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Addendum - Risk and Hazard Screening

Industrial Subdivision and General Industrial Development, 2 & 10 Bowman Road, Moss Vale

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We declare that:
The report contains all available information that is relevant to the assessment of the Site and proposed development, activity or infrastructure to which the report relates, and the information contained in the report is neither false nor misleading.

Report version	Authors	Date	Reviewer	Approved for issue	Date
Draft	C. Rich	22/04/2024	Dr. M Jackson	Dr. M Jackson	17/04/2024
Final	C. Rich	22/04/2024	Dr. M Jackson	Dr. M Jackson	24/04//2024

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1. Introduction

Wingecarribee Shire Council (WSC) has requested further information regarding the potential risks and hazards associated with the proposed General Industry and Subdivision (the Proposal) to be located at 2 and 10 Bowman Road, Moss Vale. The Proposal involves the subdivision and realignment of boundaries to create a four-lot subdivision. Three of the lots are within the E4 General Industrial land use zone and it is proposed to construct a large industrial building with internal offices and external hardstand and parking on each of these three lots. The proposed development also includes construction of a 430m extension of Bowman Road and a 160m section of Hutchinson Road. A development application (DA 24/0302) was submitted to Wingecarribee Shire Council (WSC) on 5th September 2023.

Parts of the proposed development area are affected by an easement that conveys two high pressure gas transmission pipelines owned and operated by APA Group. The pipelines are the Moomba to Sydney Ethane Pipeline and Moomba to Wilton Natural Gas Pipeline. The proposed industrial development has been designed to minimise the extent of works required within the pipeline easement, which will be limited to the following:

- Bowman Road pipeline crossing;
- Part of the driveway crossing required for Building 2;
- A services crossing to incorporate water, sewer, and electrical; and
- Landscaping in the form of turfed areas and exclusion fencing.

Extensive consultation with APA Group has been undertaken to ensure the Proposal is consistent with all requirements for works within and adjacent to the pipeline easement. The consultation included a design workshop involving representatives from APA Group, Jackson Environment and Planning Pty Ltd (planning and project management), the project engineer (ECLIPSE Consulting Engineers), and the project landscape architect (Moir Landscape Architecture). The workshop was used to identify the main risks to the pipeline from the proposed development, and to outline the requirements for design, pipeline inspections, monitoring, and further consultation. SAAS Aus Pty Ltd is committed to ensuring APA Group is consulted at every stage of the process to ensure the project meets all strict requirements.

WSC requested the following information:

- Written consideration is required in relation to land use safety implications of developing within proximity to the gas pipeline, noting that in accordance with the provisions of section 2.77(1), *State Environmental Planning Policy (Transport and Infrastructure)* 2021, Council must be satisfied that the potential safety risks or risks to the integrity of the pipeline that are associated with the development to which the application relates have been identified; and
- An addendum to the submitted Statement of Environmental Effects is required to address any provisions of Chapter 3 Hazardous and offensive development, *State Environmental Planning Policy (Resilience and Hazards)* 2021 applicable to the proposal.

This report includes a risk assessment to address Council's concerns regarding the potential safety implications of developing in close proximity to the gas pipelines and a preliminary risk screening in accordance with *Hazardous and Offensive Development Application Guidelines – Applying SEPP 33* (NSW Department of Planning, 2011) to address the Transport and Infrastructure SEPP requirements.

2. Preliminary Risk Screening

2.1. Methodology

This preliminary risk screening has been prepared in accordance with the *Hazardous and Offensive Development Application Guidelines – Applying SEPP 33*[1] (Applying SEPP 33). The Applying SEPP 33 Guidelines sets out the process for determining whether a proposal is potentially hazardous or potentially offensive, and therefore whether the provisions of Chapter 3 of the *State Environmental Planning Policy (Resilience and Hazards)* 2021 (R&H SEPP) apply to a proposal.

The process considers the materials that are to be stored on-site or used in processing equipment and whether the proposal will emit any discharges that could potentially cause an offence (e.g., polluting air or water emissions, excessive noise). Potential risk typically of holding certain types of hazardous materials on site depends on:

- The properties of the substance(s) being handled or stored;
- The conditions of storage or use;
- The quantity involved;
- The location with respect to the site boundary; and
- The surrounding land uses.

In the case of the proposed development, no materials to be stored or used on-site are potentially hazardous or offensive, but the proposed development involves work within and adjacent to the easement for two high pressure gas pipelines: the Moomba to Sydney Ethane Pipeline and the Moomba to Wilton Natural Gas Pipeline owned and operated by APA Group. This assessment considers whether the proposed development could potentially impact the integrity or safety around the easement.

Risk screening needs to be undertaken as part of the Applying SEPP 33 guidelines based on an estimate of the consequences of fire, explosion or toxic release from material(s) being handled. It considers information from the proponent on the properties of the materials, quantity, type of storage or use, and location.

