Our Ref: 57035-001-01
QA: es

07 May 2024
Assessment Manager
Burdekin Shire Council
145 Young Street
AYR QLD 4807
Attention:

Development Assessment

Dear Sir/Madam,
DEVELOPMENT APPLICATION
Development Permit for Material Change of Use (Service Station)
7-9 Eighth Avenue, Home Hill
We act on behalf of the Applicant, Freeways Australia Pty Ltd, in relation to the
abovementioned application.
Please find enclosed a Development Application seeking a Development Permit for Material Change of Use (Service Station) at 7-9 Eighth Avenue, Home Hill on land formally described as Lot 8 on H61653.
In accordance with Burdekin Shire Council's schedule of fees and charges 2023/2024, the development application fee is $2,631.00.
The fee will be paid directly to council by the applicant upon receipt of Council's
application reference number.
Thank you in advance and please do not hesitate in contacting the undersigned should you require further information.

Yours faithfully,

_____
Emma Staines
Town Planner

Brazier Motti Pty Ltd
Encl.

Development Application

595 Flinders Street, Townsville Q 4810 P 07 4772 1144 E
townsville@braziermotti.com.au W www.braziermotti.com.au

DE VELO PMEN T A PPL ICA TION
DE VELO PMEN T PE RMI T FO R:

SEEKIN G A

Material Change of Use (Service Station)
on behalf of
FREEWAYS AUSTRALIA PTY LTD
at
7-9 EIGHTH AVENUE, HOME HILL
on
LOT 8 ON H61653

Brazier Motti have prepared this report for the sole purposes of Freeways Australia Pty Ltd for the specific purpose of a Development Application seeking a Development Permit for Material Change of Use (Service Station) at 7-9 Eighth Avenue, Home Hill.

In preparing this report we have assumed that all information and documents provided to us by others, such as the client, other consultants acting on the client's behalf or government agencies, to be complete, accurate and current.

Signed on behalf of Brazier Motti Pty Ltd

EMMA STAINES
Town Planner
Brazier Motti Pty Ltd

Signed by reviewer

ANNE ZAREH
Senior Town Planner
Brazier Motti Pty Ltd

BRAZIER MOTTI
595 Flinders Street
Townsville Q 4810
Ph: 4772 1144

Final: May 2024
Prepared by: EJS
QA: es.az
Job No: 57035-001-01

CONTENTS

1.0

INTRODUCTION

This town planning report has been prepared on behalf of the Applicant, Freeways Australia Pty Ltd, in support of a Development Application seeking a Development Permit for Material Change of Use to establish a Service Station on land at 7-9 Eighth Avenue, Home Hill, being formally described as Lot 8 on H61653.

The development application is made in accordance with section 51 of the Planning Act 2016 and contains the mandatory supporting information specified in the applicable development application form, included in Appendix A.

The subject site is located within the Burdekin Shire Council local government area and the applicable planning scheme for use by the Assessment Manager is the Burdekin Shire Council Planning Scheme 2022 (“the Planning Scheme”).

In accordance with the Planning Scheme, the application is subject to impact assessment and therefore public notification will be required.

To assist in Council’s determination of this development application, this planning report covers the following matters:

Section 2:-

A site description including the site characteristics and its immediate surrounds.

Section 3:-

A detailed description of the development proposal.

Section 4:-

A review of the relevant legislation provisions.

Section 5:-

A review of the planning framework.

Section 6:-

An assessment of the proposal against the Burdekin Shire Council Planning Scheme 2022.

Section 7:-

Conclusion and recommendation.

2.0

THE SITE

The subject site is located at 7-9 Eighth Avenue, Home Hill approximately 12 kilometres south of Ayr. It is formally described as Lot 8 on H61653 and has an area of 1,196m2.

The certificate of title confirming ownership of the site by Freeways Australia Pty Ltd is included Appendix B.

Figure 1 below shows an aerial of the site and its immediate surrounds. The Smart Map is included in Appendix B which confirms the site area, tenure and surrounding cadastre.

Figure 1: Aerial image of the site and immediate surrounds

Source: Queensland Globe, 2024

The subject site is currently improved by a building that historically operated as a service station up until around the year 2004. Since then, it has been used as a mechanical workshop (McKaig's Hiway Motors). The building has a gross floor area (GFA) of approximately 600m2, which includes undercover parking and storage areas.

Access to the site is afforded via constructed driveways at three different locations. One off Second Street that is approximately 9m wide, and the other two off Eighth Avenue being approximately 14m wide and 21m wide.

The site is included in Council’s reticulated water and sewer service area and connected to all relevant infrastructure that is appropriately managed to deal with the demand generated by the existing use. It is also serviced by an existing overhead electricity supply located within Eighth Avenue.

The land is wholly contained within the Low Density Residential Zone for the purposes of the Planning Scheme.

Figure 3 below shows an extract of the Planning Scheme zone map.

Figure 2: Extract of Burdekin Shire Council Zone Map

Source: Burdekin Shire Council Planning Scheme, 2022

Overall, the pattern and zoning of development, in the vicinity of the site comprises a mix of commercial, community and residential type land uses.

To the east of the site, the land is characterised by low density residential and includes mainly single detached dwellings and dual occupancies. Land to the south is zoned community facilities and includes a place of worship (Greek Orthodox Parish & Community of St. Stephen) and indoor sport and recreation (Shim Jang Taekwondo, Home Hill). On the western side of the Bruce Highway, the land is zoned low-medium density and comprises mainly single detached dwellings. Directly opposite the subject site is the Burdekin Motor Inn.

3.0

THE PROPOSAL

This report details an application seeking a Development Permit for Material Change of Use to establish a service station on the subject site described above. The use will be contained within the existing building and does not involve any additional gross floor area (GFA).

3.1

DEFINITION OF PROPOSED USE

In accordance with Schedule 1.1 of the Planning Scheme, the proposed land use is defined as a Service Station as follows:

The use of premises for—

(a) selling fuel, including, for example, petrol, liquid petroleum gas, automotive distillate or alternative fuels;

or

(b) a food and drink outlet, shop, trailer hire, or maintaining, repairing, servicing or washing vehicles, if the use is ancillary to the use in paragraph (a).

3.2

PROPOSED DEVELOPMENT

The Applicant proposes to refurbish a portion of the existing premises to re-establish a service station on site, providing a service to the community.

It is proposed to retain and make use of all existing infrastructure except for the fuel dispensers which are to be replaced. Part of the refuelling area will be located under the existing canopy which is to be extended to cover additional refuelling area. The existing fuel tanks will be connected to the new dual sided dispensers via underground pipework.

The site plan showing the location of the existing building and structures, on site carparking and extension to the existing canopy is included in Appendix C. The proposal comprises:

• Retention of the existing building structures for storage and workshop;
• Removal of a small section of the existing building to accommodate new 30,000L above ground diesel tank;
• Conversion of part of the existing building to convenience store including kitchen facilities;
• Provision of six (6) fuel-filling positions; and
• Raise and extend the existing canopy to cover the fuel-filling positions and to accommodate fuel tanker truck height.

Operation & Staff

The service station will comprise a small convenience store to sell goods that offer small scale vehicle maintenance products such as gas, oil, and spare parts. The convenience store will also sell food, drinks, and other products. The kitchen will be incorporated to serve hot and cold food and drink to customers, ancillary to the primary use.

The existing workshop will be retained for the maintaining, repairing, servicing and washing of vehicles. The workshop will not operate independently and will be ancillary to the service station.

The service station will operate from 5:00am to 10:00pm, Monday to Sunday and on public holidays. It will be always operated by up to two (2) staff.

Water, Sewer & Stormwater

The subject site is currently connected to Council’s reticulated water and sewer infrastructure. It is not anticipated
any new connections or upgrades will be required to service the proposed development. Stormwater will discharge
to the existing kerb and channel at Eighth Avenue.

Traffic, Access and Carparking

Seven (7) on-site parking spaces (inclusive of one (1) disabled parking bay) will be provided on site to service the development.

The three (3) existing access locations will be retained to service the proposed development. Both Access Driveway 1 and 2 will be designated as Ingress-only access driveways where the Access Driveway 3 will be designated as Egress-only access driveway, to provide one-way traffic flow through the proposed service station.

A traffic impact assessment (TIA) including a road link capacity assessment (Eighth Avenue), an intersection assessment (Eighth Avenue/Second Street Intersection) and a road safety assessment, has been undertaken by Noble Consulting Engineers. The report is included in Appendix D.

Waste Management

A designated refuse storage area is provided on site, suitable to accommodate two skip bins that will be collected by a private waste collection company as required.

Signage

The existing sign in the south east corner of the site will be replaced with a digital price board.

4.0

RELEVANT LEGISLATION

4.1

COMMONWEALTH LEGISLATION

The application is not subject to assessment against Commonwealth legislation. It is not anticipated that development of this land will trigger assessment against the Environmental Protection and Biodiversity Conservation Act 1999 (EPBC), as it is not anticipated that the development will significantly impact upon a matter of national environmental significance.

4.2

THE PLANNING ACT 2016

The Planning Act 2016 provides the framework for coordinating local, regional and state planning. Given the nature of the development, the application requires assessment against this legislation.

4.3

STATE ASSESSMENT AND REFERRALS

The Development Assessment Rules (DA Rules) incorporates a referral process, established through the Planning Regulation 2017, enabling relevant State agencies to have input in the assessment process.

Consideration of the proposed development against Schedule 10 of the Planning Regulation 2017 determined that the proposal triggers referral for the matters identified in Table 3 below.

Table 3 – Referral Triggers

MATTER	STATUATORY TRIGGER
State Transport Infrastructure	Schedule 10, Part 9, Division 4, Subdivision 2, Table 4, Item 1 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

For State Transport Infrastructure, referral will be undertaken to the State Assessment and Referral Agency (SARA).

Development will be guided by outcomes sought by the State Development Assessment Provisions to the extent relevant for State Transport being State Code 1: Development in a State Controlled Road Environment.

A copy of the mapping is included in Appendix F and an assessment against State Code 1 is included in Appendix G.

4.4

STATE PLANNING POLICY

In accordance with section 1.2.1 – State planning policy of the Planning Scheme, the Planning Minister is satisfied
that the State Planning Policy (SPP) July 2017 is appropriately integrated into the Burdekin Shire Council Planning
Scheme in full. Hence, for the purposes of this development, we consider that assessment of the proposal against
the provisions of the SPP is not required, and all relevant matters will be dealt with under the provisions of the
Planning Scheme.

4.5

ASSESSMENT MANAGER AND PLANNING SCHEME

Burdekin Shire Council is nominated as the Assessment Manager for the application. The applicable planning
scheme is the Burdekin Shire Council Planning Scheme 2022.
4.6

PUBLIC NOTIFICATION

Under the provisions of the Planning Act 2016, the proposed development at this location is subject to Public
Notification. Public Notification will be carried out in accordance with Part 4 of the DA Rules.

5.0

THE PLANNING FRAMEWORK

The Planning Scheme seeks to achieve outcomes through the identification of a number of overall outcomes, performance outcomes and acceptable outcomes.

However, it should be noted that the Planning Scheme is performance based. That means that the acceptable solutions are to be read as offering one way of achieving compliance with a code but do not prohibit alternate solutions where the performance outcomes can be shown to be met.

Land identified within the Planning Scheme is categorised by a number of zones and precincts to guide development across the region. The Planning Scheme further identifies a range of overlays that may impact the land, these are governed by overlay codes.

5.1

LAND DESIGNATION

In accordance with the Planning Scheme, the site is included within the Low Density Residential Zone and is identified as affected by the following overlays:

- Acid sulfate soils overlay map (5 – 20m contour); and
- Flood hazard overlay map (medium - high hazard).

As stated in Section 3.3.2 (4) Where development is proposed on premises partly affected by an overlay, the category of development or assessment for the overlay only relates to the part of the premises affected by the overlay. For the purposes of this development application, assessment is required against the Flood Hazard Overlay Code.

5.2

LEVEL OF ASSESSMENT, ASSESSMENT BENCHMARKS AND APPLICABLE CODES

Table 3.5.1 of the Planning Scheme identifies reconfiguring a lot as assessable development and is impact assessable for the purposes of this development application.

The assessment table identifies that an application requires assessment against the Planning Scheme, hence the Strategic Framework and the following codes:

- Low Density Residential Zone Code;
- Development Works Code; and
- Flood Hazard Overlay Code.

6.0

BURDEKIN SHIRE COUNCIL PLANNING SCHEME 2022

A complete assessment of the proposed development against the Planning Scheme is provided below.

6.1

STRATEGIC FRAMEWORK

The strategic framework, described in Part 2 of the Planning Scheme provides sensible measures that are of assistance in determining the suitability of development to meet the needs of the community.

It establishes four themes that represent the policy intent of the Scheme. The themes are:

(a) Liveable communities and infrastructure
(b) Economic growth
(c) Safe and resilient communities
(d) Natural resources, the environment and heritage

The themes, on balance, seek to create opportunities for a diversity of lifestyle options in settings that are efficiently and affordably serviced, and that are respectful of environmental values.

The Framework establishes objectives to support the Shire's economy and community given its strong agricultural base, quality land and abundant water resources. It also recognises that large parts of the Burdekin are subject to some form of natural hazard and seeks the ensure new development is managed to reduce risk to life and property.

The proposed development does not require any changes to existing infrastructure arrangements, therefore ensuring the safe, efficient and cost-effective provision and operation of existing infrastructure networks (S 2.3.5 (1)). The proposed development is also of a scale commensurate with the capacity of the road network and minor changes to existing access arrangement on Second Street is proposed to improve safety and efficiency of the network (S 2.3.5 (4)).

The proposed development is for a change of use in an existing building therefore does not worsen the severity of, or exposure to, the hazard on-site or to other properties (S 2.5.1 (4)). No changes to the impermeable nature of the site are proposed as part of this application to ensure flood flow conveyance paths and flood storage volumes of the floodplain are maintained. (S 2.5.2 (1 and 5)). It is considered the proposed development mitigates the risk to an acceptable level.

The following planning grounds have been identified to support the application:

• the proposed development does not comprise any additional GFA and the built form will remain consistent with that established by the surrounding locality;
• the historic use of the premises has been for non-residential purposes and that contributes to the established character of the area;
• there is long-term community understanding and acceptance of a non-residential use at this location;
• the proposal permits adaptive re-use of an premises along a major transport route;
• the development benefits the local community providing a service and generating economic activity;
• access, car parking and manoeuvring areas can reasonably be accommodated;
• the proposed development ensures cost-effective provision and operation of existing infrastructure networks; and

• the proposal does not increase the exposure of risk to people and property to natural hazards (flood).

The proposal further satisfies the lower order components of the Planning Scheme, i.e. zone codes, development codes and overlay codes. The assessment below demonstrates how the proposal satisfies the most applicable lower order components of the Planning Scheme.

6.2

ZONE CODE PROVISIONS

6.2.1 Low Density Residential Zone Code
The proposed development is nominated for assessment against the Low Density Residential Zone Code.
The purpose of the Low Density Residential Zone is to provide for—
(a) a variety of low density dwelling types, including dwelling houses; and
(b) community uses, and small-scale services, facilities and infrastructure, to support local residents.
The purpose of the zone will be achieved through the following overall outcomes—
(a) residential development in the low density residential zone consists of one and two storey dwelling houses
and dual occupancies;
(b) non-resident workforce or rural workers' accommodation and rooming accommodation, do not establish in
this zone;
(c) development creates a high level of residential amenity and convenient accessibility for pedestrians and
cyclists;
(d) small scale non-residential uses occur within the zone where they provide a local community service or
support the day-to-day needs of the immediate residential community and do not unreasonably detract
from the residential amenity of the area. These uses may include a community use, community care centre
childcare centre, a shop being a local convenience store and an office and health care service or veterinary
service that is limited to a single practitioner;
(e) non-residential development:
(i) is of a height and scale consistent with surrounding development;
(ii) is oriented to the street front;
(iii) maintains a consistent building alignment in the street;
(iv) accommodates parking to the side or rear of buildings; and
(v) minimises impacts on the amenity of nearby residential uses;
(f) home based businesses occur at a scale that is consistent with the amenity and character of the surrounding
area;
(g) the function of the state controlled transport corridors is protected
Response
The proposed development at this location provides a service to support local residents and the wider region. The
scale and nature of the proposal is consistent with what has historically operated on site and is a use anticipated by
adjoining landowners. A complete assessment against the relevant benchmarks of the code is provided below:
PO1 – Complies
No changes to the existing building height are proposed to remain consistent with the existing low-rise scale of the
locality.
PO2 – Complies
All illumination coming from the subject site will not exceed 8 lux when measured at any point 1.5m outside of the
boundary of the property at any level from ground level up. This is consistent with the requirements of a commercial
use within the centre zone.
Lighting can be reasonably conditioned as part of an approval to ensure the development has no additional impact
on the surrounding amenity.
PO3 – Compiles
The establishment will retain its current connections to Council's reticulated water and sewer networks. The site
has frontage to Eighth Avenue (the Bruce Highway) with kerb and channelling.

This is confirmed in the TIA in

Appendix D. Roof and surface water will continue to drain as per status quo. Given there are no changes to the built
form or pavement on site, this is an acceptable outcome.
PO4 – PO7 – Not applicable
The proposal is not for a dwelling house or dual occupancy.
PO8 – PO13 – Not applicable
The proposal is not for a home-based business.
PO14 – Complies
The historic use of the premises has been for non-residential purposes and that contributes to the established
character of the area. Furthermore, there is long-term community understanding and acceptance of non-residential
use at this location.
The site, given its location on a major transport corridor is suitable for a commercial use given road noise that would
impact amenity for a residential use.
PO15 – Complies
The existing building is orientated to Eighth Avenue and is consistent with the alignment of the adjoining buildings
within the block to the south. Parking is provided to the front of the site which is consistent with the existing use
and with the proposed use, being a services station. This allows customers to enter, exit and manoeuvre the site
with ease.
PO16 – Not applicable
While the proposal is for commercial use, the site area is 1,196m2 which is capable of accommodating the proposed
use.
PO17 – Complies
The location of the on-site parking allows casual surveillance to the bin storage area. The signage and wayfinding
will be consistent with that of any service station as well as the location of the entrance in the centre of the building.
PO18 – Complies
A landscape strip is included within the road reserve along the Eighth Avenue frontage. Given the nature of the
existing premises, no additional landscaping is proposed.
PO19 – Complies
The proposed development is consistent with the nature of the subject site as it currently operates. It is not
anticipated the change of operation will increase existing noise, light, traffic it generates. The TIA in Appendix D
demonstrates traffic generated by the development is minimal.
PO20 – Not applicable
The proposal is not for a sensitive land use.
Given the above, the proposed development is considered consistent with the purpose, overall outcomes and
performance outcomes of the Low Density Residential Zone Code.
6.3

DEVELOPMENT CODES

6.3.1 Development Works Code
The proposal is nominated for assessment against the Development works code.

The purpose of this code is to ensure that development provides services to a standard which is efficient, effective and reflects community expectations, enhances the lifestyle of the community, and minimises impacts on neighbours, the streetscape and the environment.

Response

The proposed development at this location provides a service to support local residents and the wider region. The scale and nature of the proposal is consistent with what has historically operated on site and is a use anticipated by adjoining landowners. A complete assessment against the relevant benchmarks of the code is provided below:

PO1 – PO11 – Not applicable

The proposal does not require filling or excavation.

PO12 – Compiles

The establishment will retain its current connections to Council’s reticulated water, sewer and stormwater networks.

PO13 – Compiles

No changes to the existing connections are proposed to facilitate the proposed development.

PO14 – PO16 – Not applicable

PO17 – Complies

The site is connected to the nbn and Telstra telecommunications networks and is serviced by an existing Ergon Energy overhead electricity supply located within Eighth Avenue.

PO18 – Complies

No changes to the existing built surface are proposed to facilitate the development. Stormwater regime will remain the same.

PO19 – Complies

Stormwater run-off from the development site has been assessed by Noble Consulting Engineers which found:

- The proposed development utilises all the existing site features with no significant site modification or changes to the existing site levels;
- At post-development, the increase of the overall site impervious area is considered insignificant (i.e. 1.2%); and
- The pre and post development stormwater regime will remain the same.

For further information, refer to the technical memorandum in Appendix E.

PO20 – Complies

No clearing or earthworks are required to facilitate the development and no adverse changes to the impervious surface is proposed. For further information, refer to the technical memorandum in Appendix E.

PO21 – Complies

Stormwater infrastructure is located in the Eighth Avenue road corridor. most of the site catchment flows from northeast/east towards west via overland sheet flow towards Eighth Avenue. The site stormwater runoff is then intercepted by the existing kerb and channel fronting the subject site prior discharging into the underground pits/pipes system at Eighth Avenue. For further information, refer to the technical memorandum in Appendix E.

PO22 – Complies
The proposed development does not involve major excavation or filling that would otherwise disturb acid sulfate soils.

PO23 – PO29 – Complies
The subject site has frontage to Eighth Avenue (the Bruce Highway) which is a state-controlled road and secondary frontage to Second Street which is a local road. The site is ideal for a service station given the location and high traffic volumes.

A TIA including a road link capacity assessment (Eighth Avenue), an intersection assessment (Eighth Avenue/Second Street Intersection) and a road safety assessment, has been undertaken by Noble Consulting Engineers. The report is included in Appendix D.

The report confirms the proposed development is not expected to have any adverse impact on the safety or operational efficiency of the road networks, at the Opening Year (2024) and throughout the 10 years design horizon period (2034).

The TIA considers the existing three (3) access locations to the site. Access driveway 1 is to be modified to maintain a minimum clearance to the intersection give way line. No modifications to access driveways 2 or 3 are required.

These arrangements ensure adequate vehicle manoeuvrability ad swept paths can be provided on site and demonstrates all vehicles can enter and exit in a forward direction.

