

KRA Reports and Maps

Key Resource Area reports and maps 121 to 160

December 2021

TANDAN KEY RESOURCE AREA – KRA 121

LOCAL GOVERNMENT AREA: Goondiwindi Regional Council

LOCATION: The resource is located approximately 10 kilometres south of Inglewood immediately adjacent the Inglewood-Texas Road and within Yelarbon State Forest (SF 81) (see map KRA 121).

EXTRACTIVE RESOURCE: Quarry Rock

EXTRACTIVE RESOURCE DESCRIPTION:

The resource comprises variably weathered metasediments suitable for the production of a wide range of products including road bases, ballast and concrete aggregates and the rock quality appears to improve with depth. The resource is estimated to contain up to 100 million tonnes of extractive material.

SIGNIFICANCE:

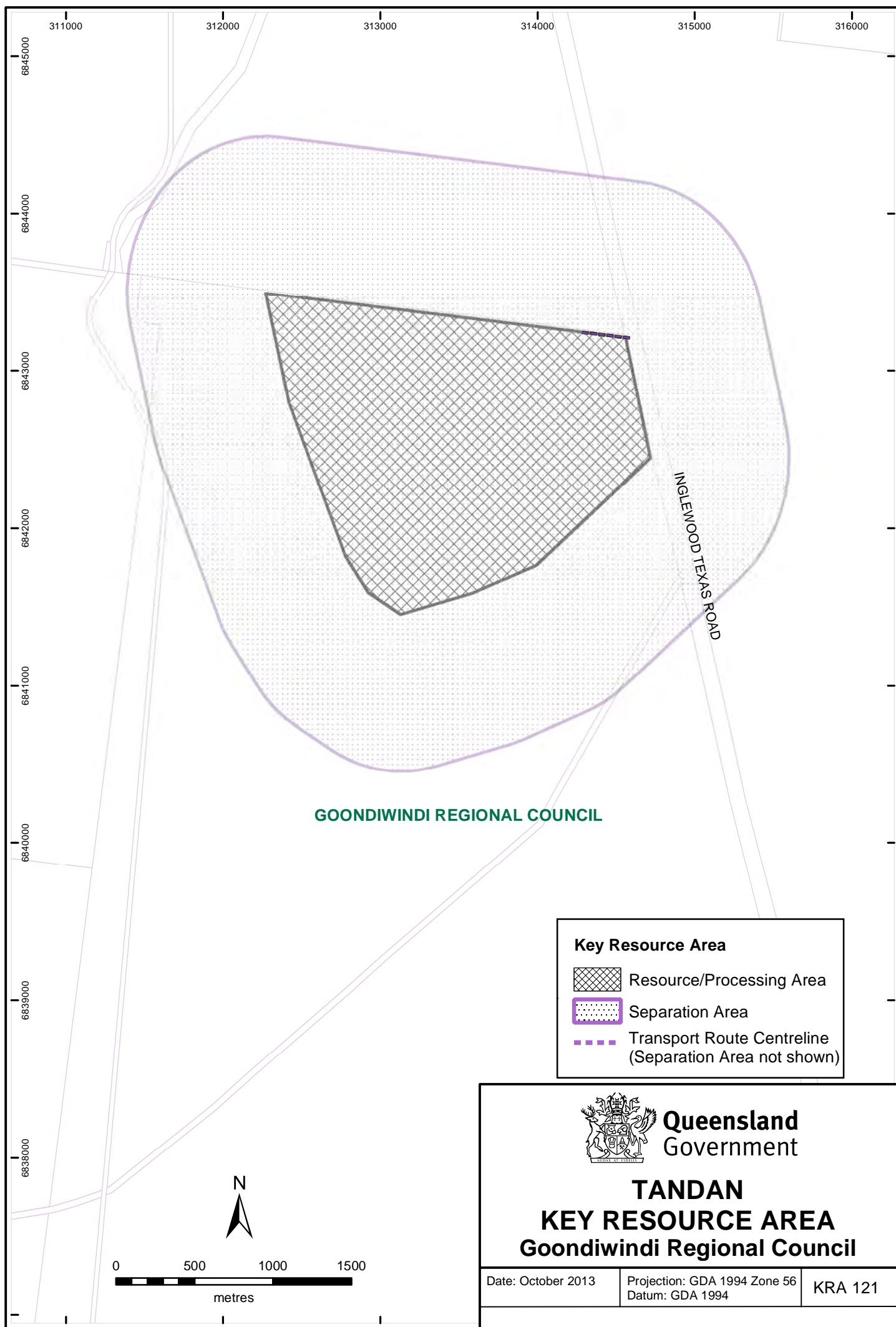
The resource is sufficient to supply infrastructure needs in the Inglewood and surrounding region. The site is significant given the size of the hardrock and gravel resource. The site was previously used for rail ballast and would be suitable for other infrastructure projects in the region.

SEPARATION AREA:

A separation distance of 1000 metres is adopted as blasting is likely to be required for most parts of the resource.

TRANSPORT ROUTE:

The material can be transported directly off the site onto the Inglewood – Texas road.



SCOTCHY POCKET KEY RESOURCE AREA - KRA 122

LOCAL GOVERNMENT AREA: Gympie Regional Council

LOCATION: Approximately 25 kilometres north-west of Gympie (see Map KRA 122).

EXTRACTIVE RESOURCE TYPE: Quarry Rock

EXTRACTIVE RESOURCE DESCRIPTION

The resource is part of a centrally located peak referred to as Mount Scotchy. The geology is dominated by large intrusions consisting of diorite, andesitic porphyry and micro granodiorite and granite, surrounded by unconsolidated sediments (e.g. residual soil, colluvium, sand soil, clay and rock debris). The three resource/processing areas are defined by the topography as any operations in future may be screened from the surrounding land.

SIGNIFICANCE:

The resource is very large and able to supply material to the Wide Bay/Burnett region including Gympie to Maryborough, and the Sunshine Coast.

The proximity to the Bruce Highway and main Northern Railway line make it ideally sited to supply major infrastructure projects and possibly transport to more distant markets.

The rock has proven exceptional engineering properties suitable for the production of ballast sealing and concrete aggregates. Importantly the agglomerate material has very high skid resistance.

Importantly, significant additional undefined resources exist adjacent to the identified resource areas.

SEPARATION AREA:

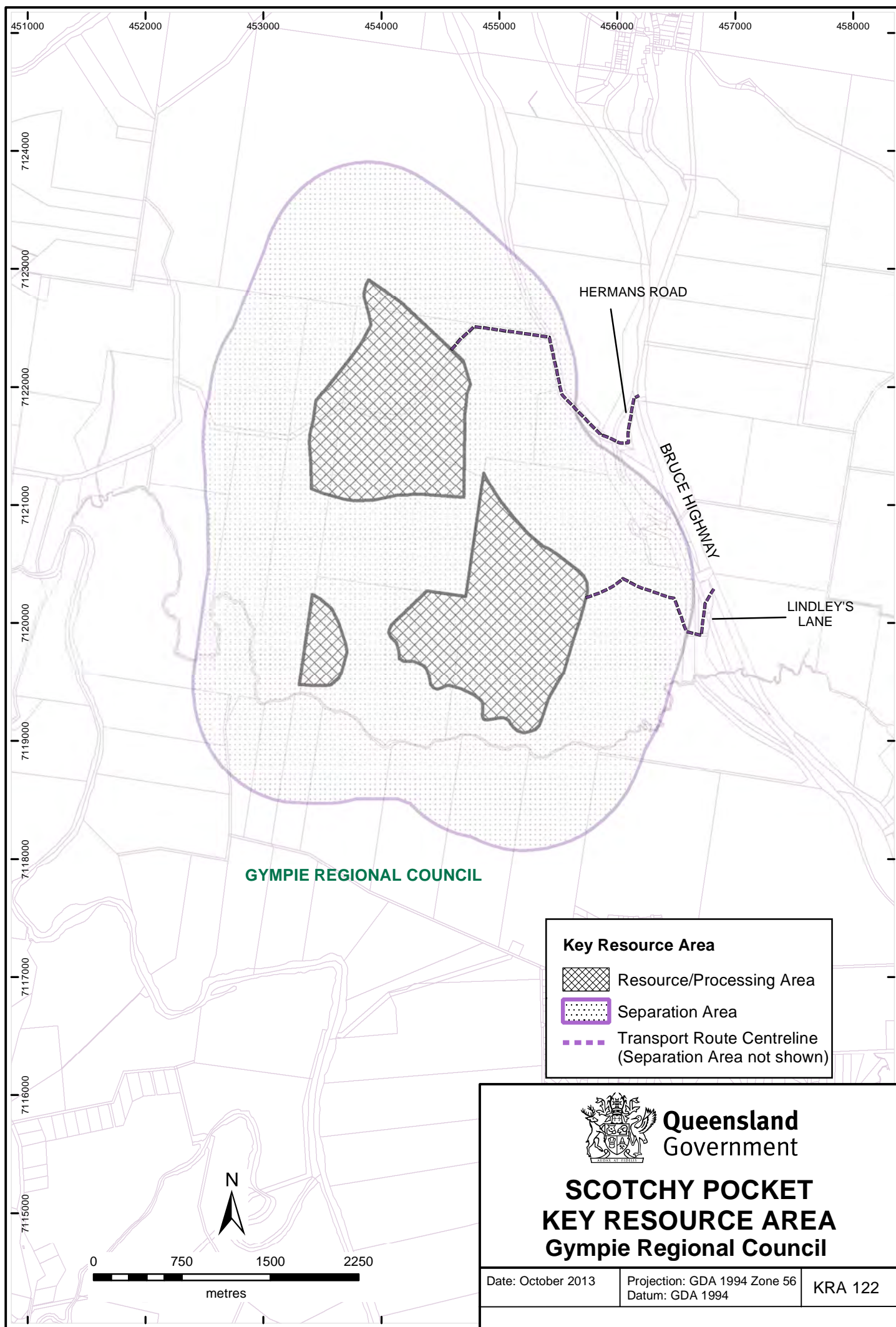
A separation distance of 1000 metres from the boundaries of the KRA is applied from the resource boundary as blasting may be required to access hard rock resources.

TRANSPORT ROUTE:

The transport route from the northern resource area will be along Birts and Hermans Road to the Bruce Highway. Transport from the southern resource will be via an unnamed road onto Lindley Lane then entering the Bruce Highway.

SPECIAL CONSIDERATIONS:

Some minor areas of the KRA is covered by Strategic Cropping Land (SCL) Trigger Mapping under the *Strategic Cropping Land Act 2011* administered by the Department of Natural Resources and Mines. This indicates the location of potential SCL and further on-ground assessment against the SCL criteria is required to confirm whether the area is SCL or non-SCL.



LUXOR KEY RESOURCE AREA - KRA 123

LOCAL GOVERNMENT AREA: Isaac Regional Council

LOCATION: The resource is situated 24 kilometres northwest of Dysart and 13 kilometres southwest of Saraji coal mine (see Map KRA 123).

EXTRACTIVE RESOURCE: Quarry Rock

RESOURCE DESCRIPTION

The resource comprises high quality, variably weathered basalt with a large core area of unweathered basalt suitable for the production of high quality engineering products including concrete and asphalt aggregates, ballast and road bases

SIGNIFICANCE

The large resource is sufficient to supply engineering materials to the coal mines and infrastructure projects in the Dysart, Peak Downs and Saraji areas and adjacent coal mines. The site is significant owing to the quality of the hard rock resource, proximity to market, lack of project constraints and access to the nearby coal mines. The deposit has the potential to supply the Isaac region for several decades at the current rate of demand.

SEPARATION AREA:

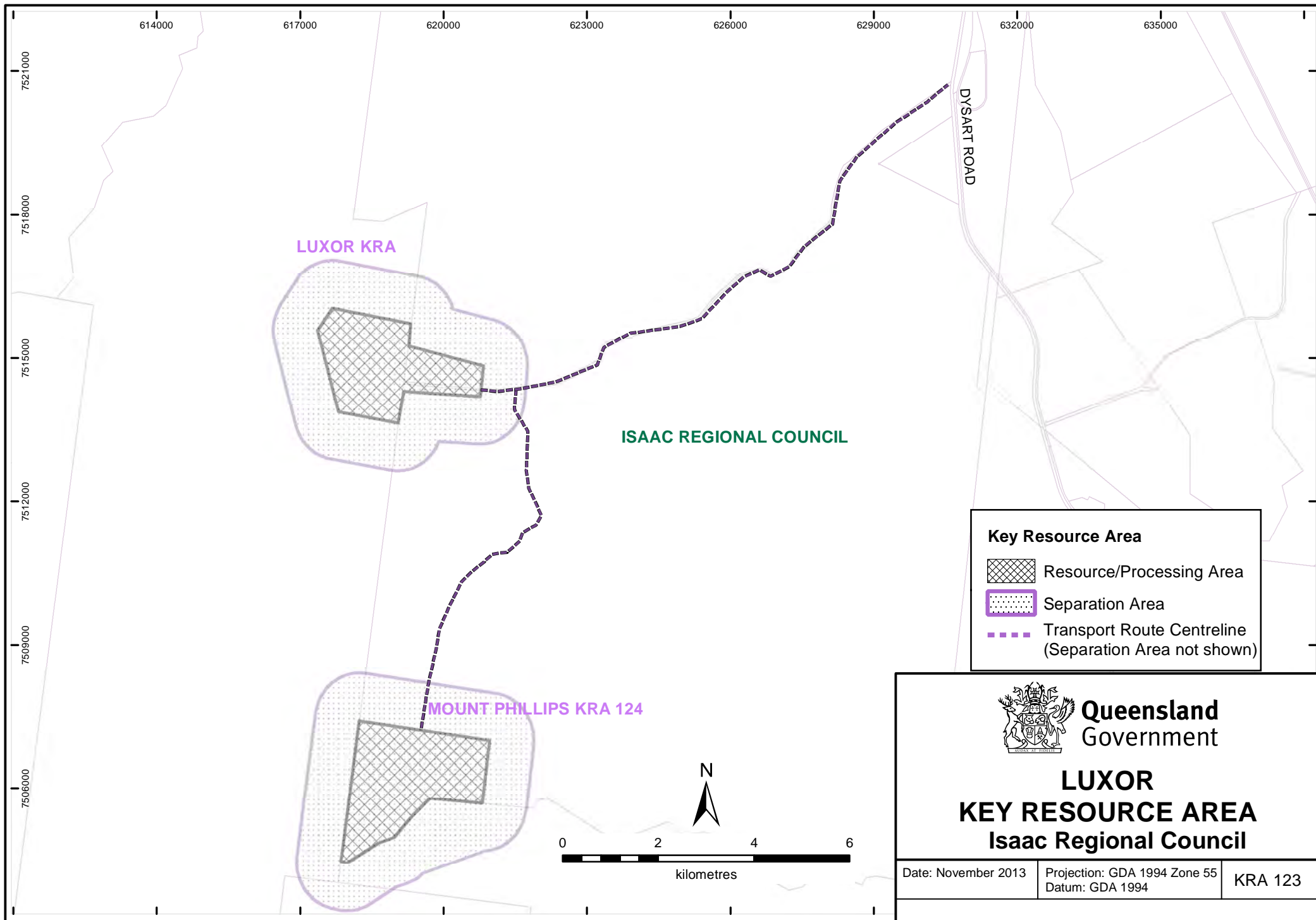
A separation distance of 1000 metres has been applied around the resource as the surrounding land is relatively flat. The land is zoned Rural.

TRANSPORT ROUTE:

The material will be transported east along an existing unnamed quarry haul road to Dysart Road.

SPECIAL CONSIDERATIONS:

Cultural Heritage is known and identified in the field within the sales permit supply zone for this quarry (on the northern side of the haul road), but this site is not within the current KRA boundary.



MOUNT PHILLIPS KEY RESOURCE AREA – KRA 124

LOCAL GOVERNMENT AREA: Isaac Regional Council

LOCATION: The resource is located approximately 20 kilometres west of Dysart, Central Queensland (see Map KRA 124).

EXTRACTIVE RESOURCE: Quarry rock

EXTRACTIVE RESOURCE DESCRIPTION:

The resource comprises variably weathered basalt suitable for the production of high quality engineering products including concrete and asphalt aggregates, ballast and road base.

SIGNIFICANCE:

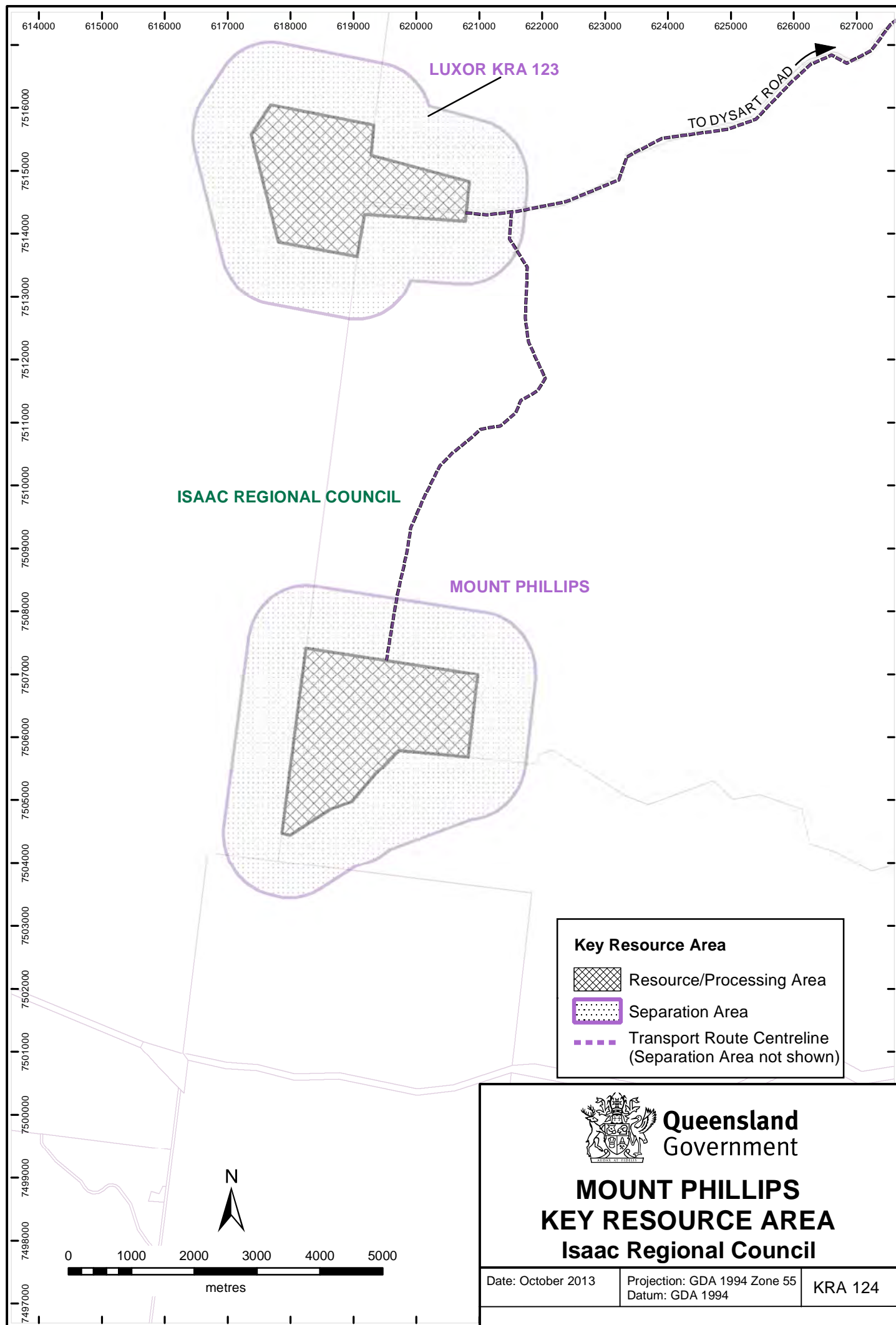
The resource is sufficient to supply material to the region including the nearby Dysart township and Saraji and Peak Downs coal mines. The site is a significant resource given its size and quality as well proximity to markets and projects and lack of development constraints.

SEPARATION AREA:

A separation distance of 1000 metres from the resource/processing boundary is adopted as blasting is likely to be required to access the resource.

TRANSPORT ROUTE:

The material will be transported north along a road leading onto an existing quarry haulage route and east towards Dysart Road.



REDHILL KEY RESOURCE AREA - KRA 125

LOCAL GOVERNMENT AREA: Isaac Regional Council

LOCATION: The resource is located 33 kilometres north of Moranbah in Central Queensland (see map KRA 125).

EXTRACTIVE RESOURCE: Quarry Rock

EXTRACTIVE RESOURCE DESCRIPTION:

The resource is comprised of basalt and is the site of an existing quarry supplying a wide range of crushed products including rail ballast and road base.

SIGNIFICANCE:

Based on production rates the resource has the potential to supply extractive material to the Mackay region for over 30 years. The resource is conveniently located to supply to nearby coal mines and associated infrastructure projects. The Goonyella North coal mine is located 5 kilometres to the west. The resource meets the criteria for State significance.

SEPARATION AREA:

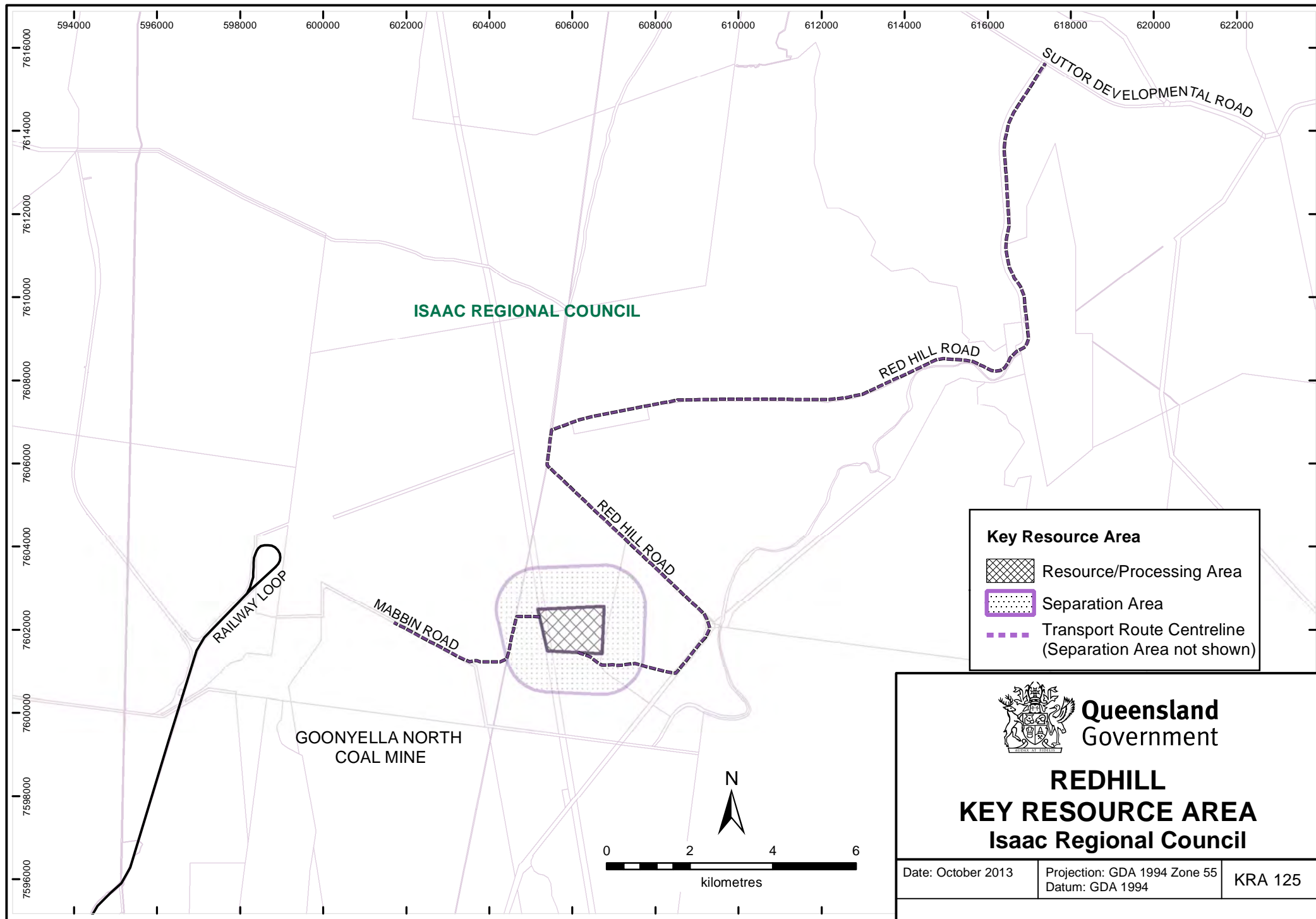
A maximum separation distance of 1000 metres has been applied around the resource/processing area boundary.

TRANSPORT ROUTE:

The extractive material is transported west via Mabbins Road to the northern part of the Goonyella mine and the railway loop or east on a quarry road to the Red Hill Road.

SPECIAL CONSIDERATIONS:

A minor portion of the separation area to the south west is covered by Strategic Cropping Land (SCL) Trigger Mapping under the *Strategic Cropping Land Act 2011* administered by the Department of Natural Resources and Mines. This indicates the location of potential SCL and further on-ground assessment against the SCL criteria is required to confirm whether the area is SCL or non-SCL.



APSLEY KEY RESOURCE AREA - KRA 126

LOCAL GOVERNMENT AREA: Isaac Regional Council

LOCATION: Approximately 13 kilometres north of Clermont, Central Queensland
(see Map KRA 126)

EXTRACTIVE RESOURCE: Quarry Rock

EXTRACTIVE RESOURCE DESCRIPTION:

The resource consists of basalt suitable for a variety of products including concrete and asphalt aggregate, ballast and road base.

