Planning Proposal Submission Form

Planning Proposal case number:PP-2023-2746

Applicant details

Title	
First given name	Damien
Other given name/s	
Family name	Mackay
Contact number	0738542910
Email	damien.mackay@tfa.com.au
Address	C/- TFA Project Group, PO Box 2339 Fortitude Valley Qld 4006
Is the applicant a company?	Yes
Name	IOR PTY LTD
ABN	36009653070
ACN	009653070
Trading Name	

Subject Land

What land does the planning proposal apply to?	Individual properties (five or less lots) within the LGA
Which LGA does the proposal relate to?	HAY

Type of Planning Proposal

What controls does the planning proposal relate to ?	The planning proposal relates to the wording of Environmental Planning Instrument provisions

Select the site of the development

Site address #	1
Street address	310 MOAMA STREET HAY SOUTH 2711
Local government area	HAY
Lot / Section Number / Plan	2 / - / DP1212081
Primary address?	Yes
Planning controls affecting property	Land Application LEP Land Zoning Height of Building Floor Space Ratio (n:1) Minimum Lot Size Heritage Land Reservation Acquisition Foreshore Building Line Groundwater Vulnerability Terrestrial Biodiversity Bushfire Prone Land 1.5 m Buffer around Classified

	Roads

Planning Proposal - subject provisions

Which planning provisions does the planning proposal seek to amend? (select all that apply)	Additional permitted uses
Please provide a brief description of the effect of the planning proposal	

Prelodgement meeting

Has a pre-lodgement meeting occurred?	No

Planning Agreement

Is the application accompanied by a Planning Agreement?	No

Pecuniary interest

Is the applicant or owner an employee or councillor of the council assessing the application?	No
Does the applicant or owner have a relationship with any staff or council or of the Councillor assessing the application?	No

Political Donations

Are you aware of any person who has financial interest in the application who has made a political donation or gift in the last two years?	No

Payer details

First name	Tony
Other given name/s	
Family name	Samut
Contact number	1300457467
Email	damien.mackay@tfa.com.au
Billing address	IOR Pty Ltd, PO Box 576, Cannon Hill, Qld 4170

Application documents

The following documents support the application

Document type	Document file name
Draft Planning Proposal	Planning Proposal Report - IOR - Truck Refuelling - 6 December 23_Rev E
Other	APPB_PSI Report
Plans	APPA_Conceptual Site Layout

Declarations

I declare that all the information in my application and accompanying documents is, to the best of my knowledge, true and correct.	Yes
I understand that the application and the accompanying information will be provided to the appropriate consent authority and relevant agency(ies) for the purposes of the assessment of this application.	Yes
I understand that if incomplete, the consent authority may request more information, which will result in delays to the application.	Yes
The Planning Proposal authority may use the information and materials provided for notification, advertising purposes, and may be made available to the public for inspection. Information related to the application may also become available via NSW Planning Portal.	Yes
I acknowledge that copies of this application and supporting documentation may be provided to interested persons in accordance with the Government Information (Public Access) 2009 (NSW) (GIPA Act) under which it may be required to release information which you provide to it.	Yes
I agree to the appropriately delegated assessment officers attending the site for the purpose of inspection.	Yes

I have read and agree to the collection and use of my personal information as outlined in the	Yes

PLANNING PROPOSAL REPORT

IOR HAY

HAY UNMANNED REFUELLING FACILITY PLANNING PROPOSAL

Project Group

CREATE · PLAN · DELIVER

PROJECT MANAGERS | PLANNERS | DESIGNERS | ENGINEERS

PLANNING PROPOSAL REPORT

IOR Hay

Hay Unmanned Refuelling Facility Planning Proposal

CLIENT: IOR Pty Ltd (IOR)

ADDRESS: 310 Moama Street, Hay South NSW 2711

TFA REFERENCE: 19297

TFA CONTACT: Damien Mackay

Document Control

REVISION	DATE	PREPARED BY	REVIEWED BY	COMMENTS
E	6-Dec-2023	D. Mackay	J. Rowell	Amended for Gateway Determination

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EXECUTIVE SUMMARY

Applicant

Applicant Details	IOR Pty Ltd
Contact Details	C/- Damien Mackay (Town Planner) TfA Project Group 166 Knapp Street FORTITUDE VALLEY QLD 4006

Site

Site Address	310 Moama Street, Hay South NSW 2711
Site Details	Lot 2 DP1212081
Site Area	Total Site Area – 42,055 m^2 (Approx.)
Current Land Use	Agricultural production

Proposal

Proposal Description	Proposed amendment to Hay Local Environmental Plan 2011 to enable a 'service station' (unmanned refuelling facility)
Application Type	Planning Proposal (enabling clause to Schedule 1 of LEP)

Local Government Policy

Assessing Authority	Hay Shire Council
Local Planning Instrument	*Hay Local Environmental Plan 2011*
Zone / Precinct	RU1 – Primary Production
Planning Strategies	• Riverina Murray Regional Plan 2041

State Government Policy

Relevant State Agencies	• Department of Planning and Environment (DPE) • Transport for NSW (TfNSW) • Rural Fire Service (RFS) • Department of Natural Resources Access Regulator (DNRAR)

1.0 INTRODUCTION

This Planning Proposal report has been prepared by TfA Project Group (TFA) on behalf of IOR Pty Ltd (the applicant) and involves a request to the Hay Shire Council (the council) to amend the Hay Local Environmental Plan 2011 (the LEP) to enable a 'service station' (unmanned refuelling facility) over land located at 310 Moama Street, Hay South NSW 2711 and more formally described as Lot 2 DP1212081.

The Planning Proposal has been prepared in accordance with section 3.33 of the *Environmental Planning and Assessment Act 1979 (*the EP&A Act) and the NSW Department of Planning and Environment (the DPE) Local Environmental Plan Making Guideline August 2023 (the *LEP Making Guideline*).

The planning proposal is accompanied by the following consultant reports / documentation:

- Appendix A: Conceptual Site Layout, prepared by IOR
- Appendix B: Preliminary Site Investigation Report, prepared by McMahon

To assist in Council's development of the planning proposal, this planning proposal covers the following matters:

- Section 2: a site description including site characteristics and the context of the surrounding area;
- Section 3: a description of the proposed development and details of relevant site history; and
- Section 4: an assessment of the proposal against the relevant statutory provisions and guidelines

2.0 THE SITE

2.1 Site and Surrounding Area Description

The subject site area comprises Lot 2 DP1212081, located within the Hay Shire local government area. The site is approximately 42,055m^2 in area and is relatively flat in nature. The site currently supports agricultural production activities. The site is located in the Hay Shire Council local government area (LGA).

The subject site has frontages of approximately 200m on Moama Street and 240m on University Road. The site is currently accessed via University Road. Moama Street (which forms part of the Sturt Highway) has a speed limit of 60kmph, and University Road has a speed limit of 80kmph.

Please refer to aerial view in Figure 1 below as well as street view photography in Figure 2.

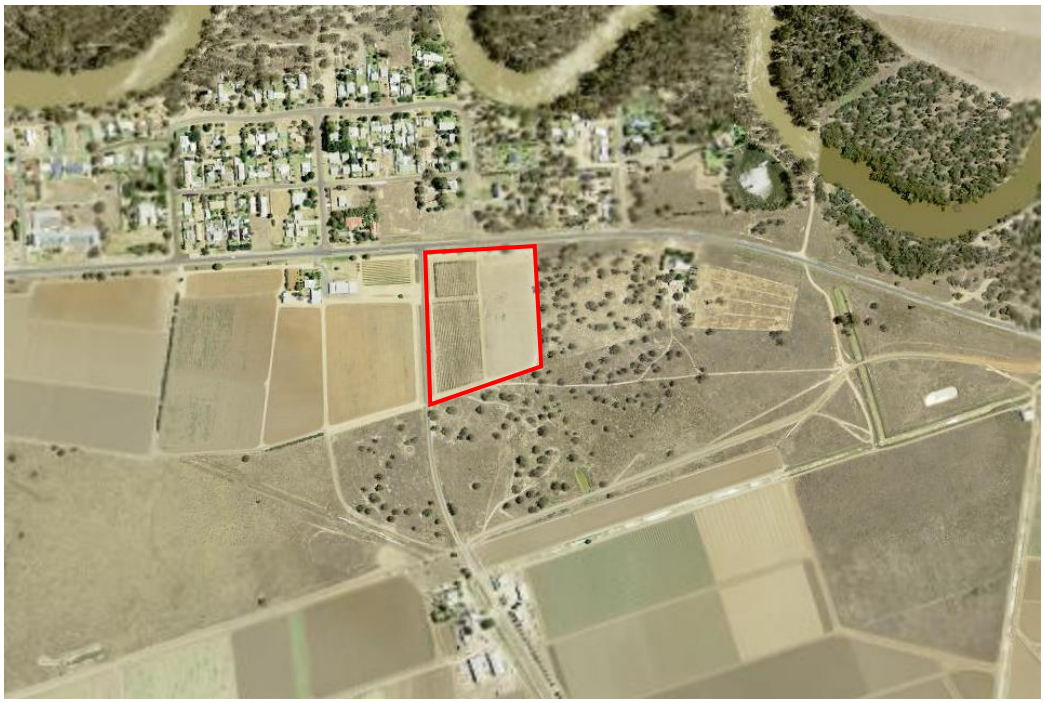

Figure 1: Aerial View (Source: SIX Maps)

Figure 2: Site appearance from corner of Moama St (Sturt Highway) and University Road (Source: Google)

Figure 3: Site appearance from corner of Moama St (Sturt Highway) and University Road (Source: Google)

2.2 Services and Utilities

The subject site is adjacent to an estate to the north and the following services and utilities are available either along the site frontage or within proximity to the site:

- Telecommunications;
- Water; and
- Electricity

2.3 Existing Site Zoning

The site is zoned RU1 – Primary Production (under the Hay Local Environmental Plan 2011). The Land Use Table under the Hay Local Environmental Plan 2011 for RU1 zone is as below:

1 Objectives of zone

- To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.
- To encourage diversity in primary industry enterprises and systems appropriate for the area.
- To minimise the fragmentation and alienation of resource lands.
- To minimise conflict between land uses within this zone and land uses within adjoining zones.

2 Permitted without consent

Freight transport facility means a facility used principally for the bulk handling of goods for transport by road, rail, air, or sea, including any facility for the loading and unloading of vehicles, aircraft, vessels, or containers used to transport those goods and for the parking, holding, servicing or repair of those vehicles, aircraft, or vessels or for the engines or carriages involved.

3 Permitted with consent

Air transport facilities; Airstrips; Animal boarding or training establishments; Aquaculture; Bed and breakfast accommodation; Boat launching ramps; Boat sheds; Building identification signs; Business identification signs; Cellar door premises; Cemeteries; Community facilities; Correctional centres; Depots; Dual occupancies (attached); Dwelling houses; Eco-tourist facilities; Environmental facilities; Extractive industries; Farm buildings; Farm stay accommodation; Forestry; Freight transport facilities; Helipads; Home businesses; Home industries; Home occupations (sex services); Industrial training facilities; Information and education facilities; Intensive livestock agriculture; Intensive plant agriculture; Jetties; Landscaping material supplies; Open cut mining; Plant nurseries;

Recreation areas; Recreation facilities (major); Recreation facilities (outdoor); Roadside stalls; Rural industries; Rural workers' dwellings; Veterinary hospitals; Water recreation structures; Water supply systems

4 Prohibited

Any development not specified in item 2 or 3

Refer to Figure below for an extract of the relevant zone map in relation to the site.

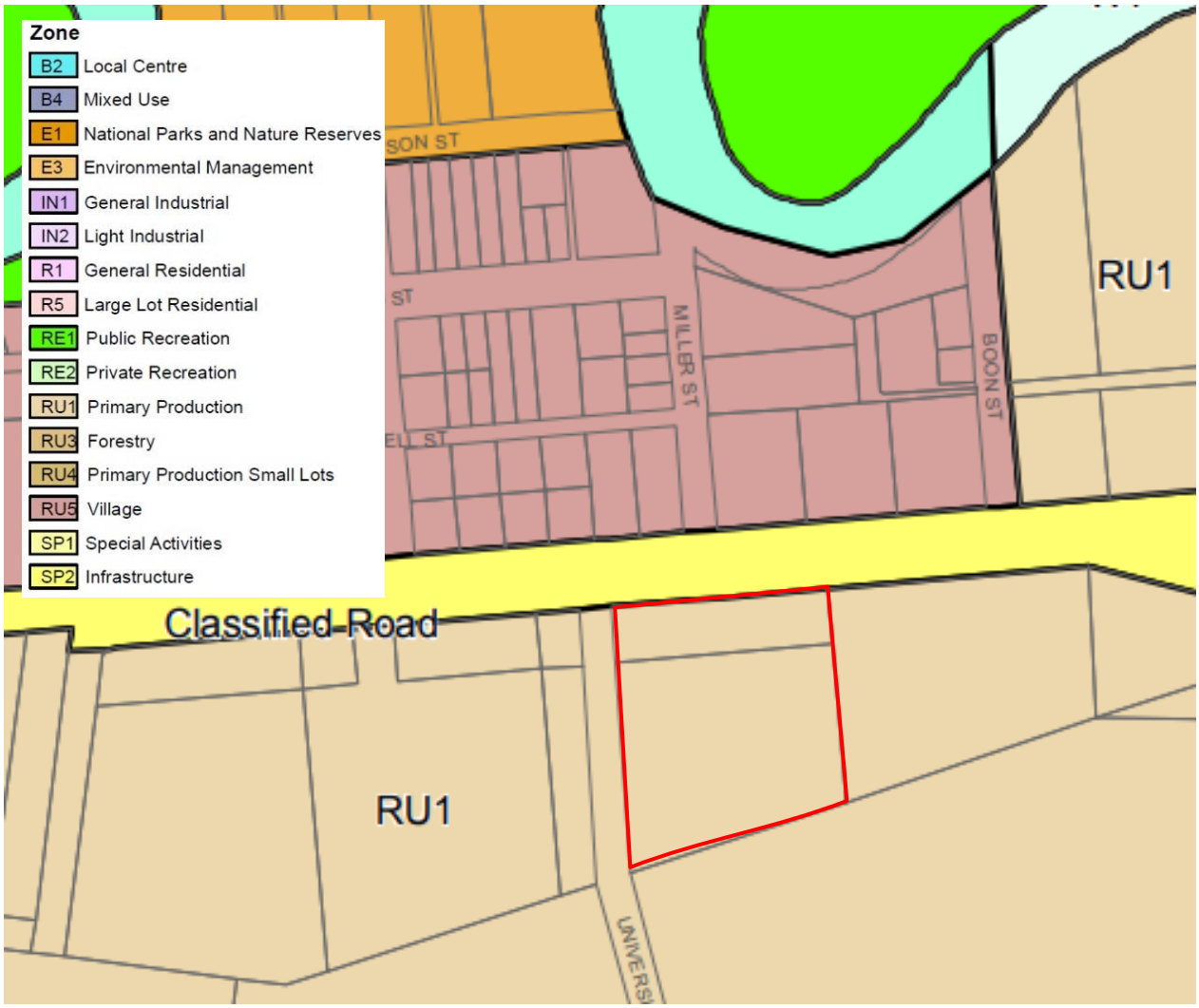

Figure 4: Zone map extract (source: Hay LEP 2011)

2.4 Pre-Gateway Determination Comments

Pre-gateway determination comments have been sought from both the Department of Planning and Environment (DPE) and the Transport for NSW (TfNSW) by the council. The following sections provides a summary of the comments received and the applicant responses.

2.4.1 Department of Planning and Environment – 31 May 2023

The council received preliminary comments from the Department of Planning and Environment (DPE) via email on 31 May 2023 with regards to this Planning Proposal. A response against the pre-referral comments is provided in Table 1 below.

Table 1: Response against Pre-Gateway Comments from the DPE – 31 May 2023

Comment	Response
• *Noting the Hay Structure Plan identifies the subject land within a broader precinct for future employment lands, it would be useful for the planning proposal to include comments about why it is not proposing to rezone the site to E1 General Industrial to align with the Structure Plan. Ideally, it would be good to have the site rezoned to be consistent with the Structure Plan. An APU would also be satisfactory, if it is the intention of Council to rezone the identified precinct later. However, if Council is relying on developer-led rezonings for individual lots, then it may not reach the intended outcome of the Structure Plan. Our preferred approach would be to align the zoning and the use together as a spot rezoning. At DA stage, the use will still need to be consistent with the objectives of the zone, which is difficult to achieve with an APU.*	A meeting was held in June 2023 between TFA Project Group, Hay Shire Council, and the NSW Department of Planning to discuss these pre-gateway comments in further detail and determine the preferred approach from the council and the department for this Planning Proposal. It is understood the council currently have funding to carry out the rezoning for the future housing precinct of the Structure Plan with further funding still required to carry out the rezoning for the future general industrial precinct of the Structure Plan. Thereby, it is considered that the intention of the council is to rezone the identified future industrial precinct, that the subject land is located within, at a later stage. Given the uncertain timeframe for the council to rezone the future industrial precinct, it is considered that the most appropriate approach would be a proposed amendment to Schedule 1 of the Hay LEP 2011. This would allow for the intended 'service station' (unmanned truck refuelling facility) use to be permitted over the individual lot under an LEP amendment to Schedule 1 instead of the entire site being rezoned for E1 general industrial land and subsequently being surrounded by rural / agricultural zoned land prior to the rezone for the future general industrial precinct by the council once funding has been obtained. It is further noted the council do not have preference with either the APU or spot rezoning approach for this Planning Proposal when discussed during the meeting.
• *The planning proposal provides a detailed assessment against the Riverina Murray Regional Plan 2036 however, it was superseded in January 2023 by the Riverina Murray Regional Plan 2041. The planning proposal will need to be updated to include an assessment against the current regional plan. Objectives 14 and 18 of the RMRP 2041 are particularly relevant to this proposal.*	A detailed assessment against Riverina Murray Regional Plan 2041 has been provided in Section 4.3.2 of this Planning Proposal report.
• *The s9.1 Direction assessment needs to be updated with the correct Direction numbers (they were changed on 20 February 2023).*	Noted. The s9.1 Direction assessment has been updated with the correct Direction numbers (changed 20 February 2023) in Section 4.3.2 of this Planning Proposal report.
• *The planning proposal should be updated to include greater consideration of consistency with s9.1 Direction 1.4 Site Specific Provisions as it applies to additional permitted use provisions.*	An assessment against s9.1 Direction 1.4 Site Specific Provisions has been provided in Table 6, Section 4.3.2 of this Planning Proposal report.
• *The planning proposal mentions the subject land is identified as 'groundwater vulnerable.' It should provide further explanation (incl mapping and cl 6.9 of the LEP) relevant to this issue.*	An assessment against groundwater vulnerable land has been included in Section 4.3.2 of this Planning Proposal report.
• *The planning proposal should be updated to include an assessment of bushfire prone land as it is affected by bushfire mapping and would be inconsistent with s9.1 Direction 4.3 Planning for Bushfire Protection.*	An assessment against bushfire prone land has been carried out in Section 4.3.2 of this Planning Proposal report.

Comment	Response
• *Part of the subject area is identified to contain terrestrial biodiversity, despite the site being predominantly cleared land for agricultural use. The mapping of terrestrial biodiversity should be addressed in the planning proposal to justify the appropriateness of development.*	While the site has been predominantly cleared land for agricultural use, the terrestrial biodiversity mapping has been addressed in Section 4.3.2 of this Planning Proposal report.
• *A preliminary contamination assessment should be completed as part of the planning proposal. The assessment should include consideration of State Environmental Planning Policy (Resilience and Hazards) 2021 – Chapter 4 Remediation of Land and s9.1 Direction 4.4 Remediation of Contaminated Land. While we don't expect major issues to arise from the development, it is a requirement for the technical study to be completed as part of the planning proposal. Any issues identified by the technical study may be addressed at DA stage.*	A preliminary site investigation (PSI) has been carried out over the subject site by McMahon in to determine the status of any contamination. The results of the PSI found that the identified potential contamination sources are assessed to be of low significance in terms of risk to current and future site users and the site is suitable for the proposed development. For further details, refer to the PSI report in **Appendix B**.

2.4.2 Transport for NSW – 4 July 2023

The council received preliminary comments from the Transport for NSW (TfNSW) via email on 4 July 2023 with regards to the Planning Proposal. A response against the pre-referral comments is provided in Table 2 below.

Table 2: Response against Pre-Gateway Comments from TfNSW – 4 July 2023

Comment	Response
• *The subject site is located on the south eastern corner of the intersection of University Road and Moama Street. Moama Street forms part of the Sturt Highway, which is a classified "state" road. The frontage to the Sturt Highway is located within a 60 km/h speed zone;*	Noted.
• *A planning proposal report prepared by TfA Project Group dated March 2023 has been submitted to Council for comment;*	This Planning Proposal report will supersede the previous report dated March 2023 (revision C) submitted to council for comment.
• *The proposal wishes to make a "service station" as one of the permissible uses on the site – through an additional permitted use within Schedule 1. The site is currently zoned RU1 – Primary Production;*	No change is proposed to the purpose of this planning proposal to make a "service station" permitted with consent under the additional permitted use provisions of Schedule 1.
• *As access is available to the local road network, TfNSW will require that the access driveway to the site be to University Road. Access to Moama Street will be denied. This is consistent with Clause 2.119 of State Environmental Planning Policy (Transport and Infrastructure) 2021;*	Access is proposed via new entry only and exit only crossover points on University Road being the local road. No access is proposed to Moama Street (the Sturt Highway).
• *Any existing driveway to the subject site from the Sturt Highway will need to be removed and the road reserve reinstated to match the surrounding roadside landform in accordance with Council requirements as part of a future development application;*	The subject site does not include any existing or new access to Moama Street (the Sturt Highway). Access is proposed to University Road being the local road.
• *TfNSW will expect supporting documents to accompany any subsequent development application,*	Noted.

Comment	Response
such as a Statement of Environmental Effects (SEE) and a Traffic Impact Assessment Report (TIAR).	

2.4.3 Department of Planning and Environment – 27 October 2023

The council received additional preliminary comments from Department of Planning and Environment (DPE) via email on 27 October 2023 with regards to the amended Planning Proposal. A response against the additional pre-referral comments is provided in Table 3 below.