The report provides recommendation multiple mitigation measures to improve the safety of pedestrians and cyclists accessing and traversing the site.

On-site car parking requirements are considered in the TIA to ensure appropriate vehicle parking is provided on site in accordance with table 6.2.1.3(e)–Vehicle parking rates and standards. For a “Service Station” the rate is as follows:

- 1 space per fuel pump; and
- 1 space per 2 employees.

Seven (7) spaces are provided on site including one (1) all abilities space. The spaces are to be marked in accordance with the relevant Australian Standards.

PO30 – Complies
Transport noise will not impact on the proposed development.

PO31 – Not applicable
No acoustic walls are proposed as part of the development.

PO32 – Complies
Lighting will be provided for the canopy and on the building exterior. The site will also benefit from existing street lighting along Eighth Avenue.

PO33 – PO34 Complies
A landscape strip is included within the road reserve along the Eighth Avenue frontage. Given the nature of the existing premises, no additional landscaping is proposed. The amenity and environmental values of the site will not be impacted upon.

PO35 – Complies
A designated refuse storage area is provided behind the proposed aboveground diesel storage tank as indicated on
the proposed site plan in Appendix C.
PO36 – Complies
As with any service station, a spill kit will be provided on site it is necessary by law. The spill kit is used to contain
and clean up hydrocarbon spills. It is effective on fuels, oils, and hydraulic fluids.
PO37 – Complies
As above.
PO38 – PO40 – Not Applicable
The proposed development does not require access by common private title.
The proposed development is consistent with the purpose and overall outcomes of the Development works code.
6.4

OVERLAY CODES

6.4.1 Flood Hazard Overlay Code
The proposal is nominated for assessment against the Flood hazard overlay code.
The purpose of the code will be achieved through the following overall outcomes:
(a) in an urban zone or rural residential zone, reconfiguration of land does not result in additional lots on land
subject to high or extreme flood hazard;
(b) elsewhere, reconfiguration is designed to ensure each lot is provided with:
(i) a building envelope to accommodate a dwelling house with floor levels above the defined flood
level; and
(ii) vehicular access from a public road to the building envelope that is free of high or extreme flood
hazard;
(c) in the rural, low density residential, township or emerging community zones, new dual occupancies or more
intensive residential uses, or worker or tourist accommodation uses are not established on land subject to
medium, high or extreme flood hazard, and any redevelopment of an existing use does not substantially
increase the number of people accommodated or requiring evacuation from the site;
(d) unless necessary to meet a significant community need:
(i) new critical or vulnerable uses are not established in a flood hazard area; and
(ii) any redevelopment of an existing use does not substantially increase the number of people
accommodated or requiring evacuation from the site;
(e) development in a flood hazard area otherwise occurs in the way intended in the relevant zone;
(f) development in a flood hazard area is designed to ensure the safety of people, reduce vulnerability to the
hazard and, for critical uses, minimise disruption to services;
(g) development involving the bulk storage or manufacture of hazardous materials does not increase the risk
to public safety or the environment in a flood hazard event;
(h) development does not worsen the severity of, or exposure to, the hazard on other properties;
(i) flood flow conveyance paths and flood storage volumes of the floodplain are maintained;
(j) the cost to the public of measures to mitigate flood risks is minimised;
(k) development supports effective and efficient disaster management capacity and capabilities.
Response
The subject site is identified in the low hazard flood area (river flood event). The extent of the mapping is minimal

and confined to the south east corner of proposed Lot 2.

No significant changes to the nature of the site are proposed to facilitate the service state. Given no earthworks,
filling or excavation is proposed, the development will not change inundation characteristics within or outside the
subject site in ways that would:
(a) result in loss of flood storage or loss of, or changes to, flow paths;
(b) adversely change the depth or behaviour of the hazard; or
(c) reduce warning times; or
(d) increase the duration of the hazard.
Furthermore, a preliminary flood impact investigation was undertaken by Noble Consulting Engineers. It found that
the pre and post development stormwater regime remain the same therefore the development will not result in
material worsening of flood impacts. The investigation found that a full Flood Impact Assessment is deemed not
required. However, any significant changes to the development layout or site levels may require a Flood Impact
Assessment to assess the flood level afflux in the surrounding area. Refer Appendix E.
The proposed development is consistent with the purpose and overall outcomes of the Flood hazard overlay code,
a detailed assessment against the code is not warranted.

7.0

CONCLUSION

This proposal details a development application to Burdekin Shire Council seeking a Development Permit for a
Material Change of Use to re-establish a service station within the existing premises, on land located at 7-9 Eighth
Avenue, Home Hill being formally described as Lot 8 on H61653.
An assessment against the relevant planning instruments confirms the proposal can be supported in this
circumstance, given:

- the proposed development does not comprise any additional GFA and the built form will remain consistent
with that established by the surrounding locality;
- the historic use of the premises has been for non-residential purposes and that contributes to the
established character of the area;
- there is long-term community understanding and acceptance of a non-residential use at this location;
- the proposal permits adaptive re-use of a premises along a major transport route;
- the development benefits the local community providing a service and generating economic activity;
- access, car parking and manoeuvring areas can reasonably be accommodated;
- the proposed development ensures cost-effective provision and operation of existing infrastructure
networks; and
- the proposal does not increase the exposure of risk to people and property to natural hazards (flood).

Given the above facts and circumstances the proposal can be favourably considered and we recommend that
Council approve the development subject to reasonable and relevant conditions.

APPENDIX A
Development Application Form 1 & Land Owners Consent

DA Form 1 – Development application details
Approved form (version 1.4 effective 15 December 2023) made under section 282 of the Planning Act 2016.

This form must be used to make a development application involving code assessment or impact assessment,
except when applying for development involving only building work.
For a development application involving building work only, use DA Form 2 – Building work details.
For a development application involving building work associated with any other type of assessable development
(i.e. material change of use, operational work or reconfiguring a lot), use this form (DA Form 1) and parts 4 to 6 of
DA Form 2 – Building work details.
Unless stated otherwise, all parts of this form must be completed in full and all required supporting information must
accompany the development application.
One or more additional pages may be attached as a schedule to this development application if there is insufficient
space on the form to include all the necessary information.
This form and any other form relevant to the development application must be used to make a development
application relating to strategic port land and Brisbane core port land under the Transport Infrastructure Act 1994,
and airport land under the Airport Assets (Restructuring and Disposal) Act 2008. For the purpose of assessing a
development application relating to strategic port land and Brisbane core port land, any reference to a planning
scheme is taken to mean a land use plan for the strategic port land, Brisbane port land use plan for Brisbane core
port land, or a land use plan for airport land.
Note: All terms used in this form have the meaning given under the Planning Act 2016, the Planning Regulation 2017, or the Development
Assessment Rules (DA Rules).

PART 1 – APPLICANT DETAILS
1) Applicant details
Applicant name(s) (individual or company full name)

Freeways Australia Pty Ltd c/- Brazier Motti Pty Ltd

Contact name (only applicable for companies)

Emma Staines

Postal address (P.O. Box or street address)

595 Flinders Street

Suburb

Townsville City

State

Queensland

Postcode

4810

Country

Australia

Contact number

4772 1144

Email address (non-mandatory)

Emma.staines@braziermotti.com.au
0437 538 193

Mobile number (non-mandatory)
Fax number (non-mandatory)
Applicant’s reference number(s) (if applicable)

57035-001-01

2) Owner’s consent
2.1) Is written consent of the owner required for this development application?
Yes – the written consent of the owner(s) is attached to this development application
No – proceed to 3)

PART 2 – LOCATION DETAILS
3) Location of the premises (complete 3.1) or 3.2), and 3.3) as applicable)
Note: Provide details below and attach a site plan for any or all premises part of the development application. For further information, see DA Forms Guide: Relevant plans.

3.1) Street address and lot on plan
Street address AND lot on plan (all lots must be listed), or
Street address AND lot on plan for an adjoining or adjacent property of the premises (appropriate for development in water but adjoining or adjacent to land e.g. jetty, pontoon. All lots must be listed).

Unit No.
a)

b)

Street No.

Street Name and Type

Suburb

7-9

Eighth Avenue

Home Hill

Postcode

Lot No.

Plan Type and Number (e.g. RP, SP)

Local Government Area(s)

4806

8

H61653

Burdekin Shire Council

Unit No.

Street No.

Street Name and Type

Suburb

Postcode

Lot No.

Plan Type and Number (e.g. RP, SP)

Local Government Area(s)

3.2) Coordinates of premises (appropriate for development in remote areas, over part of a lot or in water not adjoining or adjacent to land

e.g. channel dredging in Moreton Bay)
Note: Place each set of coordinates in a separate row.

Coordinates of premises by longitude and latitude
Longitude(s)

Latitude(s)

Datum

Local Government Area(s) (if applicable)

WGS84
GDA94
Other:
Coordinates of premises by easting and northing
Easting(s)

Northing(s)

Zone Ref.

Datum

54
55
56

Local Government Area(s) (if applicable)

WGS84
GDA94
Other:

3.3) Additional premises
Additional premises are relevant to this development application and the details of these premises have been
attached in a schedule to this development application
Not required
4) Identify any of the following that apply to the premises and provide any relevant details
In or adjacent to a water body or watercourse or in or above an aquifer
Name of water body, watercourse or aquifer:
On strategic port land under the Transport Infrastructure Act 1994
Lot on plan description of strategic port land:
Name of port authority for the lot:
In a tidal area
Name of local government for the tidal area (if applicable):
Name of port authority for tidal area (if applicable):
On airport land under the Airport Assets (Restructuring and Disposal) Act 2008
Name of airport:

Listed on the Environmental Management Register (EMR) under the Environmental Protection Act 1994
EMR site identification:

14645

Listed on the Contaminated Land Register (CLR) under the Environmental Protection Act 1994
CLR site identification:
5) Are there any existing easements over the premises?
Note: Easement uses vary throughout Queensland and are to be identified correctly and accurately. For further information on easements and how they may affect the proposed development, see DA Forms Guide.

Yes – All easement locations, types and dimensions are included in plans submitted with this development application
No

PART 3 – DEVELOPMENT DETAILS
Section 1 – Aspects of development
6.1) Provide details about the first development aspect
a) What is the type of development? (tick only one box)
Material change of use

Reconfiguring a lot

Operational work

Building work

b) What is the approval type? (tick only one box)
Development permit

Preliminary approval

Preliminary approval that includes a variation approval

c) What is the level of assessment?
Code assessment

Impact assessment (requires public notification)

d) Provide a brief description of the proposal (e.g. 6 unit apartment building defined as multi-unit dwelling, reconfiguration of 1 lot into 3 lots):
Service station
e) Relevant plans
Note: Relevant plans are required to be submitted for all aspects of this development application. For further information, see DA Forms guide: Relevant plans.

Relevant plans of the proposed development are attached to the development application
6.2) Provide details about the second development aspect
a) What is the type of development? (tick only one box)
Material change of use

Reconfiguring a lot

Operational work

Building work

b) What is the approval type? (tick only one box)
Development permit

Preliminary approval

Preliminary approval that includes a variation approval

c) What is the level of assessment?
Code assessment

Impact assessment (requires public notification)

d) Provide a brief description of the proposal (e.g. 6 unit apartment building defined as multi-unit dwelling, reconfiguration of 1 lot into 3 lots):
e) Relevant plans
Note: Relevant plans are required to be submitted for all aspects of this development application. For further information, see DA Forms Guide: Relevant plans.

Relevant plans of the proposed development are attached to the development application
6.3) Additional aspects of development
Additional aspects of development are relevant to this development application and the details for these aspects
that would be required under Part 3 Section 1 of this form have been attached to this development application
Not required

Section 2 – Further development details
7) Does the proposed development application involve any of the following?
Material change of use

Yes – complete division 1 if assessable against a local planning instrument

Reconfiguring a lot

Yes – complete division 2

Operational work

Yes – complete division 3

Building work

Yes – complete DA Form 2 – Building work details

Division 1 – Material change of use
Note: This division is only required to be completed if any part of the development application involves a material change of use assessable against a local planning instrument.

8.1) Describe the proposed material change of use
Provide a general description of the proposed use

Provide the planning scheme definition (include each definition in a new row)

Number of dwelling units (if applicable)

Gross floor area (m2) (if applicable)

Service Station

The use of premises for—
(a) selling fuel, including, for example, petrol, liquid petroleum gas, automotive distillate or alternative fuels; or
(b) a food and drink outlet, shop, trailer hire, or maintaining, repairing, servicing or washing vehicles, if the use is ancillary to the use in paragraph (a).

8.2) Does the proposed use involve the use of existing buildings on the premises?
Yes
No

Division 2 – Reconfiguring a lot
Note: This division is only required to be completed if any part of the development application involves reconfiguring a lot.

9.1) What is the total number of existing lots making up the premises?
9.2) What is the nature of the lot reconfiguration? (tick all applicable boxes)
Subdivision (complete 10))

Dividing land into parts by agreement (complete 11))

Boundary realignment (complete 12))

Creating or changing an easement giving access to a lot
from a constructed road (complete 13))

10) Subdivision
10.1) For this development, how many lots are being created and what is the intended use of those lots:
Intended use of lots created

Residential

Commercial

Industrial

Other, please specify:
Rural Residential

Number of lots created
10.2) Will the subdivision be staged?
Yes – provide additional details below
No

How many stages will the works include?
What stage(s) will this development application apply to?
11) Dividing land into parts by agreement – how many parts are being created and what is the intended use of the parts?
Intended use of parts created

Residential

Commercial

Industrial

Other, please specify:

Number of parts created
12) Boundary realignment
12.1) What are the current and proposed areas for each lot comprising the premises?
Current lot
Lot on plan description

Proposed lot

Area (m2)

Lot on plan description

Area (m2)

12.2) What is the reason for the boundary realignment?

13) What are the dimensions and nature of any existing easements being changed and/or any proposed easement?
(attach schedule if there are more than two easements)

Existing or proposed?

Width (m)

Length (m)

Purpose of the easement? (e.g. pedestrian access)

Identify the land/lot(s) benefitted by the easement

Division 3 – Operational work
Note: This division is only required to be completed if any part of the development application involves operational work.

14.1) What is the nature of the operational work?
Road work
Drainage work
Landscaping

Stormwater
Earthworks
Signage

Water infrastructure

Sewage infrastructure
Clearing vegetation

Other – please specify:
14.2) Is the operational work necessary to facilitate the creation of new lots? (e.g. subdivision)
Yes – specify number of new lots:
No
14.3) What is the monetary value of the proposed operational work? (include GST, materials and labour)
$

PART 4 – ASSESSMENT MANAGER DETAILS
15) Identify the assessment manager(s) who will be assessing this development application
Burdekin Shire Council
16) Has the local government agreed to apply a superseded planning scheme for this development application?
Yes – a copy of the decision notice is attached to this development application

The local government is taken to have agreed to the superseded planning scheme request – relevant documents
attached
No

PART 5 – REFERRAL DETAILS
17) Does this development application include any aspects that have any referral requirements?
Note: A development application will require referral if prescribed by the Planning Regulation 2017.

No, there are no referral requirements relevant to any development aspects identified in this development
application – proceed to Part 6
Matters requiring referral to the Chief Executive of the Planning Act 2016:
Clearing native vegetation
Contaminated land (unexploded ordnance)
Environmentally relevant activities (ERA) (only if the ERA has not been devolved to a local government)
Fisheries – aquaculture
Fisheries – declared fish habitat area
Fisheries – marine plants
Fisheries – waterway barrier works
Hazardous chemical facilities
Heritage places – Queensland heritage place (on or near a Queensland heritage place)
Infrastructure-related referrals – designated premises
Infrastructure-related referrals – state transport infrastructure
Infrastructure-related referrals – State transport corridor and future State transport corridor
Infrastructure-related referrals – State-controlled transport tunnels and future state-controlled transport tunnels
Infrastructure-related referrals – near a state-controlled road intersection
Koala habitat in SEQ region – interfering with koala habitat in koala habitat areas outside koala priority areas
Koala habitat in SEQ region – key resource areas
Ports – Brisbane core port land – near a State transport corridor or future State transport corridor
Ports – Brisbane core port land – environmentally relevant activity (ERA)
Ports – Brisbane core port land – tidal works or work in a coastal management district
Ports – Brisbane core port land – hazardous chemical facility
Ports – Brisbane core port land – taking or interfering with water
Ports – Brisbane core port land – referable dams
Ports – Brisbane core port land – fisheries
Ports – Land within Port of Brisbane’s port limits (below high-water mark)
SEQ development area
SEQ regional landscape and rural production area or SEQ rural living area – tourist activity or sport and
recreation activity
SEQ regional landscape and rural production area or SEQ rural living area – community activity
SEQ regional landscape and rural production area or SEQ rural living area – indoor recreation
SEQ regional landscape and rural production area or SEQ rural living area – urban activity
SEQ regional landscape and rural production area or SEQ rural living area – combined use
SEQ northern inter-urban break – tourist activity or sport and recreation activity
SEQ northern inter-urban break – community activity
SEQ northern inter-urban break – indoor recreation
SEQ northern inter-urban break – urban activity
SEQ northern inter-urban break – combined use

Tidal works or works in a coastal management district
Reconfiguring a lot in a coastal management district or for a canal
Erosion prone area in a coastal management district
Urban design

Water-related development – taking or interfering with water
Water-related development – removing quarry material (from a watercourse or lake)
Water-related development – referable dams
Water-related development –levees (category 3 levees only)
Wetland protection area
Matters requiring referral to the local government:
Airport land
Environmentally relevant activities (ERA) (only if the ERA has been devolved to local government)
Heritage places – Local heritage places
Matters requiring referral to the Chief Executive of the distribution entity or transmission entity:
Infrastructure-related referrals – Electricity infrastructure
Matters requiring referral to:
• The Chief Executive of the holder of the licence, if not an individual
• The holder of the licence, if the holder of the licence is an individual
Infrastructure-related referrals – Oil and gas infrastructure
Matters requiring referral to the Brisbane City Council:
Ports – Brisbane core port land
Matters requiring referral to the Minister responsible for administering the Transport Infrastructure Act 1994:
Ports – Brisbane core port land (where inconsistent with the Brisbane port LUP for transport reasons)
Ports – Strategic port land
Matters requiring referral to the relevant port operator, if applicant is not port operator:
Ports – Land within Port of Brisbane's port limits (below high-water mark)
Matters requiring referral to the Chief Executive of the relevant port authority:
Ports – Land within limits of another port (below high-water mark)
Matters requiring referral to the Gold Coast Waterways Authority:
Tidal works or work in a coastal management district (in Gold Coast waters)
Matters requiring referral to the Queensland Fire and Emergency Service:
Tidal works or work in a coastal management district (involving a marina (more than six vessel berths))
18) Has any referral agency provided a referral response for this development application?
Yes – referral response(s) received and listed below are attached to this development application
No
Referral requirement

Referral agency

Date of referral response

Identify and describe any changes made to the proposed development application that was the subject of the
referral response and this development application, or include details in a schedule to this development application
(if applicable).

PART 6 – INFORMATION REQUEST
19) Information request under Part 3 of the DA Rules
I agree to receive an information request if determined necessary for this development application
I do not agree to accept an information request for this development application
Note: By not agreeing to accept an information request I, the applicant, acknowledge:
•
that this development application will be assessed and decided based on the information provided when making this development
application and the assessment manager and any referral agencies relevant to the

development application are not obligated under the DA

Rules to accept any additional information provided by the applicant for the development application unless agreed to by the relevant parties
•
Part 3 of the DA Rules will still apply if the application is an application listed under section 11.3 of the DA Rules.
Further advice about information requests is contained in the DA Forms Guide.

PART 7 – FURTHER DETAILS
20) Are there any associated development applications or current approvals? (e.g. a preliminary approval)
Yes – provide details below or include details in a schedule to this development application
No
List of approval/development application references

Reference number

Assessment manager

Date

Approval
Development application
Approval
Development application
21) Has the portable long service leave levy been paid? (only applicable to development applications involving building work or operational work)

Yes – a copy of the receipted QLeave form is attached to this development application
No – I, the applicant will provide evidence that the portable long service leave levy has been paid before the assessment manager decides the development application. I acknowledge that the assessment manager may give a development approval only if I provide evidence that the portable long service leave levy has been paid
Not applicable (e.g. building and construction work is less than $150,000 excluding GST)
Amount paid

Date paid (dd/mm/yy)

QLeave levy number (A, B or E)

$
22) Is this development application in response to a show cause notice or required as a result of an enforcement notice?
Yes – show cause or enforcement notice is attached
No
23) Further legislative requirements
Environmentally relevant activities
23.1) Is this development application also taken to be an application for an environmental authority for an Environmentally Relevant Activity (ERA) under section 115 of the Environmental Protection Act 1994?
Yes – the required attachment (form ESR/2015/1791) for an application for an environmental authority accompanies this development application, and details are provided in the table below

No
Note: Application for an environmental authority can be found by searching “ESR/2015/1791” as a search term at www.qld.gov.au. An ERA requires an environmental authority to operate. See www.business.qld.gov.au for further information.

Proposed ERA number:

Proposed ERA threshold:

Proposed ERA name:
Multiple ERAs are applicable to this development application and the details have been attached in a schedule to this development application.
Hazardous chemical facilities
23.2) Is this development application for a hazardous chemical facility?
Yes – Form 69: Notification of a facility exceeding 10% of schedule 15 threshold is attached to this development application
No

Note: See www.business.qld.gov.au for further information about hazardous chemical notifications.

Clearing native vegetation
23.3) Does this development application involve clearing native vegetation that requires written confirmation that
the chief executive of the Vegetation Management Act 1999 is satisfied the clearing is for a relevant purpose under
section 22A of the Vegetation Management Act 1999?
Yes – this development application includes written confirmation from the chief executive of the Vegetation
Management Act 1999 (s22A determination)
No
Note: 1. Where a development application for operational work or material change of use requires a s22A determination and this is not included,
the development application is prohibited development.
2. See https://www.qld.gov.au/environment/land/vegetation/applying for further information on how to obtain a s22A determination.