SIGNIFICANCE:

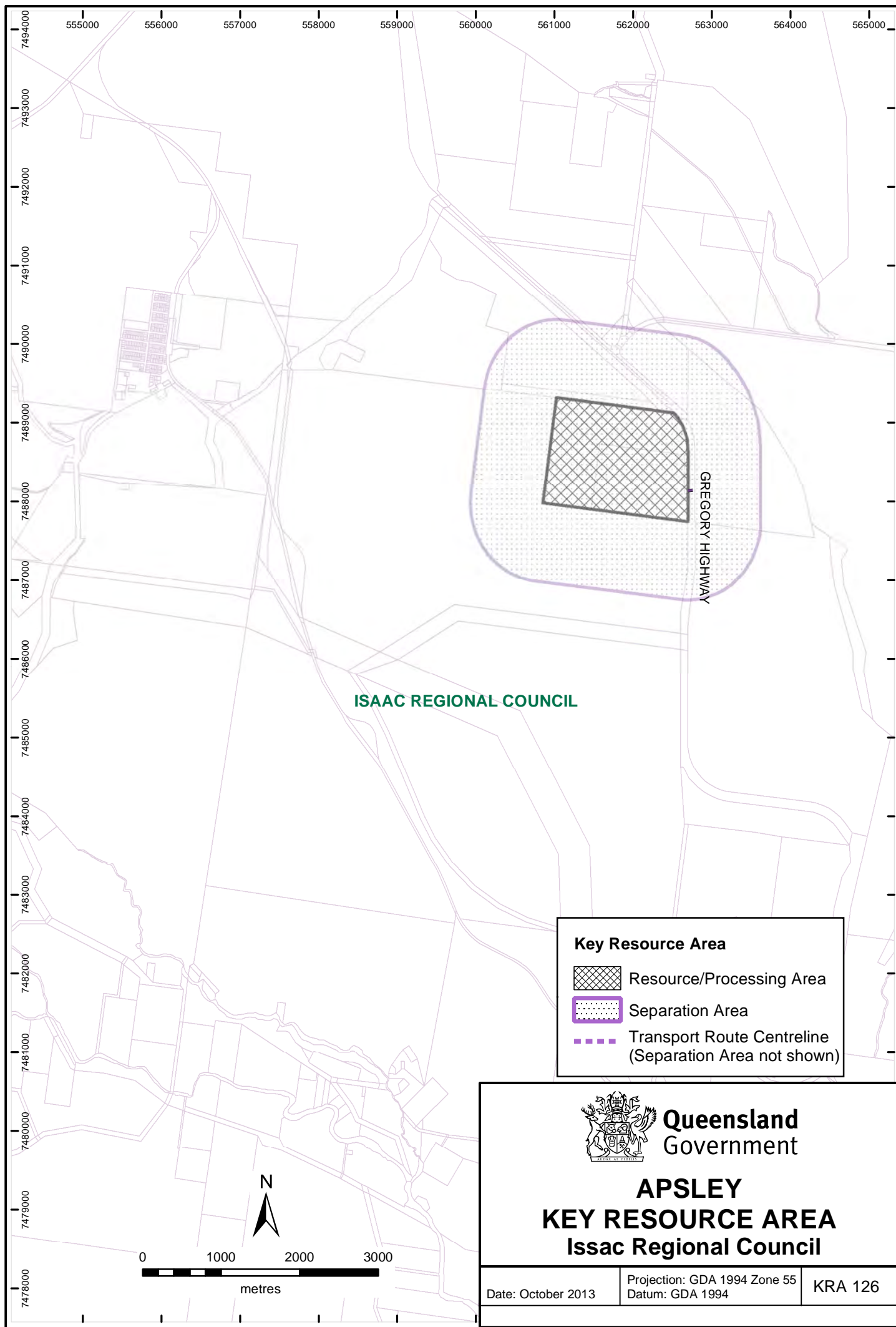
The resource is large enough to supply Clermont and surrounding areas for a number of years. Due to the scarcity of natural construction material of this type in the region and its location close to major infrastructure projects the Apsley Key Resource Area meets the criteria for State significance.

SEPARATION AREA:

A maximum separation distance of 1000 metres has been applied around the resource/processing area boundary as blasting is likely to be required to access the resource. The surrounding land is zoned Rural.

TRANSPORT ROUTE:

The material can be transported directly to the Gregory Highway.



FAIRFIELD KEY RESOURCE AREA - KRA 127

LOCAL GOVERNMENT AREA: Isaac Regional Council

LOCATION: Approximately 24 kilometres north of Clermont, Central Queensland (see map KRA 127)

EXTRACTIVE RESOURCE: Quarry Rock

EXTRACTIVE RESOURCE DESCRIPTION

The resource consists of basalt and is suitable for a variety of products including concrete and asphalt aggregate, ballast and road base. There is an existing extractive operation at the site.

SIGNIFICANCE:

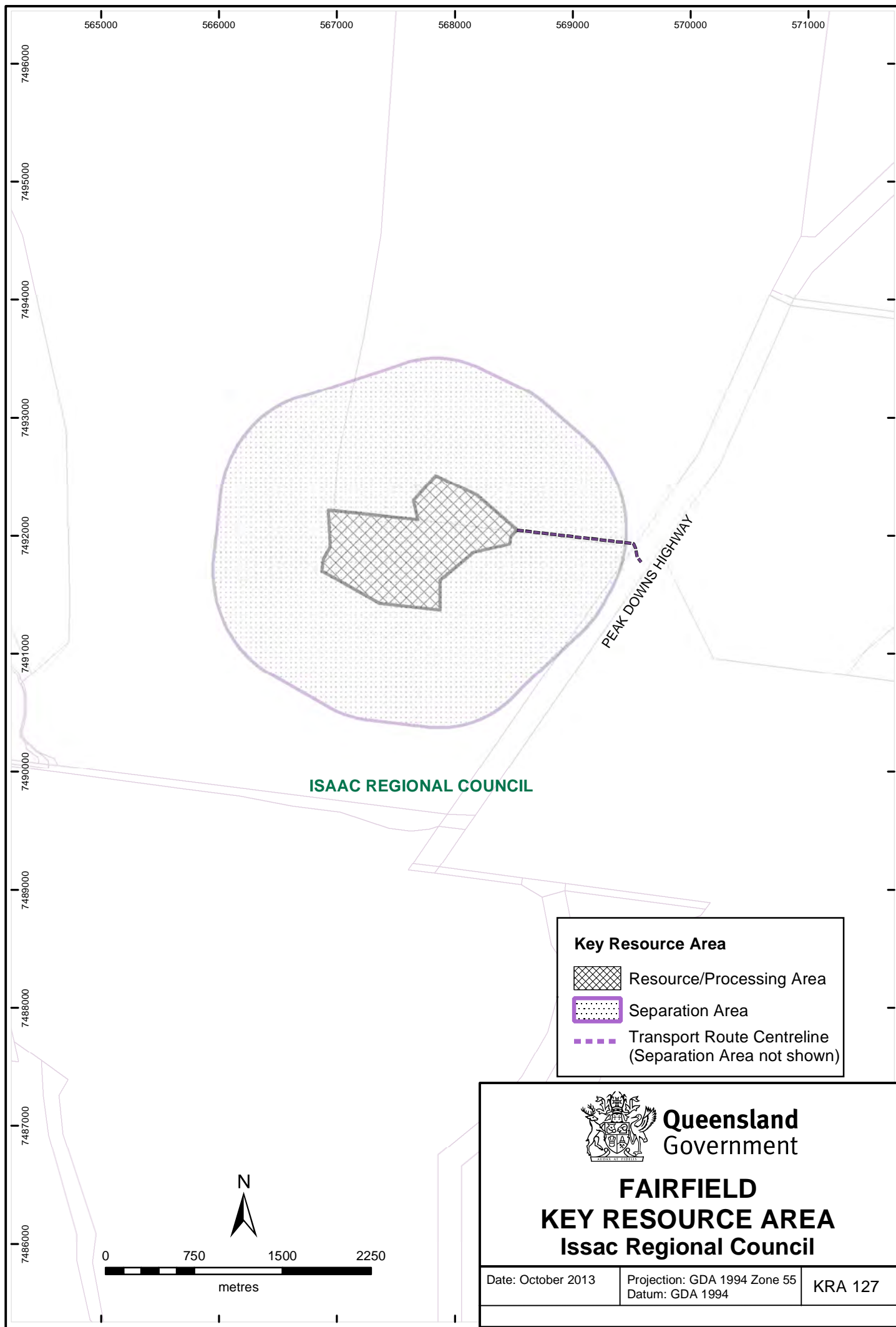
The resource is large enough to supply Clermont and surrounding areas for a number of years. Due to the scarcity of natural construction material in the region and its location close to major infrastructure projects the Fairfield Key Resource Area meets the criteria for State significance.

SEPARATION AREA:

A maximum separation distance of 1000 metres has been applied around the resource/processing area boundary as blasting is likely to be required to access the resource. The surrounding land is zoned Rural.

TRANSPORT ROUTE:

The material is transported a kilometre to the east directly onto the Peak Downs Highway.



MORANBAH SOUTH KEY RESOURCE AREA - KRA 128

LOCAL GOVERNMENT AREA: Isaac Regional Council

LOCATION: The resource is situated 15 kilometres south of Moranbah in Central Queensland (see map KRA 128).

EXTRACTIVE RESOURCE TYPE: Sand and hard rock

EXTRACTIVE RESOURCE DESCRIPTION

The resource area covers two geological units; distinctly weathered to unweathered basalt and silty to clayey sands (fine aggregate).

The basalt is suitable for the production of high quality engineering products including concrete and asphalt aggregates, ballast and road bases. It extends to the south and west of the current site.

The sand resource is an off-stream deposit of the Isaac River and is a mixture of silty and clayey sands which could be extracted and washed to produce a fine aggregate suitable for use in concrete. The full extent of the sand resource is not yet known.

SIGNIFICANCE:

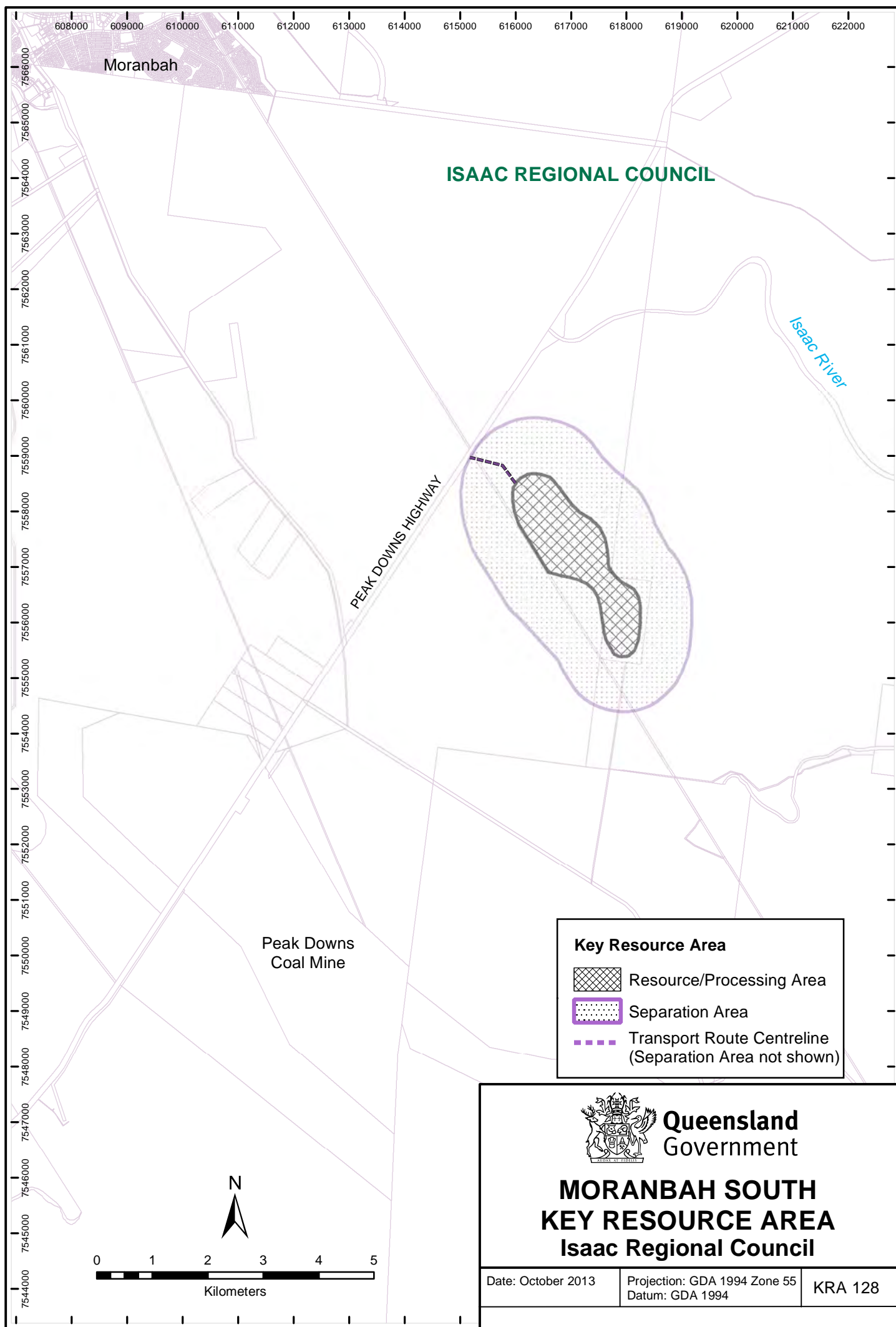
The large resource is sufficient to supply construction materials to the coal mines and infrastructure projects of the Moranbah-Dysart area. This site is also centrally placed to service several coal mines and infrastructure projects in the region. The size and quality of the hard rock resource and proximity to regional market, meet the criteria for State significance.

SEPARATION AREA:

A separation distance of 1000 metres from the resource boundary is adopted, as blasting may be required to access hard rock resources. The surrounding land is zoned Rural.

TRANSPORT ROUTE:

The material is transported along a gravel road to meet the Peak Downs Highway about 5 kilometres northeast of the Goonyella Road to Moranbah and the Dysart Road leading southwards.



GRANTHAM KEY RESOURCE AREA – KRA 129

LOCAL GOVERNMENT AREA: Lockyer Valley Regional Council

LOCATION:

The resource is situated near the old Warrego Highway, about 10 west of Gatton and 20 km east of Toowoomba (see map KRA 129).

EXTRACTIVE RESOURCE: Sand

EXTRACTIVE RESOURCE DESCRIPTION:

The resource is medium to coarse sand inside a long meander on Lockyer Creek. The sand is covered by deep loamy alluvial soil and is underlain by coarse to cobbly gravel. The operating pit is sited in the middle alluvial terrace on the right bank. The basal gravel layer is worked by dragline below the water table.

Weathered sandstone resources in the Marburg Sandstone occur below the higher terrace to the west. This area is not being worked at present however may provide a larger resource in future.

SIGNIFICANCE:

The deposits of regional significance as it is a major source of sand for the Lockyer Valley district and Toowoomba. At least 15 years production is estimated.

Similar deposits of sand and gravel are likely to occur along this part of the Lockyer Creek valley. However the adjacent areas are likely to be good quality agricultural land which might not be available for extractive industry.

SEPARATION AREA:

A separation distance of 200 m from the resource/processing area boundary is applied. The resource/processing area is outlined only over the area owned by the operator. The potential extent of the sandstone resource has not been defined by drilling or excavation.

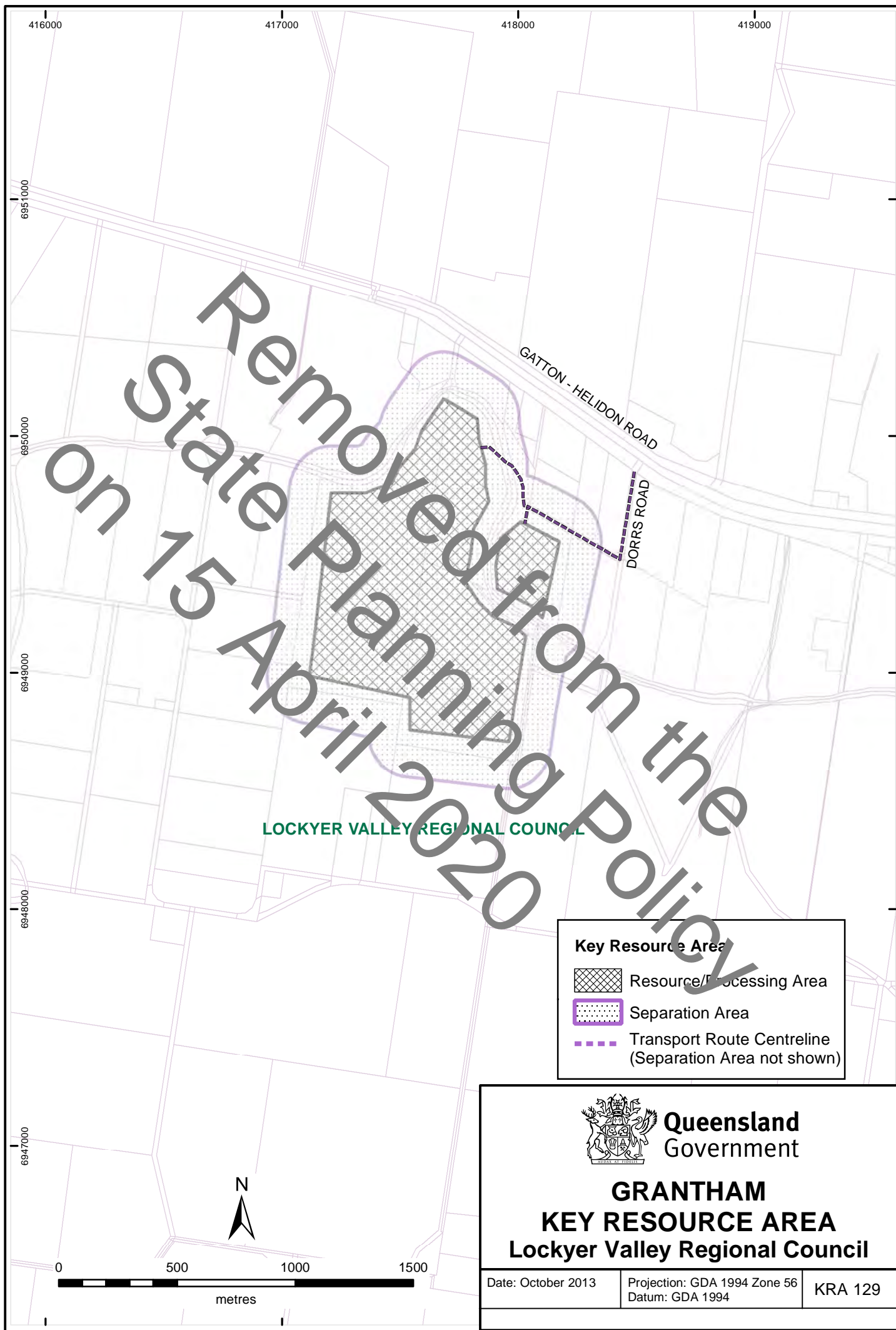
TRANSPORT ROUTE:

A transport route is designated over the quarry access road onto Doris Road which leads northwards to the Helidon-Gatton Road.

SPECIAL CONSIDERATIONS:

Future operations may be restricted to avoid interference with the water table.

Some parts of the KRA is covered by Strategic Cropping Land Trigger Mapping under the Strategic Cropping Land Act 2011 administered by the Department of Natural Resources and Mines. This indicates the location of potential SCL and further on-ground assessment against the SCL criteria is required to confirm whether the area is SCL or non-SCL.



MOUNT SYLVIA KEY RESOURCE AREA - KRA 130

LOCAL AUTHORITY: Lockyer Valley and Toowoomba Regional Councils

LOCATION: The resource is situated approximately 28 kilometres south of Gatton on the Mount Sylvia Road (see map KRA130).

EXTRACTIVE RESOURCE: Quarry Rock

EXTRACTIVE RESOURCE DESCRIPTION:

The resource consists of basalt overlying an interbedded diatomite layer. The diatomite exposed at the lowest part of the slope is currently mined as authorised under a Mining Lease for some decades. The basalt overburden is the extractive resource and extraction is licensed over the resource area. The entire Resource/Processing Area is within the Lockyer Valley Regional Council Area.

SIGNIFICANCE:

The deposit is of regional significance as it is a source of hard rock for the Lockyer Valley and Somerset Regions and the western parts of the Ipswich and Brisbane Cities. At least 20 years production is envisaged at this stage. The size and quality of the resource allows it to meet the criteria for State significance.

SEPARATION AREA:

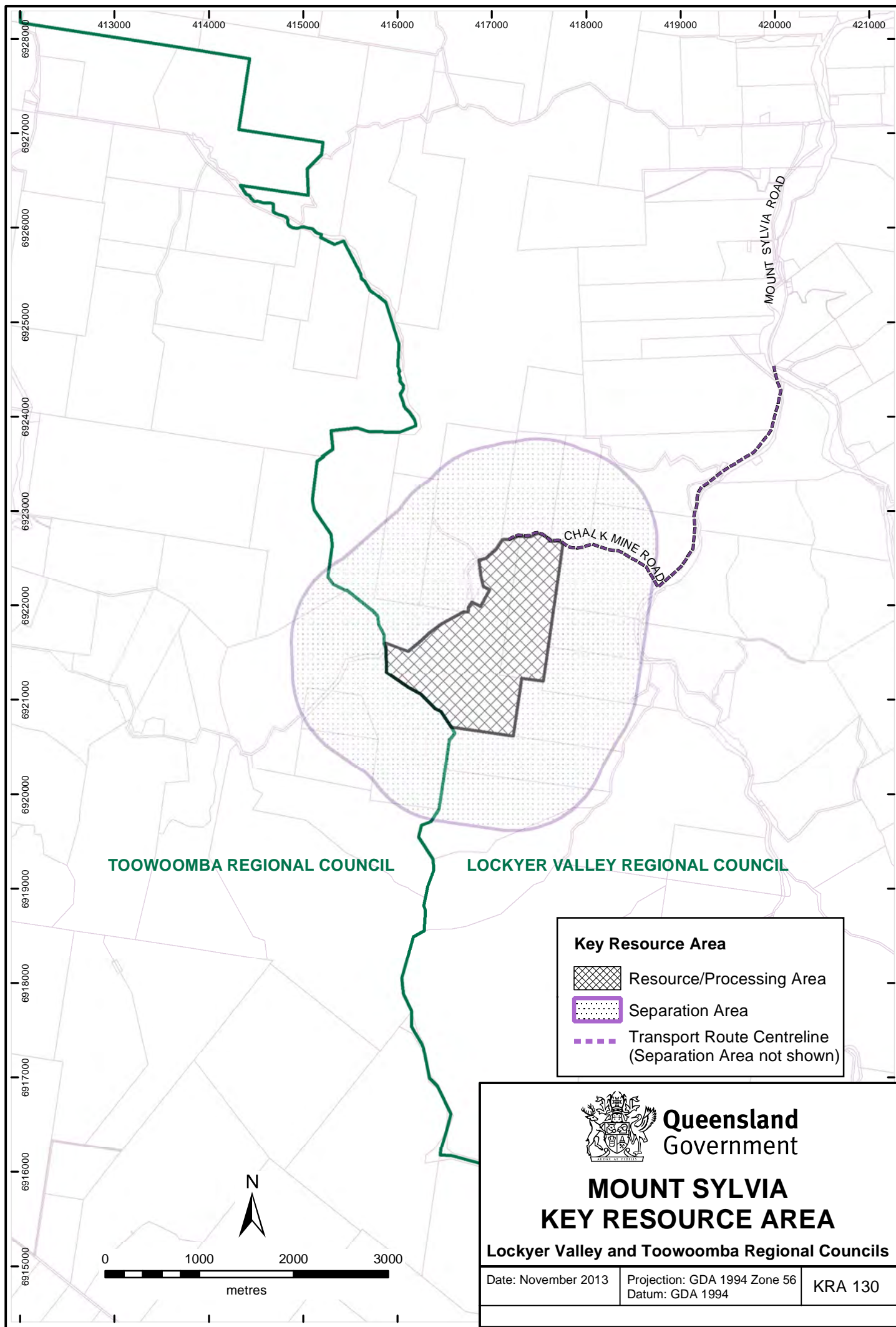
The resource area is largely defined by the lots which are approved for extractive industry. The full extent of basalt throughout the adjacent ridges is unknown. As the surrounding area is mostly higher than the extractive operations, a separation distance of 500 metres from the resource/processing area has been adopted. The separation area is situated within Lockyer Valley and Toowoomba Regional Councils.

TRANSPORT ROUTE:

The approval conditions specified that the haul route must follow Chalkmine Road, Mount Sylvia Road, Ingoldsby Road, Tenthill Creek Road, Gatton Helidon Road to the Warrego Highway. Mount Sylvia Road is State-controlled, therefore the transport route is not indicated beyond where it enters this road.

SPECIAL CONSIDERATIONS:

Minor parts of the separation area is covered by Strategic Cropping Land (SCL) Trigger Mapping under the *Strategic Cropping Land Act 2011* administered by the Department of Natural Resources and Mines. This indicates the location of potential SCL and further on-ground assessment against the SCL criteria is required to confirm whether the area is SCL or non-SCL.



PARADISE CREEK KEY RESOURCE AREA – KRA 131

LOCAL GOVERNMENT AREA: Lockyer Valley Regional Council

LOCATION:

The resource is located about 17 kilometres south west of Gatton and 23 kilometres east of Toowoomba (see map KRA 31).

EXTRACTIVE RESOURCE: Quarry Rock

EXTRACTIVE RESOURCE DESCRIPTION:

The resource consists of a prominent unnamed hill formed by a thick basalt outlier which appears to overlie sandstone. The estimated thickness exceeds 100 metres and is considered to represent a flow over a deeply eroded sandstone terrain rather than an intrusive plug. The basalt is considered to be sufficiently jointed that blasting would not be required for extraction. Laboratory testing has indicated the rock to be suitable for asphalt and road base.