The methodology used to inform preliminary hazard analysis and environmental risk assessment has included the following steps:

- Identify and screen the hazards associated with the project;
- Examine the maximum reasonable consequence of identified events;
- Qualitatively estimate the likelihood of events;
- Proposed risk treatment measures;
- Qualitatively assess risks to the environment, member of the public and their property arising from atypical and abnormal events and compare these to applicable qualitative criteria;
- Recommend further risk treatment measures if considered warranted; and
- Qualitatively determine the residual risk assuming the implementation of the risk treatment measures.

2.2. Potentially hazardous or offensive industry

Under the R&H SEPP, a potentially hazardous industry is defined as:

> *A development for the purposes of any industry which, if the development were to operate without employing any measures (including, for example, isolation from existing or likely future development*

[1] NSW Department of Planning (2011a). *Hazardous and Offensive Development Application Guidelines – Applying SEPP 33*.

on other land) to reduce or minimise its impact in the locality or on the existing or likely future development on other land, would pose a significant risk in relation to the locality—

a) to human health, life or property, or

b) to the biophysical environment,

and includes a hazardous industry and a hazardous storage establishment.

Appendix 2 of Applying SEPP 33 provides a checklist to assist in determining whether a proposal meets the definition of a potentially hazardous or offensive industry. For a potentially hazardous industry, the checklist relates to the presence of dangerous goods and otherwise hazardous materials involved in the proposed development. This includes raw materials, intermediates, and products, incompatible materials (including non-hazardous materials), potentially hazardous waste products, dusts, and storage or processing operations including the use of dangerous goods or hazardous materials in the operation of plant and equipment. For potentially offensive industry, the checklist requests information on materials or processes that may produce air, noise, water, or other emissions with a potential for pollution, and details of pollution control licenses, permits or agreements.

The proposed development will be used for the storage, assembly, maintenance, transport, and hire of scaffolding equipment for SAAS's three scaffolding businesses. Consequently, no large quantities of dangerous goods or hazardous materials are proposed to be stored on-site. The only chemicals to be present on-site will be standard cleaning chemicals for general hygiene purposes. No processing plant or equipment that uses dangerous goods or hazardous materials for its operation will be present on-site, and no fuel or LPG is proposed to be stored on-site. Therefore, the proposal is **NOT** considered potentially hazardous industry.

The operation of the proposed development will not release any potentially offensive emissions. The only emissions from the proposed development will be those typically associated with all large-scale developments, being:

- Noise generation from vehicle movements;
- Air quality emissions from vehicle movements and general building operation (e.g. greenhouse gas emissions associated with electricity usage); and
- Stormwater overflows from the on-site stormwater management systems.

The proposed development will not require any pollution control licenses, permits or agreements for any of the emissions. The proposed development is to be in an industrial zoned area alongside other large-scale industrial operations (e.g. the Wingecarribee Resource Recovery Facility) away from residential areas. The location will reduce the likelihood that the operation will negatively impact other land uses. Therefore, the proposed development is **NOT** considered a potentially offensive industry.

As the proposed development is not considered a potentially hazardous or offensive industry, a Preliminary Hazard Analysis is not required. However, the operation of the gas pipelines would be considered a hazardous industry; therefore, a risk assessment to consider the potential impact of the construction and operation of the proposed development has been prepared in the following section.

3. Risk Assessment

Whilst the proposed development is not a potentially hazardous or offensive industry, the construction phase poses a risk to the operation of the high pressure gas pipeline that traverses part of the development Site. The proposed development has been designed to minimise works within the gas pipeline easement as far as possible, and the pipeline owner/operator, APA Group, has been consulted during the design process to reduce the potential risks.

The following environmental risk assessment has been prepared to consider the risks associated with construction and operation of the proposed development in close proximity to the gas pipeline easement. The environmental risk assessment has been informed by AS/NZ 31000: 2009 *Risk Management Principles and Guidelines* and *Hazardous Industry Planning Advisory Paper No 3 - Risk Assessment*[2] (HIPAP3). The risk management process has been informed by the following elements:

- Establish the context;
- Identify the risks;
- Analyse the risks;
- Evaluate the risks; and
- Treat risks.

3.1. Risk Criteria

The following principles have been adopted to identify and assess risk in this study. This has been informed by the *Hazardous Industry Planning Advisory Paper No. 4 – Risk Criteria for Land Use Safety Planning*[3] (HIPAP4).

- The avoidance of all avoidable risks;
- The risk from a major hazard should be reduced wherever practicable, even where the likelihood of exposure is low;
- The effects of significant events should, wherever possible be contained within the site boundary; and
- Where the risk from an existing installation is already high, further development should not pose any incremental risk.

