Appendix 18
Proponent Response to Independent Planning Commission

Ref: 056 - 230728 - PP-2021-4118 IPC Request for Review

28 July 2023

Independent Planning Commission
Suite 15.02, 135 King Street
SYDNEY NSW 2000

RE: PLANNING PROPOSAL 2021 – 4118 – 170 RUSSELL STREET EMU PLAINS (FORMERLY 1 to 4 OLD BATHURST ROAD)

REQUEST FOR INDEPENDENT PLANNING COMMISSION REVIEW OF DETERMINATION

1. Introduction

We refer to Planning Proposal 2021 – 4118 which was recently considered for Gateway Determination by the Department of Planning and Environment.

Following extensive pre-lodgement consultation and working closely and collaboratively with Council staff, the Planning Proposal was supported by Penrith Council and forwarded to the Department of Planning and Environment on the 22nd of November 2022 requesting a Gateway Determination.

The Department of Planning Department of Planning and Environment issued a determination notice on the 15th of June 2023 which determined that the Planning Proposal should not proceed.

As per our previous correspondence of the 28th of June 2023 we now formally submit this request for gateway review.

We have engaged with the Department of Planning in an effort to understand and resolve their concerns. This has included the following:

- Meeting with Department of Planning Staff on 10th of June 2023.
- Meeting with Department of Planning staff and Rhelm consulting who provided flood advice to Department on the 19th of July 2023.
- Email and phone correspondence during this period.

This has allowed us and the Department to clarify and refine the key issues to be resolved. These are summarised as follows:

Planning Matters

1. ***Flooding:*** Provide additional written response to further demonstrate consistency with specified Regional / District Plan objectives

2. ***Expansion of industrial zone:*** Further address the expansion of the employment / industrial zone in terms of the need for additional employment land in the locality in terms of Regional / District Plan objectives.
3. ***Additional permitted uses:*** Provide further written response addressing adoption of existing Additional Permitted Use clause over the site and consistency with Ministerial Direction 1.4 Site Specific Provisions
4. ***Contamination:*** The proponent should submit the Stage 1 preliminary site investigation to the Department. It can then be investigated whether this study is sufficient to confirm that the proposal is consistent with Ministerial Direction Section 4.4 Remediation of Contaminated Land.

Flood Review

1. ***PMF Flood Study:*** Provide a PMF Flood Study for the site.
2. ***Evacuation:*** Provide further details addressing Evaluation Capacity and timeframes in the locality to ensure proposed rezoning does not impact flood evacuation capabilities.
3. ***Hazard:*** Provide further details addressing PMF Flood Hazard in relation to building construction.

We have provided below a detailed response the each of these key matters.

In addition, a detailed PMF Flood Study is also being finalised incorporating feedback provided in the meeting on the 19th of July which is expected to be finalised by the 9th of August.

We have also provided below an updated response to the reasons for determination listed in the determination issued by the Department of Planning on the 15th of June 2023.

The responses below and associated flood study being completed fully address the matters raised in the determination and subsequent key issues as advised by the Department of Planning.

This submission and associated supporting studies demonstrate that the proposal is able to be supported consistent with the Council resolution of 22nd of November 2022.

2. Adopted Flood Planning Levels

Currently, the adopted Flood Planning Level / Flood Planning Event for development and review of Planning Proposals in the Penrith LGA is the 1% AEP storm event (1:100 year flood).

The recent Flood Planning Guidelines recommend consideration of floods up to the Probable Maximum Flood (PMF) for development for consideration of risk to evacuation, safety and building construction. The PMF is not the Flood Planning Level for this area.

For context, the NSW Government released the Hawkesbury-Nepean Valley Regional Flood Study overview update in July 2019. This document provided guidance on flood planning in the catchment and likelihood of various floods as follows:

> *The largest flood possible is called the probable maximum flood or PMF. It is an extremely rare and unlikely flood.*

The largest flood on record which took place in 1867 reached approximately 19.7 metres AHD at Windsor – or around 19 metres above normal river height (see figure 3 below). This flood is estimated to be around a 1 in 500 (0.2%) chance per year event.

The 1 in 100 (1%) chance per year flood is the default flood planning level in New South Wales. Such a flood would reach 17.3 metres AHD at Windsor.

The critical issue for flood impacts in the Hawkesbury Nepean catchment is the capacity and location of road infrastructure to safely evacuate people during flood events.

As detailed in the Infrastructure NSW | Hawkesbury-Nepean Valley Flood Risk Management Strategy Summary report:

> *Evacuating people away from flood affected areas is the primary method of reducing the risk to life during a flood. In the Valley, the NSW State Emergency Service identifies mass self-evacuation by private motor vehicles as the primary method for evacuation, as other transport options are highly vulnerable to floods or have limited capacity.*
>
> *Currently, there is not enough road capacity to safely evacuate the whole population on time, with multiple communities relying on common, constrained and congested road links as their means of evacuation. The undulating topography of the Valley results in many key evacuation routes becoming flooded at low points long before population centres are inundated, creating flood islands. Many of the significant urban centres such as McGraths Hill, Windsor, Richmond and Bligh Park are located on flood islands which can become fully submerged in large flood events.*

Critically, the Emu Plains / Emu Heights areas are not impacted by these evacuation constraints during the PMF as:

- There is a much smaller number of residential properties inundated by flood waters in the PMF;
- There are extensive timeframes between flood waters triggering major flood warnings and the time when flood waters begin to impact residential areas; and
- Residential areas within Emu Plains and Emu Heights have access to continually rising flood free evacuation routes.

In relation to the subject site, there is flood free land in the PMF 500m to the west along Old Bathurst Road, being a 5 minute walk or 1 minute drive – by comparison, there is approximately 9 hours between when major flood warning gauges are triggered on the Nepean River and when flood waters begin to touch the edge of the site, and approximately 28 hours from the start of the storm event.

We have provided below a detailed review of the evacuation management / road capacity during the PMF Flood Event based on the adopted Nepean River Flood Study prepared by Advisian for Penrith Council and Flood Emergency Response Plan prepared by Advisian for Penrith Council which relates to a current industrial Development Application for a site on Old Bathurst Road in Emu Plains.

This has demonstrated that <u>all residents and employees</u> in the locality are able to be evacuated in approximately 3 hours based on adopted road capacities – with flood impacts commencing 5.5 hours after river gauge warnings in Emu Plains and 9 hours from flood trigger warnings in Emu Heights.

This assumes full employee attendance during a significant major storm and flood event, which is highly unlikely as roadways into the area would be blocked by emergency services and police to prevent access before major flood warning gauges are triggered.

3. Response to Determination

- *Is inconsistent with Ministerial Directions 4.1 Flooding and 9.2 Rural Lands.*

  We note this weas addressed in detail in the Planning Proposal and deemed to be satisfactory by Council.

  The detailed flood study provided demonstrated to the satisfaction of Council's Flood Engineers that there were no flood impacts as a result of the proposed rezoning.

  We also note that the subject site is zoned part E4 General Industrial and Rural 1D (Future Urban). The detailed assessment by Penrith Council and Planning Proposal addressed the "rural" land component.

  Council's report noted that *The subject site is not located within the rural lands defined by the Region Plan, District Plan, LSPS or draft Rural Lands Strategy. Therefore, the proposed removal of rural-zoned land as sought in this Planning Proposal is justified and consistent with this draft strategy*.

  The Department of Planning have not requested any further assessment under Ministerial Direction 9.2 Rural Lands. We understand this matter is now resolved.

  A further assessment of the proposal under Ministerial Direction 4.1 Flooding is provided below.

- *The Flood Risk Management Strategy (Rienco, 2022) does not adequately support the proposal as it:*
  - *does not justify the inconsistency with Ministerial Direction 4.1*

    The Flood Risk Management Strategy fully addressed the Ministerial Direction to the satisfaction of Penrith Council's Planning Team and Council's Flood Engineers.

    At no stage during the assessment did the Department request any further information addressing this matter.

    We have provided a further assessment of Direction 4.1 as part of this submission and a further flood assessment addressing the PMF flood event is being prepared.

  - *has not addressed the impacts of the proposal at the PMF level;*

    The Flood Risk Management Strategy submitted with proposal addressed the PMF flood levels stating that:

    In the PMF, the proposal *would have an immaterial effect of flood behaviour. This is because not only does the proposed works balance flood storage, the depth-varying roughness effect applies and it is not plausible that the works could have any material influence on extreme flood behaviour.*

    Notwithstanding, a further Flood Study is being prepared and will incorporate modelling of the PMF flood event and address outcomes of the meeting with the Department of Planning on the 19th of July.

  - *lacks consideration of the cumulative impacts on flood behaviour (both upstream and downstream) as a result of filling Lot 1.*

    This statement is false. This appears to demonstrate that staff reviewing the Flood Study may not possess appropriate expertise/qualifications.

We note that the Flood Study was prepared by a highly qualified and experienced Flood Engineer.

Council's highly experienced Flood Engineers reviewed the study and deemed it appropriate were satisfied that there were no upstream or downstream impacts.

The Flood Risk Management Plan provided detailed modelling of the proposal and demonstrated that there were no upstream or downstream impacts.

At no stage during assessment of the Planning Proposal did the Department seek clarification or explanation of the flood model.

The proposal does not propose any importation of fill to the site. The proposal simply incorporates regrading of an existing stockpile.

The flood study clearly detailed that the proposal will result in an increase in flood storage o the site.

- *lacks detail on how future industrial development on the site (as a result of the proposed rezoning) will impact on flood behaviour.*

  The proposal incorporated a detailed Flood assessment addressing development of the site.

  This demonstrates that there were no impacts on adjoining land upstream or downstream in the Flood Planning Event as required being the 1:100 year flood.

  At no stage during assessment of the Planning Proposal did the Department seek clarification or further modelling of this matter.

  A supplementary Flood Study is currently being prepared which will address the PMF flood event as requested by the Department of planning.

- *The proposal seeks to 'fill' the site, which:*
  - *is not supported by strategic documents including the Western District Plan and*

    The proposal does not seek to or rely on any fill to be imported onto the site.

    The proposal seeks to relocate / redistribute an existing small stockpile located on the site to address 1:100year flood levels.

    There is no "cut & fill" proposed.

    This was addressed in detail in the Planning Proposal and the Council report.

    The Council report deemed the proposal was wholly consistent with the Western District Plan. The Council report stated as follows:

    Council officers are of the view that the Planning Proposal is consistent with the direction of the Western City District Plan, Council's Local Strategic Planning Statement and recently adopted Employment Lands Strategy and therefore demonstrates strategic merit in providing employment zoned land for smaller lots. In relation to site-specific matters such as around flood behaviour and fill, this can be addressed through planning controls.

