accordance with section 63 (5) of the Planning Act 2016 and must be published on the assessment managers website.

The development application for Material Change of Use for "Service Station" and "Food and Drink Outlet"

(including drive through facility) and Reconfiguring a Lot (One (1) lot into Two (2) lots)

24/31	
2-4 Lamberth Road, Goondiwindi	
Lot 262 on SP104612	
On <u>26 March 2025</u> , the above development application was:	
approved in full or	
approved in part for	or
☑ approved in full with conditions or	
approved in part for	, with conditions or
refused.	

1. <u>Reasons for the decision</u>

The reasons for this decision are:

 Having regard to the relevant criteria in the Goondiwindi Region Planning Scheme 2018, the proposed development satisfied all relevant criteria, and was approved subject to appropriate, relevant and reasonable conditions.

2. Assessment benchmarks

The following are the benchmarks applying for this development:

Benchmarks applying for the development	Benchmark reference	
Centre Zone Code	P01-P010	
Reconfiguring a Lot Code	PO1-PO12	
Transport & Infrastructure Code	PO1-PO15	
Natural Resources Overlay Code	PO5-PO8	
Flood Hazard Overlay Code	P01-P04	

3. Compliance with benchmarks

Benchmark reference	Reasons for the approval despite non- compliance with benchmark
Centre Zone Code	
AO6.1 <i>Buildings</i> that adjoin a <i>primary road frontage</i> provide an <i>active frontage</i> .	Not Applicable The proposed development does not adjoin the primary road frontage.

Benchmark reference	Reasons for the approval despite non- compliance with benchmark
 AO6.2 Building entrances are clearly recognisable from the primary street frontage. AO6.3 The following building elements are not visible from the primary street frontage: (a) building plant equipment (e.g. air conditioning units); (b) refuse storage areas; and (c) vehicle servicing areas. AO6.4 On-site car parking is provided behind or to the side of the building alignment to the primary street 	Complies The building entrance will be recognisable from the Cunningham Highway access. Conditions will be applied to ensure all services are screened from external boundaries and road frontages. Alternative Solution Car parking is provided at the frontage of the site to the Cunningham Highway with truck parking provided at the rear. The proposed layout is consistent with customer expectations
frontage.	for a Service Station development and internal access paths will educe potential conflict points between customers and vehicles.
Reconfiguring a Lot Code	
 PO12 Reconfiguring a lot retains vegetation where practical for the: (a) protection of scenic amenity; (b) protection of general habitat; (c) protection of soil quality and stability; (d) maintenance and establishment of open space corridors and networks; and (e) purpose of positive climate response. 	Performance Solution Trees located in Proposed Lot 13 will be cleared to facilitate the proposed development. The balance of Proposed Lot 1 will remain undeveloped.
Transport & Infrastructure Code	
AO2 Parking is provided on the site in accordance with the requirements identified in Table 9.4.4.2 - Car parking generation rates and service vehicle requirements. Note—where for a <i>supermarket</i> or <i>shopping centre</i> including a <i>supermarket</i> in the Central business district precinct or Pratten Street precinct of the Centre Zone or the Callandoon Street precinct or Marshall Street precinct of the General residential zone, a Traffic and Car Parking Impact Assessment and Street Improvement Plan is undertaken in support of any development application seeking car parking concessions.	Alternative Solution The proposed development includes 37 car parking spaces which is less than required. However, the car parking provision is adequate based solely on GFA demand calculations. It is considered that there is adequate area in the refuelling forecourt to accommodate vehicle queuing safely. Conditions will be applied to ensure the area is attractively landscaped.
OR Where development is for a material change of use involving no building work or <i>minor building work</i> , the existing number of car parking spaces on the premises is maintained.	

4. Relevant matters for impact assessable development

5. Matters raised in submissions for impact assessable development

6. Matters prescribed by Regulation

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Attachment 5 – Planning Act 2016 Extracts



EXTRACT FROM PLANNING ACT 2016 RELATING TO APPEAL RIGHTS

Chapter 6 Dispute Resolution, Part 1 Appeal Rights

229 Appeals to tribunal or P&E Court

- (1) Schedule 1 states—
 - (a) matters that may be appealed to-
 - (i) either a tribunal or the P&E Court; or
 - (ii) only a tribunal; or
 - (iii) only the P&E Court; and
 - (b) the person-

 (i) who may appeal a matter (the appellant); and

(ii) who is a respondent in an appeal of the matter; and

(iii) who is a co-respondent in an appeal of the matter; and

(iv) who may elect to be a co-respondent in an appeal of the matter.