Table 3: Response against additional Pre-Gateway Comments from the DPE – 27 October 2023

Comment	Response
• *The planning proposal should be updated to address s9.1 Direction 9.1 Rural Zones to justify industrial use (and future rezoning) at the site. This can be addressed by reference to the Hay Structure Plan and its identification of this site for industrial use.*	This amended Planning Proposal has provided an updated response to s9.1 Direction 9.1 Rural Zones which provides further justification on the industrial use (and future rezoning) at the site. It noted the Hay Structure Plan has been endorsed by the council and identified the site to be rezoned for future industrial use. For further details, refer to Section 4.3 in this report.
• *The Project Timeline should be updated. Please use the attached LEP Making Guideline (August 2023) as the benchmark for the timeframes associated with each milestone. Please be advised that exhibitions must either end by Friday 15 December 2023 or run until at least Friday 12 January. This means that the final date to commence an exhibition in order to complete before Christmas is Friday 17 November 2023, while the final pre-Christmas starting date for any exhibition is Thursday 14 December 2023. Any exhibitions that span the Christmas period (25 Dec – 5 Jan) must run for at least seven weeks for standard planning proposals. If Council elects to exhibit a planning proposal over the Christmas period, Council will be required to manage exhibition. New exhibitions can commence in the new year from 11 January 2024.*	This amended Planning Proposal has been updated to reference the benchmarks for the timeframes associated with each milestone. For further details, refer to Section 4.6 in this report.
• *The site is referenced in the Hay and Maude Flood Study (June 2023) as being impacted by the 1% AEP event and Extreme flood.*	It is acknowledged the site is identified on flood prone land as identified on council's Hay and Maude Flood Study (June 2023) and bushfire prone land as identified on council's mapping.
• *The planning proposal seeks to place a potentially hazardous industry (fuel storage) on flood prone land. Therefore, the planning proposal should be updated to address the appropriateness of the proposed use and further consider the flood risk identified in the Hay and Maude Flood Study by addressing:* o *Updated Section 9.1 Ministerial Direction - 4.1 Flooding - for planning proposals that create, remove or alter a zone or a provision that affects flood prone land.*	It is acknowledged the site is identified to be partially located over flood prone land as identified on council's Hay and Maude Flood Study (June 2023) and bushfire prone land as identified on council's mapping. With regards to placing a 'potentially hazardous industry' on flood prone land and bushfire prone land, it is noted under Section 7.1 (page 16) of the former *Applying SEPP 33 Guideline* (now Resilience and Hazards SEPP) states that "If combustible liquids of class C1 are present on site and are stored in a separate bund or within a storage area where there are no flammable materials stored they are not

Comment	Response
○ *Planning Circular PS21-006 – Considering flooding in land use planning: guidance and statutory requirements.* ○ *Considering flooding in land use planning guideline (2021). This guideline is triggered under the updated local planning direction.*	considered to be potentially hazardous." This is further discussed in Section 4.3.2 of this report. It is further noted that the proposed development will be used for unmanned purposes. The fuel tank and fuel equipment will be appropriately designed to ensure flood immunity and minimise risk to life and property. Any building floor levels for ablutions block would be any 1% AEP event. It is acknowledged that any detailed flood and/or bushfire assessment studies can be provided as part of the future DA lodgement package for a more-refined assessment.
• *We also recommend early consultation is undertaken with the following agencies:* ○ *TfNSW (included)* ○ *BCD re. flooding* ○ *RFS* ○ *DPI Agriculture* ○ *NRAR re. groundwater*	To date the proponent has received early consultation comments from the DPE and TfNSW on 31 May 2023 and 4 July 2023 respectfully with responses from the proponent provided in this section above and amendments to the report incorporated within this amended Planning Proposal report. It is understood the additional comments from the DPE now suggest the proponent should carry out further early consultation with additional agencies. It is noted the proponent has previously received council endorsement to proceed with the Gateway Determination stage and provided the amended Planning Proposal with supporting PSI study on 20 September 2023. In the interest of avoiding further delays, appreciating the time it has taken from the beginning of this Planning Proposal from April 2021 up until this point, the preference of the proponent is to proceed with the formal lodgement and carry out Gateway Determination acknowledging these additional agencies will be required to provide their comments and assessment responses during the referral period under the Gateway Determination stage.
• *Some minor administrative comments you may also wish to consider when updating the planning proposal:* ○ *'A guide to Preparing Local Environmental Plans and a Guide to Preparing Planning Proposals' are superseded versions of the current guideline attached.*	Noted. This reference has now been updated throughout this report.
○ *SEPP 33 has been repealed and replaced by the Resilience and Hazards SEPP.*	Noted. This reference has now been updated throughout this report where applicable. It is understood the NSW Government prepared a guideline titled *'Applying SEPP 33'* (Jan 2011) for Hazardous and Offensive Development. The guideline referenced the formerly known SEPP 33 (now Resilience and Hazards SEPP); however, it is acknowledged this guideline can be generally applied to Hazardous and Offensive Development under the replaced Resilience and Hazards SEPP.

Comment	Response
○ *The planning proposal claims the development footprint is >750m from any bushfire hazard. This should be amended as part of the site is bushfire prone.*	Noted. This response has been updated in Section 4.3.2 of this report.
○ *References throughout the PP to the 'draft LSPS' and 'draft Structure Plan' should be updated, noting that the LSPS and the Structure Plan have been adopted by Council.*	Noted. This reference has now been updated throughout this report.

3.0 PROPOSED DEVELOPMENT

3.1 Description of the Proposal

The overall intent is for the eventual development of the subject site for a service station (unmanned refuelling facility). The facility will operate 24 hours per day, seven days per week and payment of diesel fuel will be made via swipe card technology. The facility will be for the refuelling of heavy vehicles only and, as a result, only diesel fuel (combustible and non-flammable) and the related AdBlue product (non-combustible / non-flammable) will be available.

A conceptual site layout of the proposed unmanned refuelling facility is included in **Appendix A**. The unmanned truck refuelling facility would obtain access from University Road off Moama Street (Sturt Highway).

Generally, the facility will involve the following main features:

- 1 x 92kL above-ground, self-bunded tank for the storage of diesel (combustible and non-flammable) and AdBlue (non-combustible / non-flammable);
    - Diesel tank 85,000L;
    - AdBlue tank 7,000L;
        - AdBlue is a diesel exhaust fluid used in modern trucks to reduce oxides / nitrogen levels;
- Ablution block comprising of one toilet and shower facilities which will connect to the proposed onsite sewerage treatment system and dispersed to 40m^2 dispersal area for treated water;
- Fuel dispensing area allowing for up to two heavy vehicles to refuel at any one time;
- Fuel dispensing area to be located on a concrete hardstand rollover bunded area;
- Fuel dispensing area to be drained to an enclosed oily water treatment separator;
- Site access and on-site manoeuvrability will cater for B-Triples being the largest anticipated heavy vehicle accessing the site;
- General on-site manoeuvring areas will consist of the part-existing / part-new all weathered gravel paths and new concrete bunded area; and
- Erection of one 6m high pylon sign close to the University Road frontage and entry / exit signage close to the access point.

The proposed development is essentially a response to the perceived demand for these services within this locality and is considered the type of use which can integrate effectively within the rural landscape, particularly one located on a major highway.

3.2 Background

TFA Project Group act on behalf of IOR Pty Ltd with respect to the proposed development to erect a new service station (unmanned truck refuelling facility). The subject site is considered to be a prime location for a truck refuelling facility use owing to its proximity to the Sturt Highway (Moama Street) and rural production areas.

The applicant provides refuelling services to many heavy vehicles and related agricultural production vehicles and machinery which support the local agricultural industry.

3.3 Local Strategic Planning Statement

The Local Strategic Planning Statement (LSPS) was prepared by the Hay Shire Council in 2020 and sets the framework for Hay Shire's economic, social, and environmental land use needs over the next 20 years. The LSPS also gives effect to the Riverina Murray Regional Plan 2036, implementing the directions and actions at a local level. It is noted the Riverina Murray Regional Plan 2036 was superseded in January 2023 by the Riverina Murray Regional Plan 2041.

The LSPS has been developed in consultation with the local community and Department of Planning, Industry

and Environment. It has identified certain areas within the Hay Shire LGA area, typically those in rural-zoned areas, that could be potentially rezoned for residential or industrial purposes.

3.4 Hay Structure Plan

The Hay Structure Plan (the Structure Plan) provides further detail on the manner in which the areas identified in the LSPS could be rezoned.

The subject site is located within the area of the Structure Plan referred to as South Hay. The Structure Plan identifies no supply of industrial-zoned land in South Hay and recommends certain areas be rezoned for industrial purposes.

Key aspects of the Structure Plan as they relate to the subject site are as follows:

- Proposed Land Zoning Map (Figure 44 of Structure Plan – copy below) showing the site within the proposed IN1 zone.

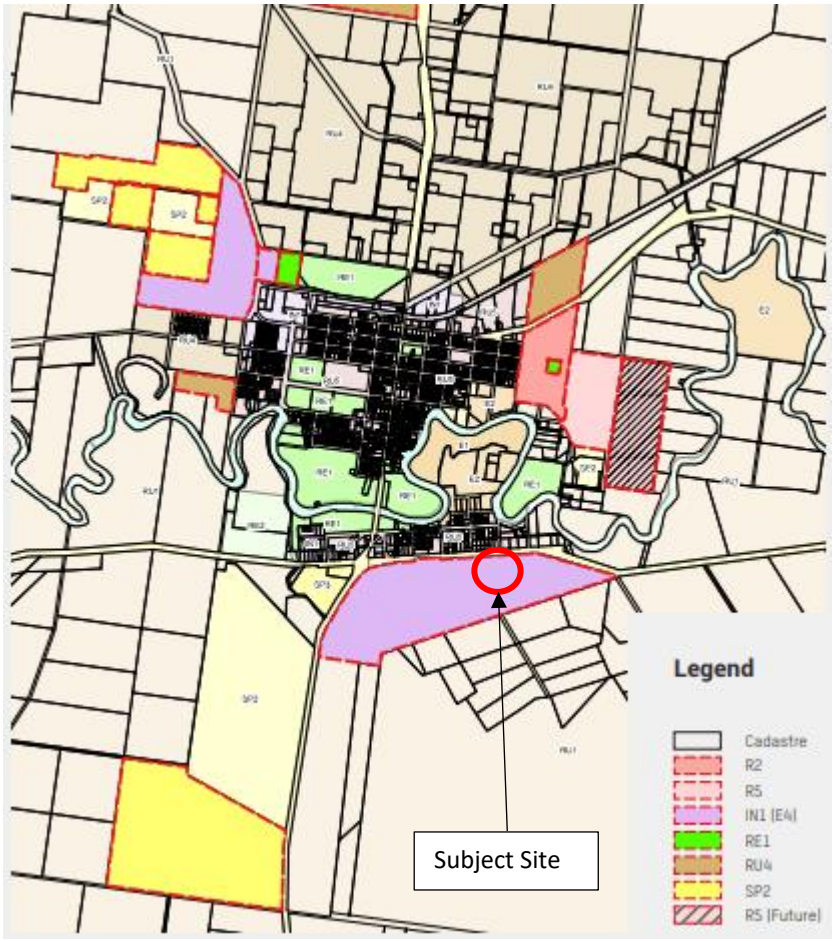

Figure 5: Proposed Zone map extract (source: Hay Structure Plan, 2022)

- Proposed Staging Plan (Figure 45 of Structure Plan – copy below) showing the site within ''Stage A'' of the plan (i.e. Envisaged to occur first).

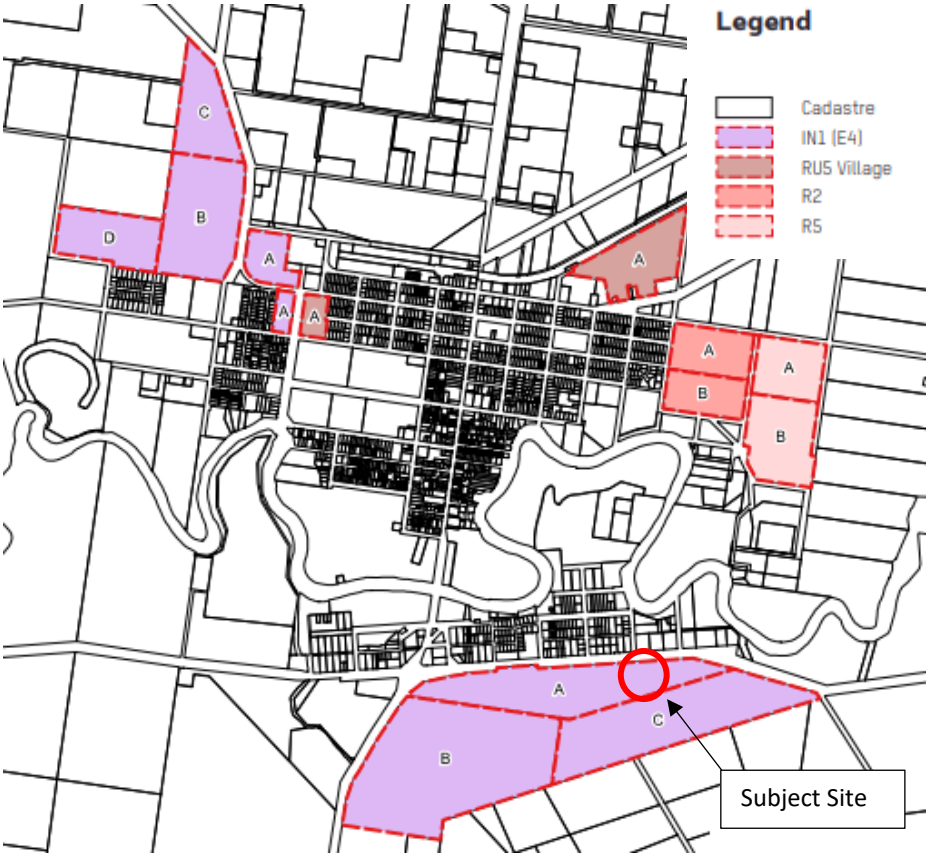

Figure 6: Proposed Staging Plan extract (source: Hay Structure Plan, 2022)

- Amended Terrestrial Biodiversity Map (Figure 46 of Structure Plan – copy below) showing the development footprint is wholly outside of any mapped area for Terrestrial Biodiversity. When considering part of the overall site within the terrestrial biodiversity area, it is noted that the site contains no significant vegetation as identified on the State Vegetation Map (Figure 22 of Structure Plan – copy overleaf).

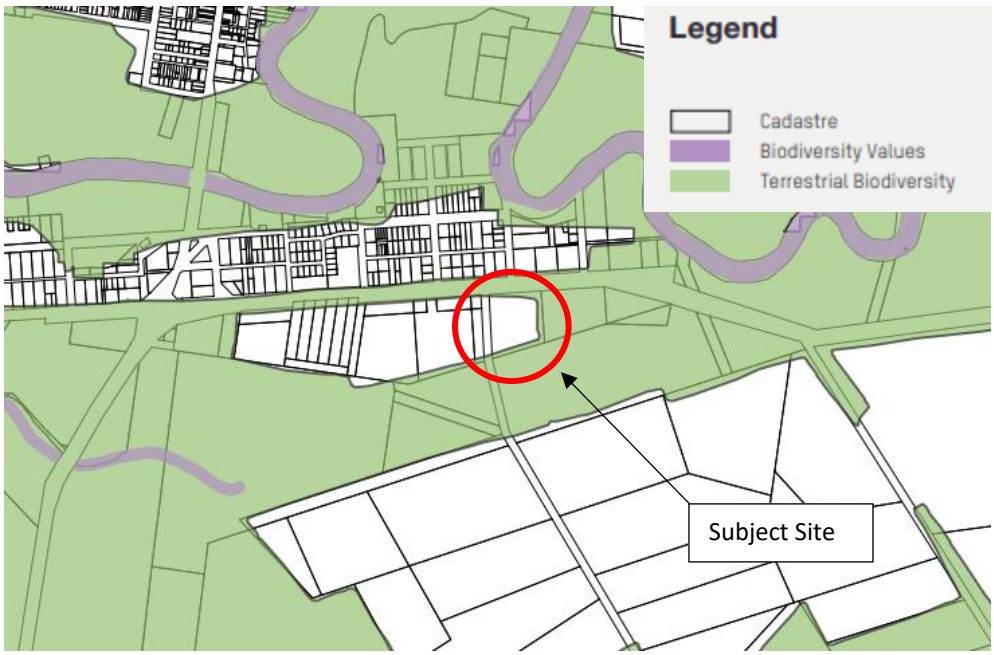

Figure 7: Amended Terrestrial Biodiversity map extract (source: Hay Structure Plan, 2022)

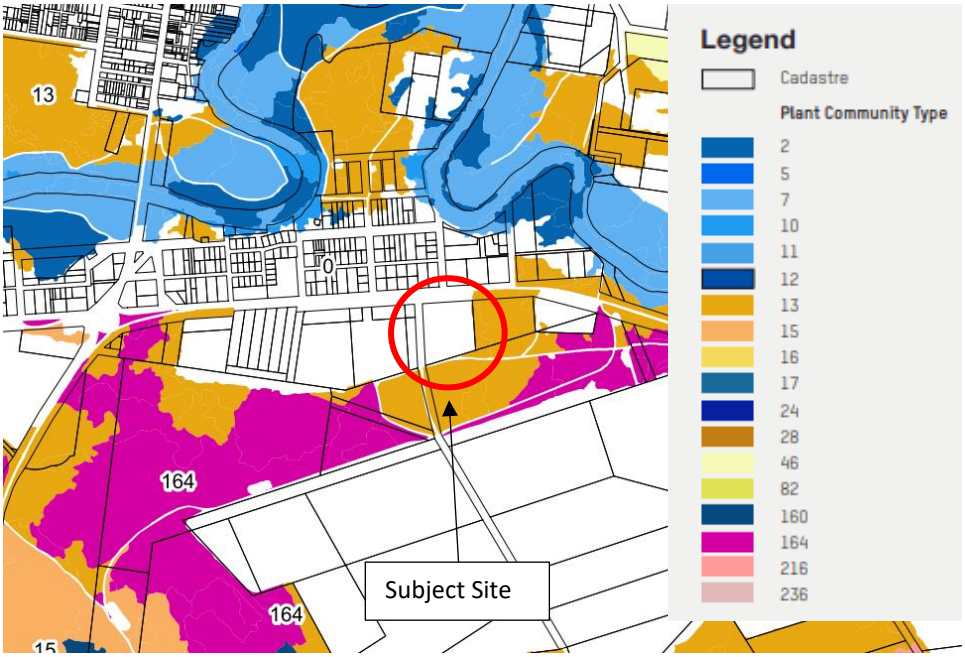

Figure 8: State vegetation map extract (source: Hay Structure Plan, 2022)

- Waterway Map (Figure 25 of Structure Plan – copy below) showing the site is partially within the mapped area for groundwater vulnerability.

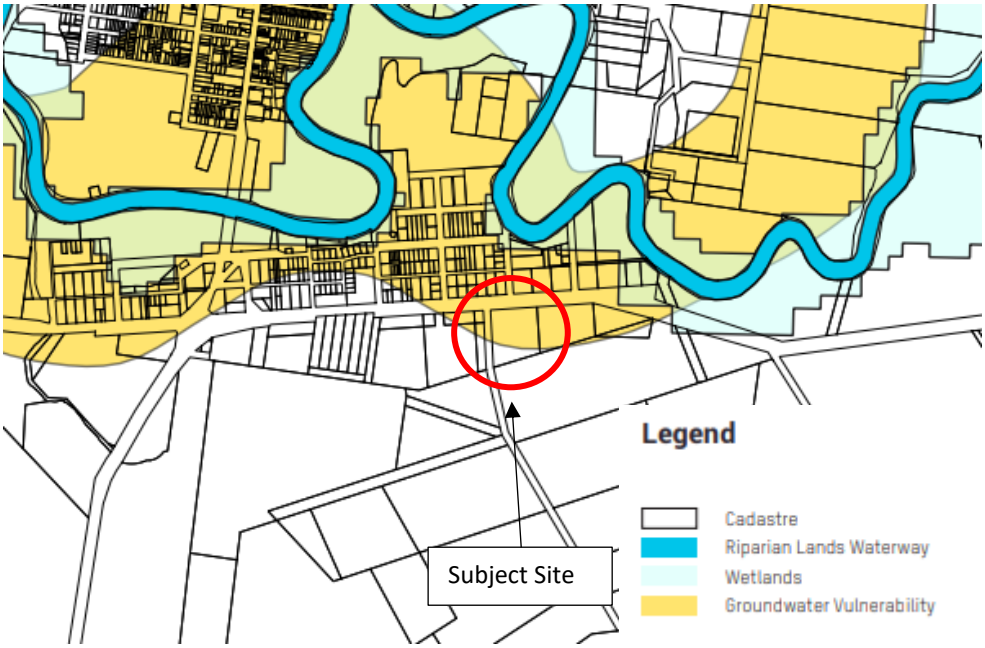

Figure 9: Waterway area map extract (source: Hay Structure Plan, 2022)

- Bushfire Prone Land Map (Figure 26 of Structure Plan – copy below) showing the development footprint is wholly outside of the mapped area for bushfire prone land.