  - *has the potential for cumulative impacts on flood behaviour and result in off-site impacts*

    This statement is false.

    The Flood Risk Management Plan provided detailed modelling of the proposal and demonstrated that there were no upstream or downstream impacts.

At no stage during assessment of the Planning Proposal did the Department seek clarification or explanation of the flood model.

There are no cumulative impacts on flood behaviour as a result of the proposal.

There are no significant new release areas in the locality which require cumulative flood impact assessment. The locality is fully developed.

- *Given the level flood impact and hazard, it is not considered that the proposal could be supported by an updated flood impact assessment.*

  We note that at no stage during the assessment did the Department request any clarification on these matters from the engaged expert Flood Engineers or Council's expert Flood Engineers.

  The expert Flood Engineers engaged disagree with this statement.

  A supplementary Flood Study is being prepared and will be provided to the IPC addressing this matter.

  This review has also addressed flood evacuation and hazard and demonstrated that the proposal is able to be supported.

  This information could have been provided during assessment, had it been requested.

- *The proposal also lacks sufficient justification to expand the proposed E4 General Industrial zoning across the site (and associated development control amendments).*

  The Department of Planning have provided further clarification on this matter.

  A detailed response is provided as part of the response to key planning matters below fully addressing this matter.

This submission and the associated PMF Flood Study being prepared fully address all aspects of the determination and demonstrates that the proposal is able to be recommended for support and Gateway Determination as part of this review.

Furthermore, we consider that these matters could have been addressed in a relatively short timeframe had the information been requested during assessment of the Planning Proposal.

4. Response to Key Planning Matters (provided by Department of Planning)

a) Flooding:

i. Regional Plan Objective 37: Exposure to natural and urban hazards is reduced.

The Greater Sydney Region Plan A Metropolis of Three Cities was released by the Greater Sydney Commission in March 2018. The plan outlines a vision for Greater Sydney as a metropolis of three cities, incorporating the Western Parkland City, the Central River City and the Eastern Harbour City, *where most residents live within 30 minutes of their jobs, education and health facilities, services and great places.*

The plan provides broad high level strategic planning guidance across the Sydney Metropolitan Area and identified key known Strategic Centres, large scale urban release areas, major transport infrastructure and the like.

The subject site forms part of the Western Parkland City which is further addressed in the subsequent Western City District Plan.

Objective 37 provides high level commentary on addressing Bushfire and Flooding hazards across the Sydney Metro Area with specific reference to consideration of the location and suitability of new urban residential areas.

Objective 37 does not provide any reference to consideration of Industrial or Employment lands. Notwithstanding we have provided a response below to the specific Strategies listed under Objective 37.

Effective land use planning and design can reduce the exposure to natural and urban hazards and build resilience to shocks and stresses. Growth and change need to be considered at a local level when making structural decisions about the regions growth, and when considering cumulative impacts at district and regional levels.

Strategy 37.1
Avoid locating new urban development in areas exposed to natural and urban hazards and consider options to limit the intensification of development in existing urban areas most exposed to hazards.

The proposal seeks to deliver a minor extension of an existing industrial zone over the site and does not incorporate any new urban development areas.

The Regional Plan makes a clear distinction throughout the document between Urban Land and "*industrial and urban services land*".

The proposed rezoning will deliver additional small scale industrial and urban services land and is therefore consistent with Strategy 3.1 as it does not seek to rezone land to accommodate urban (residential) development in areas considered to be impacted by hazard.

Strategy 37.2
Respond to the direction for managing flood risk in the Hawkesbury-Nepean Valley as set out in Resilient Valley, Resilient Communities – Hawkesbury-Nepean Valley Flood Risk Management Strategy.

The Resilient Valley, Resilient Communities – Hawkesbury-Nepean Valley Flood Risk Management Strategy provides broad scale strategies for the management of evacuation of residential communities in flood prone areas and minimising flood impacts in the Hawkesbury – Nepean Catchment.

The Strategy specifically discusses the number of properties and residents affected and evacuation of residents in major flood.

The Strategy provide high level options for consideration by State Government in managing flood risk and evacuation including raising of Warragamba Dam Wall, lowering dam storage levels and Major Evacuation Route upgrades.

In discussing land use planning outcomes and strategies for State & Local Government, the strategy specifically notes:

It is important to ensure that population growth in the Valley is carefully managed, both in terms of absolute numbers of people and the distribution of the population within the Valley. This means that land use and road planning will need to account for the cumulative impact of growth on road evacuation capacity.

While this Strategy does not relate to Industrial Land, it is considered that the proposal consistent with Strategy 37.2 as we have demonstrated below there are no impacts to flood evacuation.

ii. District Plan Planning Priority W20 - Adapting to the impacts of urban and natural hazards and climate change

Planning Priority W20 - Adapting to the impacts of urban and natural hazards and climate change includes planning principles that will be applied to both local strategic planning and development decisions until such time as a framework to address flood risk in the Hawkesbury-Nepean Valley is finalised.

We have provided below a review of each principle as it relates to the proposal. This demonstrates that the proposed rezoning is consistent with Planning Priority W20.

Principle	Consistency Response
Avoiding intensification and new urban development on land below the current 1 in 100 chance per year flood event (1 per cent annual exceedance probability flood event)	No new urban development proposed on land below the 1:100 flood event based on regarding of the existing small stockpile on site.
Applying flood related development controls on land between the 1 in 100 chance per year flood level and the PMF level	The Penrith LEP has been amended to address this requirement.
Providing for less intensive development or avoiding certain urban uses in areas of higher risk and allowing more intensive development in areas of lower flood risk, subject to an assessment of the cumulative impact of urban growth on regional evacuation road capacity and operational complexity of emergency management	The proposal seeks minor extension of an existing industrial zoning. The proposal is considered consistent as it is not an intensive use and does not create urban residential development in higher risk areas. The proposal is consistent with this principle in allowing development in areas of lower risk and has demonstrated there are no impacts to flood evacuation.
Balancing desired development outcomes in strategic centres with appropriate flood risk management outcomes	The proposal provides an appropriate land use in the flood risk context.
Avoiding alterations to flood storage capacity of the floodplain and flood behaviour through filling and excavation ('cut and fill') or other earthworks	There are no alterations (reductions) in flood storage capacity. The proposal results in a minor increase on flood storage capacity.
Applying more flood-compatible building techniques and subdivision design for greater resilience to flooding.	Noted. Flood compatible building techniques can be implemented.

iii. Local Strategic Planning Statement - Planning Priority 20 - Manage Flood Risk

We note that Penrith Council undertook a detailed assessment of the proposal against their Local Strategic Planning Statement and determined that the rezoning was folly consistent with the intent and provisions of the LSPS.

Planning Priority 20 – Manage Flood Risk outlines tasks and strategies Council will undertake implement in association with flood risk management across the LGA such as finalising a Floodplain Risk Management Study and updated planning instruments as required.

Notwithstanding, we have provided a review of each Action Item listed under Planning Priority 20 – Manage Flood Risk.

As demonstrated below, these primarily relate to Council Actions to be undertaken and are not relevant to the proposal.

The proposal is therefore considered to be consistent with Planning Priority 20 – Manage Flood Risk.

Type	Actions	Consistency Response
Immediate	20.1 Continue to work with the NSW Government on regional Flood Strategy.	Not Applicable to this proposal - Council Action.
	20.2 Investigate the benefits of the Castlereagh Connection and its potential to support flood evacuation.	Not Applicable to this proposal - Council Action.
Short-Medium	20.3 Review, update and contemporise planning and development controls relating to water management and flood risk management and planning.	Council supported rezoning of the site and updating site specific planning provisions. The proposal is consistent with Action 20.3
	20.4 Consolidate mapping to incorporate all flood studies to create a contemporary resource for managing flood risk.	Not Applicable to this proposal - Council Action.
Ongoing	20.5 Finalise the program of floodplain risk management studies.	Not Applicable to this proposal - Council Action.
	20.6 Improved information sharing and collaboration among all stakeholders.	Not Applicable to this proposal - Council Action.
	20.7 Respond to Hawkesbury Nepean Regional Flood Study and Flood Taskforce.	Not Applicable to this proposal - Council Action.
	20.8 Continue to advocate for delivery of Stage 1 of the Castlereagh Connection between the M7 and The Northern Road.	Not Applicable to this proposal - Council Action.

iv. Section 9.1 Ministerial Direction 4.1 Flooding

We have provided a detailed response to Ministerial Direction 4.1 Flooding in Attachment 1.

This has demonstrated the proposal is fully consistent with the Ministerial Directions.

The planning proposal is also supported by a flood and risk impact assessment which has been accepted by the accepted by the relevant planning authority (Penrith Council) and is prepared in accordance with the principles of the Floodplain Development Manual 2005 and consistent with the relevant planning authorities' requirements.

Any perceived inconsistency would be of minor significance.

b) Expansion of industrial zone:

i. Regional Plan Objective 23: Industrial and urban services land is planned, retained and managed

Objective 23 of the Regional Plan relates to the Greater Sydney (Cities) Commission policy to retain and manage industrial land urban services land through limiting any rezoning for alternate land uses.

The Reginal Plan notes that all existing industrial and urban services land should be safeguarded from competing pressures, especially **residential and mixed-use zones**.

The Regional Plan does not prevent delivery of additional industrial or employment land to meet local demand as proposed under this Planning Proposal.

We have provided a review of the Strategies listed under Objective 23 below.

Strategy 23.1
Retain, review and plan industrial and urban services land in accordance with the principles for managing industrial and urban services land.

The proposal Is consistent with this strategy as it retains the existing employment / industrial zoned land within the property.

The Hill PDA supporting study which informed the Penrith Employment Strategy stated that land on the northern side of Old Bathurst Road could be rezoned to meet ongoing demand and provide additional industrial land in Penrith LGA.

The employment strategy noted the need to provide additional localised employment stating that:

> *Planned employment precincts are projected to provide up to 22,000 jobs and future employment land in the Western Sydney Airport and Aerotropolis precincts have been estimated to add a further 52,000 jobs within the LGA by 2056. Even with these opportunities, there will be a shortfall of between 10,000 and 34,000 local jobs if employment in Penrith is to keep pace with its projected population growth.*

Support for this Planning Proposal will deliver additional employment opportunities for local residents consistent with the vision of a 30-minute city which underpins the Regional Plan.

The Penrith Employment Strategy and associated studies indicate that existing Emu Plains Industrial / Employment area has a total combined Gross Floor Area 294,081m^2 across all sites.