Environmental offsets
23.4) Is this development application taken to be a prescribed activity that may have a significant residual impact on
a prescribed environmental matter under the Environmental Offsets Act 2014?
Yes – I acknowledge that an environmental offset must be provided for any prescribed activity assessed as
having a significant residual impact on a prescribed environmental matter
No
Note: The environmental offset section of the Queensland Government's website can be accessed at www.qld.gov.au for further information on
environmental offsets.

Koala habitat in SEQ Region
23.5) Does this development application involve a material change of use, reconfiguring a lot or operational work
which is assessable development under Schedule 10, Part 10 of the Planning Regulation 2017?
Yes – the development application involves premises in the koala habitat area in the koala priority area
Yes – the development application involves premises in the koala habitat area outside the koala priority area
No
Note: If a koala habitat area determination has been obtained for this premises and is current over the land, it should be provided as part of this
development application. See koala habitat area guidance materials at www.des.qld.gov.au for further information.

Water resources
23.6) Does this development application involve taking or interfering with underground water through an
artesian or subartesian bore, taking or interfering with water in a watercourse, lake or spring, or taking
overland flow water under the Water Act 2000?
Yes – the relevant template is completed and attached to this development application and I acknowledge that a
relevant authorisation or licence under the Water Act 2000 may be required prior to commencing development
No
Note: Contact the Department of Natural Resources, Mines and Energy at www.dnrme.qld.gov.au for further information.
DA templates are available from https://planning.dsdmip.qld.gov.au/. If the development application involves:
•
•
•

Taking or interfering with underground water through an artesian or subartesian bore: complete DA Form 1 Template 1
Taking or interfering with water in a watercourse, lake or spring: complete DA Form1 Template 2
Taking overland flow water: complete DA Form 1 Template 3.

Waterway barrier works
23.7) Does this application involve waterway barrier works?
Yes – the relevant template is completed and attached to this development application
No
DA templates are available from https://planning.dsdmip.qld.gov.au/. For a development application involving waterway barrier works, complete DA Form 1 Template 4.

Marine activities
23.8) Does this development application involve aquaculture, works within a declared fish habitat area or
removal, disturbance or destruction of marine plants?

Yes – an associated resource allocation authority is attached to this development application, if required under the Fisheries Act 1994
No
Note: See guidance materials at www.daf.qld.gov.au for further information.

Quarry materials from a watercourse or lake
23.9) Does this development application involve the removal of quarry materials from a watercourse or lake under the Water Act 2000?
Yes – I acknowledge that a quarry material allocation notice must be obtained prior to commencing development
No
Note: Contact the Department of Natural Resources, Mines and Energy at www.dnrme.qld.gov.au and www.business.qld.gov.au for further information.

Quarry materials from land under tidal waters
23.10) Does this development application involve the removal of quarry materials from land under tidal water under the Coastal Protection and Management Act 1995?
Yes – I acknowledge that a quarry material allocation notice must be obtained prior to commencing development
No
Note: Contact the Department of Environment and Science at www.des.qld.gov.au for further information.
Referable dams
23.11) Does this development application involve a referable dam required to be failure impact assessed under section 343 of the Water Supply (Safety and Reliability) Act 2008 (the Water Supply Act)?
Yes – the 'Notice Accepting a Failure Impact Assessment' from the chief executive administering the Water Supply Act is attached to this development application
No
Note: See guidance materials at www.dnrme.qld.gov.au for further information.

Tidal work or development within a coastal management district
23.12) Does this development application involve tidal work or development in a coastal management district?
Yes – the following is included with this development application:
Evidence the proposal meets the code for assessable development that is prescribed tidal work (only required if application involves prescribed tidal work)

A certificate of title
No
Note: See guidance materials at www.des.qld.gov.au for further information.

Queensland and local heritage places
23.13) Does this development application propose development on or adjoining a place entered in the Queensland heritage register or on a place entered in a local government's Local Heritage Register?
Yes – details of the heritage place are provided in the table below
No
Note: See guidance materials at www.des.qld.gov.au for information requirements regarding development of Queensland heritage places.

Name of the heritage place:

Place ID:

Brothels

23.14) Does this development application involve a material change of use for a brothel?
Yes – this development application demonstrates how the proposal meets the code for a development
application for a brothel under Schedule 3 of the Prostitution Regulation 2014
No
Decision under section 62 of the Transport Infrastructure Act 1994
23.15) Does this development application involve new or changed access to a state-controlled road?

Yes – this application will be taken to be an application for a decision under section 62 of the Transport
Infrastructure Act 1994 (subject to the conditions in section 75 of the Transport Infrastructure Act 1994 being
satisfied)
No
Walkable neighbourhoods assessment benchmarks under Schedule 12A of the Planning Regulation
23.16) Does this development application involve reconfiguring a lot into 2 or more lots in certain residential zones
(except rural residential zones), where at least one road is created or extended?
Yes – Schedule 12A is applicable to the development application and the assessment benchmarks contained in
schedule 12A have been considered
No
Note: See guidance materials at www.planning.dsdmip.qld.gov.au for further information.

PART 8 – CHECKLIST AND APPLICANT DECLARATION
24) Development application checklist
I have identified the assessment manager in question 15 and all relevant referral
requirement(s) in question 17

Yes

Note: See the Planning Regulation 2017 for referral requirements

If building work is associated with the proposed development, Parts 4 to 6 of DA Form 2 –
Building work details have been completed and attached to this development application

Yes
Not applicable

Supporting information addressing any applicable assessment benchmarks is with the
development application
Note: This is a mandatory requirement and includes any relevant templates under question 23, a planning report
and any technical reports required by the relevant categorising instruments (e.g. local government planning
schemes, State Planning Policy, State Development Assessment Provisions). For further information, see DA
Forms Guide: Planning Report Template.

Yes

Relevant plans of the development are attached to this development application
Note: Relevant plans are required to be submitted for all aspects of this development application. For further
information, see DA Forms Guide: Relevant plans.

Yes

The portable long service leave levy for QLeave has been paid, or will be paid before a
development permit is issued (see 21)

Yes
Not applicable

25) Applicant declaration
By making this development application, I declare that all information in this development application is true and
correct
Where an email address is provided in Part 1 of this form, I consent to receive future electronic communications
from the assessment manager and any referral agency for the development application where written information
is required or permitted pursuant to sections 11 and 12 of the Electronic Transactions Act 2001
Note: It is unlawful to intentionally provide false or misleading information.

Privacy – Personal information collected in this form will be used by the assessment manager and/or chosen
assessment manager, any relevant referral agency and/or building certifier (including any professional advisers
which may be engaged by those entities) while processing, assessing and deciding the development application.
All information relating to this development application may be available for inspection and purchase, and/or
published on the assessment manager's and/or referral agency's website.
Personal information will not be disclosed for a purpose unrelated to the Planning Act 2016, Planning
Regulation 2017 and the DA Rules except where:
• such disclosure is in accordance with the provisions about public access to documents contained in the Planning
Act 2016 and the Planning Regulation 2017, and the access rules made under the Planning Act 2016 and
Planning Regulation 2017; or
• required by other legislation (including the Right to Information Act 2009); or
• otherwise required by law.

This information may be stored in relevant databases. The information collected will be retained as required by the
Public Records Act 2002.

PART 9 – FOR COMPLETION OF THE ASSESSMENT MANAGER – FOR OFFICE USE ONLY
Date received:

Reference number(s):

Notification of engagement of alternative assessment manager
Prescribed assessment manager
Name of chosen assessment manager
Date chosen assessment manager engaged
Contact number of chosen assessment manager
Relevant licence number(s) of chosen assessment manager
QLeave notification and payment
Note: For completion by assessment manager if applicable

Description of the work
QLeave project number
Amount paid ($)

Date paid (dd/mm/yy)

Date receipted form sighted by assessment manager
Name of officer who sighted the form

Company consent to the making of a development application under the Planning Act 2016
I,

Muhammad Ali

Director of the company mentioned below.
and I,

Director/Secretary of the company mentioned below.
Of:
FREEWAYS AUSTRALIA PTY LTD A.C.N. 627 677 105
as owner of the premises identified as follows:
7-9 Eighth Avenue, Home Hill
Lot 8 on H61653
consent to the making of a development application under the Planning Act 2016 by:
Brazier Motti Pty Ltd
on the premises described above for:
Material Change of Use (Service Station)

……
Signature of Director

……
Signature of Director/Secretary

08 -……
04 - 2024

……
Date

Date

The Planning Act 2016 is administered by the Department of Local Government, Infrastructure and Planning, Queensland
Government.

595 Flinders Street, Townsville Q 4810 P 07 4772 1144 E
townsville@braziermotti.com.au W www.braziermotti.com.au

APPENDIX B
Current Title Search and Smart Map

Current Title Search
Queensland Titles Registry Pty Ltd
ABN 23 648 568 101
Title Reference:

50279339

Search Date:

08/04/2024 14:47

Date Title Created:

02/09/1999

Request No:

47632109

Previous Title:

40021349

ESTATE AND LAND
Estate in Fee Simple
LOT 8

CROWN PLAN H61653
Local Government: BURDEKIN

REGISTERED OWNER
Dealing No: 722531496

09/06/2023

FREEWAYS AUSTRALIA PTY LTD A.C.N. 627 677 105
UNDER INSTRUMENT 722531496

TRUSTEE

EASEMENTS, ENCUMBRANCES AND INTERESTS
1.

Rights and interests reserved to the Crown by
Deed of Grant No. 40021349 (Lot 8 on CP H61653)

ADMINISTRATIVE ADVICES
NIL
UNREGISTERED DEALINGS
NIL
** End of Current Title Search **

Requested by: D-ENQ GLOBALX

543

75

147°25'01".175

106
H61611
FH
19°40'08".426

1315m²

4
RP729141
FH

219m²

147°25'05".949

103
H61611
FH
1012m²

3
RP729141

2
RP729141

80

FH

19°40'08".426

FH

1
RP729141

945m²
13

EIG

T

FH

804m²

HT
H

ND
CO

ST

E
RE

H61624

AV

SE

EN

653m²

UE

12
H61624

05

19
H61611
19°40'10"

FH

1267m²

11
H61624

FH

19°40'10"

FH

9
H61653

1214m²

20
H61611

05

FH

8
H61653

1267m²

FH

FH
FH

1821m²
7825

00

6
H61626

HT
H

7824

FH

95 0 m N

E
NU

113
H61611

1206m²

1214m²

E
AV

FH

FH
FH

1206m²

FH

1189m²

19°40'13".762

1206m²
147°25'05".949
543

0

75 0m E

543

20

40

60

80

80

100
m

HORIZONTAL DATUM:GDA94

ZONE:55

SCALE 1 : 1000

SUBJECT PARCEL DESCRIPTION

CLIENT SERVICE STANDARDS

147°25'03".562
19°40'11".094
1.04 KM

GDA

SmartMap
An External Product of
SmartMap Information Services

MAP WINDOW POSITION &
NEAREST LOCATION

HOME HILL

1629m²
95

147°25'01".175

STANDARD MAP NUMBER
8358-12424

FH

5
H61626

1214m²

115
H61611

19°40'13".762

00

FH

114
H61611

1206m²

4
H61624

FH

EIG

112
H61611

7825

7
H61626

1196m²

FH
1206m²

1629m²

1204m²

111
H61611

PRINTED 08/04/2024

DCDB
Lot/Plan

8/H61653

Area/Volume

1196m²

Tenure

FREEHOLD

Local Government

BURDEKIN SHIRE

Locality

HOME HILL

Segment/Parcel

35690/41

DCDB

Based upon an extraction from the
Digital Cadastral Data Base

07/04/2024

APPENDIX C
Proposed Site Plan 57035/001E prepared by Brazier Motti

0

PROPOSED
KITCHEN

PROPOSED
NEW
CONVENIENCE
STORE

CUSTOMER
PARKING

CUSTOMER
PARKING

CUSTOMER
PARKING

BIN YARD

EXISTING
WORKSHOP TO
RETAIN

CANOPY OVER

CROSSOVER

STAFF PARKING

SECOND STREET

PROPOSED
STORAGE

EXISTING FUEL
VENTS
THROUGH
ROOF TO BE
UTILIZED

EXTEND CANOPY TO
COVER NEW PUMPS
INSTALL NEW HOOP
BOLLARDS
W/ PRODUCT BOARD
(TYP. 2-NO.)
EXISTING REMOTE FUEL
POINTS TO BE UTILIZED
CROSSOVER

1.5

REMOVE ONE
SMALL SHOP
AND INSTAL
30000L
ABOVEGROUND
DIESEL TANK

EXTEND CANOPY TO
COVER NEW PUMPS

EXISTING U/G
FUEL TANKS TO
BE UTILIZED

EXISTING CANOPY TO BE
UTILIZED

LANDSCAPE

EIGHTH AVENUE

CROSSOVER
PROPOSED
EXISTING SIGN
TRAFFIC
TO BE
BOLLARD
REPLACED
WITH DIGITAL
PRICE BOARD
Date: 25th March, 2024
A3

Scale: 1:150
Drawn: MJM
Job No: 57035/001-01

Plan No:

57035/001 E

braziermotti.com.au
This plan is conceptual and for discussion purposes only. All areas, dimensions and land uses are preliminary, subject to investigation, survey, engineering, and Local Authority and Agency approvals.

S U RV E Y I N G
TOWNPLANNING
P R O J E C T M A N A G E M E NT
MAPPING&GIS

3m

APPENDIX D
Traffic Impact Assessment prepared by Noble Consulting Engineers

7-9 EIGHTH AVENUE, HOME HILL
PROPOSED SERVICE STATION DEVELOPMENT

Traffic Impact Assessment
Freeways Australia

NOBLE CONSULTING ENGINEERS
Project No.:

240116/01

Reference No.:

FN0152

Date:

30/04/2024

240116/01_7-9 EIGHTH AVENUE, HOME HILL
PROPOSED SERVICE STATION DEVELOPMENT
TRAFFIC IMPACT ASSESSMENT

Controlled Copy no.: 1
Revisions: C
Revision Record:

Rev	Date	Description	Prepared	Checked	Approved
A	2/04/2024	Issued for Client Comment	Fei Ngoo		
B	8/04/2024	Added roadway capacity assessment	Fei Ngoo		
C	30/04/2024	For submission	Fei Ngoo		

240116/01_7-9 EIGHTH AVENUE, HOME HILL
PROPOSED SERVICE STATION DEVELOPMENT
TRAFFIC IMPACT ASSESSMENT

TABLE OF CONTENTS

1.0 INTRODUCTION

1.1 Background

Noble Consulting Engineers has been commissioned by Freeways Australia to undertake a traffic impact assessment for a proposed service station development at 7-9 Eighth Avenue, Home Hill.
The location of the subject site is shown on Figure 1.1.

Figure 1.1: Site Locality (Source: QLD Globe)

1.2 Aim

The purpose of this report is to evaluate the proposed development in terms of its likely peak hour traffic generation, impact on the surrounding roads network and to identify any external works required to mitigate potential adverse traffic impacts.

This study is to provide information to the Department of Transport and Main Roads (DTMR) and Burdekin Shire Council (BSC) to assist with the assessment of the development application.

2.0 EXISTING CONDITIONS

2.1 Subject Site

The subject site is described as Lot 8/H61653 and is located within the Home Hill Township, in the Burdekin Shire Region. The subject site comprises a total area of approximately 1,196m2. The subject site is shown in Figure 2.1.

Subject Site Boundary

Figure 2.1: Subject Site (Source: QLD Globe)

The subject site is bounded as follows:

- to the north by Second Street;
- to the east and south by residential; and
- to the west by Eighth Avenue (Bruce Highway).

According to the BSC Planning Scheme Zoning Map, the subject site is zoned as “Low Density Residential”.

The subject site currently contains a mechanic workshop as shown in Figure 2.1.

It shall be noted that the previous use of the subject site was a service station. The service station
was operated up until or around the year 2004.

2.2

Access
The access to the subject site is currently via the three (3) existing driveways as follow:

- Driveway 1 - 9m wide (approx.) bitumen sealed access driveway via Second Street;
- Driveway 2 - 14m wide (approx.) concrete access driveway via Eighth Avenue; and
- Driveway 3 - 21m wide (approx.) concrete access driveway via Eighth Avenue.

The subject site current access driveways are shown in Figure 2.2.

Subject Site Boundary

Figure 2.2: Subject Site Access Driveways (Source: QLD Globe)

The existing access driveways also illustrated in Figures 2.3, 2.4 and 2.5.

≈ 9.0m wide

Figure 2.3: Access Driveway 1 (Bitumen Sealed)

≈ 14.0m wide

Figure 2.4: Access Driveway 2 (Concrete)

≈ 21.0m wide

Figure 2.5: Access Driveway 3 (Concrete)

Access Driveway 1 is deemed as all-movement access driveway.

Both Access Driveways 2 and 3 are currently configured as Left In/Left Out access only due to
existing double barrier line and chevron pavement marking at Eighth Avenue channelised right turn
traffic lane, as shown in Figure 2.6.

Chevron Pavement
Marking

Existing double
Barrier Line

Figure 2.6: Eighth Avenue/Second Street Intersection – Channelised Right turn

2.3 Road Network

2.3.1 Key Roads

Key attributes of the surrounding road networks in the proximity of the subject site are summarised in Table 2.1.

Table 2.1: Key Roads Attributes

Attribute	Eighth Avenue	Second Street	(10K Bruce Highway (BowenAyr))
Road Hierarchy	Highway (State-Controlled Road)	Local Street	
Jurisdiction	DTMR	BSC	
Posted Speed (km/h)	60km/h	Unsigned (Default to 50km/h)	
Predominant Land Use	Commercial	Residential	
Kerb and Channel	Yes	No	
On-street Parking	Yes	Yes (road verge)	
Concrete Footpath	Yes (eastern side only)		

No

Principal Cycle Network

Yes

No

Bicycle Lane

No

No

Bus Route

No

No

Traffic count data for the adjacent section of Eighth Avenue fronting the subject site, was obtained
from DTMR 2012-2022 Traffic Census Data. The TMR traffic count site (Site 91439) is located at
the Bruce Highway, approximately 1.17km north of the subject site.

The TMR traffic count site is illustrated in Figure 2.7 and the 2022 traffic data is summarised below:

- Annual Average Daily Traffic (AADT): 7,384 vehicle per day (vpd)
- Heavy Vehicle % (HV%): 11.15%
- Annual segment growth:
  - Growth last year: 3.29%
  - Growth last 5 years: 1.44%
  - Growth last 10 years: 0.66%

Traffic Count Site 91439

Subject Site

Figure 2.7: DTMR Traffic Count Site 91439 (Source: QLD Government Open Portal Data)

In accordance with TMR 2020 AADT Segment Report (Count Site 91439), the weekdays AM and
PM peak period at the Eighth Avenue section in vicinity to the subject site were generally occurs
between 8am – 9am and 3pm – 4pm.

Second Street daily traffic data was not available at the time of this traffic impact assessment.

2.3.2

Key Intersection
The key intersection in proximity to the subject site, which form part of the access route to the
proposed development site were Eighth Avenue/Second Street intersection.

The existing Eighth Avenue/Second Street intersection is a 3-way T-intersection with give-way
control, as shown in Figure 2.8.

Subject
Site

Figure 2.8: Eighth Avenue/Second Street Intersection (Source: QLD Globe)

The existing configuration of the intersection is summarised below:
•

Eighth Avenue (N) northern approach
➢ 3.5m wide through lane;
➢ 3.5m wide dual right turn lane; and
➢ 5.1m (eastern side) and 5.4m (western side) sealed shoulder.

•

Eighth Avenue (S) southern approach
➢ 3.5m wide through lane; and
➢ 3.5m wide channelised right turn lane (approximately 50m long including taper); and
➢ 5.4m sealed shoulder.

•

Second Street (E) eastern approach
➢ 5.5m wide (average) bitumen sealed roadway; and
➢ 12m wide (both side) grass verge.

2.4

Active and Public Transport
Pedestrians and Cyclists
Pedestrian concrete footpaths are located along the subject site frontage.

As indicated in Table 2.1, Eighth Avenue form part of the Principal Cycle Network Plan. However,
there are no cyclist facilities in the vicinity of the subject site or the key roads.

Public Transport
There are currently no public transport facilities (i.e. bus stops and trains stations) in the vicinity of
the subject site or key roads.

3.0 PROPOSED DEVELOPMENT

3.1 Development Layout

The development application seeks approval for a Material Change of Use for a small-scaled familyowned service station. The proposal comprises the following components:

- Retention of the existing building structures for storage and workshop;
- Removal small section of the existing building to accommodate new 30,000L above ground diesel tank;
- Convert part of the existing building to convenience store including kitchen facilities;
- Provision of six (6) fuel-filling positions;
- Raise and extends existing canopy to cover the six (6) fuel-filling positions and to accommodate fuel tanker truck height; and
- Provision of seven (7) on-site parking spaces (inclusive of one (1) disabled parking bay) including four (4) cover parking spaces inside the existing building.

The layout of the proposed development is illustrated in Figure 3.1 and included in Appendix A.

Figure 3.1: Overall Development Layout (Source: Brazier Motti)

3.2

Operation
It is anticipated that the proposed service station will commence operation in mid to end-2024,
subject to BSC/DTMR development approval and construction program being finalised.

The proposed trading hours of the service station is 5am to 10pm, 7 days a week.

3.3

Vehicular Access Arrangement
It is proposed to retain the existing three (3) site access points to service the proposed development.

Both Access Driveway 1 and 2 will be designated as Ingress-only access driveways where the
Access Driveway 3 will be designated as Egress-only access driveway, to provide one-way traffic
flow through the proposed service station, as shown in Figure 3.2.

