

Mount Walker, Exploration Permit for Minerals

Regional Interests Development Application

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1 Introduction

1.1 Background

The Austral Brick Co Pty Ltd ('Austral Bricks') has engaged Groundwork Plus to prepare an application for an Exploration Permit for Minerals ('EPM') over land situated within the Department of Resources ('DoR') 'Brisbane Mining District'. The proposed EPM (named 'Mount Walker') is situated approximately 10 km west of the town of Willowbank, Queensland. The proposed EPM covers the following Blocks and Sub-Blocks BRIS3198 K, P, T, U, Y, Z and BRIS3199 A, B, C, F, G, H, L, Q. The application for the EPM was recorded as lodged with DoR on 27 January 2022 and assigned EPM 28268.

The proposed EPM overlies an area which has been determined as having reasonable prospectivity for clay and shale resources, which if found to be feasible, would support a Mining Lease ('ML') application to provide security of resource for Austral Bricks' activities in Queensland well into the future.

The target areas for the EPM are Area A being Lot 70 CH31283 and Area B being Lot 4 RP50009, Lot 1 RP49462 and Lot 64 CH31240. The proposed EPM is in area of regional interest under the *Regional Planning Interests Act 2014* (the RPI Act). The areas of regional interest include Priority Living Areas (PLAs) and Strategic Cropping Area (SCA). A Regional Interest Development Approval (RIDA) is required when a resource activity is proposed in an area of regional interest under the RPI Act.

This RIDA application is made only in relation to the EPM target areas within Lot 70 CH31283, Lot 4 RP50009, Lot 1 RP49462 and Lot 64 CH31240 and those areas avoid SCA and therefore it is made in relation to the PLA only.

The purpose of the EPM will be to enable Austral Bricks to carry out exploration activities to determine the presence of all minerals other than coal, with a focus on determining the presence of Clay (Brick Clay) and Shale within the EPM target areas.

The EPM activities proposed within the EPM target areas are low impact activities resulting in minimal ground disturbance and are suited to open plain or open agricultural paddock settings, or lightly timbered areas. They include:

- Desktop Study and Geophysical Data Reprocessing
- Reconnaissance
- Geological Data Collection
- Drilling
- Geophysical Surveys
- Ceramic Metallurgical Studies
- Resource and Geological Modelling

They are rapid techniques that would cause little disturbance to any agricultural activity being undertaken by the landholder. Furthermore, they are techniques which do not result in any permanent change to the landform and do not involve any permanent infrastructure, structures or buildings and would not constitute a material change of use of the land. The activities in essence are not dissimilar to soil sample investigations that a rural landholder might undertake to confirm the suitability of the land for a range of rural and agricultural uses.

To be clear, the EPM activities proposed as part of this RIDA application do not include extraction, processing and sale of the clay resource or any other mineral. The EPM activities are exploration activities only. If a viable deposit of clay is identified, a future RIDA application would need to be made to enable extraction, processing and sale of the clay resource to occur.

Clay resources are comparable to extractive industry operations (i.e., quarries), in that they produce construction materials (e.g., bricks, pavers, tiles, etc) and therefore must be established close to the market, commonly in urban areas, to ensure demand can be met and prices for consumers remain competitive. As expected, urban and industrial development in Southeast Queensland ('SEQ') has resulted in the loss of most accessible clay deposits close to the markets that rely on them. As clay resources become increasingly limited, the importance of new MLs in locations that are close to market will become increasingly important. The proposed EPM is positioned in proximity to Austral Bricks' expansive brick and paver manufacturing facilities at Rochedale ('Rochedale Brick Plant'), situated on ML 1151. The establishment of an additional ML in the Mount Walker locality at some point in the future subject to a future RIDA application would enable Austral Bricks to provide a consistent and competitively priced supply of materials.

1.2 Purpose of Report

This report contains information to address the requirements of the RPI Act in relation to a proposed resource activity within a PLA with the relevant assessment criteria being, *'The location, nature and conduct of the activity is compatible with the planned future for the priority living area stated in a planning instrument under the Planning Act'*.

2 Project Summary

2.1 Tenure Details

The location details for the proposed EPM are summarised in Table 1 – Summary of Subject Land. Figure 1 – Permit Layout provides an illustration of the layout of the permit.

Table 1 – Summary of Subject Land

Location	10 km west of Willowbank, Queensland
Proposed Holder	The Austral Brick Co. Pty Ltd
Proposed Term	Five years
Mining District	Brisbane Mining District
Blocks and Sub-Blocks	Refer to Figure 1 and Table 2

Table 2 – Proposed Sub-Blocks

BIM Code	Block Number	Sub-blocks
BRIS	3198	- - - - - K - - - - P.. - - T U - - - Y Z
BRIS	3199	A B C - - F - G - H - - - L - - - - Q - - - - -

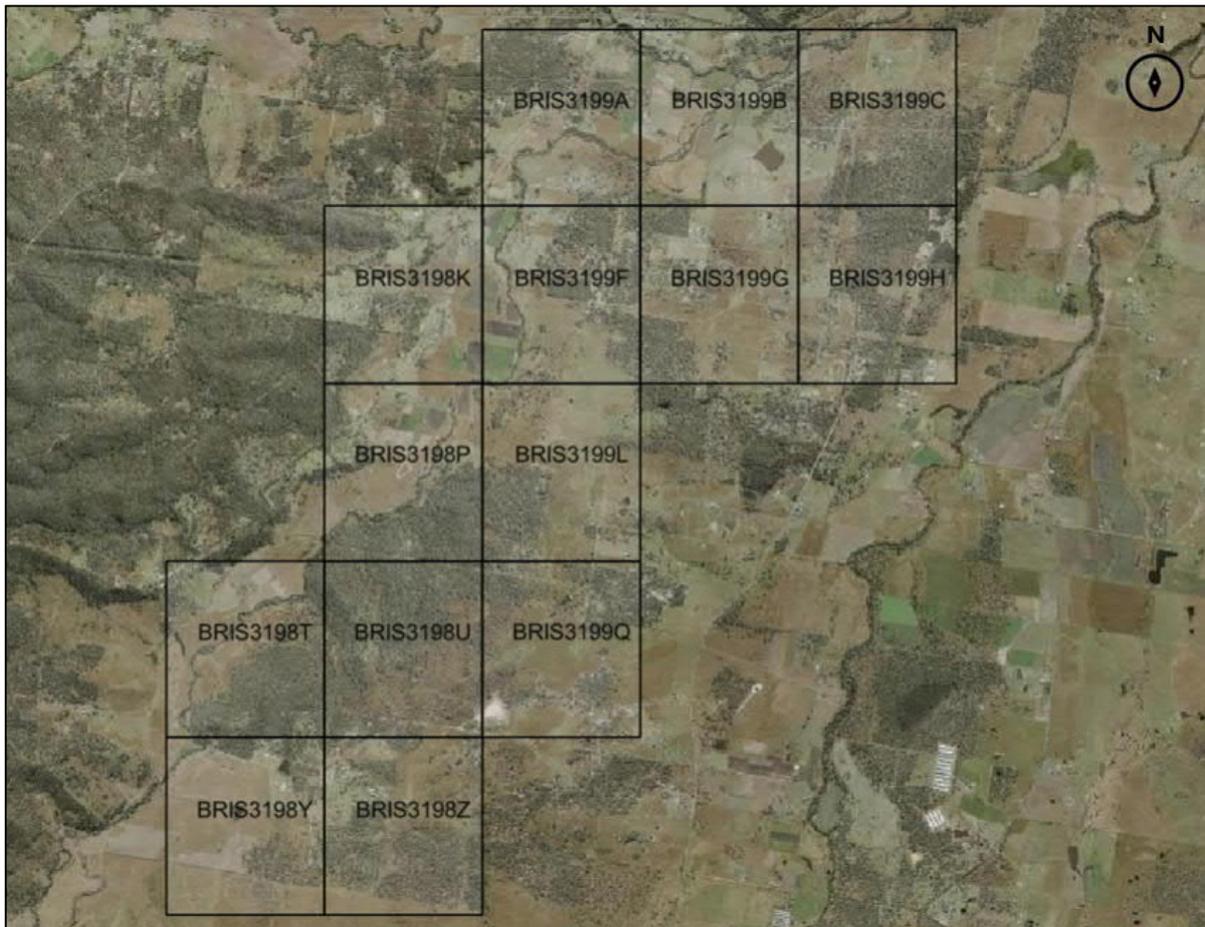


Figure 1 – Permit Layout

(Figure source: The State of Queensland (2022a))

2.2 General Description and Access

Access to the EPM will be provided for by several existing constructed and unsealed roads as shown in Figure 2 – Site Topography. General overland access will be arranged for areas which do not have constructed roads or access tracks. Topographical features of the EPM are shown in Figure 2 – Site Topography. The EPM area is traversed by several watercourses, the largest being Franklin Vale Creek and Western Creek. Franklin Creek traverses the western portions of the EPM area, flowing in a general north-easterly direction, conjoining with Western Creek in sub-block BRIS3199B, and ultimately converging with the Bremer River 7 km downstream of the EPM. A network of ephemeral watercourses traverses the EPM area, which feed these larger creek systems. The drainage pattern is typical of the low lying floodplains which overly the broader Walloon Coal Measures.

Elevations across the proposed EPM range from approximately 50 m Australian Height Datum ('mAHD') to 150 mAHD. There are multiple hills scattered throughout the EPM area which are generally associated with isolated Tertiary Basalt outcrops.



Figure 2 – Site Topography

(Figure source: State of Queensland (2022a))

2.3 Land Availability Search Results

A land availability search has been completed for the proposed EPM via GeoResGlobe using the 'Unavailable Land' and 'Constrained Land' layers (refer Figure 3 – EPM Land Availability Search Results), which has identified that the EPM area is overlain by constraints. A summary of the constraints overlapping the proposed EPM is provided in Table 3 – Constraints Summary.

It must be noted that Austral Bricks has identified 'target areas' within the permit area for all intrusive drilling activities, all of which avoid the constraints listed below, with the exception of the Priority Living Areas ('PLA') declared under the *Regional Planning Interests Act 2014* ('RPI Act'), which overlaps the entirety of the proposed EPM. A Regional Interests Development Approval ('RIDA') application is currently being compiled and will be lodged to ensure that the requisite approvals are in place prior to on-site works being carried out. Following consultation with DoR, it is understood that the RIDA process is distinct from DoR's assessment and grant of the EPM, and this process is not contingent upon a RIDA application having been lodged or approved. Strategic Cropping Land ('SCL') criteria sub-zone is not a trigger for RIDA and has therefore not been considered further as a constraint. Low impact soil/sediment sampling which can be done by hand is likely to occur across the permit area and outside of the target areas, dependent upon topography and the prospective geology.

The EPM is wholly overlain by Restricted Area ('RA') 452, which prohibits any new mining claim applications. As this permit is an EPM, this RA has not been considered further as a constraint.

As advised by DoR following lodgement of the EPM application, part of the permit at the time of application was subject to non-current MDL 172. Based on consultation with the Coal Hub of DoR, this land was released for further application as of the week ending 16 September 2022. Refer to Figure 4 – EPM 28268 and Former Non-Current MDL Mapping Overlay for an illustration of the former non-current MDL 172 extent. At the date of this assessment report, it is understood that DoR has not made a determination as to whether released land will be available to EPMs in application phase and included in the permit on grant, or whether the EPM will be granted with only land, which was available at the time of application, irrespective of any release of land that occurs during the application process. As illustrated in Figure 4 – EPM 28268 and Former Non-Current MDL Mapping Overlay, portions of the target areas are subject to the former MDL 172, and therefore the outcomes of the above will directly influence whether the land will be available to Austral Bricks for access.

Austral Bricks currently do not intend to carry out any exploration within restricted land as defined under the *Mineral and Energy Resources (Common Provisions) Act 2014* and will accordingly retain a buffer of 200 m and 50 m to residences and dams respectively, unless written consent of the landowner is otherwise provided.

The proposed EPM is over land which comprises less than 10% of land subject to Native Title, and as such, the Native Title process is not triggered.

