



Section 2

Strategic Context

PREAMBLE

This section identifies the strategic issues that are relevant to the assessment and evaluation of the Project. The Project's consistency with State and local planning for the extraction of hard rock resources in the Dunmore - Shellharbour Hills area is reviewed. The surrounding land ownership and land uses are described together with the existing surrounding infrastructure and other extraction operations that are considered in the Project design and environmental assessments.



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2.1 Introduction

This section identifies the key strategic issues that are relevant to the assessment and evaluation of the Project. In particular, it emphasises the importance of the Project to the Illawarra-Shoalhaven and Greater Sydney Regions. The principal planning documents and their key themes that are relevant to the Project justification are described, followed by a description of the key features and cumulative impacts of the Project. This section concludes with a summary of the strategic support for the Project.

2.2 Strategic Support and Project Justification

2.2.1 Introduction

The NSW Government has published a range of planning documents that collectively provide the basis for government strategic planning for NSW. Central to many of these documents is the recognition that the construction of housing, non-residential buildings, roads and other engineered infrastructure relies on construction materials provided by the extractive industry sector. The planning documents that are relevant to the Project and how each of those documents provides strategic support to the Project are outlined in the following subsections.

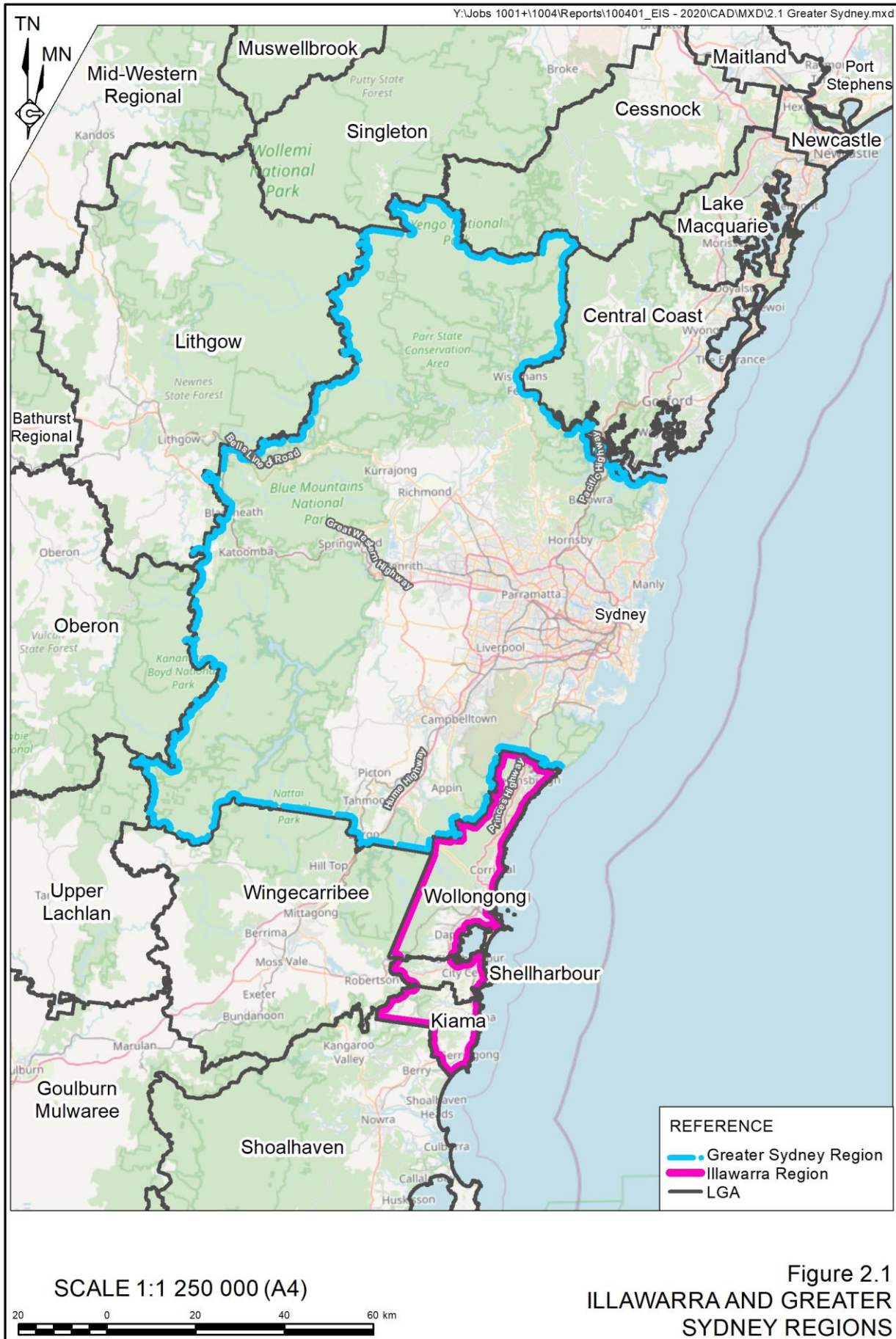
2.2.2 Planning Documents

2.2.2.1 Greater Sydney Region Plan

The *Greater Sydney Region Plan* (GSR, 2018) provides a vision for the growth of Sydney to a metropolis of three cities, namely the Eastern Harbour City, Central River City and Western Parkland City. The Greater Sydney Region (GSR) and surrounding Local Government Areas are presented in **Figure 2.1**. The GSR Plan outlines where projected population growth is anticipated or planned across the three cities until 2056 and forecasts that 725 000 additional dwellings would be constructed in the GSR by 2036. A key objective of the Plan is that detailed consideration of the availability and distribution of extractive materials is required for long-term strategic planning.

It is noted that there are no operating hard rock quarries within the GSR. As a result, the building and construction industry within the GSR is entirely dependent on the supply of crushed rock products from hard rock quarries in regions surrounding the GSR (RWC, 2019). The Illawarra-Shoalhaven Region is therefore one of the critical feeder areas for the supply of crushed rock products into the GSR, due its proximity and existing transport links.

The Quarry currently sells approximately 22% of its products into the GSR (Element, 2022). There is potential for this proportion to increase should the Project be approved. As the Project would continue to meet market demands for the supply of high quality hard rock products in the GSR, it is consistent with the key objectives of the GSR Plan.