3.2. Qualitative measurement of consequence, likelihood, and risk

To undertake a qualitative risk assessment, it is useful to describe the levels of consequence of a particular event, and the likelihood or probability of such an event occurring. Risk assessment criteria have been developed in AS/NZS ISO 31000: 2009 which allows the risk assessor to develop risk criteria during the establishment of the context.

In accordance with AS/NZS ISO 31000: 2009,

[2] NSW Department of Planning (2011b). *Hazardous Industry Planning Advisory Paper No 3 - Risk Assessment*.
[3] NSW Department of Planning (2011c). *Hazardous Industry Planning Advisory Paper No. 4 – Risk Criteria for Land Use Safety Planning.*

Table 3.1 and Table 3.2 have been reviewed as part of establishing the context of the project. These tables were considered to be consistent with the specific objectives of the preliminary hazard analysis and environmental risk assessment.

Table 3.1. Qualitative measures of probability.

Event	Likelihood	Description
A	Almost certain	Happens often
B	Likely	Could easily happen
C	Possible	Could happen and has occurred elsewhere
D	Unlikely	Hasn't happened yet but could
E	Rare	Conceivable, but only in extreme circumstances

Table 3.2. Qualitative measures of maximum reasonable consequence.

Event	People	Environment	Asset / Production
1	Multiple fatalities	Extreme environmental harm (e.g. widespread catastrophic impact on environmental values of an area)	More than $1B loss or production delay
2	Permanent total disabilities, single fatality	Major environmental harm (e.g. widespread substantial impact on environmental values of an area)	$100M to $1B or production delay
3	Minor injury or health effects (e.g. major lost workday case / permanent disability)	Serious environmental harm (e.g. widespread and considerable impact on environmental values of an area)	$5M - $100M loss or production delay
4	Minor injury or health effects (e.g. restricted work or minor lost workday case)	Material environmental harm (e.g. localised and considerable impact on environmental values of an area)	$250K to $5M loss or production delay
5	Slight injury or health effects (e.g. first aid / minor medical treatment needed)	Minimum environmental harm (e.g. minor impact on environmental values of an area)	Less than $250K or production delay

Combining the probability and consequence tables, Table 3.3 provides a qualitative risk analysis matrix to assess risk levels.

Table 3.3. Qualitative risk analysis matrix used in this preliminary hazard analysis and environmental risk assessment.

		Probability[1]				
		A	B	C	D	E
Consequence	1	1 (H)	2 (H)	4 (H)	7 (M)	11 (M)
	2	3 (H)	5 (H)	8 (M)	12 (M)	16 (L)
	3	6 (H)	9 (M)	13 (M)	17 (L)	20 (L)
	4	10 (M)	14 (M)	18 (L)	21 (L)	23 (L)
	5	15 (M)	19 (L)	22 (L)	24 (L)	25 (L)

[1] Legend – L: low; M: Moderate; H: high; Risk numbering: 1 – highest; 25 – lowest risk. Colour coding: Green: tolerable risk; orange: ALARP – as low as reasonably practicable; red: intolerable risk.

Risk acceptance criteria for the project have been formulated following consideration of HIPAP4 and AS/NZS ISO 31000 2009 – *Risk Management Principles and Guidelines.*

In assessing the tolerability of risk from potentially hazardous development, both qualitative and quantitative aspects need to be considered. Relevant general principles considered in this study as documented in HIPAP4:

- The avoidance of all avoidable risks;
- The risk from a major hazard should be reduced wherever practicable, even where the likelihood of exposure is low;
- The effects of significant events should, wherever possible, be contained within the site boundary; and
- Where the risk from an existing installation is already high, further development should not pose any incremental risk.

3.3. Project summary

SAAS Aus Pty Ltd is proposing to create a new subdivision from the properties at 2 and 10 Bowman Road, Moss Vale. The proposed development involves the subdivision and realignment of boundaries to create a four-lot subdivision. Three of the lots are within the E4 General Industrial land use zone and it is proposed to construct a large industrial building with internal offices and external hardstand and parking on each of these three lots. The proposed development also includes construction of a 430m extension of Bowman Road and a 160m section of Hutchinson Road.