Table 3 – Constraints Summary

Constraint
Inland Rail - Calvert to Kagaru Current EIS project
Inland Rail - Helidon to Calvert Current EIS project
RA 452 - To prohibit any new mining claim applications
Strategic Cropping Land (SCL)
SCL criteria sub-zone
Priority Living Area
Priority Agricultural Area
Danroben Nature Refuge
The following Endangered Regional Ecosystems
12.3.3 - <i>Eucalyptus tereticornis</i> woodland on Quaternary alluvium
12.3.18 - <i>Melaleuca irbyana</i> low open forest on alluvial plains
12.3.10a – <i>E. populnea</i> woodland on alluvial plains
12.3.19 – <i>E. moluccana</i> and/or <i>E. tereticornis</i> and <i>E. crebra</i> open forest to woodland, with a sparse to mid-dense understorey of <i>M. irbyana</i> on alluvial plains
12.9-10.11 – <i>M. irbyana</i> low open forest on sedimentary rocks
12.9-10.27 - <i>Corymbia citriodora</i> subsp. <i>variegata</i> and/or <i>E. moluccana</i> , <i>E. tereticornis</i> , <i>E. crebra</i> open forest with <i>M. irbyana</i> understorey on sedimentary rocks

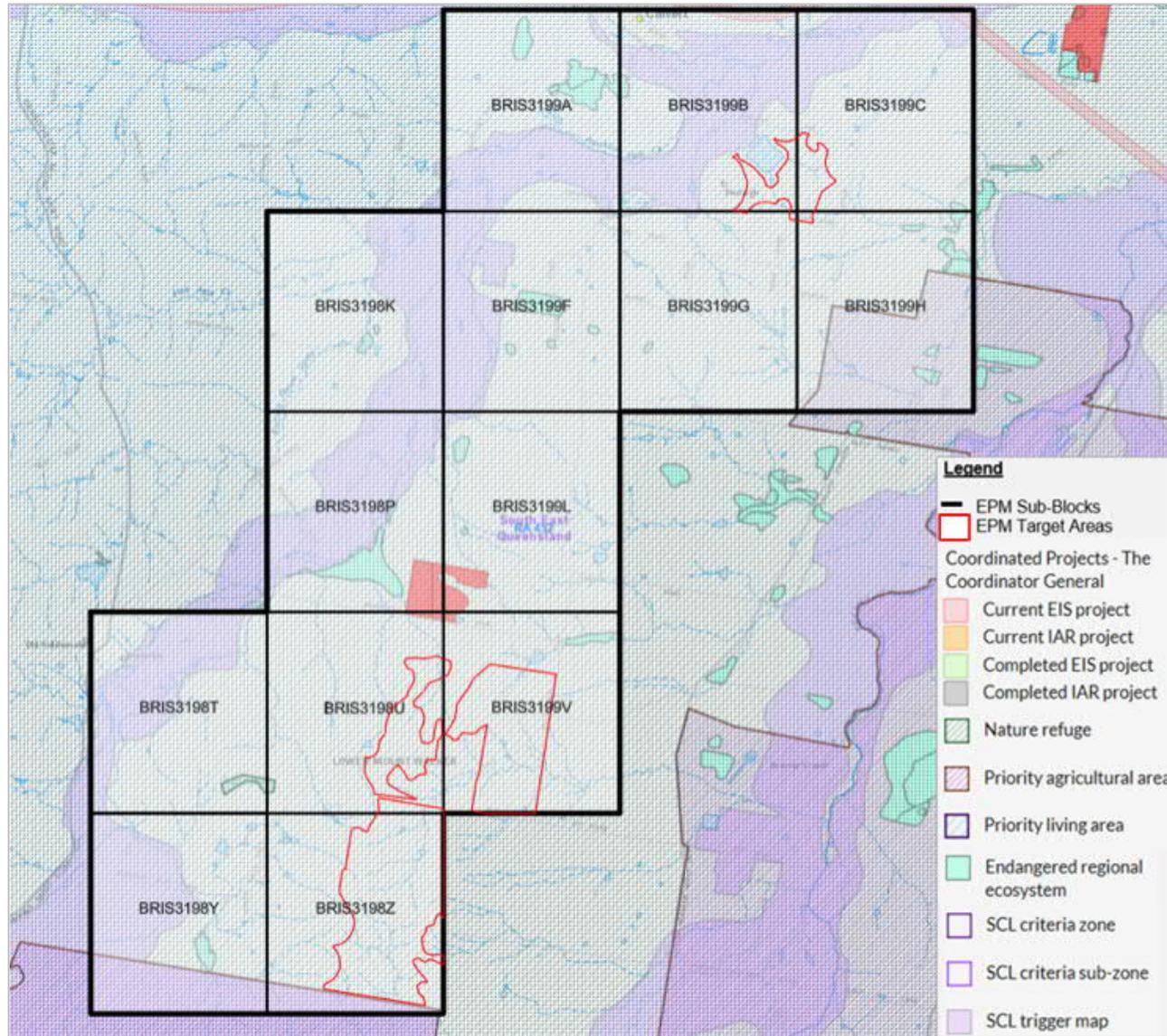


Figure 3 – EPM Land Availability Search Results

(Figure source: State of Queensland (2022b))

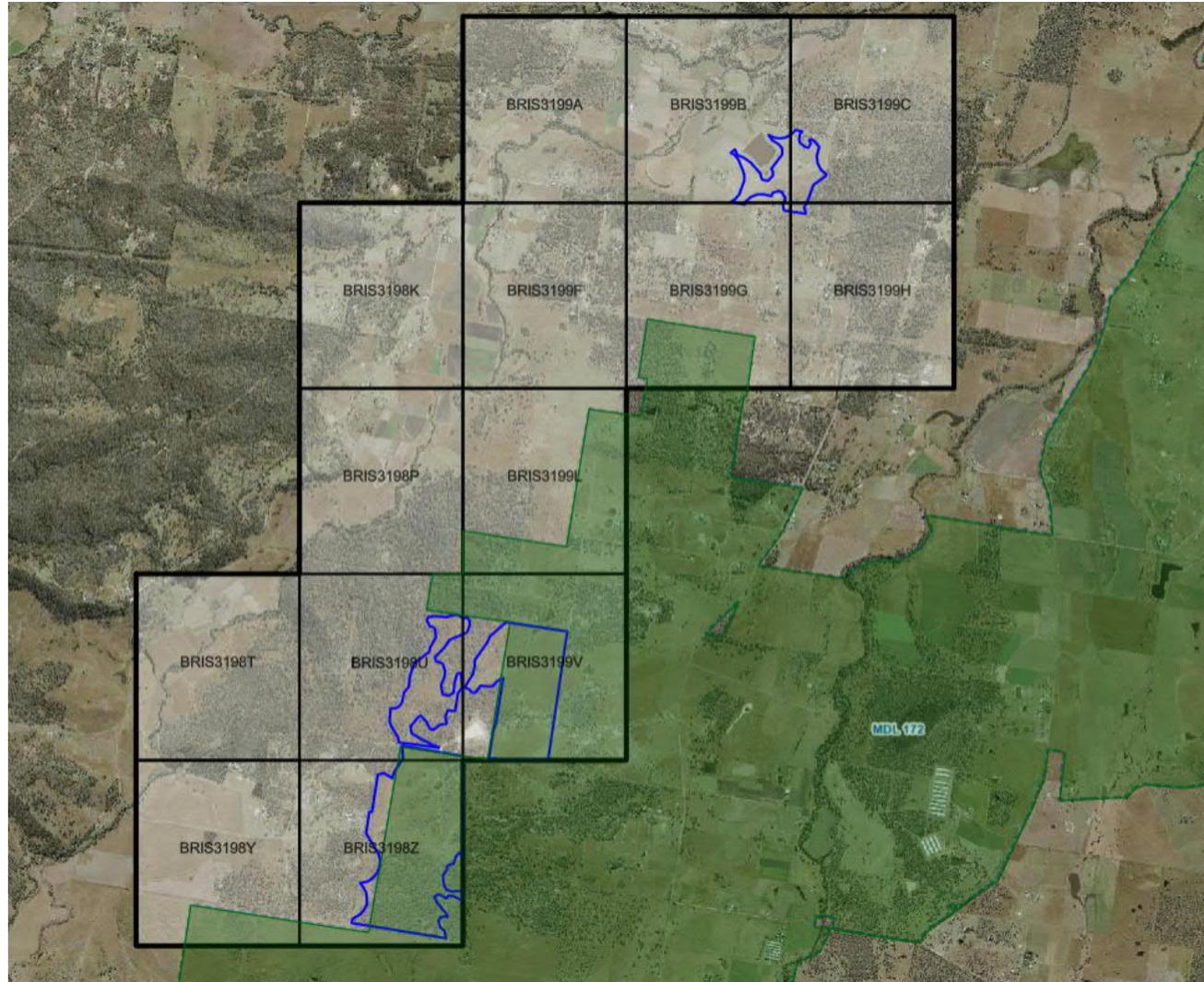


Figure 4 – EPM 28268 and Former Non-Current MDL Mapping Overlay

(Figure reprinted from GeoResGlobe)

2.4 EPM Target Areas

Within the EPM there are specific 'target areas' as shown on Figure 3 above within which the 'advanced activities'¹ as defined by DoR will be limited to. An illustration of the target areas including set-out coordinates is provided in the attached drawings titled Advanced Activity Authorised Areas - Area A (Drawing 2676.DRG.001Ar1) and Advanced Activity Authorised Areas - Area B (Drawing 2676.DRG.001Br1 and Drawing 2676.DRG.001Cr1).

The target areas are described as Area A (36.19ha) and B (283.85ha).

Advanced activities within the buffer area will be limited to drill-hole establishment, which will include the following:

- Drilling to approximately 25 m depth below natural surface levels, or to the underlying shallow sedimentary unweathered basement. The methods of drilling may comprise any of the following:
 - Rotary Air Blast (RAB) drilling.
 - Air Core (AC) drilling.
 - Reverse Circulation (RC) drilling (where lithologies cannot be penetrated by RAB or AC drilling).
 - Diamond Core drilling (DD).
 - Large diameter drilling to shallow depths (where unmixed samples of thin strata are required, and/or when ceramic laboratory specialty testing is required).
- Sample collection from each drill hole and subsequent backfilling of drill holes with returns (i.e., material removed from the same drill hole).

'Preliminary activities'² (low impact activities) as defined by DoR are likely to occur across the broader EPM area, not limited to the target areas. These activities do not require any clearing. As summarised in the application materials, these will include:

- Initial reconnaissance program across the permit area, dependent upon topography and the prospective geology, to collect hand samples of soil/clay/rock on foot, and possible handheld X-Ray Fluorescence (XRF) and laboratory X-Ray Diffraction (XRD).
- Geophysical surveys pending the outcomes of the preliminary data gathering stages to assist in refinement of targets for drill testing. Geophysical surveys are low impact methods and are suited to open plain or sparsely vegetated areas, as they are typically undertaken using handheld transmitters and receivers. Shallow techniques such as passive seismic ground geophysical survey or Loupe Transient Electro-Magnetics (TEM) ground survey may be used to aid mapping of depth to clay and shale basement, or to differentiate respective layers for drill targeting. These techniques would assist in correlating between drillholes and would provide high-resolution data to refine target locations for follow-up drilling to minimise the need for broader scale drilling activities.

Austral Bricks do not propose any clearing of vegetation or creation of new access tracks within the EPM target areas. Only existing tracks and open spaces as they present will be traversed, with no additional site infrastructure such as camps to be created. It must be noted that Austral Bricks has identified 'target areas' within the permit area for all intrusive drilling activities, all of which avoid all mapped environmental values, with the exception of PLA, which overlaps the entirety of the proposed EPM.

¹ DoR, (2019). *Advanced activity requirements*. Accessed 13 September 2022 via <https://www.business.qld.gov.au/industries/mining-energy-water/resources/landholders/accessing-private-land/advanced>

² DoR, (2021). *Preliminary activity requirements*. Accessed 13 September 2022 via <https://www.business.qld.gov.au/industries/mining-energy-water/resources/landholders/accessing-private-land/preliminary>

2.5 EPM Target Areas Property Details and Ownership

The Lot and property descriptions and ownership details of the EPM target areas is provided below in Table 4 – Property Details and Ownership and Figure 5 to 6 below.

Table 4 – Property Details and Ownership

Property	Owner
Area A	
Lot 70 CH31283	Vicki Lorraine Burton
Area B	
Lot 4 RP50009	Mount Mort Poultry Pty Ltd ACN 611 724 880
Lot 1 RP49462	Rickie William Ruhland and Jody Ellen Ruhland
Lot 64 CH31240	Thomas John and Lorraine Anne Cole



Figure 5 – Area A

2.6 EPM Target Area Environmental Values

The following provides a description of the EVs relevant to matters assessed under the Environmental Authority for the EPM.

Vegetation Management Regional Ecosystems

The target areas are wholly mapped as Category X – Non-Remnant Vegetation, refer to Figure 7 – Remnant Vegetation: Area A and Figure 8 – Remnant Vegetation: Area B.