**Cleary Bros (Bombo) Pty Ltd***Albion Park Quarry Extraction Area Stage 7 Extension***2.2.2.2 Infrastructure Strategy and Freight and Ports Plan**

The *NSW State Infrastructure Strategy 2018-2038* (INSW 2018) outlines the policies and strategies required to meet the infrastructure needs of the growing population of NSW. It recognises the current record level of investment in housing and infrastructure and the need to address transport and logistical challenges associated with construction demand. The Strategy recognises that roads are the dominant carrier of freight and construction materials and that the proportion of freight transported by rail is forecast to increase. Maintaining an efficient bulk handling network is identified as a key component of the Strategy.

The *NSW Freight and Ports Plan 2018-2023* (TfNSW 2018) identifies that construction materials, which includes products produced by the extractive industry sector, are one of the most dominant commodities contributing to the freight task in the GSR. The Plan:

- forecasts growth in the demand for total construction materials of 20.4% between 2016 and 2036, from a base case of approximately 40 million tonnes per annum;
- commits to increase the use of rail freight, coastal shipping and high productivity vehicles to assist with the containment of delivery costs for extractive materials;
- states that road congestion in the GSR is impacting freight costs; and
- acknowledges that the efficiency of freight delivery on the rail network is impacted by competition with passenger services.

Intermodal terminals and regional distribution centres are identified as a key requirement for increasing the proportion of freight transported by rail to and within the GSR. The Strategy and Plan recognise the importance of collaborating with industry to ensure suitable locations are identified, protected and zoned appropriately to allow for the efficient operation of these facilities.

The supply of crushed rock products into the GSR is an existing market for Cleary Bros and remains an important growth market for Cleary Bros. Quarry products have been supplied for construction of the following transport infrastructure projects in the GSR.

- Moorebank Intermodal Terminal.
- WestConnex.
- Northern Road Upgrade.
- More Trains, More Services Upgrade.

If approved, the Project would continue to meet market demands for the supply of high-quality hard rock products for critical road and rail infrastructure in the GSR. The Project would therefore contribute to the establishment of an efficient bulk handling network in the GSR and Illawarra-Shoalhaven Region.

2.2.2.3 Illawarra-Shoalhaven Regional Plans

The *Illawarra-Shoalhaven Regional Plan 2041* (Regional Plan) was released in May 2021 and provides a vision and direction for land use planning priorities and decisions addressing future needs for housing, jobs, infrastructure and a healthy environment in the Illawarra-Shoalhaven Region.