SIGNIFICANCE:

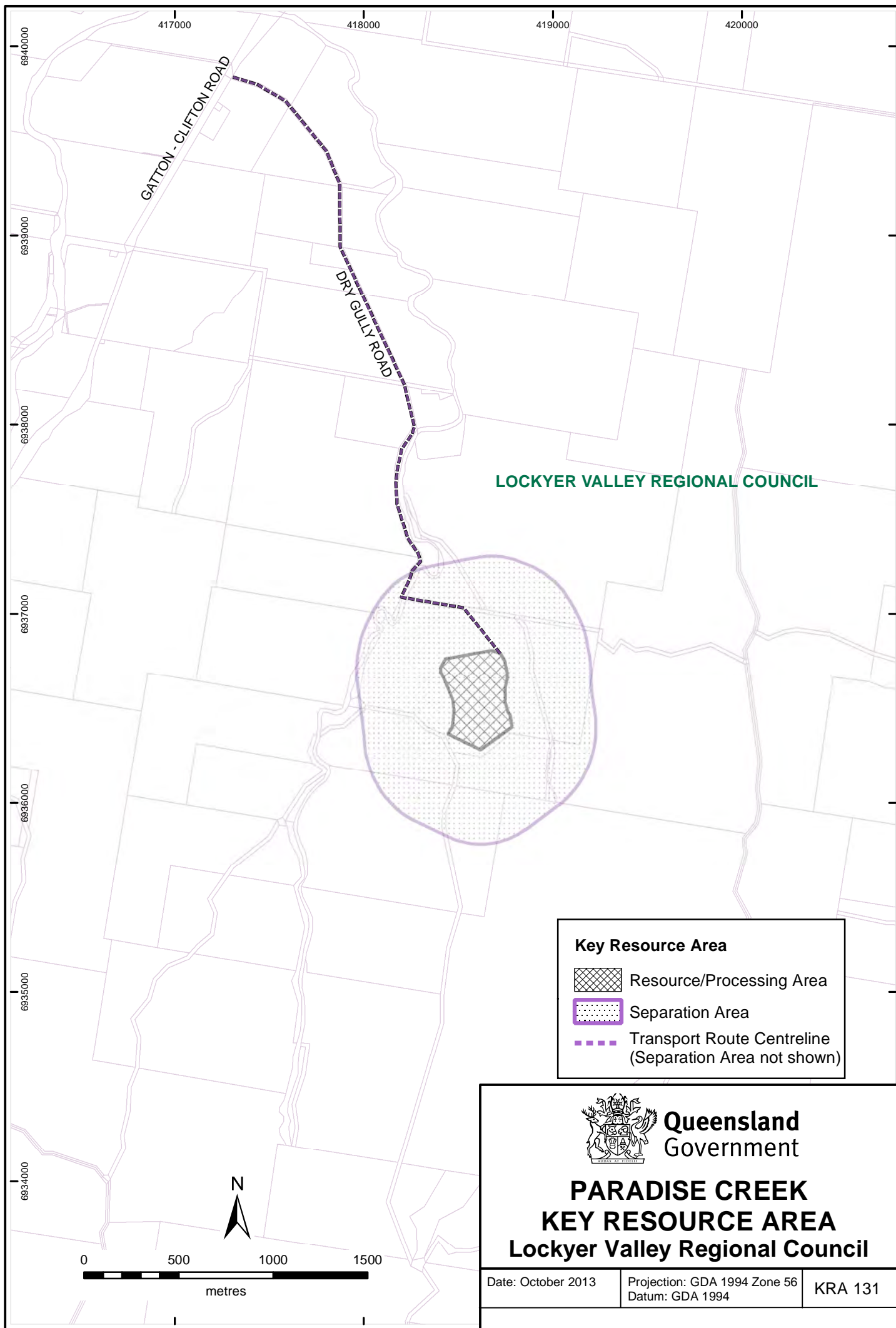
The deposit is a potential source of hard rock for urban growth areas in the Lockyer Valley and Somerset Regions and the western parts of Ipswich and Brisbane Cities. At least 50 years production is envisaged at this stage. The size and quality of the resource allows it to meet the criteria for State significance.

SEPARATION AREA:

The resource area is largely defined by the eastern slopes of the basalt hill. Although the basalt is considered to be rippable, the western part of the hill will be retained and the separation distance is set at 500 metres from the western edge of the resource area to allow for blasting if necessary. Land to the east is mostly higher so a distance of 500 metres has been adopted as the separation distance to allow for future blasting.

TRANSPORT ROUTE:

The transport route is via Dry Gully Road to the State-controlled Gatton-Clifton Road.



BENHOLME KEY RESOURCE AREA - KRA 132

LOCAL GOVERNMENT AREA: Mackay Regional Council

LOCATION: The resource is located along Cattle Creek, part of the Pioneer River catchment, upstream of the Mirani Weir and southwest of Mirani, 40 kilometres west of Mackay in Central Queensland (see map KRA 132).

EXTRACTIVE RESOURCE TYPE: Sand & Gravel

EXTRACTIVE RESOURCE DESCRIPTION:

The resource is part of an alluvial sand and gravel deposit in the Cattle Creek and Pioneer River catchment. Since the installation of the Mirani Weir the recharge rates of the sand deposits have been high and limited to the upstream parts of the water storage. Dredging from the watercourse is regulated under the *Water Act 2000*. The material is suitable for concrete production.

SIGNIFICANCE:

The sand deposits in Cattle Creek and the broader Pioneer River catchment are substantial. The Benholme Key Resource Area site hosts a resource capable of producing more than 5 percent of annual demand for sand in the Mackay region for many years. The resource meets the criteria for State significance.

SEPARATION AREA:

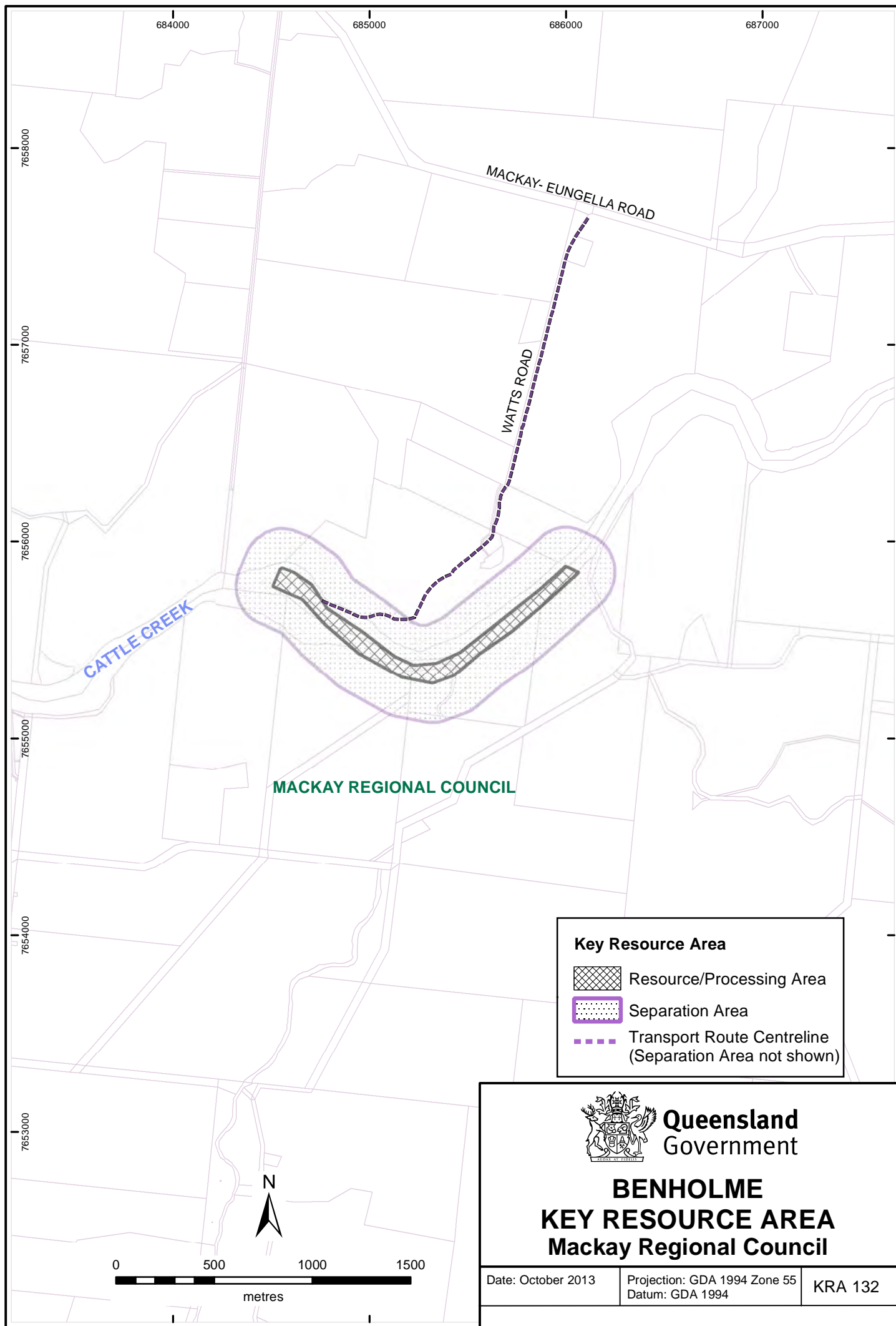
A maximum separation distance of 200 metres has been applied around the resource/processing area.

TRANSPORT ROUTE:

Material is transported along Watts Road and on to the Mackay-Eungella Road.

SPECIAL CONSIDERATIONS:

Most of the separation area is covered by Strategic Cropping Land (SCL) Trigger Mapping under the *Strategic Cropping Land Act 2011* administered by the Department of Natural Resources and Mines. This indicates the location of potential SCL and further on-ground assessment against the SCL criteria is required to confirm whether the area is SCL or non-SCL.



MANDURANA KEY RESOURCE AREA - KRA 133

LOCAL GOVERNMENT AREA: Mackay Regional Council

LOCATION: The resource is located at Balnagowan-Mandurah Road, 16 kilometres northwest of Mackay (see map KRA 133).

EXTRACTIVE RESOURCE TYPE: Quarry Rock

EXTRACTIVE RESOURCE DESCRIPTION:

The resource is comprised of hornfels, andesite and diorite. The hornfels is the most abundant rock type in the current workings. The andesite occurs as a series of dykes and is generally massive, fine to medium grained, strong competent rock. The diorite has been intersected in drilling and is known to outcrop at the peak of Mandurana Hill at the south western corner of the resource/processing area. It is therefore considered to form the core of the hill and could be accessed in later stages of quarry development.

SIGNIFICANCE:

The site hosts a large resource capable of producing various types of extractive material for ten to fifteen years at greater than 5 percent of the annual demand in the region. The material provides a wide range of products to the Mackay area as well as Proserpine to the north and the coal fields to the west. The resource meets the criteria for State significance.

SEPARATION AREA:

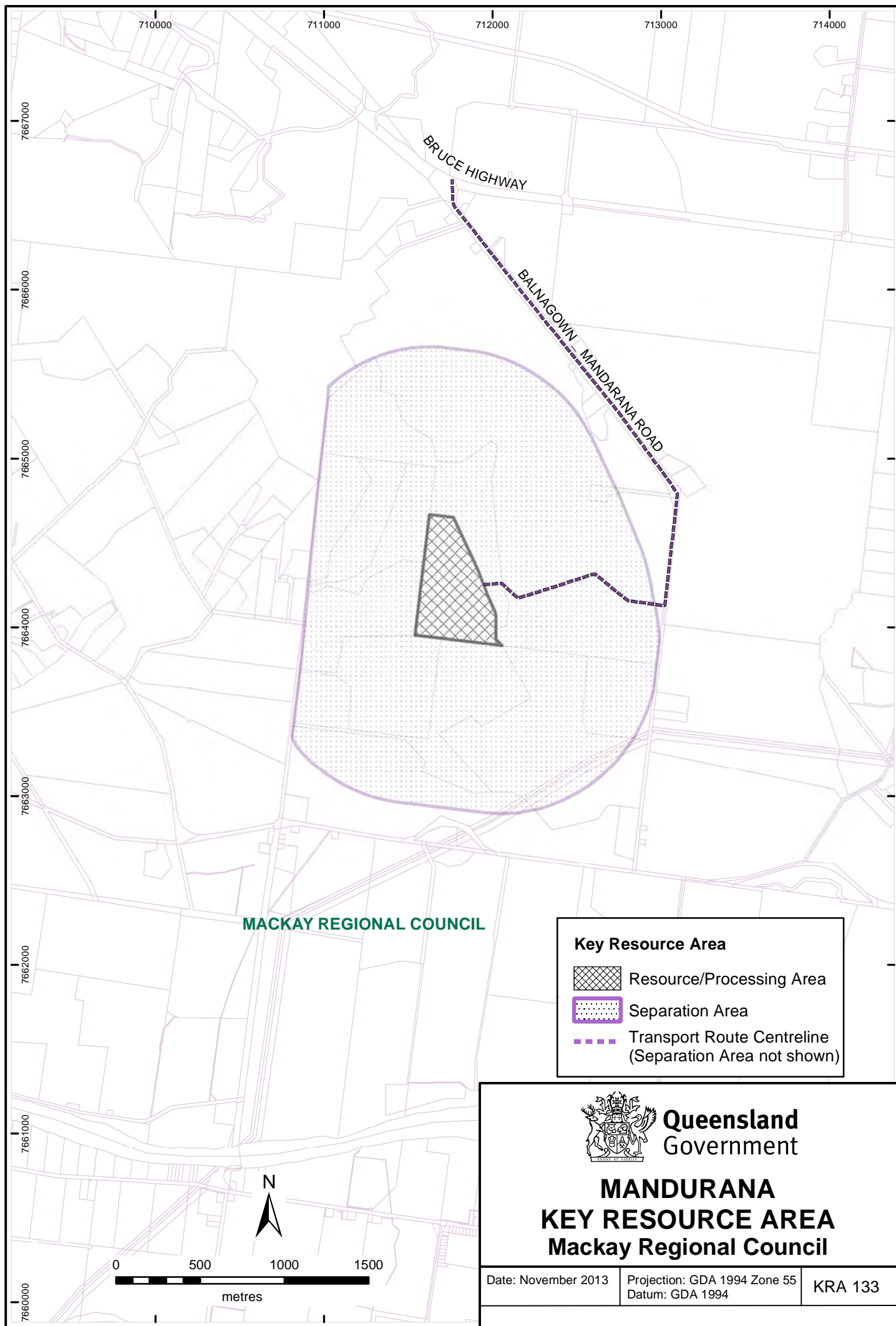
A separation distance of 1000 metres is applied to the north east and south of the resource boundary as blasting may be required to access hard rock resources. Mandurana Hill provides a topographic buffer to the west and a separation distance of 600 metres from the western boundary of the resource is applied.

TRANSPORT ROUTE:

Material is transported via a gravel road which connects to the Balnagowan-Mandarana Road, and northwards on to the Bruce Highway.

SPECIAL CONSIDERATIONS:

A large part of the separation area is covered by Strategic Cropping Land (SCL) Trigger Mapping under the *Strategic Cropping Land Act 2011* administered by the Department of Natural Resources and Mines. This indicates the location of potential SCL and further on-ground assessment against the SCL criteria is required to confirm whether the area is SCL or non-SCL.



MOUNT HOMEBUSH KEY RESOURCE AREA - KRA 134

LOCAL GOVERNMENT AREA: Mackay Regional Council

LOCATION: The resource is located at Barrie Lane, Homebush approximately 20 kilometres south west of Mackay (see map KRA 134).

EXTRACTIVE RESOURCE: Quarry Rock

EXTRACTIVE RESOURCE DESCRIPTION:

The resource is sited in interbedded siltstone and mudstone, volcanolithic sandstone and conglomerate, rhyolitic to dacitic volcanic rocks and minor basalt.

It is a site of an existing quarry supplying a wide range of crushed product including concrete aggregate, road base, manufactured sand and drainage rock. The topographic elevation and size of the resource indicates that there may be large volumes of hard rock in adjacent lots.

SIGNIFICANCE:

Based on production rates the resource has the potential to supply extractive material to the Mackay region for over 30 years. The identified resource is capable of producing 5 per cent of the annual demand in the region or sub-region. The existing quarry is the largest in the area south of Mackay.

SEPARATION AREA:

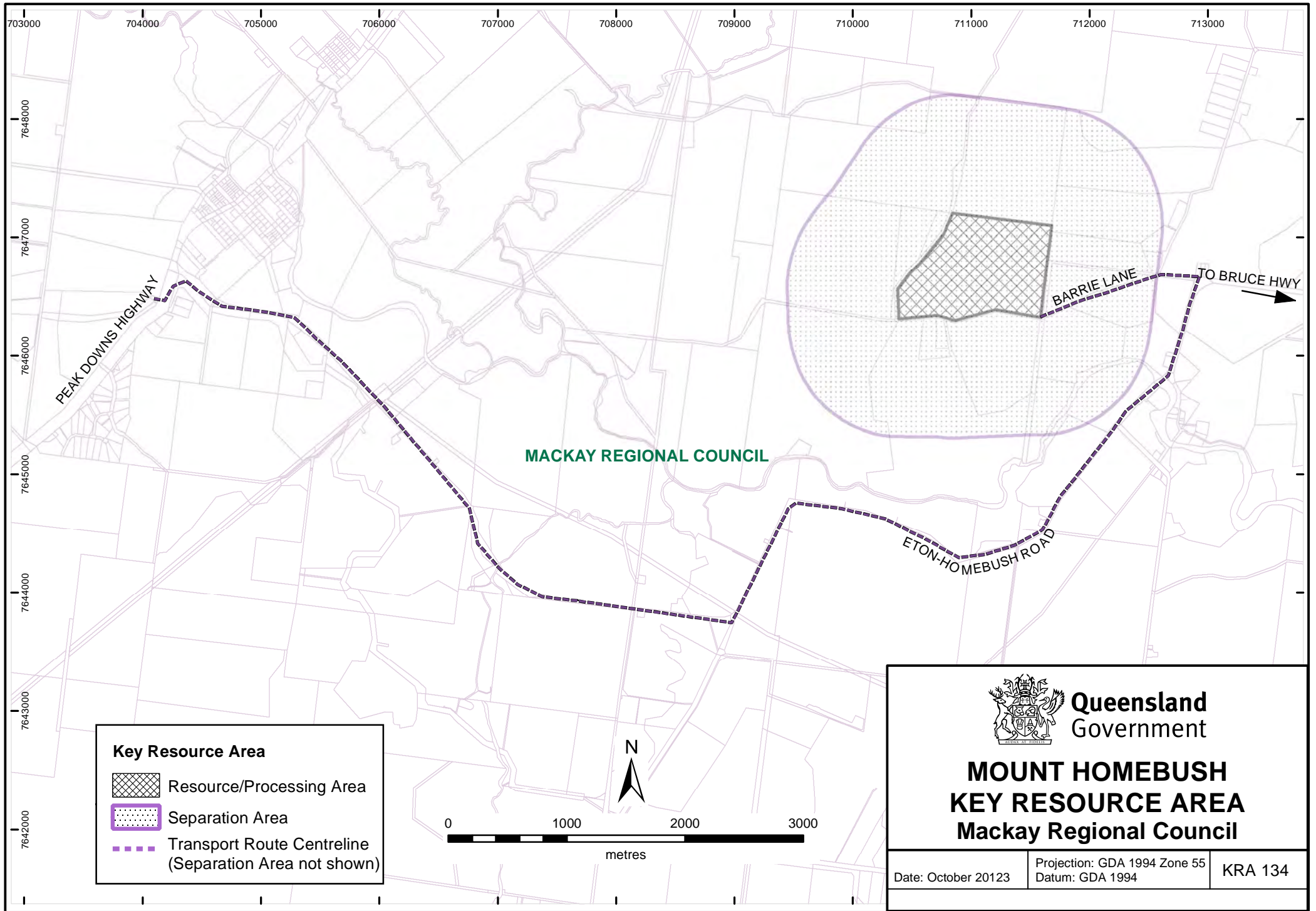
The site is surrounded by cane farms and cattle properties and is zoned rural in the current planning scheme. A maximum separation distance of 1000 metres has been applied around the resource/processing area boundary.

TRANSPORT ROUTE:

The material is transported to Mackay via Barrie Lane and onto Homebush Road leading to the Bruce Highway. Some material is also transported to Peak Downs Highway via Barrie Lane and right onto Eton-Homebush Road.

SPECIAL CONSIDERATIONS:

A large portion of the separation area south of the resource/processing area is covered by Strategic Cropping Land (SCL) Trigger Mapping under the *Strategic Cropping Land Act 2011* administered by the Department of Natural Resources and Mines. This indicates the location of potential SCL and further on-ground assessment against the SCL criteria is required to confirm whether the area is SCL or non-SCL.



HEADACHE HILL KEY RESOURCE AREA – KRA 135

LOCAL GOVERNMENT AREA: Maranoa Regional Council

LOCATION: The resource is located approximately 30 kilometres east of Injune and 68 km north of Roma in south west Queensland (see map KRA 135)

EXTRACTIVE RESOURCE: Quarry Rock

EXTRACTIVE RESOURCE DESCRIPTION:

The undeveloped resource is comprised of a basalt intrusion located on a leasehold cattle grazing property.

SIGNIFICANCE:

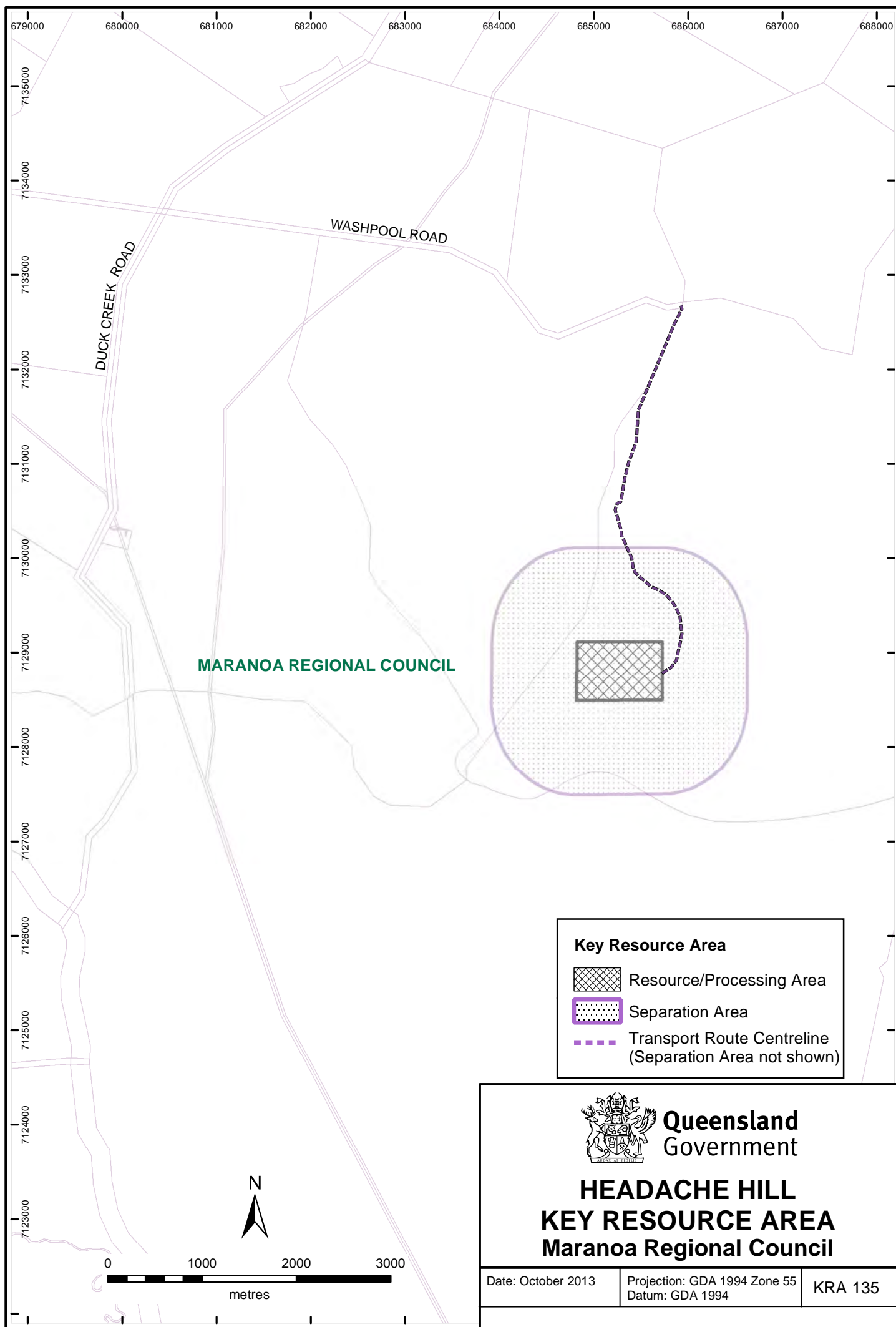
The resource is located in an area where high quality hard rock are very scarce with other known hard rock sources located over 100 kilometres to the south. The demand for road construction materials and other infrastructure projects is increasing due to coal seam gas developments in the region. The resource is considered to meet the criteria for State significance.

SEPARATION AREA:

A separation distance of 1000 metres from the resource/processing boundary is adopted as blasting is likely to be required to access the resource.

TRANSPORT ROUTE:

The proposed transport is via an existing unsealed road from the resource area to Washpool Road and on to Duck Creek Road which links to other local connector roads and the Carnarvon Highway. The nearest state controlled road is located approximately 30 kilometres to the west.



CALLIOPE RIVER KEY RESOURCE AREA - KRA 136

LOCAL GOVERNMENT AREA: Gladstone Regional Council

LOCATION:

The resource is located on the north side of the Calliope River, 3 kilometres northwest of Calliope and approximately 20 kilometres southwest of Gladstone (See map KRA 136).

EXTRACTIVE RESOURCE: Sand

EXTRACTIVE RESOURCE DESCRIPTION:

The current extraction operation is sited on a narrow alluvial terrace on the north bank of the Calliope River. The terrace extends downstream from the extraction site for over 2 kilometres and is underlain by sand and gravel up to 5 metres thick.