Figure 7 – Remnant Vegetation: Area A
(Figure reprinted from Queensland Globe)

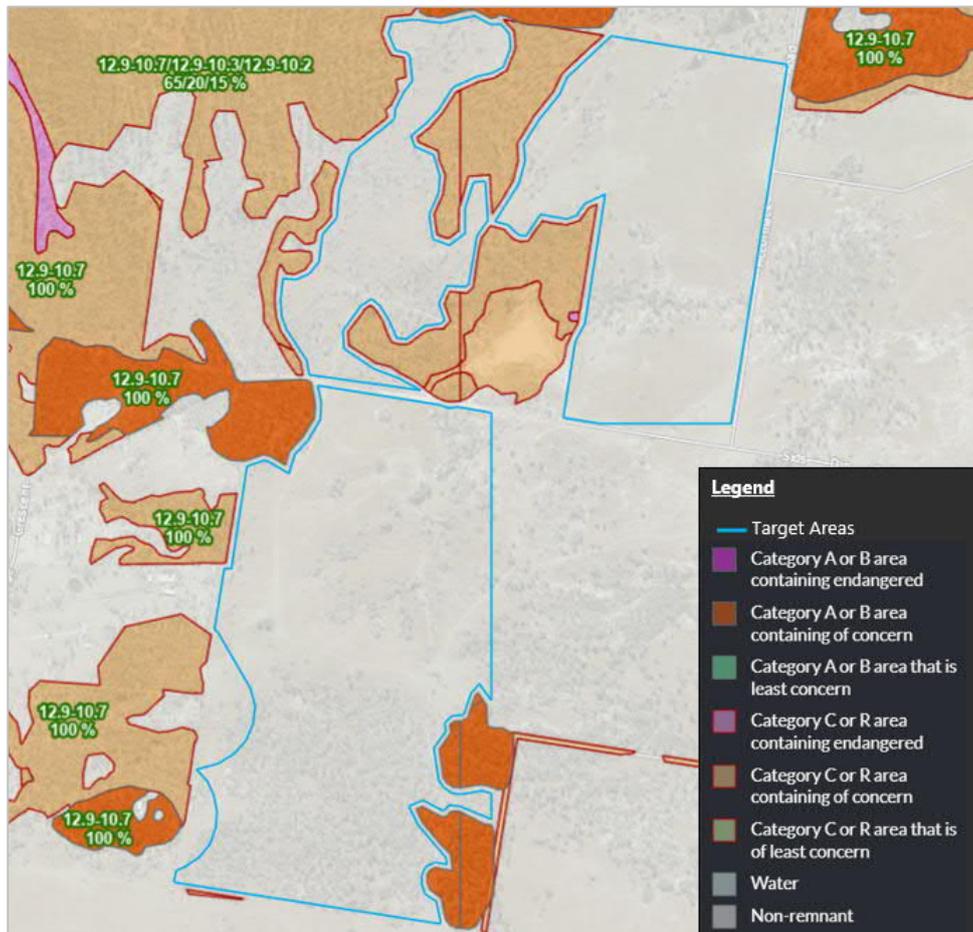


Figure 8 – Remnant Vegetation: Area B
(Figure reprinted from Queensland Globe)

The broader EPM is mapped as containing the remnant and regrowth vegetation under the *Vegetation Management Act 1999* ('VMA') as summarised in Table 5 – Regulated Vegetation. However, Austral Bricks do not propose any clearing or advanced activities within this vegetation. An illustration of the remnant vegetation mapping over the EPM is provided as Figure 9 – Remnant Vegetation: Broader EPM. Category B – Endangered Regional Ecosystems are also identified as Category B ESA as shown in Attachment 2 – ESA Mapping.

Table 5 – Regulated Vegetation

Regional Ecosystem (RE)	VMA Status	Short Description
Category B Remnant Vegetation		
12.3.7 (100%)	Least Concern	<i>Eucalyptus tereticornis</i> , <i>Casuarina cunninghamiana</i> subsp. <i>cunninghamiana</i> +/- <i>Melaleuca</i> spp. fringing woodland
12.3.7c (100%)	Least Concern	Billabongs and ox-bow lakes containing either permanent or periodic water bodies. Often fringed with <i>E. tereticornis</i> Old riverbeds now cut off from regular flow. Palustrine

Regional Ecosystem (RE)	VMA Status	Short Description
12.9-10.2 (100%)	Least Concern	<i>Corymbia citriodora</i> subsp. <i>variegata</i> +/- <i>E. crebra</i> open forest on sedimentary rocks
12.3.8 (100%)	Of Concern	<i>C. citriodora</i> subsp. <i>variegata</i> +/- <i>E. crebra</i> open forest on sedimentary rocks
12.9-10.2/12.9-10.7 (100%)	Of Concern	<i>C. citriodora</i> subsp. <i>variegata</i> +/- <i>Eucalyptus crebra</i> open forest on sedimentary rocks; and, <i>E. crebra</i> +/- <i>E. tereticornis</i> , <i>Corymbia tessellaris</i> , <i>Angophora</i> spp. and <i>E. melanophloia</i> woodland on sedimentary rocks
12.9-10.3	Of Concern	<i>E. moluccana</i> open forest on sedimentary rocks
12.9-10.7	Of Concern	<i>E. crebra</i> +/- <i>E. tereticornis</i> , <i>Corymbia tessellaris</i> , <i>Angophora</i> spp. and <i>E. melanophloia</i> woodland on sedimentary rocks
12.9-10.7/12.9-10.2 (55/45%)	Of Concern	<i>E. crebra</i> +/- <i>E. tereticornis</i> , <i>Corymbia tessellaris</i> , <i>Angophora</i> spp. and <i>E. melanophloia</i> woodland on sedimentary rocks; and, <i>C. citriodora</i> subsp. <i>variegata</i> +/- <i>Eucalyptus crebra</i> open forest on sedimentary rocks.
12.9-10.7/12.9-10.3/12.9-10.2 (65/20/15%)	Of Concern	<i>E. crebra</i> +/- <i>E. tereticornis</i> , <i>Corymbia tessellaris</i> , <i>Angophora</i> spp. and <i>E. melanophloia</i> woodland on sedimentary rocks; and, <i>E. moluccana</i> open forest on sedimentary rocks; and, <i>C. citriodora</i> subsp. <i>variegata</i> +/- <i>Eucalyptus crebra</i> open forest on sedimentary rocks.
12.3.10a (100%)	Endangered	<i>Acacia harpophylla</i> open forest to woodland. Occurs on Quaternary alluvial plains where minor areas of cracking clay soils prevail. Not a Wetland
12.3.3 (100%)	Endangered	<i>E. tereticornis</i> woodland on Quaternary alluvium
12.3.18 (100%)	Endangered	<i>M. irbyana</i> low open forest on alluvial plains
12.3.19 (100%)	Endangered	<i>E. moluccana</i> and/or <i>E. tereticornis</i> and <i>E. crebra</i> open forest to woodland, with a sparse to mid-dense understorey of <i>M. irbyana</i> on alluvial plains
12.9-10.11 (100%)	Endangered	<i>M. irbyana</i> low open forest on sedimentary rocks

Regional Ecosystem (RE)	VMA Status	Short Description
12.9-10.27 (100%)	Endangered	C. citriodora subsp. variegata and/or E. moluccana, E. tereticornis, E. crebra open forest with M. irbyana understorey on sedimentary rocks
Category C Regrowth Vegetation		
12.3.7 (100%)	Least Concern	E. tereticornis, <i>Casuarina cunninghamiana</i> subsp. cunninghamiana +/- Melaleuca spp. fringing woodland
12.9-10.2 (100%)	Least Concern	C. citriodora subsp. variegata +/- E. crebra open forest on sedimentary rocks
12.9-10.2/12.9-10.7 (100%)	Endangered	C. citriodora subsp. variegata +/- E. crebra open forest on sedimentary rocks; and, E. crebra +/- E. tereticornis, Corymbia tessellaris, Angophora spp. and E. melanophloia woodland on sedimentary rocks.
12.9-10.2/12.9-10.7/12.9-10.17a (100%)	Endangered	C. citriodora subsp. variegata +/- E. crebra open forest on sedimentary rocks; and, E. crebra +/- E. tereticornis, Corymbia tessellaris, Angophora spp. and E. melanophloia woodland on sedimentary rocks; and, <i>Lophostemon confertus</i> or L. suaveolens dominated open forest usually with emergent Eucalyptus and/or Corymbia species. Occurs in gullies and southern slopes on Cainozoic and Mesozoic sediments. Not a Wetland.
12.9-10.3 (100%)	Endangered	E. moluccana open forest on sedimentary rocks
12.9-10.7 (100%)	Endangered	E. crebra +/- E. tereticornis, Corymbia tessellaris, Angophora spp. and E. melanophloia woodland on sedimentary rocks
12.9-10.7/12.9-10.3 (90/10%)	Endangered	E. crebra +/- E. tereticornis, Corymbia tessellaris, Angophora spp. and E. melanophloia woodland on sedimentary rocks; and, E. moluccana open forest on sedimentary rocks.
12.9-10.7/12.9-10.3/12.9-10.2 (65/20/15%)	Endangered	E. crebra +/- E. tereticornis, Corymbia tessellaris, Angophora spp. and E. melanophloia woodland on sedimentary rocks; and, E. moluccana open forest on sedimentary rocks; and, C. citriodora subsp. variegata +/- E. crebra open forest on sedimentary rocks.

Regional Ecosystem (RE)	VMA Status	Short Description
12.3.10a (100%)	Of concern	A. harpophylla open forest to woodland. Occurs on Quaternary alluvial plains where minor areas of cracking clay soils prevail. Not a Wetland
12.3.18 (100%)	Of Concern	M. irbyana low open forest on alluvial plains
12.3.19 (100%)	Of Concern	E. moluccana and/or E. tereticornis and E. crebra open forest to woodland, with a sparse to mid-dense understorey of Melaleuca irbyana on alluvial plains
12.3.3 (100%)	Of Concern	E. tereticornis woodland on Quaternary alluvium
12.3.3/12.3.7 (90/10%)	Of Concern	E. tereticornis woodland on Quaternary alluvium; and, E. tereticornis, <i>Casuarina cunninghamiana</i> subsp. <i>cunninghamiana</i> +/- Melaleuca spp. fringing woodland.
12.3.3d (100%)	Of Concern	E. moluccana woodland. Other frequently occurring species include E. tereticornis, E. crebra, E. siderophloia, C. citriodora subsp. <i>variegata</i> , <i>Angophora leiocarpa</i> and C. <i>intermedia</i> . Occurs on margins of Quaternary alluvial plains often adjacent sedimentary geologies. May also occur on stranded Pleistocene river terraces. Not a Wetland
12.9-10.11 (100%)	Of Concern	M. irbyana low open forest on sedimentary rocks
12.9-10.27 (100%)	Of Concern	C. citriodora subsp. <i>variegata</i> and/or E. moluccana, E. tereticornis, E. crebra open forest with Melaleuca irbyana understorey on sedimentary rocks

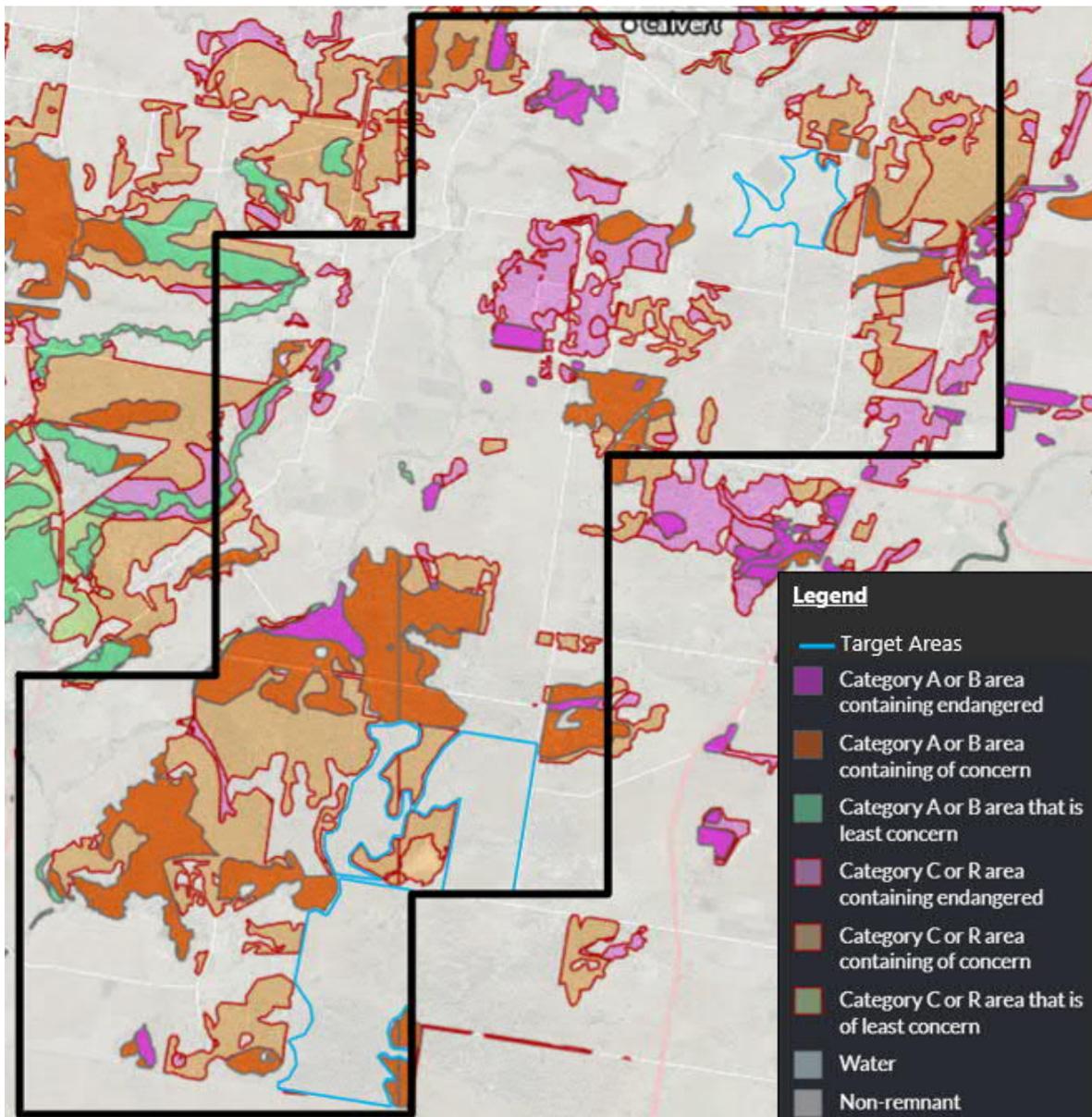


Figure 9 – Remnant Vegetation: Broader EPM

(Figure reprinted from Queensland Globe)