Strategy 10.1 of the Regional Plan recognises that the Illawarra-Shoalhaven Region has a history of over 200 years of mining and extraction activity since coal was discovered in the region in 1797. The Regional Plan acknowledges that as the region continues to grow, the continued extraction of resource lands should remain a priority. Strategy 10.2 of the Regional Plan recognises that continued extraction provides the opportunity for strategic biodiversity conservation in areas surrounding the resource lands, to protect environmental values whilst providing certainty for extraction activities.

The Regional Plan acknowledges the long-term importance to the local economy of maintaining agricultural and resource production. It aims to minimise potential land use conflicts and encourage continued investment in land for agriculture and natural resources. The Regional Plan notes that the region has valuable hard rock resources in the Dunmore – Shellharbour Hills area, which includes the Project Area, Albion Park Quarry (Holcim) and Dunmore Quarry (Boral) (**Figure 2.2**).

Cleary Bros sells approximately 78% of its products into the Illawarra-Shoalhaven Region and the Wingecarribee Local Government Area (LGA) (Element, 2022). As detailed in Section 2.2.3, those products are extracted from land that is identified as Significant Extractive Resources – State and Regional Mineral Resources. This is consistent with the Regional Plan priority of continued extraction from resources land in the Illawarra-Shoalhaven Region.

Cleary Bros has assessed the biodiversity impacts associated with the Project and would retire biodiversity offset credits to offset the removal of vegetation and habitat within the areas extracted (see Sections 3.12 and 6.4), should the Project be approved. In addition, Cleary Bros has re-designed the boundary of the extended Project extraction area to reduce the impacts to native vegetation. Combined, these measures are consistent with the Regional Plan objectives of strategic biodiversity conservation in resource lands to protect environmental values whilst providing certainty for extraction activities.

2.2.2.4 Illawarra-Shoalhaven Regional Transport Plan

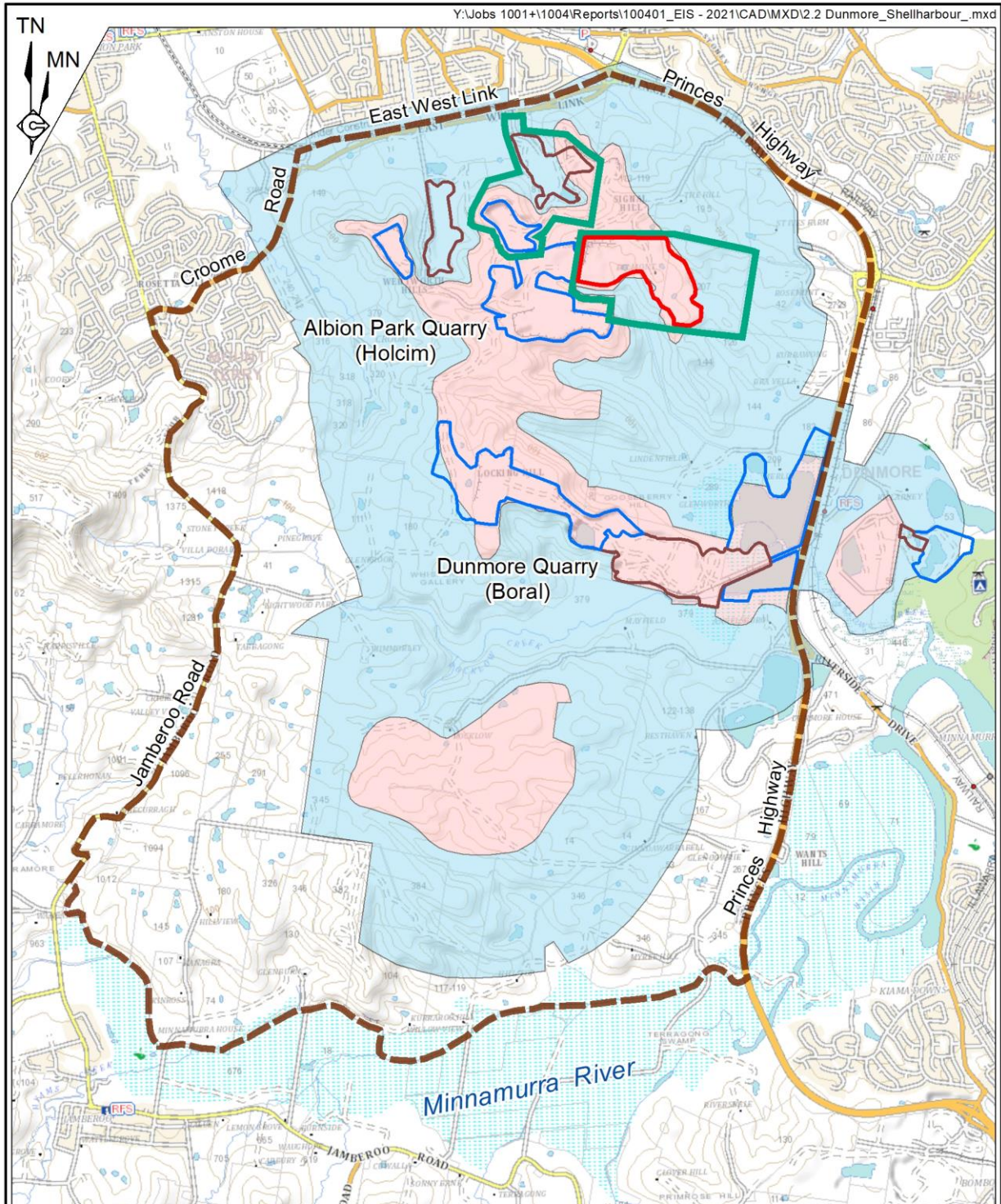
The *Illawarra-Shoalhaven Regional Transport Plan 2056* (Transport Plan) was released in 2021. The Transport Plan identifies key initiatives that are required to deliver transportation improvements for the Illawarra-Shoalhaven Region over the next 25 years. Transport initiatives currently being delivered include the following.