SIGNIFICANCE:

The resource is well placed to supply the development of the Gladstone region for many years. It is conveniently situated relative to the major urban and industrial growth areas of the Gladstone area, and is likely to be the largest alluvial sand deposit located close to the Bruce Highway between Rockhampton and Miriam Vale to the south.

SEPARATION AREA:

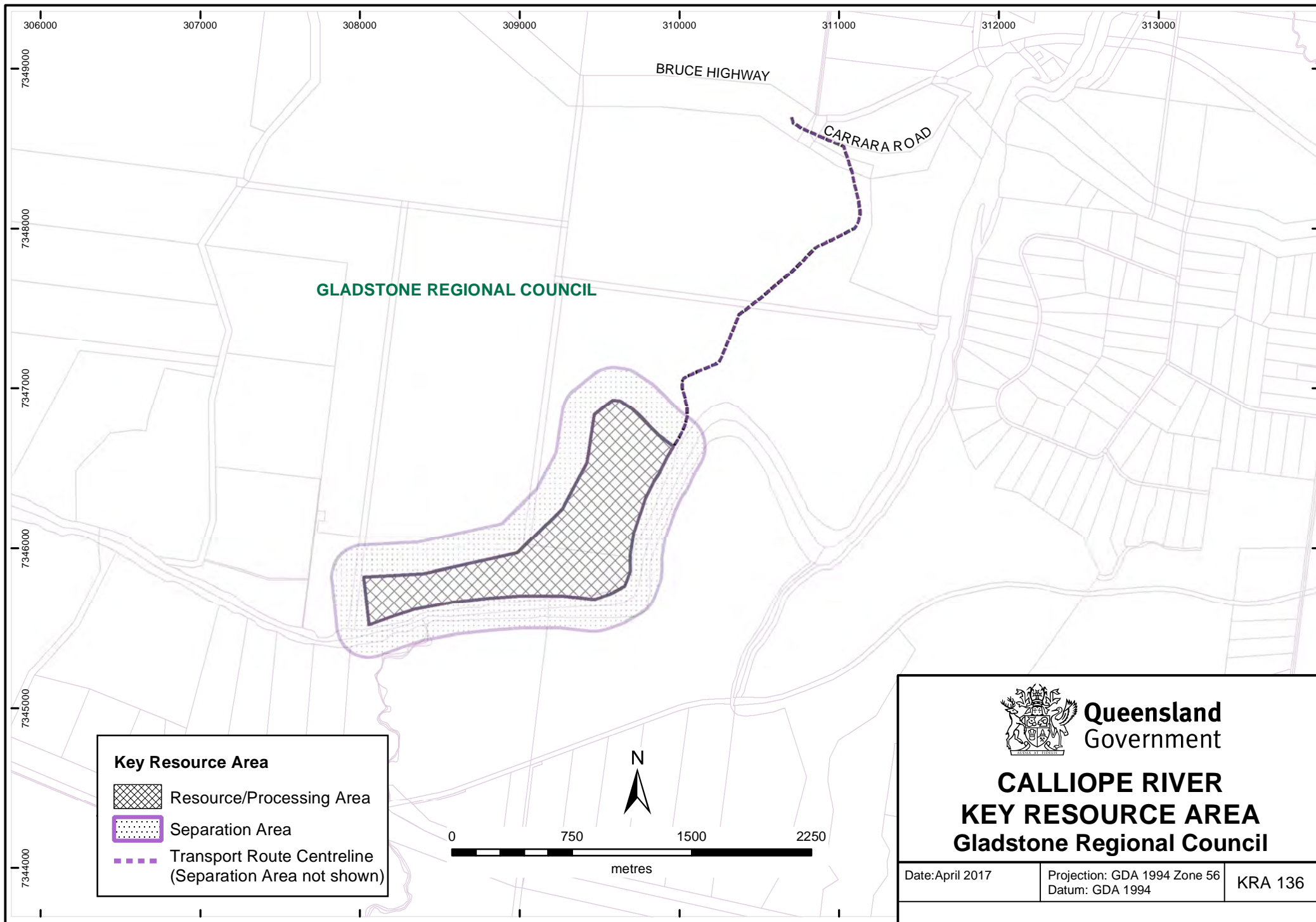
The resource/processing area covers part of the upper and lower terraces. The full extent of workable sand has not been identified. The riverine margin of the resource/processing area has been drawn to provide adequate setbacks from the river. A wider riparian buffer would be required downstream of the tidal limit in the Calliope River. A separation distance of 200 metres has been applied from the boundaries of the resource as currently identified.

TRANSPORT ROUTE:

The transport route traverses private land along a formed all-weather road and enters the Bruce Highway via Carrara Road about a kilometre west of the highway bridge over the Calliope River.

SPECIAL CONSIDERATIONS:

Adequate setbacks to tidal waters would need to be considered.



JARDINE BLUFF KEY RESOURCE AREA - KRA 137

LOCAL GOVERNMENT AREA: Mount Isa City Council

LOCATION: The resource is located 3 kilometres north-northeast of Mount Isa, northwest Queensland (see map KRA 137).

EXTRACTIVE RESOURCE: Quarry Rock

EXTRACTIVE RESOURCE DESCRIPTION:

The hard rock resource is predominantly quartzite with a high silica content. There is a significant amount of rock in the sales permit area issued under the *Forestry Act 1959* with the resource/processing area measuring over 12 square kilometres.

SIGNIFICANCE:

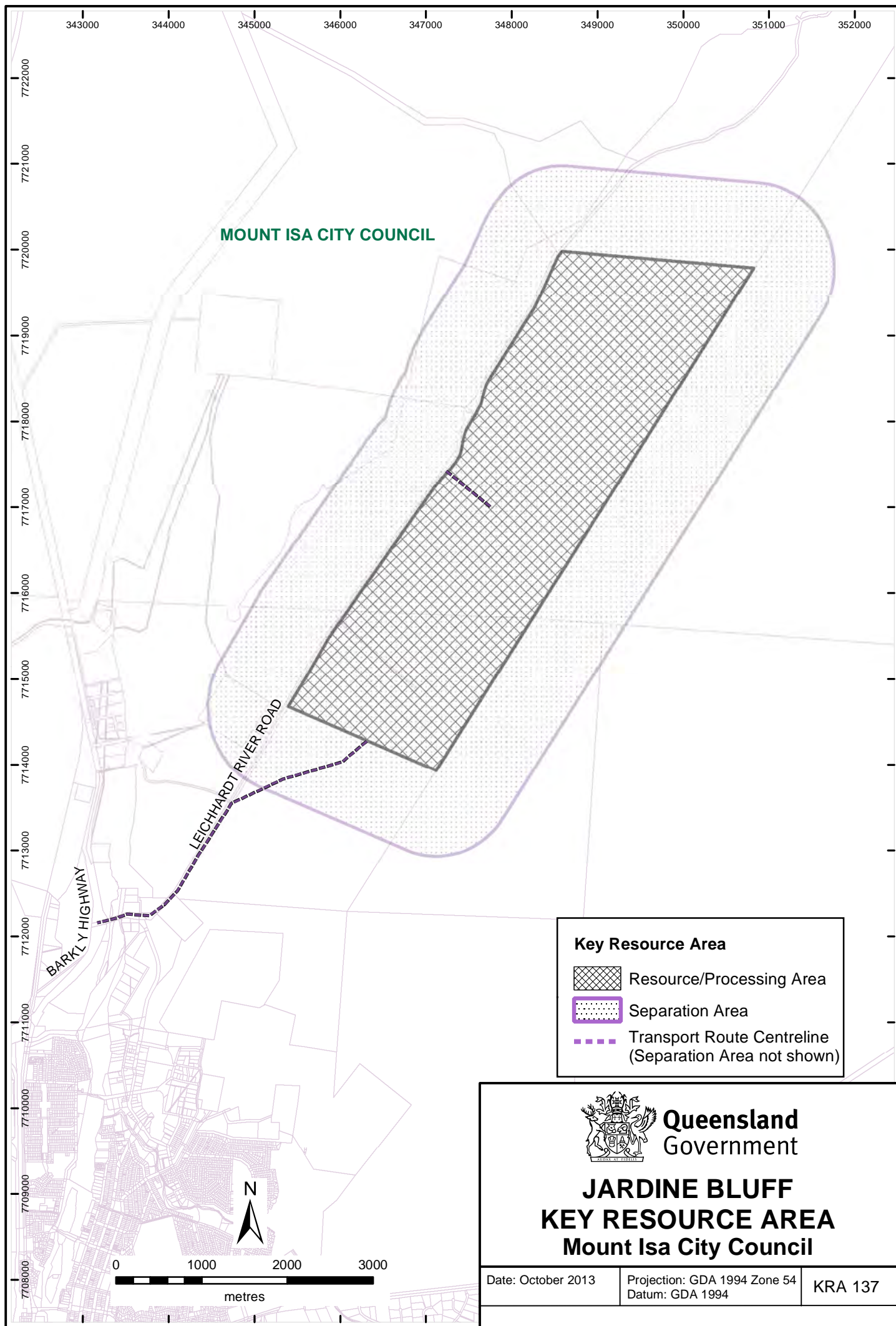
The resource is very large and is capable of supplying material for road and construction projects within the Mount Isa area and surrounding regions.

SEPARATION AREA:

A separation area of 1000 metres is applied around the resource area as blasting will be necessary. The surrounding land is zoned Rural.

TRANSPORT ROUTE:

An unsealed road from the quarry enters the Leichhardt River Road, which enters the Barkly Highway on the northern outskirts of Mount Isa.



MUAN QUARRY KEY RESOURCE AREA - KRA 138

LOCAL GOVERNMENT AREA: North Burnett Regional Council

LOCATION: The resource is situated approximately 9 kilometres northwest of Biggenden and 70 kilometres south west of Bundaberg (See Map KRA 138).

EXTRACTIVE RESOURCE: Quarry Rock

EXTRACTIVE RESOURCE DESCRIPTION:

The resource consists of basalt up to 20 metres thick overlying an older basalt layer. Overburden is variable, generally less than 3 metres thick in place. The basalt appears to extend into the adjacent property to the west. A small quarry (Muan Quarry) produced a wide range of aggregates for a number of years and although the quarry is no longer operating significant resources remain.

SIGNIFICANCE

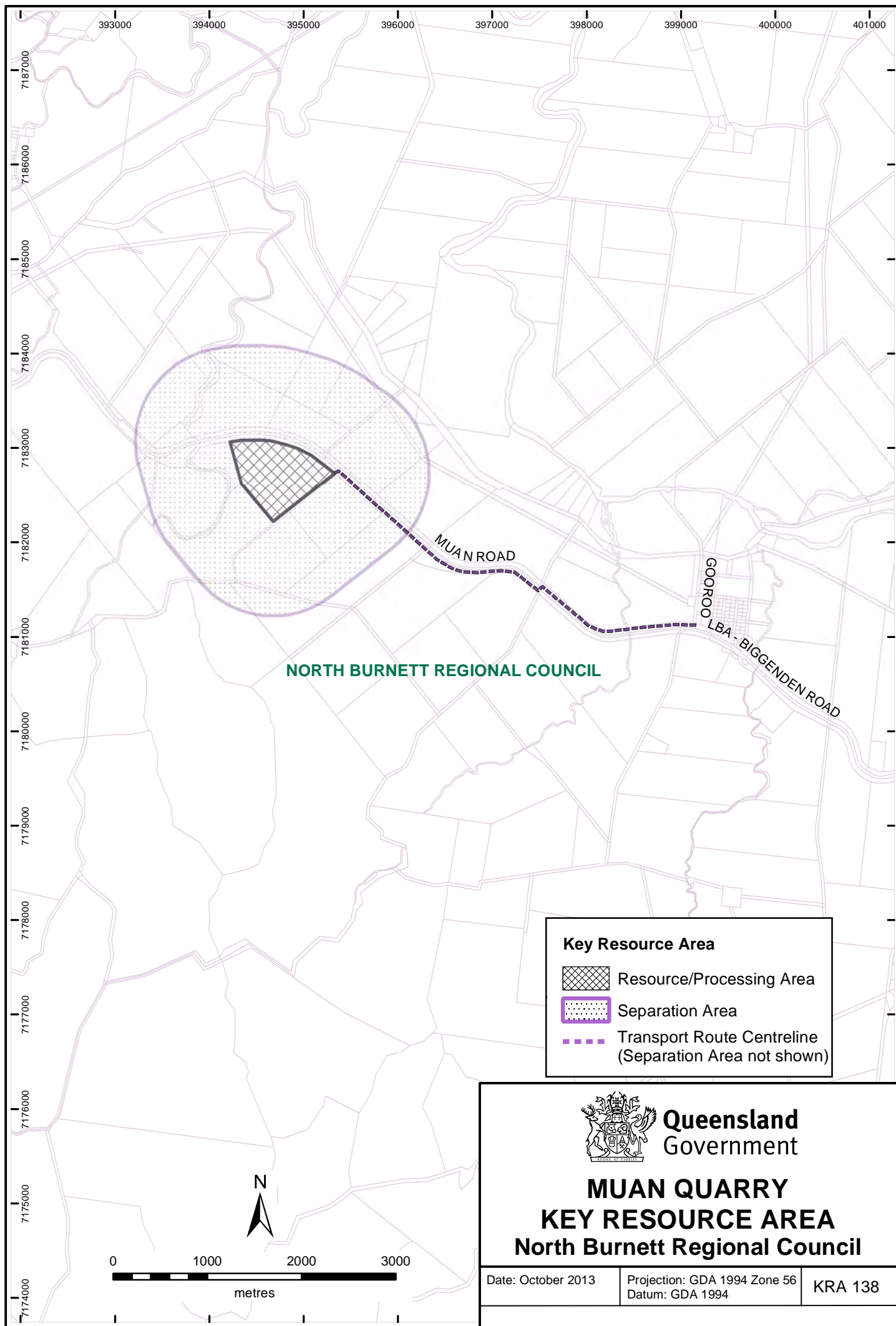
The former Muan Quarry had a considerable resource of hard rock suitable for production of specified material such concrete aggregate, asphalt screening and road base supplying a large part of the North Burnett region. It is conveniently located to transport routes, and substantial resources remain that is sufficient for more than 25 years of supply. As such the deposit meets the criteria for State significance of production level, deposit volume, and regional supply.

SEPARATION AREA:

The site is situated in an area that has low relief. Future development in the property would not be well-screened from surrounding land therefore a maximum of 1000 metres separation distance from the resource/processing area boundary is applied.

TRANSPORT ROUTE

Material can be transported along the sealed Muan Road then eastwards along Gooroolba Biggenden Road to Biggenden and onto the Isis Highway.



CRYNA KEY RESOURCE AREA - KRA 139

LOCAL GOVERNMENT AREA: Scenic Rim Regional Council

LOCATION:

The resource is located about 5 kilometres south of Beaudesert, Southeast Queensland (see map KRA 139).

EXTRACTIVE RESOURCE: Quarry Rock

EXTRACTIVE RESOURCE DESCRIPTION

The resource consists of a north-south trending ridge of basalt with a low saddle set in the northern half of the ridge. The rock mass is closely jointed with distinctly to slightly weathered basalt occurring for a considerable depth below this. There is a major quarry currently operating over the resource.

SIGNIFICANCE

The resource is conveniently situated to supply a large part of the Southeast Queensland region with high quality rock products. The current market area extends from the Brisbane River in the north to the northern part of the Gold Coast in the south. It also encompasses all of the Logan, Ipswich and a major part of the Scenic Rim Local Government areas.

Sufficient resources remain for 20 years of supply at the current rates of production. The resource meets the criteria for State significance.

SEPARATION AREA

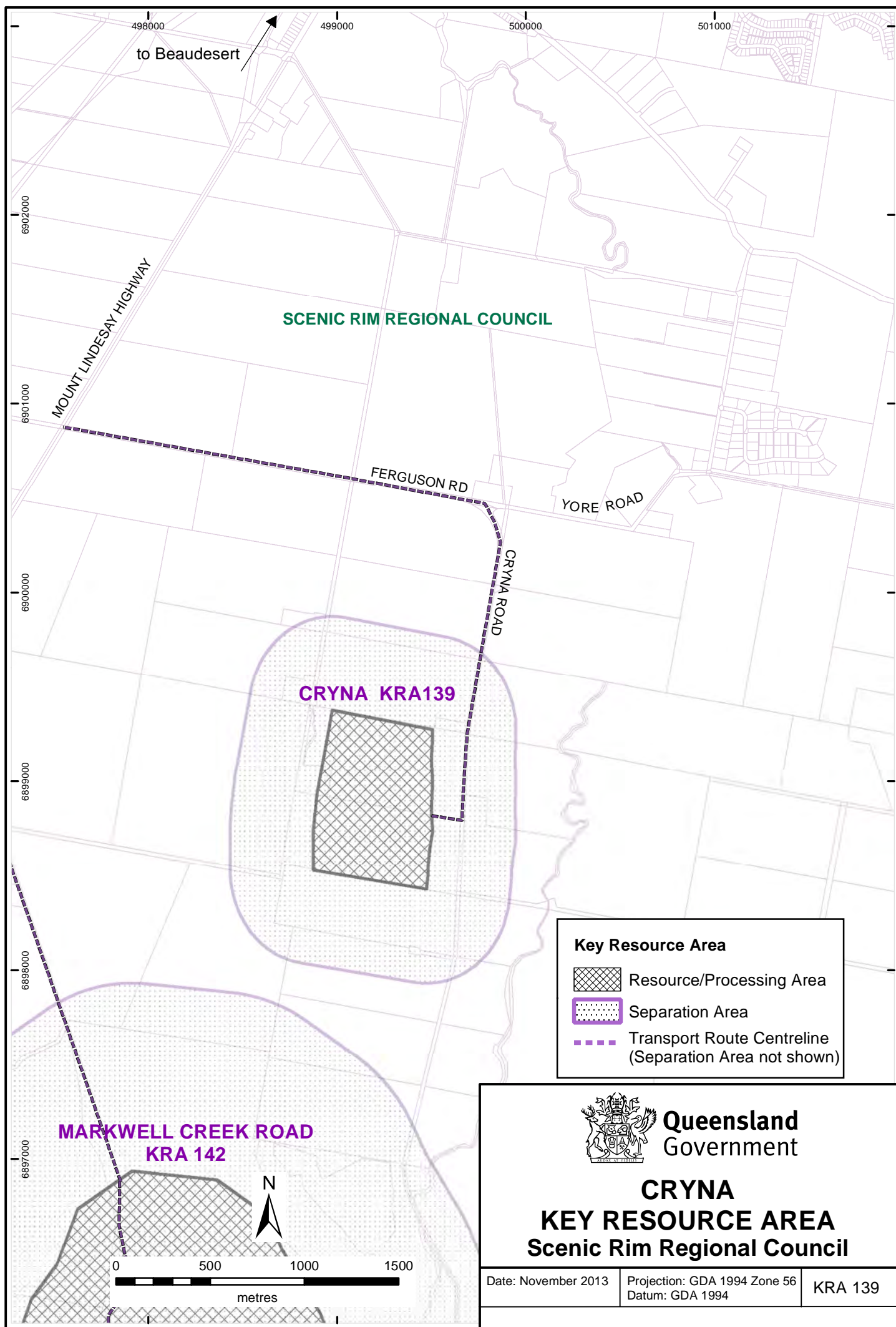
A distance of 500 metres is adopted as the quarry operations are designed to be confined within the ridge to screen the quarry from the surrounding land. Blasting is likely to be confined to the deeper parts of the resource and will be screened by the upper benches.

TRANSPORT ROUTE

Material is transported along Cryna Road then on to Ferguson Road and enters the Mount Lindesay Highway to the west on the southern outskirts of Beaudesert. Small amounts of material for the local markets may be hauled eastwards to Kerry Road via Yore Road.

SPECIAL CONSIDERATION:

The eastern portion of the KRA including the resource/processing area is covered by Strategic Cropping Land (SCL) Trigger Mapping under the *Strategic Cropping Land Act 2011* administered by the Department of Natural Resources and Mines. This indicates the location of potential SCL and further on-ground assessment against the SCL criteria is required to confirm whether the area is SCL or non-SCL.



ERIN VIEW KEY RESOURCE AREA - KRA 140

LOCAL GOVERNMENT AREA: Scenic Rim Regional Council

LOCATION: The resource is located about 12 kilometres south of Beaudesert, Southeast Queensland (See Map KRA 140).

EXTRACTIVE RESOURCE: Quarry Rock

RESOURCE DESCRIPTION

The resource consists of two high intersecting ridges of basalt. The overburden is about 3 metres thick containing weathered basalt with variable soil content. Distinctly to slightly weathered basalt occurs for a considerable depth below this.

CRITERIA FOR STATE SIGNIFICANCE:

The potential resource size and quality meets the criteria for regional significance. Sufficient resources remain for over 50 years of supply at expected rates of production.

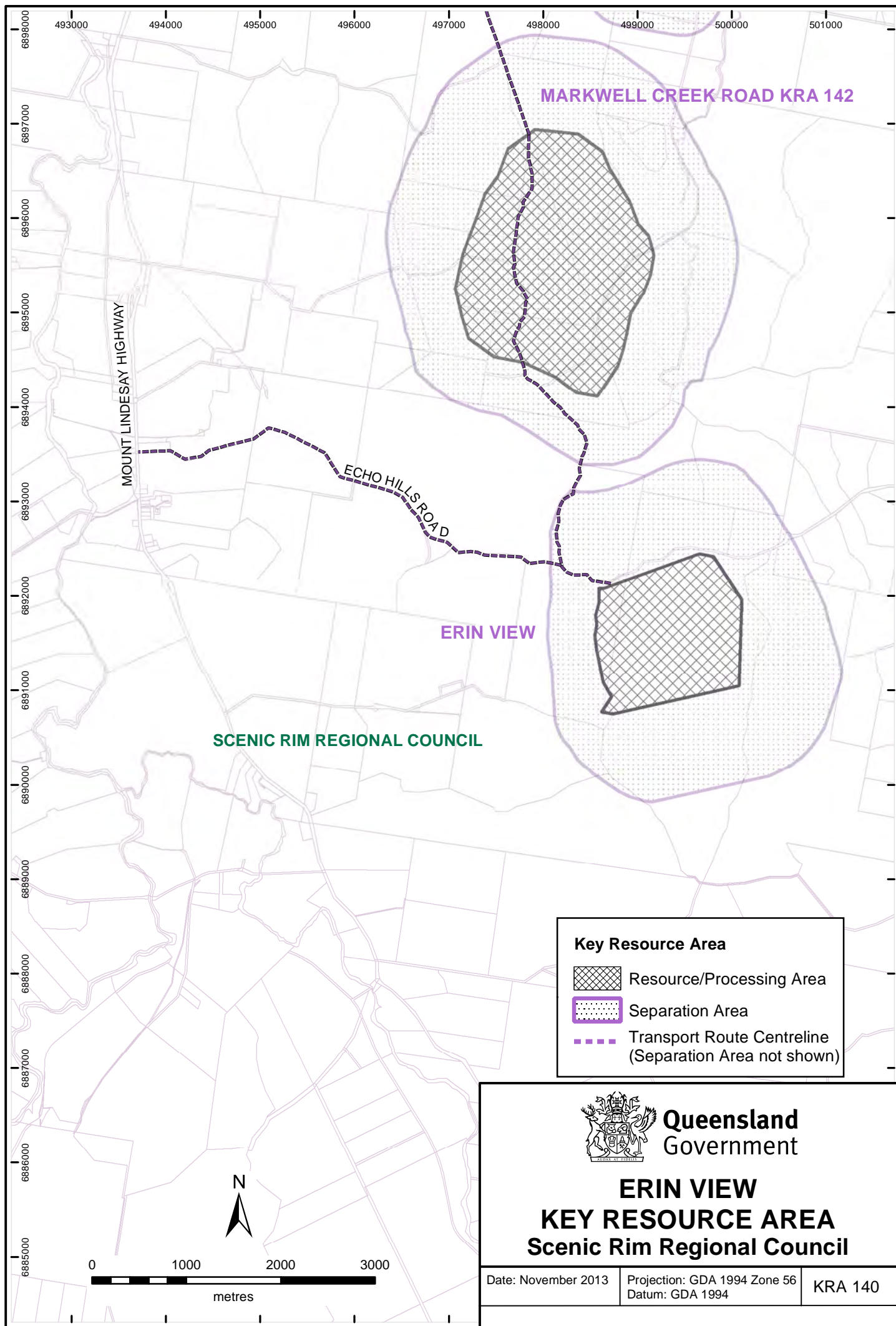
SEPARATION AREA:

A maximum separation distance of 1000 metres is adopted from the resource/processing boundary where ridges are lower than the resource location to the north and south. The distance is reduced to 500 metres in the western direction as the land in that direction is screened by the crest of the range. The separation area in the eastern direction is defined by ridgelines north and south of the eastern end of Markwell Creek Road.

TRANSPORT ROUTE:

An unused road linking to Markwell Creek Road extends northwards from the resource site. This could be upgraded to allow truck movement directly onto the Mount Lindesay Highway. Whilst this would require considerable earthworks it would link through the Markwell Creek Key Resource Area (KRA142) from which other quarry operations could also access the highway.

An alternative transport route via Echo Hills Road directly west to the Mount Lindesay Highway is also proposed, however this road passes through the northern fringe of Laravale and would need to be upgraded.



KANGAROO MOUNTAIN KEY RESOURCE AREA - KRA 141

LOCAL GOVERNMENT AREA: Scenic Rim Regional Council

LOCATION:

The resource is located approximately 4 kilometres north of Aratula, west of the Cunningham Highway and 46 kilometres southwest of Ipswich in Southeast Queensland (see map KRA 141).

EXTRACTIVE RESOURCE: Quarry Rock (and minor sand and gravel)

EXTRACTIVE RESOURCE DESCRIPTION:

The resource consists of a massive trachyandesite intrusion. It forms a broad northeasterly trending ridge between two peaks, Kangaroo Mountain on the southern end and the northern unnamed peak. The broad saddle between the peaks is approximately a kilometre long with trachyandesite outcropping throughout. The intrusion is known to greater than 100 metres thick with minimal overburden. A sand and gravel alluvial deposit has been identified to the western and southern foot of Kangaroo Mountain and is included in the resource area.