The proposed rezoning would likely deliver up to 5,000m^2 additional floor space, representing an increase in employment land 1.7 % increase in floor space across the precinct.

The proposal represents such a minor increase in net floor space over the Emu Plains Employment Land precinct, there will be no impacts on the viability or feasibility of existing employment land holdings or buildings.

The proposal is demonstrated to be consistent with this Strategy and Objective.

Strategy 23.2
Consider office development in industrial zones where it does not compromise industrial or urban services activities in the South and Western City Districts.

The proposal does not seek any office uses on the site.

This strategic planning review regarding the suitability of office development in industrial zones is to be undertaken by the Department of Planning and Penrith Council and is not applicable to the proposal.

ii. District Plan Planning Priority W10: Maximising freight and logistics opportunities and planning and managing industrial and urban services land

Planning Priority W10 provides guidance on a district planning level for the retention of existing industrial and urban services land and guides delivery of new industrial areas.

As noted in Priority W10:

> *Existing sites face pressure to rezone to residential uses, especially near Liverpool and north of Greater Penrith. While locations like Wetherill Park and North St Marys may absorb more industrial activities in the short term, the District's new communities need jobs and services close to home.*
>
> ***It is therefore important to retain the existing sites and plan for more industrial and urban services land.***

The proposal is consistent with the intent and objectives of Planning Priority W10 as follows:

- The proposal maintains the existing industrial / urban services land on site as per its current zoning and land use arrangements.
- The rezoning of the site provides for enhanced efficient and competitive industrial and freight networks by delivering industrial land which is already serviced and has access to major road networks.
- The rezoning will increase and enhance job opportunities for local residents in the local area.
- The proposal provides for urban services land as part of an existing employment area.

c) *Additional permitted uses:*

The proposal seeks to extend the existing employment land use zoning and permissible land uses as currently in place over the balance of the land that is a deferred matter under the LEP.

This represents a logical planning and land use outcome, providing a consistency in land use arrangements over Lot 1.

An existing Additional Permissible Use clause provision is currently in effect over the western portion of the site which is zoned E4 General Industrial.

This clause (Penrith LEP Clause 38 Use of certain land at Werrington, Kingswood, Penrith, Cranebrook and Emu Plains) was implemented by Penrith Council and the Department of Planning through amendment of the LEP via and amending SEPP which revised Employment and Industrial zones.

The land uses have been considered appropriate and permissible land uses over the site since adoption of the Penrith LEP in 2010.

Penrith Council requested that the additional Use Clause be included in the Planning Proposal to ensure consistency in land uses over the site. Further, as the Planning Proposal, was under assessment prior to the change in employment zones, it was required to be included in case the Planning Proposal was adopted before the amending SEPP came into force.

This is consistent with the Ministerial Direction 1.4 Site Specific Provisions which requires that existing permissible land uses be retained as permissible when rezoning land.

d) *Contamination:*

As requested by the Department an additional Stage 1 Preliminary Site Investigation (PSI) has been prepared and is submitted with this response.

The PSI has been prepared by Environmental Consulting Services Pty Ltd (ECS). The scope of work undertaken to meet this objective included the review of selected background information including historical aerial photographs and certificates of title, the identification of potential contamination types and the development of a conceptual Site model, a Site inspection and targeted soil sampling.

The report states as follows:

> *There appears to be minimal potential for significant or widespread contamination to be present associated with historical Site activities. To characterise the surface material, ten shallow test pits were excavated across the Site with no significant thicknesses of fill material observed.*
>
> *The results of the soil analysis indicate concentrations of contaminants below the site assessment criteria for sensitive land use including the samples from the stockpiles on the adjoining land. Concentrations of some heavy metals detected in soil samples are considered to represent natural background levels at the Site.*

Based on the findings of this investigation, ECS concludes that the Site is considered suitable for the most sensitive permissible use currently allowed under the existing zoning which is a child care facility.

5. Response to Key Flood Matters

We have provided below a summary of the key flood parameters as they apply to the site and Planning Proposal.

- ***Site Outcomes***

  The Planning Proposal incorporates the relocation / regrading of an existing small stockpile on site – the stockpile is not a natural part of the landform.

  The stockpile encompasses 550m^3 of material. Approximately 500m^3 will be spread on the site and 50m^3 removed from site.

  The net outcome is an increase in flood storage on site of 50m^3.

  Once regarded, the subject land is wholly above the Flood Planning Area / Level.

- ***Localised Flooding***

  The Emu Plains Overland Flow Flood Study 2020 prepared for Penrith Council's indicates that:

  - The site is entirely flood free in the Local Catchment Flood Planning Level storm event (1:100yr storm event).

  - There is minor affectation in the Local Catchment PMF storm event.

    "Floodway" areas in the PMF impact a small portion of land along the eastern boundary adjacent to the Lapstone Creek Drainage Chanel.

    There is no development proposed on this portion of the land as it contains an easement for access to the rear allotment and cannot be built on.

    The rear allotment has flood free road access to its primary address being Russell Street to the east. The access easement is a secondary access point.

    (If required, the Planning Proposal can be amended to adopt an RE1 Private Recreation zone over the access easement land).

- ***Hawkesbury / Nepean River Catchment Flooding***

  - As noted above, the subject site is flood free in the 1:100 year storm event (being the Flood Planning Level) upon regrading of the stockpile which forms part of the Planning Proposal.

  - There is no Floodway affectation of the site in the 1:100 year storm event.

  - Figure 42 of the Nepean River Flood Study Figure 42 – Hydraulic Classification identifies site hazard classification adopting the NSW Government's 'Floodplain Development Manual'.

    The Site is classified as *Flood Storage*.

  - The site is affected by the Probable Maximum Flood (PMF).

- PMF flood waters reach the site approximately 8+ hours after major flood event warning triggered at river gauges.

- ***Site Evacuation***
  - There is a rising flood free access along Old Bathurst Road.
  - Nepean River Flood Study indicates all residential dwellings affected by the PMF in the locality are able to be evacuated within 2 hours.
  - PMF flood waters reach the site approximately 8+ hours after major flood event warning triggered at river gauges.
  - PMF flood free land located 500m to the west on Old Bathurst Road.

a) *PMF Flood Study:*

Egris (Calibre) Consulting have been engaged and are currently preparing a detailed PMF Flood Study for the site as requested by the Department of Planning.

The flood study is being prepared to take into consideration matters discussed with the Department of Planning during the meeting on the 19th of July 2023.

Initial draft flood modelling has indicated that the proposal is able to be supported and there are no impacts on flood parameters during a PMF flood event.

As noted above, the proposal results in an increase in food storage in the locality providing positive public benefit when considering flood storage.

b) *Evacuation:*

As discussed with Department of Planning staff and Rhelm consulting, we have provided below a review of flood evacuation procedures/road capacity and timeframes in the Emu Plains / Emu Heights area which demonstrates that the proposed rezoning will not impact flood evacuation capabilities or burden emergency services.

This has been informed by the following publicly available documents which have been prepared for Penrith Council:

- Penrith City Council Nepean River Flood Study (2018)
- Flood Emergency Response Strategy – Proposed Subdivision of 158-164 Old Bathurst Road, Emu Plains (2022)

Residential

Section 9 of the Penrith Council The Nepean River Flood Study addresses flood evacuation and management in key areas of the LGA including Emu Plains (Section 9.1.1) and Emu Plains North (Emu Heights) (Section 9.1.3).

In relation to flood affected areas, the Study states that:

> *The Emu Plains residential area encompasses the flood affected area between the railway line and M4 embankments west of the river and covers approximately 1900 dwellings. There are almost 1200 residences in these two areas that will require evacuation before rising flood levels break out of Knapsack Creek and eventually engulf these properties,*
>
> *The band of properties to the north is the first area to become affected across Emu Plains north. The 100 or so properties become isolated when Wedmore Road is cut at a Penrith gauge level of RL 23.9m. Property inundation occurs shortly thereafter along Alma Crescent, and a total of 40 dwellings are flood affected.*

In total in the full peak of the PMF flood event, there are up to 1,900 properties affected by flooding in Emu Plains and 140 properties in Emu Plains North.

Employment Figures

Employment figures for the Emu Plains industrial area have been outlined in reports prepared to inform the Penrith Council Employment Lands Strategy. Both documents note the precinct has a diverse mix of manufacturing, construction, and food services.

The Hill PDA Penrith Employment land use study prepared in 2020 indicated there were a total of 2,499 jobs in the Precinct.

The Penrith City Council • Technical Report | Penrith Industrial Precincts prepared in 2021 indicated there were a total of 2,781 jobs in the Precinct based on 2016 census data.

For the purposes of this review, we have adopted a total of 2,650 jobs / employees being the mid-point of these figures. The peak PMF Flood extents indicate some level of inundation for all employment land. The proposal would deliver approximately an additional 60 jobs, bringing employment in the Precinct to a total of 2,710 jobs.

Employment Modes of Travel

The ABS 2016 and 2021 census data provides the following breakdown of modes of travel for residents in the Penrith LGA as shown in the table below.

Mode of Travel	2016 ABS	2021 ABS
Car, as driver	66.5 %	47.9%
Car, as passenger	4.9%	3.5%
Truck		1.4%
Train	5.6%	1.4%
Walked only		1.1%
Did not go to work		**15%**
Worked at home	**3%**	**26.3%**
People who travelled to work by public transport (a)	**11.4%**	**3.1%**
People who travelled to work by car as driver or passenger (b)	**75.1%**	**52.4%**

The data above indicates a higher proportion of employees working from home and a lower rate of public transport use post / during the Covid period. For this review, we have adopted an average of the two census data periods as follows.

Mode of Travel	Average
People who travelled to work by car as driver	**57.2%**
People who travelled to work by car as a passenger	**4.2%**
Did not go to work	**7.5%**
Worked at home	**14.7%**
People who travelled to work by public transport	**7.5%**
Other Modes of Transport	**8.9%**

Evacuation Vehicle Generation

To ascertain road capacity for evacuation we have adopted the residential flood impacted properties outlined in the Nepean River Flood Study and the mode of travel for the employment area based on ABS data average.

The Nepean River Flood Study (Section 9) adopts a calculation of 1 vehicle per dwelling for flood affected areas when considering flood evacuation.

In order to provide a 'worst case scenario' we have assumed that all employees who travelled to work by public transport and other modes of transport have driven to work in a storm event. In this scenario, 73.6% of employees drive to work.