Matters of State Environmental Significance (MSES)

The broader EPM is overlain by the following MSES:

- MSES regulated vegetation [100m from wetland]
- MSES regulated vegetation [essential habitat]
- MSES regulated vegetation [category C- endangered or of concern]
- MSES regulated vegetation [category B - endangered or of concern]
- MSES wildlife habitat [SEQ koala habitat - core]
- MSES wildlife habitat [endangered or vulnerable]
- MSES high ecological significance wetlands
- MSES regulated vegetation [defined watercourse]
- MSES protected area [nature refuges].

The target areas for advanced activities are not overlain by any MSES. Figure 10 – MSES Mapping: Broader EPM provides an illustration of the above-mentioned MSES mapping overlaying the EPM, while plans illustrating the MSES adjacent to the proposed Target Areas is provided in the attached drawings titled Advanced Activity Authorised Areas - Area A (Drawing 2676.DRG.001Ar1) and Advanced Activity Authorised Areas - Area B (Drawing 2676.DRG.001Br1 and Drawing 2676.DRG.001Cr1).

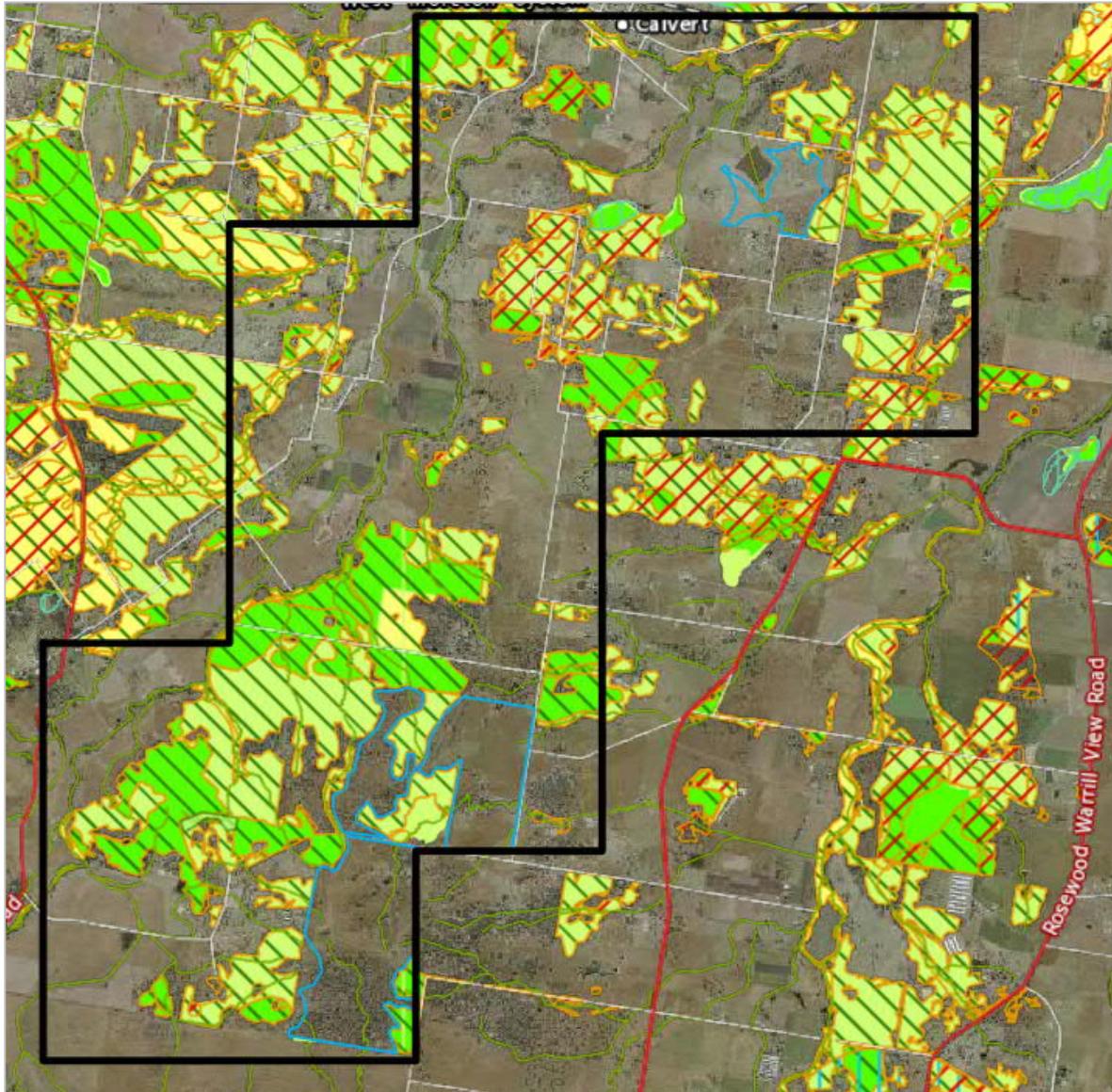


Figure 10 – MSES Mapping: Broader EPM

(Figure reprinted from Queensland Globe)

As previously discussed, the proposed target areas have been located so as to avoid advanced activities in areas mapped as MSES, with an additional 20 m buffer to any areas mapped as MSES as illustrated in the attached drawings titled Advanced Activity Authorised Areas - Area A (Drawing 2676.DRG.001Ar1) and Advanced Activity Authorised Areas - Area B (Drawing 2676.DRG.001Br1 and Drawing 2676.DRG.001Cr1). There will be no vegetation clearing associated with the EPM work program, and only low impact 'preliminary activities' will occur outside of the target areas (e.g., traversing the permit area on foot and hand sampling of soils).

Please note that the target areas are traversed by drainage features identified as *MSES regulated vegetation [defined watercourse]*; however, it is noted that Significant Residual Impacts ('SRIs') under the *Queensland Environmental Offsets Policy: Significant Residual Impact Guideline* are only considered relevant to these matters to the extent that clearing of a regional ecosystem will occur within:

*the defined distance from the defining banks of a watercourse identified on the vegetation management watercourse map, as defined under the Vegetation Management Act 1999 (State of Queensland 2014, p. 4)*³

As no clearing will occur to facilitate the exploration, this MSES mapping layer is not applicable. Furthermore, under Standard Condition B14, drilling and excavation must not occur on the sloped banks, or within 3 m of the top of the bank or 5m of the toe of the bank. It is proposed that Austral Bricks will observe these setbacks so as to avoid impacts to watercourses.

Water

The site is wholly within the Lowland Freshwaters of the Bremer River sub-catchment which forms part of the broader Brisbane River Basin. The EPM area is traversed by several watercourses, the largest being Franklin Vale Creek and Western Creek. Franklin Creek traverses the western portions of the EPM area, flowing in a general north-easterly direction, conjoining with Western Creek in sub-block BRIS3199B, and ultimately converging with the Bremer River 7 km downstream of the EPM. A network of ephemeral watercourses traverses the EPM area, which feed these larger creek systems. The drainage pattern is typical of the low lying floodplains which overly the broader Walloon Coal Measures. Figure 11 – Watercourse Mapping: Broader EPM to Figure 13 – Watercourse Mapping: Area B illustrate the watercourses traversing the EPM.

³ State of Queensland, (2014). *Queensland Environmental Offsets Policy: Significant Residual Impact Guideline*. Accessed 29 July 2022 via https://environment.des.qld.gov.au/_data/assets/pdf_file/0017/90404/significant-residual-impact-guide.pdf

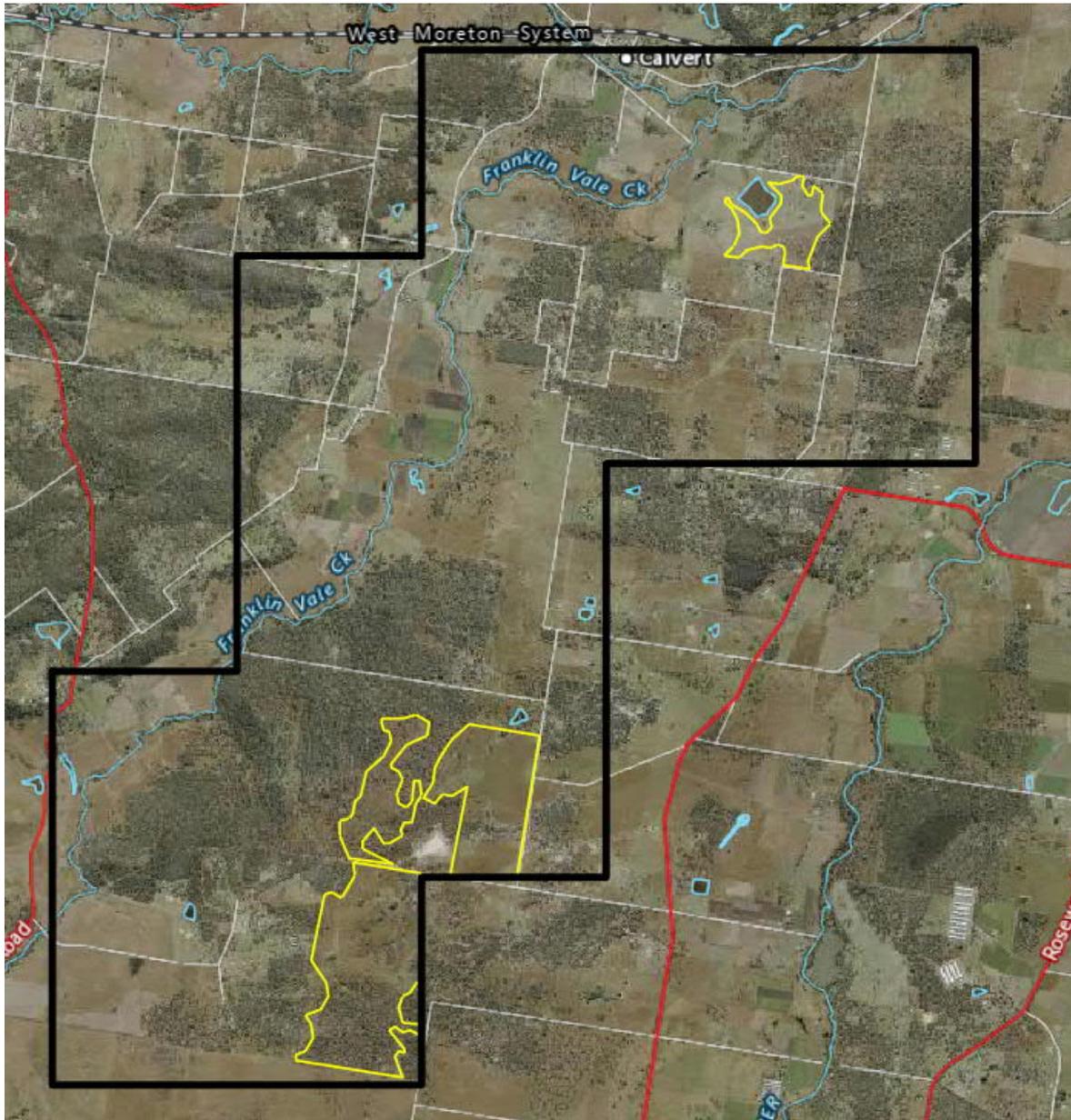


Figure 11 – Watercourse Mapping: Broader EPM
(Figure reprinted from Queensland Globe)