- (2) An appellant may start an appeal within the appeal period.
- (3) The appeal period is—
 - (a) for an appeal by a building advisory agency—10 business days after a decision notice for the decision is given to the agency; or
 - (b) for an appeal against a deemed refusal at any time after the deemed refusal happens; or
 - (c) for an appeal against a decision of the Minister, under chapter 7, part 4, to register premises or to renew the registration of premises—20 business days after a notice is published under section 269(3)(a) or (4); or
 - (d) for an appeal against an infrastructure charges notice—20 business days after the infrastructure charges notice is given to the person; or
 - (e) for an appeal about a deemed approval of a development application for which a decision notice has not been given—30 business days after the applicant gives the

deemed approval notice to the assessment manager; or

(f) for any other appeal—20 business days after a notice of the decision for the matter, including an enforcement notice, is given to the person.

Note-

- See the P&E Court Act for the court's power to extend the appeal period.
- (4) Each respondent and co-respondent for an appeal may be heard in the appeal.
- (5) If an appeal is only about a referral agency's response, the assessment manager may apply to the tribunal or P&E Court to withdraw from the appeal.
- (6) To remove any doubt, it is declared that an appeal against an infrastructure charges notice must not be about—
 - (a) the adopted charge itself; or
 - (b) for a decision about an offset or refund-

(i) the establishment cost of trunk infrastructure identified in a LGIP; or

(ii) the cost of infrastructure decided using the method included in the local government's charges resolution.

230 Notice of appeal

- (1) An appellant starts an appeal by lodging, with the registrar of the tribunal or P&E Court, a notice of appeal that—
 - (a) is in the approved form; and
 - (b) succinctly states the grounds of the appeal.
- (2) The notice of appeal must be accompanied by the required fee.
- (3) The appellant or, for an appeal to a tribunal, the registrar must, within the service period, give a copy of the notice of appeal to—
 - (a) the respondent for the appeal; and
 - (b) each co-respondent for the appeal; and
 - (c) for an appeal about a development application under schedule 1, table 1, item 1—each

principal submitter for the development application; and

- (d) for an appeal about a change application under schedule 1, table 1, item 2—each principal submitter for the change application; and
- (e) each person who may elect to become a corespondent for the appeal, other than an eligible submitter who is not a principal submitter in an appeal under paragraph (c) or (d); and
- (f) for an appeal to the P&E Court—the chief executive; and
- (g) for an appeal to a tribunal under another Act any other person who the registrar considers appropriate.
- (4) The service period is-
 - (a) if a submitter or advice agency started the appeal in the P&E Court—2 business days after the appeal is started; or
 - (b) otherwise—10 business days after the appeal is started.
- (5) A notice of appeal given to a person who may elect to be a co-respondent must state the effect of subsection (6).
- (6) A person elects to be a co-respondent by filing a notice of election, in the approved form, within 10 business days after the notice of appeal is given to the person.

231 Other appeals

- (1) Subject to this chapter, schedule 1 and the P&E Court Act, unless the Supreme Court decides a decision or other matter under this Act is affected by jurisdictional error, the decision or matter is non-appealable.
- (2) The Judicial Review Act 1991, part 5 applies to the decision or matter to the extent it is affected by jurisdictional error.
- (3) A person who, but for subsection (1) could have made an application under the Judicial Review Act 1991 in relation to the decision or matter, may apply under part 4 of that Act for a statement of reasons in relation to the decision or matter.

(4) In this section-

decision includes----

(a) conduct engaged in for the purpose of making a decision; and

(b) other conduct that relates to the making of a decision; and

(c) the making of a decision or the failure to make a decision; and

(d) a purported decision; and

(e) a deemed refusal.

non-appealable, for a decision or matter, means the decision or matter—

(a) is final and conclusive; and

(b) may not be challenged, appealed against, reviewed, quashed, set aside or called into question in any other way under the Judicial Review Act 1991 or otherwise, whether by the Supreme Court, another court, a tribunal or another entity; and

(c) is not subject to any declaratory, injunctive or other order of the Supreme Court, another court, a tribunal or another entity on any ground.

232 Rules of the P&E Court

- (1) A person who is appealing to the P&E Court must comply with the rules of the court that apply to the appeal.
- (2) However, the P&E Court may hear and decide an appeal even if the person has not complied with rules of the P&E Court.