Subject Site Boundary

Traffic Flow Direction

Figure 3.2: Proposed Access Driveways (Source: QLD Globe)

No new access location to the external road network is proposed.

3.3.1

Access Driveway 1 (Second Street)
The Access Driveway 1 at Second Street is approximately 9.0m wide and is located approximately
2.1m from the Eighth Avenue/Second Street intersection give way line, as shown in Figure 3.3.

Existing Road Edge (Indicative)

Existing Driveway Edge (Indicative)
TP Point

Existing Edge line marking

Figure 3.3: Proposed Access Driveway 1 Location

The Access Driveway 1 location does not comply with the Australian Standard AS2890.1:2004
Parking Facilities – Part 1: Off-Street Car Parking - Access Driveway Location requirement, as
shown in Figure 3.4.

Figure 3.4: Prohibited Locations of Access Driveways (Source: AS2890.1:2004, Figure 3.1)

It is proposed to reduce the existing Access Driveway 1 width to 5.1m (approximately) to maintain the minimum 6m clearance from the Eighth Avenue/Second Street intersection give way line. The revised Access Driveway 1 configuration is illustrated in Figure 3.5.

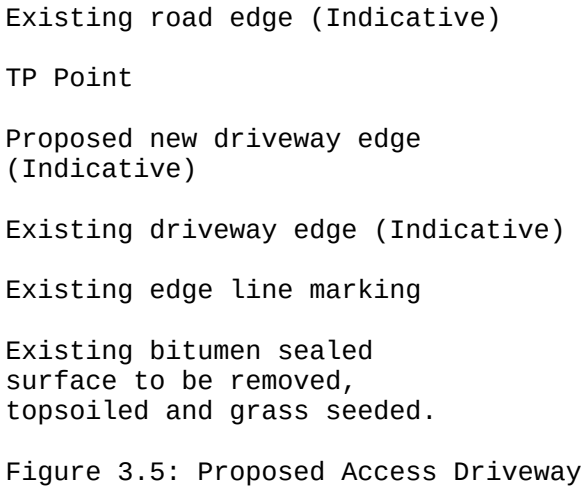

Figure 3.5: Proposed Access Driveway 1 Location (Modified)

3.3.2

Access Driveway 2 (Eighth Avenue)
The Access Driveway 2 at Eighth Avenue is approximately 14.0m wide and is located approximately
6.0m from the Eighth Avenue/Second Street intersection TP point, as shown in Figure 3.6.

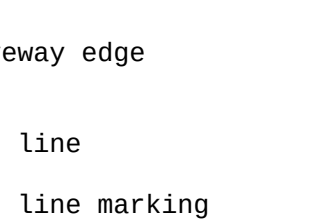

Figure 3.6: Proposed Access Driveway 2 Location

The Access Driveway 2 location comply with the Australian Standard AS2890.1:2004 Parking
Facilities – Part 1: Off-Street Car Parking - Access Driveway Location requirement (refer Figure
3.4).

No modification works to the Access Driveway 2 is proposed.

3.3.3

Access Driveway 3 (Eighth Avenue)
The Access Driveway 3 at Eighth Avenue is approximately 21.0m wide and is located approximately
31.5m from the Eighth Avenue/Second Street intersection TP point, as shown in Figure 3.7.

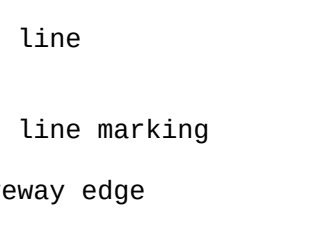

Figure 3.7: Proposed Access Driveway 3 Location

The Access Driveway 3 location comply with the Australian Standard AS2890.1:2004 Parking
Facilities – Part 1: Off-Street Car Parking - Access Driveway Location requirement (refer Figure
3.4).

No modification works to the Access Driveway 3 is proposed.

3.4 On-Site Car Parking

3.4.1 Parking Assessment

The required on-site parking bays associated with the proposed development has been assessed in accordance with BSC Planning Scheme – Vehicle Parking Rates and Standards – Table 6.1.2.3(e), using the following parking rates for “Service Station”:

- 1 space per fuel pump; and
- 1 space per 2 employees.

In accordance with National Construction Code (NCC) - Table D3.5, the number of car parking spaces required for people with a disability is 1 space for every 50 carparking spaces for service station (Building Class 6).

Freeways Australia has advised that there will be maximum of two (2) employees operating the service station daily.

Based on two (2) employees and six (6) fuel-filling positions, a total of seven (7) car parking spaces is required to cater for the development needs.

The proposed service station provides seven (7) car parking bays (inclusive of one (1) disabled parking bay), which complied with the BSC Planning Scheme requirements. The proposed one (1) disabled parking bay complied with the NCC requirements.

3.4.2 Proposed Parking Layout

The proposed layout of on-site parking area is generally consistent with the requirements of AS2890.1 – Off-Street Parking, in terms of bay dimensions, aisle widths, vehicle circulation and manoeuvring. This is typified by:

- User Class 3A – Short term, high turnover parking;
- Parking spaces dimensioned 2.6m wide by 5.4m long;
- PWD spaces dimensioned 2.4m wide and 5.4m long with an adjacent 2.4m wide shared area; and

-

Parking aisle dimensioned a minimum 6.2m wide.

3.4.3

Pedestrian Safety
It is recommended that the following measures to be provided at the proposed service station to
improve the safety of the pedestrian traversing the site:
•

Provide chevon pavement marking with bollard in vicinity of the existing garden bed as a
designated walking path for the pedestrian; and

•

Trim the vegetation at the existing garden bed to maintain a maximum of 600mm height from
the ground level to improve the entering traffic sight line to the pedestrian traversing the site
and vice versa.

The proposed safety measures are illustrated in Figure 3.8.

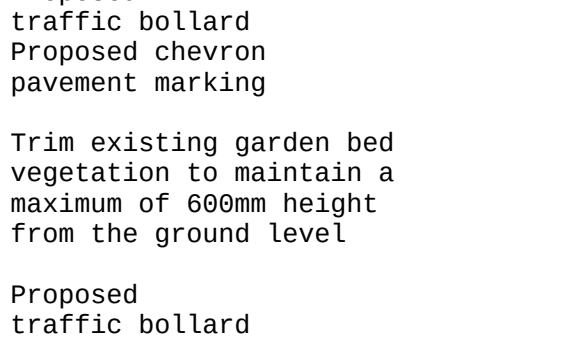

Figure 3.8: Proposed Pedestrian Safety Measures

3.4.4

Swept Path Analysis (Parking Bays)
Swept path analysis at the proposed parking bays has been conducted using a 5.2m passenger car
as shown in Figure 3.9.

Figure 3.9: Swept Path Analysis (5.2m Passenger Car)

The swept path analysis demonstrated that the 5.2m passenger car can safely manoeuvre in and
out at the proposed parking bays.

3.5

Servicing

3.5.1

Bulk Tank Re-fuelling
Upon discussion with Freeways Australia, the largest service vehicles assessing the site for bulk
fuelling will be a 19m long articulated vehicle (AV) which generated from Townsville.

The 19m long AV will be accessing the development site via Eighth Avenue. The swept path analysis of a 19m AV accessing and egressing the development site via Eighth Avenue access driveways (i.e. Access Driveways 1 and 2) is shown in Figure 3.10.

Figure 3.10: 19m AV Swept Path Analysis

Based on Figure 3.10, the 19m AV would stand on the western side of the canopy, thus restricting access to the western bowser positions. However, re-fuelling is expected to occur outside of peak times and this arrangement is not expected to significantly affect operations and safety at the site access.

3.5.2

Refuse Collection

A 10.22m rear-lift refuse collection vehicle (RCV) is expected to follow a similar path to the 19m AV, as demonstrated in Figure 3.10, and would stand at the area fronting the proposed aboveground diesel tank while refuse is collected.

The swept path analysis of a 10.22m RCV service arrangement is shown in Figure 3.11.

Proposed aboveground diesel tank area

Figure 3.11: 10.22m RCV Swept Path Analysis

Based on Figure 3.11, the 10.22m RCV can safely reverse into the area for refuse collection and exit the site in a forward manner. It is noted that the 10.22m RCV may impact the traffic flow of the service station, however, refuse collection is expected to occur outside of peak times and this arrangement is not expected to significantly affect operations and safety at the site access.

3.6

Access Driveway Sight Distance (Access Driveway 3 – Egress-only)

3.6.1

Sight Distance to Pedestrian

The pedestrian sight line assessment was conducted in accordance with the TMR Guideline – Treatment Options to Improve Safety of Pedestrians, Bicycle Riders and Other Path User at Driveways.

The TMR sight distance requirements at driveways are illustrated in Figures 3.12 and 3.13.

Figure 3.12: Sight Lines for Path Users Based on Bicycle Stopping Distances

Figure 3.13: Dimensions of Splays to Provide Sight Lines at Driveways (Flat Gradients)

The pedestrian sight line assessment conducted for the Access Driveway 3 (Egress-only access
driveway) at Eighth Avenue.

Considering that Eight Avenue is designated as Principal Cycle Network path, the following
‘Desirable’ criteria (refer Figure 3.13) is adopted to assess the driveway’s sightline:

- X = 5.0m
- Y = 13.0m

The assessed sight triangle requirement at the Access Driveway 3 is illustrated in Figure 3.14.

Pedestrian walking path
(Indicative)

Pedestrian Sight
Triangle

Existing vegetation

Figure 3.14: Sight Triangle Requirements at Access Driveway 3 (Egress-only)

The exiting traffic sight line to the pedestrian at Access Driveway 3 is generally complied with the
TMR Guideline – Treatment Options to Improve Safety of Pedestrians, Bicycle Riders and Other
Path User at Driveways requirements, however, the exiting traffic sight line may be impacted by the
existing vegetation at the corner of the property line as shown in Figures 3.14 and 3.15.

Existing vegetation

Figure 3.15: Existing Vegetation at Site Property Corner

It is recommended that the existing vegetation at the corner of the site property (as highlighted in
Figure 3.15) to be removed to improve the exiting traffic sight line to the pedestrian.

3.6.2

Stopping Sight Distance at Access Driveway Exits
The Stopping Sight Distance (SSD) requirements for access driveway, in accordance with the
Australian Standard AS2890.1:2004 Parking Facilities – Part 1: Off-Street Car Parking, is illustrated
in Figure 3.16.

Figure 3.16: Sight Distance Requirements at Access Driveways

For a 60km/h speed environment, the minimum required sight distance for the Eighth Avenue
through traffic is ranged from 65m to 83m.

The minimum SSD at Access Driveway 3 is illustrated in Figure 3.17.

Desirable 5s Gap Sight
Triangle

Figure 3.17: Access Driveway 3 SSD Assessment

Based on Figure 3.17, the Eighth Avenue through traffic has sufficient sight line to observe a vehicle on the access driveway or the conflict point, and to decelerate to a stop before reaching the collision point, if required. The available sight distances at the driveway/conflict point are consistent with AS2890.1 requirements and is expected to be adequate.

4.0 SITE INSPECTION

As indicated in Section 2.3.1.1, the Eighth Avenue weekdays peak periods occurs between 8am – 9am and 3pm – 4pm.

Noble Consulting Engineers has conducted a site inspection on Thursday morning (14/03/24), between 8am to 9.30am, to gain better understanding of the AM peak hour traffic operation at the Eighth Avenue/Second Street intersection.

Please see below site observation/findings:

- Minimal traffic generated to/from Second Street at the Eighth Avenue/Second Street intersection, i.e. only twelve (12) vehicles generated to/from Second Street at the intersection between 8am - 9am;
- No vehicle conducting left turn from Second Street onto Eight Avenue during the AM peak;
- Minimal pedestrian activity was observed at the Eighth Avenue/Second Street intersection and the subject site; and
- One (1) pedestrian is observed traversing the intersection and the subject site.

The Eighth Avenue/Second Street intersection traffic count were collected between 8am – 9am and illustrated in Figure 4.1.

Figure 4.1: 2024 AM Peak (Field Counts)

5.0 ASSESSMENT METHODOLOGY

The overall methodology adopted for the traffic impact assessment is outlined below:

- Assess the Eighth Avenue background daily and peak hour traffic generation;
- Assess the existing subject site daily and peak hour traffic generation;
- Assess the development daily and peak hour traffic generation associated with the propsoed service station;
- Assess the additional development traffic generation;
- Conduct 5% impact threshold assessment on Eighth Avenue including roadway capacity assessment;
- Assess the background and development peak hour traffic generation and distribution at Eighth Avenue/Second Street intersection;
- Eighth Avenue/Second Street intersection turn treatment warrants assessment;
- Analyse and assess the performance of the Eighth Avenue/Second Street intersection using SIDRA 9.1 software package for AM/PM peak hour traffic (i.e. Degree of Saturation (DoS), Level of Service (LOS), Average Delay and queue length etc.);
- Conduct road safety assessment (i.e. historical crash analysis, intersection sight distance and access driveways risk assessment);
- Determine the impact (if any) of the development traffic on Eighth Avenue/Second Street intersection, in terms of traffic operation and safety; and
-

Determine the mitigation measures (if required).

As indicated in Section 3.2, the proposed service station is expected to commence operation in mid
to end-2024. The impact assessment has considered the following scenarios:

- 2024 AM/PM Peak (Background);
- 2024 AM/PM Peak (Background + Development);
- 2034 AM/PM Peak (Background); and
- 2034 AM/PM Peak (Background + Development).

6.0 TRAFFIC ASSESSMENT

6.1 Background Traffic

6.1.1 Eighth Avenue (Bruce Highway)

As indicated in Section 2.3.1.1, the Eighth Avenue 2022 AADT fronting the subject site were 7,384 vpd.

The Eighth Avenue peak rates were obtained from TMR 2020 AADT Segment Report and summarised in Table 6.1.

Table 6.1: Eighth Avenue Peak Rates

Day	Peak Rate AM Peak	PM Peak
Monday	8.0%	8.0%
Tuesday	8.0%	9.0%
Wednesday	8.5%	9.0%
Thursday	8.0%	9.0%
Friday	9.0%	10.5%
	8.3%	9.1%

Average

A 1.0% growth per annum has been adopted with a compound growth pattern, to project the 2022
background traffic to year 2024 and 2034.

The projected 2024 and 2034 Eight Avenue traffic is summarised in Table 6.2.

Table 6.2: Eighth Avenue Projected Background Traffic
Year

Daily Traffic

PH Traffic

(Two-way)

(Two-way)

(vpd)

(vph)
AM Peak

PM Peak

2024

7,532

625

685

2034

8,320

691

757

Note: PH – Peak Hour; vpd – vehicle per day; vph – vehicle per hour

6.1.2

Second Street
The daily and peak hour traffic for Second Street were estimated using 1st principal method with the
recommended trip generation rates stipulated in TMR Road Planning and Design Manual (RPDM)
– Chapter 3: Road Planning and Design Fundamentals, Appendix 3A.

The recommended daily and peak rate for detached dwelling, stipulated in TMR RPDM guideline
were:
•

Daily Rate: 6 – 10 vpd per dwelling; and

•

Peak Rate: 0.8 to 0.85 vph per dwelling.

A daily rate of “6 vpd per dwelling” and peak rate of “0.8 vph per dwelling” has been adopted to
estimate the daily and peak hour traffic for Second Street section in vicinity of the subject site.

The estimated Second Street catchment is illustrated in Figure 6.1.

Traffic catchment boundary
(35 dwellings)

Figure 6.1: Second Street Traffic Catchment

Based on 35 dwellings, the estimated Second Street daily and peak hour traffic is estimated to be:
•

Daily traffic: 35 x 6.0 vpd per dwelling = 210 vpd (two-way)

•

Peak hour traffic: 35 x 0.6 vph per dwelling = 28 vph (two-way)

6.2

Existing Site Traffic
The existing mechanic workshop traffic generation were estimated based on the following
discussion with the business owners and site observation:

- Operational hours: 7am to 5pm on weekdays;
- Three (3) staff including the business owner were observed working at the workshop;
- Number of customers per day: 6 to 10 customers daily;
- Customer generally dropping off their vehicle for service/repairs around 7am to 8am; and
- Customer generally picking up their vehicle after service/repairs around 4pm to 5pm.

The existing site traffic generation were estimated based on the following assumptions:

- All staff arriving at the workshop using private vehicle = 3 x 2 vpd = 6 vpd (two-way)
- Average of 8 customers per day = 8 x 2 vpd = 16 vpd (two-way);
- Adjustment to customer daily traffic = 16 vpd x 2 = 32 vpd (two-way);
- The adjustment of the customer daily traffic is to allow for the following:
  - ➢ some customer picking up by other vehicle after dropping-off their cars for service/repairs; and
  - ➢ some customer dropping off by other vehicle to pick-up their cars after service/repairs.

Based on the above, the estimated site daily traffic generation were 6 vpd + 32 vpd = 38 vpd (twoway).

It is assumed that 8.7% (i.e. average of Eighth Avenue AM and PM peak factors) of the site daily
traffic generated during the Eighth Avenue peak periods. The estimated site peak hour traffic was
38 vpd x 8.7% = 4.0 vph (two-way).

6.3

Development Generated Traffic

6.3.1

Construction Traffic
All traffic related to constructing the proposed facility including workforces is expected to use Eighth
Avenue to access the site. Given that any construction traffic is likely to be temporary in nature, it is
expected that there will be no substantial impact on the operation of the state-controlled and local
roads due to the movement of the additional construction traffic.

All required state and local regulations will be observed during construction, including obtaining any
appropriate permits (if required) prior to the transportation of heavy equipment or construction
machinery for example.

Prior to the commencement of construction, the requirement to produce Traffic Management Plans (TMP) and Traffic Control Plans (TCP) will be discussed with TCC and DTMR. If required, a TMP and appropriate TCPs will be developed. These documents identify the likely traffic impacts of the road works and potential mitigation measures. Any TMP and/or TCPs will be developed in reference to Manual of Uniform Traffic Control Devices (MUTCD). Potential mitigation measures could include a reduced speed limit and/or additional signage while the works are being undertaken.

6.3.2

Development Traffic

Traffic generation rates for the proposed service station were sourced from the ITE Trip Generation Manual 10th Edition, using “Gasoline/Service Station with Convenience Store (945)” land use as a reference.

The trip rates which were used to estimate the traffic generation for the propsoed development are as follows:

- Weekday daily: 205.36 vpd per bowser
- Weekday AM peak hour: 12.47 vph per bowser
- Weekday PM peak hour: 13.99 vph per bowser

Using the daily rate of 205.36 vpd per bowser and average peak rate of 13.23 vph per bowser, the estimated traffic generation for the service station development are:

- Weekday daily: 205.36 x 6 fuel-filling positions = 1,232 vpd
- Weekday peak hour: 13.23 x 6 fuel-filling positions = 79 vph

Considering the proposed service station is located on the southern end of the township, smallscaled family-owned service station and adjacent large scale service stations such as United Petroleum and Liberty Oil (under construction) as shown in Figure 6.2, the development traffic generation in fact would be lower compared to a standard large scaled service station.

Future Liberty Oil Service
Station (under construction)

Existing United Petroleum
Service Station

Proposed Development

Figure 6.2: Adjacent Large Scaled Service Stations (Source: QLD Globe)

Therefore, a 25% reduction factor is applied to the above daily and peak hour traffic generation. The
revised traffic generation for the service station development is estimated to be:

- Weekday daily: 1,232 vpd x 75% = 924 vpd

- Weekday peak hour: 79 vph x 75% = 60 vph

For this development, 60% passing trade is assumed (in accordance ITE Trip Generation Manual
10th Edition) for the proposed service station.

The 2024 net addition of the traffic when accounting for passing trade and existing site traffic is +332
vpd (daily traffic) and +20 vph (peak hour), calculated as follows:

- Daily traffic: 924 – (924 x 60%) – 38 = 332 vpd

- Peak hour traffic: 60 – (60 x 60%) – 4 = 20 vph

The projected 2034 net addition of the development traffic, based on 1% growth per annum with a
compound growth pattern, is estimated to be +366 vpd (daily traffic) and +22 vph (peak hour).

7.0 ROAD LINK CAPACITY ASSESSMENT (EIGHTH AVENUE)

7.1 5% THRESHOLD IMPACT ASSESSMENT

In accordance with DTMR Guide to Traffic Impact Assessment - Section 6.4, all road links where the development traffic exceeds 5% of the base traffic (background traffic) deemed to have an impact on the road network.

The 5% threshold impact assessment based on the daily traffic is summarised in Table 7.1.

Table 7.1: 5% Threshold Impact Assessment

Roads	2024 AADT (Background)	2034 AADT (Background)	2024 Development (%)	2034 Development (%)	2024 Development Traffic (vpd)	2034 Development Traffic (vpd)	(Net Opening 2024)	(Net 10 Years Addition)

Addition)

Year)

Design

(vpd)

(vpd)

332

366

Eighth Avenue

7,532

8,320

Horizon)
4.41%

4.39%

Based on the assessment, the overall estimated development daily traffic is less than 5% of the
Eighth Avenue (Bruce Highway) background traffic. Therefore, the development traffic is deemed
to have minimal impact on the traffic operation or capacity of Eighth Avenue (Bruce Highway).

7.2

Roadway Capacity
DTMR RPDM (1st edition) Chapter 5 – Traffic Parameters and Human Factors provide a guidance
of road capacity and Level of Services (LOS). The overall relation between the LOS and their
associated roadway capacity (expressed as vehicle per hour per lane) is summarised in Table 7.2.

Table 7.2: LOS and Capacity
LOS

Peak Lane Capacity

Description

(vph)
A

< 700

Drivers can travel at their own free speed with little interference.

B

700 - 1000

Drivers have reasonable freedom to select their speed.

C

1000 - 1500

Drivers are restricted in their freedom to select speed or manoeuvre, but speeds are still at or above optimum speed.