Total vehicle numbers to consider road capacity and evacuation times are therefore as follows:

- Emu Plains Residential = 1,900 vehicles
- Emu Plains North Residential = 140 vehicles
- Emu Plains Employment area = 2,000 vehicles (73.6% of 2,710 jobs / employees)

Evacuation Road Capacity / Flooding Impacts to Roadways

The Nepean River Flood Study adopts a road capacity during evacuation of 600 vehicles / hour along Russell Street.

The traffic report submitted with the rezoning and endorsed by Council indicated a capacity of 900 v/h along Old Bathurst Road. For this review we have adopted an approximate 75% road capacity being 700v/h to provide a conservative approach.

As outlined in the flood studies, PMF Flood Waters do not reach the Old Bathurst Road / Russell Street intersection until approximately 8-9 hours following flood waters triggering a major flood event warning on the Nepean River Guage.

There is a localised flood impact in the PMF to the east of the site on Old Bathurst Road which impacts the western portion of the employment area (approximately 25%) where the road is impacted approximately 3.5 hours following flood waters triggering a major flood event warning on the Nepean River Guage.

This does not impact the site and the Flood Emergency Response Plan submitted with the DA has demonstrated that this area can be evacuated prior to this localised flood impact.

PMF Flood Waters due not impact Russell Street through Emu Plains until approximately 8 hours following flood waters triggering a major flood event warning on the Nepean River Guage.

Evacuation Road Capacity

For this review we have assumed full worker attendance in place of employment and no residents have evacuated prior in a Probable Maximum Flood storm event.

This will not occur as police and emergency services will block access roads into the area prior to the PMF flood event major flood warning triggers on the Nepean River, and resident evacuations are likely to commence prior to major flood warning levels being reached.

As an example, the most recent flooding in the locality in 2021 / 2022 were classified as 1:50 year storm events. Even in these lower order storm events, localised resident evacuation was undertaken as a precaution and police road blocks were established.

Further, the PMF Flood Events referred to are not localised 'flash flood' events. The PMF inundation in Emu Plains is a result of a large scale extended PMF storm event over the entire Hawkesbury-Nepean catchment over a number of days.

Localised flash flooding does not have a significant impact in a local PMF event as demonstrated in the Penrith Council Emu Plains overland flow study released in 2020.

Notwithstanding, the review below provides a highly conservative assessment of evacuation capacities and timeframes.

For worst case evacuation of residents in Emu Plains North (Emu Heights) and the employment Precinct there would be up to 2,140 residential and employee vehicles utilising Old Bathurst Road or as a local evacuation route.

We note that all of the residential areas are able to access Old Bathurst Road via Wedmore Road, Dempsey Street and Killuran Ave which remain flood free in the PMF flood event.

Notwithstanding, adopting a capacity of 700 v/h, full evacuation of this area using Old Bathurst Road would take 3 hours.

Therefore, there is sufficient capacity and timeframe for evacuation for all residents and employees (including full development of the site) to evacuate via Old Bathurst Road approximately 5 hours prior to flood waters reaching the intersection of Old Bathurst Road and Russell Street.

For evacuation of residents and employees in both Emu Plains and Emu Plains North (Emu Heights) and the employment Precinct there would be up to 4,040 residential and employee vehicles utilising either Old Bathurst Road or Russell Street as local evacuation routes.

We note that all of the residential areas would utilise Russell Street. For this option we have assumed 25% of vehicles in the are able to access Old Bathurst Road via Wedmore Road, Dempsey Street and Killuran Ave which remain flood free in the PMF flood event.

This equates to approximately 2,400 vehicles along Russell Street and 1,600 vehicles along Old Bathurst Road.

Adopting a capacity of 600 v/h, for Russell Street, evacuation of Emu Plains and 25% of the employment area would take 4 hours.

Therefore, there is sufficient capacity and timeframe for evacuation for all residents and employees (including full development of the site) to evacuate via Old Bathurst Road approximately 4 hours prior

to flood waters reaching the intersection of Old Bathurst Road and Russell Street and the eastern section of Russell Street.

Adopting a capacity of 700 v/h, for Old Bathurst Road, evacuation of the balance of Emu Plains north residential and the employment precinct would take just over 2 hours.

Therefore, there is sufficient capacity and timeframe for evacuation for all residents and employees (including full development of the site) to evacuate via Old Bathurst Road approximately 6 hours prior to flood waters reaching the intersection of Old Bathurst Road and Russell Street.

This demonstrates that combined coordinated evacuation would likely be in the order of 3 hours, as residents and employees are directed to Old Bathurst Road following evacuation of Emu Plains North.

This review has demonstrated that there is more than adequate capacity in the local road network to accommodate localised flood evacuation in all scenarios, and that the additional 40 vehicles likely associated with development of the site as a result of the rezoning would not have any impact on flood evacuation times or capacity.

c) *Hazard:*

As detailed above, there are no impediments to evacuation of workers from the site during a PMF flood event.

Workers are able to safely evacuate from the site via rising flood free access routes along Old Bathurst Road and Russell Street.

As such, we understand the concern and assessment of risk relates to insurance of premises and the structural integrity of future buildings during a PMF flood event. These matters are addressed below.

iii. Flood Insurance

Glenstone Group Pty Ltd are a local construction and property development group who have undertaken a number f projects across the Blue Mountains and Penrith LGA, including recent construction and occupation of a new Industrial Building at 124 Russell Street.

The property at 124 Russell Street is subject to the identical flood affectation and hydraulic hazard categories in the PMF as the subject site.

Glenstone have commenced preliminary design review of the site with a view to purchase the property and construct a mix of small scale industrial units and associated facilities / businesses.

Glenstone have provided a letter confirming that they have ben able to obtain full insurance for their existing premisses, demonstrating that there is no risk to having future buildings insured on the site (Refer Attachment 2).

iv. Hydraulic Hazard / Construction

PMF Flood water velocities are detailed in the Nepean River Flood Study prepared for Penrith Council by Advisian in November 2018.

As shown in the Figure below, Flood Water velocities are primarily mapped as being 0m/s to 0.8m/s over the land proposed to be rezoned in a PMF Flood Event. Land accommodating future building is wholly within the 0m/s to 0.8m/s area.

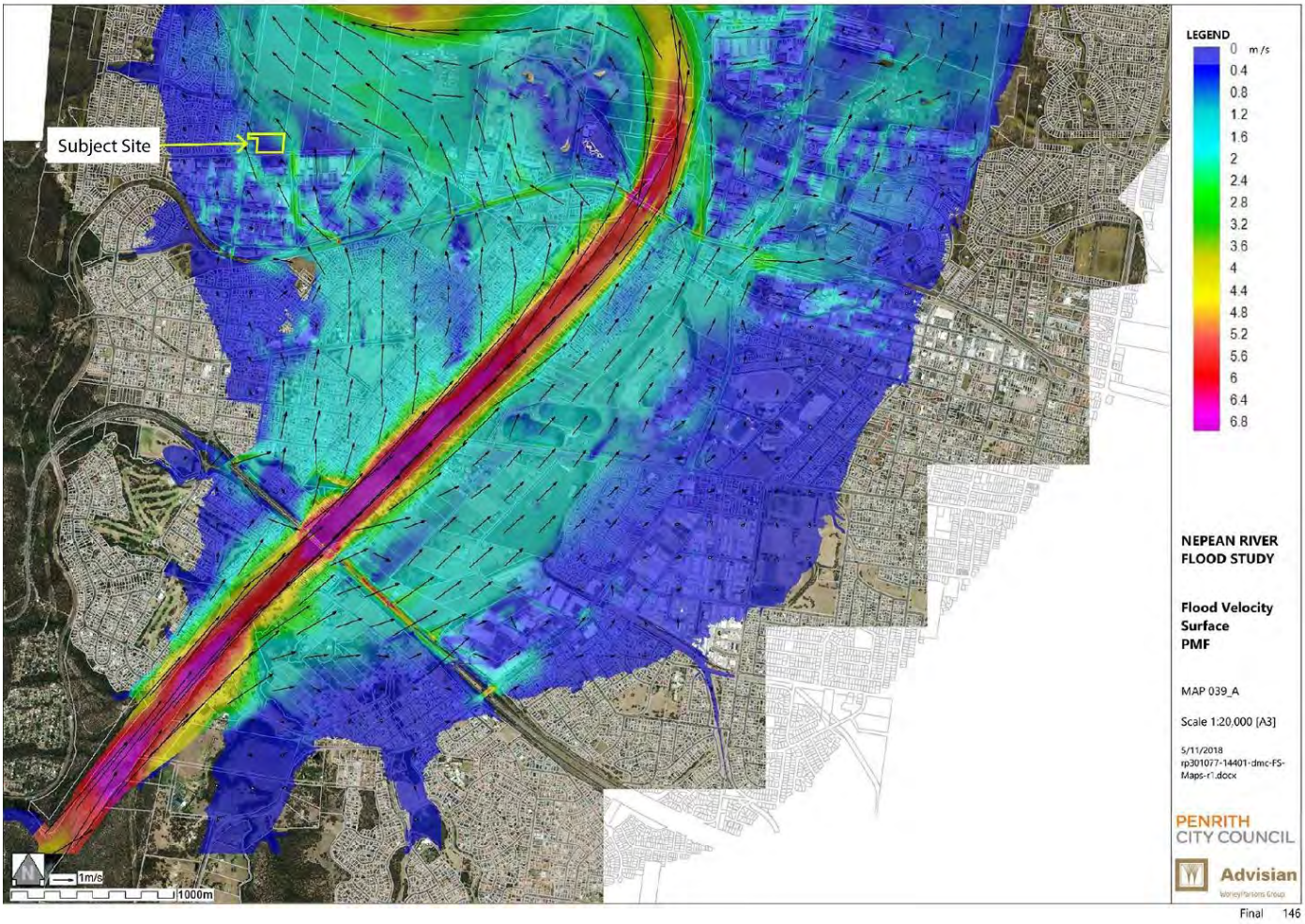


Figure 1: PMF Flood Velocities – *Nepean River Flood Study, Advisian*

These are the lowest flood water velocities able to be mapped and indicate that PMF flood water in the area / over the site is extremely slow moving.

As detailed in the flood construction guidelines prepared by the Hawkesbury-Nepean Floodplain Management Steering Committee (Reducing Vulnerability Of Buildings To Flood Damage - Guidance On Building In Flood Prone Areas) flood water velocities below 1m/s are unlikely to result in any structural damage to a residential dwelling.

As such, the flood water velocities are unlikely to result in any structural damage to higher grade industrial / commercial buildings constructed on the site.