Part 2 Development tribunal

Division 1 General

233 Appointment of referees

(1) The Minister, or chief executive, (the appointer) may appoint a person to be a referee, by an appointment notice, if the appointer considers the person—

(a) has the qualifications or experience prescribed by regulation; and

(b) has demonstrated an ability-

(i) to negotiate and mediate outcomes between parties to a proceeding; and

(ii) to apply the principles of natural justice; and

(iii) to analyse complex technical issues; and

(iv) to communicate effectively, including, for example, to write informed succinct and well-organised decisions, reports, submissions or other documents.

(2) The appointer may-

(a) appoint a referee for the term, of not more than 3 years, stated in the appointment notice; and

(b) reappoint a referee, by notice, for further terms of not more than 3 years.

- (3) If an appointer appoints a public service officer as a referee, the officer holds the appointment concurrently with any other appointment that the officer holds in the public service.
- (4) A referee must not sit on a tribunal unless the referee has given a declaration, in the approved form and signed by the referee, to the chief executive.
- (5) The appointer may cancel a referee's appointment at any time by giving a notice, signed by the appointer, to the referee.
- (6) A referee may resign the referee's appointment at any time by giving a notice, signed by the referee, to the appointer.
- (7) In this section-

appointment notice means-

(a) if the Minister gives the notice—a gazette notice; or

(b) if the chief executive gives the notice—a notice given to the person appointed as a referee.

234 Referee with conflict of interest

(1) This section applies if the chief executive informs a referee that the chief executive proposes to appoint the referee as a tribunal member, and either or both of the following apply—

(a) the tribunal is to hear a matter about premises—

(i) the referee owns; or

(ii) for which the referee was, is, or is to be, an architect, builder, drainer, engineer, planner, plumber, plumbing inspector, certifier, site evaluator or soil assessor; or

(iii) for which the referee has been, is, or will be, engaged by any party in the referee's capacity as an accountant, lawyer or other professional; or

(iv) situated or to be situated in the area of a local government of which the referee is an officer, employee or councillor;

(b) the referee has a direct or indirect personal interest in a matter to be considered by the tribunal, and the interest could conflict with the proper performance of the referee's functions for the tribunal's consideration of the matter.

- (2) However, this section does not apply to a referee only because the referee previously acted in relation to the preparation of a relevant local planning instrument.
- (3) The referee must notify the chief executive that this section applies to the referee, and on doing so, the chief executive must not appoint the referee to the tribunal.
- (4) If a tribunal member is, or becomes, aware the member should not have been appointed to the tribunal, the member must not act, or continue to act, as a member of the tribunal.

235 Establishing development tribunal

- (1) The chief executive may at any time establish a tribunal, consisting of up to 5 referees, for tribunal proceedings.
- (2) The chief executive may appoint a referee for tribunal proceedings if the chief executive considers the referee has the qualifications or experience for the proceedings.
- (3) The chief executive must appoint a referee as the chairperson for each tribunal.
- (4) A regulation may specify the qualifications or experience required for particular proceedings.
- (5) After a tribunal is established, the tribunal's membership must not be changed.

236 Remuneration

A tribunal member must be paid the remuneration the Governor in Council decides.

237 Tribunal proceedings

- (1) A tribunal must ensure all persons before the tribunal are afforded natural justice.
- (2) A tribunal must make its decisions in a timely way.
- (3) A tribunal may-

(a) conduct its business as the tribunal considers appropriate, subject to a regulation made for this section; and

(b) sit at the times and places the tribunal decides; and

(c) hear an appeal and application for a declaration together; and

(d) hear 2 or more appeals or applications for a declaration together.

(4) A regulation may provide for-

(a) the way in which a tribunal is to operate, including the qualifications of the chairperson of the tribunal for particular proceedings; or

(b) the required fee for tribunal proceedings.

238 Registrar and other officers

- The chief executive may, by gazette notice, appoint—
 - (a) a registrar; and

(b) other officers (including persons who are public service officers) as the chief executive considers appropriate to help a tribunal perform its functions.

(2) A person may hold the appointment or assist concurrently with any other public service appointment that the person holds.

Division 2 Applications for declarations

239 Starting proceedings for declarations

- (1) A person may start proceedings for a declaration by a tribunal by filing an application, in the approved form, with the registrar.
- (2) The application must be accompanied by the required fee.

240 Application for declaration about making of development application

- (1) The following persons may start proceedings for a declaration about whether a development application is properly made—
 - (a) the applicant;
 - (b) the assessment manager.
- (2) However, a person may not seek a declaration under this section about whether a development application is accompanied by the written consent of the owner of the premises to the application.
- (3) The proceedings must be started by-

(a) the applicant within 20 business days after receiving notice from the assessment manager, under the development assessment rules, that the development application is not properly made; or

(b) the assessment manager within 10 business days after receiving the development application.