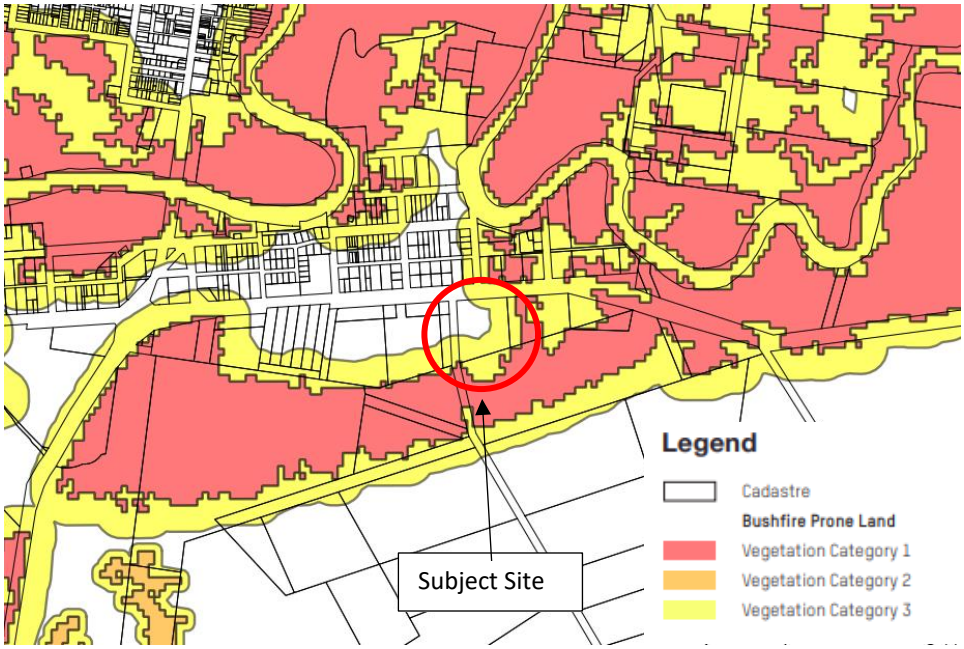

Figure 10: Bushfire prone area map extract (source: Hay Structure Plan, 2022)

It is understood both the LSPS and Structure Plan now form the basis of council's Planning Proposal with the Department to finalise the re-zoning of the relevant sites.

4.0 STATUTORY PARTS OF A PLANNING PROPOSAL

The following section of this report is consistent with section 3.33 of the EP&A Act and includes those mandatory provisions the planning proposal must include.

4.1 Part 1 – Objectives of the proposed instrument

The objective of this planning proposal is to enable a 'service station' the subject site. This is via an amendment to the Hay Local Environmental Plan 2011 (the LEP) and more specifically, via enabling clause to Schedule 1 of the LEP.

4.2 Part 2 – Explanation of the provisions

4.2.1 Schedule 1 Amendment

The proposed outcome will be achieved by inserting the following into Schedule 1 'Additional permitted uses' of the Hay Local Environmental Plan 2011:

SCHEDULE 1 ADDITIONAL PERMITTED USES	
Item 1	**Use of certain land at University Road, Hay** (1) This clause applies to land at 310 Moama Street, Hay South, being Lot 2 DP1212081 (2) Development for the purposes of 'service station' is permitted with development consent.

4.2.2 LEP Use Definitions

The use referred above is defined under the LEP as follows:

> *"**service station** means a building or place used for the sale by retail of fuels and lubricants for motor vehicles, whether or not the building or place is also used for any one or more of the following:*
>
> *(a) The ancillary sale by retail of spare parts and accessories for motor vehicles,*
>
> *(b) The cleaning of motor vehicles,*
>
> *(c) Installation of accessories,*
>
> *(d) Inspecting, repairing, and servicing of motor vehicles (other than body building, panel beating, spray painting, or chassis restoration),*
>
> *(e) The ancillary retail selling or hiring of general merchandise or services or both."*

4.2.3 Amending The Additional Permitted Uses Map

Prepare an additional map within the CL1 mapping series to apply the additional permitted uses to the subject site.

4.3 Part 3 – Justification for the Planning Proposal

The following section of the report provides justification for the proposal in line with the *A Guide to Preparing Planning Proposals* document.

In summary, the proposed service station (unmanned truck refuelling facility) is considered a logical form of development to be located over rural production land which is located over a site with frontage to a major highway. Further, there is an identified shortage of similar facilities within the immediate surrounding area and, also a lack of refuelling capability (partly heavy vehicle) along the eastbound side along the Sturt Highway within the vicinity.

4.3.1 Section A – Need for the Planning Proposal

Q1. Is the planning proposal a result of an endorsed local strategic planning statement, strategic study, or report?

Response – The Planning Proposal is a direct result of the council's endorsed LSPS and Structure Plan. These policy instruments recommend the re-zoning of the subject site to IN1 industrial zone purposes.

Q2. Is the planning proposal the best means of achieving the objectives or intended outcomes, or is there a better way?

Response – A clause to enable the additional use on the land by way of proposed LEP amendment to Schedule 1 is considered the most appropriate way to achieve the objective / intended outcome. This is in part due to the certainty the applicant has over the proposed use within the site (thereby not seeking broad flexibility with a whole-of-site rezoning).

The proposed unmanned refuelling facility does not have the typical characteristics of a 'service station' development. However, under the majority of LEP's this type of facility will typically be considered to fall within a 'service station' use, due mainly to the absence of a more appropriate definition.

In this instance, a 'service station' use is prohibited under the RU1 Rural Zone of the Hay LEP 2011. A planning proposal is therefore considered the most appropriate means of establishing this particular type of 'service station' (unmanned truck refuelling facility) over the subject land.

Notwithstanding above, it is understood the council currently have funding to carry out the rezoning for the future housing precinct of the Structure Plan with further funding still required to carry out the rezoning for the future general industrial precinct of the Structure Plan. Thereby, it is considered that the intention of the council is to rezone the identified future industrial precinct, that the subject land is located within, at a later stage.

Given the uncertain timeframe for the council to rezone the future industrial precinct, it is further considered that the most appropriate approach would be a proposed amendment to Schedule 1 of the Hay LEP 2011. This would allow for the intended 'service station' (unmanned truck refuelling facility) use to be permitted over the individual lot under an LEP amendment to Schedule 1 instead of the entire site being rezoned for E1 general industrial land and subsequently being surrounded by rural / agricultural zoned land prior to the rezone for the future general industrial precinct by the council once funding has been obtained.

4.3.2 Section B – Relationship to Strategic Planning Framework

Q3. Will the planning proposal give effect to the objectives and actions of the applicable regional, or district plan or strategy (including any exhibited draft plans or strategies)?

Response – In addition to the above responses on the LSPS and Structure Plan, the proposal has been assessed against the Riverina Murray Regional Plan 2041. Comments in relation to the proposal and any impact on the policy intent of the relevant plan are discussed under separate heading below.

<u>Riverina Murray Regional Plan 2041</u>

The Riverina Murray Regional Plan 2041 (the RMRP) is a regional plan prepared by the State government which establishes a framework to grow the region's cities and local centres, supports the protection of high-value environmental assets and makes developing a strong, diverse, and competitive economy central to building prosperity and resilience in the region.

Figure 11 below provides an extract from the RMRP map showing the approximate location of the subject site within.

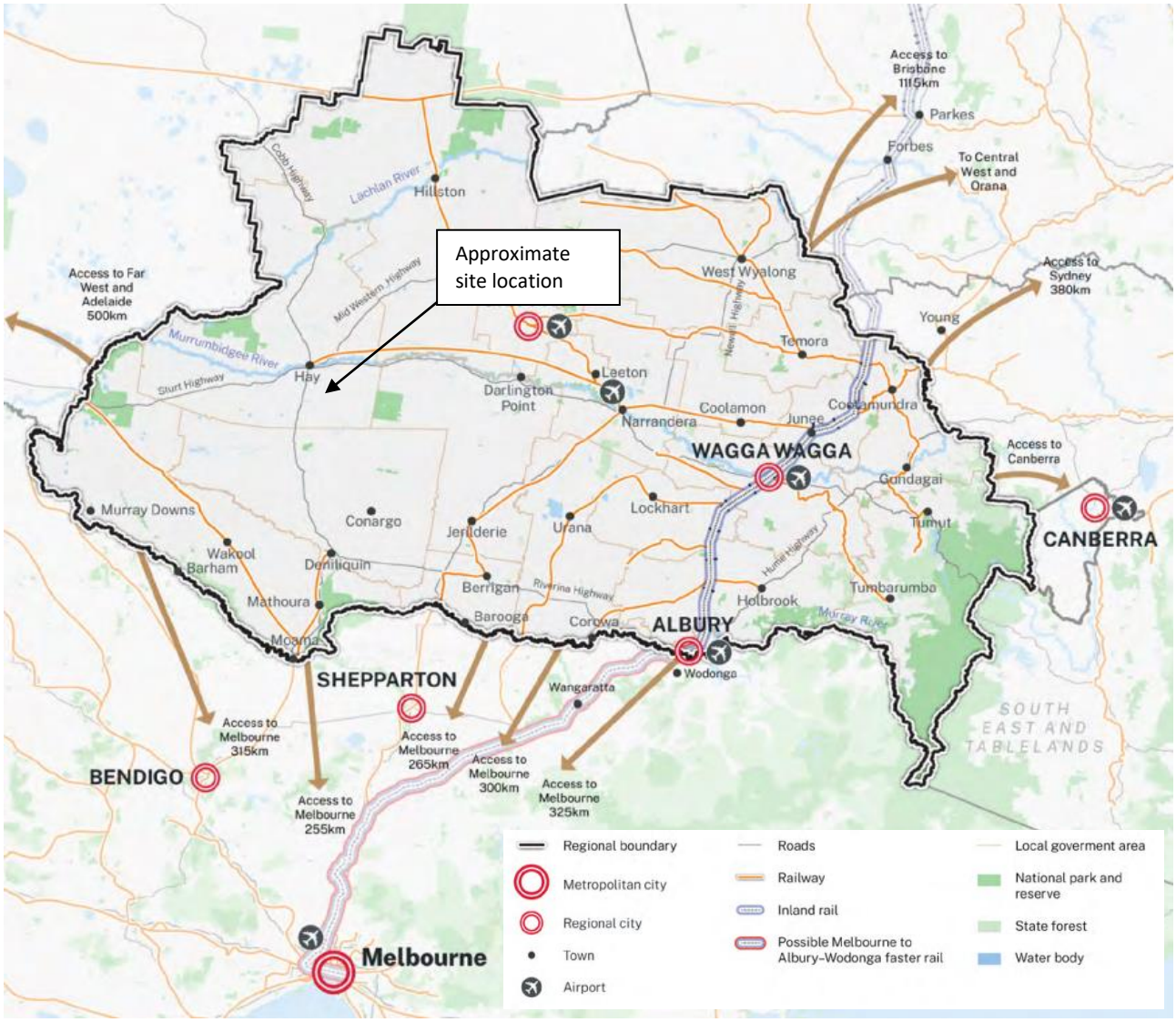

Figure 11: Riverina Murray Region context extract (source: Dept Planning & Environment)

The proposed development is consistent with the objectives and strategies of the Regional Plan. In particular the proposal will assist in achieving the relevant actions identified for the Riverina Murray Regional Plan 2041 as outlined in the table below.

Table 4: Assessment of the proposal against the Riverina Murray Regional Plan 2041

OBJECTIVE AND STRATEGY	CONSISTENCY
PART 3 ECONOMY	
Objective 14: Protecting and promoting industrial and manufacturing land	
Strategy 14.1 *Local strategic planning statement will:* • *include an overview of the LGA's key industrial land areas, industries (including major employers) and location and significance of strategic assets (such as supply and distribution chain infrastructure, key freight routes, supporting services and natural attributes)*	The proposed development will provide economic benefits in the local area.

OBJECTIVE AND STRATEGY	CONSISTENCY
• *recognise trends and opportunities for industrial and/or employment land uses* • *commit to preparing or updating local strategies for industrial and/or employment land.*	
Strategy 14.2 *Strategic planning for existing employment lands and new opportunities will:* • *locate new industrial land in areas accessible to inter-regional networks or in areas that could allow rail transport, unencumbered by natural hazards or environmental constraints while accessible to businesses and communities* • *provide flexible and simplified planning controls that support the changing needs of industry, emerging industries and diversification, adaptation and innovation* • *provide for the supply of diverse industrial land to meet the changing demands of industry* • *encourage co-location and clustering of compatible industries to improve efficiencies and productivity, reduce land use conflict, maximise infrastructure investment and capitalise on supply networks* • *drive competitive advantage by leveraging strengths, assets and attributes while maintaining integrity of existing industrial precincts* • *investigate bespoke industrial precinct planning using targeted responses.*	The proposed development will be consistent with the future industrial zoning by supporting the region in the long-term. The proposed development for an unmanned truck refuelling facility will provide a direct fuelling service to the local and regional freight and transport networks. The proposal will support industrial employment and industrial land within the region by providing a refuelling service to heavy vehicles.
Strategy 14.3 *Strategic and statutory planning will protect industrial land from potential land use conflicts arising from inappropriate and incompatible surrounding land uses.*	The proposed use being a service station is considered to be a consistent use within the industrial zones. It is noted that the land subject to this planning proposal is identified as being within future industrial zoned land.
Objective 18: Integrate transport and land use planning	
Strategy 18.1 *Local strategic planning statements will:* • *overview strategic transport assets, including road, rail, air and freight* • *identify existing or potential strategic projects or policies to improve transport, including heavy vehicle or town bypasses* • *identify transport issues requiring further strategic investigation or funding.*	The proposal is considered to be consistent with the future intent of the site for industrial purposes under the Local Strategic Planning Statement (LSPS) adopted by Council which is currently undergoing Gateway Determination by the Department of Planning.
Strategy 18.2 *Strategic and statutory planning will realise land use planning and transport integration by:* • *identifying and activating employment lands near freight infrastructure, using planning controls that support supply chain oriented land uses and limit incompatible land uses* • *in consultation with Transport for NSW, identifying and investigating opportunities to reserve future*	The proposed development is appropriately located within proximity to a major road (Sturt Highway) being an unmanned truck refuelling facility that supports local and regional freight and transport networks.

OBJECTIVE AND STRATEGY	CONSISTENCY
heavy vehicle and town bypasses and associated road corridors • *ensuring development proposals for supply chain or logistics hub uses address urban amenity impacts, including the application of buffers where appropriate* • *addressing first mile and last mile freight limitations, including off-street loading docks, kerbside space, formal de-coupling sites, alternative last mile delivery vehicles, appropriate access for vehicles on local road networks and accommodating larger vehicle combinations* • *incorporating flexible planning controls to support new and emerging technology-driven land uses.*	
Strategy 18.3 *Strategic and statutory planning will strengthen connectivity and amenity in centres and across the region by:* • *planning and designing streets that prioritise walking, cycling and public transport as attractive transport choices, especially in brownfield and greenfield sites* • *establishing connected and accessible green walking and cycling networks supported by appropriate user facilities and integrated with public transport* • *balancing the needs of pedestrians and cyclists, and vehicle traffic on main streets and prioritising pedestrians in town centres* • *requiring major traffic-generating development proposals to demonstrate how the proposal will effectively integrate with existing walking, cycling and public transport networks, where appropriate* • *promoting redevelopment and higher densities within walking distance to town centres, public spaces and transport interchanges* • *ensuring land use planning creates opportunities for new and emerging transport technologies and services, such as autonomous and electric vehicles and on demand transport.*	The proposed development for an unmanned truck refuelling facility will provide a direct fuelling service to the local and regional freight and transport networks.
Strategy 18.4 *Strategic and statutory planning will protect supply chains, freight corridors and logistics facilities from future development impacts by identifying measures to mitigate associated noise and air emissions, encouraging off-road freight or connections between heavy vehicle routes that do not involve local roads, and identifying and maintaining buffers between freight infrastructure and incompatible land uses areas.*	The proposal is considered to be consistent with the future intent of the site for industrial purposes under the Local Strategic Planning Statement (LSPS) adopted by Council which is currently undergoing Gateway Determination by the Department of Planning.
Strategy 18.5 *Strategic and statutory planning will need to ensure development outcomes near the Inland Rail corridor or near the road/rail interfaces of Inland Rail do not undermine the function of the Inland Rail.*	The proposed development is not considered to undermine the function of the Inland Rail given the location of the proposal being within the Hay Shire in the Riverina area of southwest NSW.
Strategy 18.6 *Strategic and statutory planning for airport and aerodrome upgrades will adopt a precinct-based planning approach to complement the expanded or emerging role of the airports and*	While the proposed use is generally inconsistent with primary production zoned land, it is noted that the land subject to this planning proposal is identified as being within

OBJECTIVE AND STRATEGY	CONSISTENCY
aerodromes. This includes protection from encroachment of incompatible development by: • *managing and protecting associated land uses and airspace, including potential future operations* • *limiting the encroachment of incompatible development* • *avoiding development that penetrates the Obstacle Limitation Surface* • *identifying and activating employment lands in surrounding areas.*	future industrial zoned land under the Local Strategic Planning Statement and Structure Plan. The proposed development is an appropriate scale and intensity that will not prejudice the continuation and expansion of the airport and aerodrome upgrades within the Hay Shire.

Q4. Will the planning proposal give effect to a council's endorsed local strategic planning statement, or another endorsed local strategy or strategic plan?

Response – The proposal is consistent with the intended industrial zoning for the site, as captured under the LSPS and Structure Plan. An application for ''service station'' would be ''permitted with consent'' under the IN1 zone and generally in accordance with the objectives of that zone. Further, the development footprint is located outside of the amended terrestrial biodiversity map. When considering part of the overall site within the terrestrial biodiversity area, it is noted that the site contains no significant vegetation as identified on the State Vegetation Map. It is considered wholly consistent with all relevant provisions of the LSPS and Structure Plan.

Q5. Is the planning proposal consistent with applicable State Environmental Planning Policies?

Response – There are no existing or draft State Environmental Planning Policies (SEPPs) that prohibit or restrict the proposed development as outlined in this planning proposal. Those SEPPs that were considered and addressed as potentially relevant to the proposal are detailed in Table 5 below.

Table 5: SEPPs

SEPP	POLICY DIRECTION / PRINCIPAL AIMS	COMMENT ON RELEVANCE AT PLANNING PROPOSAL STAGE
SEPP – (Resilience and Hazards) 2021	• ***Hazardous and Offensive Development*** *– Chapter 3 of the Resilience and Hazards SEPP aims to ensure that in determining whether a development is a hazardous or offensive industry, any measures proposed to be employed to reduce the impact of the development are taken into account*	At this stage the planning proposal is for the purposes of amending the Hay Local Environmental Plan 2011 to enable an additional permitted use 'service station' (unmanned refuelling facility) over the site. Should the proponent be successful in amending the LEP for an additional permitted use, the next stage in the approval process would be to lodge a development application to obtain local development consent for the proposed service station (unmanned truck refuelling facility). The future unmanned truck refuelling facility DA will seek approval for one aboveground tank storing approximately 85,000L of diesel (a combustible / non-flammable liquid) and 7,000L AdBlue (a non-combustible / non-flammable liquid). A review of the former *'Applying SEPP33'* (Jan 2011) guideline (now Resilience and Hazards SEPP) document prepared by the State government provides the following key points: • Section 2.1 (page 3) of the guideline suggests that a hazardous storage

SEPP	POLICY DIRECTION / PRINCIPAL AIMS	COMMENT ON RELEVANCE AT PLANNING PROPOSAL STAGE
		establishment is included in the definition of 'potentially hazardous industry'. • Section 7.1 (page 16) of the guideline states that "If combustible liquids of class C1 are present on site and are stored in a separate bund or within a storage area where there are no flammable materials stored they are not considered to be potentially hazardous. If, however, they are stored with other flammable liquids, that is, class 3PGI, II or III, then they are to be treated as class 3PGIII, because under these circumstances they may contribute fuel to a fire." In this instance it is considered that Resilience and Hazards SEPP is not applicable as the proposed storage of diesel is not considered 'potentially hazardous'. The tank is manufactured to comply with Australian Standard AS1692 (Steel tanks for flammable and combustible liquids) and, once installed, will comply with Australian Standard AS1940 (The storage and handling of flammable and combustible liquids).
	• ***Remediation of Land*** *– Chapter 4 of the Resilience and Hazards SEPP aims to promote the remediation of contaminated land for the purpose of reducing the risk of harm to human health or any other aspect of the environment*	While the subject site does not have a history of being used as a fuel depot or service station, a preliminary site investigation has been carried out by McMahon in **Appendix B** to determine whether the premises has any concerns of contamination. The PSI report found that the site is suitable for use as an unmanned refuelling facility.
SEPP – (Industry and Employment) 2021	• ***Advertising and Signage*** *– Chapter 3 of the Industry and Employment SEPP aims to ensure that signage and advertising, particularly in road corridors, are appropriate to the location and setting of a proposed development*	This policy will need to be considered in the design and assessment of the future development application for the service station (unmanned refuelling facility) proposal.
SEPP (Transport and Infrastructure) 2021	• ***Infrastructure*** – Chapter *2 of the Transport and Infrastructure SEPP aims to facilitate the effective delivery of infrastructure throughout NSW. Namely, this chapter promotes the regulation and design of infrastructure provision and provides statutory considerations to be applied in the assessment of development application.*	In relation to utility services and whether the proposal will trigger the upgrade of any of these services, this is considered most appropriately assessed at development application stage. Consultation with TfNSW can be undertaken following a gateway determination as required. Any forthcoming application for development consent will demonstrate the site can be accessed safely and conveniently by the intended number and size of vehicles accessing the site with the support of a Traffic Impact Assessment Report (TIAR).

SEPP	POLICY DIRECTION / PRINCIPAL AIMS	COMMENT ON RELEVANCE AT PLANNING PROPOSAL STAGE
	• ***Traffic Generating Development*** – Section *2.121 of the Transport and Infrastructure SEPP applies to new or enlarged premises that comprises a size or scale in excess of the traffic generation thresholds outlined within schedule 3 of the SEPP. In accordance with Schedule 3, the proposed land use of 'service station' is identified as a relevant land use under this schedule*	It is understood TfNSW will expect supporting documents to accompany a future development application, such as a Statement of Environmental Effects (SEE) and a Traffic Impact Assessment Report (TIAR).
SEPP (Primary Production) 2021	• ***Primary Production and Rural Development*** – *Chapter 2 of the Primary Production SEPP aims to facilitate the orderly economic use and development of lands for primary production*	The proposal is seen as providing a supporting role to the rural production lands within the immediate vicinity rather than significantly impacting the viability of employment within the business zoned land. The size of the intended development is not considered of the type or scale which will significantly impact the surrounding areas generally. Notwithstanding above, the Local Strategic Planning Statement (LSPS) prepared and endorsed by the Hay Shire Council has identified the subject land as being within future industrial zoned land. Further, the proposed development for an unmanned refuelling facility is considered to be consistent with the relevant provisions within the LSPS. For details of the LSPS refer to section 4.3.2 above.