Figure 125 *Water velocities may cause severe damage to a brick house*

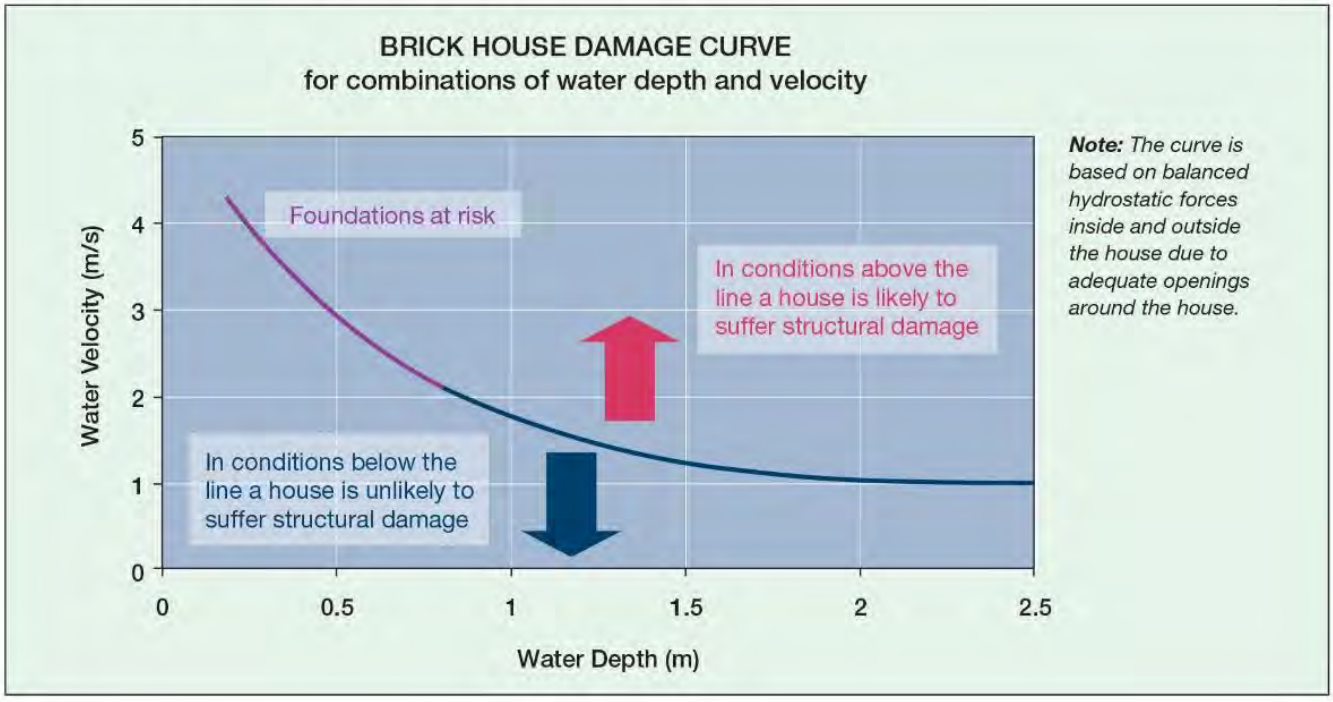


Figure 2: Brick House Damage Curve – *Reducing Vulnerability Of Buildings To Flood Damage - Guidance On Building In Flood Prone Areas*

6. Summary

The Planning Proposal submitted for the site seeks to deliver a logical and common sense land use outcome for the balance of Lot 1 – 170 Russell Street. The Planning Proposal will resolve a long standing "Deferred Matter" under the Penrith LEP over Lot 1 and allow for the delivery of high quality industrial and urban services uses which provide enhanced access to employment opportunities for local residents.

The Planning Proposal was assessed by Penrith Council's expert Flood Engineers and Planning Team and deemed to satisfactorily address all local, district and regional planning policies and was deemed appropriate to proceed in relation to the Ministerial Directions.

Support for this proposal will enhance local employment opportunities consistent with the principle of a 30 minute city under the Sydney Region Plan and District Plans.

The proposed regarding of an existing soil stockpile on site and part removal will result in an increase in increase flood storage on the site and in the locality. There are also no impacts on any upstream or downstream properties and no cumulative flood impacts as a result of the proposal.

This submission has addressed all key Planning and Flooding matters as outlined by the staff from the Department of Planning. The supplementary PMF Flood Study will also be completed and provided tot e commission prior to the relevant meeting dates.

We look forward to working with the Commission, Council and Department of Planning to finalise this matter and deliver employment opportunities for local residents in Western Sydney.

If you have any questions or wish to discuss this letter, please contact me on 0455 994 957.

Yours faithfully
Urbanco Group Pty Ltd

Michael Rodger
Director

CC Rouzbeh Loghmani - Planning Manager, Metro West

Attachment 1

Assessment of Consistency with Ministerial Direction 4.1 – Flooding

Direction 4.1

(1) A planning proposal must include provisions that give effect to and are consistent with:

(a) the NSW Flood Prone Land Policy,

(b) the principles of the Floodplain Development Manual 2005,

(c) the Considering flooding in land use planning guideline 2021, and

(d) any adopted flood study and/or floodplain risk management plan prepared in accordance with the principles of the Floodplain Development Manual 2005 and adopted by the relevant council.

Response:

The Planning Proposal adopts the principles of the *NSW Flood Prone Land Policy*, *Floodplain Development Manual* and *Considering flooding in land use planning guideline 2021.*

The proposal does not seek to rezone any flood prone land to allow residential or urban development.

The Proposal and associated regarding of the site stockpile will ensure that the industrial zoned land is wholly flood free in the Flood Planning Event, consistent with the principles of these guidelines and manuals.

The guidelines and manuals do not prohibit rezoning of industrial land below the PMF flood level.

The Flood Planning Event / Flood Planning Level is consistently adopted as the 1:100 year flood.

(2) A planning proposal must not rezone land within the flood planning area from Recreation, Rural, Special Purpose or Conservation Zones to a Residential, Business, Industrial or Special Purpose Zones.

The Proposal and associated regarding of the site stockpile will ensure that the industrial zoned land is wholly flood free in the Flood Planning Event and does not rezone any land within the Flood Planning Area.

(3) A planning proposal must not contain provisions that apply to the flood planning area which:

(a) permit development in floodway areas,

The proposal does not permit any development in floodway areas in the flood planning area.

(b) permit development that will result in significant flood impacts to other properties,

The flood study submitted with the proposal demonstrates that there is no impact on any upstream or downstream properties in the flood planning event.

(c) permit development for the purposes of residential accommodation in high hazard areas,

The proposal does not permit any residential development on the site.

Further, we note the site does not have any areas of high hazard under the flood planning event.

(d) permit a significant increase in the development and/or dwelling density of that land,

The proposal will not result in a significant increase in the development or dwelling density of any land within the flood planning area.

(e) permit development for the purpose of centre-based childcare facilities, hostels, boarding houses, group homes, hospitals, residential care facilities, respite day care centres and seniors housing in areas where the occupants of the development cannot effectively evacuate,

The review of evacuation timeframes and capacity in this submission has demonstrated that all employees and residents are able to be evacuated in timeframes which provide significant buffer to flood impacts.

There are no impacts on local flood evacuation timeframes or road evacuation capacity.

(f) permit development to be carried out without development consent except for the purposes of exempt development or agriculture. Dams, drainage canals, levees, still require development consent,

The proposal does not introduce any additional land uses which are permissible without consent.

(g) are likely to result in a significantly increased requirement for government spending on emergency management services, flood mitigation and emergency response measures, which can include but are not limited to the provision of road infrastructure, flood mitigation infrastructure and utilities, or

The evacuation review above has demonstrated that the proposal does not result in any increased requirement for spending on emergency services, flood mitigation or emergency response.

(h) permit hazardous industries or hazardous storage establishments where hazardous materials cannot be effectively contained during the occurrence of a flood event.

The proposal will not result in and hazardous materials or storage below the flood planning level. The site is flood free in the defined flood event.

(4) A planning proposal must not contain provisions that apply to areas between the flood planning area and probable maximum flood to which Special Flood Considerations apply which:

We note that the proposal does not seek to permit any Special Flood Consideration land uses within the PMF area.

(a) permit development in floodway areas,

The proposal does not seek to permit development in floodway areas as outlined above.

(b) permit development that will result in significant flood impacts to other properties,

The Flood Risk Management Strategy submitted with proposal addressed the PMF flood levels stating that:

In the PMF, the proposal would have an immaterial effect of flood behaviour. This is because not only does the proposed works balance flood storage, the depth-varying roughness effect applies and it is not plausible that the works could have any material influence on extreme flood behaviour.

Notwithstanding, a further Flood Study is being prepared and will incorporate modelling of the PMF flood event and address outcomes of the meeting with the Department of Planning on the 19th of July.

(c) permit a significant increase in the dwelling density of that land,

The proposal does not seek tot rezone any land for residential development.

The proposal will not result in a significant increase in the dwelling density of land.

(d) permit the development of centre-based childcare facilities, hostels, boarding houses, group homes, hospitals, residential care facilities, respite day care centres and seniors housing in areas where the occupants of the development cannot effectively evacuate,

The review of evacuation timeframes and capacity in this submission has demonstrated that all employees and residents are able to be evacuated in timeframes which provide significant buffer to flood impacts.

There are no impacts on local flood evacuation timeframes or road evacuation capacity.

(e) are likely to affect the safe occupation of and efficient evacuation of the lot, or

The review of evacuation timeframes and capacity in this submission that there are no impacts on the safe occupation and efficient evacuation of the lot.

(f) are likely to result in a significantly increased requirement for government spending on emergency management services, and flood mitigation and emergency response measures, which can include but not limited to road infrastructure, flood mitigation infrastructure and utilities.

The evacuation review above has demonstrated that the proposal does not result in any increased requirement for spending on emergency services, flood mitigation or emergency response.

(5) For the purposes of preparing a planning proposal, the flood planning area must be consistent with the principles of the Floodplain Development Manual 2005 or as otherwise determined by a Floodplain Risk Management Study or Plan adopted by the relevant council.

The flood planning area is consistent with the Floodplain Development Manual 2005. A Floodplain Risk Management Study has not been adopted by Council.

Consistency

As demonstrated above, the proposal; is considered to be fully consistent with the Ministerial Directions.

The planning proposal is also supported by a flood and risk impact assessment which has been accepted by the accepted by the relevant planning authority (Penrith Council) and is prepared in accordance with the principles of *the Floodplain Development Manual 2005* and consistent with the relevant planning authorities' requirements.

Any perceived inconsistency would be of minor significance.