Parts of the proposed development area are affected by an easement that conveys two high pressure gas transmission pipelines owned and operated by APA Group. The pipelines are the Moomba to Sydney Ethane Pipeline and Moomba to Wilton Natural Gas Pipeline. The proposed industrial development has been designed to minimise the extent of works required within the pipeline easement, which will be limited to the following (Figure 3.1):

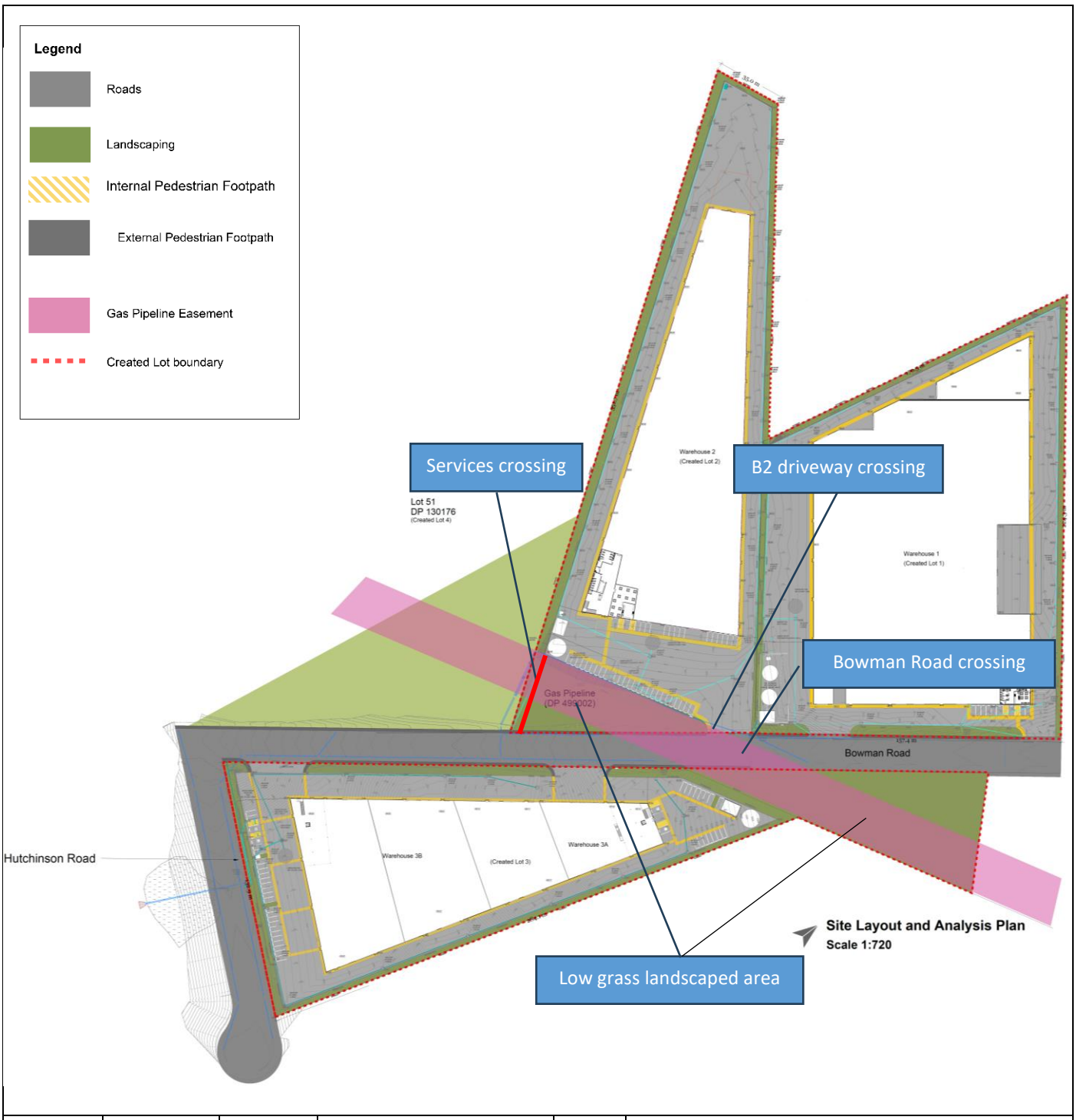
- Bowman Road pipeline crossing;
- Part of the driveway crossing required for Building 2;
- A services crossing to incorporate water, sewer, and electrical; and
- Landscaping in the form of grass and exclusion fencing.

Construction of the proposed development will also involve the following works immediately adjacent to the pipeline easement boundary:

- Installation of the on-site detention tank and filling above the tank for the external carpark for Building 2 (Figure 3.2); and
- Excavation within created Lot 3 for the external carpark for Building 3 (Figure 3.3).

The pipeline easement is 24.385m wide, allowing space for the two pipelines and a buffer either side. A potholing survey was undertaken in consultation with APA Group to confirm the location of the gas pipelines within the section of the easement closest to the proposed development (i.e., adjacent to the northern end of the B3 carpark, the Bowman Road crossing, and adjacent to the B2 carpark). This was supplied as Appendix D to the Statement of Environmental Effects and was done in consultation with APA Group. The high-pressure gas pipeline is 6.35m from the western edge of the easement and approximately 1.2m below natural surface level. The high-pressure ethane pipeline is 10m from the eastern edge of the easement and approximately 1.4m below natural surface level.