- (4) The registrar must, within 10 business days after the proceedings start, give notice of the proceedings to the respondent as a party to the proceedings.
- (5) In this section-

respondent means-

(a) if the applicant started the proceedings—the assessment manager; or

(b) if the assessment manager started the proceedings—the applicant.

241 Application for declaration about change to development approval

 This section applies to a change application for a development approval if—

(a) the approval is for a material change of use of premises that involves the use of a classified building; and

(b) the responsible entity for the change application is not the P&E Court.

(2) The applicant, or responsible entity, for the change application may start proceedings for a

declaration about whether the proposed change to the approval is a minor change.

- (3) The registrar must, within 10 business days after the proceedings start, give notice of the proceedings to the respondent as a party to the proceedings.
- (4) In this section-

respondent means-

(a) if the applicant started the proceedings—the responsible entity; or

(b) if the responsible entity started the proceedings—the applicant.

Division 3 Tribunal proceedings for appeals and declarations

242 Action when proceedings start

If a document starting tribunal proceedings is filed with the registrar within the period required under this Act, and is accompanied by the required fee, the chief executive must—

(a) establish a tribunal for the proceedings; and

(b) appoint 1 of the referees for the tribunal as the tribunal's chairperson, in the way required under a regulation; and

(c) give notice of the establishment of the tribunal to each party to the proceedings.

243 Chief executive excusing noncompliance

(1) This section applies if—

(a) the registrar receives a document purporting to start tribunal proceedings, accompanied by the required fee; and

(b) the document does not comply with any requirement under this Act for validly starting the proceedings.

- (2) The chief executive must consider the document and decide whether or not it is reasonable in the circumstances to excuse the noncompliance (because it would not cause substantial injustice in the proceedings, for example).
- (3) If the chief executive decides not to excuse the noncompliance, the chief executive must give a notice stating that the document is of no effect,

because of the noncompliance, to the person who filed the document.

- (4) The chief executive must give the notice within 10 business days after the document is given to the chief executive.
- (5) If the chief executive does excuse the noncompliance, the chief executive may act under section 242 as if the noncompliance had not happened.

244 Ending tribunal proceedings or establishing new tribunal

(1) The chief executive may decide not to establish a tribunal when a document starting tribunal proceedings is filed, if the chief executive considers it is not reasonably practicable to establish a tribunal.

Examples of when it is not reasonably practicable to establish a tribunal—

- there are no qualified referees or insufficient qualified referees because of a conflict of interest
- the referees who are available will not be able to decide the proceedings in a timely way
- (2) If the chief executive considers a tribunal established for tribunal proceedings—

(a) does not have the expertise to hear or decide the proceedings; or

(b) is not able to make a decision for proceedings (because of a tribunal member's conflict of interest, for example); the chief executive may decide to suspend the proceedings and establish another tribunal, complying with section 242(c), to hear or re-hear the proceedings.

- (3) However, the chief executive may instead decide to end the proceedings if the chief executive considers it is not reasonably practicable to establish another tribunal to hear or re-hear the proceedings.
- (4) If the chief executive makes a decision under subsection (1) or (3), the chief executive must give a decision notice about the decision to the parties to the proceedings.
- (5) Any period for starting proceedings in the P&E Court, for the matter that is the subject of the tribunal proceedings, starts again when the chief

executive gives the decision notice to the party who started the proceedings.

(6) The decision notice must state the effect of subsection (5).

245 Refunding fees

The chief executive may, but need not, refund all or part of the fee paid to start proceedings if the chief executive decides under section 244—

(a) not to establish a tribunal; or

(b) to end the proceedings.

246 Further material for tribunal proceedings

(1) The registrar may, at any time, ask a person to give the registrar any information that the registrar reasonably requires for the proceedings.

Examples of information that the registrar may require—

material about the proceedings (plans, for example)

 information to help the chief executive decide whether to excuse noncompliance under section 243

• for a deemed refusal—a statement of the reasons why the entity responsible for deciding the application had not decided the application during the period for deciding the application.

(2) The person must give the information to the registrar within 10 business days after the registrar asks for the information.

247 Representation of Minister if State interest involved

If, before tribunal proceedings are decided, the Minister decides the proceedings involve a State interest, the Minister may be represented in the proceedings.