Attachment 2

Letter of Insurance Confirmation

Glenstone Group Pty Ltd
1/124 Russell Street Emu Plains
NSW 2750
1300 664 357
info@glenstone.com.au

25th July 2023
Attn: NSW Planning Department

To Whom It May Concern,

I refer to recent questions regarding the ability to insure properties, buildings and contents which fall under the Probable Maximum Flood (PMF) extents under the Hawkesbury-Nepean Valley Regional Flood Study in Emu Plains.

We currently own an industrial property at 124 Russell Street, Emu Plains which would be impacted by the PMF extents under the mapping, much like most of Emu Plains.

The property is currently insured through QBE and we have had no issues obtaining insurance in the past.

Should you have any further questions, please contact me on the above.

Best Regards,

Dominic Hogan

Attachment 3

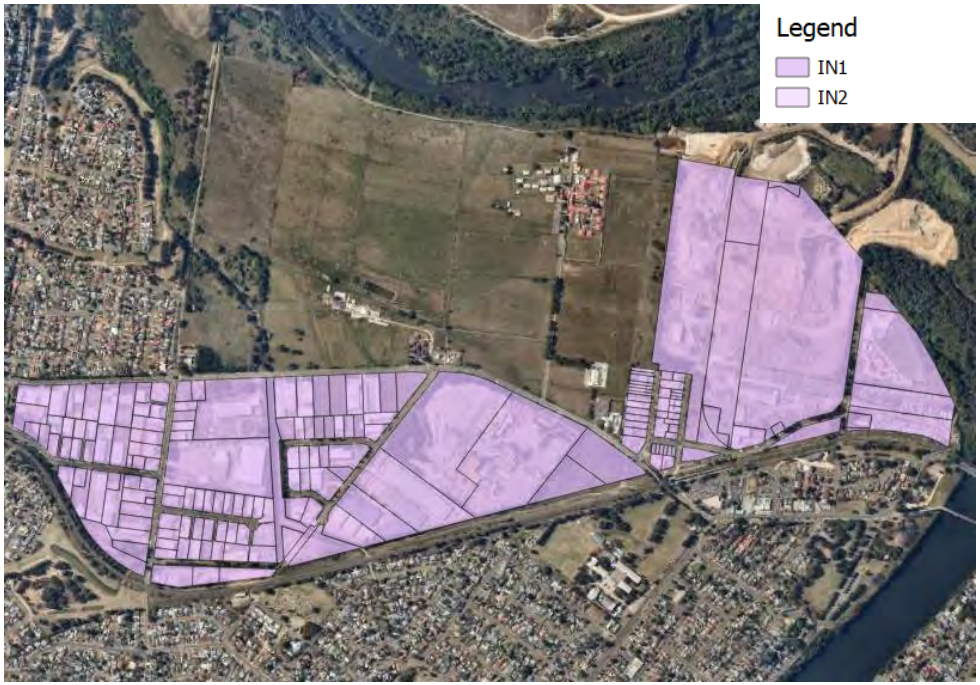
Penrith Council Employment Study Extracts

6.5 Emu Plains

Overview

	Emu Plains Precinct	All Precincts
Land area:	144.5 hectares (8.0% of all precincts)	1809.8 hectares
Gross floor area (GFA):	294,081sqm (6.7% of all precincts)	4,342,779sqm
Occupied GFA:	289,598sqm (98.5%)	4,137,296sqm (95.0%)
Vacant GFA:	4,483sqm (1.5%)	205,482sqm (5.0%)
Key Industry:	Manufacturing (34.1%)	Transport, Postal and Warehousing (33.4%)
	Transport, Postal and Warehousing (14.9%)	Manufacturing (20.2%)
	Public Administration and Safety (7.8%)	Retail Trade (8.4%)

Emu Plains Zoning Map



Emu Plains One ANSZIC Code Floorspace Data

Floorspace	Total (sqm)	% of Total	Jobs	% of Total
Agriculture, Forestry and Fishing	-	0.0%	187	7.5%
Accommodation and Food Services	2,134	0.7%	38	1.5%
Administrative and Support Services	654	0.2%	12	0.5%
Arts and Recreation Services	17,549	6.0%	8	0.3%
Construction	10,207	3.5%	473	18.9%
Education and Training	20,551	7.0%	127	5.1%
Electricity, Gas, Water and Waste Services	1,502	0.5%	41	1.7%
Financial and Insurance Services	165	0.1%	0	0.0%
Health Care and Social Assistance	921	0.3%	44	1.7%
Information Media and Telecommunications	633	0.2%	3	0.1%
Manufacturing	100,360	34.1%	821	32.8%
Mining	-	0.0%	10	0.4%
Other Services	7,996	2.7%	85	3.4%
Professional, Scientific and Technical Services	12,762	4.3%	97	3.9%
Public Administration and Safety	23,081	7.8%	159	6.4%
Rental, Hiring and Real Estate Services	9,741	3.3%	21	0.8%
Retail Trade	13,010	4.4%	106	4.2%
Transport, Postal and Warehousing	43,714	14.9%	125	5.0%
Wholesale Trade	24,374	8.3%	143	5.7%
Residential	246	0.1%	-	0.0%
Vacant	4,483	1.5%	-	0.0%
Total	**294,081**	**100.0%**	**2,499**	**100.0%**

Source: ABS Census 2016 and HillPDA

Emu Plains Precinct is located on the western side of the Penrith LGA and provides around 145 hectares of employment zoned land. The majority (99%) of Emu Plains is comprised of IN1 – General Industrial zoned land with IN2 – Light Industrial making up the remaining (1%).

The precinct's size lends it to having a high diversity of uses across is 294,081sqm of floorspace. It is characterised by manufacturing, other services, warehousing/distribution, education/training and arts and recreational services.

4. EMU PLAINS

Overview

The Emu Plains industrial precinct is located on the western side of the Penrith LGA and is well-connected by major roads and rail.

The precinct spans over 132 ha of employment-zoned land. Most of the lots are smaller than 0.5ha. The largest site in the precinct is Boral's 40ha Emu Plains Quarry. The precinct has a mixture of older and newer developments, with differing heights.

The precinct is mostly zoned IN1 General Industrial, with a smaller proportion zoned IN2 Light Industrial. The precinct's size and range of lot sizes lends it to having a high diversity of industries, with manufacturing and construction being the main industries.

In 2016, the precinct provided a total of 2,781 jobs. Population-serving businesses within the precinct's boundaries provide services for workers as well as serving the local population. For example, the precinct's western side offers a variety of cafes and fast-food restaurants, as well as two yoga studios, a performing arts school, an aquatic centre, and roller-skating rink. These businesses increase activity and the vitality of the precinct.

The precinct's eastern side is home to Penola Catholic College (formerly known as McCarthy Catholic College) and the McCarthy Campus of CathWest Innovation College. CathWest Innovation College is a trade training centre that provides vocational pathways for secondary school students. Neighbouring this education precinct is a caravan park that also offers some long-term residential accommodation.

The precinct is bounded by the Nepean River to the north and east, but there are a lot of residential uses adjoining its western and southern boundaries. Residential development to the south is generally separated by the main western rail line. Although the precinct is located on the floodplain of the Nepean River, the overall low-level of site constraints make the area suitable for a wide range of employment uses.

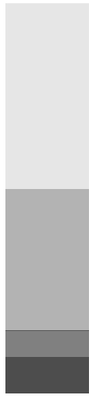
132 HA
Zoned and serviced industrial land

22 HA
Vacant, zoned and serviced industrial land

195
Businesses

2781 Jobs (2016)

Job distribution



46% Industrial

40% Population serving

6% Knowledge intensive

7% Health and education

923 (33%)
Jobs in manufacturing

687 (25%)
Jobs in construction

Location within Penrith LGA

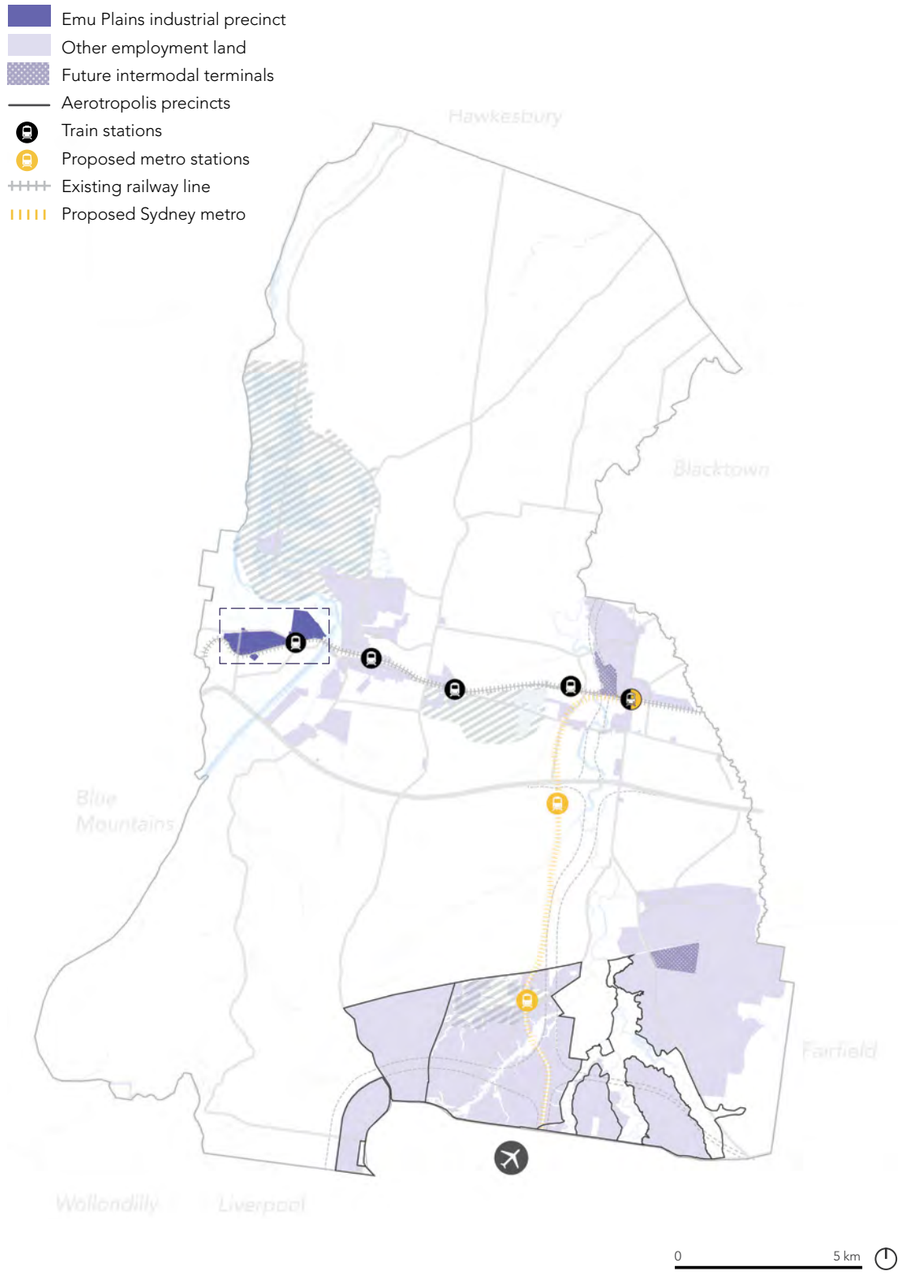
The precinct is located 2km from Penrith's City Centre, on the western side of the Nepean-Dyarubbin River. It is at the foot of the Blue Mountains on land that was once orchards and dairy farms. The precinct hugs Russell Street and Old Bathurst Road and is proximate to major thoroughfares, such as the Great Western Highway (1.5 km), the M4 Motorway (1.5 km), Castlereagh and Mulgoa Roads (2 km), and Emu Plains train station (located within the precinct's eastern boundary).