Figure 3.1. Proposed general arrangement of the building development within the proposed subdivision, noting the location of works within the gas pipeline easement.



Date	Revision	Drawn By	Site description	Client	SAAS Aus Pty Ltd
15/01/2024	Revision A	C. Rich	2 and 10 Bowman Road, Moss Vale NSW (Lot 1, DP103123, Lot 2, DP1070888, Lot 51, DP130176)	Project	Industrial Subdivision and General Industry Development
				Title	Proposed General Arrangement
				Source	Jackson Environment and Planning Pty Ltd

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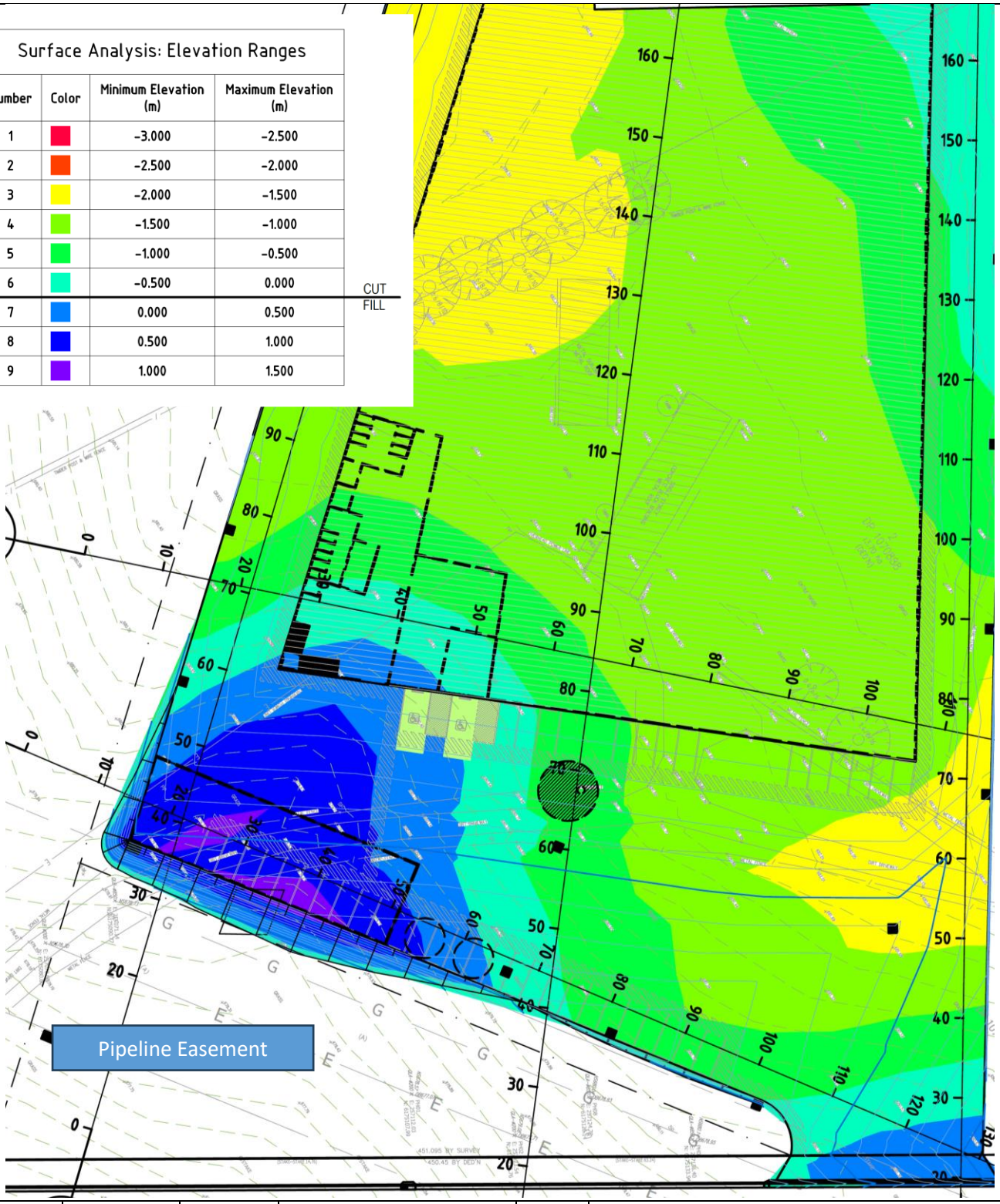
Figure 3.2. Proposed cut and fill plan adjacent to the gas pipeline easement for B2.