Q6 Is the planning proposal consistent with applicable Ministerial Directions (s.117 directions)?

Response – An assessment of relevant section 9.1(2) Directions against the planning proposal is provided in the Table 6 below.

Table 6: Relevant s.9.1(2) Ministerial Directions

MINISTERIAL DIRECTION	AIM/S OF DIRECTION	APPLICABILITY AND/OR COMMENT
FOCUS AREA 1: PLANNING SYSTEMS		
1.1 Implementation of Regional Plans	• To give legal effect to the vision, land use strategy, goals, directions, and actions contained in Regional Plans	The proposed request for an additional permitted use is considered to be generally consistent with the Riverina Murray Regional Plan 2041, particularly objective 14 & objective 18.
1.2 Development of Aboriginal Land Council land	• To provide for the consideration of development delivery plans prepared under chapter 3 of the State Environmental Planning Policy (Planning Systems) 2021 when planning proposals are prepared by a planning proposal authority	Not applicable to the site.

MINISTERIAL DIRECTION	AIM/S OF DIRECTION	APPLICABILITY AND/OR COMMENT
1.3 Approval and Referral Requirements	• To ensure that LEP provisions encourage the efficient and appropriate assessment of development	The proposal is not considered to compromise the intent of this objective.
1.4 Site Specific Provisions	• To discourage unnecessarily restrictive site-specific planning controls	This Planning Proposal seeks to amend Schedule 1 of the Hay LEP 2011 to allow 'service station' (unmanned truck refuelling facility) to be permitted over the subject land. A site-specific provision is considered the best approach to facilitate the proposed use as opposed to an individual spot rezoned lot being changed to industrial zoned land while surrounded by rural / agricultural land prior to the identified future industrial precinct of the Structure Plan being ultimately rezoned by the council at a later stage.
FOCUS AREA 1: PLANNING SYSTEMS – PLACE-BASED		
1.5 Parramatta Road Corridor Urban Transformation Strategy	• To facilitate development within the Parramatta Road Corridor that is consistent with the Parramatta to road Corridor Urban Transformation Strategy (November 2016) and the Parramatta Road Corridor Implementation Tool Kit • To provide a diversity of jobs and housing to meet the needs of a broad cross-section of the community • To guide the incremental transformation of the Parramatta Road Corridor in line with the delivery of necessary infrastructure	Not applicable to the site.
1.6 Implementation of North West Priority Growth Area Land Use and Infrastructure Implementation Plan	• To ensure development within the North West Priority Growth Area is consistent with the North West Priority Growth Area Land Use and Infrastructure Strategy (the Strategy)	Not applicable to the site.
1.7 Implementation of Greater Parramatta Priority Growth Area Interim Land Use and Infrastructure Implementation Plan	• To ensure development within the Greater Parramatta Priority Growth Area is consistent with the Greater Parramatta Priority Growth Area Interim Land Use and Infrastructure Implementation Plan dated July 2017 (the interim Plan)	Not applicable to the site.
1.8 Implementation of Wilton Priority Growth Area Interim Land Use and Infrastructure Implementation Plan	• To ensure development within the Wilton Priority Growth Area is consistent with the Wilton Interim Land Use and Infrastructure	Not applicable to the site.

MINISTERIAL DIRECTION	AIM/S OF DIRECTION	APPLICABILITY AND/OR COMMENT
	Implementation Plan and Background Analysis	
1.9 Implementation of Glenfield to Macarthur Urban Renewal Corridor	• To ensure development within the precincts between Glenfield and Macarthur is consistent with the plans for these precincts	Not applicable to the site.
1.10 Implementation of the Western Sydney Aerotropolis Plan	• To ensure development within the Western Sydney Aerotropolis ism consistent with the Western Sydney Aerotropolis Plan dated September 2020	Not applicable to the site.
1.11 Implementation of Bayside West Precincts 2036 Plan	• To ensure development within the Bayside West Precincts (Arncliffe, Banksia and Cooks Cove) is consistent with the Bayside West Precincts 2036 Plan (the Plan)	Not applicable to the site.
1.12 Implementation of Planning Principles for the Cooks Cove Precinct	• To ensure development within the Cooks Cove Precinct is consistent with the Cooks Cove Planning Principles.	Not applicable to the site.
1.13 Implementation of St Leonards and Crows Nest 2036 Plan	• To ensure development within the St Leonards and Crows Nest Precinct is consistent with the St Leonards and Crows Nest 2036 Plan (the Plan).	Not applicable to the site.
1.14 Implementation of Greater Macarthur 2040	• To ensure that development within the Greater Macarthur Growth Area is consistent with: ○ Greater Macarthur 2040 dated November 2018, ○ the Greater Macarthur Growth Area Structure Plan 2022 (Structure Plan), and ○ the Guide to the Greater Macarthur Growth Area (Guide)	Not applicable to the site.
1.15 Implementation of the Pyrmont Peninsula Place Strategy	• To facilitate development within the Pyrmont Peninsula that is consistent with the Pyrmont Peninsula Place Strategy (Place Strategy) and the Economic Development Strategy, • To align the planning framework with the Eastern City District Plan Planning Priority E7 Growing a Stronger and More Competitive Harbour CBD and actively support the consistent delivery of • objectives in the Eastern City District Plan and Greater Sydney Region Plan, and • To guide growth and change balanced with character, heritage	Not applicable to the site.

MINISTERIAL DIRECTION	AIM/S OF DIRECTION	APPLICABILITY AND/OR COMMENT
	and infrastructure considerations (amongst others) across the Peninsula under the Place Strategy	
1.16 North West Rail Link Corridor Strategy	• To promote transit-oriented development and manage growth around the eight train stations of the North West Rail Link (NWRL), and • To ensure development within the NWRL corridor is consistent with the proposals set out in the NWRL Corridor Strategy and precinct Structure Plans	Not applicable to the site.
1.17 Implementation of the Bays West Place Strategy	• To facilitate development within the Bays West precinct that is consistent with the Bays West Place Strategy (Place Strategy) and the Urban Design Framework (which includes the Sustainability Framework and Connecting with Country Framework), • To actively support the consistent delivery of objectives in the Eastern City District Plan and Greater Sydney Region Plan, and • To guide growth and change balanced with character, Indigenous and European heritage, working harbour and infrastructure considerations across the Bays West precinct under the Place Strategy.	Not applicable to the site.
1.18 Implementation of the Macquarie Park Innovation Precinct	• To ensure development within the Macquarie Park Innovation Precinct is consistent with the Macquarie Park Innovation Precinct Place Strategy (Place Strategy) and Macquarie Park Innovation Precinct Strategic Master Plan (Master Plan)	Not applicable to the site.
1.19 Implementation of the Westmead Place Strategy	• To facilitate development within the Westmead and Parramatta North precincts that is consistent with the Westmead Place Strategy, and • To actively support the consistent delivery of objectives in the Central City District Plan and Greater Sydney Region Plan	Not applicable to the site.
1.20 Implementation of the Camellia-Rosehill Place Strategy	• To facilitate development within the Camellia-Rosehill precinct that is consistent with the Camellia Rosehill Place Strategy, • To guide growth and change in the Camellia-Rosehill precinct in a coordinated manner, that delivers	Not applicable to the site.

MINISTERIAL DIRECTION	AIM/S OF DIRECTION	APPLICABILITY AND/OR COMMENT
	appropriate infrastructure and retains the precinct's role as an employment hub, and • To actively support the consistent delivery of objectives in the Central City District Plan and Greater Sydney Region Plan	
1.21 Implementation of South West Growth Area Structure Plan	• To ensure that development within the South West Growth Area (also referred to as the South West Growth Centre) is consistent with Structure Plan and Guide dated December 2022	Not applicable to the site.
1.22 Implementation of the Cherrybrook Station Place Strategy	• To facilitate development within the Cherrybrook Station Precinct that is consistent with the Cherrybrook Station Precinct Place Strategy, and • To actively support the consistent delivery of objectives in the North District Plan and Greater Sydney Region Plan	Not applicable to the site.
FOCUS AREA 2: DESIGN AND PLACE		
FOCUS AREA 3: BIODIVERSITY AND CONSERVATION		
3.1 Conservation Zones	• To protect and conserve environmentally sensitive areas	Not applicable to the site.
3.2 Heritage Conservation	• To conserve items, areas, objects and places of environmental heritage significance and indigenous heritage significance	Not applicable to the site.
3.3 Sydney Drinking Water Catchments	• To provide for healthy catchments and protect water quality in the Sydney drinking water catchment.	Not applicable to the site.
3.4 Application of C2 and C3 Zones and Environmental Overlays in Far North Coast LEPs	• To ensure that a balanced and consistent approach is taken when applying conservation zones and overlays to land on the NSW Far North Coast.	Not applicable to the site.
3.5 Recreation Vehicle Areas	• To protect sensitive land or land with significant conservation values from adverse impacts from recreation vehicles.	Not applicable to the site.
3.6 Strategic Conservation Planning	• To protect, conserve or enhance areas with high biodiversity value.	Not applicable to the site.
3.7 Public Bushland	• To protect bushland in urban areas, including rehabilitated areas, and ensure the ecological viability of the bushland, by: ○ Preserving: ▪ biodiversity and habitat corridors,	Not applicable to the site.

MINISTERIAL DIRECTION	AIM/S OF DIRECTION	APPLICABILITY AND/OR COMMENT
	▪ links between public bushland and other nearby bushland, ▪ bushland as a natural stabiliser of the soil surface, ▪ existing hydrological landforms, processes and functions, including natural drainage lines, watercourses, wetlands and foreshores, ▪ the recreational, educational, scientific, aesthetic, environmental, ecological and cultural values and potential of the land, and ○ mitigating disturbance caused by development, ○ giving priority to retaining public bushland	
3.8 Willandra Lakes Region	• To protect, conserve and manage the Willandra Lakes Region World Heritage Property (World Heritage Property) in accordance with a strategic plan of management prepared for World Heritage Property, and • To establish a consultation process for making decisions on conservation and development within the World Heritage Property.	Not applicable to the site.
3.9 Sydney Harbour Foreshores and Waterways Area	• To protect and enhance the natural assets and unique environmental, scenic and visual qualities of Sydney Harbour and its islands and foreshores • To minimise risk to development from rising sea levels or changing flood patterns as a result of climate change • To ensure the protection, maintenance and rehabilitation of watercourses, wetlands, riparian lands, remnant vegetation and ecological connectivity • To protect or enhance terrestrial and aquatic species, populations and ecological communities, including by avoiding physical damage to, or shading of, aquatic vegetation	Not applicable to the site.

MINISTERIAL DIRECTION	AIM/S OF DIRECTION	APPLICABILITY AND/OR COMMENT
	• To promote the equitable use of the Foreshores and Waterways Area • To protect the cultural heritage significance of Sydney Harbour, its islands and foreshores • To ensure a prosperous working harbour and effective transport corridor; and • To encourage a culturally rich and vibrant place for people	
3.10 Water Catchment Protection	• To maintain and improve the water quality (including ground water) and flows of natural waterbodies, and reduce urban run-off and stormwater pollution • To protect and improve the hydrological, ecological and geomorphological processes of natural waterbodies and their connectivity • To protect and enhance the environmental quality of water catchments by managing them in an ecologically sustainable manner, for the benefit of all users • To protect, maintain and rehabilitate watercourses, wetlands, riparian lands and their vegetation and ecological connectivity	Part of the site is located on groundwater vulnerability land. The intended development is not considered to significantly impact the environmental constraints and will provide adequate controls for oily water and stormwater management so that the impacts on water quality in receiving waters is minimised. Further details of the oily water and stormwater management controls as well as sediment and erosion controls will be provided at development application stage as part of the engineering matter.
FOCUS AREA 4: RESILIENCE AND HAZARDS		
4.1 Flooding	• To ensure that development of flood prone land is consistent with the NSW Government's Flood Prone Land Policy and the principles of the Floodplain Development Manual 2005, and • To ensure that the provisions of an LEP that apply to flood prone land are commensurate with flood behaviour and includes consideration of the potential flood impacts both on and off the subject land	It is acknowledged the site is identified to be partially located over flood prone land as identified on council's Hay and Maude Flood Study (June 2023). The intended development is not considered to significantly impact the environmental constraints and will provide adequate controls for oily water and stormwater management so that the impacts on water quality in receiving waters is minimised. It is further noted that the intended development will be used for unmanned purposes. The fuel tank and fuel equipment will be appropriately designed to ensure flood immunity and include appropriate tie-down measures as well as raising critical equipment infrastructure above the 1% AEP event to minimise risk to life and property.

MINISTERIAL DIRECTION	AIM/S OF DIRECTION	APPLICABILITY AND/OR COMMENT
		Any building floor levels for ablutions block would be any 1% AEP event. It is understood that any detailed flood studies can be provided as part of the future DA lodgement package where applicable for a more-refined assessment.
4.2 Coastal Management	• To protect and manage coastal areas of NSW	Not applicable to the site.
4.3 Planning for Bushfire Protection	• To protect life, property and the environment from bush fire hazards, by discouraging the establishment of incompatible land uses in bush fire prone areas, and • To encourage sound management of bush fire prone areas	While the development footprint is located wholly outside any bushfire prone land mapping, the overall site is affected by category 3 (vegetation buffer) mapping. In relation to the intended development, the following is acknowledged: • The proposed tank location is wholly located outside the bushfire prone land, with all above-ground elements, including bowsers, being located outside the mapped bushfire prone land and >750 metres from any heavily vegetated grasslands; • The tank capacity is significantly lower than that for a standard service station or liquid fuel depot; • The intended development does not achieve the definition of 'hazardous industry' under State Environmental Planning Policy No 33 – Hazardous and Offensive Development (1992 EPI 129); and • All relevant fire mitigation measures will be provided in accordance with Australian Standard 1940 Flammable Liquids Storage & Handling. It is understood that any detailed bushfire studies can be provided as part of the future DA lodgement package where applicable for a more-refined assessment.
4.4 Remediation of Contaminated Land	• To reduce the risk of harm to human health and the environment by ensuring that contamination and remediation are considered by planning proposal authorities	A preliminary site investigation (PSI) has been carried out over the subject site by McMahon in to determine the status of any contamination. The results of the PSI found that the identified potential contamination

MINISTERIAL DIRECTION	AIM/S OF DIRECTION	APPLICABILITY AND/OR COMMENT
		sources are assessed to be of low significance in terms of risk to current and future site users and the site is suitable for the proposed development. For further details, refer to the PSI report in **Appendix B**.
4.5 Acid Sulfate Soils	• To avoid significant adverse environmental impacts from the use of land that has a probability of containing acid sulfate soils	Not applicable to the site.
4.6 Mine Subsidence and Unstable Land	• To prevent damage to life, property and the environment on land identified as unstable or potentially subject to mine subsidence	Not applicable to the site.
FOCUS AREA 5: TRANSPORT AND INFRASTRUCTURE		
5.1 Integrating Land Use and Transport	• To ensure that urban structures, building forms, land use locations, development designs, subdivision and street layouts achieve the following planning objectives: ○ improving access to housing, jobs and services by walking, cycling and public transport, and ○ increasing the choice of available transport and reducing dependence on cars, and ○ reducing travel demand including the number of trips generated by development and the distances travelled, especially by car, and ○ supporting the efficient and viable operation of public transport services, and ○ providing for the efficient movement of freight	The proposed request for additional permitted use (service station) will create convenient refuelling services that will facilitate the ability to provide for the efficient movement of freight.
5.2 Reserving Land for Public Purposes	• To facilitate the provision of public services and facilities by reserving land for public purposes, and • To facilitate the removal of reservations of land for public purposes where the land is no longer required for acquisition.	Not applicable to the site.
5.3 Development Near Regulated Airports and Defence Airfields	• To ensure the effective and safe operation of regulated airports and defence airfields; • To ensure that their operation is not compromised by development that constitutes an obstruction,	Not applicable to the site.

MINISTERIAL DIRECTION	AIM/S OF DIRECTION	APPLICABILITY AND/OR COMMENT
	hazard or potential hazard to aircraft flying in the vicinity; and • To ensure development, if situated on noise sensitive land, incorporates appropriate mitigation measures so that the development is not adversely affected by aircraft noise.	
5.4 Shooting Ranges	• To maintain appropriate levels of public safety and amenity when rezoning land adjacent to an existing shooting range, • To reduce land use conflict arising between existing shooting ranges and rezoning of adjacent land, • To identify issues that must be addressed when giving consideration to rezoning land adjacent to an existing shooting range	Not applicable to the site.
FOCUS AREA 6: HOUSING		
6.1 Residential Zones	• To encourage a variety and choice of housing types to provide for existing and future housing needs, • To make efficient use of existing infrastructure and services and ensure that new housing has appropriate access to infrastructure and services, and • To minimise the impact of residential development on the environment and resource lands	Not applicable to the site as no residential development proposed.
6.2 Caravan Parks and Manufactured Home Estates	• To provide for a variety of housing types, and • To provide opportunities for caravan parks and manufactured home estates	Not applicable to the site as no residential development proposed.
FOCUS AREA 7: INDUSTRY AND EMPLOYMENT		
7.1 Business and Industrial Zones	• To encourage employment growth in suitable locations, • To protect employment land in employment zones, and • To support the viability of identified centres	Not applicable. The proposal is located over rural zoned land and will not compromise the employment protection policies over Business and Employment zones.
7.2 Reduction in non-hosted short-term rental accommodation period	• To mitigate significant impacts of short-term rental accommodation where non-hosted short-term rental accommodation period are to be reduced, and • To ensure the impacts of short-term rental accommodation and	Not applicable to the site.

MINISTERIAL DIRECTION	AIM/S OF DIRECTION	APPLICABILITY AND/OR COMMENT
	views of the community are considered	
7.3 Commercial and Retail Development along the Pacific Highway, North Coast	• To protect the Pacific Highway's function, that is to operate as the North Coast's primary inter- and intra-regional road traffic route, • To prevent inappropriate development fronting the highway, • To protect public expenditure invested in the Pacific Highway, • To protect and improve highway safety and highway efficiency, • To provide for the food, vehicle service and rest needs of travellers on the highway, and • To reinforce the role of retail and commercial development in town centres, where they can best serve the populations of the towns.	Not applicable to the site.
FOCUS AREA 8: RESOURCES AND ENERGY		
8.1 Mining, Petroleum Production and Extractive Industries	• To ensure that the future extraction of State or regionally significant reserves of coal, other minerals, petroleum and extractive materials are not compromised by inappropriate development	Not applicable to the site.
FOCUS AREA 9: PRIMARY PRODUCTION		
9.1 Rural Zones	• To protect the agricultural production value of rural land	The Planning Proposal does not propose to rezone any rural zoned land. The objective of this proposal is to enable a service station to be permitted with consent over the subject site. This is via an amendment to the Hay Local Environmental Plan 2011 (the LEP) and more specifically, via enabling clause to Schedule 1 of the LEP. The subject site is located within the area of the Hay Structure Plan referred to as South Hay. The Structure Plan endorsed by the council identifies no supply of industrial-zoned land in South Hay and recommends certain areas be rezoned for industrial purposes. The Proposed Land Zoning Map (Figure 44 of Hay Structure Plan) shows the subject site for the intended development within the proposed IN1 zone. For further details of the Hay Structure Plan, refer to Section 3.4 of this report.

MINISTERIAL DIRECTION	AIM/S OF DIRECTION	APPLICABILITY AND/OR COMMENT
		It is noted that the intended development will be used for refuelling of trucks including those involved in surrounding primary industry enterprises. As such, it is considered the intended development will be consistent with future intent of the site under the Hay Structure Plan.
9.2 Rural Lands	• To protect the agricultural production value of rural land, • To facilitate the orderly and economic use and development of rural lands for rural and related purposes, • To assist in the proper management, development and protection of rural lands to promote the social, economic and environmental welfare of the State, • To minimise the potential for land fragmentation and land use conflict in rural areas, particularly between residential and other rural land uses, • To encourage sustainable land use practices and ensure the ongoing viability of agriculture on rural land, • To support the delivery of the actions outlined in the NSW Right to Farm Policy	The subject land is currently used for agricultural purposes. It is noted that the proposal would involve the refuelling of trucks including those involved in surrounding primary industry enterprises. The proposed development will not fragment surrounding resource land by virtue of its location, close to an intersection with a major highway, and its relatively small development footprint within the context of the surrounding agricultural lands.
9.3 Oyster Aquaculture	• To ensure that 'Priority Oyster Aquaculture Areas' and oyster aquaculture outside such an area are adequately considered when preparing a planning proposal, and • To protect 'Priority Oyster Aquaculture Areas' and oyster aquaculture outside such an area from land uses that may result in adverse impacts on water quality and consequently, on the health of oysters and oyster consumers	Not applicable to the site.
9.4 Farmland of State and Regional Significance on the NSW Far North Coast	• To ensure that the best agricultural land will be available for current and future generations to grow food and fibre, • To provide more certainty on the status of the best agricultural land, thereby assisting councils with their local strategic settlement planning, and • To reduce land use conflict arising between agricultural use and non-agricultural use of farmland as	Not applicable to the site.

MINISTERIAL DIRECTION	AIM/S OF DIRECTION	APPLICABILITY AND/OR COMMENT
	caused by urban encroachment into farming areas	

4.3.3 Section C – Environmental, Social and Economic Impact

Q7 Is there any likelihood that critical habitat or threatened species, populations or ecological communities, or their habitats, will be adversely affected as a result of the proposal?

Response – The planning proposal relates to land that is used for rural production which has been cleared of any critical habitat or threatened species, populations, or ecological communities.

The proposed additional permitted use is not likely to have an adverse impact on critical habitat or threatened species, populations or ecological communities or their habitats.

It is also noted the development footprint is located outside of the amended terrestrial biodiversity map the overall site is located outside of the state vegetation map under the Structure Plan.

Q8 Are there any other likely environmental effects as a result of the planning proposal and how are they proposed to be managed?

Response – The proposal will respond to the following at development application stage:

- Design and installation of all fuel-related storage and dispensing equipment in accordance with AS1940
- Fill points to drain to an appropriate oily water spill containment to council's satisfaction

Q9 Has the planning proposal adequately addressed any social and economic effects?