248 Representation of parties at hearing

A party to tribunal proceedings may appear-

- (a) in person; or
- (b) by an agent who is not a lawyer.

249 Conduct of tribunal proceedings

- Subject to section 237, the chairperson of a tribunal must decide how tribunal proceedings are to be conducted.
- (2) The tribunal may decide the proceedings on submissions if the parties agree.
- (3) If the proceedings are to be decided on submissions, the tribunal must give all parties a notice asking for the submissions to be made to the tribunal within a stated reasonable period.
- (4) Otherwise, the tribunal must give notice of the time and place of the hearing to all parties.
- (5) The tribunal may decide the proceedings without a party's submission (written or oral) if—

(a) for proceedings to be decided on submissions—the party's submission is not received within the time stated in the notice given under subsection (3); or

(6) When hearing proceedings, the tribunal-

(a) need not proceed in a formal way; and

(b) is not bound by the rules of evidence; and

(c) may inform itself in the way it considers appropriate; and

(d) may seek the views of any person; and

(e) must ensure all persons appearing before the tribunal have a reasonable opportunity to be heard; and

(f) may prohibit or regulate questioning in the hearing.

(7) If, because of the time available for the proceedings, a person does not have an opportunity to be heard, or fully heard, the person may make a submission to the tribunal.

250 Tribunal directions or orders

A tribunal may, at any time during tribunal proceedings, make any direction or order that the tribunal considers appropriate.

Examples of directions-

• a direction to an applicant about how to make their development application comply with this Act

 a direction to an assessment manager to assess a development application, even though the referral agency's response to the assessment manager was to refuse the application

251 Matters tribunal may consider

(1) This section applies to tribunal proceedings about—

(a) a development application or change application; or

(b) an application or request (however called) under the Building Act or the Plumbing and Drainage Act.

(2) The tribunal must decide the proceedings based on the laws in effect when—

(a) the application or request was properly made; or

(b) if the application or request was not required to be properly made—the application or request was made.

(3) However, the tribunal may give the weight that the tribunal considers appropriate, in the circumstances, to any new laws.

252 Deciding no jurisdiction for tribunal proceedings

- (1) A tribunal may decide that the tribunal has no jurisdiction for tribunal proceedings, at any time before the proceedings are decided—
 - (a) on the tribunal's initiative; or
 - (b) on the application of a party.
- (2) If the tribunal decides that the tribunal has no jurisdiction, the tribunal must give a decision notice about the decision to all parties to the proceedings.
- (3) Any period for starting proceedings in the P&E Court, for the matter that is the subject of the tribunal proceedings, starts again when the tribunal gives the decision notice to the party who started the proceedings.

- (4) The decision notice must state the effect of subsection (3).
- (5) If the tribunal decides to end the proceedings, the fee paid to start the proceedings is not refundable.

253 Conduct of appeals

- (1) This section applies to an appeal to a tribunal.
- (2) Generally, the appellant must establish the appeal should be upheld.
- (3) However, for an appeal by the recipient of an enforcement notice, the enforcement authority that gave the notice must establish the appeal should be dismissed.
- (4) The tribunal must hear and decide the appeal by way of a reconsideration of the evidence that was before the person who made the decision appealed against.
- (5) However, the tribunal may, but need not, consider—

(a) other evidence presented by a party to the appeal with leave of the tribunal; or

(b) any information provided under section 246.

254 Deciding appeals to tribunal

- (1) This section applies to an appeal to a tribunal against a decision.
- (2) The tribunal must decide the appeal by-
 - (a) confirming the decision; or
 - (b) changing the decision; or

(c) replacing the decision with another decision; or

(d) setting the decision aside, and ordering the person who made the decision to remake the decision by a stated time; or

(e) for a deemed refusal of an application-

(i) ordering the entity responsible for deciding the application to decide the application by a stated time and, if the entity does not comply with the order, deciding the application; or

(ii) deciding the application.

- (3) However, the tribunal must not make a change, other than a minor change, to a development application.
- (4) The tribunal's decision takes the place of the decision appealed against.
- (5) The tribunal's decision starts to have effect---

(a) if a party does not appeal the decision—at the end of the appeal period for the decision; or

(b) if a party appeals against the decision to the P&E Court—subject to the decision of the court, when the appeal ends.

255 Notice of tribunal's decision

A tribunal must give a decision notice about the tribunal's decision for tribunal proceedings, other than for any directions or interim orders given by the tribunal, to all parties to proceedings.

256 No costs orders

A tribunal must not make any order as to costs.