Date	Revision	Drawn By	Site description	Client	SAAS Aus Pty Ltd
15/01/2024	Revision A	C. Rich	2 and 10 Bowman Road, Moss Vale NSW (Lot 1, DP103123, Lot 2, DP1070888, Lot 51, DP130176)	Project	Industrial Subdivision and General Industry Development
				Title	Cut and Fill Plan – B2
				Source	ECLIPSE Consulting Engineers

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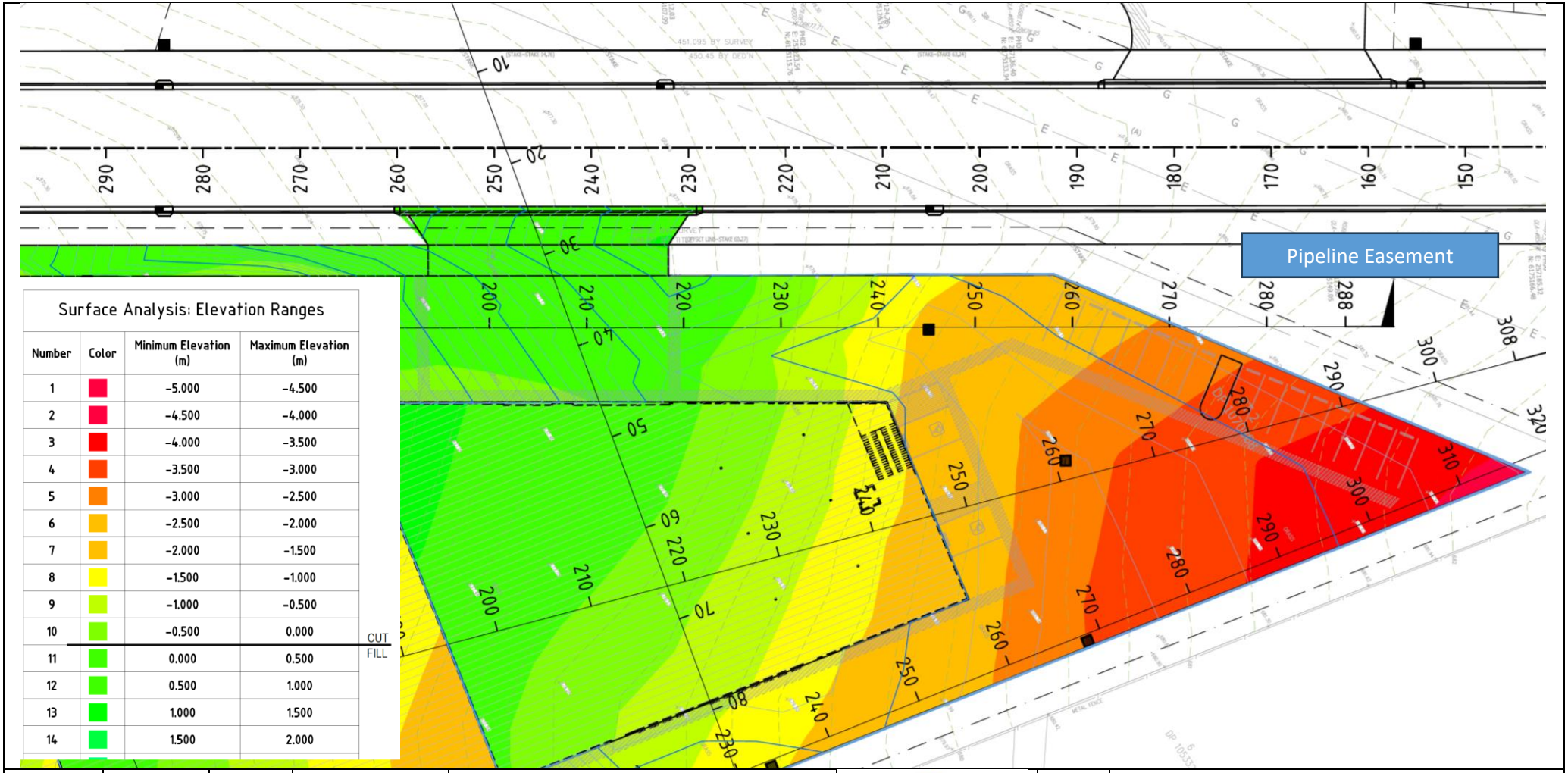
Figure 3.3. Proposed cut and fill plan adjacent to the pipeline easement for B3.



Date	Revision	Drawn By	Site description	Jackson Environment and Planning Pty Ltd		Client	SAAS Aus Pty Ltd
15/01/2024	Revision A	C. Rich	2 and 10 Bowman Road, Moss Vale NSW (Lot 1, DP103123, Lot 2, DP1070888, Lot 51, DP130176)	Strategy | Infrastructure | Compliance | Procurement A: Suite 102, Level 1, 25-29 Berry St, North Sydney NSW 2060 E: admin@jacksonenvironment.com.au T: 02 8056 1849 W: http://www.jacksonenvironment.com.au		Project	Industrial Subdivision and General Industry Development
						Title	Cut and Fill Plan – B3
						Scale	Not to scale
						Source	ECLIPSE Consulting Engineers

3.4. Hazardous materials

No hazardous materials will be stored on the Site in bulk quantities. Only chemicals required for general cleaning will be stored in each building. These chemicals will not exceed any thresholds identified in the Applying SEPP 33 guidelines.