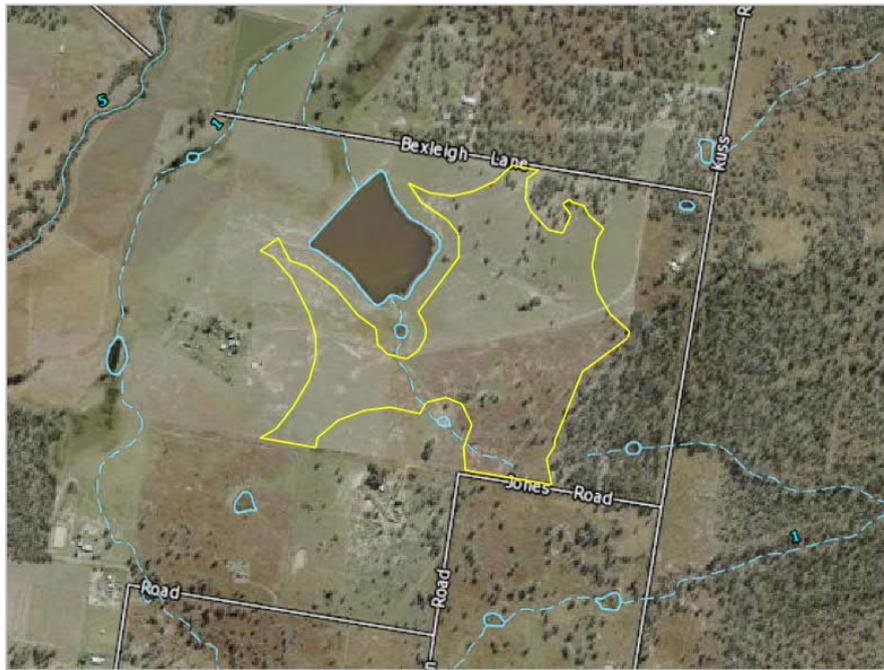


Figure 12 – Watercourse Mapping: Area A
(Figure reprinted from Queensland Globe)

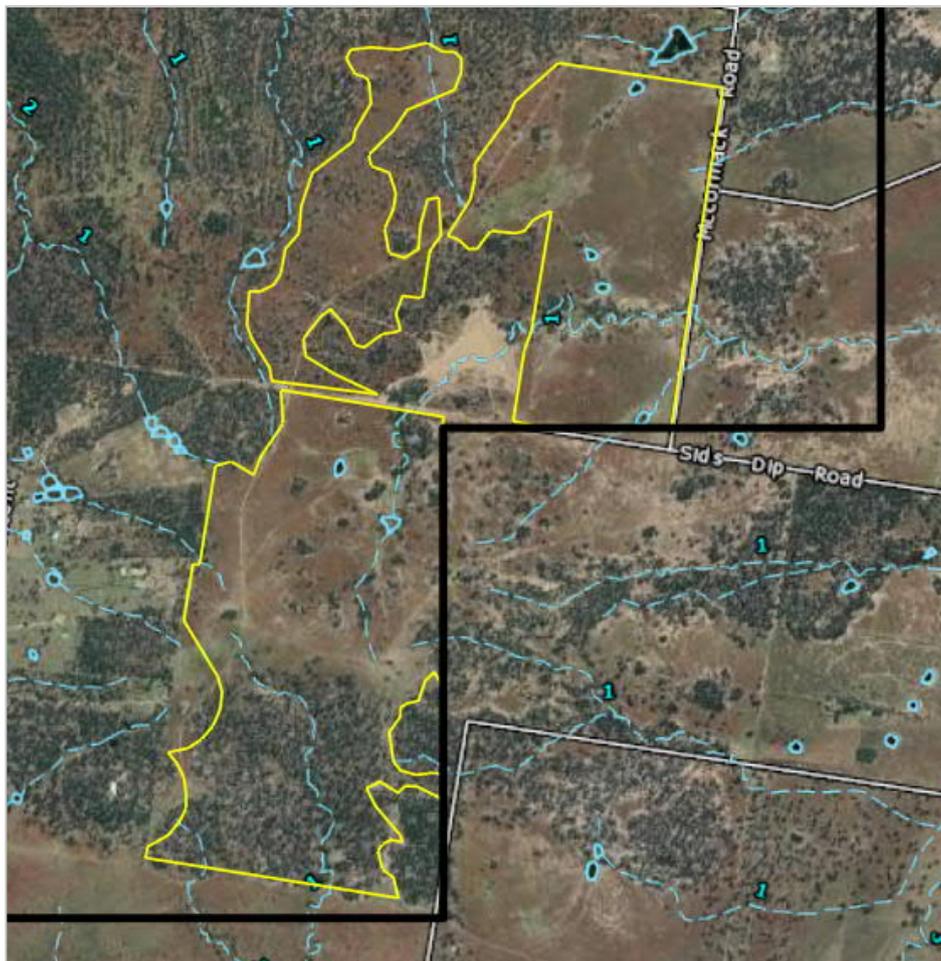


Figure 13 – Watercourse Mapping: Area B
(Figure reprinted from Queensland Globe)

2.7 Target Minerals

The target mineral for the proposed EPM over the term will be Clay (Brick Clay) and Shale for use in brick and paver manufacturing.

The site is in an area of known Quaternary alluvium comprised of unconsolidated deposits including clay, sand, gravels and silts. Austral Bricks intend to principally target the near surface clays and shales of the Jurassic-age Walloon Coal Measures Formation which form part of the Ipswich Basin.

The priority target minerals will enable long-term security of resource for Austral Bricks' mining activities in SEQ if proven viable. Section 3 – Site Geology and Resource Investigations provides a detailed summary of the regional and site-specific mineralisation.

2.8 Environmental Authority

An Environmental Authority ('EA') application has been lodged with the Department of Environment and Science ('DES') and is currently under assessment (DES ref. P-EA-100203784). A change application under Section 132 of the *Environmental Protection Act 1994* has been lodged with DES to reflect the changed permit target areas and layout.

3 Site Geology and Resource Investigations

3.1 Regional and Permit Area Geology

The region is principally associated with historical finds of coal, being situated in the Jurassic age Walloon Coal Measures which are the primary coal bearing sequence of the Clarence - Moreton Basin⁴. The region is overlain by Quaternary alluvial deposits comprised of unconsolidated gravel, sand, silt and clays which occur on the floodplains of the present drainage system (Pass 2012, p. 15). Figure 14 – Stratigraphy for the Clarence-Moreton Basin provides an illustration of the typical stratigraphic column for the Clarence Moreton Basin.

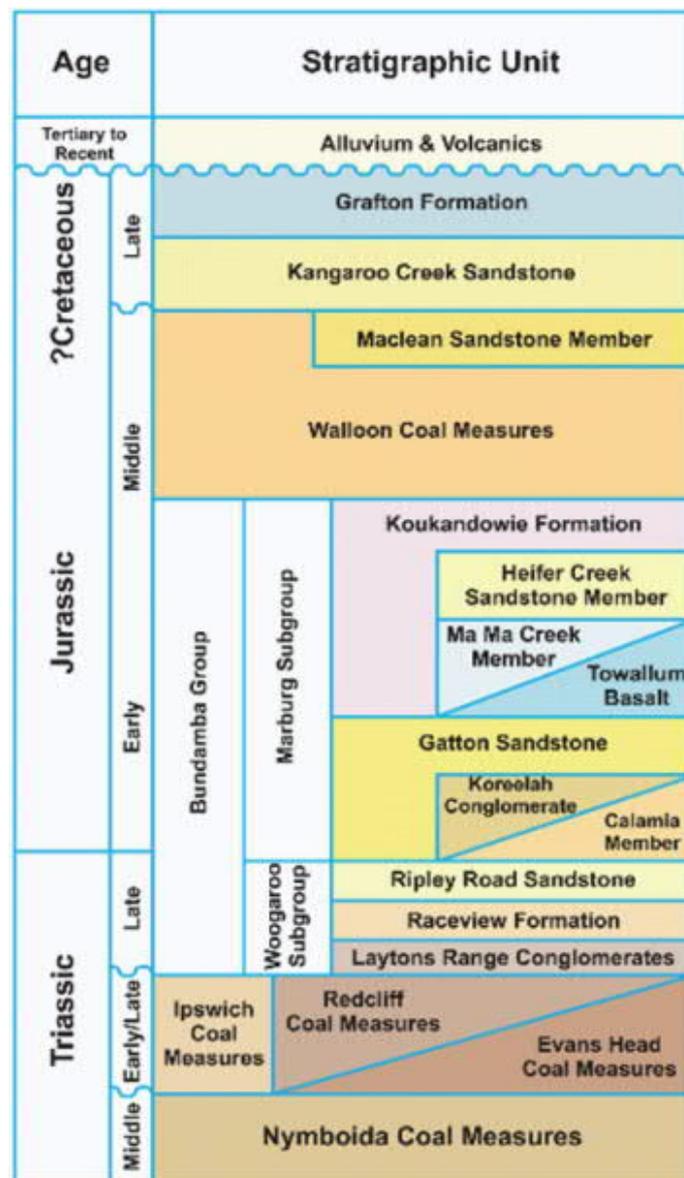


Figure 14 – Stratigraphy for the Clarence-Moreton Basin
(Figure reprinted from Pass (2012, p. 15))

⁴ Jeebropilly Collieries Pty Ltd, (1984). Authority to Prospect No. 3646M: Final Report

Figure 15 – Permit Geology provides an illustration of the surface geology mapped over the proposed EPM. Within the permit area, the surface geology is dominated by the Walloon Coal Measures, comprised of shale, siltstone, sandstone, coal seams. Selective weathered and fresh siltstones, mudstones, claystones and shale in coal basins traditionally make good raw materials for bricks, pavers and roof tiles. Austral Bricks therefore intends to target drilling and sampling within the low lying alluvial deposits overlying these measures.

Weathered clays and shales in the eastern exposed portion of the Ipswich Basin are currently exploited by Austral Bricks for brick and paver manufacturing extracted from current MLs 1152, 1156, 6621 and 50035 (please note that ML 1151 is also held by Austral Bricks; however, the primary purpose of the tenure is to house the Rochedale Brick Plant). A repetition of these clays and shales are sought in the west Ipswich Basin as Austral Bricks seeks new long-term supplies.

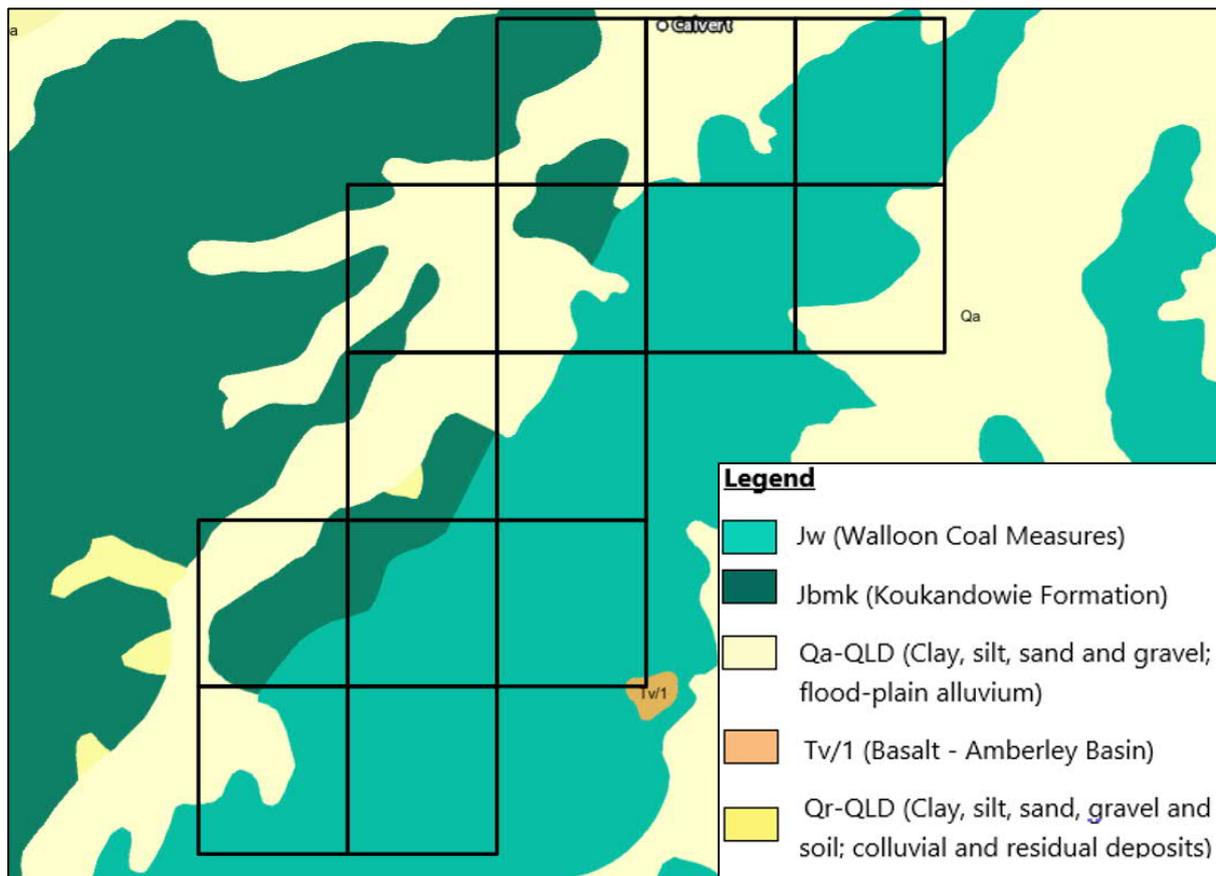


Figure 15 – Permit Geology
 (Figure source: State of Queensland (2022b))