257 Recipient's notice of compliance with direction or order

If a tribunal directs or orders a party to do something, the party must notify the registrar when the thing is done.

258 Tribunal may extend period to take action

- (1) This section applies if, under this chapter, an action for tribunal proceedings must be taken within a stated period or before a stated time, even if the period has ended or the time has passed.
- (2) The tribunal may allow a longer period or a different time to take the action if the tribunal considers there are sufficient grounds for the extension.

259 Publication of tribunal decisions

The registrar must publish tribunal decisions under the arrangements, and in the way, that the chief executive decides.

Schedule 1 Appeals

section 229

Appeal rights and parties to appeals

(1) Table 1 states the matters that may be appealed to—

(a) the P&E court; or

(b) a tribunal.

(2) However, table 1 applies to a tribunal only if the matter involves—

(a) the refusal, or deemed refusal of a development

application, for-

(i) a material change of use for a classified building; or

(ii) operational work associated with building work, a retaining wall, or a tennis court; or

(b) a provision of a development approval for-

(i) a material change of use for a classified building; or

(ii) operational work associated with building work, a retaining wall, or a tennis court; or

(c) if a development permit was applied for—the decision to give a preliminary approval for—

(i) a material change of use for a classified building; or

(ii) operational work associated with building work, a retaining wall, or a tennis court; or

(d) a development condition if—

(i) the development approval is only for a material change of use that involves the use of a building classified under the Building Code as a class 2 building; and

(ii) the building is, or is proposed to be, not more than 3 storeys; and

(iii) the proposed development is for not more than 60 sole-occupancy units; or

(e) a decision for, or a deemed refusal of, an extension application for a development approval that is only for a material change of use of a classified building; or

(f) a decision for, or a deemed refusal of, a change

application for a development approval that is only for a material change of use of a classified building; or

(g) a matter under this Act, to the extent the matter relates to the Building Act, other than a matter under that Act that may or must be decided by the Queensland Building and Construction Commission; or

(h) a decision to give an enforcement notice-

(i) in relation to a matter under paragraphs (a) to (g); or

(ii) under the Plumbing and Drainage Act; or

(i) an infrastructure charges notice; or

(j) the refusal, or deemed refusal, of a conversion application; or

(I) a matter prescribed by regulation.

(3) Also, table 1 does not apply to a tribunal if the matter involves—

(a) for a matter in subsection (2)(a) to (d)-

(i) a development approval for which the development application required impact assessment; and

 (ii) a development approval in relation to which the assessment manager received a properly made submission for the development application; or

(b) a provision of a development approval about the identification or inclusion, under a variation approval, of a matter for the development.

(4) Table 2 states the matters that may be appealed only to the P&E Court.

(5) Table 3 states the matters that may be appealed only to the tribunal.

(6) In each table---

(a) column 1 states the appellant in the appeal; and

(b) column 2 states the respondent in the appeal; and

(c) column 3 states the co-respondent (if any) in the appeal; and

(d) column 4 states the co-respondents by election (if any) in the appeal. (7) If the chief executive receives a notice of appeal under section 230(3)(f), the chief executive may elect to be a co-respondent in the appeal.

(8) In this section-

storey see the Building Code, part A1.1.

Table 1

Appeals to the P&E Court and, for certain matters, to a tribunal

1. Development applications

For a development application other than a development application called in by the

Minister, an appeal may be made against—

(a) the refusal of all or part of the development application; or

(b) the deemed refusal of the development application; or

(c) a provision of the development approval; or

(d) if a development permit was applied for—the decision to give a preliminary approval.

EXTRACT FROM THE PLANNING ACT 2016 RELATING TO LAPSE DATES

Division 4 Lapsing of and extending development approvals

85 Lapsing of approval at end of current period

(1) A part of a development approval lapses at the end of the following period (the currency period)—

(a) for any part of the development approval relating to a material change of use—if the first change of use does not happen within—

(i) the period stated for that part of the approval; or

(ii) if no period is stated—6 years after the approval starts to have effect;

(b) for any part of the development approval relating to reconfiguring a lot—if a plan for the reconfiguration that, under the Land Title Act, is required to be given to a local government for approval is not given to the local government within—

(i) the period stated for that part of the approval; or

(ii) if no period is stated—4 years after the approval starts to have effect;

(c) for any other part of the development approval if the development does not substantially start within—

(i) the period stated for that part of the approval; or

(ii) if no period is stated—2 years after the approval starts to take effect.

(2) If part of a development approval lapses, any monetary security given for that part of the approval must be released.