SIGNIFICANCE:

The resource is well placed to supply the expansion of urban development in the South East Queensland Regional Plan Area. It is estimated to be sufficient for 50 years at the current level of demand for the Ipswich and Scenic Rim regions.

The resource is suitable for most types of construction aggregate and may be capable of producing rip rap with application of appropriate extraction techniques.

SEPARATION AREA:

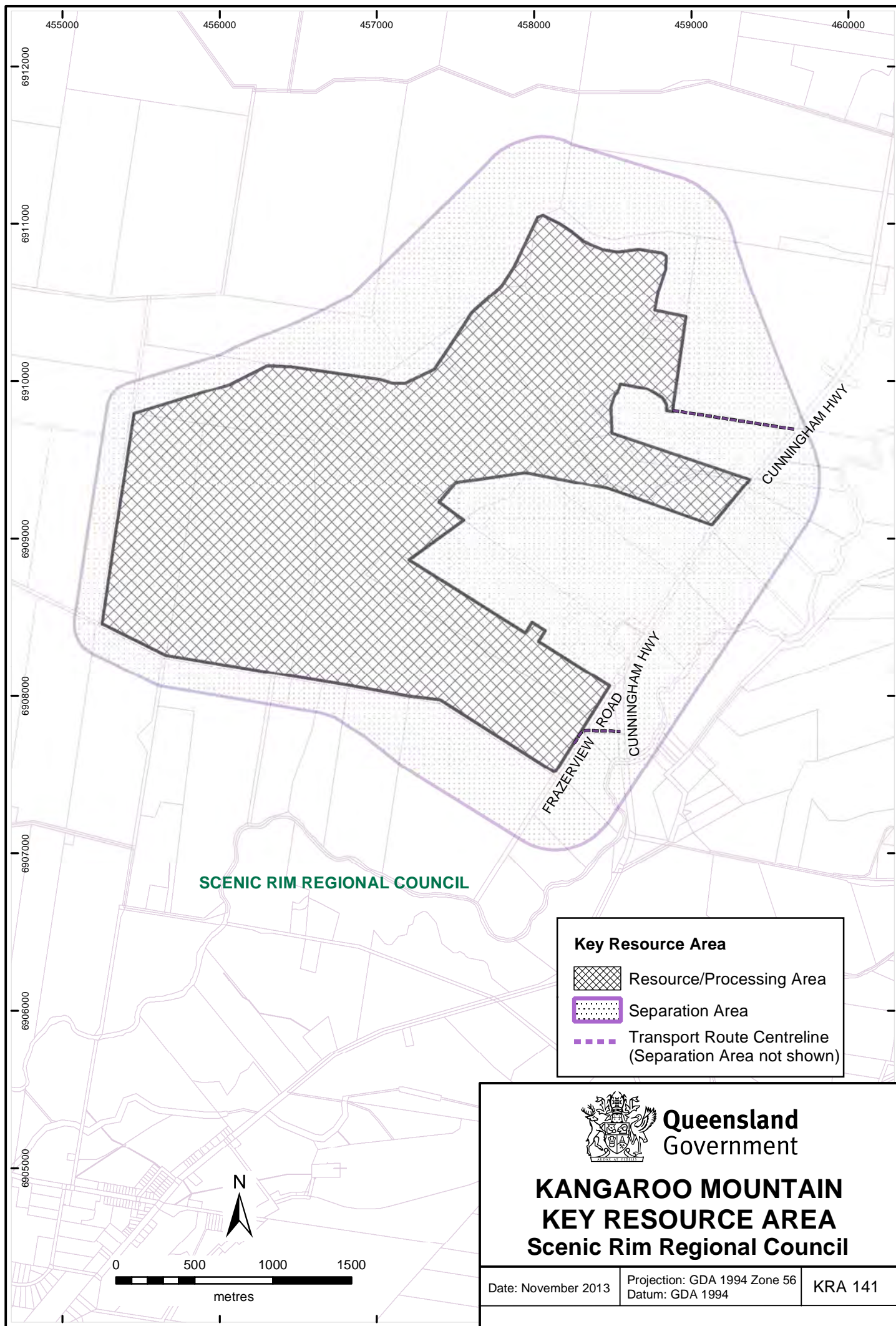
The resource/processing area is defined by the area which is screened from adjacent properties and topographic highs as well as a current extractive industry approval over the western portion of the KRA. As most of this area is surrounded by ridge crests which are higher than the surrounding land, a separation distance of 500 metres from the resource/processing area has been applied. A 200 metre separation area is applied around the sand resource at the western portion of the KRA.

TRANSPORT ROUTE:

An existing route exits the centre of the resource using existing road reserves and extends eastwards to the Cunningham Highway. Upgrades of existing roads and intersections with the highway are likely to be required. The long narrow blocks extend from the resource to the highway to allow development of haul roads over privately owned land.

SPECIAL CONSIDERATIONS:

Some parts of the KRA is covered by Strategic Cropping Land (SCL) Trigger Mapping under the *Strategic Cropping Land Act 2011* administered by the Department of Natural Resources and Mines. This indicates the location of potential SCL and further on-ground assessment against the SCL criteria is required to confirm whether the area is SCL or non-SCL.



MARKWELL CREEK ROAD KEY RESOURCE AREA - KRA 142

LOCAL GOVERNMENT AREA: Scenic Rim Regional Council

LOCATION:

The resource is located 8 kilometres south of Beaudesert along the Mount Lindesay Highway and is accessed via Markwell Creek Road (See Map KRA 142).

EXTRACTIVE RESOURCE: Quarry Rock

EXTRACTIVE RESOURCE DESCRIPTION:

The resource consists of a north-south trending ridge of basalt with a low saddle set in the northern half of the ridge. Drilling in the lower parts of the valley has confirmed that massive basalt layers up to 10 metres thick are interspersed with vesicular flow tops up to five metres thick over a vertical interval of 60 metres. Numerous outcrops of massive dense basalt occur in the beds of gullies and on the slopes. These take the form of rocky steps or low falls in the headwaters of the gullies at a lower level than the borehole intersections.

The resource/processing area is defined by the area where future quarry operations would be screened from adjacent properties.

SIGNIFICANCE:

The inferred resources tonnages indicate that the sizeable resource is capable of producing extractive material for over 50 years if developed. The potential market encompasses all or part of the Gold Coast, Brisbane, Logan, Ipswich and Scenic Rim Local Government areas. The resource therefore meets the criteria for State significance.

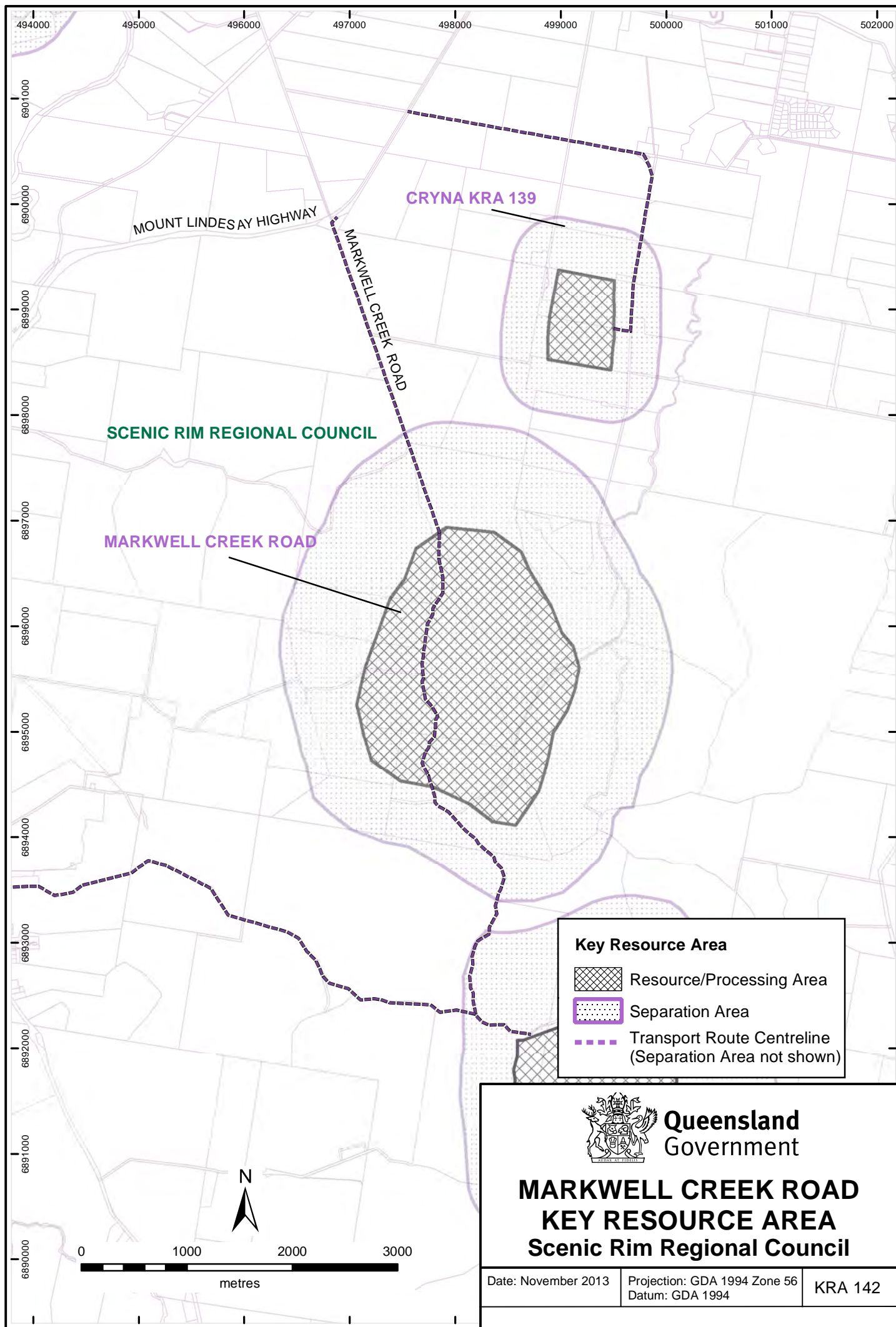
Preliminary petrographic and geotechnical analysis indicate a high percentage of the basalt resource is made up of extractive material suitable for high quality uses such as concrete aggregates, asphaltic/sealing aggregates for road construction as well as rail ballast.

SEPARATION AREA:

Blasting is likely to be required for most parts of the resource therefore a separation distance of 1000 metres is adopted around the northern and eastern part of the resource/processing areas. A 600 metres separation distance is defined at the southern part due to topographic highs providing a natural buffer.

TRANSPORT ROUTE:

The Mount Lindesay Highway is accessed via Markwell Creek Road which is unsealed and continues as a poorly formed farm road across the higher parts of the resource.



YORE ROAD KEY RESOURCE AREA – KRA 143

LOCAL GOVERNMENT AREA: Scenic Rim Regional and Logan City Councils

LOCATION:

The resource occurs on the south side of Clutha Creek about 3 kilometres north of Tamborine Village, bordered on the north by Clutha Creek, and the Waterford-Tamborine Road to the east (See map KRA 143).

EXTRACTIVE RESOURCE: Sand

EXTRACTIVE RESOURCE DESCRIPTION:

The resource occupies three small lots under common ownership, covering a total of about 80 hectares. Weathered quartzose to sub-labile sandstone forms the major proportion of the resource. The sand and loam extraction on the site is for alluvial and colluvial loam and sand. The potential for extraction of sand from sandstone in a similar manner to the existing operations to the immediate north of Clutha Creek should be protected. Several decades of resources would be present at projected consumption at production rates in excess of 100,000 tonnes per year. Currently there is an approval for extraction from a pit within the resource area. Sandstone is known to extend south of the resource area to Yore Road, though horticulture and related agricultural uses may become the preferred use for that area.

SIGNIFICANCE:

The resource is of regional significance and is likely to be a major supplier of sand in the Brisbane south markets as well as the Gold Coast. It is one of a very few sites suitable for future sand extraction south of Brisbane.

SEPARATION AREA:

A separation area of some 500 metres has been applied around the resource as blasting maybe required if rocks cannot be ripped using dozers. It is assumed that such activity will be well below natural surface level so the surrounding area will be screened from blasting effects. The surrounding land is zoned Rural. Some parts of the separation area crosses over the Logan City Council area.

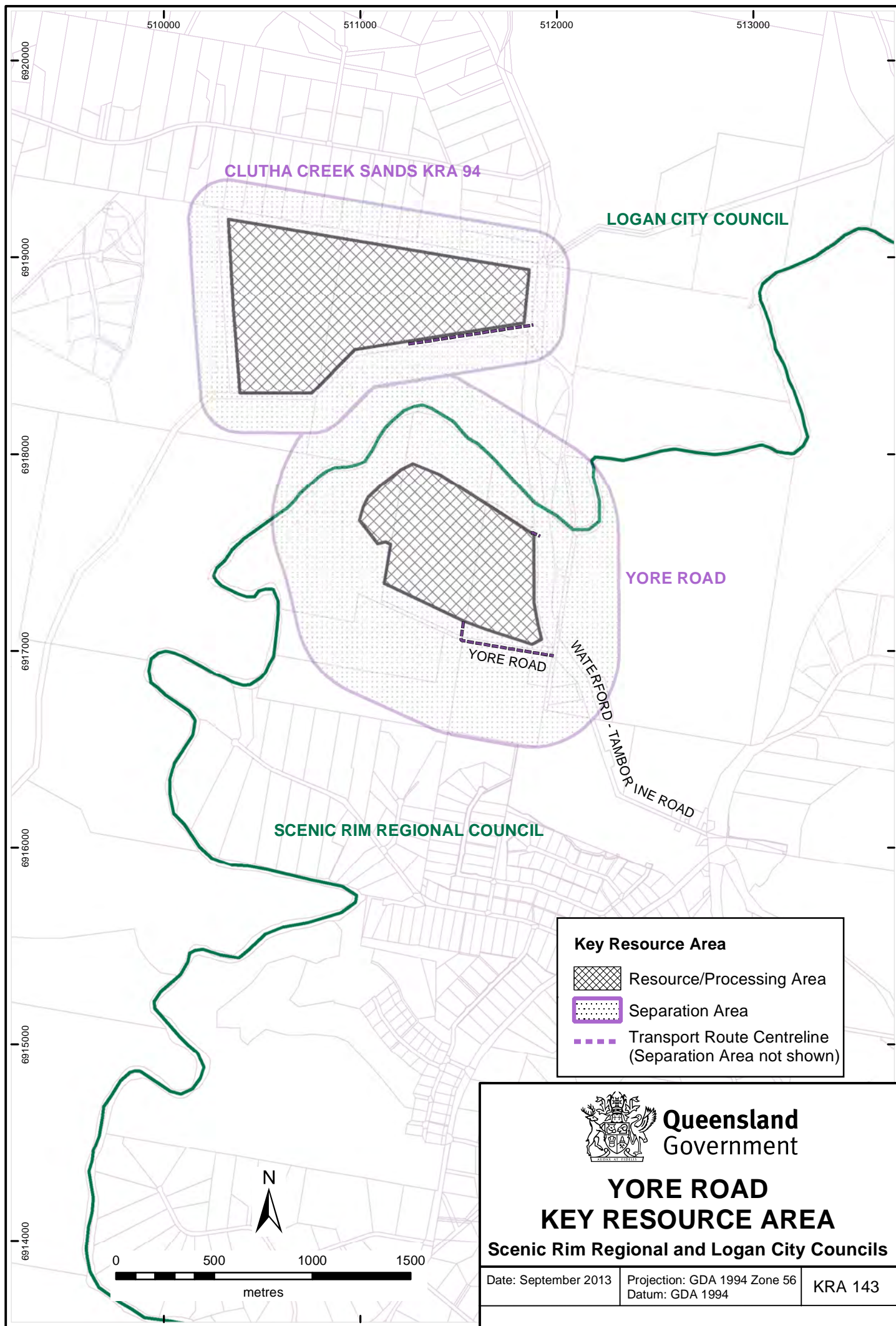
TRANSPORT ROUTE:

Two transport routes are proposed from the property eastwards onto the State controlled main road, the Waterford-Tamborine Road via Yore Road and an unsealed road. Distribution would then be north and south to Brisbane and Gold Coast markets respectively.

SPECIAL CONSIDERATIONS

Limitations within the resource/processing area may in future be on buffer distances to watercourses and conditions on the allowable depth of extraction.

The entire resource area is covered by the Strategic Cropping Land (SCL) Trigger Mapping under the *Strategic Cropping Land Act 2011* administered by the Department of Natural Resources and Mines. This indicates the location of potential SCL and further on-ground assessment against the SCL criteria is required to confirm whether the area is SCL or non-SCL. .



HORSE MOUNTAIN KEY RESOURCE AREA - KRA 144

LOCAL GOVERNMENT AREA: Somerset Regional Council

LOCATION:

The resource is located about 4 km north east of Fernvale on Banks Creek Road, 20 km north west of Ipswich (see map KRA 144).

EXTRACTIVE RESOURCE: Quarry Rock

EXTRACTIVE RESOURCE DESCRIPTION:

The resource has been mapped with lithologies consisting of chert, silicified siltstone and volcanolithic arenite of the Neranleigh-Fernvale Beds. The latter unit is the dominant rock type throughout the resource area.

SIGNIFICANCE:

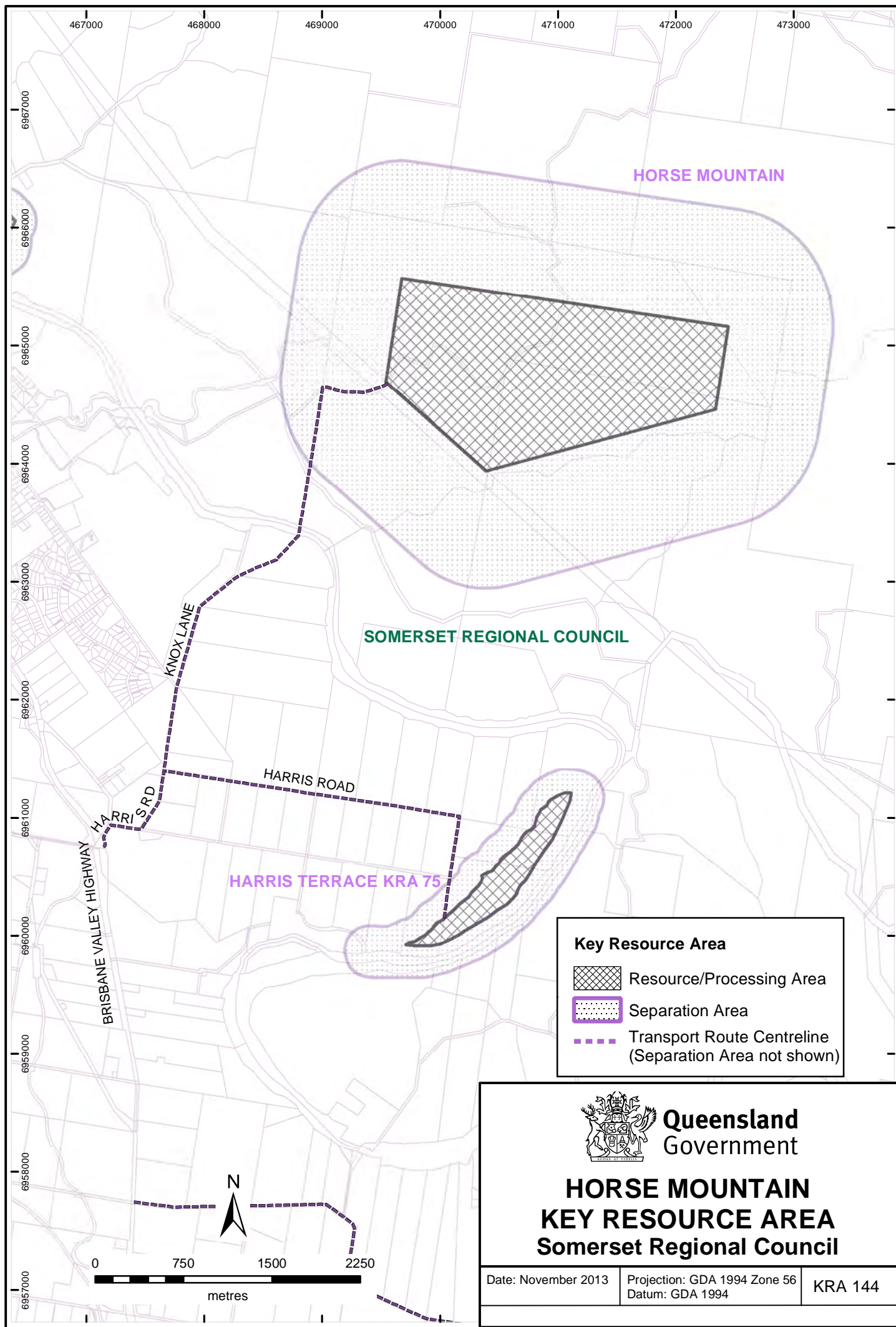
The availability of hard rock resources in the western part of Southeast Queensland may become severely constrained in the near future as other resources are exhausted. This resource is one of the largest in the region and would be capable of meeting a significant part of the projected demand.

SEPARATION AREA:

The steep ridges surrounding the site will provide additional screening however the maximum separation distance of 1000 metres is applied from the resource/processing area boundary. The surrounding land is zoned Rural and there are no dwellings within the proposed separation area.

TRANSPORT ROUTE:

A transport corridor has been proposed in the current Esk Shire planning scheme, leading directly south over the Brisbane River to the Brisbane Valley via the existing Harris Road intersection. This would avoid truck traffic through the residential areas of Fernvale.



MANYUNG SAND KEY RESOURCE AREA - KRA 145

LOCAL GOVERNMENT AREA: South Burnett and Gympie Regional Councils

LOCATION:

The resources are approximately 6 km east of Murgon and 68 km west of Gympie near the Bunya Highway (see map KRA 145).

EXTRACTIVE RESOURCE: Sand

EXTRACTIVE RESOURCE DESCRIPTION:

Extensive colluvial sand deposits occur throughout the rural land northwest of Manyung, however the proposed resource areas are defined by the distribution of cultivated rural lots and proximity of dwellings.

There are two separate resource areas with the northern site situated on the border of South Burnett and Gympie Regional Councils.

SIGNIFICANCE:

This site has produced sand for concrete aggregate in the past and sufficient sand appears to be present to cater for several years or decades of supply to the immediate region. It may be able to supplant imported sand from riverine sources in other regions.

SEPARATION AREA:

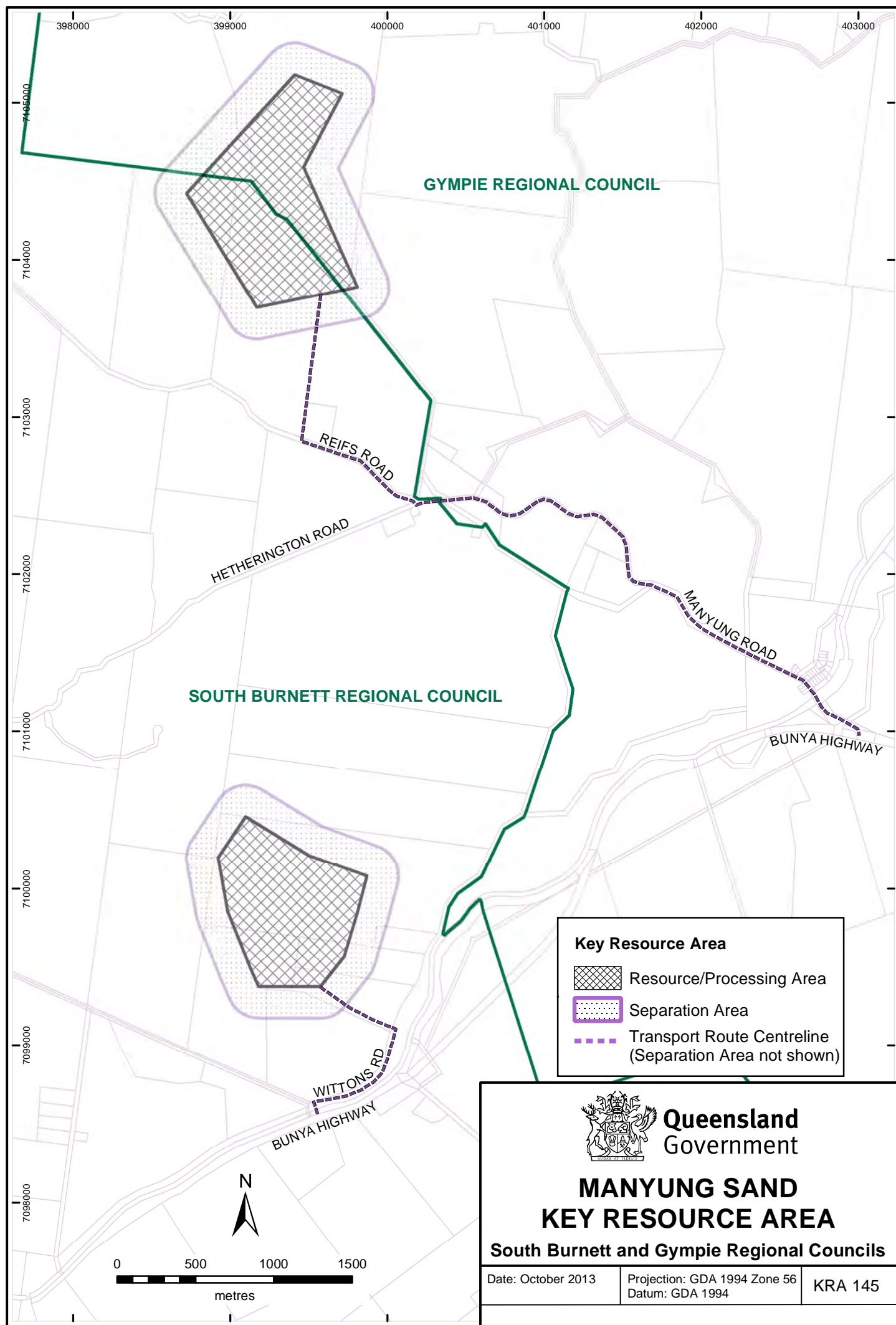
A separation distance of 200 metres is adopted as the extraction is likely to require mechanical means (ripping or digging) to extract sand.