Planning context

The precinct is zoned by the Penrith Local Environmental Plan 2010. The Penrith Development Control Plan 2014 also sets out several land-use controls for the precinct in Part D4 Industrial Precincts. The precinct is referred to as Precinct 7 (Emu Plains – north of Old Bathurst Road) and Precinct 8 (Emu Plains – south of Old Bathurst Road) in this document

MAP 6: Emu Plains Industrial Precinct

Location of Emu Plains industrial precinct in the LGA.



LAND-USE ZONING

The precinct is mostly zoned IN1 General Industrial (99.3% or 148.9ha) and supports traditional and non-traditional uses, including manufacturing, education and training, electricity, gas and water services, mining, construction, transport, postal and warehousing, retail trade and wholesale trade. The rest of the precinct is zoned IN2 Light Industrial (0.7% or 1.1ha), which is totally comprised of vacant land.

Area percentage by zoning

Table 1: Area by land-use zoning of Emu Plains industrial precinct

Land zone	Area (ha)	Percentage
Area zoned IN1	148.9	99%
Area zoned IN2	1.1	1%
Total Area*	150	100%

**Includes roads*

Figure 1: Land-use zoning in Emu Plains industrial precinct

Legend

Industrial

Light Industrial

0 500m

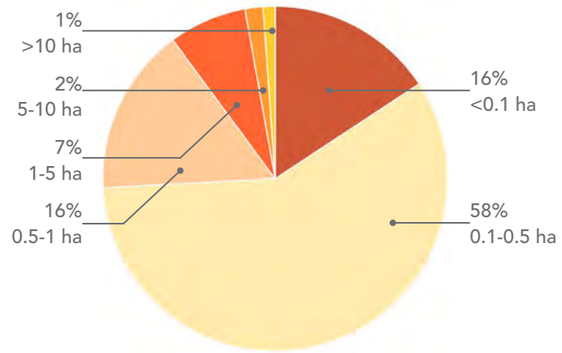
LOT SIZE

Emu Plains is mostly sub-divided into small-scale lots with 90% of all lots being 1 ha or less in size. Of the 178 lots in the precinct, the largest proportion (58%) of lots are 0.1 to 0.5 ha. The second largest group (15.8%) are lots smaller than 0.1 ha. Lots between 0.5 and 1 ha make up 15%. Only 10% of lots are larger than 1 ha. The predominance of smaller lots in the precinct makes it suitable for a variety of small-scale industries.

Table 2: Lot sizes in Emu Plains industrial precinct

Lot size	Number	Percentage
<0.1 ha	28	16%
0.1-0.5 ha	104	58%
0.5-1 ha	28	16%
1-5 ha	13	7%
5-10 ha	3	2%
>10 ha	2	1%
Total	178	100%

Figure 2: Proportion of lots by lot size of Emu Plains industrial precinct

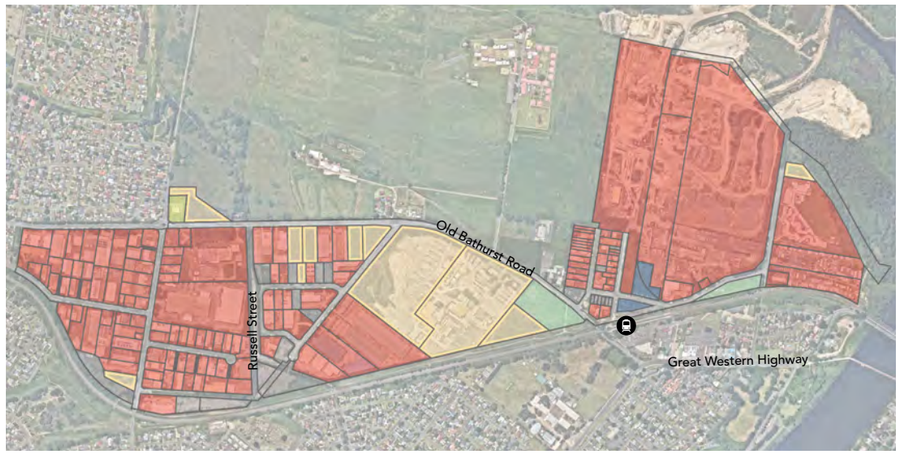


DEVELOPMENT STATUS

Around three quarters (75.6% or 99.7 ha) of the precinct developable land area is developed and 17% (or 22.4 ha) remains vacant. Some vacant land (5.9 ha) is currently being used for storage. The "Other" category only applies to a very small portion of the precinct (2.1% or 2.7ha) and refers to land that is not developable in the immediate future and is likely to be used for non-employment purposes.

Most developed lots are small and are between 0.1 to 0.5 ha in size (or 88 lots of 140). 19 of 140 developed lots are smaller than 1000 sqm and only 2 of them are larger than 10 ha. Of the 11 vacant lots, 7 are 1 ha or less. Only two lots are 5 ha or larger. Most vacant lands with storage are smaller than 0.5 ha, while only (3 of 22) vacant lands with storage are larger than 0.5 ha. Therefore, the vacant lands available for future development largely reflect the lots already developed, meaning that future development of these sites is likely to deliver a similar type of building and business.

Figure 3: Development status of Emu Plains industrial precinct



Legend

Developed
- Developed

Vacant
- Vacant land with Storage
- Vacant Land

Other Uses
- Commuter Car Park
- Infrastructure
- Other

0 500m

Table 3: Development status by area of Emu Plains industrial precinct

Development Status	Area (ha)	Percentage
Developed	99.7	76%
Under Construction	0	0%
Commuter Car Park	1.1	1%
Other	2.7	2.1%
Vacant Land	22.4	17%
Vacant Land with Storage	5.9	5%
Total	131.9	100%

Figure 4: Development status by area of Emu Plains industrial precinct

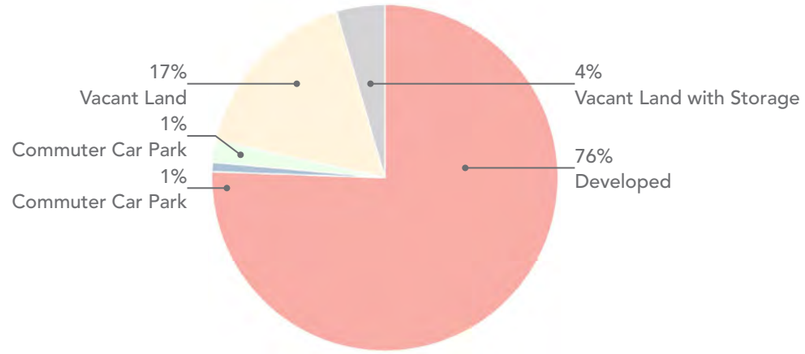
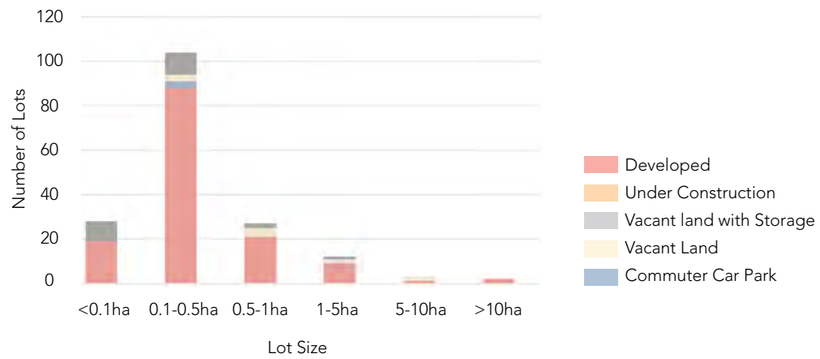


Table 4: Development status by lot size of Emu Plains industrial precinct

Lot Size	<0.1 ha	0.1-0.5 ha	0.5-1 ha	1-5 ha	5-10 ha	>10 ha	Total
Developed	19	88	21	9	1	2	140
Under Construction	0	0	0	0	0	0	0
Commuter Car Park	0	3	0	0	0	0	3
Other	0	0	1	1	0	0	2
Vacant Land	0	3	4	2	2	0	11
Vacant Land with Storage	9	10	2	1	0	0	22
Total	28	104	28	13	3	2	178

Figure 5: Development status by lot size of Emu Plains industrial precinct



OCCUPANCY

More than two-thirds (68%) of the fully developed lots have a single occupancy, while just under a third (28%) have multiple occupants.

Single occupancy lots lend themselves to future redevelopment than multiple occupancy.