3.2 Resource Data Interpretation

Resource investigations in the permit area have historically focused on coal under various Exploration Permit for Coal (EPC). Preliminary research has shown some coal exploration companies did not log the tops of holes rigorously so in some cases there is a paucity of information in the weathered profile to fresh basement that is useable for clay and shale for bricks or ceramic ware exploration. Several EPMs were established in the proximity to the proposed EPM dating back to approximately 1984 as summarised in Table 5 – Historical EPMs. Figure 16 – Historical EPM Locations provides an illustration of the location of these historical EPMs

Table 6 – Historical EPMs

Permit Number	Date Granted	Expiry Date	Holder
EPM 10495	6-Apr-95	5-Apr-96	International Exploration Services Pty Ltd
EPM 10504	24-Mar-95	23-Mar-00	Boral Bricks (Qld) Limited
EPM 9587	3-Nov-93	2-Nov-98	Flinders Dolomite Pty Ltd
EPM 6994	5-Mar-90	4-Mar-97	Newage Metals Pty Ltd
EPM 2869	20-Feb-81	29-Sep-81	Unknown
EPM 3646	24-May-84	6-Sep-84	Jeebropilly Collieries Pty Ltd

Of most relevance is EPM 10504 formerly held by Boral Bricks (Qld) Pty Ltd ('Boral'). Drilling carried out by Boral confirmed the presence of terracotta to brown and dark firing clays in the alluvium throughout the permit area, with similar colours recorded from a number of holes drilled in the east of the EPM in the Walloon Coal Measures (Guerra Bach 2000, Ch. Summary). Throughout the EPM, Boral found that the alluvial sequence comprised of up to 15 m of clay and sandy clay materials.

Boral carried out preliminary and production scale testing of the samples collected through the drilling campaign at their Darra Brickworks. Boral concluded that "the drilling and testing programs to date indicate that materials potentially suitable for brick manufacture exist within the EPM" (Guerra Bach 2000, Ch. 7).

Jeebropilly Collieries (1984) similarly carried out exploratory activities on EPM 3646 which were targeted at discovering clay for brick and tile manufacture, which determined that suitable deposits were located in the permit area (Ch.3). At that time, Jeebropilly Collieries concluded that, in 1984 at the time of reporting, the distance to potential markets and economic situation had been limiting factors in progression of clay tenures in the locality (Jeebropilly Collieries 1984, Ch.5). However, as urban expansion has increased, this distance to markets has been significantly diminished.

Given the lack of systematic previous exploration in the area for brickmaking raw materials, Austral Bricks' activities will be aimed at providing a rigorous dataset to determine the mineral prospectivity of the permit area for raw materials suitable for brick manufacturing.

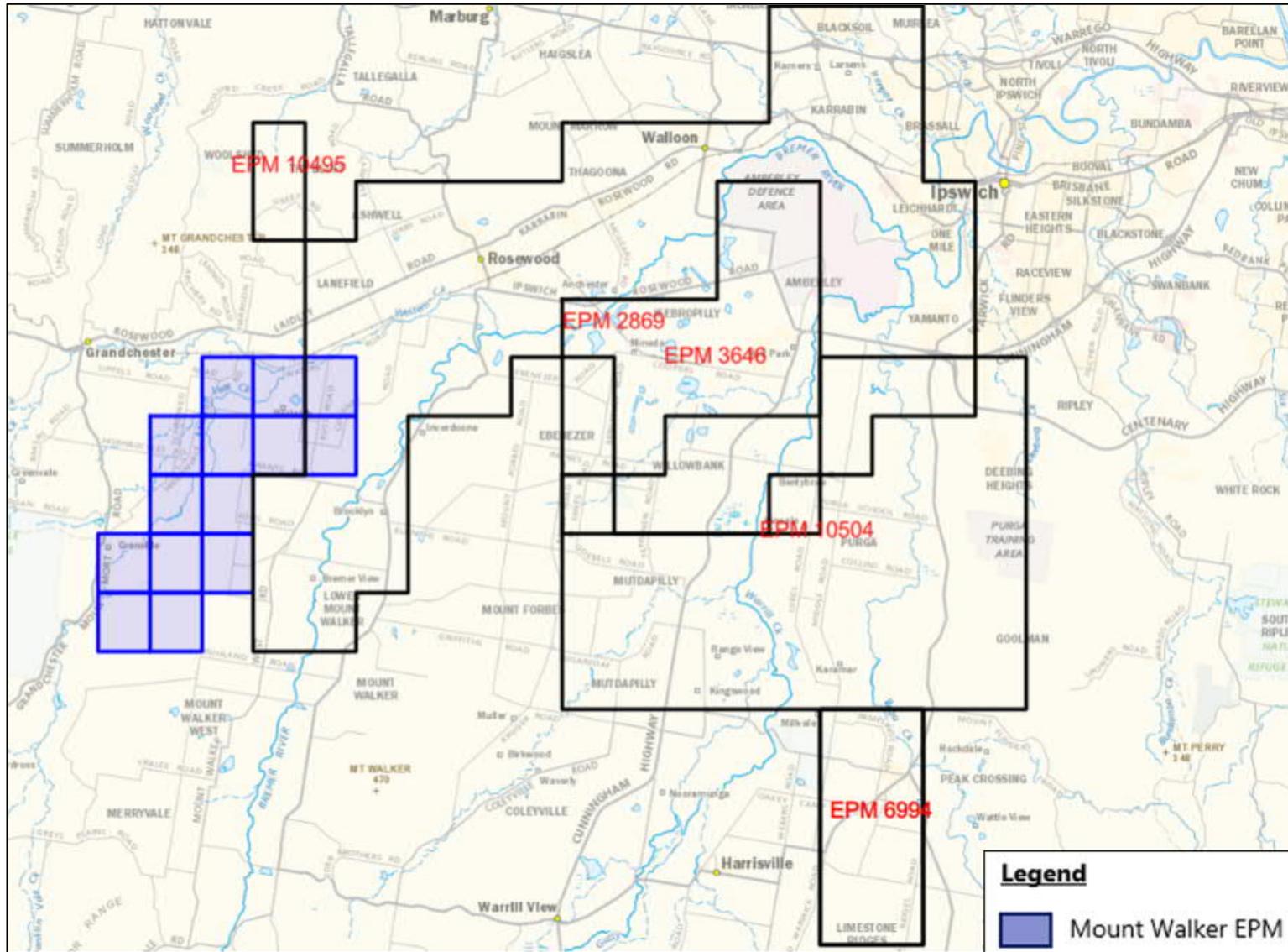


Figure 16 – Historical EPM Locations

(Figure source: State of Queensland (2022b))

4 Outcomes-Based Work Program

4.1 Exploration Rationale

The primary objective of Austral Bricks' proposed exploration program will be to delineate and define the extent and grade of clay and shale mineralisation within the EPM area. Key deliverables will be the completion of a Scoping Study and a subsequent Definitive Feasibility Study based on a defined Mineral Resource at the end of the initial five-year term. At completion of these works, Austral Bricks will be able to make an informed decision as to the feasibility of a Mining Lease application.

The proposed EPM represents critical pre-requisite tenure for a future ML, which would be applied for over the area should the exploration activities within the proposed EPM identify a viable resource of clay and shale which suits Austral Bricks' needs.

4.2 Proposed Activities

Table 7 – Outcomes-Based Work Program over page provides a summary of the exploration activities which are proposed to be carried out by Austral Bricks over the term of the permit. A detailed summary of the proposed activities which has been provided by Austral Bricks is as follows:

Desktop Study and Geophysical Data Reprocessing – this work will compile all existing digital geochemical, geophysical and geological data. Whilst geophysical data is not usually used for localised clay and shale exploration, any useable historical data will be reprocessed to maximise data value where necessary.

Recent innovation in satellite remote sensing using spectral responses in certain surface weathered strata and clays will be considered as an exploration tool.

Reconnaissance – based on desktop studies, geological information and geophysical data an initial reconnaissance program will aim to:

- verify through sample collection (soil/clay/rock) on foot and possible hand-held X-Ray Fluorescence (XRF) and laboratory X-Ray Diffraction (XRD) to identify the preferred clay species contained within the strata that indicates suitability for ceramics production
- determine the extent and possible thickness of any recent alluvial and or colluvial cover sequences by utilising natural creek and river incisions and their exposed banks
- provide an understanding of possible land access and logistical issues including environmentally sensitive areas, priority living areas and strategic cropping land
- meet local stakeholders (landowners, Native Title representatives and local government representatives)

Geological Data Collection – an initial program will be conducted across the EPM to:

- identify indications of the occurrence, depth to and depth extent of any clay and shale occurrences within and beneath the weathered profile
- collect geological data regarding lithological variations, extent of the weathered profile and regional characteristics and occurrence of any recent suitable clay deposition

Drilling – RAB/AC/RC/DD Drill Program(s) – drill testing of targets identified from the preliminary stages of exploration is planned. It is envisioned that economical Rotary Air Blast (RAB), or Air Core drilling (AC) may be required to penetrate the lithologies noted. These programs will be rapid variably spaced or grid based on lines and quite shallow to approximately 25 metres depth, or to the underlying shallow sedimentary unweathered basement.

Where necessary Reverse Circulation (RC) drilling will be conducted where lithologies cannot be penetrated by RAB or AC drilling.

Shallow large diameter Diamond Core Drilling (DD) will be considered when unmixed samples of thin strata will be required, and when ceramic laboratory specialty testing is required.

Selected drill samples over the visually interesting clay and shale profiles that look suitable for ceramic firing will be analysed by internal brick firing laboratory techniques in terms of dried shrinkage, fired shrinkage, the mass of moist samples, the mass of dried and fired samples, colour of fired samples, and cold-water absorption. Where required to ascertain unique properties, multi-element analytical techniques including ICP-MS, XRF and mineralogy determination like XRD will be undertaken on relevant samples. Selected samples will be submitted for petrological and or mineralogical examination and characterisation to external providers where required.

Technical reviews will be undertaken at the end of each work program and this work will guide the next steps in the exploration program.

Where ceramic grade shale and clay is intersected and confirmed in preliminary drill testing, more detailed follow up drilling will commence with the aim to broadly define and characterise the extent and nature of the raw material as to allow establishment a Mineral Resources and Ore Reserves Statement to ensure that the potential resources meet Austral Bricks' target criteria. If applicable this would be complimented by a Ceramic Metallurgical and Scoping Study.

Geophysical Surveys – it will be assessed in the early stages of the exploration program what, if any geophysical surveys may be suitable to assist the refinement of targets for drill testing. For example, it is envisaged that shallow technique such as passive seismic ground geophysical survey or Loupe Transient Electro-Magnetics (TEM) ground survey may be appropriate to aid mapping of depth to clay and shale basement, or to differentiate respective layers for drill targeting. These are low impact techniques and are suited to open plain or open agricultural paddock settings, or lightly timbered areas. They are rapid techniques that would cause little disturbance to any agricultural activity being undertaken by the landholder. The techniques would also assist correlation between drillholes and in turn the high-resolution results would minimise, but yet better focus follow-up drilling, again reducing disturbance to agricultural activities.

Ceramic Metallurgical Studies - define clay and shale characteristics and recovery and extractive techniques. Samples submitted would be aggregated from drill samples.

Resource and Geological Modelling - The outcome of the Work Program will be to generate a Mineral Resources and Ore Reserves statement to ensure that the potential resources meet Austral Bricks' target criteria of a long lived shallow extractable raw material body or bodies. If applicable this would be complimented by a Scoping Study and Final (Bankable) Feasibility Study. Mining Lease application would follow if the Studies were to be successful.