Response – The proposal is expected to generate positive social and economic effects. The proposed additional permitted use will be able to service trucks including those involved in surrounding primary industry enterprises.

4.3.4 Section D – State and Commonwealth Interests

Q10 Is there adequate public infrastructure for the planning proposal?

Response – The proposal is generally considered to have adequate public infrastructure available. All existing road infrastructure (both access to the site and the ability of the surrounding road network to adequately cater for the site) is considered sufficient for the proposal. This will be further assessed by Council and TfNSW at development application stage.

In relation to utility services and whether the proposal will trigger the upgrade of any of these services, this is considered most appropriately assessed at development application stage. The proposal will effectively manage effluent onsite.

Q11 What are the views of state and Commonwealth public authorities consulted in accordance with the Gateway determination?

Response – The gateway determination will determine any further consultation requirements with State or Commonwealth public authorities.

4.4 Part 4 – Mapping

Amendments to the LEP mapping is not required as the request is for an addition permitted use under Schedule 1.

4.5 Part 5 – Community Consultation

It is understood that the standard 28-day public exhibition period will likely apply to the Planning Proposal.

4.6 Part 6 – Project Timeline

The following milestone timeframes are anticipated. Timeframes will be revised is any significant delays are encountered.

Table 7: Indicative Project Timeline

TASK	ANTICIPATED TIMEFRAME
Consideration by Council	December 2023
Council Decision	December 2023
Gateway Determination	February 2024
Pre-exhibition	April 2024
Commencement and Completion of Public Exhibition Period	May 2024
Consideration of Submissions	May 2024
Post-exhibition Review and Additional Studies	July 2024
Finalisation and Gazettal of LEP Amendment	September 2024

5.0 CONCLUSION

This Planning Proposal report has been prepared by TfA Project Group (TFA) on behalf of IOR Pty Ltd (the applicant) and involves a request to the Hay Shire Council (the council) to amend the Hay Local Environmental Plan 2011 (the LEP) to enable a 'service station' (unmanned refuelling facility) over land located at 310 Moama Street, Hay South NSW 2711 and more formally described as Lot 2 DP1212081.

The Planning Proposal has been prepared in accordance with section 3.33 of the *Environmental Planning and Assessment Act 1979 (*the EP&A Act) and the NSW Department of Planning and Environment (the DPE) Local Environmental Plan Making Guideline August 2023 (the *LEP Making Guideline*).

The proposal has been assessed against the relevant local and State provisions, guidelines, and regional strategies and from this assessment, the following conclusions are able to be drawn:

- The site is suitably located for the intended use by virtue of its proximity to the state-controlled road network (Sturt Highway);
- The site adjoins existing RU1 zoned land, and the intended additional permitted use would support surrounding rural production land which is located within proximity to a major road off a highway;
- The proposal is considered to be consistent with the policy provisions and intent of the relevant regional strategies, including the council's endorsed LSPS to ultimately rezone the site and surrounding area for industrial purposes;
- The proposed development will not fragment surrounding agricultural land by virtue of its location, close to an intersection with a major highway, and its relatively small development footprint within the context of the surrounding agricultural area; and
- The proposal is not considered to impact adversely on any surrounding receiving environment and any perceived impacts can be managed through appropriate environmental management measures demonstrated at development application stage.

On the basis of the above, it is considered sufficient planning grounds exist to warrant the proposal and the application is recommended for Council's further assessment of the Planning Proposal and Gateway Determination by the Department of Planning.

APPENDIX A – CONCEPTUAL SITE LAYOUT, PREPARED BY IOR

APPENDIX B – PRELIMINARY SITE INVESTIGATION REPORT, PREPARED BY MCMAHON

R.P.D.
LOT 2
DP1212081
AREA APPROX 42,055m²

STURT HIGHWAY

SIGNPOST

POWER POLE
STRAINER POLE

UNIVERSITY ROAD

SPEED SIGN

A
A03

50000

114400

40m² DISPERSAL AREA FOR TREATED WATER FROM ABLUTION BLOCK. AREA TO BE DESIGNED AND SYSTEM INSTALLED TO COMPLY WITH RELEVANT CODES AND DEVELOPMENT APPROVALS.

ALL WEATHER ROAD BASE

PROPOSED LEASE AREA APPROX. 6892m²

6m HIGH PYLON SITE SIGN

ENTRY ONLY SIGN
600W x 600H

ENTRY ONLY SIGN
2150W x 600H

B
A03

20600

PROPOSED ONSITE SEWAGE TREATMENT SYSTEM

ABLUTION BLOCK

3340

60000

85/7kL DIES/ADB.

EXIT ONLY SIGN
2150W x 600H

EXIT ONLY SIGN
600W x 600H

46700

CONCRETE APRON SLAB AT FILLING POINTS TYPICAL TO DRAIN TO SPILL CONTAINMENT TO COUNCIL'S SATISFACTION.

85kL DIESEL / 7kL ADBLUE DOUBLE WALL TANK

ALL WEATHER ROAD BASE

iOR PETROLEUM

Scale Bar
10 0 10 20 30 40 50m
Metres
Figured dimensions to be taken in preference to scale readings.

revision	date	by	description	checked
1	21.11.19	DGC	PRELIMINARY FOR CLIENT REVIEW	

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TfA Project Group

project
iOR PETROLEUM
UNMANNED TRUCK STOP
UNIVERSITY ROAD,
HAY SOUTH,
NEW SOUTH WALES

title
PROPOSED SITE LAYOUT

drawn	approved	date created	A1 scale	A3 scale
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status	drawing no.	rev.
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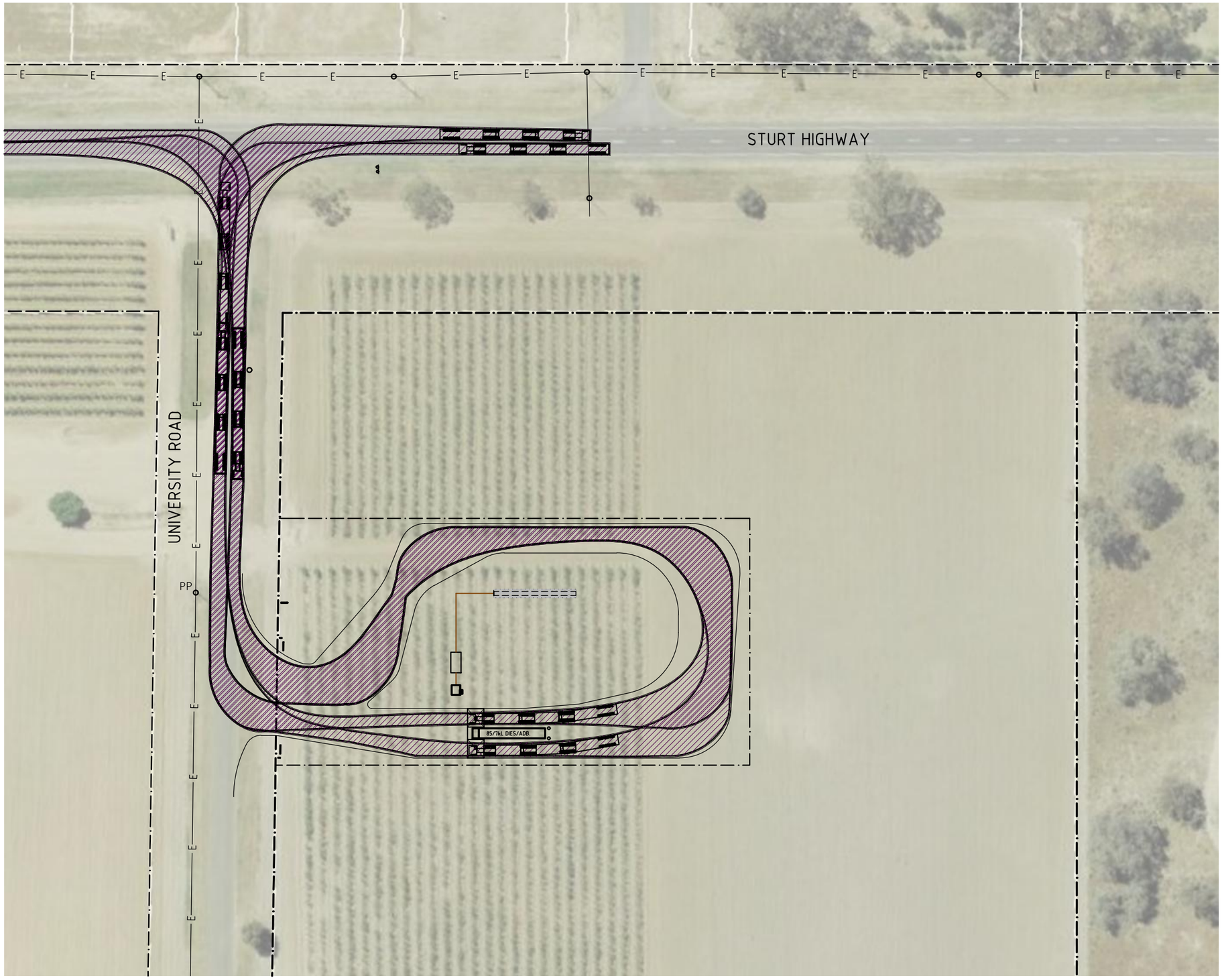
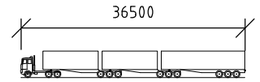


R.P.D.
LOT 2
DP1212081
AREA APPROX 42,055m²



B-TRIPLE ELEVATION

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Metres

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revision	date	by	description	checked
A	21.11.19	DGC	PRELIMINARY FOR CLIENT REVIEW	

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UNIVERSITY ROAD,
HAY SOUTH,
NEW SOUTH WALES

title
VEHICLE TURNING PATHS

drawn	approved	date created	A1 scale	A3 scale
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status	drawing no.	rev.
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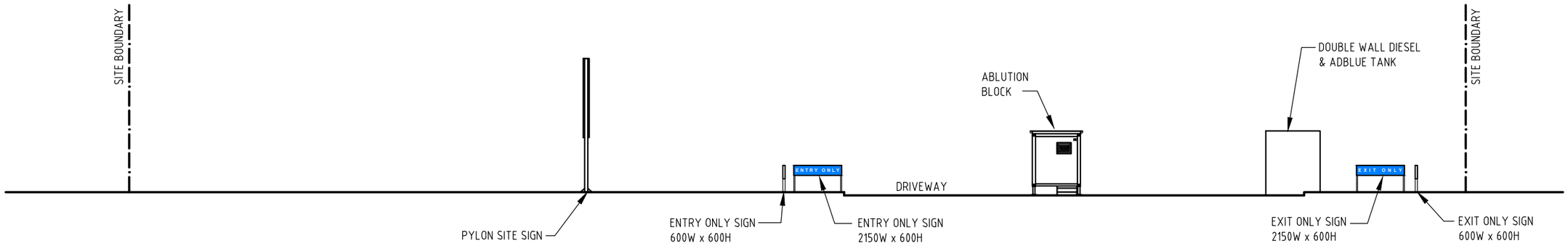
1:200



B A02 ELEVATION
1:200

iOR PETROLEUM

Scale Bar

2 0 5 10m

Metres

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revision	date	by	description	checked
A	20.11.19	DGC	PRELIMINARY FOR CLIENT REVIEW	

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TFA Project Group

project
iOR PETROLEUM
UNMANNED TRUCK STOP
UNIVERSITY ROAD,
HAY SOUTH,
NEW SOUTH WALES

title
PROPOSED SITE ELEVATIONS

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status	drawing no.	rev.
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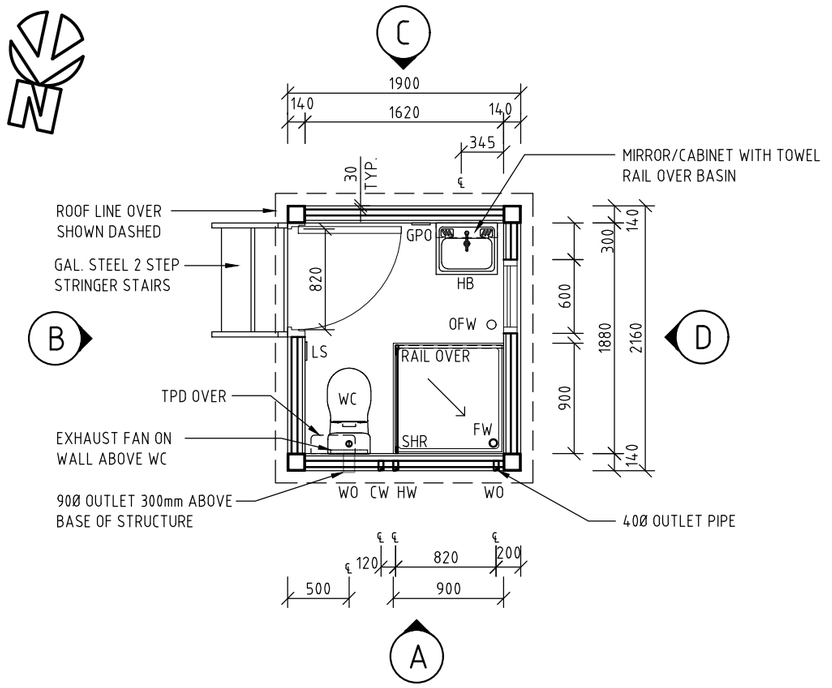
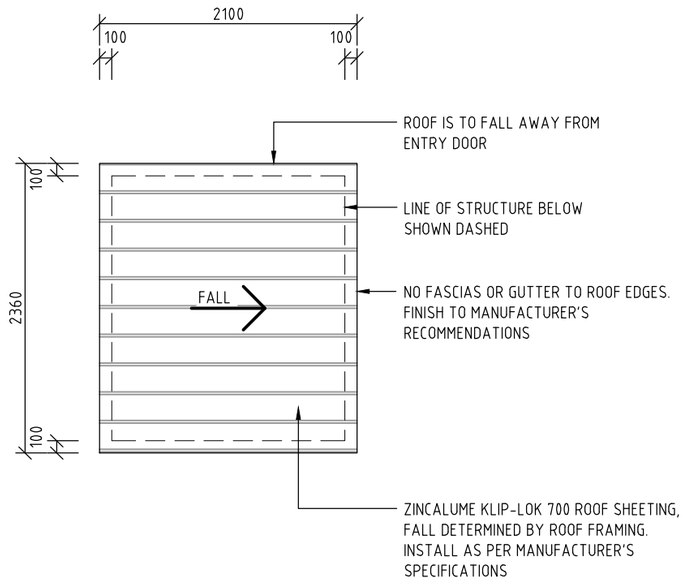


FLOOR PLAN



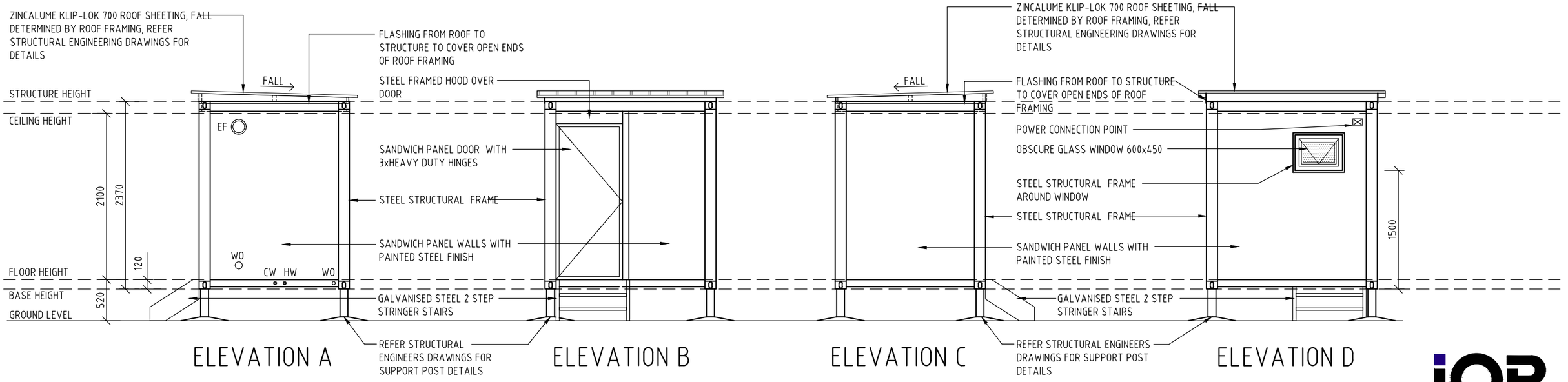
ROOF PLAN

NOTES

1. ALL SERVICES TO BE CONCEALED, RUN BELOW FLOOR OR IN WALL/ CEILING CAVITIES.
2. THE CONTRACTOR IS TO VERIFY ON SITE THAT THE INVERT & SERVICE LEVELS & REQUIRED COVER OVER DRAINAGE LINES ARE OBTAINABLE BEFORE COMMENCING WORKS.
3. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE BY-LAWS & THE REQUIREMENTS OF THE LOCAL BUILDING & PLUMBING INSPECTOR. ENSURE MATERIALS MEET THE FIRE RATING REQUIREMENTS OF THE QLD BUILDING CODE OF AUSTRALIA.
4. THESE DRAWINGS MUST BE READ IN CONJUNCTION WITH THE ARCHITECTS / DESIGNERS COUNCIL OR CERTIFIERS APPROVED BUILDING DRAWINGS.
5. FINISHED FLOOR LEVELS DETERMINED BY ON SITE CONDITIONS. REFER CIVIL & STRUCTURAL DESIGN FOR LEVELS, FOOTINGS AND STAIR REQUIREMENTS.

LEGEND

CW	COLD WATER CONNECTION
EF	EXHAUST FAN
FW	FLOOR WASTE
GPO	POWER OUTLET SINGLE
HB	HAND BASIN
HW	HOT WATER CONNECTION
HWU	HOT WATER UNIT
LS	LIGHT SWITCH
OFW	OVERFLOW FLOOR WASTE
ORG	OVERFLOW RELIEF GULLY
SHR	SHOWER
TPD	TOILET PAPER DISPENSER
WC	WATER CLOSET
WO	WASTE OUTLET



iOR PETROLEUM

Scale Bar

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Metres

Figured dimensions to be taken in preference to scale readings.

revision	date	by	description	checked
1	21.11.19	DGC	PRELIMINARY FOR CLIENT REVIEW	

ACN 612 132 233
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TfA Project Group

project
iOR PETROLEUM
UNMANNED TRUCK STOP
UNIVERSITY ROAD,
HAY,
NEW SOUTH WALES

title
ABLUTIONS – FLOOR PLAN, ROOF PLAN & ELEVATIONS

drawn	approved	date created	A1 scale	A3 scale
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status	drawing no.	rev.
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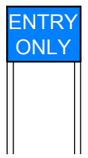

ENTRY ONLY SIGN
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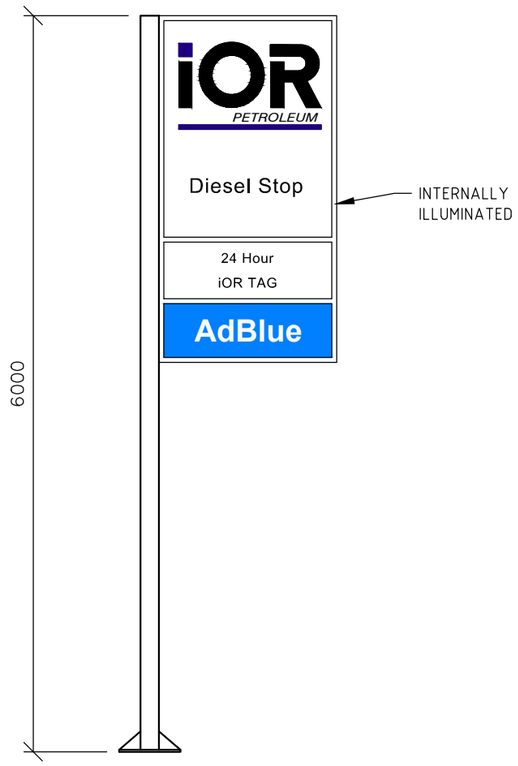
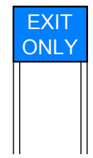
ENTRY ONLY SIGN
2150W x 600H
1:50



6m HIGH PYLON SITE
SIGN
1:50

EXIT ONLY SIGN
2150W x 600H
1:50



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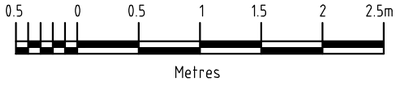
Scale Bar



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revision	date	by	description	checked
A	21.11.19	DGC	PRELIMINARY FOR CLIENT REVIEW	

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TfA Project Group

project
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UNMANNED TRUCK STOP
UNIVERSITY ROAD,
HAY SOUTH,
NEW SOUTH WALES

title
PROPOSED SIGNAGE DETAILS

drawn	approved	date created	A1 scale	A3 scale
DGC		21.11.19		1:50

status	drawing no.	rev.
PRELIMINARY	19297–HAY–D05	1

iOR PETROLEUM

McMahon EARTH SCIENCE

310 MOAMA STREET HAY NSW 2711

PRELIMINARY SITE INVESTIGATION

FOR THE REZONING OF LAND FOR A PROPOSED UNMANNED REFUELLING FACILITY

JULY 2023

REPORT NO: 9404

DM McMahon Pty Ltd
6 Jones St (PO Box 6118)
Wagga Wagga NSW 2650
t (02) **6931 0510** **www.dmmcmahon.com.au**

Report type

Preliminary Site Investigation

For the rezoning of land for a proposed unmanned refuelling facility.

Site address

310 Moama Street

Hay NSW 2711

Report number

9404

Prepared for

Damien Mackay

TFA Project Group

166 Knapp Street

Fortitude Valley QLD 4006

Tel: 0738 542 910

Email: Damien.Mackay@tfa.com.au

Prepared by

DM McMahon Pty Ltd

6 Jones Street (PO Box 6118)

Wagga Wagga NSW 2650

Tel: 0269 310 510

Email: admin@dmmcmahon.com.au

Document control

Role	Name	Signed	Date	Revision
Prepared by	**David McMahon** CEnvP SC BAppSc SA GradDip WRM MEnvMgmt MALGA MEIANZ MSSA		13/07/2023	0

Contents

1.0 Executive summary

DM McMahon Pty Ltd (McMahon) conducted this Preliminary Site Investigation (PSI) at the request of Damien Mackay of TFA Project Group for the rezoning of land for a proposed unmanned refuelling facility at 310 Moama Street Hay NSW. The 4.1ha development area (the site) has a historical agricultural/horticultural land use. A map of the site investigated as part of this PSI and the future proposed development for the unmanned refuelling facility can be seen in **Attachment A**.