D

1500 - 1800

Appropriate to flows near tolerable capacity.

E

1800 - 2000

At or near actual capacity.

Austroads Guide to Traffic Management (AGTM) Part 3 – Traffic Studies and Analysis provides
guidance to calculate the capacity of a single traffic lane, as follows:

C = 1800 fW fHV

where:
C = capacity in veh/h under prevailing roadway and traffic conditions
fW = adjustment factor for narrow lanes and lateral clearances (refer AGTM Part 3 – Table 4.1)
fHV = adjustment factor for heavy vehicles = 1/[1+ PHV (EHV – 1)]
PHV = the proportion of heavy vehicles in the traffic stream, expressed as a decimal
EHV = the average passenger car equivalents for heavy vehicles (refer AGTM Part 3 – Table 4.2)
AGTM Part 3 – Tables 4.1 and 4.2 are illustrated in Figure 7.1.

Figure 7.1: fW and EHV Values (Source: AGTM Part 3)
Based on the following conservative assumptions (worst case scenario), the calculated single lane
traffic capacity was 972 vph:

- fW = 0.6, assuming 3.2m lane width with 0m lateral clearances on each side;
- PHV = 0.1115 (DTMR AADT segment reports indicated Eight Avenue HV% were ≈11.15%);
and
- EHV = 2.0, assuming ‘Level’.

At post-development and throughout the 10-year design horizon, the two-way peak hour traffic along
Eighth Avenue (refer Figures 8.7 and 8.8) is estimated to be:

- 2024 AM Peak: 713 veh/hr (or 357 veh/lane/hr);
- 2024 PM Peak: 773 veh/hr (or 387 veh/lane/hr);
- 2034 AM Peak: 787 veh/hr (or 394 veh/lane/hr); and
- 2034 PM Peak: 854 veh/hr (or 427 veh/lane/hr).

The Eighth Avenue overall peak hour traffic is less than 700 vph peak lane capacity which indicates
LOS of A. The Eighth Avenue overall peak hour traffic is also below the 972 vph single lane traffic
capacity. Thus, the development traffic impact on Eighth Avenue is considered minimal.

8.0 INTERSECTION ASSESSMENT (EIGHTH AVENUE/SECOND STREET INTERSECTION)

8.1

Eight Avenue Background Traffic (Peak Hour)
As indicated in Table 6.2, the Eighth Avenue peak hour traffic were:

- 2024 AM Peak – 625 vph (two-way)
- 2024 PM Peak – 685 vph (two-way)
- 2034 AM Peak – 691 vph (two-way)
- 2034 PM Peak – 757 vph (two-way)

Based on the TMR 2022 traffic census data, the HV% were 11.15%.

Assuming a 50/50 directional split, the Eighth Avenue northbound and southbound peak hour traffic
is calculated as follow:

8.2

- 2024 AM Peak – 312.6 vph (northbound) / 312.6 vph (southbound)
- 2024 PM Peak – 342.7 vph (northbound) / 342.7 vph (southbound)
- 2034 AM Peak – 345.3 vph (northbound) / 345.3 vph (southbound)
- 2034 PM Peak – 378.6 vph (northbound) / 378.6 vph (southbound)

Second Street Background Traffic (Peak Hour)
As indicated in Section 6.1.2, the estimated 2024 peak hour traffic generation at Second Street

were 28 vph (two-way).

The following assumptions (in conjunction with site observation) has been made in assessing the
Second Street peak hour traffic generation and distribution at the Eighth Avenue/Second Street
intersection:
•

During AM peak:
➢ 60% of the peak hour traffic leaving the catchment with the following traffic movement
split:
▪

10% LEFT OUT to Eighth Avenue

▪

90% RIGHT OUT to Eighth Avenue

➢ 40% of the peak hour traffic entering the catchment with the following traffic movement split:
▪

80% LEFT IN from Eighth Avenue

▪

20% RIGHT IN from Eighth Avenue

•

During PM peak:
➢ 40% of the peak hour traffic leaving the catchment with the following traffic movement
split:
▪

10% LEFT OUT to Eighth Avenue

▪

90% RIGHT OUT to Eighth Avenue

➢ 60% of the peak hour traffic entering the catchment with the following traffic movement split:
▪

80% LEFT IN from Eighth Avenue

▪

20% RIGHT IN from Eighth Avenue

A 1.0% HV has been assumed for the Second Street peak hour traffic.

A 1.0% traffic growth per annum has been assumed and adopted to project the Second Street peak
hour traffic to year 2034.

The Second Street 2024 and 2034 peak hour traffic generation and distribution at the Eighth
Avenue/Second Street intersection is illustrated in Figures 8.1 and 8.2.

Figure 8.1: 2024 Peak Hour Traffic (Second Street)

Figure 8.2: 2034 Peak Hour Traffic (Second Street)

8.3

Development Traffic (Peak Hour)
As indicated in Section 6.3.2, the estimated 2024 development peak hour traffic were 60 vph (twoway).

The following assumptions has been made in assessing the development peak hour traffic
generation and distribution at the Eighth Avenue/Second Street intersection:

- 50% of the peak hour traffic entering the proposed service station via Access Driveway 2
(i.e. STRAIGHT THROUGH from Eighth Avenue (N));

- 50% of the peak hour traffic entering the proposed service station via Access Driveway 1
(i.e. RIGHT IN from Eighth Avenue (S));

- Assumed same development traffic generation and distribution for both AM and PM peak
periods; and

- All traffic exiting the proposed service station via Access Driveway 3 (i.e. not traversing the
Eighth Avenue/Second Street intersection).

A 1.0% traffic growth per annum has been assumed and adopted to project the development peak
hour traffic to year 2034.

The 2024 and 2034 development peak hour traffic generation and distribution at the Eighth
Avenue/Second Street intersection is illustrated in Figures 8.3 and 8.4.

Figure 8.3: 2024 Peak Hour Traffic (Development)

Figure 8.4: 2034 Peak Hour Traffic (Development)

8.4

Overall Traffic Generation

Building on the data and assumptions outlined above, the traffic generation and distribution figures adopted for the Eighth Avenue/Second Street intersection assessment were derived.

The resulting overall 2024 and 2034 AM/PM peak hour traffic volumes, at the Eighth Avenue/Second Street intersection, adopted for the assessment are shown in Figures 8.5, 8.6, 8.7 and 8.8.

Figure 8.7: 2024 Peak Hour Traffic (Background + Development)

Figure 8.8: 2034 Peak Hour Traffic (Background + Development)

8.5

Turn Treatment Warrant Assessment
Intersection turns warrant assessment were conducted in accordance with DTMR Supplement to
Austroads Guide to Road Design Part 4A: Unsignalised and Signalised Intersections.

As indicated earlier in Section 2.3, the speed limit of Eighth Avenue section in vicinity of the Second
Street intersection is 60km/h.

The assessment of the warrants is based on the Extended Design Domain (EDD) criteria for a road
with a design speed ≤70km/h.

The major road traffic volumes (QM) for the assessment were calculated in accordance with Figure
8.7.

Figure 8.7: Calculation of the Major Road Traffic Volumes (Source: DTMR)

The calculated traffic volumes at the intersection are summarised in Table 8.1.

Table 8.1: Turn Warrant Traffic Volumes

2024 Peak Hour (vph)		2034 Peak Hour (vph)	
AM	PM	AM	PM
QT1			
312.6	342.7	345.3	378.6
QT2			
342.4	372.5	378.2	411.5
QL			
9.0	13.4	9.9	14.8
QR			
32	33.1	35.4	36.6
QM (Right Turn)			
663.9	728.7		

733.4

804.9

QM (Left Turn)

342.4

372.5

378.2

411.5

Parameters

The turn warrant assessment was conducted using the Warrant Chart illustrated in Figure 8.8, with
the 2024/2034 PM peak hour traffic.

Figure 8.8: Turn Treatment Warrants (Source: DTMR)

Based on the assessment, the Eighth Avenue/Second Street intersection warrants:
•

At post development (2024) – Basic Right/Basic Left (BAR/BAL)

•

10 years design horizon (2034) – Channelised Right (Short)/Basic Left
(CHR(s)/BAL)

The existing Eighth Avenue/Second Street intersection only consists of channelised right turn
treatment (as illustrated in Figure 2.6) and is not consistent with the assessment findings. However,
in saying that, the current 5.1m wide sealed road shoulder can be utilised by the Eighth Avenue
southbound left turning traffic onto Second Street if needed or safe to do so.

It shall be noted all Eighth Avenue southbound development traffic will be accessing the proposed
service station via Access Driveway 1, which is located south of the existing Eighth Avenue/Second
Street intersection.

8.6 Intersection Analysis

8.6.1 General

The existing Eighth Avenue/Second Street intersection has been modelled against the following scenarios:

- 2024 AM/PM Peak (Background);
- 2024 AM/PM Peak (Background + Development);
- 2034 AM/PM Peak (Background); and
- 2034 AM/PM Peak (Background + Development).

The existing intersection has been analysed using the SIDRA 9.1 software package. This software package calculates the operation of intersections based on input parameters, including geometry and traffic volumes. As an output, SIDRA 9.1 provides values for the Degree of Saturation (DoS), Average Delays, Queue Length and Level of Service (LOS) as defined below:

- Degree of Saturation (DoS) – is the ratio of demand flow (or number of vehicles) to the physical capacity of the intersection or approach and is usually represented by a value that lies between zero and one. A DoS in excess of 1.0 indicates that the intersection will operate above capacity and that long delays and congestion will occur.
- Average Delay - is usually defined as the difference in time between interrupted and uninterrupted travel times through an intersection.
- Queue Length - is the 95th percentile back of queue length. This is the length to the back of the queue for a particular approach which 95% of all observed queue lengths fall below.
- Level of Service (LOS) – an index of the operational performance of traffic on traffic lane,

approach, intersection, route or network, based on measures such as delay, degree of saturation, density, speed, congestion coefficient, speed efficiency or travel time index during a given flow period. This provides a quantitative stratification of a performance measure or measures that represent the quality of service, measured on an A to F scale, with LOS A representing the best operating conditions from the traveller’s perspective and LOS F the worst.

8.6.2

Intersection Performance Assessment Criteria
The four (4) key performance measurements adopted to assess the intersection operational
conditions were Degree of Saturation (DoS), delay, Level of Service (LOS) and queue length.

In general, the intersection capacity DoS, where it is considered that the operation of the intersection
is constrained, are:
•

0.80 (80%) for un-signalised intersections;

•

0.85 (85%) for roundabouts; and

•

0.90 (90%) for signalised intersections.

The typical LOS, its characteristics and rating are defined in Table 8.2.

Table 8.2: LOS Characteristic and Rating

8.6.3

LOS

Description

Rating

A

Free, unrestrictive flow

Very good

B

Mostly free flow, few disruptions

Very Good

C

Stable flow

Good

D

Mostly stable flow, some delays

Acceptable

E

Congested

Bad

F

Forced flow

Bad

SIDRA Modelling
This section summarises the SIDRA assessment outputs (DoS and LOS) of the existing intersection.
The detailed SIDRA outputs (Movement Summary) are included in Appendix B.

The configuration of the existing Eighth Avenue/Second Street intersection is shown in Figure 8.9.

Figure 8.9: Eighth Avenue/Second Street Intersection

The summary of the SIDRA assessment results for the four (4) scenarios during AM/PM peak hours
is shown in Tables 8.3 and 8.4.

Table 8.3: 2024 AM/PM Peak (Summary of Results)

Table 8.4: 2034 AM/PM Peak (Summary of Results)

The SIDRA analysis results indicated that the existing intersection with development, the maximum overall DoS is approximately 0.244 during PM peak in year 2034, with a surplus capacity of 60% before roundabout upgrade (i.e. DoS of 0.85).

The maximum average delay difference at the intersection approaches, at pre and post development is 1.0 secs to 1.3 secs (i.e. Second Street (E) approach during year 2024 and 2034 PM peak – Right Turning Movement) which is considered minimal and acceptable.

At post-development, all approaches turning movements are operating at LOS A/B throughout the 10 years design horizon and the increase of queue length is less than one (1) car length.

Overall, at post-development (2024) and throughout the 10 years design horizon (2034), the existing intersection is operating under “mostly free flow with few disruptions” condition.

9.0 STACKING CAPACITY

The stacking capacity of the service station and queue analysis at the fuel-filling points have been assessed in more detail to investigate the impacts of higher-than-average site patronage during peak weekday operational periods (i.e., “cheap fuel days”). This sensitivity analysis was undertaken in order to confirm the capacity of the service station to operate satisfactorily under amplified traffic activity conditions.

As indicated in Section 6.3.2, the estimated 2024 development peak hour traffic were 60 vph (twoway). The projected 2034 development traffic, based on 1% growth per annum with a compound growth pattern, is estimated to be 66 vph (33 inbound / 33 outbound). It is assumed that all bowsers will be in operation during the peak period.

The 33 inbound trips during the peak hour across 6 fuel-filling points result in six (6) cars being serviced per fill point in one hour (i.e. 33 veh / 6 fill points = 6 veh per fill point). This results in an average of 10 minutes for each car at each fill point to be serviced (i.e. 60 min / 6 veh = 10 min per veh). However, practical experience indicates that the typical rate of service per fill point (time taken for a vehicle to arrive, park at a fill point, get fuel, pay for fuel and leave the fill point and service station site) is usually around 3 minutes during peak times.

If conservatively a 5 minutes service time is adopted, then up to twelve (12) cars can be serviced per fill point within one hour (i.e. 60 min / 5 min per veh per fill points = 12 veh per hour per fill point) which in turn results in up to seventy two (72) cars in total serviced in one hour within the service station (12 veh per hour per fill point x 6 fill points = 72 veh per hour).

This analysis indicates that conservatively the service station can service 39 more vehicles than the highest peak hour trip rate. However, as evident from Figure 9.1, in addition to the six (6) vehicles parked at the bowsers, at least another four (4) vehicles can comfortably be stacked behind the cars filling up at the bowsers without impacting the traffic circulations within the site to access the uncover parking bays.

Figure 9.1: Stacking Analysis

Therefore, it is anticipated that under peak operating conditions, no stacking or queue backs onto
Eighth Avenue are expected.

10.0 ROAD SAFETY ASSESSMENT

10.1

Crash Data
Crash history data from QLD Globe indicates that there have been NIL crashes reported at the
Eighth Avenue/Second Street intersection or in vicinity of the subject site access driveways, as
shown in Figure 10.1.

Subject Site

Figure 10.1: QLD Globe Historical Crash (Source: QLD Globe)

10.2

Safe Intersection Sight Distance (Eighth Avenue/Second Street Intersection)
A Safe Intersection Sight Distance (SISD) has been conducted on the existing Eighth
Avenue/Second Street intersection.

The SISD was assessed in accordance with Austroads - Guide to Road Design Part 4A:
Unsignalised and Signalised Intersections (AGRD Part 4A), Section 3.2.2.

For a 60km/h speed environment (i.e. 70km/h advisory speed), the desirable SISD is 151m. The
desirable SISD and sight line is illustrated in Figure 10.2.

Conflict Point

Sight line to vehicle on side road

Subject Site

Desirable SISD 151m

Figure 10.2: SISD Assessment

Based on Figure 10.2, the Eighth Avenue through traffic has sufficient sight line to observe a vehicle on Second Street and to decelerate to a stop before reaching the collision point, if required. The SISD at Eighth Avenue is consistent with AGRD Part 4A requirements and is expected to be adequate.

10.3

Risk Assessment (Proposed Development Access Driveways)

A road safety risk assessment has been undertaken in accordance with TMR's Guide to Traffic Impact Assessment (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 realized. 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 10.3. These identified risks relate to the traffic movements at the proposed access driveways associated with the development.

Figure 10.3: Safety Risk Score Matrix (Source: TMR's GTIA)

The risk assessment has been conducted for the proposed development access driveways which specifically address the:

- Item 1 - Left turns into the site (rear-end crash with left turn entry);
- Item 2 - Left turns into the site (pedestrian crash upon entering a driveway);
- Item 3 – Right turns into the site (rear-end crash with right turn entry);
- Item 4 - Right turns into the site (pedestrian crash upon entering a driveway);
- Item 5 - Right turns out of the site (side-swipe crashes with adjacent through movements); and
- Item 6 – Right turns out of the site (pedestrian crash upon exiting a driveway).

The results of the risk assessment are summarised in Tables 10.1, 10.2 and 10.3.
Table 10.1: Road Safety Risk Assessment (Access Driveway 1 – Ingress-only)
With

L

2

1

Mitigation Measures

Risk Score

1

Consequence

1

& Mitigation

Likelihood

Consequence

Item 1: Left turns into

development

Risk Score

Risk Item

Likelihood

Development

Risk Score

Development

Consequence

With

Likelihood

Without

L

Second Street through traffic has sufficient sight

-

-

-

-

-

-

-

-

-

-

-

-

the site

line to development left turn traffic into access

(rear-end crash with left

driveway due to relatively straight and flat road

turn entry)

geometry along Second Street.

No action required.

Item 2 - Left turns into

1

2

L

2

2

L

Left-In development traffic has wide view to the

the site

surrounding area prior turning into the driveway.

(pedestrian crash upon

Please also note that during the site inspection,

entering a driveway)

minimal public pedestrian activity was observed in
the area (refer Section 4.0).

No action required.
Item 3 – Right turns

1

1

L

2

1

L

Eighth Avenue turning traffic onto Second Street

into the site

has sufficient SSD to the development traffic

(rear-end crash with

waiting for turning into the driveway.

right turn entry)

Refer also Section 10.2 for SISD assessment.

No action required.

Item 4 - Right turns into

1

2

L

2

2

L

Right-In development traffic has wide view to the

the site

surrounding prior turning into the driveway.

(pedestrian crash upon

Please also note that during the site inspection,

entering a driveway)

minimal public pedestrian activity was observed in
the area (refer Section 4.0).

No action required.

Table 10.2: Road Safety Risk Assessment (Access Driveway 2 – Ingress-only)
With

L

2

1

Risk Score

1

Mitigation Measures

Consequence

1

& Mitigation

Likelihood

Consequence

Item 1: Left turns into

development

Risk Score

Risk Item

Likelihood

Development

Risk Score

Development

Consequence

With

Likelihood

Without

L

Eighth Avenue through traffic has sufficient sight

-

-

-

1

2

L

the site

line to development left turn traffic into access

(rear-end crash with left

driveway due to relatively straight and flat road

turn entry)

geometry along Eighth Avenue.
Refer also Section 10.2 for SISD assessment.

No action required.

Item 2 - Left turns into

1

2

L

2

2

L

Trim existing raised garden bed vegetation to

the site

maintain a maximum of 600mm height from the

(pedestrian crash upon

ground level to improve the entering vehicle sight

entering a driveway)

line to the pedestrian traversing inside the service
station.
Please also note that during the site inspection,
minimal public pedestrian activity was observed in
the area (refer Section 4.0).

Table 10.3: Road Safety Risk Assessment (Access Driveway 3 – Egress-only)
With

L

2

1

Risk Score

1

Mitigation Measures

Consequence

1

& Mitigation

Likelihood

Consequence

Item 5 - Right turns out

development

Risk Score

Risk Item

Likelihood

Development

Risk Score

Development

Consequence

With

Likelihood

Without

L

Eighth Avenue through traffic has sufficient SSD to

-

-

-

1

2

L

of the site

exiting development traffic.

(side-swipe crashes

Refer also Section 3.6.2 for SSD assessment.

with adjacent through
movements)
Item 6 – Right turns out

No action required.

1

2

L

2

2

L

Trim existing raised garden bed vegetation to

of the site

maintain a maximum of 600mm height from the

(pedestrian crash upon

ground level to improve the exiting vehicle sight line

exiting a driveway)

to the pedestrian traversing along Eighth Avenue
road shoulder (refer Section 3.4.3).

Trim existing vegetation at the corner of the site
property to improve the exiting traffic sight line to
the pedestrian (refer Section 3.6.1).

The proposed development will increase the likelihood of crashes at the
development site accesses,
compared to the pre-development case, however, this increase in likelihood is
not expected to have
a significant impact on road safety with the following recommended measures:
•

Trim existing raised garden bed vegetation to maintain a maximum of 600mm height
from the
ground level to improve the exiting vehicle sight line to the pedestrian
traversing along Eighth
Avenue road shoulder; and

•

Trim existing vegetation at the corner of the site property to improve the exiting traffic sight
line to the pedestrian.

11.0

PRE-LODGEMENT ADVICE DISCUSSION

In accordance with the SARA's pre-lodgement advice, there were concerns raised regards the pedestrian safety, the existing Eighth Avenue access driveway crossover width (i.e. Access Driveways 2 and 3) and blocked access/queuing issues onto Eighth Avenue, as stipulated below:

"The existing crossovers are very wide and don't take into consideration pedestrian safety. The widths should be reduced to cater for only the largest design vehicle to minimise the extent of crossover provided. The crossovers are also not to current standards. Any application should update/amend the access into the site so that they are consistent with current council and DTMR standards.

The existing onsite layout, parking arrangement, and workshop location may cause onsite conflicts which would then result in a blocked access/queuing issues onto the SCR. This is required to be address in any future application."

11.1

Pedestrian Safety

Refer to Sections 3.4.3, 3.6.1 and 10.3 pedestrian safety assessment and findings including proposed safety measures.

11.2

Access Driveway Crossover Width

It is understood that there is no set standard of concrete driveway crossover profile available from BSC or DTMR. In general, any driveway crossover design should be able to accommodate the design vehicle turning movements, regardless the width.

As shown in Figure 3.9, the width of existing Access Driveways 2 and 3 is deemed required to accommodate the 19m AV enter and exit manoeuvres at the subject site and any further width reduction may jeopardised the 19m AV turning movements.

The subject site access driveways width is consistent with other previous approved service station development along Eighth Avenue. i.e. United Petroleum (located 330m north of the subject site), as shown in Figure 11.1.