Table 7 – Outcomes-Based Work Program

Years	Outcomes to be Pursued	Rationale	Information and data to be provided	Estimated Expenditure (Human and Financial Resources)
1 - 5	<ol style="list-style-type: none"> 1. Test the clay and shale potential of the tenement that have been attained from prospecting, surface geology, geological mapping, trenching, airborne geophysics, ground geophysics, satellite imagery, and drilling. 2. Drill test targets identified from prior exploration histories intersecting clay and shale horizons, new targets generated by prospecting and integrated geological targeting. 3. To determine whether any resources delineated within the EPM represent a potentially mineable resource (scoping study). 4. Reach the milestone within 5 years where a decision can be made to move the project tenure to a mining lease title for the commodities sought. 5. To undertake environmental feasibility assessments to inform future MLA if viable. 6. Move project through to definitive feasibility studies and eventual clay winning by The Austral Brick Co. Pty Ltd. 	<p>The increasing demand in manufactured building products such as bricks, pavers and roof tiles, together with diminishing inhouse resources in current Mining Leases require for the applicant to invest in grassroots exploration activities.</p> <p>The region under application is prospective for clays and shale resources as raw materials for brick manufacture. The principal target is near surface/shallow clays and shales of the Jurassic-age Walloon Coal Measures Formation that is part of the Ipswich Basin known for its coal endowment in the past. Selective weathered and fresh siltstones, mudstones, claystones and shale in coal basins containing abundant kaolinite and/or illite clays traditionally make good raw materials for bricks, pavers and roof tiles.</p> <p>Weathered clays and shales in the eastern exposed portion of the Ipswich Basin at Rochedale and Burbank are currently exploited by The Austral Brick Co. Pty Ltd for brick and paver making in current Mining Leases. A repetition of these clays and shales are sought in the west Ipswich Basin.</p> <p>Whilst there has been traditional coal exploration for several decades in the area sought, there is a lack of systematic previous exploration specifically for brick-making clay and shale. The Austral Brick Co. Pty Ltd plans to fund and to operate a program of grassroots exploration to test the prospectivity of the area under application.</p> <p>See extended text attached for more rationale and background details.</p>	<ol style="list-style-type: none"> 1. Geochemistry: soil/clay/shale/rock sampling on and appropriately spaced intervals will be conducted initially and submitted with annual Activity Reports as required under the MERC Act and MRA. If required additional follow up sampling will be undertaken and reported. 2. Application of innovative techniques utilising aerial and satellite imagery, in conjunction with other remote sensing techniques to complete cluster analysis and assist in refining areas of interest. 3. Internal laboratory testing results determining brick-making qualities of the raw materials from the collected samples processed at The Austral Brick Co. Pty Ltd technical laboratory at Rochedale. 4. External laboratory testing using trace element geochemistry, XRF, XRD, mineralogical analysis and petrology analysis will be performed on samples to identify the right clay/shale raw material species for brick-making 5. Drilling: drill testing of clay and shale targets generated is planned; this data will also be submitted in the form required by DoR and reported in the Activity Reports as required. 6. Raw Material Occurrence Models: will be continuously developed and refined and will be presented in the Activity Reports. 7. Metallurgical Assessment: subject to discovery of suitable clay and shale deposits, assessment will be applied as to the extractability of any potential economic resources using internal and external testing laboratories; the results of this will be submitted in the form required by the department and reported on in the ATRs as required. 8. Resource Calculations: Clay/shale Resources and Reserves would be estimated, and the commissioning of a Scoping Study and the Final Feasibility Study results would be provided. 	<p>During the term of the permit, Austral Bricks will commit the following human resources:</p> <ul style="list-style-type: none"> • National Geologist. • Environment Manager. • Senior management to provide oversight to exploration activities. • Support staff and additional consultants as required. <p>Estimated financial commitment is in the order of approximately \$30,000 to \$40,000 over the permit term.</p>
		<p>These assessments would inform the scope of future environmental impact assessments to determine the viability of any potential MLA.</p>	<p>Summary findings of environmental assessment.</p>	

5 Financial and Technical Resources

Austral Bricks has developed significant technical expertise in clay mining and clay products manufacturing. The company operates numerous large manufacturing facilities in Australia, staffed by experienced managers and employees. Austral Bricks has an extensive team of experienced management and operations staff, as well as contractors/ subcontractors and specialist consultants (as required). A summary of the key staff who will be involved in the exploration program, which includes Julius Marinelli, Austral Bricks' National Geologist, is provided in Attachment 1 – Financial and Technical Statements. Julius who will head the exploration activities has had a long and varied career in the mining and exploration industry, having worked as a geologist for companies including BP, Rio Tinto, QER Pty Ltd, DGR Global, MMG Limited, White Rock Minerals Ltd.

Austral Bricks is Australia's largest clay brick manufacturer with significant market positions in every state (Brickworks Limited 2022, p. 9), which reinforces the company's importance to the construction industry. The company provides building materials which are long-lasting, cost effective, thermally sound, termite and fire-resistant to help house many Queenslanders and Australians, and the market relies on the consistent supply of materials provided by Austral Bricks.

In addition to the domestic market, Austral Bricks export approximately ten million bricks per annum, predominantly to the Asian and New Zealand markets. Exports to the New Zealand market have equated to the construction of approximately 1,500 new homes. These export values are expected to increase significantly over the coming years.

Austral Bricks currently operates clay and shale winning operations in SEQ at the Rochedale, Ford Road and German Church Road on MLs 1152, 1156, 6621 and 50035 (please note that ML 1151 is also held by Austral Bricks; however, the primary purpose of the tenure is to house the Rochedale Brick Plant).

In recent years, Austral Bricks has spent \$70 million on major upgrades at the Rochedale Brick Plant. The upgrade work included the installation of a new packaging line and the re-commissioning of the west kiln (previously mothballed) to replace the older east kiln (Brickworks Limited 2018, p. 27). Brickworks Limited (2018) identified that the completion of these upgrades will significantly improve product quality and lower unit production costs (p. 27). These upgrades affirm Austral Bricks' long-term view of the brick and ceramic product manufacturing activities.

Currently Austral Bricks' operations directly create 120 full time jobs within our factory, sales and support staff and full-time contractors. Indirectly, our activities create jobs through employment opportunities in our extensive supply chain including transport and logistics, maintenance providers and consultancies.

Austral Bricks falls within the Building Products division of the parent company, Brickworks Limited. The Building Products division includes 30 manufacturing sites across Australia. In the *Brickworks Limited: Annual Report 2022* (Brickworks Limited 2022), the reported annual revenue was \$1,093,154,000. A statement to support the financial resources of the company to fund the work program is provided in Attachment 1 – Financial and Technical Statements.

Grant of the EPM will enable an ongoing revenue stream for the State such as mining rental and Environmental Authority annual fees. Should an ML later be established over the permit area, the State will benefit from ongoing mineral royalties.

6 RIDA Assessment

6.1 The EPM activities

The EPM target areas are:

- Area A within Lot 70 CH31283 and
- Area B within Lot 4 RP50009, Lot 1 RP49462 and Lot 64 CH31240.

As described above the EPM target areas avoid areas of mapped environmental value.

As described above the EPM activities proposed within the EPM target areas are low impact activities resulting in minimal ground disturbance and are suited to open plain or open agricultural paddock settings, or lightly timbered areas. They include:

- Desktop Study and Geophysical Data Reprocessing
- Reconnaissance
- Geological Data Collection
- Drilling
- Geophysical Surveys
- Ceramic Metallurgical Studies
- Resource and Geological Modelling

They are rapid techniques that would cause little disturbance to any agricultural activity being undertaken by the landholder.

Furthermore, they are techniques which do not result in any permanent change to the landform and do not involve any permanent infrastructure, structures or buildings and would not constitute a material change of use of the land.

The activities in essence are not dissimilar to soil sample investigations that a rural landholder might undertake to confirm the suitability of the land for a range of rural and agricultural uses.

To be clear, the EPM activities proposed as part of this RIDA application do not include extraction, processing and sale of the clay resource or any other mineral. The EPM activities are exploration activities only. If a viable deposit of clay is identified, a future RIDA application would need to be made to enable extraction, processing and sale of the clay resource to occur.

6.2 The required outcome

As previously discussed, in relation to a proposed resource activity within a PLA the required outcome for the PLA Assessment criteria is:

'The location, nature and conduct of the activity is compatible with the planned future for the priority living area stated in a planning instrument under the Planning Act'.

All areas of the EPM are in the Rural zone of the Ipswich City Planning Scheme and the Regional Landscape and Rural Production Area of the South East Queensland Regional Plan 2017.

Table 8 – SEQ Regional Plan Policy Statements addresses the relevant PLA policy statements within that document. Table 9 – Ipswich Planning Scheme Policy Statements addresses key aspects of the planning scheme which could be relevant statements relating to the PLA.

Table 8 – SEQ Regional Plan Policy Statements

Intent	Response
<p><u>Intent</u></p> <p><i>The Regional Landscape and Rural Production Area (RLRPA) is a large and important part of SEQ, surrounding the Urban Footprint and Rural Living Area. It provides important values that help sustain the region socially, culturally, economically and environmentally. The intent of the RLRPA is to:</i></p> <ul style="list-style-type: none"> • <i>protect the values of this land from encroachment by urban and rural residential development</i> • <i>protect natural assets and regional landscapes, and ensure their sustainable use and management</i> • <i>support development and economic growth of rural communities and industries.</i> 	<p>As discussed above, the EPM activities being temporary low impact activities are not dissimilar to soil sample investigations that a rural landholder might undertake to confirm the suitability of the land for a range of rural and agricultural uses.</p> <p>The EPM activities are not urban or rural residential development.</p> <p>The EPM activities are designed and managed to protect natural assets and regional landscapes and will not impact on the sustainable use and management of the land.</p> <p>By avoiding impacts to landform and natural assets, the EPM activities would not conflict with the development and economic growth of rural communities and industries.</p>
<p><u>Regional outcome</u></p> <p><i>The growth potential of SEQ settlements, population-supporting assets and amenity are protected and prioritised over resource activities.</i></p>	<p>The EPM activities are not located within or adjacent to a SEQ settlement. Because the EPM activities are low impact and temporary in nature with no permanent impact to the land there will be no impact on the growth potential of SEQ settlements.</p> <p>The EPM activities are not located within or adjacent to population supporting assets. Because the EPM activities are low impact and temporary in nature with no permanent impact to the land there will be no impact to population supporting assets.</p> <p>The EPM activities are not located within or adjacent to areas of high scenic amenity. Because the EPM activities are low impact and temporary in nature with no permanent impact to the land there will be no impact to the rural amenity of the area.</p>
<p><u>Regional policy</u></p> <p><i>Safeguard areas required for the long-term growth of SEQ communities from the irreversible impacts of resource activities in the PLA.</i></p>	<p>Because the EPM activities are low impact and temporary in nature with no permanent impact to the land there will be no irreversible impacts to the land which would impact the long-term growth of SEQ communities.</p> <p>Because the EPM activities are low impact and temporary in nature with no permanent impact to the land there will be no irreversible impacts</p>

Intent	Response
<p><i>Protect water storage infrastructure and the integrity and functionality of associated water catchments in the PLA.</i></p> <p><i>Protect the regional and rural landscape amenity of the PLA from material impacts of resource activities.</i></p>	<p>to the land which would impact water storage infrastructure and the integrity and functionality of the water catchments in SEQ.</p> <p>Because the EPM activities are low impact and temporary in nature with no permanent impact to the land there will be no irreversible impacts to the regional and rural landscape amenity of the area.</p>

Table 9 – Ipswich Planning Scheme Policy Statements

Intent	Response
<p><u>10.12 Overall Outcomes for Rural B (Pastoral) Zone.</u></p> <p><i>(1) The overall outcomes are the purpose of the Rural B (Pastoral) Zone.</i></p> <p><i>(2) The overall outcomes sought for the Rural B (Pastoral) Zone are the following—</i></p> <p><i>(a) The Rural B (Pastoral) Zone caters primarily for commercial pastoral activities, forestry or other sustainable rural activities (including both traditional and new and emerging rural activities such as wineries, nurseries, wholesale plants, shrubs and cut flower suppliers) although some lands may be suitable for rural support activities.</i></p> <p><i>(b) The Rural B (Pastoral) Zone also caters for rural based tourism and recreational activities, including provision of accommodation and support services for eco-tourism within nearby rural conservation areas.</i></p> <p><i>(c) Uses within the Rural B (Pastoral) Zone are provided with basic levels of service which reflect their rural location and character.</i></p> <p><i>(d) Uses and works within the Rural B (Pastoral) Zone are located, designed and managed to—</i></p> <p><i>(i) maintain the productive use of the land;</i></p> <p><i>(ii) be compatible with surrounding uses and works, in particular where adjacent to closely settled areas or the Rural C (Rural</i></p>	<p>1 Noted.</p> <p>2 (a) Because the EPM activities are low impact and temporary in nature with no permanent impact to the land there would be no impact to the capacity of the land to be used for commercial pastoral activities, forestry or other sustainable rural activities (including both traditional and new and emerging rural activities such as wineries, nurseries, wholesale plants, shrubs and cut flower suppliers).</p> <p>2 (b) Because the EPM activities are low impact and temporary in nature with no permanent impact to the land there would be no impact to the capacity of the land to be used for rural based tourism and recreational activities, including provision of accommodation and support services for eco-tourism within nearby rural conservation areas.</p> <p>2 (c) Because the EPM activities are low impact and temporary in nature with no permanent impact to the land there will be no impact to the capacity to service the land with basic rural services.</p> <p>2 (d) Because the EPM activities are low impact and temporary in nature with no permanent impact to the land they would:</p> <ul style="list-style-type: none"> (i) maintain the productive use of the land; (ii) be compatible with the surrounding uses; (iii) protect the amenity of the character of the area; (iv) maintain rural amenity;