The issue of potential contamination is required to be considered whenever a planning proposal is presented to a planning authority where the new use may increase risk from contamination if it is present. Therefore, the purpose of this investigation is to provide TFA Project Group and the planning authority with a statement of site suitability for the proposed land use and an appropriate risk assessment framework for the management of the site during development.

The scope of work includes:

- A desktop study used to collect basic site information and identify the site characteristics.
- A detailed site inspection to complement the findings of the desktop study and site history and to identify any additional relevant site information.
- Conduct limited sampling using data quality objectives to assess the need for further investigation.
- From the information collected, develop a conceptual site model detailing the potential contamination source-pathway-receptor linkages.
- Conduct a risk assessment for site suitability regarding potential contamination and the proposed development.
- Provide a statement of site suitability for the proposed land use and recommendations for further investigation, assessment, and site management if required.

Findings of the investigation include:

- A site inspection was conducted and found the development area was generally well-maintained agricultural/horticultural land with no indicators of gross contamination.
- This PSI identified persistent pesticides that may have been used as the source of potential contamination that may affect the development.
- The soil analysis returned results below the criteria for commercial/industrial land use.
- In conclusion, the identified potential contamination sources are assessed to be of low significance in terms of risk to future site users and the site is suitable for the proposed development.

This executive summary and the findings of this PSI are subject to the recommendations in **Section 10.0** and limitations as stated in **Section 11.0**. A protocol for unexpected finds as outlined in **Section 12.0** has also been developed as part of this risk assessment framework if additional potential contamination sources are identified during planning or development.

2.0 Objectives

The objective of this investigation is to:

- Provide information regarding potential contamination on site.
- Provide a factual record of the works completed and results.
- Undertaking a risk assessment for health risk to future site users and the environment.
- Provide a statement of site suitability or recommendations for further investigation and/or site management.
- To prepare the PSI in general accordance with the relevant guidelines and legislation, namely:
    - NSW EPA, Consultants Reporting on Contaminated Land: Contaminated Land Guidelines, (2020).
    - State Environmental Planning Policy (Resilience and Hazards) 2021.
    - National Environment Protection (Assessment of Site Contamination) Measure (NEPM), (2013).

3.0 Scope of work

The scope of work includes the following:

- Review the available information regarding historical, current, and proposed land use of the site and surrounds.
- Review the environmental setting of the site and surrounds.
- Assess the potential contamination sources and chemicals of potential concern.
- Conduct limited sampling to assess the need for further investigation.
- Assess the potential contamination source-pathway-receptor linkages from the chemicals of potential concern, environmental setting, and land use.
- Develop a conceptual site model to assess potential contamination risk from the source-pathway-receptor linkages.
- Provide a clear statement on site suitability for the present and future land use and the need for further investigation and/or site management.

4.0 Site identification

The site identification and details are as follows.

- Address: 310 Moama Street Hay NSW 2711.
- Real property description: Lot 2 DP 1212081
- Development area centre co-ordinate: 303135E 6177985N MGA GDA z55.
- Property size: 4.1ha.
- Owner: IOR Property Group No. 2 Pty Ltd.
- Local Government Area: Hay Shire Council.
- Current zoning: RU1 Primary Production.
- Proposed zoning: IN1 General Industrial.
- Present use: Agriculture/horticulture.
- Development Application reference: Not known.

5.0 Site history

From research of the available resources, the following site history is offered.

Historical owners and occupiers

As follows are the registered owners and occupiers:

- 1885 South Hay Common administered by the Hay Pastoral Protection Board.
- 1962 Special lease 62/15 to Frank Danelutti. Known as Portion 119.
- 1970 part of the land resumed for road.
- 1970 owned by Francesco (Frank) Ruberto.
- 2004 owned Erminia Ruberto
- 2004 owned by Mark Sam Ruberto.
- 2019 to present owned by IOR Property Group No. 2 Pty Ltd.

Council records

A Section 10.7 Planning Certificate (Certificate No: 2023-120) was obtained from Council on 11 July 2023 and the certificate states that the site has not been declared significantly contaminated within the meaning of the Contaminated Land Management Act 1997.

EPA records

There are no records on the Contaminated Land Record Database for the site or adjacent properties pertaining to Preliminary Investigation Orders, Declaration of Significantly Contaminated Land, Approved Voluntary Management Plans, Management Orders, Ongoing Maintenance Orders, Repeal Revocation or Variation Notice, Site Audit Statement, or Notice of Completion or Withdrawal of Approved VMP. The site or adjacent properties have not been “notified” to the EPA on the list of NSW Contaminated sites as of June 2023.

Internet search

- The Hay Standard (Hay) May 1898. South Hay Common. William Cullen deposed: I know all the South Hay Common ground; I only consider a small portion fit for cultivation; it is black clayey open porous land, and swampy. I do not consider the area large enough for close settlement and making homes upon; I consider the bulk only fit for grazing purposes.
  To Mr Walker: The areas themselves are not large enough to make a living off; the area is large enough for a man in conjunction with other pursuits, provided he is not flooded out.; I believe the flood came from the north east boundary; if the canal is constructed, the banks if made strong would certainly help keep flood waters of the land.
  To Mr Walker: There was no protest to my knowledge when this land was taken over for irrigation; immediately the irrigation area was reduced the Council asked for this area as a temporary common; the land was always used for common purposes even when under the Irrigation Trust the same as under previous conditions.
- The Riverina Grazier (Hay) November 1898. The South Hay Common. The land at South Hay, which, for want of a better term is known as the South Hay common, is

about to be subdivided into a temporary common, travelling stock route, and homestead selections.

- Government Gazette of the State of NSW (Sydney) *Notification of Granting of Special Leases* Issue 102, October 1963. Frank Danelutti of Lachlan Street Hay. Situation and area of land: Portion 119.
  Area about 15 acres, 2 roods, 30 perches.
  Purpose of lease: Garden (vegetable and nursery).
  Term of lease: Sept. 1962 to Dec. 1989.
- Government Gazette of the State of NSW (Sydney) *Notification under the Public Roads Act, 1902, of Resumptions and Withdrawals of Lands for Roads, Resumptions and Withdrawals of Severed Lands of Declaration of Roads to be Public Roads and of Closing* Issue 12, January 1970. Frank Danelutti. Land withdrawn 1 acre 3 roods 25 perches, being part of Special Lease 62-15 and being part portion 119.

Previous reports

Habitat Planning (2022) Hay Structure Plan. Ref: 21138.

The Hay Structure Plan implements the recommendations of the Hay Local Strategic Planning Statement (2020), which will guide land use planning decisions for residential, rural residential and industrial development within Hay for the next 20 years.

- The Structure Plan has identified the need to rezone more land for industrial (employment) purposes. In response, the Structure plan has identified the South Hay Industrial precinct for additional industrial land supply.
- The South Hay Industrial Precinct is located to the south of Moama Street/Sturt Highway.
- The recommended rezoning of this land for industrial purposes is consistent with the environmental constrains of the land and surrounding land uses.
- The properties are currently zoned RU1 Primary Production with a minimum lot size of 90 hectares.
- All the properties are largely unconstrained (with the exception of bushfire), and the topography of the land is generally flat. Vegetation on-site is largely non-native.
- Infrastructure and services including water and sewerage can be made available to these precincts via an extension from the main urban area.
- The South Hay Industrial Precinct will cater for large scale and heavy industrial developments (>1ha in size).
- In total, the future subdivision of this land based on the proposed zoning and minimum lot size recommendations of this Strategy could increase the supply of IN1 (E4) General Industrial zoned lots by up to approximately 200 lots based on a 1ha minimum lot size. This equates to 80 years' worth of industrial land supply based on current industrial land take-up rates.

Aerial photographs and satellite images

McMahon observed the following from a review of the available aerial photography.

1962 – The site forms part of a larger paddock. Trees are scattered across the site. A faint path from all directions crosses in the approximate centre of the site. The surrounding land is agricultural with some residential development existing to the north of Moama Street.

1973 – The site has been divided into its current lot. The site has been cleared of trees.

1989 – The eastern half of the site has been established with what appears to be a vineyard.

1993 – The site has been divided into three paddocks with access via University Road to the west.

2002 – The whole site has been established as a vineyard.

2007 – No change from 2002.

2010 – The vineyard has been removed from the eastern half of the site. A bonfire is visible in the approximate centre of the site.

2011 – No change from 2010.

2013 – No change from 2011.

2015 – Remnants of a small bonfire is visible in the approximate centre of the site.

2017 – No change from 2015.

2018 – No change from 2017.

2020 – No change from 2018.

The aerial photographs and satellite images can be seen in **Attachment B**.

6.0 Site condition and surrounding environment

McMahon notes the following observations of the site condition as part of this PSI.

- The site is located on a broad alluvial plain with cracking reddish brown high plastic clay soil.
- Access to the site is via University Road, with an irrigation channel and gate along this road.
- The site consists of mostly unimproved pasture with less than half of the site having been established as a vineyard (currently dead).
- There are no improvements on site other than boundary farm fencing and the irrigation infrastructure.
- Remnants of a bonfire was observed in the centre of the site and appeared to consist of burnt fencing.
- A shallow channel enters the site along the northern boundary, travels south along the eastern boundary and then west along the southern boundary.
- Surrounding land uses include residential to the north, agricultural to the east and south and industrial and agricultural land to the west. Tapper Agri Services (agricultural supplies) is to the west, across University Road.

Maps of the site features can be seen in **Attachment C**.

Site photographs can be seen in **Attachment D**.

A summary of the site environmental setting is as follows.

Topography

The site is located the broad level Riverine Plains at an elevation of approximately 90m AHD.

Vegetation

The site is currently mostly unimproved pasture with part of the site established as a vineyard.

Natural Resources Sensitivity

A search of the Hay Local Environment Plan (2011) found the site is mapped as being in a natural resource sensitivity area for groundwater vulnerability. The site is not mapped as being in a natural resource sensitivity area for terrestrial biodiversity or riparian lands and waterways.

Weather

The average rainfall for Hay is around 360mm per annum, with the rainfall spread fairly evenly throughout the year. Hay is characterised by cold winters and hot summers.

Hydrology

An irrigation channel follows the north and south boundary and runs north south through the eastern half of the site. The Murrumbidgee River is located approximately 410m north from the approximate centre of the site. The irrigation channel joins the Murrumbidgee River approximately 710m to the north east of the site. The site is not mapped as being in a flood planning area.

Soil

Soils are cracking brown highly plastic clay topsoils overlying cracking reddish brown highly plastic clay subsoil.

Geology

The geology is the broad level Riverine Plains of Cainozoic/Quaternary alluvium. The alluvium overlies Palaeozoic and Mesozoic rocks that form the bedrock at around 300m deep.

Hydrogeology

There are no registered groundwater bores on site, but nearby bores and the Lower Murrumbidgee Groundwater Report (NSW DPIE, 2021) suggests there are two groundwater sources beneath the site. One being the shallow Shepparton Formation to around 40m depth consisting of poorly sorted and interbedded gravels, sands, and clays, while the other is the deeper Calivil Formation and Renmark Group from 40m to bedrock. The Shepparton Formation is typically a low productivity aquifer system and it generally not used as resource in the locale.

7.0 Sampling and analysis quality plan and sampling methodology

The Data Quality Objectives (DQOs) of the site assessment have been developed to define the type and quality of data to meet the project objectives. The DQOs have been developed generally in accordance with the seven step DQO process as outlined in AS 4482.1 (2005) and the USA EPA Guidance on Systematic Planning Using the Data Quality Objectives Process (2006a). These DQOs are as follows:

1. **The problem**
2. **The goal of the study**
3. **Information inputs**
4. **Study boundaries**
5. **The analytical approach**
6. **Performance and acceptance criteria**
7. **Obtaining data**

These objectives have been further outlined in the following sections.

DQO 1 - The problem

Potential contamination from previous land use may be present across the site and insufficient data relating to this source is available to determine land use suitability and the need for further investigation with the necessary level of confidence.

DQO 2 - The goal of the study

Goals of the study include:

- Undertake limited investigations, based on the data gaps to determine if there is pesticide contamination within the soil associated with the identified contamination sources.
- Determine if any contamination, should it be identified, poses a risk to current and/or future receptors at the site or within potential exposure pathways from the site, and if further investigation is required.
- Determining whether the site is currently, or can be made, suitable for the proposed development regarding contamination.

DQO 3 - Information inputs

- Desktop data including site inspections, site condition, history, geology, hydrogeology, and laboratory analysis to characterise the site.
- Observational data including visual and olfactory conditions obtained from the sampling.
- Analytical data relative to the assessment criteria.

DQO 4 - Study boundaries

- Intrusive investigation across the site.
- Temporal boundaries are limited to the proposed fieldwork timeframes in the third quarter of the year 2023.

DQO 5 - The analytical approach

Samples will be tested for heavy metals and organochlorine and organophosphate pesticides that may be persistent in the soil from the sites historical land use.

DQO 6 - Performance and acceptance criteria

Specific limits for the investigation are in accordance with the appropriate guidance made or endorsed by state and national regulations, appropriate data quality indicators, and industry standard procedures for field sampling and handling. To assess the validity of data for decision making, the data is assessed against a set of data quality indicators, the following predetermined data quality indicators have been adopted.

The key decision rules for the investigation are:

1) Has the analytical data been collected as part of the testing and met the data quality indicators? If they have then the data can be used to answer the decision rule/s and the decision statements developed in Step 2 of the DQOs. If not, then the need to collect additional data may be required.
2) Do contaminant concentrations exceed the investigation and screening criteria? If not, then the potential contamination does not pose an above low level of risk. Where results exceed the investigation and screening criteria, this may indicate an unacceptable level of risk. Further risk assessment and investigations may be warranted to determine the potential for impacts.

The key decision errors for the investigation are:

i. deciding that the site is contaminated when it truly is not.
ii. deciding that the site is not contaminated when it truly is.

The true state of nature for decision error (i) is that the site is not contaminated.
The true state of nature for decision error (ii) is that the site is contaminated.

The site assessment criteria were specifically derived and incorporate the following:

- The samples are not composited so the direct reading of contaminant levels will be found from each sample point on which an appropriate decision can be based off.
- The duplicate sample should have a Relative Percentage Difference (RPD) of <30%.
- The rinsate sample should return negligible concentrations for all parameters tested to ensure an appropriate sampling and decontamination procedure.
- If contaminant levels exceed the Tier 1 and statistical assessment criteria further investigation, assessment and management may be required.

Specific Tier 1 assessment criteria can be seen below, **Table 1**.

Table 1: *Assessment criteria*

Material	Analytes	Criteria
Soil	Heavy metals Pesticides	**Health Investigation Levels (HILs)** -Commercial/Industrial D NEPM (2013) -Table 1A(1) Heavy metals and pesticides -Soils within 3m of surface **Added Contaminants Limits (ACLs)** -Commercial/Industrial D NEPM (2013) -Table 1B(1) Zinc -Table 1B(2) Copper -Table 1B(3) Nickel -Table 1B(4) Lead -Soils within 2m of surface -pH of 7.0 ($CaCl_2$) and CEC of 20 assumed from local knowledge **Environmental Investigation Levels (EILs)** -Commercial/Industrial D NEPM (2013) -Table 1B(5) Arsenic and pesticides -Soils within 2m of surface **Ecological Screening Levels (ESLs)** -Commercial/Industrial D NEPM (2013) -Clay soils within 2m of surface

The Tier 1 assessment criteria are used as an initial screening of the data to determine whether further assessment is required. Where above criteria exceedance indicates a risk to human health or the environment, site specific risk assessment, statistical analysis, management, or remediation will be undertaken or recommended as appropriate.

DQO 7 - Obtaining data

The sampling pattern and strategy identifies the occurrence of potential contamination for suitable site characterisation. The sampling pattern and strategy has been devised based on site history, land uses, aerial imagery, site inspections, previous investigations and the NEPM (2013). The sampling pattern has been described in more detail below.

Sampling strategy and pattern

A systematic sampling pattern has been chosen based on potential contamination sources, previous land use, and requirements to delineate potential contamination. The adopted sampling pattern is suitable to make a quantitative statement about the level of confidence regarding the quality and accuracy of results. McMahon assesses that the sampling pattern is suitable to be used for decision making and site characterisation.

Key features of the sampling pattern include:

- 8 systematic soil sample locations taken across the site. Samples will be analysed for heavy metals and pesticides (organochlorines and organophosphates).
- One soil duplicate sample.
- One soil rinsate sample.

By reference to the DQOs, maps of the investigation locations can be seen in **Attachment E**.

Sampling design justification

- Samples 1 - 8: to assess the near surface soil contamination from potential persistent pesticides from diffuse application.

Failure to meet objectives procedure

If the procedures undertaken do not satisfy the expected data quality objectives, a review of the sampling plan will be conducted prior to any further works.

Sampling and analysis methodology

The sampling officer wore unused disposable nitrile gloves to extract samples directly from the excavated pit to place into appropriately preserved sample receptacles. Collected sample containers were placed into a chilled esky for preservation prior to analysis. All in-field observations and any relevant comments are detailed in the field sheets and a Chain of Custody form was produced to accompany the samples to the laboratory.

Sampling standards

Sampling was undertaken by reference to:

- AS 4482.1:2005 - Guide to the investigation and sampling of sites with potentially contaminated soil Part 1: Non-volatile and semi-volatile compounds.
- AS 4482.2:1999 - Guide to the sampling and investigation of potentially contaminated soil Part 2: Volatile substances.

Although these standards have been recently withdrawn, they have been used in the absence of other national guidelines.

8.0 Results

The site inspection and sampling for this PSI was conducted over one day on 15 June 2023. The weather was cool with light winds. A summary of the field observations and sample analytical results are as follows.

Soil and site surface

- Soils are cracking brown highly plastic clay topsoils overlying cracking reddish brown highly plastic clay.
- There were no visual or olfactory indicators of chemical contamination on site.

Soil analysis

- Heavy metals are below the Limits of Reporting (LORs) and/or the adopted criteria.
- Pesticides are below LORs and the adopted criteria.

Quality control and quality assurance results

- The duplicate sample (5) returned relative percent differences of <30%.
- The rinsate sample retuned results below the laboratory limit of reporting.
- There were no laboratory outliers.
- Based on the above, the field and laboratory quality control and quality assurance is of a suitable quality to rely upon the results.

Tabulated results can be seen in **Attachment F**.

Laboratory reports can be seen in **Attachment G**.

9.0 Conceptual site model

A conceptual site model is a representation of site-related information regarding contamination sources, receptors and exposure pathways between those sources and receptors and is presented and follows.

Summary

The site has been used for agriculture/horticulture as far as records can ascertain. Chemicals associated with pesticide use may have accumulated in the soil. Receptors include future construction workers, site users, and the environment. Pathways are from soil disturbance during development and occupation. Short to medium-term soil contact is likely for future construction workers, and long-term soil contact is possible for future occupants.

Potential and known sources of contamination

- Persistent pesticides.

List of chemicals of potential concern

From the potential contamination sources, the Chemicals of Potential Concern (COPCs) are as follows:

- Heavy metals and pesticides.

Mechanism of contamination

The mechanism of contamination is predominantly top-down vertical and lateral migration into soil.

Potentially affected environmental media

- Soil.
- Surface water.
- Groundwater is unlikely to be impacted owing to the deep depths.

Consideration of spatial and temporal variations

Spatial variation in potential contamination is possible. Temporal variation is unlikely owing to the aged nature of potential contaminants.

Actual or potential exposure pathways

- Direct skin contact with soil for future construction workers, and future on-site occupants.
- Inhalation and/or ingestion of soil, vapour, and dust.
- Direct surface water contact.
- Groundwater ingestion.

Human and ecological receptors

- Future on-site users.
- Construction workers.
- Domestic groundwater users. No domestic groundwater bores currently exist on site.
- Down gradient ecological receptors.
- Future landscaping and ecological receptors.

Frequency of exposure

- Construction workers are assessed to be a short-term exposure risk.
- Future on-site users are assessed to have a long-term exposure risk.
- Future groundwater users are a medium to long-term exposure risk.
- Ecological receptors are assessed to be a medium to long-term exposure risk.

Source pathway receptor linkage assessment

- Future on-site construction workers have a risk of contact with potentially contaminated during construction and maintenance.
- Future on-site users have a risk of dermal contact with potentially contaminated soil during occupation and maintenance.
- Future on-site users have a risk of inhalation of potentially contaminated soil and dust.
- Groundwater use is unlikely.
- On site ecological receptors are limited at present but this could change with landscaping and land use.
- There is a low risk to down gradient ecological receptors from the migration of potentially contaminated surface water and groundwater as no gross soil contamination was found.
- The site is assessed to be suitable for the development given the adoption of the recommended site management strategies during development.

Discussion of multiple lines of evidence

A multiple lines of evidence approach is the process for evaluating and integrating information from different sources of data and uses best professional judgement to assess the consistency and plausibility of the conclusions which can be drawn, NEPM (2013).

Definitive information concerning the sources of potential contamination on site is satisfactory therefore the risk assessment relies heavily on the information provided by this PSI and is supplemented by data collected during sampling.

10.0 Conclusions and recommendations

This investigation met the objective of investigating and assessing potential contamination and providing a statement of site suitability for the proposed land use and an appropriate risk assessment framework for the management of the site during development.

The results of the investigation conclude that the identified potential contamination sources are assessed to be of low significance in terms of risk to current and future site users and the site is suitable for the proposed development.

The remnants of the bonfire are recommended to be classified in line with the NSW EPA (2014) Waste Classification Guidelines and disposed of at an appropriately licence landfill.

Although no filled gullies and dams were identified as part of this PSI, it is not uncommon to find these on agricultural/horticultural land. Care must be taken to identify and evaluated unexpected finds such as these during development under the unexpected finds protocol in **Section 12.0**.