3.5. Further hazard identification and risk assessment

To help understand further hazards possible as part of the proposed development, a series of potential worst-case scenarios have been assessed to determine possible consequences, likelihood and risk. The NSW Department of Planning's (2011) *Hazardous Industry Planning Advisory Paper No 6 - Hazard Analysis* has been used to assist in guiding this analysis.

As per the above guidelines, this assessment has qualitatively assessed the impacts of the largest possible event on people, plant, and the environment. The worst-case scenarios reflect any foreseeable factors that could exacerbate the severity of an accident, including abnormal process conditions, out of hours manning levels, and the potential for control measures to be disabled or rendered inoperable by the accident.

The worst-case scenarios we have assessed include the following:

- Excavation works directly damaging the gas pipeline resulting in immediate pipeline failure;
- Excavation works directly damaging the gas pipeline requiring repairs but not resulting in leakage or failure;
- Vibration from construction works causing damage to the gas pipeline;
- Exposure of the pipeline during excavation works;
- Incorrect or unsuitable construction methods for the Bowman Road pipeline crossing potentially resulting in delayed damage to, or failure of, the pipeline;
- Excavation works causing instability of land surrounding the gas pipeline potentially resulting in delayed damage to, or failure of, the pipeline;
- Damage to the pipeline from below ground electrical cables; and
- Plant species used in landscaping causing delayed damage to the pipeline from root growth.

Prevention and treatment measures to reduce the likelihood and resulting consequences from these worst-case scenarios are mapped out in Table 3.4 below. Note that a risk rating category has been prepared to understand the significance of these risks on the environment and human health. Note that the risk ratings estimated as part of the qualitative analysis are specified **after** implementation of the risk prevention, treatment, and detection measures.

Table 3.4. Hazard identification, scenario, consequence, prevention/treatment measures, and risk rating table.

Event	Cause/Comment	Possible scenarios, results, and consequences	Prevention, Treatment, Detection and Protection Measures	Likelihood	Consequence	Residual Risk Rating and Category
Immediate Pipeline Failure	Mechanical damage to pipeline during excavation works	• Explosion • Fire • Widespread disruption to gas supplies • Gas leakage • Death • Property damage	• Safety Management Study to be undertaken with APA Group. • All APA Group Conditions and design requirements will be addressed at the detailed design/Construction Certificate stage. • Potholing survey conducted by APA Group-approved contractor to accurately locate pipeline (completed). • Construction Drawings that meet APA Group's Standard Drawings and Construction Management Plan (prepared in accordance with APA Group's Third Party CMP Template) to be approved by APA Group prior to commencement. • Third Party Works Authorisation (TPWA) to be obtained from APA Group. • All operators to receive specific training in TPWA and meet APA Group's operator competency requirements. • All works to be in accordance with conditions of TPWA, Standard conditions for works near APA Gas Transmission Pipelines (APA Group), Excavation and Trenching Procedure (APA Group), Competency Requirements for NDD Operators Proving APA Transmission Pipelines (APA Group), and any other requirements set by APA Group. • APA Group to appoint a Permit Issuing Officer to supervise and inspect site works as required. • All excavation works to be outside the pipeline easement.	E (Rare)	2	16 (Low Risk)

Event	Cause/Comment	Possible scenarios, results, and consequences	Prevention, Treatment, Detection and Protection Measures	Likelihood	Consequence	Residual Risk Rating and Category
			• A Primary Spotter is to be used during all excavation works. Excavation operators must be able to see the Spotter at all times and should stop work if they cannot see the Spotter.			
Delayed Pipeline Failure	Incorrect or unsuitable construction of the Bowman Road pipeline crossing	• Explosion • Fire • Widespread disruption to gas supplies • Gas leakage • Death • Property damage	• Safety Management Study to be undertaken with APA Group. • Temporary and permanent road crossings to be designed to meet APA Group's standard drawings – Typical Sealed Road Crossing – Open Cut Crossing, and Temporary Heavy Vehicle Crossing General Detail. • Construction Drawings to be approved by APA Group prior to construction. • Pipeline inspection to be conducted prior to works to identify potential existing damage and any requirements for recoating or other repairs. • Any pipeline repairs and recoating to be completed and approved by APA Group prior to construction of road crossing. • Final road design to ensure minimum depth of cover is maintained. • APA Group to appoint a Permit Issuing Officer to supervise and inspect site works as required. • Pipeline monitoring as per APA Group requirements. • No material (e.g. shipping containers, soil) will be stored within the pipeline easement during construction. • Pipeline bedding and padding material will meet the APA Group testing requirements for Bedding and Padding Material.	E (Rare)	2	16 (Low)