TRANSPORT ROUTE:

A potential transport route exits the resource/processing areas along Wittons Road and Manyung Road to reach the Bunya Highway between Murgon and Goomeri.

SPECIAL CONSIDERATIONS:

The resource area has been drawn to indicate areas where the available geological information is favourable and a limited number of landholdings are affected. Resources may be proven around outcrops of the same geological unit in the surrounding district with further investigation. Parts of the sandstone are covered by RE 12.9-10.18 ('of concern').



BALLOGIE KEY RESOURCE AREA - KRA 146

LOCAL GOVERNMENT AREA: South Burnett Regional Council

LOCATION: The site is located along the Chinchilla-Wondai Road, approximately 30 km west of Wondai, south east Queensland (see map KRA 146).

EXTRACTIVE RESOURCE: Quarry Rock

EXTRACTIVE RESOURCE DESCRIPTION:

The resource consists of basalt and granodiorite suitable for a variety of products including concrete and asphalt aggregate and road base. There is an existing extractive operation at the site.

SIGNIFICANCE:

The resource is expected to supply the South Burnett region for a number of years. Due to the scarcity of natural construction material in the region, the Ballogie Key Resource Area is conveniently situated to supply these markets.

SEPARATION AREA:

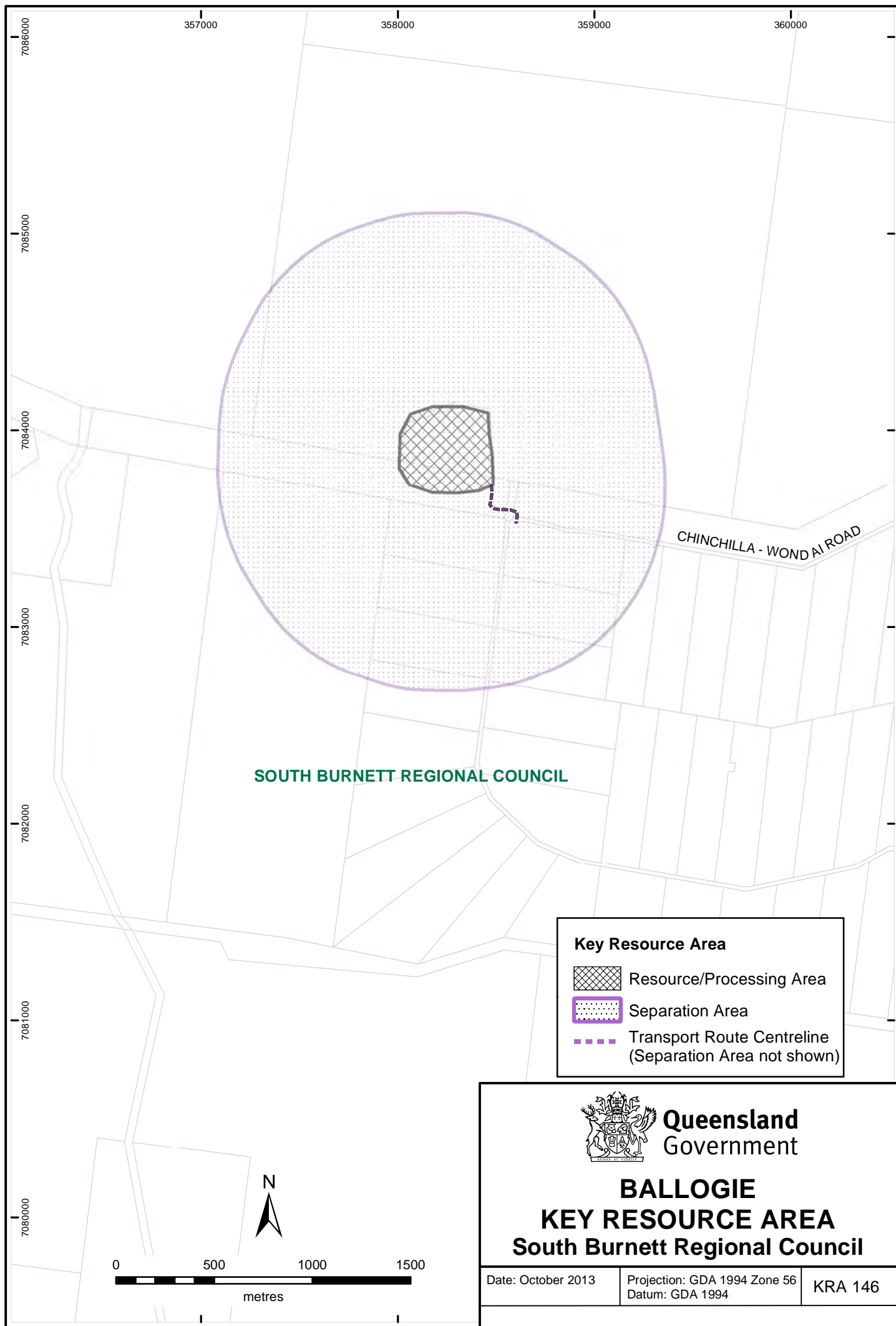
A maximum separation distance of 1000 metres has been applied around the resource/processing area boundary as blasting is likely to be required to access the resource.

TRANSPORT ROUTE:

The transport route is a short site access road leading directly onto the Chinchilla-Wondai Road.

SPECIAL CONSIDERATION:

A major portion of the resource/processing area is covered by Strategic Cropping Land (SCL) Trigger Mapping under the *Strategic Cropping Land Act 2011* administered by the Department of Natural Resources and Mines. This indicates the location of potential SCL and further on-ground assessment against the SCL criteria is required to confirm whether the area is SCL or non-SCL.



BURRUM KEY RESOURCE AREA – KRA 147

LOCAL GOVERNMENT AREA: Sunshine Coast and Moreton Bay Regional Councils

LOCATION:

A small trachyte plug is located in Beerburum West State Forest (SF 611) near the Beerburum-Woodford Road about 15 kilometres north of Caboolture (see map KRA147). It is located within 2 kilometres of Beerburum Road.

EXTRACTIVE RESOURCE: Quarry Rock

EXTRACTIVE RESOURCE DESCRIPTION:

A plug of olivine trachyte intruded into the Landsborough Sandstone is the site of a surficial gravel scraping used for forestry road maintenance for some decades.

The surface extent is not fully defined and the intrusive rock is likely to extend to considerable depths. If a large excavation removing the surrounding country rock was needed the latter material may be suitable for products such as fill and addition to blended products.

SIGNIFICANCE:

The resource is strategically located close to the fast growing urban centres of Caboolture and southern Sunshine Coast. The rock type is likely to be similar in composition to that found at Sunrock quarry (KRA 51) about 5 km to the north east and is suitable for the manufacture of a wide range of high quality hard rock quarry products including manufactured sand.

SEPARATION AREA:

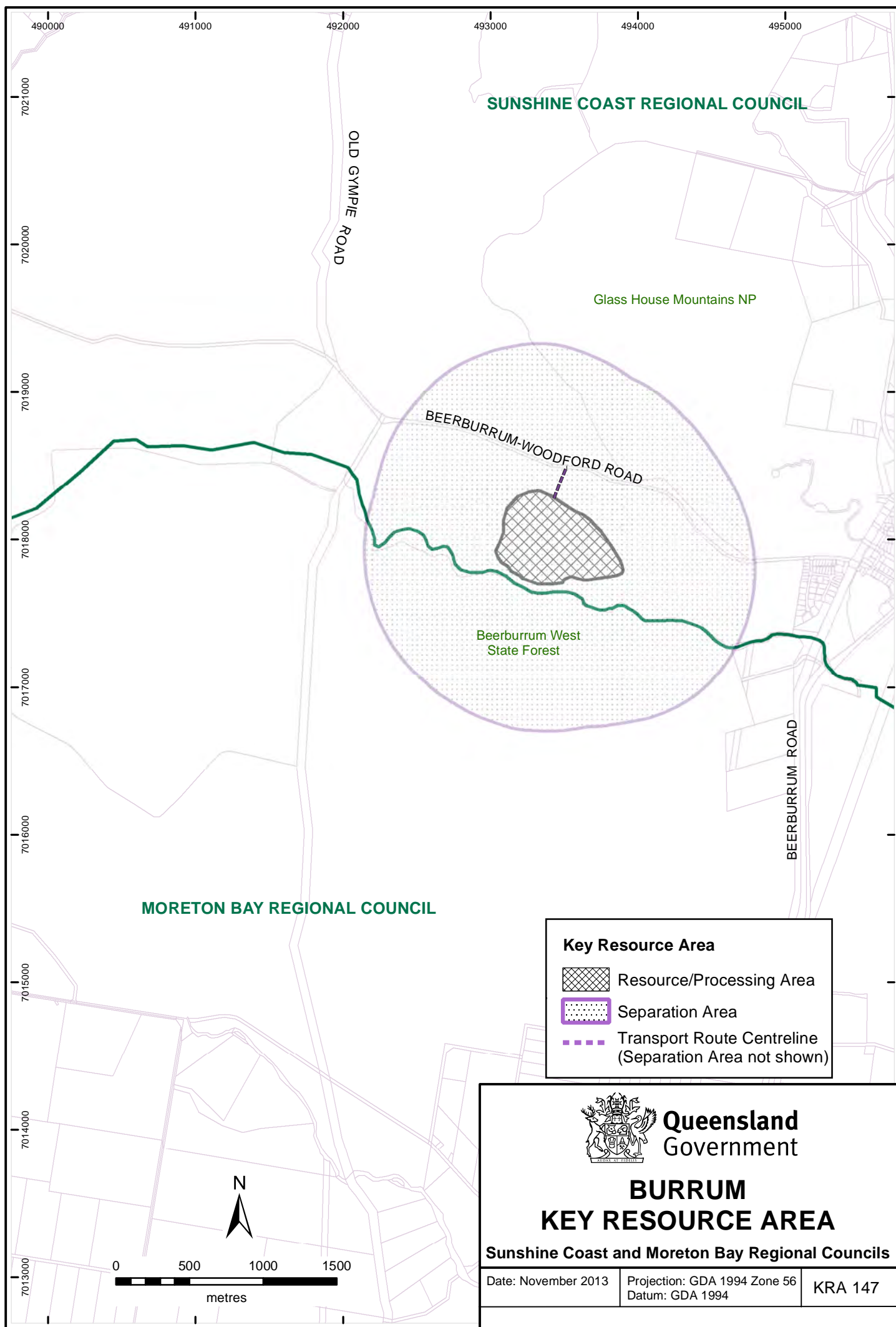
The rural setting and low surrounding topography would require adoption of a minimum 1000 metres separation distance around the resource/processing area boundary. The southern portion of the separation area lies over the Moreton Bay Regional Council area.

TRANSPORT ROUTE:

Access is via the Beerburum-Woodford Road and passing through a small residential area onto Beerburum Road to the east. More viable routes may be provided by a currently unpaved road (Eaton Road) reaching the Beerburum Road to the south or northwards to the Coonowrin Road via Old Gympie Road.

SPECIAL CONSIDERATIONS

Additional resources may exist in the surrounding freehold land, as deeper trachyte may extend outwards from the exposed gravel pit. Access to any such resource would need to be negotiated with the owners of the surrounding forestry area.



DULONG KEY RESOURCE AREA - KRA 148

LOCAL GOVERNMENT AREA: Sunshine Coast Regional Council

LOCATION:

The resource is located about 7 kilometres west of Nambour in the foothills of the Blackall Range (See Map KRA 148).

EXTRACTIVE RESOURCE: Quarry Rock

EXTRACTIVE RESOURCE DESCRIPTION:

The resource consists of basalt and extends in a north-northwesterly direction with the centre of the resource/processing marked by Dulong School Road. The resource is set in a valley lying between higher northerly trending ridges to the east and west. A small quarry has been operating intermittently producing road screenings at the corner of Dulong School and Sherwell Roads

SIGNIFICANCE:

The quarry is well placed to supply the Sunshine Coast markets with crushed rock products such as road screening gravels and concrete aggregate. At the present rate of production the lifetime would be over 50 years. The resource has been used to supply much of the asphalt screenings in the Sunshine Coast due to its superior binding properties.

The resource would be sufficient to provide 30-40 years of supply if nearby resources become exhausted. It meets the criteria for State significance.

SEPARATION AREA:

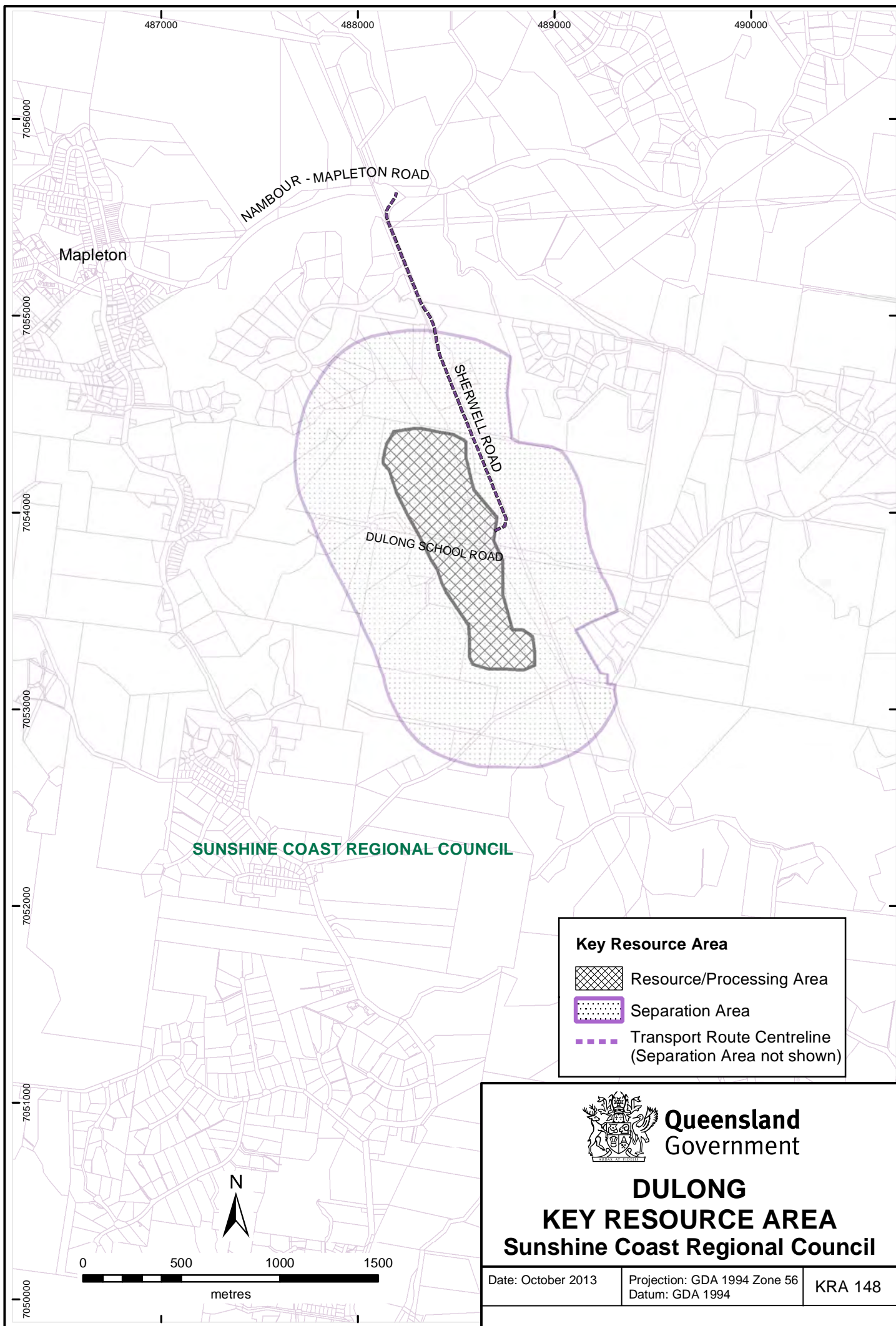
As the surrounding land is mostly higher than the resource surface level, the separation distance is set at 500 metres. The distance has been constrained to less than 250 metres where residential zones are established to the north and northeast.

TRANSPORT ROUTE:

Material can be transported directly on to Sherwell Road and northwards to the Nambour-Mapleton Road.

SPECIAL CONSIDERATIONS:

A large part of the KRA is covered by Strategic Cropping Land (SCL) Trigger Mapping under the *Strategic Cropping Land Act 2011* administered by the Department of Natural Resources and Mines. This indicates the location of potential SCL and further on-ground assessment against the SCL criteria is required to confirm whether the area is SCL or non-SCL.



BELLI PARK KEY RESOURCE AREA - KRA 149

LOCAL GOVERNMENT AREA: Sunshine Coast Regional Council

LOCATION:

The resource is located on the Kenilworth road. It is located about 12 kilometres northeast of Kenilworth (See Map KRA 149).

EXTRACTIVE RESOURCE: Quarry Rock

EXTRACTIVE RESOURCE DESCRIPTION:

The current small extraction operation is sited in a narrow valley on the eastern side of the Eumundi to Kenilworth Road. It is situated an andesitic sequence of flows, pyroclastic and intrusive dykes. The resource area covers similar rock types to those in the current pit. It is defined by the area that is screened from the surrounding land by ridges.

Other major quarries in the Sunshine Coast contain similar rock types therefore the resource has the potential to produce equivalent material.

SIGNIFICANCE:

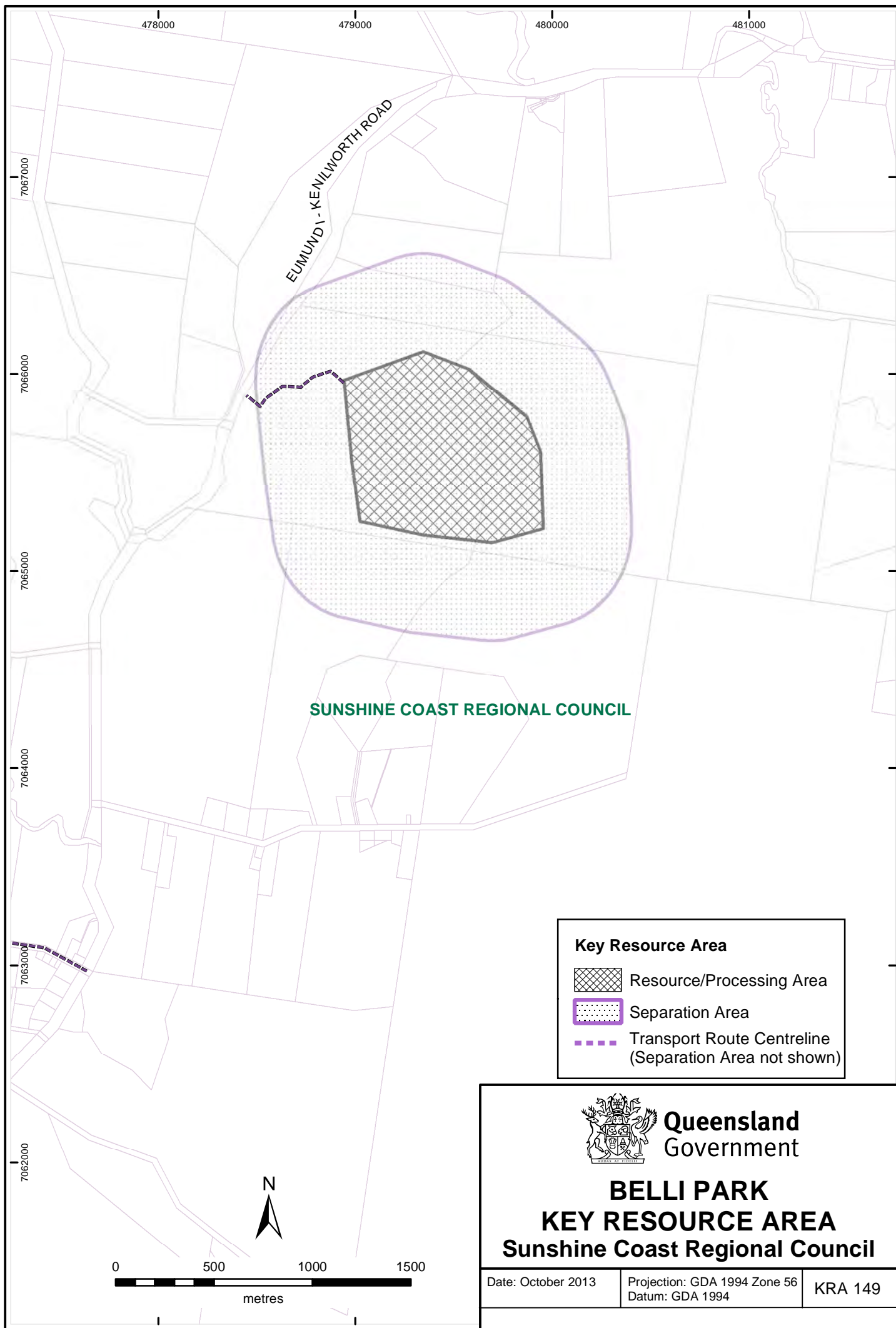
The resource is well placed to supply the development of the Sunshine Coast region for at least 20-30 years. It is conveniently situated relative to the growth areas of the northern Sunshine Coast and Mary Valley area. It represents a sizeable resource relatively close to the Sunshine Coast and hinterland markets. The resource meets the criteria for State significance.

SEPARATION AREA:

The resource/processing area covers the inner slopes of the amphitheatre shaped valley. It extends to the south and east from the existing pit. The resource/processing area is surrounded by high ridges providing natural screening in all directions. A 500 metre separation area is thus adopted.

TRANSPORT ROUTE:




The transport route crosses private land along a formed all-weather road and enters the Eumundi-Kenilworth Road about 2.5 kilometres north of the Gheerulla Cemetery.



EUMUNDI - KENILWORTH ROAD

SUNSHINE COAST REGIONAL COUNCIL

Key Resource Area

-  Resource/Processing Area
-  Separation Area
-  Transport Route Centreline
(Separation Area not shown)



**Queensland
Government**

**BELLI PARK
KEY RESOURCE AREA
Sunshine Coast Regional Council**

Date: October 2013

Projection: GDA 1994 Zone 56
Datum: GDA 1994

KRA 149

MAROOCHY NORTH BLI BLI KEY RESOURCE AREA - KRA 150

LOCAL GOVERNMENT AREA: Sunshine Coast Regional Council

LOCATION:

The resource is located between the Maroochy River and the Sunshine Coast Motorway west of Mudjimba 18 km north- northeast of Caloundra (See map KRA 150).

EXTRACTIVE RESOURCE: Sand

EXTRACTIVE RESOURCE DESCRIPTION:

Significant deposits of construction sand occur west of the Sunshine Coast Motorway west of Mudjimba on the floodplain of the Maroochy River.

Large deposits of marine fine-grained silica sand overlies estuarine and marine muds and clay, in places covering possible fossil alluvial channels or tidal fine to coarse-grained silica sand.

SIGNIFICANCE:

The deposit is significant and has the potential to supply a considerable portion of the Sunshine Coast demand, and is located close to developing urban markets in the northern and central part of the region.

SEPARATION AREA:

A separation distance of 200m has been applied around the sand deposit. The surrounding land is zoned Rural.

TRANSPORT ROUTE:

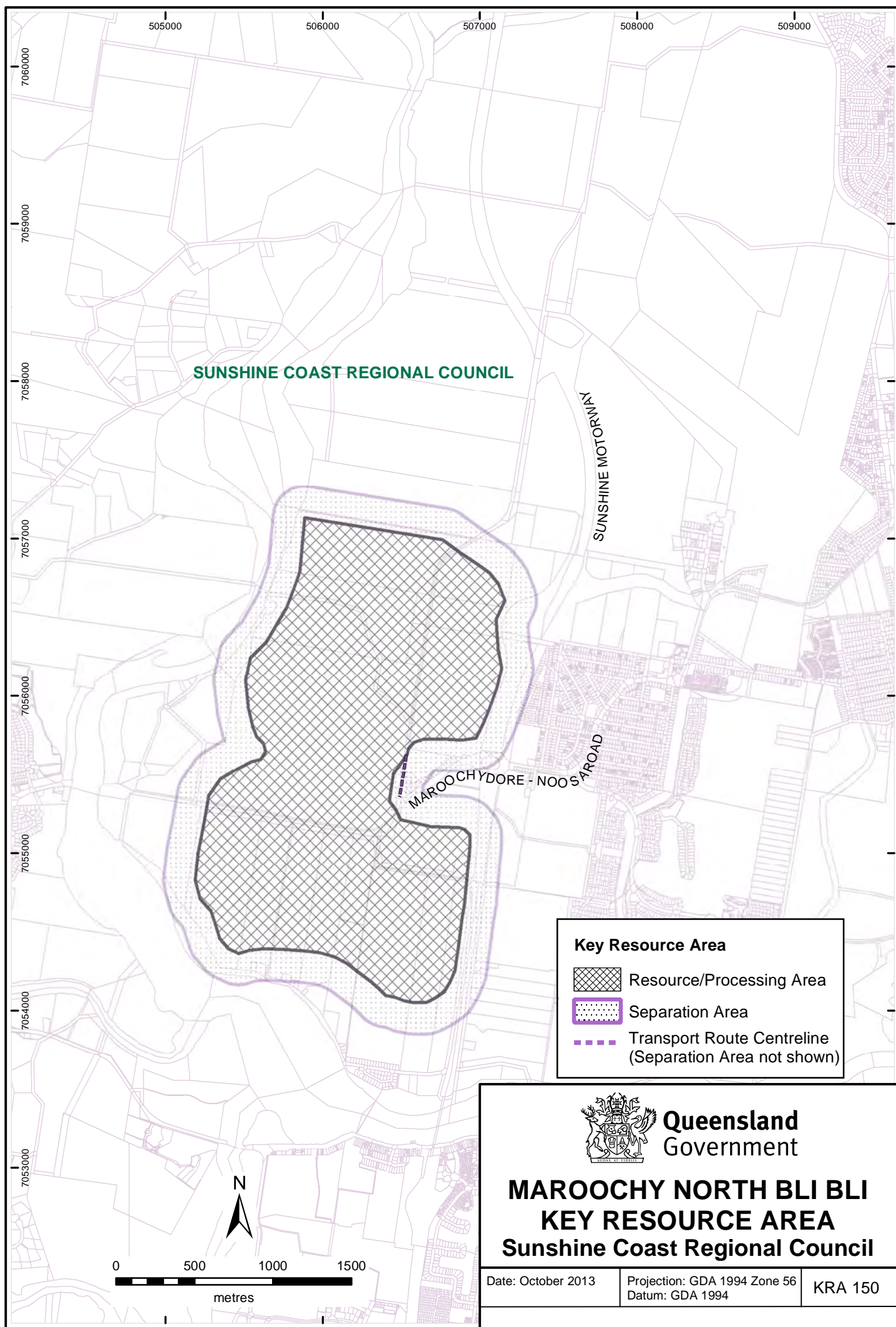
Material would be transported along Finland Road to David Low Way then east to the Sunshine Motorway.