This executive summary and the findings of this PSI are subject to the limitations as stated in **Section 11.0**.

11.0 Limitations and disclaimer

DM McMahon Pty Ltd has prepared this report in accordance with the usual care and thoroughness of the consulting profession for the use of TFA Project Group and only those third parties who have been authorised by DM McMahon Pty Ltd to rely on this report.

The information contained in this report has been extracted from field and laboratory sources believed to be reliable and accurate. DM McMahon Pty Ltd does not assume any responsibility for the misinterpretation of information supplied in this report. The accuracy and reliability of recommendations identified in this report need to be evaluated with due care according to individual circumstances. It should be noted that the recommendations and findings in this report are based solely upon the said site location and conditions at the time of assessment. The results of the said investigations undertaken are an overall representation of the conditions encountered. The properties of the soil, vapour and groundwater within the location may change due to variations in ground conditions outside of the assessed area. The author has no control or liability over site variability that may warrant further investigation that may lead to significant design and land use changes.

12.0 Unexpected findings

If any unconsolidated, odorous, stained, or deleterious soils, or suspect bonded/friable/fibrous asbestos containing material, fuel tanks, or septic systems are encountered during any further excavation, suspected historical contaminating activities are encountered, or conditions that are not alike the above descriptions, the site supervisor should be informed, the work stopped, and this office be contacted immediately for further evaluation by an appropriately qualified environmental consultant. The unexpected findings may trigger the need for more investigation and assessment dependant on the scope and context of the unexpected finding.

13.0 Notice of Copyright

14.0 Attachments

Attachment A : *Site location and proposed development plan*

310 Moama Street Hay NSW 2711

Preliminary Site Investigation
Report No. 9404
Google Earth image 2020

Legend
Boundary

Cadell St
B64
Hay
B75
Murrumbidgee River
Hay South
A20
A20
A20
Sturt Hwy
N
1 km
Google Earth
Image © 2023 CNES / Airbus

310 Moama Street Hay NSW 2711

Preliminary Site Investigation
Report No. 9404
Google Earth image 2020

Legend
Boundary

Miller St
A20
Sturt Hwy
Moama St
University Rd

Google Earth
Image © 2023 CNES / Airbus

N

100 m

R.P.D.
LOT 2
DP1212081
AREA APPROX 42,055m²

STURT HIGHWAY

SIGNPOST

POWER POLE
STRAINER POLE

UNIVERSITY ROAD

SPEED SIGN

A
A03

50000

ALL WEATHER ROAD BASE

114400

40m² DISPERSAL AREA FOR TREATED WATER FROM ABLUTION BLOCK. AREA TO BE DESIGNED AND SYSTEM INSTALLED TO COMPLY WITH RELEVANT CODES AND DEVELOPMENT APPROVALS.

PROPOSED LEASE AREA
APPROX. 6892m²

6m HIGH PYLON SITE SIGN

ENTRY ONLY SIGN
600W x 600H

ENTRY ONLY SIGN
2150W x 600H

B
A03

20600

PROPOSED ONSITE SEWAGE TREATMENT SYSTEM

ABLUTION BLOCK

3340

85/7kL DIES/ADB.

60000

EXIT ONLY SIGN
2150W x 600H

EXIT ONLY SIGN
600W x 600H

46700

CONCRETE APRON SLAB AT FILLING POINTS TYPICAL TO DRAIN TO SPILL CONTAINMENT TO COUNCIL'S SATISFACTION.

85kL DIESEL / 7kL ADBLUE DOUBLE WALL TANK

ALL WEATHER ROAD BASE

iOR PETROLEUM

Scale Bar
10 0 10 20 30 40 50m
Metres
Figured dimensions to be taken in preference to scale readings.

revision	date	by	description	checked
1	21.11.19	DGC	PRELIMINARY FOR CLIENT REVIEW	

PROJECT MANAGERS | DESIGNERS | PLANNERS | ENGINEERS
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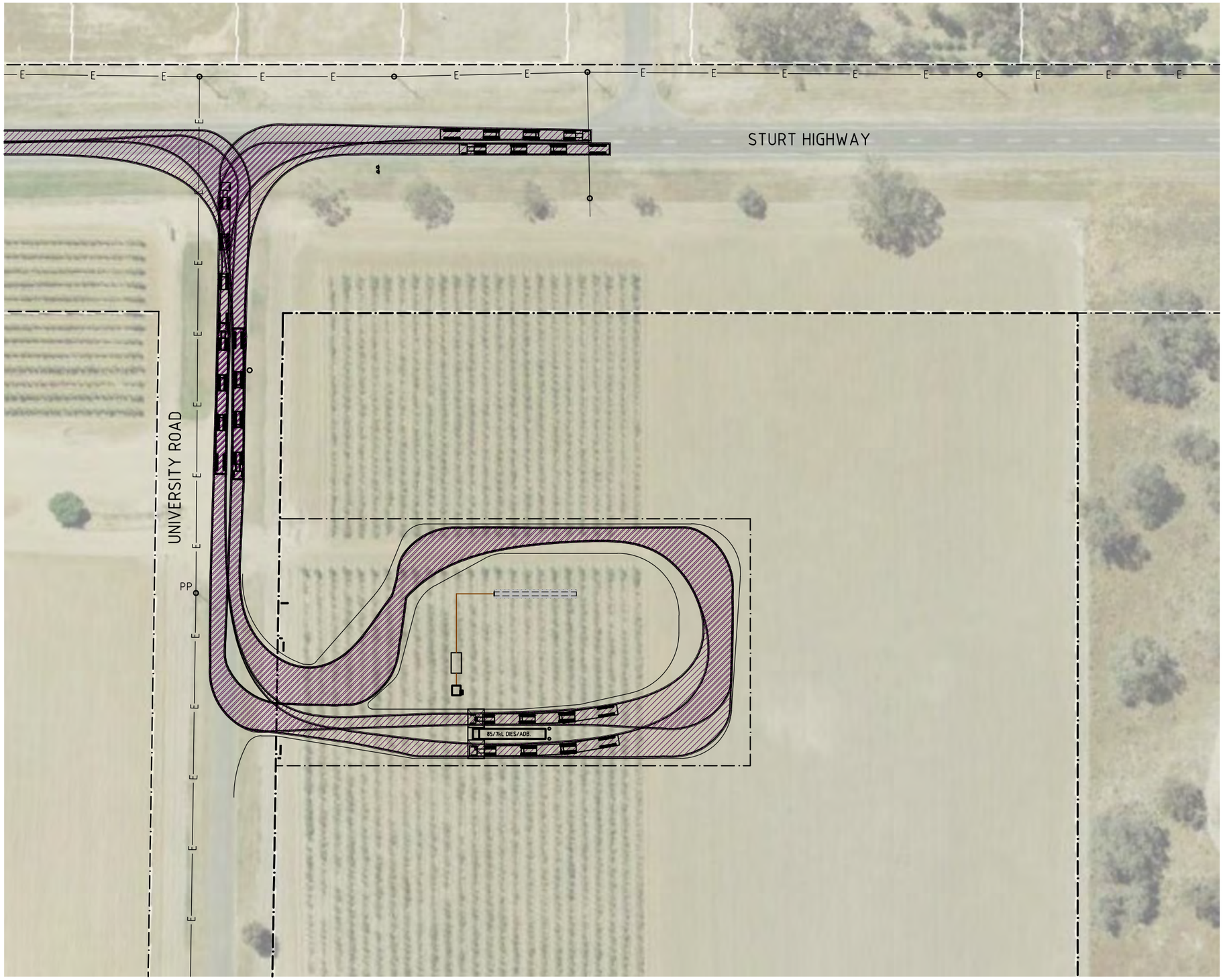
TfA Project Group

project
iOR PETROLEUM
UNMANNED TRUCK STOP
UNIVERSITY ROAD,
HAY SOUTH,
NEW SOUTH WALES

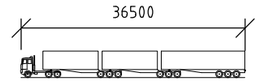
title
PROPOSED SITE LAYOUT

drawn	approved	date created	A1 scale	A3 scale
DGC	QC	21.11.19		1:1000

status	drawing no.	rev.
PRELIMINARY	19297–HAY–D01	1



R.P.D.
LOT 2
DP1212081
AREA APPROX 42,055m²



B-TRIPLE ELEVATION

iOR PETROLEUM

Scale Bar

10 0 10 20 30 40 50m

Metres

Figured dimensions to be taken in preference to scale readings.

revision	date	by	description	checked
A	21.11.19	DGC	PRELIMINARY FOR CLIENT REVIEW	

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TfA Project Group

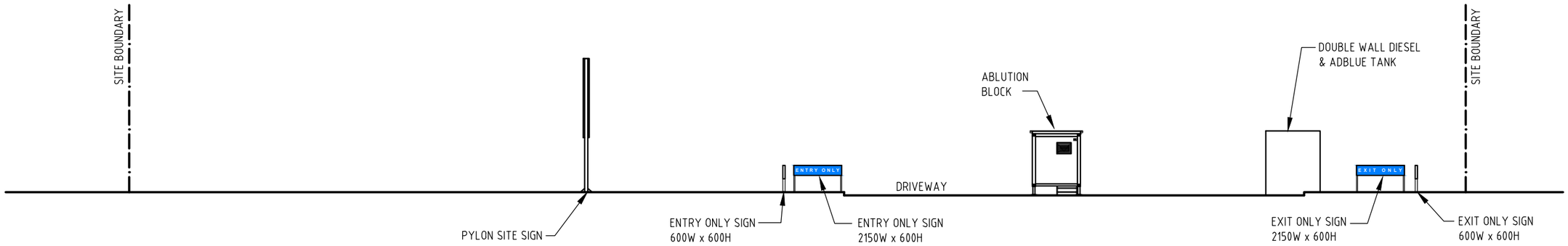
project
iOR PETROLEUM
UNMANNED TRUCK STOP
UNIVERSITY ROAD,
HAY SOUTH,
NEW SOUTH WALES

title
VEHICLE TURNING PATHS

drawn	approved	date created	A1 scale	A3 scale
DGC	QC	21.11.19		1:1000

status	drawing no.	rev.
PRELIMINARY	19297–HAY–D02	1

A D01 ELEVATION
1:200



B A02 ELEVATION
1:200

Scale Bar

2 0 5 10m

Metres

Figured dimensions to be taken in preference to scale readings.

revision	date	by	description	checked
A	20.11.19	DGC	PRELIMINARY FOR CLIENT REVIEW	

PROJECT MANAGERS | DESIGNERS | PLANNERS | ENGINEERS
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TFA Project Group

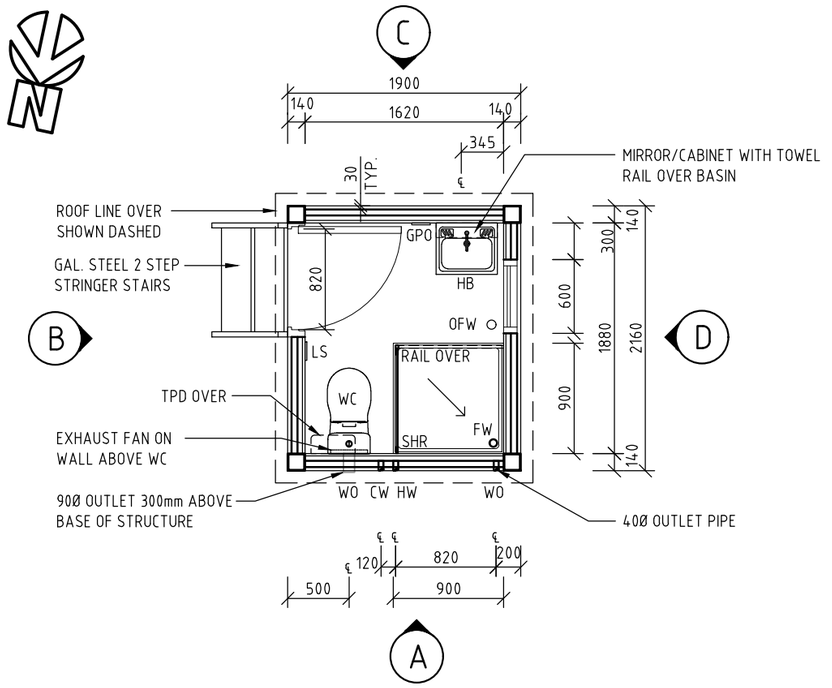
project
iOR PETROLEUM
UNMANNED TRUCK STOP
UNIVERSITY ROAD,
HAY SOUTH,
NEW SOUTH WALES

title
PROPOSED SITE ELEVATIONS

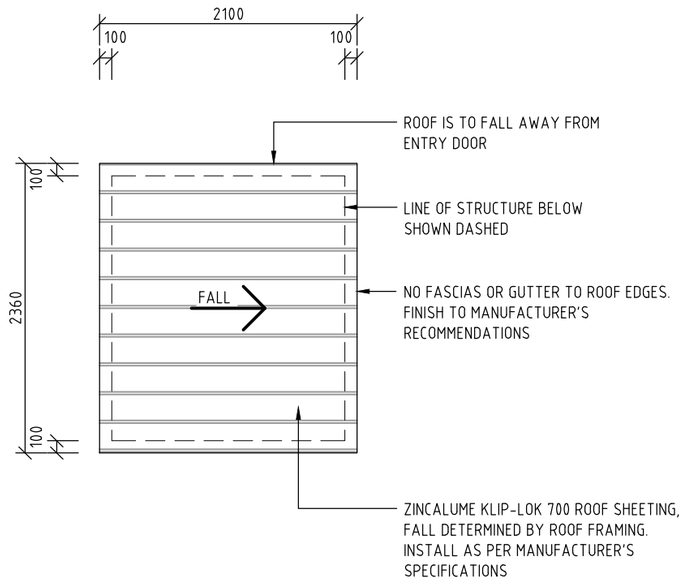
drawn	approved	date created	A1 scale	A3 scale
DGC		21.11.19		1: 200

status	drawing no.	rev.
PRELIMINARY	19297–HAY–D03	1

iOR PETROLEUM



FLOOR PLAN



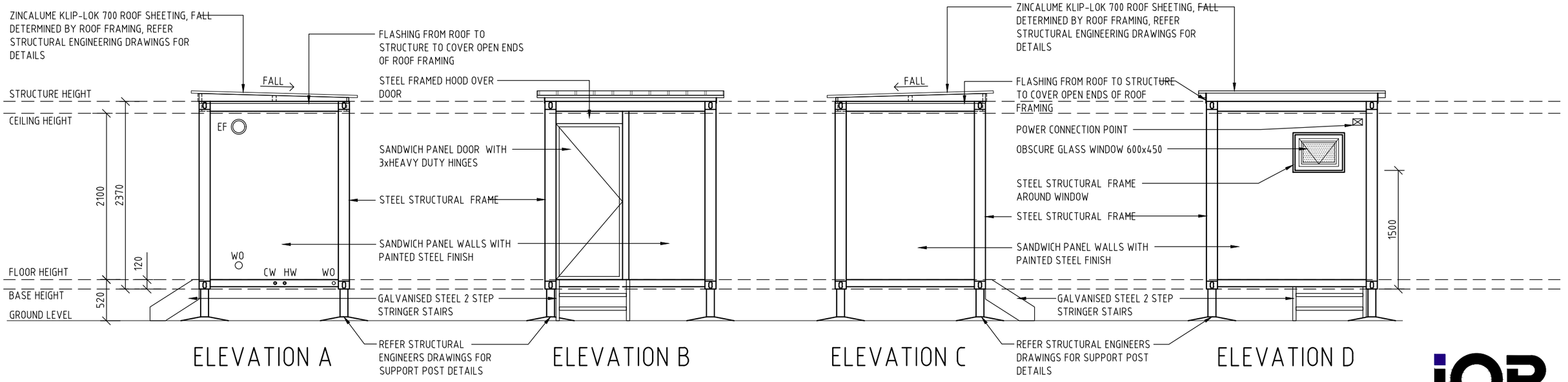
ROOF PLAN

NOTES

1. ALL SERVICES TO BE CONCEALED, RUN BELOW FLOOR OR IN WALL/ CEILING CAVITIES.
2. THE CONTRACTOR IS TO VERIFY ON SITE THAT THE INVERT & SERVICE LEVELS & REQUIRED COVER OVER DRAINAGE LINES ARE OBTAINABLE BEFORE COMMENCING WORKS.
3. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE BY-LAWS & THE REQUIREMENTS OF THE LOCAL BUILDING & PLUMBING INSPECTOR. ENSURE MATERIALS MEET THE FIRE RATING REQUIREMENTS OF THE QLD BUILDING CODE OF AUSTRALIA.
4. THESE DRAWINGS MUST BE READ IN CONJUNCTION WITH THE ARCHITECTS / DESIGNERS COUNCIL OR CERTIFIERS APPROVED BUILDING DRAWINGS.
5. FINISHED FLOOR LEVELS DETERMINED BY ON SITE CONDITIONS. REFER CIVIL & STRUCTURAL DESIGN FOR LEVELS, FOOTINGS AND STAIR REQUIREMENTS.

LEGEND

CW	COLD WATER CONNECTION
EF	EXHAUST FAN
FW	FLOOR WASTE
GPO	POWER OUTLET SINGLE
HB	HAND BASIN
HW	HOT WATER CONNECTION
HWU	HOT WATER UNIT
LS	LIGHT SWITCH
OFW	OVERFLOW FLOOR WASTE
ORG	OVERFLOW RELIEF GULLY
SHR	SHOWER
TPD	TOILET PAPER DISPENSER
WC	WATER CLOSET
WO	WASTE OUTLET



Scale Bar

0.5 0 0.5 1 1.5 2 2.5m

Metres

Figured dimensions to be taken in preference to scale readings.

revision	date	by	description	checked
1	21.11.19	DGC	PRELIMINARY FOR CLIENT REVIEW	

ACN 612 132 233
PROJECT MANAGERS | DESIGNERS | PLANNERS | ENGINEERS
Head office - 166 Knapp St, Fortitude Valley QLD 4006 Australia
Email: enquiry@tfa.com.au Ph. 61 7 3854 2900 Fax. 61 7 3854 2999

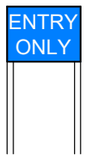
TfA Project Group

project
iOR PETROLEUM
UNMANNED TRUCK STOP
UNIVERSITY ROAD,
HAY,
NEW SOUTH WALES

title
ABLUTIONS – FLOOR PLAN, ROOF PLAN & ELEVATIONS

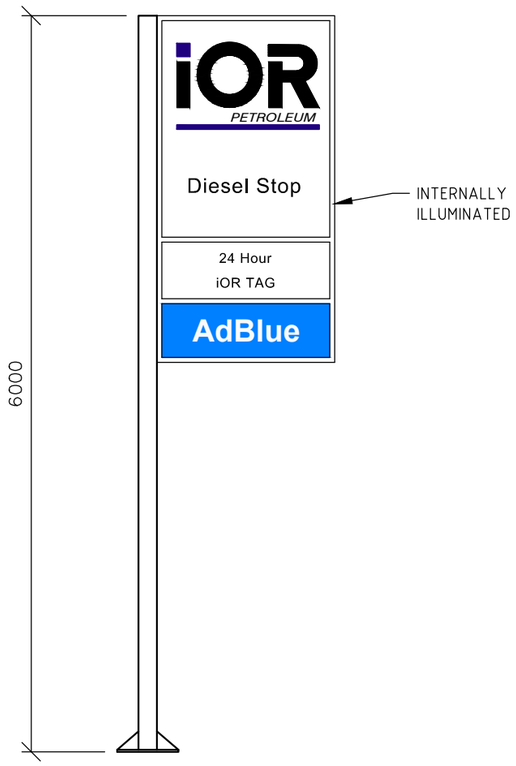
drawn	approved	date created	A1 scale	A3 scale
DGC		21.11.19	1: 25	1: 50

status	drawing no.	rev.
PRELIMINARY	19297–HAY–D04	1



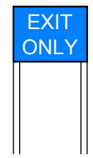
ENTRY ONLY SIGN
600W x 600H
1:50

ENTRY ONLY SIGN
2150W x 600H
1:50



6m HIGH PYLON SITE
SIGN
1:50

EXIT ONLY SIGN
2150W x 600H
1:50



EXIT ONLY SIGN
600W x 600H
1:50

Scale Bar

0.5 0 0.5 1 1.5 2 2.5m

Metres

Figured dimensions to be taken in preference to scale readings.

revision	date	by	description	checked
A	21.11.19	DGC	PRELIMINARY FOR CLIENT REVIEW	

PROJECT MANAGERS | DESIGNERS | PLANNERS | ENGINEERS
Head office - 166 Knapp St, Fortitude Valley QLD 4006 Australia
Email: enquiry@tfa.com.au Ph. 61 7 3854 2900 Fax. 61 7 3854 2999

TfA Project Group

project
iOR PETROLEUM
UNMANNED TRUCK STOP
UNIVERSITY ROAD,
HAY SOUTH,
NEW SOUTH WALES

title
PROPOSED SIGNAGE DETAILS

drawn	approved	date created	A1 scale	A3 scale
DGC		21.11.19		1:50

status	drawing no.	rev.
PRELIMINARY	19297–HAY–D05	1

iOR PETROLEUM

Attachment B : *Aerial photographs and satellite images*

310 Moama Street Hay NSW 2711

Preliminary Site Investigation
Report No. 9404
NSW LPI image 1962

Legend
Boundary

Miller St
A20
Sturt Hwy
Moama St
University Rd
N
100 m
Google Earth
Image © 2023 CNES / Airbus

310 Moama Street Hay NSW 2711

Preliminary Site Investigation
Report No. 9404
NSW LPI image 1973

Legend
Boundary

Miller St

A20

A20

Sturt Hwy

Moama St

University Rd

Google Earth

Image © 2023 CNES / Airbus

N

100 m

310 Moama Street Hay NSW 2711

Preliminary Site Investigation
Report No. 9404
NSW LPI image 1989

Legend
Boundary

Miller St
A20
A20
Sturt Hwy
Moama St
University Rd
N
100 m
Google Earth
Image © 2023 CNES / Airbus

310 Moama Street Hay NSW 2711

Preliminary Site Investigation
Report No. 9404
NSW LPI image 1993

Legend
Boundary

Miller St
A20
A20
Sturt Hwy
Moama St
University Rd
N
100 m
Google Earth
Image © 2023 CNES / Airbus

310 Moama Street Hay NSW 2711

Preliminary Site Investigation
Report No. 9404
Google Earth image 2002

Legend
Boundary

Miller St
A20
A20
Sturt Hwy
Moama St
University Rd
N
100 m
Google Earth
Image © 2023 Maxar Technologies

310 Moama Street Hay NSW 2711

Preliminary Site Investigation
Report No. 9404
Google Earth image 2007

Legend
Boundary

Miller St
A20
A20
Sturt Hwy
Moama St
University Rd

N

100 m

Google Earth
Image © 2023 Maxar Technologies

310 Moama Street Hay NSW 2711

Preliminary Site Investigation
Report No. 9404
Google Earth image 2010

Legend
Boundary

Miller St
A20
A20
Sturt Hwy
Moama St
University Rd

N

100 m

Google Earth
Image © 2023 Maxar Technologies

310 Moama Street Hay NSW 2711

Preliminary Site Investigation
Report No. 9404
Google Earth image 2011

Legend
Boundary

Miller St
A20
A20
Sturt Hwy
Moama St
University Rd

Google Earth
Image © 2023 Maxar Technologies

N

100 m

310 Moama Street Hay NSW 2711

Preliminary Site Investigation
Report No. 9404
Google Earth image 2013

Legend
Boundary

Miller St
A20
A20
Sturt Hwy
Moama St
University Rd

N

100 m

Google Earth
Image © 2023 CNES / Airbus

310 Moama Street Hay NSW 2711

Preliminary Site Investigation
Report No. 9404
Google Earth image 2015

Legend
Boundary

Miller St
A20
A20
Sturt Hwy
Moama St
University Rd

N
100 m

Google Earth
Image © 2023 Maxar Technologies

310 Moama Street Hay NSW 2711

Preliminary Site Investigation
Report No. 9404
Google Earth image 2017

Legend
Boundary

Miller St
A20
A20
Sturt Hwy
Moama St
University Rd
N
100 m
Google Earth
Image © 2023 Maxar Technologies

310 Moama Street Hay NSW 2711

Preliminary Site Investigation
Report No. 9404
Google Earth image 2018

Legend
Boundary

Miller St
A20
A20
Sturt Hwy
Moama St
University Rd

N
100 m

Google Earth
Image © 2023 CNES / Airbus

310 Moama Street Hay NSW 2711

Preliminary Site Investigation
Report No. 9404
Google Earth image 2020

Legend
Boundary

Miller St
A20
Sturt Hwy
Moama St
University Rd

N

100 m

Google Earth
Image © 2023 CNES / Airbus

Attachment C : *Site features*

310 Moama Street Hay NSW 2711

Preliminary Site Investigation
Report. No. 9404
Google Earth image 2020

Legend

- Boundary
- Irrigation channel

Miller St

A20

Sturt Hwy

A20

Moama St

Access gate

Irrigation gate

Access gate

Bonfire

Google Earth

Image © 2023 CNES / Airbus

N

100 m

Attachment D : *Site photographs*

Photograph 1: The cracking clay.