Event	Cause/Comment	Possible scenarios, results, and consequences	Prevention, Treatment, Detection and Protection Measures	Likelihood	Consequence	Residual Risk Rating and Category
Pipeline Damage	Damage from electrical cables	• Accidental contact between pipeline and electrical systems • Capacitive coupling • Electromagnetic induction • Low Frequency Induction (LFI) • Earth Potential Rise (EPR), including due to fault current or lightning discharge; • Adverse cathodic protection interference in excess of those allowed under AS/NZS 2832.1 or relevant state regulations.	• Safety Management Study to be undertaken with APA Group. • To be installed within the designated services trench only. • All infrastructure to be self-supported. • Installed in compliance with AS4853 *Electrical Hazards on Metallic Pipeline* and be accompanied by a compliance assessment report. • Construction Drawings to be approved by APA Group prior to construction. • APA Group to appoint a Permit Issuing Officer to supervise and inspect site works as required. • APA Engineering Assessment for Earth Potential Rise and Low Frequency Induction conducted to AS/NZS 4853. • Ongoing pipeline monitoring if required by APA Group.	D (Unlikely)	2	16 (Low)
	Vibration impacts during excavation and construction	• Gas leakage • Damage to pipeline or pipeline coating • Disruption to gas supplies	• Vibration monitoring to be undertaken during piling, tunnelling, HDD/boring, or compaction. • Vibration alarm to be set to 80% of the acceptable Peak Particle Velocity. When alarm is activated, works stop and are re-assessed. • Use appropriate construction methods to minimise vibration. • APA Group to appoint a Permit Issuing Officer to supervise and inspect site works as required.	D (Unlikely)	3	17 (Low)

Event	Cause/Comment	Possible scenarios, results, and consequences	Prevention, Treatment, Detection and Protection Measures	Likelihood	Consequence	Residual Risk Rating and Category
	Exposure during excavation	• Sagging of the exposed pipe • Trench instability • Damage to the pipe coating • Gas leaks • Pipeline failure • Disruption to gas supplies	Measures to be implemented to avoid exposure of the pipeline: • Safety Management Study to be undertaken with APA Group. • Potholing survey conducted by APA Group-approved contractor to accurately locate pipeline. • Third Party Works Authorisation (TPWA) to be obtained from APA Group. • All operators to receive specific training in TPWA and meet APA Group's operator competency requirements. • All works to be in accordance with conditions of TPWA, Standard conditions for works near APA Gas Transmission Pipelines (APA Group), Excavation and Trenching Procedure (APA Group) and any other requirements set by APA Group. • APA Group to appoint a Permit Issuing Officer to supervise and inspect site works as required. • A Primary Spotter is to be used during all excavation works. Excavation operators must be able to see the Spotter at all times and should stop work if they cannot see the Spotter. • All excavation works to be outside the pipeline easement, except for the services crossing.	E (Rare)	2	16 (Low)
	Root damage from plant species used for landscaping	• Damage to the pipe coating • Damage to the pipeline • Gas leaks	• Safety Management Study to be undertaken with APA Group. • Landscaping within the pipeline easement will be limited to turf.	D (Unlikely)	3	17 (Low)

Event	Cause/Comment	Possible scenarios, results, and consequences	Prevention, Treatment, Detection and Protection Measures	Likelihood	Consequence	Residual Risk Rating and Category
		• Pipeline failure • Disruption to gas supplies	• Landscaping adjacent to the pipeline. easement designed in accordance with APA Group's *Site Planning and Landscape National Guidelines.* • Landscape Plans to be approved by APA Group.			

4. Conclusion

This risk assessment has identified the potential safety risks to the integrity of the pipeline associated with the proposed development, as required by Clause 2.77 (1) of the *State Environmental Planning Policy (Transport and Infrastructure)* 2021. The assessment has concluded that the proposed development poses a low risk to the integrity and safety of the high-pressure gas pipeline. Whilst damage to the pipelines could result in severe impacts, the likelihood of the above impacts occurring is low due to the majority of works being located outside the pipeline easement and, therefore at least 6m from the pipelines.

Extensive consultation, including a design and safety workshop, with APA Group as the pipeline owner/operator was undertaken during the preparation of the development application. The proponent will maintain the relationship with APA Group during the design and construction phase to ensure all works meet the strict requirements for construction in close proximity to the gas pipelines.

Further, this assessment has also determined that the proposed development is not a potentially hazardous or offensive development and does not require the preparation of a Preliminary Hazard Analysis.