SPECIAL CONSIDERATIONS:

A large part of the resource is subject to the provisions of the Queensland Coastal Plan administered by the Department of Environment and Heritage Protection. Drilling also confirmed the presence of acid sulphate soils in some samples.

The proposed east-west runway of the Sunshine Coast Airport expansion project is located around 3 kilometres north-east of the KRA. Future aviation overlay provisions may need to be considered for future extractive industry development approvals for the purpose of air traffic safety arising from the potential to develop water-filled voids.

Most of the KRA is covered by Strategic Cropping Land (SCL) Trigger Mapping under the *Strategic Cropping Land Act 2011* administered by the Department of Natural Resources and Mines. This indicates the location of potential SCL and further on-ground assessment against the SCL criteria is required to confirm whether the area is SCL or non-SCL.



DIMBULAH ROAD KEY RESOURCE AREA - KRA 151

LOCAL GOVERNMENT AREA: Mareeba Shire Council

LOCATION: An extensive area in the Mareeba Irrigation Area located about 11 kilometres west of Mareeba. The KRA contains several sand extraction sites with the potential for other resources to be discovered.

EXTRACTIVE RESOURCE: Sand

EXTRACTIVE RESOURCE DESCRIPTION

Fine to medium sand of granitic origin occurs in shallow layers in patches over a wide area underlain by the Mareeba Granite west of Mareeba. The main deposits appear to occur beneath the lower slopes of broad gullies and are of mixed alluvial and colluvial origin.

The nearby properties over the Mareeba Granite and associated colluvium may also contain extensive resources. These may be developed in future when a need for extraction, subject to appropriate development conditions, is demonstrated.

SIGNIFICANCE

The deposits are of regional significance as sources of fine sand for the Cairns and Tableland markets are scarce. The sand occurs in shallow layers extending over a large area and the cumulative sand resource has the potential to supply the region for several decades.

SEPARATION AREA

The sand is potentially widespread beyond the defined resource/processing area. The adopted boundaries of the resource area are indicative of an identified potential for sand extraction. A standard 200 metre separation distance is adopted around the entire area to protect the potential for extraction within the resource.

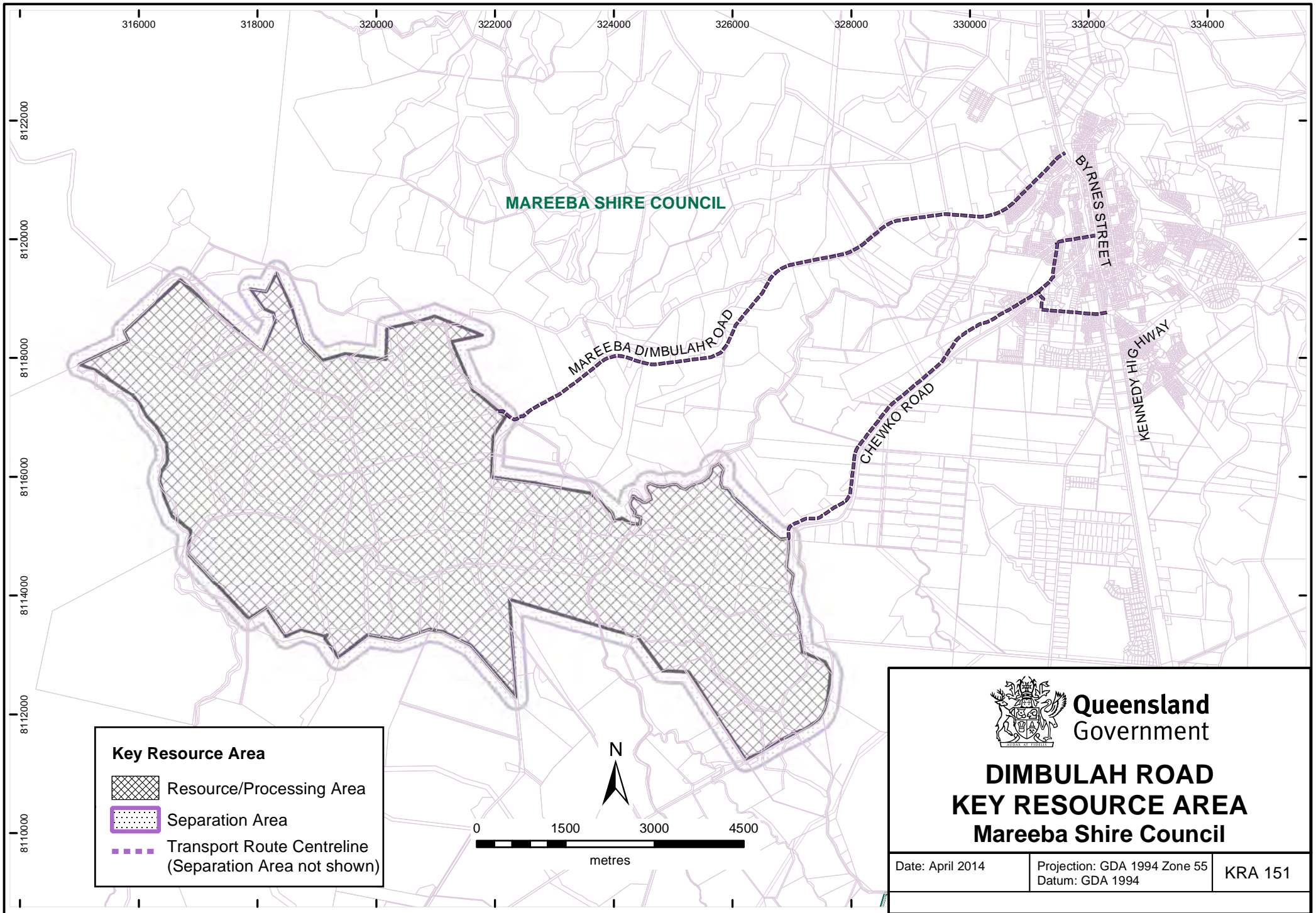
TRANSPORT ROUTE

Two transport routes are proposed. First one is via Tyrconnel Road onto Mareeba-Dimbulah Road. The second haulage is via Chewko Road and other local roads to the Mareeba-Dimbulah Road (Byrnes Street) then eastwards to the Kennedy Highway. The potential for sand extraction from any of several locations may require transport along some of the minor roads or across private land. As the area is Rural and included within the resource area, the risk of increased development along minor roads is low.

SPECIAL CONSIDERATIONS

A large portion of the KRA is covered by Strategic Cropping Land (SCL) Trigger Mapping under the *Strategic Cropping Land Act 2011* administered by the Department of Natural Resources and Mines. This indicates the location of potential SCL and further on-ground assessment against the SCL criteria is required to confirm whether the area is SCL or non-SCL.

There are currently several competing agricultural land uses existing within the resource area and any development of the sand resource would need to be assessed with regard to these factors.



WALSH RIVER KEY RESOURCE AREA - KRA 152

LOCAL GOVERNMENT AREA: Mareeba Shire and Tablelands Regional Councils

LOCATION: The resource is located at Springmount Road, 21 kilometres west of Mareeba (see KRA Map 152).

EXTRACTIVE RESOURCE TYPE: Quarry Rock

EXTRACTIVE RESOURCE DESCRIPTION:

The resource consists of interbedded units of greywacke, shales and siltstones within the Hodgkinson Group Metamorphics. Thin andesitic dykes also occur in the area.

SIGNIFICANCE:

The Walsh River Key Resource Area is a large resource capable of producing greater than 5 percent of annual demand for the commodity type in the Tablelands region. Based on the estimated resource size and production rates, there is up to 20 years of supply to the region. The resource meets the criteria for State significance.

SEPARATION AREA:

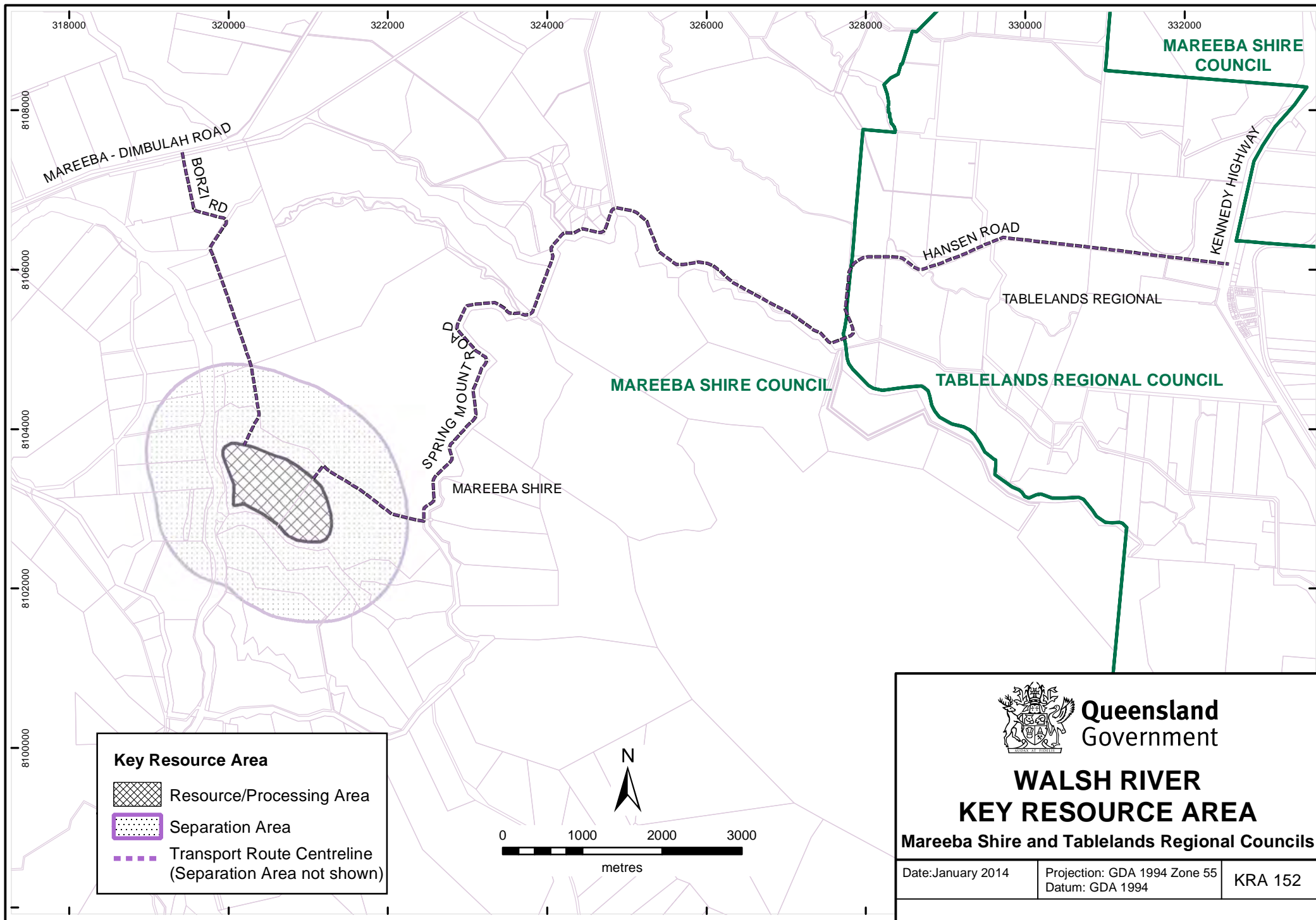
A maximum separation distance of 1000 metres has been applied around the resource/processing area boundary.

TRANSPORT ROUTE:

The materials are to be transported along Springmount Road and Hansen Road to the Kennedy Highway. Materials from the northern part of the resource are to be transported via an access easement to Borzi Road and on to Mareeba-Dimbulah Road.

SPECIAL CONSIDERATIONS:

Some parts of the KRA is covered by Strategic Cropping Land (SCL) Trigger Mapping under the *Strategic Cropping Land Act 2011* administered by the Department of Natural Resources and Mines. This indicates the location of potential SCL and further on-ground assessment against the SCL criteria is required to confirm SCL and non-SCL areas.



QUINALOW ROAD KEY RESOURCE AREA - KRA 153

LOCAL GOVERNMENT AREA: Toowoomba Regional Council

LOCATION:

The resource is about 3 kilometres north of Jondaryan and 42 kilometres northwest of Toowoomba along Jondaryan Nungil Road (See Map KRA 153).

EXTRACTIVE RESOURCE: Quarry Rock

EXTRACTIVE RESOURCE DESCRIPTION:

The resource consists of extensive massive basalt flows interbedded with weathered basalt, with sedimentary interbeds also likely to occur. There are numerous groundwater bores drilled by the former Queensland Water Resources Commission and Department of Primary Industries with indications of considerable intersections of continuous intervals of fresh, hard and dense basalt up to 100 m in thickness. Extensive basalt deposits may exist further north and to the east.

SIGNIFICANCE:

The resource is suitable for most types of construction aggregate and may be capable of producing rip rap. It is well placed to supply the expansion of urban and infrastructure development in the western part of the Southeast Queensland Regional Plan Area and the eastern Downs. If bulk transport operations based on rail upgrades become feasible the potential market area may be expanded considerably to supply larger urban markets in SEQ. The inferred resource is estimated to be sufficient for over 50 years at the current rate of production for the Toowoomba and Western Downs regions.

SEPARATION AREA:

The resource/processing area is defined by continuous basalt intersections recorded in water bores where lot sizes are greater than 100 hectares. As the rock mass is expected to become denser at depth, a provisional separation distance of 1000 metres is adopted to allow for blasting. The surrounding land is zoned Rural.

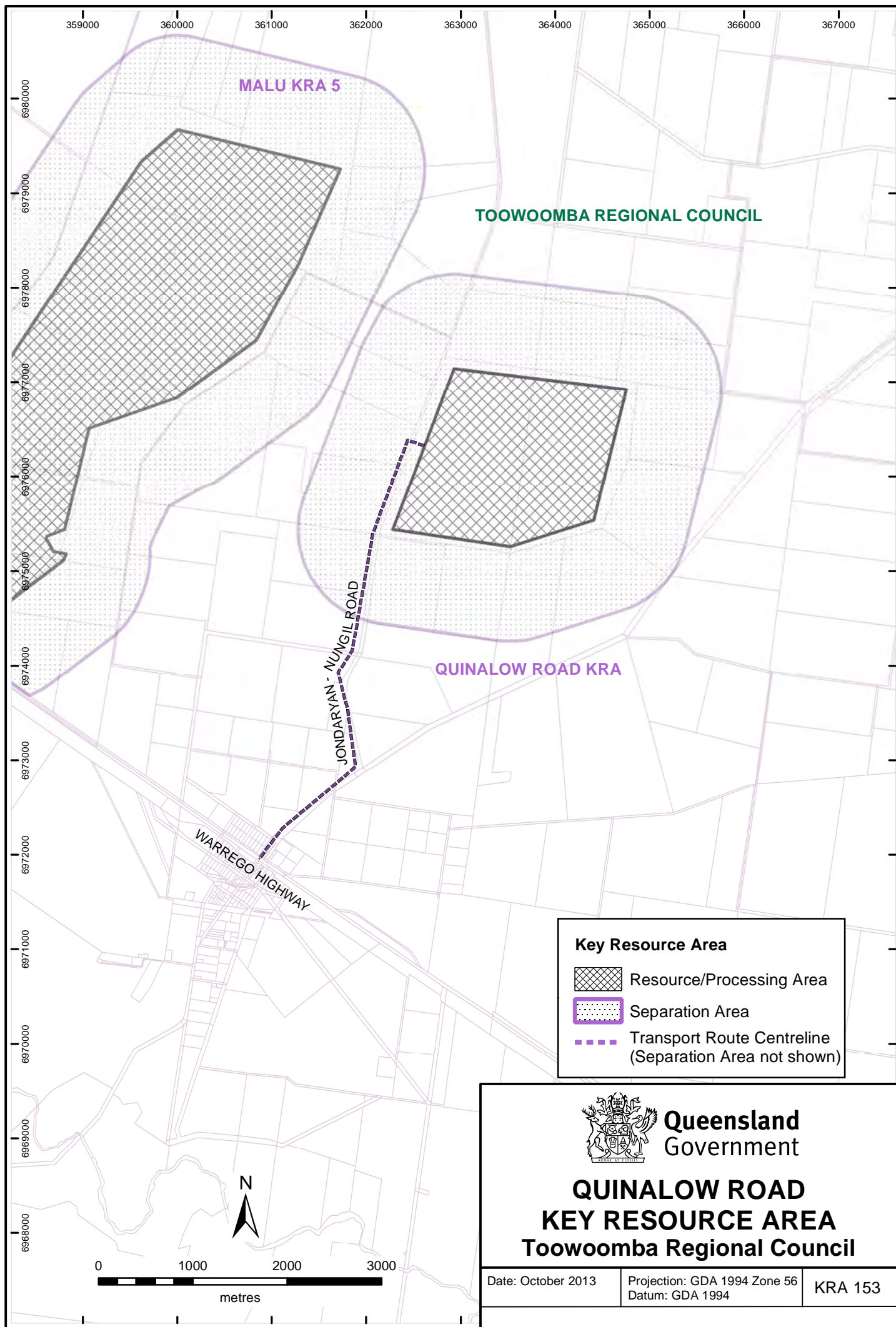
TRANSPORT ROUTE:

Preliminary transport routes exit the resource/processing area along Jondaryan Nungil Road and extend southwards to the Warrego Highway through the township of Jondaryan. The Western Rail line may offer access to more distant markets in future.

SPECIAL CONSIDERATIONS:

The depth of available resource may be affected by the groundwater level as the area is part of a declared sub-artesian basin and thus subject to the provisions for taking or interfering with groundwater under the *Water Act 2000*.

Some parts of the KRA is covered by Strategic Cropping Land (SCL) Trigger Mapping under the *Strategic Cropping Land Act 2011* administered by the Department of Natural Resources and Mines. This indicates the location of potential SCL and further on-ground assessment against the SCL criteria is required to confirm SCL and non-SCL areas.



MUNTALUNGA KEY RESOURCE AREA - KRA 154

LOCAL GOVERNMENT AREA: Townsville City Council

LOCATION:

The resource is located about 10 kilometres south of Townsville on the eastern side of the Main Northern Railway line. (See Map KRA 154).

EXTRACTIVE RESOURCE: Quarry Rock

EXTRACTIVE RESOURCE DESCRIPTION

The resource consists of massive granodiorite overlain by andesitic to rhyolitic volcanic rocks. The granodiorite forms a high flat-topped ridge with several re-entrant gullies hidden by a lower ridge to the southwest from the surrounding district. Overlying volcanic rocks outcrop throughout an easterly trending ridge on the northern side of the resource.

SIGNIFICANCE

The resource is ideally placed to supply the Townsville and regional markets and the industrial port area to the immediate north. With the varied rock types it could produce crushed rock products such as concrete aggregate, road screenings rail ballast and specialised products such as rip rap for marine projects. It is ideally situated to supply major transport infrastructure projects in Townsville and to the south.

Resources in the site are estimated to be sufficient for over 50 years at the current rate of production for the Townsville region. The resource meets the criteria for State significance.

SEPARATION AREA:

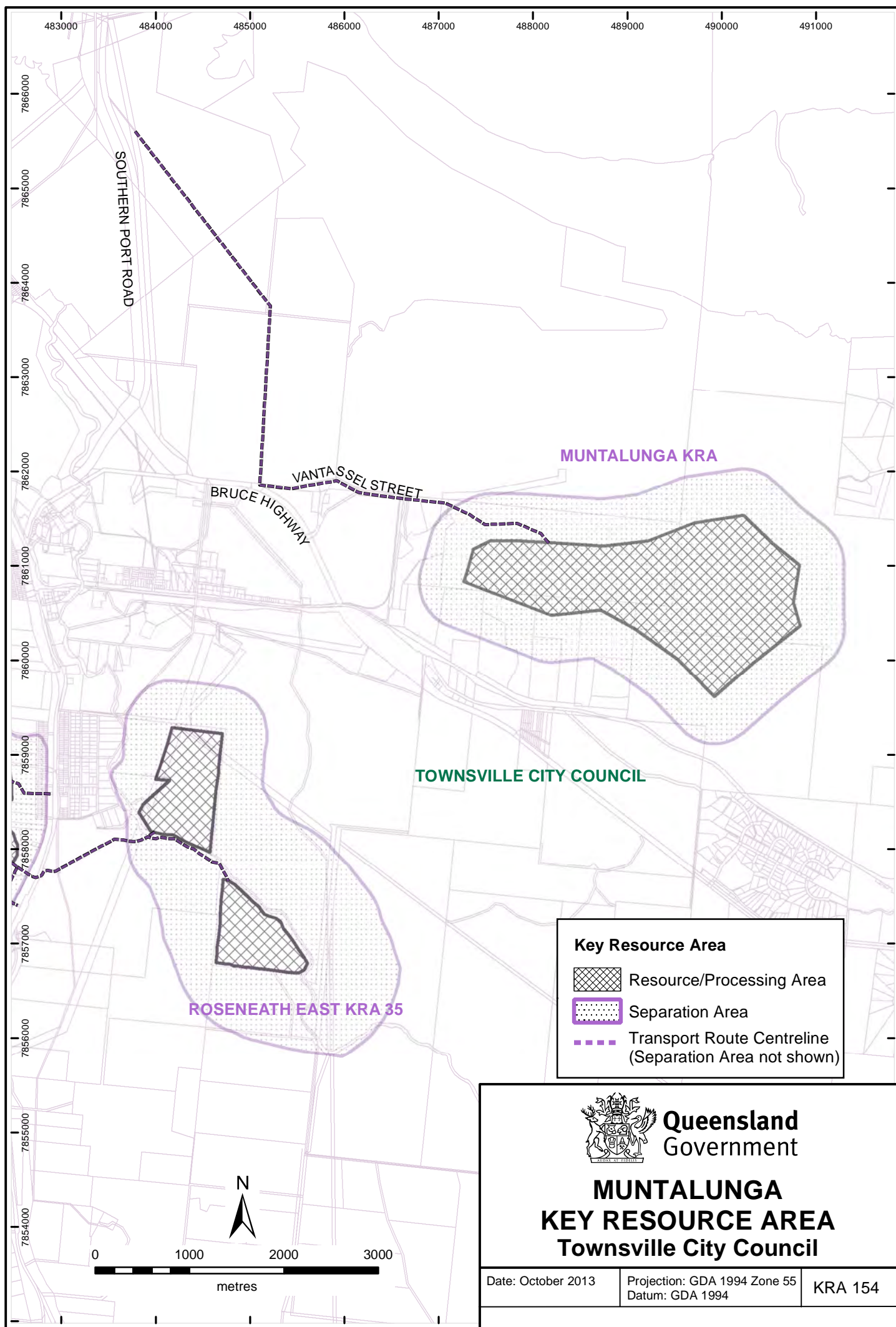
The resource/processing area is defined by the area where future quarry operations would be screened from adjacent properties. As most of this area is surrounded by ridge crests which are higher than the surrounding land, a separation distance of 500 metres has been adopted.

TRANSPORT ROUTE:

The preferred transport route exits the resource near its north western end along Vantassel Street then follows an easement through the western end of the Gravel Reserve then crosses the road and rail spur into the Townsville State Development Area before reaching the Southern Port Road. Adoption of this route would anticipate construction of an access road across the ridges of the northwest corner of the KRA.

SPECIAL CONSIDERATIONS:

Aboriginal Cultural Heritage sites are known to exist in the KRA.



GREGORY RIVER KEY RESOURCE AREA - KRA 155

LOCAL GOVERNMENT AREA: Whitsunday Regional Council

LOCATION:

The resource is located about 25 km north of Proserpine between the Bruce Highway and the Gregory RiverG. (See Map KRA 155).

EXTRACTIVE RESOURCE: Sand

EXTRACTIVE RESOURCE DESCRIPTION:

The resource consists of sand in the broad alluvial plain of the Gregory River. The extraction area has been investigated by pitting and consists of 280 hectares of cleared land underlain by sand and gravel up to 5 metres thick.

SIGNIFICANCE:

The resource is well placed to supply the development of the Whitsunday/Bowen region for a minimum of 50 years based on current production rates.

Road access to the Bruce Highway at a distance of 24 kilometres from Proserpine, about 35 kilometres to Airlie Beach and 40 kilometres to Bowen makes this resource centrally placed to growth markets.

SEPARATION AREA:

The resource/processing area outlined is larger than the existing approved quarry operations as the full extent of sand have not yet been identified. It extends over land currently cultivated for sugar cane. The stockpile and despatch area is closer to the highway and is depicted as a separate portion of the resource/processing area. A separation distance of 200 metres has been applied to the boundaries of the resource/processing areas.