Table 5: Occupancy Status of Emu Plains industrial precinct

Occupancy	Number of lots	Percentage	Area (ha)	% of total area
Single Occupancy	95	68%	82.8	83%
Multiple Occupants	39	28%	15.8	16%
Vacant Space - Unoccupied	5	4%	0.6	0.6%
Total	139	100%	99.2	100%

Figure 6: Occupancy Status of Emu Plains industrial land

Legend

0 500m

Occupied
- Multiple Occupancy
- Single Occupancy
- Other

Vacant
- Vacant land with Storage
- Vacant Land

Other Uses
- Commuter Car Park
- Infrastructure

EMPLOYMENT

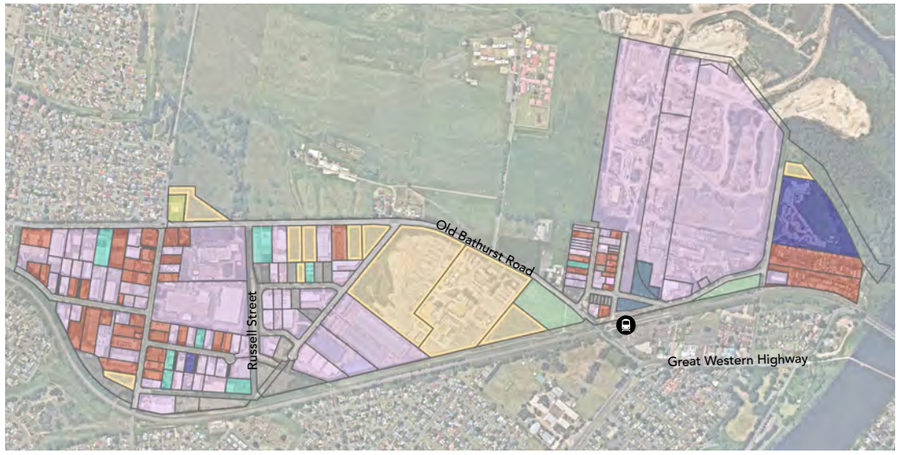
Total employment in Emu Plains industrial precinct was 2,781 jobs in 2016. The vast majority of jobs are in the industrial and population serving sectors.

Employment in the precinct has grown from 2,553 jobs in 2009, and is estimated to have been 3,083 jobs in 2019.

Table 6: Land use and jobs by GSC employment code of Emu Plains industrial precinct

Employment Code	Land Area (ha)	% of total	Jobs	% of total
Industrial	75.5	77%	1292	46%
Population Serving	15.0	15%	1119	40%
Health/Education	5.1	5%	195	7%
Knowledge Intensive	2.9	3%	175	6%
Total	98.5	100%	2781	100%

Figure 7: Land use and jobs by GSC employment code of Emu Plains industrial precinct



Legend

0 500m

Industrial Sectors
- Industrial
- Population Serving
- Knowledge Intensive
- Health and Education

Other Uses
- Commuter Car Park
- Infrastructure
- Residential

Developed
- Under Construction
- Other

Vacant
- Vacant land with Storage
- Vacant Land
- Vacant Space - Unoccupied

INDUSTRIES

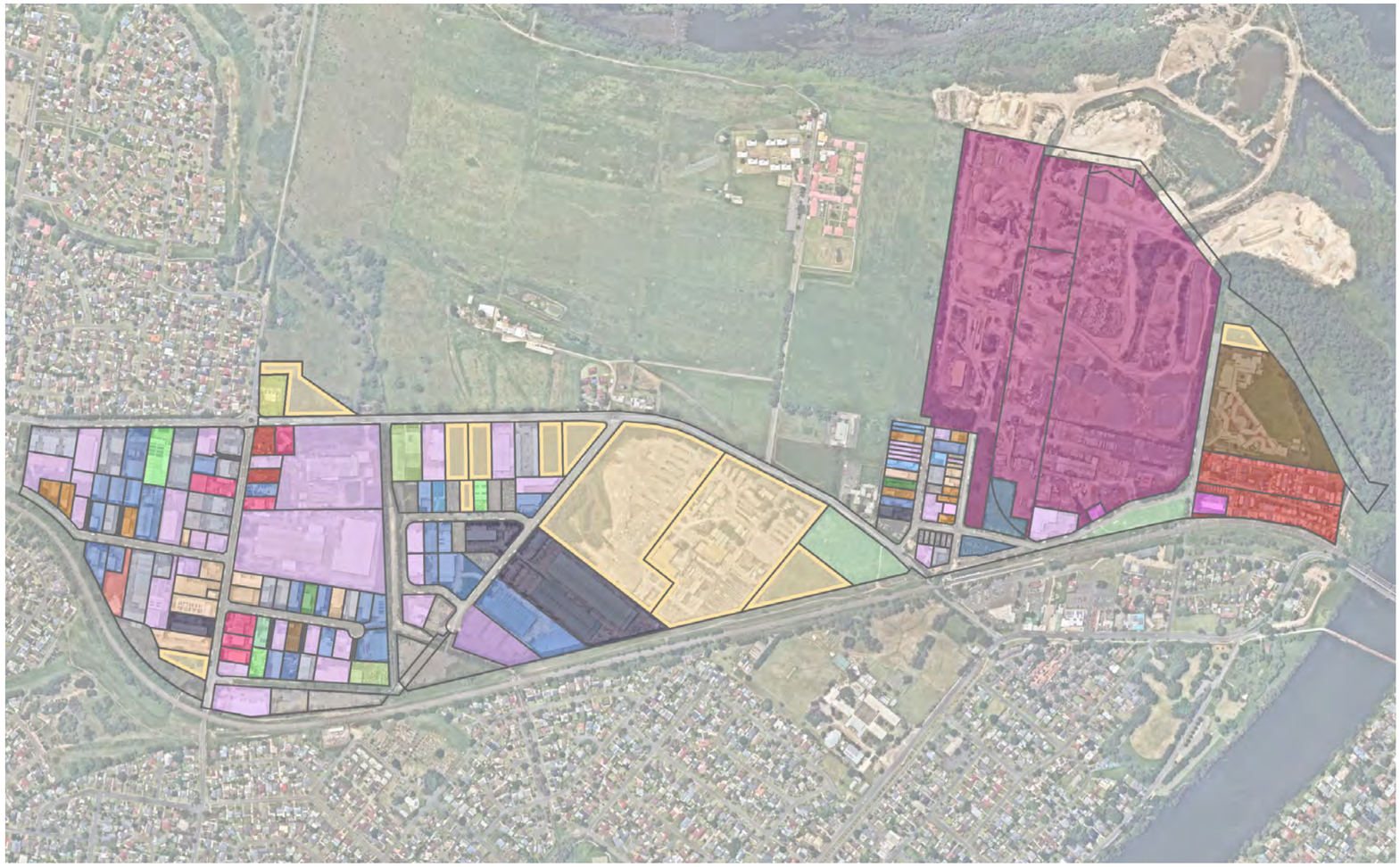
Manufacturing is the largest industry and provides 923 local jobs, representing 33% of all jobs in the precinct. This industry covers 18% of the total area of the precinct (23.7 ha).

Construction is the second largest industry and provides 687 local jobs, representing almost a quarter of all jobs in the precinct. However, it only accounts for 1.9% of the total area of the precinct (2.5 ha). This high number of jobs in Construction may be partly explained by workers being employed by companies in the precinct but working else where.

The major concrete supply company Rocla announced the closure of its Emu Plains site in April 2020, which will likely lead to a reduction of 94 construction jobs in the precinct.

Accommodation and Food Services is the third largest industry in the precinct, employing 208 workers, representing 7.5% of all jobs in the precinct. This industry comprises 3.3% of the total precinct area (4.3 ha). Retail and other services make up 1 in 5 of the population serving jobs in the precinct.

Figure 8: Land use by ANZSIC code of Emu Plains industrial precinct



Legend

Industrial Sectors

Industrial

- Electricity, Gas, Water, and Waste Services
- Manufacturing
- Mining
- Transport, Postal, and Warehousing
- Wholesale Trade

Knowledge Intensive

- Administrative and Support Services
- Information, Media, and Telecommunications
- Professional, Scientific, and Technical Services
- Public Administration and Safety
- Rental, Hiring and Real Estate Services

Health and Education

- Education and Training

Population Serving

- Accommodation and Food Services
- Arts and Recreational Services
- Construction
- Other Services
- Retail Trade

Developed

- Multi-Use

Vacant`

- Vacant Land with Storage
- Vacant Land
- Vacant Space - Unoccupied

Other Uses

- Commuter Car Park
- Infrastructure
- Residential
- Other

0 500m

Table 7: Land use by ANZSIC code of Emu Plains industrial precinct

ANZSIC Code	Total Land Area (ha)	% of total	Jobs	% of total
Industrial				
Agriculture, Forestry and Fishing	0	0%	17	1%
Electricity, Gas, Water and Waste Services	0.4	0%	45	2%
Manufacturing	23	18%	923	33%
Mining	39.7	30%	12	0%
Transport, Postal and Warehousing	8.9	7%	143	5%
Wholesale Trade	1.3	1%	152	6%
Knowledge Intensive				
Administrative and Support Services	0.1	0%	50	2%
Financial and Insurance Services	0.0	0%	0	0%
Information Media and Telecommunications	0.2	0%	3	0%
Professional, Scientific and Technical Services	1.1	1%	100	4%
Public Administration and Safety	0.2	0%	0	0%
Rental, Hiring and Real Estate Services	1.3	1%	21	1%
Health and Education				
Education and Training	5.1	4%	144	5%
Health Care and Social Assistance	0.0	0%	50	2%
Population Serving				
Accommodation and Food Services	4.4	3%	208	8%
Arts and Recreation Services	0.5	0%	11	0%
Construction	2.6	2%	687	25%
Other Services	1.2	1%	102	4%
Retail Trade	1.6	1%	111	4%
Vacant				
Commuter Car Park	1.1	1%	-	-
Under Construction	0.0	0%	-	-
Vacant land	22.4	17%	-	-
Vacant land with storage	6.0	5%	-	-
Vacant Space (unoccupied)	0.6	2%	-	-
Others				
Infrastructure	0.5	0%	-	-
Multi-use	6.2	5%	-	-
Other	2.7	2%	-	-
Residential	0.1	0%	-	-
Total	**132.0**	**100%**	**2,781**	**100%**

Top 3 industries by Growth between 2009 and 2019

Construction experienced the greatest increase in local jobs since 2009 (346 local jobs), followed by Transport, Postal and Warehousing (46), and Accommodation and Food Services (28).

Business

The precinct is occupied by 195 businesses and is known for its diverse mix of manufacturing, construction, and food services. Businesses with head offices in Emu Plains range from larger construction serving and civil engineering companies, such as ACO drainage equipment and Marley Flow cooling towers, to mid-size companies, like Avida RV (caravans and campervans) and Plustec (windows and doors). The precinct is also occupied by boutique manufacturers, like Zokoko (artisan chocolate), Gingerbread Folk (artisan biscuits), and Native Oils Australia, as well as recreational facilities like Nepean Aquatic Centre and Penrith Skatel (roller skating). The largest site in the precinct is occupied by Boral Quarries.

Emu Plains

Additional Studies Submitted

PRELIMINARY ENVIRONMENTAL

SITE INVESTIGATION

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Emu Plains NSW 2750

Environmental Consulting Services Pty Ltd