Intent	Response
<p><i>Living) Zone or within water supply catchment areas;</i></p> <p><i>(iii) protect the character of the nearby area;</i></p> <p><i>(iv) maintain rural amenity;</i></p> <p><i>(v) maintain the distinct 'greenbelt' between the urban areas and townships which contributes significantly to the rural landscape character and the 'sense of community' for the towns, villages and urban areas;</i></p> <p><i>(vi) maintain the safety of people, buildings and works; and</i></p> <p><i>(vii) avoid significant adverse effects on the natural environment.</i></p>	<p>(v) maintain the distinct greenbelt between urban areas and townships.;</p> <p>(vi) maintain the safety of people, buildings and works;</p> <p>(vii) avoid significant adverse effects on the natural environment.</p>
<p><u>10.13 Effects of Development – General</u></p> <p><i>Uses and Works</i></p> <p><i>(1) Specific Outcomes</i></p> <p><i>(a) Uses and works reflect the local character, the amenity of the surrounding area and protect and enhance important rural vistas and landmark features having regard to—</i></p> <p><i>(i) building height;</i></p> <p><i>(ii) lot sizes and dimensions;</i></p> <p><i>(iii) boundary clearances and in particular the potential restriction on the current or future use of adjoining land as a result of the erection of new dwellings;</i></p> <p><i>(iv) building setbacks from the road network in particular along Designated Roads;</i></p> <p><i>(v) vegetation protection;</i></p> <p><i>(vi) places of cultural significance and streetscape value; and</i></p> <p><i>(vii) the form, scale, bulk, style and siting of buildings.</i></p>	<p>1 (a) Because the EPM activities are low impact and temporary in nature with no permanent impact to the land, they will reflect the local character and amenity and will protect and enhance rural vistas because:</p> <p>(i) no permanent buildings are proposed;</p> <p>(ii) no change to lot sizes and dimensions are proposed</p> <p>(iii) no change to boundary clearances or erection of new dwellings is proposed;</p> <p>(iv) no permanent buildings are proposed;</p> <p>(v) no vegetation clearing is proposed;</p> <p>(vi) no impacts to mapped cultural heritage and streetscape values is proposed;</p> <p>(vii) no change to the form, scale, bulk, style or siting of existing buildings on the land is proposed.</p> <p>1 (b) Because the EPM activities are low impact and temporary in nature with no permanent impact to the land there will not be a significant detrimental impact on the amenity of nearby residents or the sounding area because:</p> <p>(i) the activities are similar to soil testing carried out on rural</p>

Intent	Response
<p><i>(b) Non residential Uses and Works do not have a significant detrimental impact on the amenity of nearby residents or the surrounding area, including through the—</i></p> <p><i>(i) operation of machinery or equipment;</i></p> <p><i>(ii) emission of odours, noise, dust, wastewater, waste products, light, electrical interference or otherwise;</i></p> <p><i>(iii) chemical spray draft over nearby properties; or</i></p> <p><i>(iv) generation of traffic (including dust) travelling to or from the use.</i></p>	<p>properties using limited machinery and equipment;</p> <p>(ii) the activities would not generate significant odour, noise, dust, wastewater, waste, light or electrical emissions;</p> <p>(iii) the activities do not involve chemical spraying;</p> <p>(iv) the activities do not generate significant numbers of truck movements.</p>
<p><u>10.15 Consistent and Inconsistent Uses, Use Classes and Other Development</u></p> <p><i>(2) The following uses, use classes and other development categories are consistent with the outcomes sought for the Rural B (Pastoral) Zone if of a type and scale appropriate for the prevailing nature of the area and the particular circumstances of the site and its surrounds—</i></p> <p><i>(g) extractive industry;</i></p>	<p>The EPM activities are not dissimilar to soil testing activities that would occur prior to making a development application for a material change of use for extractive industry on the land.</p> <p>It is important to note that undertaking the equivalent soil testing activities to inform an extractive industry proposal would not require a development approval from Council or the State.</p>

6.3 The prescribed solution

The prescribed solution for achieving the outcome is:

'The application demonstrates each of the following—

(a) the activity is unlikely to adversely impact on development certainty—

(i) for land in the immediate vicinity of the activity; and

(ii) in the priority living area generally;

(b) carrying out the activity in the priority living area, and in the location stated in the application, is likely to result in community benefits and opportunities, including, for example, financial and social benefits and opportunities.

To address the requirements of the RPI Act, the following assessment is provided informed by the RPI Act Statutory Guideline 04/14. Table 10 – Development certainty addresses the first component of the prescribed solution and Table 11 – Community benefit addresses the second component of the prescribed solution.

Table 10 – Development certainty

Guidance	Response
<p><i>The activity is unlikely to adversely impact on development certainty—</i> <i>(i) for land in the immediate vicinity of the activity; and</i> <i>(ii) in the priority living area generally;</i></p>	
<p><i>To understand whether an activity may adversely impact on development certainty, the applicant should undertake and submit an analysis that demonstrates the extent to which the activity would or would not:</i></p>	
<p><i>a) result in the loss of land available for urban development as identified in a local government planning scheme, development scheme or other applicable statutory planning instrument</i></p>	<p>The EPM target areas are Rural zoned land outside the Urban Footprint and therefore the EPM activities would not result in the loss of land available for urban development.</p>
<p><i>b) prevent or delay the orderly expansion of planned urban development as identified in a local government planning scheme, development scheme or other applicable statutory planning instrument (for example, the life of the proposed resource activity may delay access to land and preventing its timely development)</i></p>	<p>The EPM target areas are Rural zoned land outside the Urban Footprint and therefore the EPM activities would not prevent or delay the orderly expansion of planned urban development.</p>
<p><i>c) result in the discontinuation of an activity that is lawfully in existence under a local government planning scheme, development scheme or other applicable statutory planning instrument</i></p>	<p>The EPM activities as described above are low impact techniques and would not result in the discontinuation of any landuse lawfully in existence.</p>
<p><i>d) increase the cost of planned development (for example, changes to the existing landform could make the land more difficult or costly to develop)</i></p>	<p>The EPM activities would not change the existing landform and therefore would not increase the cost of planned development for rural purposes.</p>
<p><i>e) damage or otherwise affect existing infrastructure (for example, structural damage cause by subsidence)</i></p>	<p>The EPM activities would not damage or affect existing infrastructure.</p>
<p><i>f) result in additional demand on existing infrastructure or services (for example, town water)</i></p>	<p>The EPM activities would not result in additional demand for reticulated water, sewer, power or telecommunications infrastructure. The activities will be mobile and temporary in nature, requiring no connection to existing infrastructure.</p>
<p><i>g) negatively impact on the amenity of the PLA in general and on land in the immediate vicinity of the activity.</i></p>	<p>The EPM activities being low impact and temporary in nature would not negatively impact on the rural amenity of the land in the immediate vicinity of the activities.</p>

Guidance	Response
<p><i>The activity is unlikely to adversely impact on development certainty—</i> <i>(i) for land in the immediate vicinity of the activity; and</i> <i>(ii) in the priority living area generally;</i></p>	
<p><i>To determine the impact on amenity, the proposed activity should be evaluated against the following factors:</i></p>	
<p><i>a) the compatibility of the activity with surrounding activities</i></p>	<p>As discussed, the EPM activities are similar in nature to soil sampling or water bore installation that a rural landholder might undertake to confirm the suitability of the land or access water for a range of rural and agricultural activities. Therefore, the EPM activities are compatible with the surrounding rural land uses.</p>
<p><i>b) the nature and scale of the proposed activity and the extent of its intrusion on the predominant character of the surrounding area</i></p>	<p>The temporary and low impact nature of the EPM activities would not intrude on the rural character of the area.</p>
<p><i>c) the extent of change to the volume or nature of traffic on the roads in the PLA</i></p>	<p>Other than truck mounted drill rigs the EPM activities would only involve light vehicles and therefore are unlikely to significantly the volume or nature of traffic on local roads.</p>
<p><i>d) the effect on the existing linkages between various parts of the PLA (for example, between residential areas and employment areas)</i></p>	<p>The EPM target areas are fully contained within rural zoned land and would not have any effect on linkages between residential and employment areas.</p>
<p><i>e) changes to the outlook from key vistas, nearby sensitive uses (for example, residential areas) or public facilities (for example, parks) and tourist attractions</i></p>	<p>The EPM activities being temporary and low impact in nature would not change the outlook from key vistas or nearby sensitive uses or public facilities or tourist attractions. All ground disturbed during the drilling activities will be rehabilitated upon completion of the drill hole, resulting in no disturbance remaining.</p>
<p><i>f) the effect on the sense of place, local cultural heritage values and perceptions of safety</i></p>	<p>The EPM activities being temporary and low impact in nature would not affect the sense of place, cultural heritage values or perceptions of safety.</p>
<p><i>g) the visual prominence of the site</i></p>	<p>The EPM target areas are not visually prominent.</p>
<p><i>h) proposed landscaping and enhancements.</i></p>	<p>No landscaping or enhancement works are proposed.</p>
<p><i>The application should also explain how any impacts will be managed or mitigated.</i></p>	<p>Refer to Section 2 and 4 of this report.</p>

Table 11 – Community benefit

Guidance	Response
<p><i>carrying out the activity in the priority living area, and in the location stated in the application, is likely to result in community benefits and opportunities, including, for example, financial and social benefits and opportunities.</i></p>	
<p><i>The applicant should submit an analysis of:</i></p>	
<p><i>a. the economic and social benefits that will be associated with the additional workforce (during both the construction and operation phases)</i></p>	<p>The estimated financial commitment from Austral for the EPM activities is in the order of approximately \$30,000 to \$40,000 over the permit term.</p> <p>The EPM activities are not anticipated to generate additional equivalent full time jobs.</p>
<p><i>b. direct contributions (monetary or in-kind work) towards:</i></p> <p><i>i. the improvement of trunk infrastructure (whether it be the capacity or the quality of the infrastructure)</i></p> <p><i>ii. public infrastructure (including public transport, health and education services, and cultural and social infrastructure such as parks, sport and recreation facilities, bikeways and walkways)</i></p> <p><i>iii. a community initiative or facility (for example public artwork, community notice board, community centre).</i></p>	<p>The EPM activities being temporary and low impact in nature will not impact trunk infrastructure, public infrastructure or a community initiative or facility and therefore no improvements (monetary or in-kind work) are proposed.</p>

7 Concluding Remarks

The exploration activities for clay and shale resources proposed by Austral Bricks are temporary and low impact in nature and are not dissimilar to soil sample investigations or water bore installation that a rural landholder might undertake to confirm the suitability of the land or access water for a range of rural and agricultural uses.

The EPM target areas are rural zoned land outside the urban footprint and avoid mapped environmental values including strategic cropping land and protected vegetation. Being temporary and low impact in nature the proposed EPM activities would not adversely impact the development certainty of the land and could lead to future economic benefits if a viable clay mineral resource was identified. On that basis it is evident that the location, nature and conduct of the proposed exploration activities are compatible with the planned future for the priority living area stated in a planning instrument under the Planning Act.

The future of Austral Bricks' mining activities is dependent upon a secure supply of clay and shale materials within reasonable proximity to the Rochedale Brick Plant, which underpins to importance of the proposed Mount Walker EPM. If the mineral within the permit area proves viable, the site being situated in proximity to an ever-expanding SEQ market would ensure demand for materials can be met and prices for consumers remain competitive.

Austral Bricks is backed by the funding and technical resources of Brickworks Limited, which in 2022 alone reported a revenue of \$1,093,154,000. All activities on the permit area will be overseen by Austral Bricks' National Geologist, Julius Marinelli who has a wealth of expertise in mineral exploration.

To be clear, the EPM activities proposed as part of this RIDA application do not include extraction, processing and sale of the clay resource or any other mineral. The EPM activities are exploration activities only. If a viable deposit of clay is identified, a future RIDA application would need to be made to enable extraction, processing and sale of the clay resource to occur.

The above factors combined support this Regional Interest Development Application and provide evidence that the proposed EPM and associated exploration activities are compatible with the planned land use for the EPM target areas and therefore approval under the RPI Act is appropriate subject to reasonable and relevant conditions.

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ATTACHMENTS

Attachment 1

Financial and Technical Statements