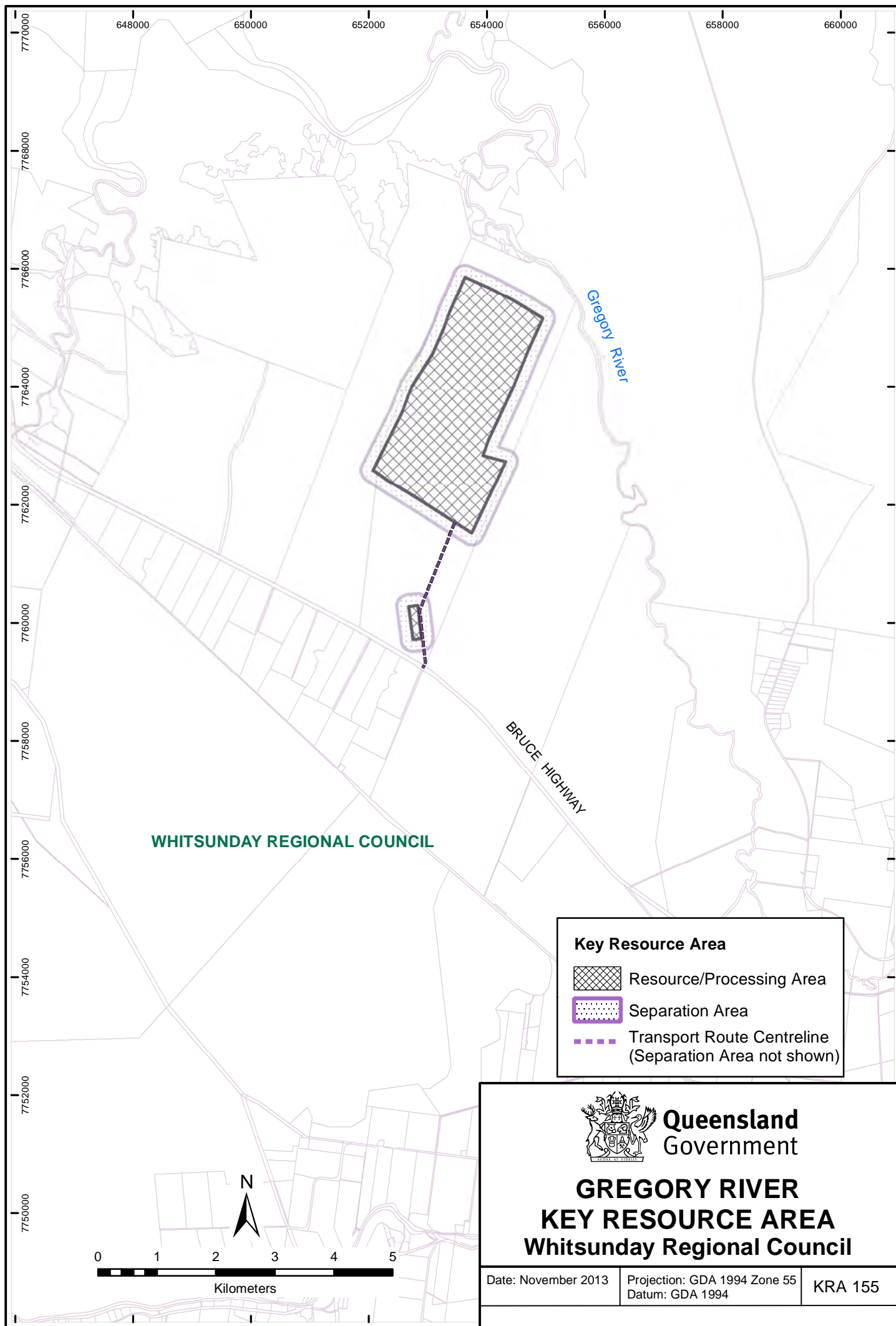
TRANSPORT ROUTE:

The transport route crosses private land along a formed all-weather road and enters directly to the Bruce Highway.

SPECIAL CONSIDERATIONS

There are some small patches of remnant vegetation of endangered status between two and four hectares within the resource and would require offsets for clearing. A narrow waterway also crosses the resource.

A large portion of the KRA is covered by Strategic Cropping Land (SCL) Trigger Mapping under the *Strategic Cropping Land Act 2011* administered by the Department of Natural Resources and Mines. This indicates the location of potential SCL and further on-ground assessment against the SCL criteria is required to confirm whether the area is SCL or non-SCL.



MAROOCHY NORTH COOLUM KEY RESOURCE AREA - KRA 156

LOCAL GOVERNMENT AREA: Sunshine Coast Regional Council

LOCATION:

The resource extends south of the Yandina-Coolum Road on the floodplain of the Maroochy River west of the Sunshine Motorway near Coolum Beach (See map KRA 156).

EXTRACTIVE RESOURCE: Sand

EXTRACTIVE RESOURCE DESCRIPTION:

A significant deposit of construction sand occurs in the alluvial flats of the Maroochy River. This deposit consists of marine fine-grained silica sand overlying estuarine and marine muds and clay in places covering possible fossil alluvial channels or tidal fine to coarse-grained silica sand.

SIGNIFICANCE:

The deposit is significant as it has the potential to supply a considerable portion of the Sunshine Coast demand, and is located close to developing urban markets in the northern part of the region.

SEPARATION AREA:

A separation distance of 200m has been applied around the sand deposits identified. The surrounding land is zoned Rural.

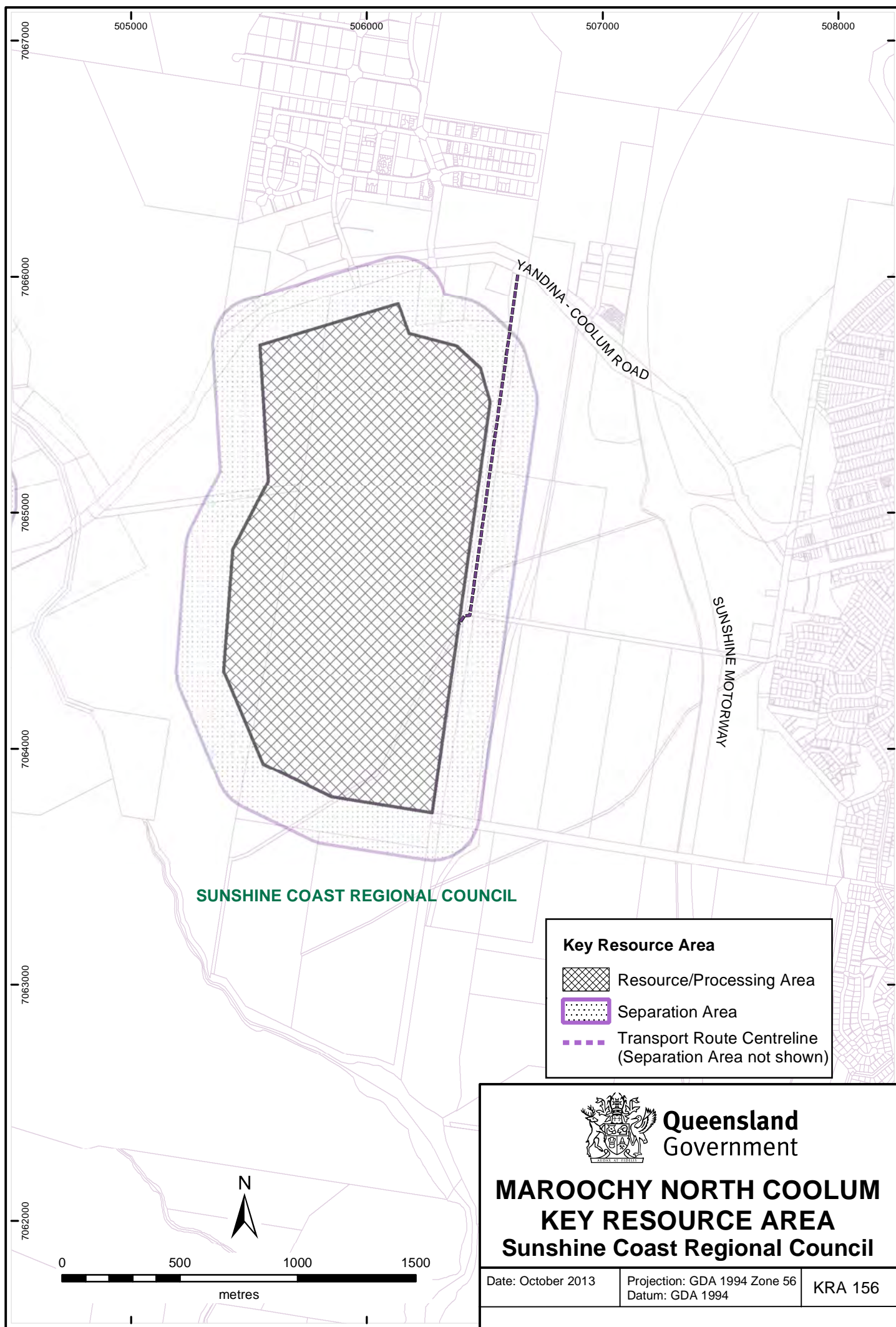
TRANSPORT ROUTE:

Transport from this resource could access the Yandina to Coolum Road via an unnamed road on the eastern side of the deposit.

SPECIAL CONSIDERATIONS:

A large part of the resource is subject to the provisions of the Queensland Coastal Plan administered by the Department of Environment and Heritage Protection. Drilling also confirmed the presence of acid sulphate soils in some samples.

Most of the KRA is covered by Strategic Cropping Land Trigger Mapping under the *Strategic Cropping Land Act 2011* administered by the Department of Natural Resources and Mines. This indicates the location of potential SCL and further on-ground assessment against the SCL criteria is required to confirm whether the area is SCL or non-SCL.



WOODERSON KEY RESOURCE AREA - KRA 157

LOCAL GOVERNMENT AREA: Gladstone Regional Council

LOCATION:

The resource is located approximately 18km west of Calliope and 28km south-west of Gladstone along the Dawson Highway. (See map KRA 157).

EXTRACTIVE RESOURCE: Quarry Rock

EXTRACTIVE RESOURCE DESCRIPTION:

The resource consists of a significant deposit of meta volcaniclastic rocks, mainly volcanilithic pebbly sandstone and volcanilithic pebbly breccia. These rocks are suitable for use as rail ballast, roadbase, concrete aggregate, surface cover aggregate and revetment material.

SIGNIFICANCE:

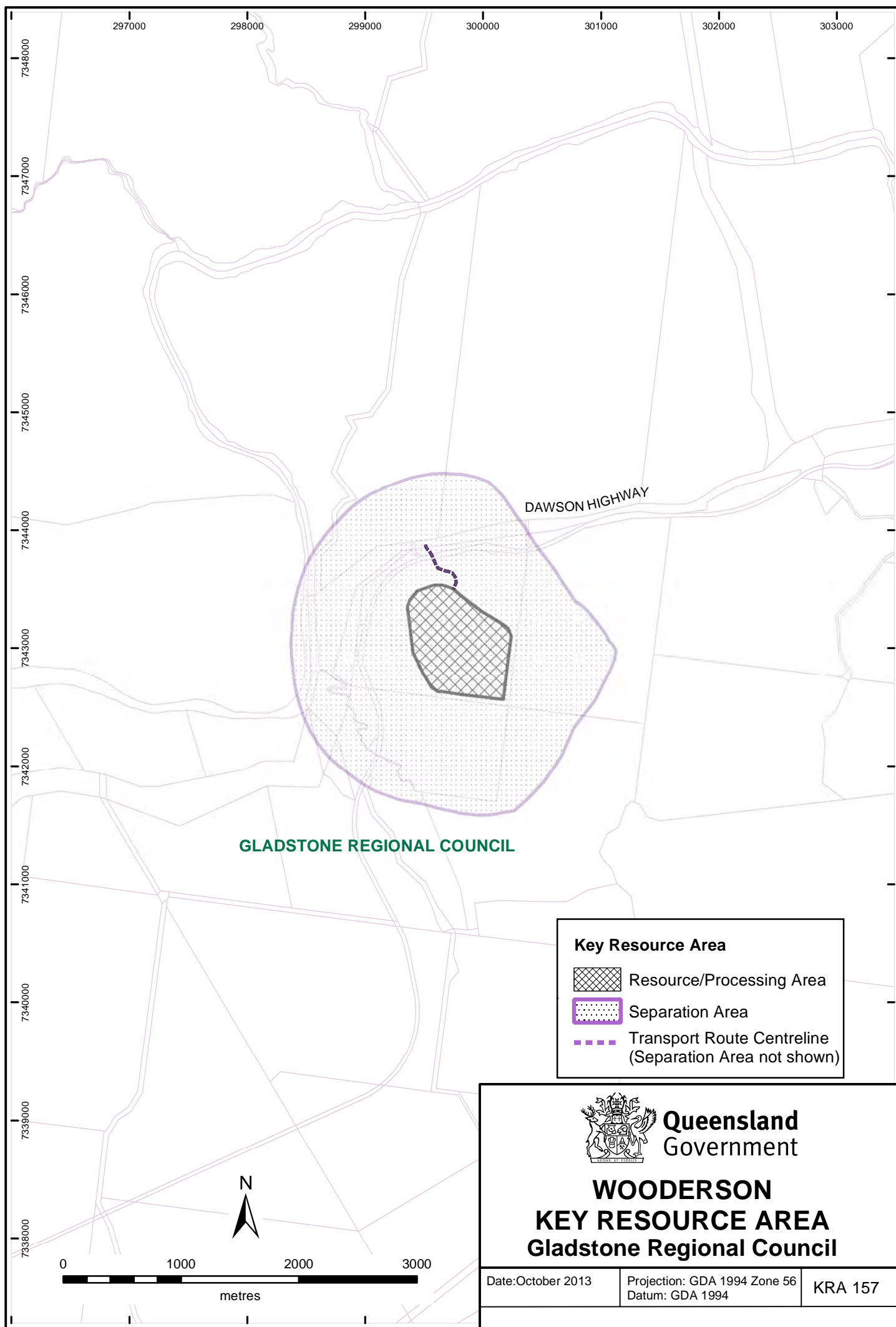
Available geological information suggests a large resource is present with the potential of up to 30 years supply. The deposit is significant as it has the potential to supply variety of quarry products to Gladstone region via good transport access for many decades.

SEPARATION AREA:

A separation distance of 1000 metres has been applied around the resource area. Separation area has been reduced for the north east and south east side as these areas are screened by hills at a lesser distance. The surrounding land is zoned Rural.

TRANSPORT ROUTE:

Transport from this resource would access the Dawson Highway directly via an unnamed road on the northern side of the deposit.



MOUNT WALKER KEY RESOURCE AREA - KRA 158

LOCAL GOVERNMENT AREA: Scenic Rim Regional Council

LOCATION:

The resource is located approximately 58 kilometres south-west of Brisbane and 28 kilometres south-west to Ipswich (See map KRA 158).

EXTRACTIVE RESOURCE: Quarry Rock

EXTRACTIVE RESOURCE DESCRIPTION:

The resource consists of a significant deposit of moderately weathered to fresh basalt. The rock has been tested for its suitability for use as aggregate and road base material. Initial assessment indicates that the resource is sufficient for 30 years at projected rates of production.

SIGNIFICANCE:

The site is located in the central part of the Scenic Rim area. The site is in close proximity to both Brisbane and Ipswich. The deposit has the potential to supply a variety of quarry products for infrastructure developments to these areas for many years.

SEPARATION AREA:

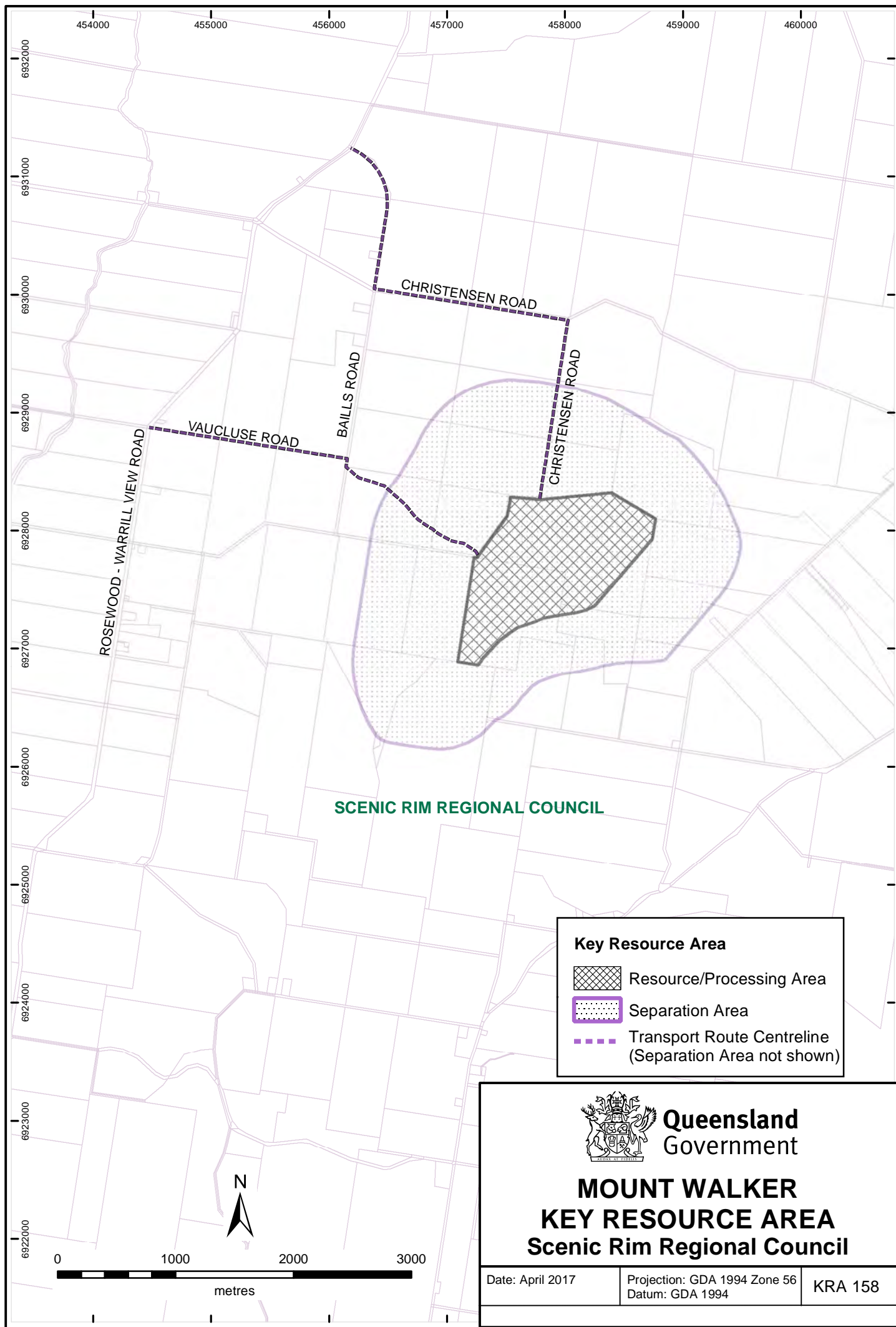
A separation distance of 1000 metres has been adopted for areas from north-west to south-west. However, separation distance has been reduced over land to the north-east to south-east as these areas are screened by the portions of the ridge which will be retained. The surrounding land is zoned Rural.

TRANSPORT ROUTE:

Transport from this resource would access the Rosewood-Warrill View Road via Vaocluse Road on the western side of the deposit and Christensen Road from the north.

SPECIAL CONSIDERATIONS:

Small portions of the separation area is covered by Strategic Cropping Land (SCL) Trigger Mapping under the *Regional Planning Interest Act 2014*. This indicates the location of potential SCL and further on-ground assessment against the SCL criteria is required to confirm whether or not SCL exists.



BANFF TERRACE KEY RESOURCE AREA – KRA 159

LOCAL GOVERNMENT AREA: Somerset and Lockyer Valley Regional Councils

LOCATION:

The resource is situated near Buaraba Creek about 4.5 kilometres west of Coominya, 20 kilometres north west of Fernvale, 25 kilometres north east of Gatton and 38 kilometres north west of Ipswich (see map KRA 159).

EXTRACTIVE RESOURCE: Sand and Gravel

EXTRACTIVE RESOURCE DESCRIPTION:

The resource/processing area covers a total of 416ha of Quaternary stranded river terrace deposits along Buaraba Creek comprising silt, clay, sand and gravel. The northern portion of the resource also contains sand derived from weathered sandstone. The site is currently undeveloped.

SIGNIFICANCE:

The resource has the potential to supply the Somerset, Lockyer Valley, Ipswich and western Brisbane markets for several decades.

SEPARATION AREA:

The full separation distance of 200 metres has been applied around the identified resource/processing boundary due to the absence of any intervening natural features.

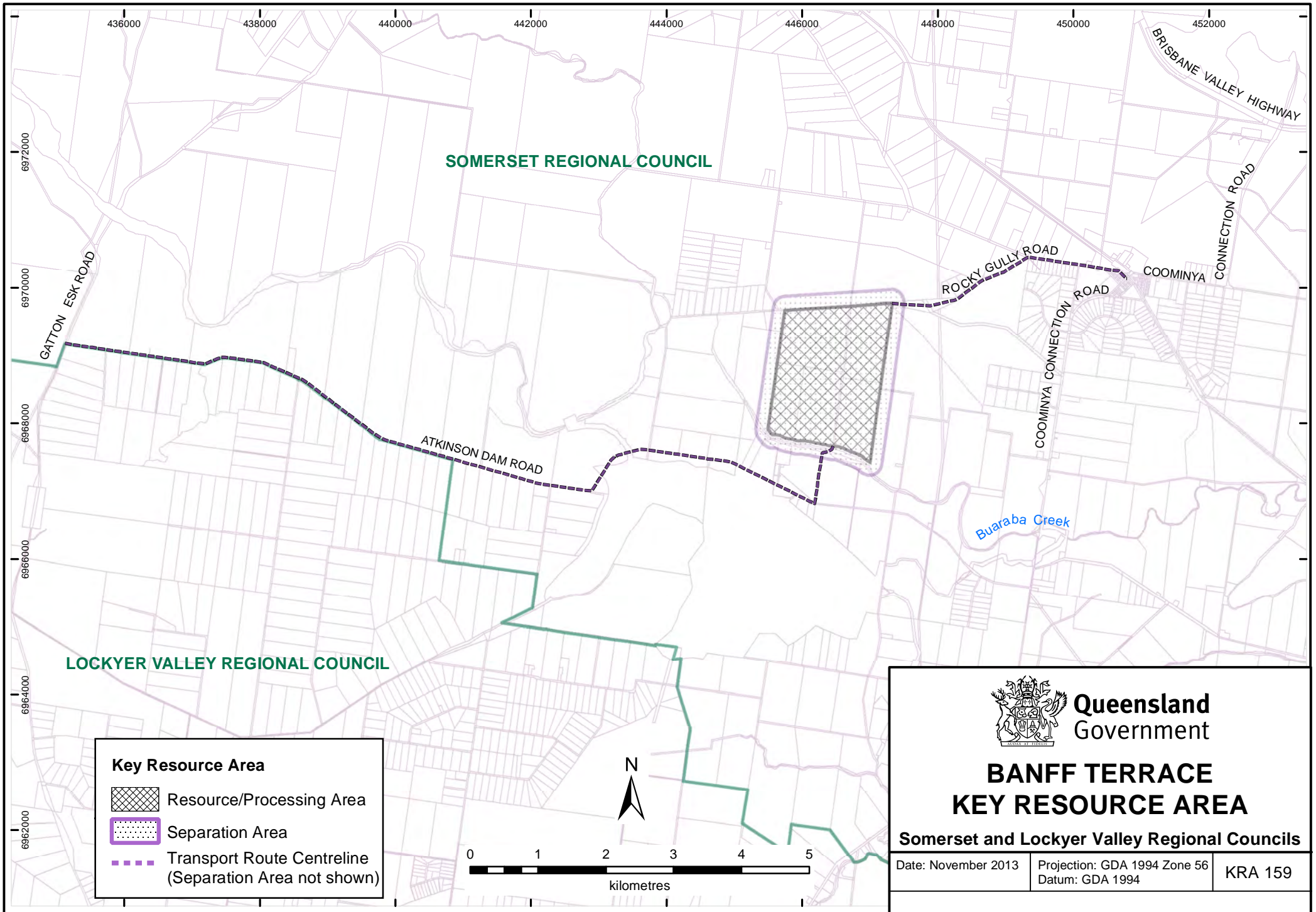
TRANSPORT ROUTE:

The transport route utilises existing roads along Rocky Gully Road to Coominya along the Coominya Connection Road and continuing on to the Brisbane Valley Highway to the north east. Material can also be transported along Atkinson's Dam Road then west on to the Gatton-Esk Road to supply the Lockyer Valley and surrounding areas.

SPECIAL CONSIDERATIONS:

The southern half of the KRA is covered by Strategic Cropping Land (SCL) Trigger Mapping under the *Strategic Cropping Land Act 2011* administered by the Department of Natural Resources and Mines. This indicates the location of potential SCL and further on-ground assessment against the SCL criteria is required to confirm whether the area is or is not an SCL.

The resource/processing area is adjacent to the Buaraba Creek and a minimum buffer width of 50 metres from the resource/processing area to Buaraba Creek has been established.



SARINA SOUTH KEY RESOURCE AREA – KRA 160

LOCAL GOVERNMENT AREA: Mackay Regional Council

LOCATION:

The resource is located approximately 8 kilometres south of Sarina, near Oonooie rail siding immediately adjacent to the Bruce Highway (see map KRA 160).

EXTRACTIVE RESOURCE: Quarry Rock

EXTRACTIVE RESOURCE DESCRIPTION:

The resource consists of a range of lithologies within the Carmila Beds, including rhyolitic tuff, basalt, and purple pebble-cobble conglomerate that mainly consists of rounded acid volcanics with some granitic clasts.

SIGNIFICANCE:

The resource hosts the only operating quarries between Sarina and Rockhampton. It is large enough to supply the Mackay to Marlborough region for some decades.

SEPARATION AREA:

The resource is in a rural area, flanked by the Connors Range on the west and tidal flats on the east. The full separation distance of 1000 metres has been applied around the resource boundary with minor variations to exclude smaller rural lots along the north-west side.

TRANSPORT ROUTE:

Materials can be transported directly onto the State-controlled Bruce Highway from all the three resource sites.