United
Petroleum
Service Station

Figure 11.1: United Petroleum Service Station Access Driveways Width (Source: QLD Globe)

In addition:

- The proposed service station access driveways configuration promotes one-way traffic flow within the site, which is believed to be safer, and introduce less conflict points due to no development traffic will be entering and exiting simultaneously via a same access driveway; and

- Crash history data from QLD Globe indicates NIL crashes reported in vicinity of the subject site access driveways in the past ten (10) years) which indicated that the road users are familiar with the traffic condition in the area.

Refer also to Section 10.3 for access driveway risk assessment.

Considering the above, it is proposed that the existing access driveway crossovers width at Eighth Avenue to remain as it is, and driveway modification works is deemed not required.

11.3

Blocked Access/Queuing Issues onto Eighth Avenue
As indicated in Section 6.2, the mechanic workshop operated between 7am to 5pm. Majority of the workshop patrons traffic will be arriving at the site between 7am – 8am for dropping
off their vehicles for repair/service and picking up their vehicles between 4pm – 5pm after
repair/service.

The workshop patrons traffic is generally generated outside the Eighth Avenue peak periods, i.e.
8am – 9am and 3pm – 4pm. It shall also be noted that the workshop patrons appointment is
managed via booking system to avoid overload or outweighed capacity.

Considering the above, the risk of onsite conflict between the service station and mechanic
workshop patrons is deemed low.

Refer also to Section 9.0 for development stacking capacity assessment and findings.

12.0 CONCLUSION AND CERTIFICATION STATEMENT

12.1 Conclusion

The proposed service station development has been evaluated in terms of its site accesses arrangement, on-site parking, impact on the surrounding road network and safety. The mains points to note are:

- The proposed small-scaled family-owned service station development comprises of:
  - Retention of the existing building structures for storage and workshop;
  - Removal small section of the existing building to accommodate new 30,000L above ground diesel tank;
  - Convert part of the existing building to convenience store including kitchen facilities;
  - Provision of six (6) fuel-filling positions;
  - Raise and extends existing canopy to cover the six (6) fuel-filling positions and to accommodate fuel tanker truck height; and
  - Provision of seven (7) on-site parking spaces (inclusive of one (1) disabled parking bay) including four (4) cover parking spaces inside the existing building.
- It is anticipated the proposed development will commence operation in mid to late 2024, subject to development approval and construction;
- Access to the development site is proposed via existing three (3) site access driveways;
  - Driveway 1 - 9m wide (approx.) bitumen sealed access driveway via Second Street;
  - Driveway 2 - 14m wide (approx.) concrete access driveway via Eighth Avenue; and
  - Driveway 3 - 21m wide (approx.) concrete access driveway via Eighth Avenue.
- It is proposed to reduce the existing Access Driveway 1 width to 5.1m (approximately) to maintain the minimum 6m clearance from the Eighth Avenue/Second Street intersection give way line;
- Both Access Driveways 2 and 3 location complies with the Australian Standard AS2890.1:2004 Parking Facilities – Part 1: Off-Street Car Parking - Access Driveway Location requirement;

•

The proposed layout of on-site parking area is generally consistent with the requirements of
AS2890.1 – Off-Street Parking;

•

The proposed service station provides seven (7) car parking bays (inclusive of one (1)
disabled parking bay), which complied with the BSC Planning Scheme requirements;

•

It is recommended that the following measures to be provided at the proposed service station
to improve the safety of the pedestrian traversing the site:
➢ Provide chevon pavement marking with bollard in vicinity of the existing garden bed
as a designated walking path for the pedestrian; and

➢ Trim the vegetation at the existing garden bed to maintain a maximum of 600mm height from the ground level to improve the entering traffic sight line to the pedestrian
traversing the site and vice versa.
•

The swept path analysis demonstrated that the 5.2m passenger car can safely manoeuvre
in and out at the proposed parking bays;

•

The swept path analysis demonstrated that the 19m AV can safely manoeuvre in and out of
the proposed service station Access Driveways 2 and 3;

•

The 19m AV would stand on the western side of the canopy, thus restricting access to the
western bowser positions. However, re-fuelling is expected to occur outside of peak times
and this arrangement is not expected to significantly affect operations and safety at the site
access;

•

The swept path analysis demonstrated that the 10.22m RCV safely reverse into the area for
refuse collection and exit the site in a forward manner;

•

The “sight distance to pedestrian” at Access Driveway 3 (Egress only access driveway) is
consistent with the DTMR requirements. It is recommended that the existing vegetation at
the corner of the site property to be removed to improve the exiting traffic sight line to the
pedestrian;

•

The SSD at Access Driveway 3 consistent with the AS2890.1:2004 Parking Facilities – Part
1: Off-Street Car Parking requirement;

•

Site inspection findings:
➢ Minimal traffic generated to/from Second Street at the Eighth Avenue/Second Street
intersection between 8am - 9am;
➢ No vehicle conducting left turn from Second Street onto Eight Avenue during the AM
peak;
➢ Minimal pedestrian activity was observed at the Eighth Avenue/Second Street intersection and the subject site; and
➢ One (1) pedestrian is observed traversing the intersection and the subject

site.

•

The estimated existing site daily and peak hour traffic generation were 38.0 vpd and 4.0 vpd
respectively;

•

The revised traffic generation (with 25% reduction) for the service station development is
estimated to be:
➢ Weekday daily: 1,232 vpd x 75% = 924 vpd
➢ Weekday peak hour: 79 vph x 75% = 60 vph

•

The 2024 net addition of the development traffic when accounting for passing trade (60%)
and existing site traffic is +332 vpd (daily traffic) and +20 vph (peak hour)

•

The projected 2034 net addition of the development traffic, based on 1% growth per annum
with a compound growth pattern, is estimated to be +366 vpd (daily traffic) and +22 vph
(peak hour);

•

The estimated average daily traffic of the “New attracted development traffic” (i.e. 332-366
vpd) is less than 5% of Eighth Avenue (or Bruce Highway) 2024/2034 background traffic (i.e.
7,532-8,320 vpd);

•

Turn warrant assessment indicated that Eighth Avenue/Second Street intersection warrants:
➢ At post development (2024) – Basic Right/Basic Left (BAR/BAL)
➢ 10 years design horizon (2034) – Channelised Right (Short)/Basic Left (CHR(s)/BAL)

•

The existing Eighth Avenue/Second Street intersection only consists of channelised right
turn treatment. The current 5.1m wide sealed road shoulder can be utilised by the Eighth
Avenue southbound left turning traffic onto Second Street if needed or safe to do so;

•

It shall be noted all Eighth Avenue southbound development traffic will be accessing the
proposed service station via Access Driveway 1, which is located south of the existing Eighth
Avenue/Second Street intersection;

•

SIDRA analysis indicated that, at post-development (2024) and throughout the 10 years
design horizon (2034), the existing Eighth Avenue/Second Street intersection is operating
under “mostly free flow with few disruptions” condition”;

•

The proposed service station stacking capacity analysis indicated that under peak operating
conditions, no stacking or queue backs onto Eighth Avenue are expected;

•

Crash history data from QLD Globe indicates that there have been NIL crashes reported at
the Eighth Avenue/Second Street intersection or in vicinity of the subject site

access
driveways;

•

The SISD at Eighth Avenue/Second Street intersection consistent with AGRD Part 4A
requirements;

•

The proposed development will increase the likelihood of crashes at the development site
accesses, compared to the pre-development case, however, this increase in likelihood is not
expected to have a significant impact on road safety with the following recommended
measures:
➢ Trim existing raised garden bed vegetation to maintain a maximum of 600mm height
from the ground level to improve the exiting vehicle sight line to the pedestrian
traversing along Eighth Avenue road shoulder; and
➢ Trim existing vegetation at the corner of the site property to improve the exiting traffic
sight line to the pedestrian.

•

No modification works is proposed to Access Driveways 2 and 3 considering:

➢ The width of existing Access Driveways 2 and 3 is deemed required to accommodate the 19m AV enter and exit manoeuvres at the subject site and any further width reduction may jeopardized the 19m AV turning movements;
➢ The width of existing Access Driveways 2 and 3 is consistent with other previous approved service station development along Eighth Avenue. i.e. United Petroleum (located 330m north of the subject site);
➢ The proposed service station access driveways configuration promotes one-way traffic flow within the site, which is believed to be safer, and introduce less conflict points due to no development traffic will be entering and exiting simultaneously via a same access driveway;
➢ Crash history data from QLD Globe indicates NIL crashes reported in vicinity of the subject site access driveways in the past ten (10) years) which indicated that the road users are familiar with the traffic condition in the area;
➢ Trim existing raised garden bed vegetation to maintain a maximum of 600mm height from the ground level to improve the exiting vehicle sight line to the pedestrian traversing along Eighth Avenue road shoulder; and
➢ Trim existing vegetation at the corner of the site property to improve the exiting traffic sight line to the pedestrian.

Based on the assessment (in conjunction with the recommendation), the proposed development is not expected to have any adverse impact on the safety or operational efficiency of the road networks, at the Opening Year (2024) and throughout the 10 years design horizon period (2034)

In conclusion, the findings of this Traffic Impact Assessment are supportive of the proposed development.

12.2

Certification
This traffic impact assessment report has been prepared by Fei Ngoo (RPEQ No 23918), a civil /traffic engineer with 15+ years' experience in the planning, design and implementation of urban residential, industrial and commercial land development including preparation of traffic impact assessments for developments.

……..
Fei Ngoo – Principal Civil Engineer (RPEQ No 23918), Noble Consulting Engineers

APPENDIX A
Proposed Development Layout

0

PROPOSED
KITCHEN

PROPOSED
NEW
CONVENIENCE
STORE

CUSTOMER
PARKING

CUSTOMER
PARKING

CUSTOMER
PARKING

BIN YARD

EXISTING
WORKSHOP TO
RETAIN

CANOPY OVER

CROSSOVER

STAFF PARKING

SECOND STREET

PROPOSED
STORAGE

EXISTING FUEL
VENTS
THROUGH
ROOF TO BE
UTILIZED

EXTEND CANOPY TO
COVER NEW PUMPS
INSTALL NEW HOOP
BOLLARDS
W/ PRODUCT BOARD
(TYP. 2-NO.)
EXISTING REMOTE FUEL
POINTS TO BE UTILIZED
CROSSOVER

1.5

REMOVE ONE
SMALL SHOP
AND INSTAL
30000L
ABOVEGROUND
DIESEL TANK

EXTEND CANOPY TO
COVER NEW PUMPS

EXISTING U/G
FUEL TANKS TO
BE UTILIZED

EXISTING CANOPY TO BE
UTILIZED

LANDSCAPE

EIGHTH AVENUE

CROSSOVER
PROPOSED
EXISTING SIGN
TRAFFIC
TO BE
BOLLARD
REPLACED
WITH DIGITAL
PRICE BOARD
Date: 25th March, 2024
A3

Scale: 1:150
Drawn: MJM
Job No: 57035/001-01

Plan No:

57035/001 E

braziermotti.com.au
This plan is conceptual and for discussion purposes only. All areas, dimensions and land uses are preliminary, subject to investigation, survey, engineering, and Local Authority and Agency approvals.

S U RV E Y I N G
TOWNPLANNING
P R O J E C T M A N A G E M E NT
MAPPING&GIS

3m

240116/01_7-9 EIGHTH AVENUE, HOME HILL
PROPOSED SERVICE STATION DEVELOPMENT
TRAFFIC IMPACT ASSESSMENT

APPENDIX B
SIDRA Movement Summary

MOVEMENT SUMMARY
Site: 101 [2024 AM Peak (Background) (Site Folder: General)]
Output produced by SIDRA INTERSECTION Version: 9.1.6.228
Eighth Avenue/Second Street Intersection
Site Category: Existing Design
Give-Way (Two-Way)
Vehicle Movement Performance
Mov
ID

Turn Mov
Class

Demand
Arrival
Flows
Flows
[Total HV] [Total HV]
veh/h % veh/h %
South: Eighth Avenue (S)

Deg.
Satn
v/c

sec

2

T1 All MCs

329 11.2

0.179

0.0

3

R2 All MCs

Approach

329 11.2

Aver. Level of
Delay Service

95% Back Of
Queue
[Veh.
Dist]
veh
m

Prop.
Que

Eff.
Stop
Rate

Aver.
No. of

Cycles

Aver.
Speed

LOS A

0.0

0.0

0.00

0.00

0.00

59.9

km/h

2 1.0

2 1.0

0.002

6.6

LOS A

0.0

0.1

0.41

0.55

0.41

37.7

331 11.1

331 11.1

0.179

0.1

NA

0.0

0.1

0.00

0.00

0.00

59.6

East: Second Street (E)
4

L2 All MCs

2 1.0

2 1.0

0.034

5.7

LOS A

0.1

0.8

0.58

0.73

0.58

34.0

6

R2 All MCs

16 1.0

16 1.0

0.034

10.1

LOS B

0.1

0.8

0.58

0.73

0.58

31.9

18 1.0

18 1.0

0.034

9.7

LOS A

0.1

0.8

0.58

0.73

0.58

32.1

Approach
North: Eighth Avenue (N)
7

L2 All MCs

9 1.0

9 1.0

0.184

5.6

LOS A

0.0

0.0

0.00

0.02

0.00

50.9

8

T1 All MCs

329 11.2

329 11.2

0.184

0.0

LOS A

0.0

0.0

0.00

0.02

0.00

59.3

Approach

339 10.9

339 10.9

0.184

0.2

NA

0.0

0.0

0.00

0.02

0.00

59.0

All Vehicles

688 10.7

688 10.7

0.184

0.4

NA

0.1

0.8

0.02

0.03

0.02

58.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control
(HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model

Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY
Site: 101 [2024 AM Peak (Background+Dev) (Site Folder: General)]
Output produced by SIDRA INTERSECTION Version: 9.1.6.228
Eighth Avenue/Second Street Intersection
Site Category: Existing Design
Give-Way (Two-Way)
Vehicle Movement Performance
Mov ID
Turn
Mov Class
Demand Flows [Total HV] veh/h %
Arrival Flows [Total HV] veh/h %
South: Eighth Avenue (S)
Deg. Satn v/c
Aver. Delay sec
Level of Service
95% Back Of Queue [Veh.
T1 All MCs 329 11.2 0.179 0.0 3
R2 All MCs 34 1.0 34 1.0 0.028 363 10.2 363 10.2 0.179
Approach 329 11.2

Dist]
veh
m

Prop.
Que

Eff.
Stop
Rate

Aver.
No. of
Cycles

Aver.
Speed

LOS A

0.0

0.0

0.00

0.00

0.00

59.9

6.8

LOS A

0.1

0.8

0.44

0.62

0.44

37.5

0.6

NA

0.1

0.8

0.04

0.06

0.04

56.4

km/h

East: Second Street (E)
4

L2 All MCs

2 1.0

2 1.0

0.037

5.9

LOS A

0.1

0.9

0.61

0.75

0.61

33.2

6

R2 All MCs

16 1.0

16 1.0

0.037

11.0

LOS B

0.1

0.9

0.61

0.75

0.61

31.1

18 1.0

18 1.0

0.037

10.5

LOS B

0.1

0.9

0.61

0.75

0.61

31.3

Approach
North: Eighth Avenue (N)
7

L2 All MCs

9 1.0

9 1.0

0.201

5.6

LOS A

0.0

0.0

0.00

0.02

0.00

50.9

8

T1 All MCs

360 11.2

360 11.2

0.201

0.0

LOS A

0.0

0.0

0.00

0.02

0.00

59.3

Approach

370 10.9

370 10.9

0.201

0.2

NA

0.0

0.0

0.00

0.02

0.00

59.1

All Vehicles

750 10.3

750 10.3

0.201

0.6

NA

0.1

0.9

0.03

0.05

0.03

56.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control
(HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY
Site: 101 [2024 PM Peak (Background) (Site Folder: General)]
Output produced by SIDRA INTERSECTION Version: 9.1.6.228
Eighth Avenue/Second Street Intersection
Site Category: Existing Design
Give-Way (Two-Way)
Vehicle Movement Performance
Mov
ID

Turn Mov
Class

Demand
Arrival
Flows
Flows
[Total HV] [Total HV]
veh/h % veh/h %
South: Eighth Avenue (S)

Deg.
Satn
v/c

sec

2

T1 All MCs

361 11.2

0.196

0.0

3

R2 All MCs

Approach

361 11.2

Aver. Level of
Delay Service

95% Back Of
Queue
[Veh.
Dist]
veh
m

Prop.
Que

Eff.
Stop
Rate

Aver.
No. of

Cycles

Aver.
Speed

LOS A

0.0

0.0

0.00

0.00

0.00

59.9

km/h

4 1.0

4 1.0

0.003

6.8

LOS A

0.0

0.1

0.43

0.57

0.43

37.6

364 11.1

364 11.1

0.196

0.1

NA

0.0

0.1

0.00

0.01

0.00

59.5

1 1.0

1 1.0

0.025

5.9

LOS A

0.1

0.6

0.61

0.74

0.61

33.2

East: Second Street (E)
4

L2 All MCs

6

R2 All MCs

Approach

11 1.0

11 1.0

0.025

11.0

LOS B

0.1

0.6

0.61

0.74

0.61

31.0

12 1.0

12 1.0

0.025

10.5

LOS B

0.1

0.6

0.61

0.74

0.61

31.3

North: Eighth Avenue (N)
7

L2 All MCs

14 1.0

14 1.0

0.204

5.6

LOS A

0.0

0.0

0.00

0.02

0.00

50.7

8

T1 All MCs

361 11.2

361 11.2

0.204

0.0

LOS A

0.0

0.0

0.00

0.02

0.00

59.1

Approach

375 10.8

375 10.8

0.204

0.2

NA

0.0

0.0

0.00

0.02

0.00

58.7

All Vehicles

751 10.8

751 10.8

0.204

0.3

NA

0.1

0.6

0.01

0.03

0.01

58.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control
(HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY
Site: 101 [2024 PM Peak (Background+Dev) (Site Folder: General)]
Output produced by SIDRA INTERSECTION Version: 9.1.6.228
Eighth Avenue/Second Street Intersection
Site Category: Existing Design
Give-Way (Two-Way)
Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total HV] veh/h %	Arrival Flows [Total HV] veh/h %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh.
South: Eighth Avenue (S)								
2	T1	All MCs	361 11.2	361 11.2	0.196	0.0	A	0.0
3	R2	All MCs	35 1.0	35 1.0	0.030	10.3	B	1.0
Approach			396 10.3	396 10.3	0.196	1.0	NA	1.0

Dist]
veh
m

Prop.
Que

Eff.
Stop
Rate

Aver.
No. of
Cycles

Aver.
Speed

LOS A

0.0

0.0

0.00

0.00

0.00

59.9

7.0

LOS A

0.1

0.9

0.46

0.63

0.46

37.4

0.6

NA

0.1

0.9

0.04

0.06

0.04

56.5

km/h

East: Second Street (E)
4

L2 All MCs

1 1.0

1 1.0

0.028

6.0

LOS A

0.1

0.7

0.64

0.77

0.64

32.4

6

R2 All MCs

11 1.0

11 1.0

0.028

12.0

LOS B

0.1

0.7

0.64

0.77

0.64

30.2

12 1.0

12 1.0

0.028

11.4

LOS B

0.1

0.7

0.64

0.77

0.64

30.4

Approach
North: Eighth Avenue (N)
7

L2 All MCs

14 1.0

14 1.0

0.221

5.6

LOS A

0.0

0.0

0.00

0.02

0.00

50.7

8

T1 All MCs

392 11.2

392 11.2

0.221

0.0

LOS A

0.0

0.0

0.00

0.02

0.00

59.1

Approach

406 10.8

406 10.8

0.221

0.2

NA

0.0

0.0

0.00

0.02

0.00

58.8

All Vehicles

814 10.4

814 10.4

0.221

0.6

NA

0.1

0.9

0.03

0.05

0.03

56.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control
(HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY
Site: 101 [2034 AM Peak (Background) (Site Folder: General)]
Output produced by SIDRA INTERSECTION Version: 9.1.6.228
Eighth Avenue/Second Street Intersection
Site Category: Existing Design
Give-Way (Two-Way)
Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total HV] veh/h %	Arrival Flows [Total HV] veh/h %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. Dist] veh m	Prop. Que	Eff. Stop Rate	Aver. No. of
South: Eighth Avenue (S)											
2	T1	All MCs	363 11.2	363 11.2	0.198	0.0	A				
3	R2	All MCs									

Cycles

Aver.
Speed

LOS A

0.0

0.0

0.00

0.00

0.00

59.9

km/h

3 1.0

3 1.0

0.002

6.7

LOS A

0.0

0.1

0.43

0.56

0.43

37.6

366 11.1

366 11.1

0.198

0.1

NA

0.0

0.1

0.00

0.00

0.00

59.6

5.9

LOS A

0.1

1.0

0.61

0.77

0.61

33.1

East: Second Street (E)
4

L2 All MCs

2 1.0

2 1.0

0.042

6

R2 All MCs

18 1.0

18 1.0

0.042

11.2

LOS B

0.1

1.0

0.61

0.77

0.61

30.9

20 1.0

20 1.0

0.042

10.6

LOS B

0.1

1.0

0.61

0.77

0.61

31.2

Approach
North: Eighth Avenue (N)
7

L2 All MCs

10 1.0

10 1.0

0.203

5.6

LOS A

0.0

0.0

0.00

0.02

0.00

50.8

8

T1 All MCs

363 11.2

363 11.2

0.203

0.0

LOS A

0.0

0.0

0.00

0.02

0.00

59.3

Approach

374 10.9

374 10.9

0.203

0.2

NA

0.0

0.0

0.00

0.02

0.00

59.0

All Vehicles

760 10.7

760 10.7

0.203

0.4

NA

0.1

1.0

0.02

0.03

0.02

57.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control
(HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model

Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY
Site: 101 [2034 AM Peak (Background+Dev) (Site Folder: General)]
Output produced by SIDRA INTERSECTION Version: 9.1.6.228
Eighth Avenue/Second Street Intersection
Site Category: Existing Design
Give-Way (Two-Way)
Vehicle Movement Performance
Mov ID
Turn
Mov Class
Demand Flows [Total HV] veh/h %
Arrival Flows [Total HV] veh/h %
South: Eighth Avenue (S)
Deg. Satn v/c
Aver. Delay sec
Level of Service
95% Back Of Queue [Veh.
1 T1 All MCs 363 11.2 0.198 0.0 3
2 R2 All MCs 37 1.0 37 1.0 0.032 401 10.2 401 10.2 0.198
Approach 363 11.2

Dist]
veh
m

Prop.
Que

Eff.
Stop
Rate

Aver.
No. of
Cycles

Aver.
Speed

LOS A

0.0

0.0

0.00

0.00

0.00

59.9

7.0

LOS A

0.1

0.9

0.46

0.64

0.46

37.4

0.7

NA

0.1

0.9

0.04

0.06

0.04

56.3

km/h

East: Second Street (E)
4

L2 All MCs

2 1.0

2 1.0

0.047

6.1

LOS A

0.2

1.1

0.65

0.81

0.65

32.1

6

R2 All MCs

18 1.0

18 1.0

0.047

12.3

LOS B

0.2

1.1

0.65

0.81

0.65

30.0

20 1.0

20 1.0

0.047

11.6

LOS B

0.2

1.1

0.65

0.81

0.65

30.2

Approach
North: Eighth Avenue (N)
7

L2 All MCs

10 1.0

10 1.0

0.222

5.6

LOS A

0.0

0.0

0.00

0.02

0.00

50.9

8

T1 All MCs

398 11.2

398 11.2

0.222

0.0

LOS A

0.0

0.0

0.00

0.02

0.00

59.3

Approach

409 10.9

409 10.9

0.222

0.2

NA

0.0

0.0

0.00

0.02

0.00

59.1

All Vehicles

829 10.3

829 10.3

0.222

0.7

NA

0.2

1.1

0.04

0.06

0.04

56.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control
(HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY
Site: 101 [2034 PM Peak (Background) (Site Folder: General)]
Output produced by SIDRA INTERSECTION Version: 9.1.6.228
Eighth Avenue/Second Street Intersection
Site Category: Existing Design
Give-Way (Two-Way)
Vehicle Movement Performance
Mov
ID

Turn Mov
Class

Demand
Arrival
Flows
Flows
[Total HV] [Total HV]
veh/h % veh/h %
South: Eighth Avenue (S)

Deg.
Satn
v/c

sec

2

T1 All MCs

399 11.2

0.217

0.0

3

R2 All MCs

Approach

399 11.2

Aver. Level of
Delay Service

95% Back Of
Queue
[Veh.
Dist]
veh
m

Prop.
Que

Eff.
Stop
Rate

Aver.
No. of

Cycles

Aver.
Speed

LOS A

0.0

0.0

0.00

0.00

0.00

59.9

km/h

4 1.0

4 1.0

0.003

6.9

LOS A

0.0

0.1

0.46

0.58

0.46

37.5

402 11.1

402 11.1

0.217

0.1

NA

0.0

0.1

0.00

0.01

0.00

59.5

East: Second Street (E)
4

L2 All MCs

1 1.0

1 1.0

0.031

6.0

LOS A

0.1

0.8

0.65

0.79

0.65

32.1

6

R2 All MCs

12 1.0

12 1.0

0.031

12.3

LOS B

0.1

0.8

0.65

0.79

0.65

29.9

13 1.0

13 1.0

0.031

11.7

LOS B

0.1

0.8

0.65

0.79

0.65

30.1

Approach
North: Eighth Avenue (N)
7

L2 All MCs

16 1.0

16 1.0

0.225

5.6

LOS A

0.0

0.0

0.00

0.02

0.00

50.7

8

T1 All MCs

399 11.2

399 11.2

0.225

0.0

LOS A

0.0

0.0

0.00

0.02

0.00

59.0

Approach

414 10.8

414 10.8

0.225

0.2

NA

0.0

0.0

0.00

0.02

0.00

58.7

All Vehicles

829 10.8

829 10.8

0.225

0.3

NA

0.1

0.8

0.01

0.03

0.01

58.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control
(HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model

Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY
Site: 101 [2034 PM Peak (Background+Dev) (Site Folder: General)]
Output produced by SIDRA INTERSECTION Version: 9.1.6.228
Eighth Avenue/Second Street Intersection
Site Category: Existing Design
Give-Way (Two-Way)
Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh.
South: Eighth Avenue (S)										
2	T1	All MCs	399	11.2	399	11.2	0.217	0.0	3	
R2	All MCs		39	1.0	39	1.0	0.035	437	10.3	
Approach			399	11.2	437	10.3	0.217			

Dist]
veh
m

Prop.
Que

Eff.
Stop
Rate

Aver.
No. of
Cycles

Aver.
Speed

LOS A

0.0

0.0

0.00

0.00

0.00

59.9

7.2

LOS A

0.1

1.0

0.48

0.66

0.48

37.3

0.7

NA

0.1

1.0

0.04

0.06

0.04

56.5

km/h

East: Second Street (E)
4

L2 All MCs

1 1.0

1 1.0

0.035

6.2

LOS A

0.1

0.8

0.69

0.82

0.69

31.0

6

R2 All MCs

12 1.0

12 1.0

0.035

13.6

LOS B

0.1

0.8

0.69

0.82

0.69

28.9

13 1.0

13 1.0

0.035

12.9

LOS B

0.1

0.8

0.69

0.82

0.69

29.1

Approach
North: Eighth Avenue (N)
7

L2 All MCs

16 1.0

16 1.0

0.244

5.6

LOS A

0.0

0.0

0.00

0.02

0.00

50.7

8

T1 All MCs

433 11.2

433 11.2

0.244

0.0

LOS A

0.0

0.0

0.00

0.02

0.00

59.1

Approach

449 10.8

449 10.8

0.244

0.2

NA

0.0

0.0

0.00

0.02

0.00

58.8

All Vehicles

899 10.4

899 10.4

0.244

0.6

NA

0.1

1.0

0.03

0.05

0.03

56.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control
(HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

APPENDIX E
Preliminary Investigation (Flood Impact) Technical Memorandum
prepared by Noble Consulting Engineers

Technical Memorandum
Pages

To

Freeways Australia

CC

Brazier Motti

Subject

7-9 Eighth Avenue, Home Hill – Proposed Service Station – Flooding Impact Preliminary Investigation

From

Noble Consulting Engineers

Project No/Ref No.

240116-01/TM-FN0155

1.0

Date

14

30/04/2024

BACKGROUND

Noble Consulting Engineers has been commissioned by Freeways Australia to conduct a preliminary investigation of the flooding impact associated with the proposed service station development at 7 – 9 Eighth Avenue, Home Hill.

The purpose of this preliminary investigation is to inform whether a full Flooding Impact Assessment (FIA) is required to further assess the worsening effect of stormwater, flooding or drainage impacts caused by the proposed development to the surrounding area.

This technical memo is prepared in response to the SARA Pre-lodgement advice, stipulated below:

“Stormwater, drainage and flooding:

The subject site is currently developed, and the proposed development will result in an intensification of the site. As part of a future development application, the Applicant will be required to provide a Stormwater Management Plan, including a Flood Impact Assessment and drainage concept plan prepared by a suitably qualified Registered Professional Engineer of Queensland (RPEQ) that demonstrates that any onsite changes required to facilitate the development will not result in an actionable nuisance or worsening of stormwater, flooding, or drainage impacts in an existing or future state-controlled road.”

Please note that stormwater quality assessment does not form part of this preliminary
investigation.

April 30, 2024

2.0

EXISTING CONDITIONS

2.1

Subject Site
The subject site is described as Lot 8/H61653 and is located within the Home Hill Township,
in the Burdekin Shire Region, as shown in Figure 2.1.

To Ayr

Subject Site

To Inkerman

Figure 2.1: Subject Site (Source: QLD Globe)
The subject lot size is approximately 1,196m2 and bounded as follows:
•

to the north by Second Street;

•

to the east and south by residential; and

•

to the west by Eighth Avenue (Bruce Highway).

In accordance with Burdekin Shire Council (BSC) Planning Scheme Flood Hazard Overlay
Mapping (i.e. OM7.7(a) Home Hill), the subject site is located within the “Medium Hazard”
zone, as shown in Figure 2.2.

Subject Site

Figure 2.2: Flood Hazard Overlay (Source: Burdekin Shire Council)

2.2

Existing Features and Site Terrain

The subject site consists of a mechanic workshop and the outdoor area is fully paved (i.e. concrete surface) except the minor area to the northeast and southeast corner of the subject site is covered by grassed/graveled surface.

The existing site features are shown in Figure 2.3.

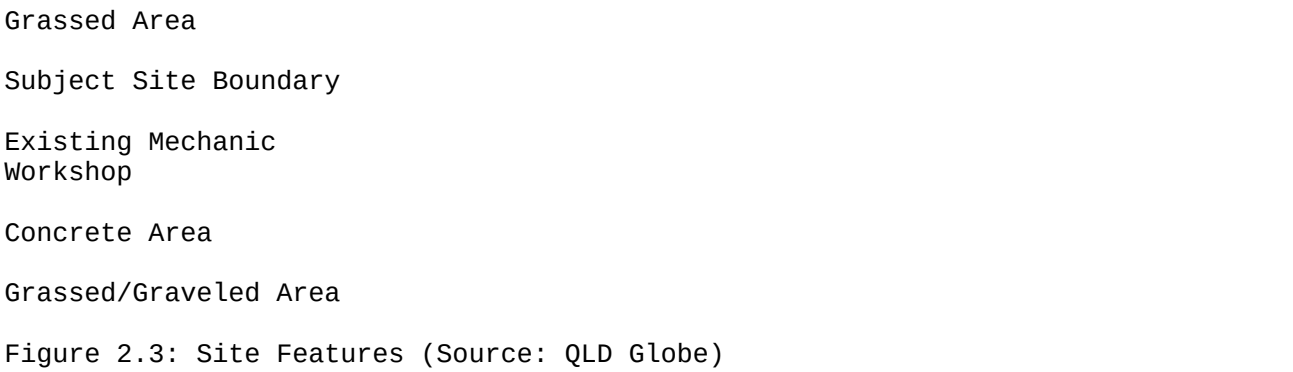

Figure 2.3: Site Features (Source: QLD Globe)

The various surface extents and approximate areas is shown in Figure 2.4 and summarised
below:

- Mechanic workshop roof area: 601m2
- Concrete paved surface: 432m2
- Grassed surface (northeast corner): 61m2
- Grassed/graveled surface (southeast corner): 102m2

The overall pervious and impervious areas of the subject site were 1,033m2 (i.e. 601m2 +
432m2) and 163m2 (i.e. 61m2 + 102m2), respectively.

Grassed Area ≈ 61m2

Mechanic Workshop
Roof Area ≈ 601m2

Concrete Area ≈432m2

Grassed/Graveled
Area ≈ 102m2

Figure 2.4: Various Surface Extents within Subject Site

The existing site and surrounding areas digital elevation LIDAR data were sourced from
ELVIS (Elevation Information System), using data from Queensland Government. The subject site and surrounding areas elevation contours are illustrated in Figure 2.5.

Land Fall

Localised low spots

Subject Site Boundary

Figure 2.5: LIDAR Contours (Source: ELVIS)

According to the LIDAR contours, the subject site slope is generally less than 1.3% with existing ground levels ranging from 10.35m AHD to 10.60m AHD. The subject site generally falls from east to west towards Eighth Avenue.

2.3

Existing Stormwater Regime

The existing stormwater structures in vicinity of the subject site were sourced from Before You Dig Australia (BYDA). In accordance with the BSC data, there is an underground pits/pipe system located along the northern and western side of the subject site as shown in Figure 2.6.

Subject Site

Figure 2.6: BSC Stormwater Drainage System (Source: BYDA)

As shown in Figure 2.5, most of the site catchment flows from northeast/east towards west
via overland sheet flow towards Eighth Avenue. The site stormwater runoff is then intercepted
by the existing kerb and channel fronting the subject site prior discharging into the
underground pits/pipes system at Eighth Avenue.

The existing site stormwater regime is illustrated in Figure 2.7.

Overland Flow
Culvert Headwall

Kerb Flow

Stormwater Manhole

Underground Drainage Pipe

Kerb Inlet Pit

Figure 2.7: Subject Site Stormwater Regime

3.0

PROPOSED DEVELOPMENT

The proposed development comprises of the following components:

- Retention of the existing building structures for storage and workshop;
- Removal small section of the existing building to accommodate new 30,000L above ground diesel tank;
- Convert part of the existing building to convenience store including kitchen facilities;
- Provision of six (6) fuel-filling positions;
- Raise and extends existing canopy to cover the six (6) fuel-filling positions and to accommodate fuel tanker truck height; and
- Provision of seven (7) on-site parking spaces.

The overall development layout is illustrated in Figure 3.1 and attached in Attachment 1.

Figure 3.1: Proposed Development Layout (Source: Brazier Motti)

It is understood that the proposed service station will utilise all existing site features to service the development and subsequently there will be minimal site modification or changes to the existing site levels. The only site modification is to provide additional concrete area to the southern side of the subject site to cater for the on-site parking bays as shown in Figure 3.2.

Figure 3.2: Additional Concrete Surface Areas

At post development, the service station stormwater regime will maintain at pre-development
level with no new stormwater measures proposed.

4.0

SITE IMPERVIOUS AREA ASSESSMENT
As indicated in Section 2.2, at pre-development, the overall pervious and impervious areas
of the existing site were 1,033m2 and 163m2, respectively.
At post development, with the incorporation of the additional concrete area (i.e. 12.5m2) to
cater for the parking bay area, the subject site impervious area increased from 1,033m2 to
1045.5m2.

The overall increase of the impervious area at the subject site is approximately 1.2% (i.e.
12.5m2 / 1,033m2) which is considered minimal.

5.0

ASSESSMENT FINDINGS/RECOMMENDATION
Based on the preliminary assessment, the development impact to the surrounding area
stormwater, flooding or drainage is deemed minimal considering:
•

The proposed development utilises all the existing site features with no significant site
modification or changes to the existing site levels;

•

At post-development, the increase of the overall site impervious area is considered
insignificant (i.e. 1.2%); and

•

The pre and post development stormwater regime remain the same.

Considering the above, it is anticipated that a full Flood Impact Assessment is deemed not
required. However, any significant changes to the development layout or site levels may
require a Flood Impact Assessment to assess the flood level afflux in the surrounding area.

April 30, 2024

6.0

CERTIFICATION STATEMENT AND AUTHORISATION

This technical memorandum has been prepared by Fei Ngoo (RPEQ No 23918), a Principal Civil Engineer with 15+ years’ experience in local government, urban/rural infrastructures and stormwater assessment.

……..

Fei Ngoo – Principal Civil Engineer (RPEQ No 23918)

April 30, 2024

Attachment 1
Proposed Development Layout

April 30, 2024

13

0

PROPOSED
KITCHEN

PROPOSED
NEW
CONVENIENCE
STORE

CUSTOMER
PARKING

CUSTOMER
PARKING

CUSTOMER
PARKING

BIN YARD

EXISTING
WORKSHOP TO
RETAIN

CANOPY OVER

CROSSOVER

STAFF PARKING

SECOND STREET

PROPOSED
STORAGE

EXISTING FUEL
VENTS
THROUGH
ROOF TO BE
UTILIZED

EXTEND CANOPY TO
COVER NEW PUMPS
INSTALL NEW HOOP
BOLLARDS
W/ PRODUCT BOARD
(TYP. 2-NO.)
EXISTING REMOTE FUEL
POINTS TO BE UTILIZED
CROSSOVER

1.5

REMOVE ONE
SMALL SHOP
AND INSTAL
30000L
ABOVEGROUND
DIESEL TANK

EXTEND CANOPY TO
COVER NEW PUMPS

EXISTING U/G
FUEL TANKS TO
BE UTILIZED

EXISTING CANOPY TO BE
UTILIZED

LANDSCAPE

EIGHTH AVENUE

CROSSOVER
PROPOSED
EXISTING SIGN
TRAFFIC
TO BE
BOLLARD
REPLACED
WITH DIGITAL
PRICE BOARD
Date: 25th March, 2024
A3

Scale: 1:150
Drawn: MJM
Job No: 57035/001-01

Plan No:

57035/001 E

braziermotti.com.au
This plan is conceptual and for discussion purposes only. All areas, dimensions and land uses are preliminary, subject to investigation, survey, engineering, and Local Authority and Agency approvals.

S U RV E Y I N G
TOWNPLANNING
P R O J E C T M A N A G E M E NT
MAPPING&GIS

3m

APPENDIX F
SARA Mapping

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Matters of Interest for all selected Lot Plans

Water resource planning area boundaries
State-controlled road
Area within 25m of a State-controlled road

Matters of Interest by Lot Plan
Lot Plan: 8H61653 (Area: 1196 m 2)
Water resource planning area boundaries
State-controlled road
Area within 25m of a State-controlled road

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Legend
State-co ntrolled road
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APPENDIX G
Response to State Code 1: Development in a State Controlled Road Environment

State code 1: Development in a state-controlled road environment

Table 1.1 Development in general
Performance outcomes

Acceptable outcomes

Buildings, structures, infrastructure, services and utilities
PO1 The location of the development does not create a safety hazard for users of the state-controlled road.

AO1.1 Development is not located in a state-controlled road.

Response
Complies with AO1.1
The development is not located in a state-controlled road.

AND
AND
AO1.2 Development can be maintained without requiring access to a state-controlled road.

PO2 The design and construction of the development does not adversely impact the structural integrity or physical condition of the state-controlled road or road transport infrastructure.

No acceptable outcome is prescribed.

PO3 The location of the development does not obstruct road transport infrastructure or adversely impact the operating performance of the statecontrolled road.

No acceptable outcome is prescribed.

PO4 The location, placement, design and operation of advertising devices, visible from the state-controlled road, do not create a safety hazard for users of the state-controlled road.

No acceptable outcome is prescribed.

PO5 The design and construction of buildings and structures does not create a safety hazard by distracting users of the state-controlled road.

AO5.1 Facades of buildings and structures fronting the state-controlled road are made of non-reflective materials.

Complies with AO1.2
No additional access to a state-controlled road is required as part of this development.
Complies
The development has been designed within the extent of the existing building. The existing canopy will be extended to cover the new pumps however it is not anticipated this work will adversely impact the structural integrity of the road.
Complies

A traffic impact assessment has been prepared by Noble Consulting Engineers which confirms the proposed development is not expected to have any adverse impact on the safety or operational efficiency of the road networks. The report is included in Appendix D.

Complies

The existing sign in the south east corner of the site is to be replaced with a digital price board, servicing the development only. The sign will operate in accordance Transport and main Roads Practitioner Manual Roadside Advertising Manual Edition 4 Assessment Volume (December 2023).

Complies

No reflective materials are to be used on the existing building or proposed extension to the canopy. This will

Performance outcomes

Acceptable outcomes

Response

AND

ensure no reflection of light is directed into oncoming traffic.

AO5.2 Facades of buildings and structures do not direct or reflect point light sources into the face of oncoming traffic on the state-controlled road.

Standard conditions to safeguard these aspects are expected.

AND
AO5.3 External lighting of buildings and structures is not directed into the face of oncoming traffic on the state-controlled road.
AND

PO6 Road, pedestrian and bikeway bridges over a state-controlled road are designed and constructed to prevent projectiles from being thrown onto the statecontrolled road.
Landscaping
PO7 The location of landscaping does not create a safety hazard for users of the state-controlled road.

AO5.4 External lighting of buildings and structures does not involve flashing or laser lights.
AO6.1 Road, pedestrian and bikeway bridges over the state-controlled road include throw protection screens in accordance with section 4.11 of the Design Criteria for Bridges and Other Structures Manual, Department of Transport and Main Roads, 2020.
AO7.1 Landscaping is not located in a state-controlled road.
AND
AO7.2 Landscaping can be maintained without requiring access to a state-controlled road.
AND
AO7.3 Landscaping does not block or obscure the sight lines for vehicular access to a state-controlled road.

State Development Assessment Provisions v3.0
State code 1: Development in a state-controlled road environment

Not applicable
No roads or pedestrian and bikeway bridges are proposed as part of this development.

Alternate solution
The existing landscaping located within the statecontrolled road corridor, fronting the development site
will be retained as it does not adversely impact the operating performance of the road.
A traffic impact assessment has been prepared by Noble Consulting Engineers which confirms the proposed development is not expected to have any adverse impact on the safety or operational efficiency of the road networks. The report is included in

Performance outcomes

Acceptable outcomes

Response
The landscaping is to be regularly maintained to ensure it does not obstruct sight lines for users of the road. Particularly, the existing raised garden bed vegetation must maintain a maximum of 600mm height from the ground level to improve the exiting vehicle sight line to the pedestrian traversing along Eighth Avenue road shoulder.

Stormwater and overland flow
PO8 Stormwater run-off or overland flow from the development site does not create or exacerbate a safety hazard for users of the state-controlled road.

PO9 Stormwater run-off or overland flow from the development site does not result in a material worsening of the operating performance of the statecontrolled road or road transport infrastructure.
PO10 Stormwater run-off or overland flow from the development site does not adversely impact the structural integrity or physical condition of the statecontrolled road or road transport infrastructure.
PO11 Development ensures that stormwater is lawfully discharged.

No acceptable outcome is prescribed.

No acceptable outcome is prescribed.