Photograph 2: Access gate to University Road.

Photograph 3: Irrigation channel and gate along University Road.

Photograph 4: Unimproved pasture with the vineyard in the background (facing east).

Photograph 5: Vineyard (facing north west). Tapper Agri Services can be seen in the background.

Photograph 6: Remnants of the bonfire in the centre of the site.

Attachment E : *Sampling map*

310 Moama Street Hay NSW 2711

Preliminary Site Investigation
Report. No. 9404
Google Earth image 2020

Legend

- Boundary
- Investigation locations

Miller St
A20
Sturt Hwy
Moama St
University Rd
1
2
3
4
5
6
7
8
N
100 m
Google Earth
Image © 2023 CNES / Airbus

Attachment G : *Tabulated results*

Page: 1 of 1
Job number: 9404
Project: 310 Moama Street Hay

			Sample date	6/7/23	6/7/23	6/7/23	6/7/23	6/7/23	6/7/23	6/7/23	6/7/23	-	-	-	-				
			Sample location	Paddock	Paddock	Paddock	Paddock	Paddock	Paddock	Paddock	Paddock	-	-	-	-				
			Sample ID	1	2	3	4	5	6	7	8	-	-	-	-				
			Sample depth (m)	0-0.3	0-0.3	0-0.3	0-0.3	0-0.3	0-0.3	0-0.3	0-0.3	-	-	-	-				
Compound	**LOR**	**Unit**		Result	Result	Result	Result	Result	Result	Result	Result	-	-	-	-	**HILs**	**HSLs**	**ACLs**	**EILs**	**ESLs**
Arsenic	5	mg/kg		5	<5	<5	<5	6	6	5	<5	-	-	-	-	3000	-	-	160	-
Cadmium	1	mg/kg		<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	900	-	-	-	-
Chromium	2	mg/kg		29	29	29	28	35	34	31	34	-	-	-	-	-	-	660	-	-
Copper	5	mg/kg		30	41	39	35	38	41	44	44	-	-	-	-	240000	-	320	-	-
Lead	5	mg/kg		14	14	14	14	17	17	16	16	-	-	-	-	1500	-	1800	-	-
Nickel	2	mg/kg		24	24	24	23	24	24	25	24	-	-	-	-	6000	-	460	-	-
Zinc	5	mg/kg		46	48	46	44	50	52	51	54	-	-	-	-	400000	-	1100	-	-
Mercury	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	730	-	-	-	-
PCBs	0.1	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-	7	-	-	-	-
HCB	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	80	-	-	-	-
Heptachlor	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	50	-	-	-	-
Chlordane	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	530	-	-	-	-
Endrin	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	100	-	-	-	-
Endosulfan	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	2000	-	-	-	-
Aldrin+dieldrin	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05	0.99	<0.05	<0.05	-	-	-	-	45	-	-	-	-
DDT+DDE+DDD	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05	0.98	<0.05	<0.05	-	-	-	-	3600	-	-	-	-
Chlorpyrifos	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	2000	-	-	-	-
Phenols	0.5	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-	240000	-	-	-	-
PAHs	0.5	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-	4000	-	-	-	-
Benzo(a)pyrene	0.5	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-	-				
Benzo(a)pyrene TEQ (half LOR)	0.5	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-	40	-	-	-	0.7
TRH C6-C10 minux BTEX (F1)	10	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-	-	310	-	-	215
TRH C10-C16 minus napthalene (F2)	50	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	170
TRH C16-C34 (F3)	100	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2500
TRH C34-C40 (F4)	100	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6600
Benzene	0.2	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	95
Toluene	0.5	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	135
Ethylbenzene	0.5	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	185
Xylenes	0.5	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	95
Napthalene	1	mg/kg		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	370	-

Commercial/Industrial (D) Criteria

Attachment H : *Laboratory reports*

CERTIFICATE OF ANALYSIS

Work Order	: **ES2322626**	Page	: 1 of 8
Client	: **DM MCMAHON PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MR DAVID MCMAHON	Contact	: Customer Services ES
Address	: 6 JONES ST Wagga Wagga NSW, AUSTRALIA 2650	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: 02 6931 0510	Telephone	: +61-2-8784 8555
Project	: 310 Moama Street Hay	Date Samples Received	: 07-Jul-2023 10:50
Order number	: 9404	Date Analysis Commenced	: 10-Jul-2023
C-O-C number	: ----	Issue Date	: 13-Jul-2023 11:40
Sampler	: D. McMahon		
Site	: ----		
Quote number	: EN/222		
No. of samples received	: 10		
No. of samples analysed	: 10		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Alex Rossi	Organic Chemist	Sydney Organics, Smithfield, NSW
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Evie Sidarta	Inorganic Chemist	Sydney Inorganics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- EP068: Where reported, Total Chlordane (sum) is the sum of the reported concentrations of cis-Chlordane and trans-Chlordane at or above the LOR.
- EP068: Where reported, Total OCP is the sum of the reported concentrations of all Organochlorine Pesticides at or above LOR.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	1	2	3	4	5
			Sampling date / time	06-Jul-2023 00:00	06-Jul-2023 00:00	06-Jul-2023 00:00	06-Jul-2023 00:00	06-Jul-2023 00:00
Compound	CAS Number	LOR	Unit	ES2322626-001	ES2322626-002	ES2322626-003	ES2322626-004	ES2322626-005
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	**20.2**	**20.5**	**18.7**	**19.1**	**22.5**
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	<5	**6**
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	**29**	**29**	**29**	**28**	**35**
Copper	7440-50-8	5	mg/kg	**30**	**41**	**39**	**35**	**38**
Lead	7439-92-1	5	mg/kg	**14**	**14**	**14**	**14**	**17**
Nickel	7440-02-0	2	mg/kg	**24**	**24**	**24**	**23**	**24**
Zinc	7440-66-6	5	mg/kg	**46**	**48**	**46**	**44**	**50**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	1	2	3	4	5
			Sampling date / time	06-Jul-2023 00:00	06-Jul-2023 00:00	06-Jul-2023 00:00	06-Jul-2023 00:00	06-Jul-2023 00:00
Compound	CAS Number	LOR	Unit	ES2322626-001	ES2322626-002	ES2322626-003	ES2322626-004	ES2322626-005
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	**96.2**	**99.8**	**89.7**	**108**	**89.8**
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	**82.2**	**87.3**	**75.0**	**88.4**	**77.9**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	6	7	8	Duplicate	----
			Sampling date / time	06-Jul-2023 00:00	06-Jul-2023 00:00	06-Jul-2023 00:00	06-Jul-2023 00:00	----
Compound	CAS Number	LOR	Unit	ES2322626-006	ES2322626-007	ES2322626-008	ES2322626-009	--------
				Result	Result	Result	Result	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	**22.2**	**21.2**	**22.5**	**22.1**	**----**
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	**6**	**5**	<5	**5**	**----**
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	**----**
Chromium	7440-47-3	2	mg/kg	**34**	**31**	**34**	**36**	**----**
Copper	7440-50-8	5	mg/kg	**41**	**44**	**44**	**38**	**----**
Lead	7439-92-1	5	mg/kg	**17**	**16**	**16**	**17**	**----**
Nickel	7440-02-0	2	mg/kg	**24**	**25**	**24**	**24**	**----**
Zinc	7440-66-6	5	mg/kg	**52**	**51**	**54**	**50**	**----**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	**----**
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	<0.05	**----**	**----**
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	<0.05	**----**	**----**
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	<0.05	**----**	**----**
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	<0.05	**----**	**----**
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	**----**	**----**
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	<0.05	**----**	**----**
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	<0.05	**----**	**----**
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	<0.05	**----**	**----**
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	<0.05	<0.05	**----**	**----**
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	<0.05	**----**	**----**
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	<0.05	**----**	**----**
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	<0.05	**----**	**----**
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	**----**	**----**
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	<0.05	**----**	**----**
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.05	**----**	**----**
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	**----**	**----**
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	<0.05	<0.05	**----**	**----**
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	**----**	**----**
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	**----**	**----**
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	**----**	**----**
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	<0.2	**----**	**----**
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	<0.05	**----**	**----**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	6	7	8	Duplicate	----
				Sampling date / time	06-Jul-2023 00:00	06-Jul-2023 00:00	06-Jul-2023 00:00	06-Jul-2023 00:00	----
Compound	CAS Number	LOR	Unit		ES2322626-006	ES2322626-007	ES2322626-008	ES2322626-009	--------
					Result	Result	Result	Result	----
EP068A: Organochlorine Pesticides (OC) - Continued									
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	<0.2	<0.2	----	----
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-2	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Monocrotophos	6923-22-4	0.2	mg/kg		<0.2	<0.2	<0.2	----	----
Dimethoate	60-51-5	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Diazinon	333-41-5	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Parathion-methyl	298-00-0	0.2	mg/kg		<0.2	<0.2	<0.2	----	----
Malathion	121-75-5	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Fenthion	55-38-9	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Parathion	56-38-2	0.2	mg/kg		<0.2	<0.2	<0.2	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Fenamiphos	22224-92-6	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Prothiofos	34643-46-4	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Ethion	563-12-2	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Carbophenothion	786-19-6	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		**103**	**93.3**	**99.6**	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		**96.5**	**81.3**	**85.2**	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	Rinsate	----	----	----	----
				Sampling date / time	06-Jul-2023 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2322626-010	--------	--------	--------	--------
					Result	----	----	----	----
EG020T: Total Metals by ICP-MS									
Arsenic	7440-38-2	0.001	mg/L		<0.001	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	----	----	----	----
Chromium	7440-47-3	0.001	mg/L		<0.001	----	----	----	----
Copper	7440-50-8	0.001	mg/L		<0.001	----	----	----	----
Nickel	7440-02-0	0.001	mg/L		<0.001	----	----	----	----
Lead	7439-92-1	0.001	mg/L		<0.001	----	----	----	----
Zinc	7440-66-6	0.005	mg/L		<0.005	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	----	----	----	----

Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	49	147
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	35	143

Chain of Custody

DM McMahon Pty Ltd
6 Jones Street
PO Box 6118, Wagga Wagga NSW 2650
Ph: (02) 69 310 510

Turnaround Requirements: ☑ Standard TAT ☐ Non Standard or Urgent TAT (List Due Date):

Relinquished by:	D. McMahon
Date:	6/07/2023
Signature:	DM
Received by:	Zac-L
Date:	7/7/23 10:50
Signature:	Zac
Relinquished by:	
Date:	
Signature:	
Received by:	
Date:	
Signature:	

Analysing Laboratory:	ALS Environmental - Sydney
Project:	310 Moama Street Hay
Order No.:	9404
Project Manager:	David McMahon
Contact Ph:	(02) 69 310 510
Sampling Officer:	D. McMahon
Report Format:	Default
Email Reports to:	admin@dmmcmahon.com.au
Email Invoice to:	admin@dmmcmahon.com.au

For Laboratory Use Only (Circle)

Custody Seal Intact?	Yes	No	N/A
Free ice/ Frozen ice bricks present upon sample	Yes	No	N/A
Random sample temp on receipt:			°C
Other comments:			

QUOTE NO.:

Lab Comments:

COC SEQUENCE NUMBER

COC:	1	2	3	4	5	6	7	8
OF:	1	2	3	4	5	6	7	8

LAB USE	SAMPLE DETAILS			CONTAINER INFORMATION		ANALYSIS REQUIRED including suites (where metals are required, specify Total or Dissolved)										Additional Information
LAB ID	SAMPLE ID	DATE/TIME	MATRIX (ref below)	TYPE & PRESERVATIVE (see codes below)	TOTAL CONTAINERS	S-2 (metals)	S-12 (OCP/OPP)	W-2 (metals)								Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
1	1 to 8	6/07/2023	S	Jar	8	✓	✓									
2	Duplicate	6/07/2023	S	Jar	1	✓										
3	Rinsate	6/07/2023	W	NP	1			✓								
				TOTAL	10											

Environmental Division
Sydney
Work Order Reference
ES2322626

Telephone : +61-2-8784 8555

Matrix	Container Codes:
W- Water; S - Soil; Sed - Sediment; Sl - Sludge; A - Air; D - Dust.	P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP = Airfreight Unpreserved Plastic; V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass; Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2322626**

Client	: **DM MCMAHON PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MR DAVID MCMAHON	Contact	: Customer Services ES
Address	: 6 JONES ST Wagga Wagga NSW, AUSTRALIA 2650	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: david@dmmcmahon.com.au	E-mail	: ALSEnviro.Sydney@ALSGlobal.com
Telephone	: 02 6931 0510	Telephone	: +61-2-8784 8555
Facsimile	: 02 6931 0511	Facsimile	: +61-2-8784 8500
Project	: 310 Moama Street Hay	Page	: 1 of 3
Order number	: 9404	Quote number	: EB2017DMMCMA0001 (EN/222)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: ----		
Sampler	: D. McMahon		

Dates

Date Samples Received	: 07-Jul-2023 10:50	Issue Date	: 07-Jul-2023
Client Requested Due Date	: 13-Jul-2023	Scheduled Reporting Date	: **13-Jul-2023**

Delivery Details

Mode of Delivery	: Carrier	Security Seal	: Not Available
No. of coolers/boxes	: 1	Temperature	: 12.1'C - Ice Bricks present
Receipt Detail	: Hard Esky	No. of samples received / analysed	: 10 / 10

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Analytical work for this work order will be conducted at ALS Sydney.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.

Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- **No sample container / preservation non-compliance exists.**

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **SOIL**

Laboratory sample ID	Sampling date / time	Sample ID	SOIL - EA055-103 Moisture Content	SOIL - S-02 8 Metals (incl. Digestion)	SOIL - S-12 OC/OP Pesticides
ES2322626-001	06-Jul-2023 00:00	1	✓	✓	✓
ES2322626-002	06-Jul-2023 00:00	2	✓	✓	✓
ES2322626-003	06-Jul-2023 00:00	3	✓	✓	✓
ES2322626-004	06-Jul-2023 00:00	4	✓	✓	✓
ES2322626-005	06-Jul-2023 00:00	5	✓	✓	✓
ES2322626-006	06-Jul-2023 00:00	6	✓	✓	✓
ES2322626-007	06-Jul-2023 00:00	7	✓	✓	✓
ES2322626-008	06-Jul-2023 00:00	8	✓	✓	✓
ES2322626-009	06-Jul-2023 00:00	Duplicate	✓	✓	

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - W-02T 8 metals (Total)
ES2322626-010	06-Jul-2023 00:00	Rinsate	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

Requested Deliverables

ADMIN

- *AU Certificate of Analysis - NATA (COA)	Email	admin@dmmcmahon.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	admin@dmmcmahon.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	admin@dmmcmahon.com.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	admin@dmmcmahon.com.au
- A4 - AU Tax Invoice (INV)	Email	admin@dmmcmahon.com.au
- Chain of Custody (CoC) (COC)	Email	admin@dmmcmahon.com.au
- EDI Format - XTab (XTAB)	Email	admin@dmmcmahon.com.au

DAVID MCMAHON

- *AU Certificate of Analysis - NATA (COA)	Email	david@dmmcmahon.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	david@dmmcmahon.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	david@dmmcmahon.com.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	david@dmmcmahon.com.au
- A4 - AU Tax Invoice (INV)	Email	david@dmmcmahon.com.au
- Chain of Custody (CoC) (COC)	Email	david@dmmcmahon.com.au
- EDI Format - XTab (XTAB)	Email	david@dmmcmahon.com.au

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2322626**	Page	: 1 of 5
Client	: **DM MCMAHON PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MR DAVID MCMAHON	Telephone	: +61-2-8784 8555
Project	: 310 Moama Street Hay	Date Samples Received	: 07-Jul-2023
Site	: ----	Issue Date	: 13-Jul-2023
Sampler	: D. McMahon	No. of samples received	: 10
Order number	: 9404	No. of samples analysed	: 10

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO Method Blank value outliers occur.**
- **NO Duplicate outliers occur.**
- **NO Laboratory Control outliers occur.**
- **NO Matrix Spike outliers occur.**
- **For all regular sample matrices, NO surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

- **NO Analysis Holding Time Outliers exist.**

Outliers : Frequency of Quality Control Samples

- **NO Quality Control Sample Frequency Outliers exist.**

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for ***VOC in soils*** vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C)							
Soil Glass Jar - Unpreserved (EA055)							
1, 2, 3, 4, 5, 6, 7, 8, Duplicate	**06-Jul-2023**	**----**	----	----	**11-Jul-2023**	20-Jul-2023	✓
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T)							
1, 2, 3, 4, 5, 6, 7, 8, Duplicate	**06-Jul-2023**	**12-Jul-2023**	02-Jan-2024	✓	**12-Jul-2023**	02-Jan-2024	✓
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T)							
1, 2, 3, 4, 5, 6, 7, 8, Duplicate	**06-Jul-2023**	**12-Jul-2023**	03-Aug-2023	✓	**13-Jul-2023**	03-Aug-2023	✓
EP068A: Organochlorine Pesticides (OC)							
Soil Glass Jar - Unpreserved (EP068)							
1, 2, 3, 4, 5, 6, 7, 8	**06-Jul-2023**	**10-Jul-2023**	20-Jul-2023	✓	**11-Jul-2023**	19-Aug-2023	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP068B: Organophosphorus Pesticides (OP)							
Soil Glass Jar - Unpreserved (EP068)							
1, 2, 3, 4, 5, 6, 7, 8	**06-Jul-2023**	**10-Jul-2023**	20-Jul-2023	✓	**11-Jul-2023**	19-Aug-2023	✓

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG020T: Total Metals by ICP-MS							
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG020A-T)							
Rinsate	**06-Jul-2023**	**10-Jul-2023**	02-Jan-2024	✓	**10-Jul-2023**	02-Jan-2024	✓
EG035T: Total Recoverable Mercury by FIMS							
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG035T)							
Rinsate	**06-Jul-2023**	**----**	----	----	**11-Jul-2023**	03-Aug-2023	✓

Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	8	**12.50**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	19	**10.53**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Pesticides by GCMS	EP068	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Pesticides by GCMS	EP068	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Pesticides by GCMS	EP068	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Total Mercury by FIMS	EG035T	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	2	18	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Total Mercury by FIMS	EG035T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Total Mercury by FIMS	EG035T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Total Mercury by FIMS	EG035T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM Schedule B(3).
Total Metals by ICP-AES	EG005T	SOIL	In house: Referenced to APHA 3120; USEPA SW 846 - 6010. Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl2) (Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3)
Pesticides by GCMS	EP068	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM Schedule B(3).
Total Metals by ICP-MS - Suite A	EG020A-T	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Total Mercury by FIMS	EG035T	WATER	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the unfiltered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3).

Preparation Methods	Method	Matrix	Method Descriptions
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM Schedule B(3).
Tumbler Extraction of Solids	ORG17	SOIL	In house: Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 30mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.
Digestion for Total Recoverable Metals	EN25	WATER	In house: Referenced to USEPA SW846-3005. Method 3005 is a Nitric/Hydrochloric acid digestion procedure used to prepare surface and ground water samples for analysis by ICPAES or ICPMS. This method is compliant with NEPM Schedule B(3)