Complies
Stormwater run-off from the development site has been assessed by Noble Consulting Engineers which found that it is not anticipated that the development will create any hazards for users of the state-controlled road, given:
• The proposed development utilises all the existing site features with no significant site modification or changes to the existing site levels;
• At post-development, the increase of the overall site impervious area is considered insignificant (i.e. 1.2%); and
• The pre and post development stormwater regime remain the same.
Refer to the technical memorandum in Appendix E.
Complies
As above.

No acceptable outcome is prescribed.

Complies
As above.

AO11.1 Development does not create any new points of discharge to a state-controlled road.

Complies with AO11.1
No additional discharge points to the state-controlled road are required to facilitate the development.

AND

Performance outcomes

Acceptable outcomes
AO11.2 Development does not concentrate flows to a state-controlled road.
AND
AO11.3 Stormwater run-off is discharged to a lawful point of discharge.
AND
AO11.4 Development does not worsen the condition of an existing lawful point of discharge to the statecontrolled road.

Flooding
PO12 Development does not result in a material worsening of flooding impacts within a state-controlled road.

AO12.1 For all flood events up to 1% annual exceedance probability, development results in negligible impacts (within +/- 10mm) to existing flood levels within a state-controlled road.
AND
AO12.2 For all flood events up to 1% annual exceedance probability, development results in negligible impacts (up to a 10% increase) to existing peak velocities within a state-controlled road.

Response
Complies with AO11.2
No major change to the impermeable nature of the site is required to facilitate the development.
AND
Complies with AO11.3
Stormwater will continue to be discharged to the existing lawful point of discharge. The proposal is not anticipated to worsen the condition of the existing points of discharge as demonstrated in the preliminary flood impact Investigation was undertaken by Noble Consulting Engineers included in Appendix E.
Complies with AO12.1
A preliminary flood impact Investigation was undertaken by Noble Consulting Engineers. It found that the pre and post development stormwater regime remain the same therefore the development will not result in material worsening of flood impacts. The investigation found that a full Flood Impact Assessment is deemed not required. However, any significant changes to the development layout or site levels may require a Flood Impact Assessment to assess the flood level afflux in the surrounding area. Refer Appendix E.

AND
AO12.3 For all flood events up to 1% annual exceedance probability, development results in negligible impacts (up to a 10% increase) to existing time of submergence of a state-controlled road.
Drainage Infrastructure

Performance outcomes

Acceptable outcomes

PO13 Drainage infrastructure does not create a safety hazard for users in the state-controlled road.

AO13.1 Drainage infrastructure is wholly contained within the development site, except at the lawful point of discharge.

Response

AND

PO14 Drainage infrastructure associated with, or within, a state-controlled road is constructed, and designed to ensure the structural integrity and physical condition of existing drainage infrastructure and the surrounding drainage network.

AO13.2 Drainage infrastructure can be maintained without requiring access to a state-controlled road.
No acceptable outcome is prescribed.

Complies
No changes to the existing drainage infrastructure is proposed to facilitate the development.

Table 1.2 Vehicular access, road layout and local roads
Performance outcomes
Acceptable outcomes

Response

Vehicular access to a state-controlled road or within 100 metres of a state-controlled road intersection
PO15 The location, design and operation of a new or changed access to a state-controlled road does not compromise the safety of users of the state-controlled road.
No acceptable outcome is prescribed.

Complies
A traffic impact assessment has been prepared by Noble Consulting Engineers which confirms the vehicular access arrangements to and from the site.
It is proposed to retain the existing three (3) site access points to service the proposed development. Both Access Driveway 1 and 2 will be designated as Ingressonly access driveways where the Access Driveway 3 will be designated as Egress-only access driveway, to provide one-way traffic flow through the proposed service station.
No new access location or change to the existing access location to the state-controlled road is proposed.
The report is included in Appendix D.

Performance outcomes

Acceptable outcomes

Response

PO16 The location, design and operation of a new or changed access does not adversely impact the functional requirements of the state-controlled road.
PO17 The location, design and operation of a new or changed access is consistent with the future intent of the state-controlled road.
PO18 New or changed access is consistent with the access for the relevant limited access road policy:
1. LAR 1 where direct access is prohibited; or
2. LAR 2 where access may be permitted, subject to assessment.
PO19 New or changed access to a local road within 100 metres of an intersection with a state-controlled road does not compromise the safety of users of the statecontrolled road.

No acceptable outcome is prescribed.

Not applicable
No new or changed accesses to a state-controlled road are proposed as part of this development.
Not applicable
No new or changed accesses to a state-controlled road are proposed as part of this development.
Not applicable
The site is not located on a limited access road.

PO20 New or changed access to a local road within 100 metres of an intersection with a state-controlled road does not adversely impact on the operating performance of the intersection.
Public passenger transport and active transport
PO21 Development does not compromise the safety of users of public passenger transport infrastructure, public passenger services and active transport infrastructure.
PO22 Development maintains the ability for people to access public passenger transport infrastructure, public passenger services and active transport infrastructure.

No acceptable outcome is prescribed.

PO23 Development does not adversely impact the operating performance of public passenger transport

No acceptable outcome is prescribed.

No acceptable outcome is prescribed.

No acceptable outcome is prescribed.

No acceptable outcome is prescribed.

No acceptable outcome is prescribed.

No acceptable outcome is prescribed.

Complies
Details on the proposed changes to the access arrangement off Second Street (within 100m of the intersection) are provided in the traffic impact assessment prepared by Noble Consulting Engineers in Appendix D. The current access does not comply therefore it is proposed to reduce the existing Access Driveway 1 width to 5.1m (approximately) to maintain the minimum 6m clearance from the Eighth Avenue/Second Street intersection give way line.
Complies
The changes to Access Driveway 1 are proposed to improve safety and operating performance of the intersection. Refer Appendix D.
Not applicable
No public passenger transport infrastructure, public passenger services or active transport infrastructure is located within the vicinity of the site.
Not applicable
No public passenger transport infrastructure, public passenger services or active transport infrastructure is located within the vicinity of the site.
Not applicable

Performance outcomes

Acceptable outcomes

Response

No acceptable outcome is prescribed.

No public passenger transport infrastructure, public passenger services or active transport infrastructure is located within the vicinity of the site.
Not applicable
No public passenger transport infrastructure, public passenger services or active transport infrastructure is located within the vicinity of the site.

infrastructure, public passenger services and active transport infrastructure.
PO24 Development does not adversely impact the structural integrity or physical condition of public passenger transport infrastructure and active transport infrastructure.

Table 1.3 Network impacts
Performance outcomes

Acceptable outcomes

Response

PO25 Development does not compromise the safety of users of the state-controlled road network.

No acceptable outcome is prescribed.

PO26 Development ensures no net worsening of the operating performance of the state-controlled road network.

No acceptable outcome is prescribed.

PO27 Traffic movements are not directed onto a statecontrolled road where they can be accommodated on
the local road network.

No acceptable outcome is prescribed.

PO28 Development involving haulage exceeding 10,000 tonnes per year does not adversely impact the pavement of a state-controlled road.
PO29 Development does not impede delivery of planned upgrades of state-controlled roads.

No acceptable outcome is prescribed.

Complies
A traffic impact assessment has been prepared by Noble Consulting Engineers which confirms the proposed development is not expected to have any adverse impact on the safety or operational efficiency of the road networks, at the Opening Year (2024) and throughout the 10 years design horizon period (2034). The report is included in Appendix D.
Complies

A traffic impact assessment has been prepared by Noble Consulting Engineers which confirms the proposed development is not expected to have any adverse impact on the safety or operational efficiency of the road networks, at the Opening Year (2024) and throughout the 10 years design horizon period (2034). The report is included in Appendix D.

Complies

A traffic impact assessment has been prepared by Noble Consulting Engineers which demonstrates traffic movements. The report is included in Appendix D.

Not applicable

No acceptable outcome is prescribed.

Complies

Performance outcomes

Acceptable outcomes

Response

PO30 Development does not impede delivery of corridor improvements located entirely within the state-controlled road corridor.

No acceptable outcome is prescribed.

Complies

Table 1.4 Filling, excavation, building foundations and retaining structures
Performance outcomes
Acceptable outcomes
PO31 Development does not create a safety hazard for users of the state-controlled road or road transport infrastructure.

No acceptable outcome is prescribed.

PO32 Development does not adversely impact the operating performance of the state-controlled road.

No acceptable outcome is prescribed.

PO33 Development does not undermine, damage or cause subsidence of a state-controlled road.

No acceptable outcome is prescribed.

PO34 Development does not cause ground water disturbance in a state-controlled road.

No acceptable outcome is prescribed.

PO35 Excavation, boring, piling, blasting and fill compaction do not adversely impact the physical condition or structural integrity of a state-controlled road or road transport infrastructure.

No acceptable outcome is prescribed.

State Development Assessment Provisions v3.0
State code 1: Development in a state-controlled road environment

Response
Complies
No filling, excavation, building foundations or retaining structures required to facilitate the development that would otherwise cause impact on the operating performance of the state-controlled road and intersection.
Complies
No filling, excavation, building foundations or retaining structures required to facilitate the development that would otherwise cause impact on the operating performance of the state-controlled road and intersection.
Complies
No filling, excavation, building foundations or retaining structures required to facilitate the development that

would otherwise cause impact on the operating performance of the state-controlled road and intersection.
Complies
No filling, excavation, building foundations or retaining structures required to facilitate the development that would otherwise cause impact on the operating performance of the state-controlled road and intersection.
Complies
No filling, excavation, building foundations or retaining structures required to facilitate the development that would otherwise cause impact on the operating performance of the state-controlled road and intersection.

Performance outcomes	Acceptable outcomes	Response
PO36 Filling and excavation associated with the construction of new or changed access do not compromise the operation or capacity of existing drainage infrastructure for a state-controlled road.	No acceptable outcome is prescribed.	Complies The changes to Access Driveway 1 are detailed in the Traffic Impact Assessment prepared by Noble Consulting Engineers. It requires the existing bitumen sealed surface to be removed and topsoiled and grassed. Those works will not compromise the existing drainage infrastructure associated with the state controlled road.

Table 1.5 Environmental emissions
Statutory note: Where a state-controlled road is co-located in the same transport corridor as a railway, the development should instead comply with Environmental emissions in State code 2: Development in a railway environment.

Performance outcomes	Acceptable outcomes	Response
Reconfiguring a lot Involving the creation of 5 or fewer new residential lots adjacent to a state-controlled road or type 1 multi-modal corridor PO37 Development minimises free field noise intrusion from a state-controlled road. The development is for Material Change of Use.	AO37.1 Development provides a noise barrier or earth mound which is designed, sited and constructed: 1. to achieve the maximum free field acoustic levels in reference table 2 (item 2.1); 2. in accordance with: a. Chapter 7 integrated noise barrier design of the Transport Noise Management Code of Practice: Volume 1 (Road Traffic Noise), Department of Transport and Main Roads, 2013; b. Technical Specification-MRTS15 Noise Fences, Transport and Main Roads, 2019; c. Technical Specification-MRTS04 General Earthworks, Transport and Main Roads, 2020. OR AO37.2 Development achieves the maximum free field acoustic levels in reference table 2 (item 2.1) by alternative noise attenuation measures where it	Not applicable

Performance outcomes	Acceptable outcomes	Response
	is not practical to provide a noise barrier or earth mound. OR AO37.3 Development provides a solid gap-free fence or other solid gap-free structure along the full extent of the boundary closest to the state-controlled road.	
Involving the creation of 6 or more new residential lots adjacent to a state-controlled road or type 1 multi-modal corridor		
PO38 Reconfiguring a lot minimises free field noise intrusion from a state-controlled road.	AO38.1 Development provides noise barrier or earth mound which is designed, sited and constructed: 1. to achieve the maximum free field acoustic levels in reference table 2 (item 2.1); 2. in accordance with: a. Chapter 7 integrated noise barrier design of the Transport Noise Management Code of Practice: Volume 1 (Road Traffic Noise), Department of Transport and Main Roads, 2013; b. Technical Specification-MRTS15 Noise Fences, Transport and Main Roads, 2019; c. Technical Specification-MRTS04 General Earthworks, Transport and Main Roads, 2020. OR AO38.2 Development achieves the maximum free field acoustic levels in reference table 2 (item 2.1) by alternative noise attenuation measures where it is not practical to provide a noise barrier or earth mound.	Not applicable The development is for Material Change of Use.
Material change of use (accommodation activity)		
Ground floor level requirements adjacent to a state-controlled road or type 1 multi-modal corridor		
PO39 Development minimises noise intrusion from a state-controlled road in private open space.	AO39.1 Development provides a noise barrier or earth mound which is designed, sited and constructed:	

		Not applicable The development is for a commercial use (service station).

Performance outcomes

Acceptable outcomes
1.

2.

Response

to achieve the maximum free field acoustic levels in reference table 2 (item 2.2) for private open space at the ground floor level;
in accordance with:
a. Chapter 7 integrated noise barrier design of the Transport Noise Management Code of Practice: Volume 1 (Road Traffic Noise), Department of Transport and Main Roads, 2013;
b. Technical Specification-MRTS15 Noise Fences, Transport and Main Roads, 2019;
c. Technical Specification-MRTS04 General Earthworks, Transport and Main Roads, 2020.

OR
AO39.2 Development achieves the maximum free field acoustic level in reference table 2 (item 2.2) for private open space by alternative noise attenuation measures where it is not practical to provide a noise barrier or earth mound.
PO40 Development (excluding a relevant residential
AO40.1 Development (excluding a relevant residential building or relocated building) minimises noise intrusion building or relocated building) provides a noise barrier from a state-controlled road in habitable rooms at the or earth mound which is designed, sited and facade.
constructed:
1. to achieve the maximum building façade acoustic level in reference table 1 (item 1.1) for habitable rooms;
2. in accordance with:
a. Chapter 7 integrated noise barrier design of the Transport Noise Management Code of Practice: Volume 1 (Road Traffic Noise), Department of Transport and Main Roads, 2013;
b. Technical Specification-MRTS15 Noise Fences, Transport and Main Roads, 2019;
State Development Assessment Provisions v3.0
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Not applicable
The development is for a commercial use (service station).

Performance outcomes

Acceptable outcomes
c.

Response

Technical Specification-MRTS04 General
Earthworks, Transport and Main Roads, 2020.

OR

PO41 Habitable rooms (excluding a relevant residential
building or relocated building) are designed and
constructed using materials to achieve the maximum
internal acoustic level in reference table 3 (item 3.1).

AO40.2 Development (excluding a relevant residential
building or relocated building) achieves the maximum
building façade acoustic level in reference table 1 (item
1.1) for habitable rooms by alternative noise
attenuation measures where it is not practical to
provide a noise barrier or earth mound.
No acceptable outcome is provided.

Not applicable
The development is for a commercial use (service
station).

Above ground floor level requirements (accommodation activity) adjacent to a
state-controlled road or type 1 multi-modal corridor
PO42 Balconies, podiums, and roof decks include:
No acceptable outcome is provided.
Not applicable
1. a continuous solid gap-free structure or balustrade
The development is for a commercial use (service
(excluding gaps required for drainage purposes to
station).
comply with the Building Code of Australia);
2. highly acoustically absorbent material treatment
for the total area of the soffit above balconies,
podiums, and roof decks.
PO43 Habitable rooms (excluding a relevant residential No acceptable outcome is
provided.
Not applicable
building or relocated building) are designed and
The development is for a commercial use (service
constructed using materials to achieve the maximum
station).
internal acoustic level in reference table 3 (item 3.1).
Material change of use (other uses)
Ground floor level requirements (childcare centre, educational establishment,
hospital) adjacent to a state-controlled road or type 1 multi-modal corridor
PO44 Development:
No acceptable outcome is provided.
Not applicable
1. provides a noise barrier or earth mound that is
The development is for a commercial use (service
designed, sited and constructed:
station).
a. to achieve the maximum free field acoustic
level in reference table 2 (item 2.3) for all

Performance outcomes

Acceptable outcomes

outdoor education areas and outdoor play areas;
b.in accordance with:
i. Chapter 7 integrated noise barrier design of the Transport Noise Management Code of Practice: Volume 1 (Road Traffic Noise), Department of Transport and Main Roads, 2013;
ii. Technical Specification-MRTS15 Noise Fences, Transport and Main Roads, 2019;
iii. Technical Specification-MRTS04 General Earthworks, Transport and Main Roads, 2020; or
2. achieves the maximum free field acoustic level in reference table 2 (item 2.3) for all outdoor education areas and outdoor play areas by alternative noise attenuation measures where it is not practical to provide a noise barrier or earth mound.
PO45 Development involving a childcare centre or educational establishment:
1. provides a noise barrier or earth mound that is designed, sited and constructed:
2. to achieve the maximum building facade acoustic level in reference table 1 (item 1.2);
3. in accordance with:
a. Chapter 7 integrated noise barrier design of the Transport Noise Management Code of Practice: Volume 1 (Road Traffic Noise), Department of Transport and Main Roads, 2013;
b. Technical Specification-MRTS15 Noise Fences, Transport and Main Roads, 2019;

State Development Assessment Provisions v3.0
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No acceptable outcome is provided.

Response

Not applicable
The development is for a commercial use (service station).

Performance outcomes	Acceptable outcomes	Response
c. Technical Specification-MRTS04 General Earthworks, Transport and Main Roads, 2020; or 4. achieves the maximum building facade acoustic level in reference table 1 (item 1.2) by alternative noise attenuation measures where it is not practical to provide a noise barrier or earth mound.		
PO46 Development involving: 1. indoor education areas and indoor play areas; or 2. sleeping rooms in a childcare centre; or 3. patient care areas in a hospital achieves the maximum internal acoustic level in reference table 3 (items 3.2-3.4).	No acceptable outcome is provided.	Not applicable The development is for reconfiguring a lot.
Above ground floor level requirements (childcare centre, educational establishment, hospital) adjacent to a state-controlled road or type 1 multi-modal corridor		
PO47 Development involving a childcare centre or educational establishment which have balconies, podiums or elevated outdoor play areas predicted to exceed the maximum free field acoustic level in reference table 2 (item 2.3) due to noise from a statecontrolled road are provided with: 1. a continuous solid gap-free structure or balustrade (excluding gaps required for drainage purposes to comply with the Building Code of Australia); 2. highly acoustically absorbent material treatment for the total area of the soffit above balconies or elevated outdoor play areas.	No acceptable outcome is provided.	Not applicable The development is for a commercial use (service station).
PO48 Development including: 1. indoor education areas and indoor play areas in a childcare centre or educational establishment; or 2. sleeping rooms in a childcare centre; or 3. patient care areas in a hospital located above ground level, is designed and constructed to achieve the maximum internal acoustic level in reference table 3 (items 3.2-3.4).	No acceptable outcome is provided.	Not applicable The development is for a commercial use (service station).

Performance outcomes

Acceptable outcomes

PO49 Private open space, outdoor education areas and outdoor play areas are protected from air quality impacts from a state-controlled road.

AO49.1 Each dwelling or unit has access to a private open space which is shielded from a state-controlled road by a building, solid gap-free fence, or other solid gap-free structure.

Response
Not applicable
The development is for a commercial use (service station).

OR
AO49.2 Each outdoor education area and outdoor play area is shielded from a state-controlled road by a building, solid gap-free fence, or other solid gap-free structure.
AO50.1 Hospitals are designed and constructed to ensure vibration in the patient treatment area does not exceed a vibration dose value of 0.1m/s1.75.

PO50 Patient care areas within hospitals are protected from vibration impacts from a state-controlled road or type 1 multi-modal corridor.

Not applicable
The development is for a commercial use (service station).

AND
AO50.2 Hospitals are designed and constructed to ensure vibration in the ward of a patient care area does not exceed a vibration dose value of 0.4m/s1.75.
PO51 Development is designed and sited to ensure light from infrastructure within, and from users of, a statecontrolled road or type 1 multi-modal corridor, does not:
1. intrude into buildings during night hours (10pm to 6am);
2. create unreasonable disturbance during evening hours (6pm to 10pm).
No acceptable outcomes are prescribed.

Table 1.6: Development in a future state-controlled road environment
Performance outcomes
Acceptable outcomes
PO52 Development does not impede delivery of a future state-controlled road.

AO52.1 Development is not located in a future statecontrolled road.

State Development Assessment Provisions v3.0
State code 1: Development in a state-controlled road environment

Not applicable
The development is for a commercial use (service station).

Response
Not applicable

Performance outcomes

Acceptable outcomes

Response

OR ALL OF THE FOLLOWING APPLY:

The development is not located within a future statecontrolled road environment.

AO52.2 Development does not involve filling and
excavation of, or material changes to, a future statecontrolled road.
AND
AO52.3 The intensification of lots does not occur
within a future state-controlled road.
AND

PO53 The location and design of new or changed
access does not create a safety hazard for users of a
future state-controlled road.
PO54 Filling, excavation, building foundations and
retaining structures do not undermine, damage or
cause subsidence of a future state-controlled road.
PO55 Development does not result in a material
worsening of stormwater, flooding, overland flow or
drainage impacts in a future state-controlled road or
road transport infrastructure.
PO56 Development ensures that stormwater is lawfully
discharged.

AO52.4 Development does not result in the landlocking
of parcels once a future state-controlled road
is delivered.
AO53.1 Development does not include new or changed
access to a future state-controlled road.
No acceptable outcome is prescribed.

No acceptable outcome is prescribed.

AO56.1 Development does not create any new points
of discharge to a future state-controlled road.

Not applicable
The development is not located within a future statecontrolled road environment.
Not applicable
The development is not located within a future statecontrolled road environment.
Not applicable
The development is not located within a future statecontrolled road environment.
Not applicable
The development is not located within a future statecontrolled road environment.

AND
AO56.2 Development does not concentrate flows to a
future state-controlled road.

Performance outcomes	Acceptable outcomes	Response
	AND AO56.3 Stormwater run-off is discharged to a lawful point of discharge. AND AO56.4 Development does not worsen the condition of an existing lawful point of discharge to the future state-controlled road.	