- Albion Park Rail Bypass – extension of the M1 Princes Motorway between Yallah and Oak Flats, completing the “missing link” in the motorway between Sydney and Bomaderry. The bypass follows the path of the existing East West Link, from which the Quarry is accessed (**Figure 2.2**). Construction commenced in January 2019 and the bypass opened in late 2021.
- Nowra Bridge Project¹ – a new four lane bridge is under construction over the Shoalhaven River with upgraded intersections and additional lanes on the Princes Highway. Major work commenced in mid-2020 and is expected to be completed by mid-2024.

¹ <https://www.rms.nsw.gov.au/projects/nowra-bridges-shoalhaven-river/index.html>



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Note: Some boundaries are coincident and are offset for clarity

REFERENCE

- Cleary Bros Property Boundary
- Project Area Boundary
- Dunmore-Shellharbour Hills Area
- Extraction Area
- Processing and Stockpiling Area
- Mineral Resource Area
- Transition Area

SCALE 1:50 000 (A4)



Data Source: Shellharbour LEP 2013

Figure 2.2
 DUNMORE - SHELLHARBOUR HILLS AREA



- Princes Highway Upgrade, Berry to Bomaderry² – to improve safety, increase road capacity and improve traffic flow. The upgrade is scheduled for completion in 2022 and will be the final piece of more than 30km of highway upgraded between Gerringong and Bomaderry since work started in 2012.

Planned transport initiatives in the Illawarra-Shoalhaven Region over the next 10 years include the following.

- Albion Park, Bulli and Thirroul Town Centre Improvements.
- M1 Princes Motorway Improvements between Figtree and Dapto
- Mount Ousley Safety and Reliability Improvements.
- Picton Road Upgrade.

A significant proportion of local Quarry sales supply products to critical infrastructure projects in the Illawarra-Shoalhaven Region, including the construction of roads, bridges, revetment structures, railways, ports and drainage controls. As the Project would continue to meet market demands for the supply of high quality hard rock products into local markets, it is consistent with the key objectives of the Regional Plan and the Transport Plan.

2.2.3 Planning Instruments

The Project Area is located mostly within an area identified as Significant Extractive Resources – State and Regional Mineral Resources and as a Mineral Resource Area, which is surrounded by a Transition Area as identified on *Shellharbour Local Environmental Plan 2013* mapping. Both areas have been recognised as strategically important for the supply of high quality construction materials. The Mineral Resource Area and Transition Area encompass most of the land within the Dunmore – Shellharbour Hills Area, as shown in **Figure 2.2**.

Extraction of hard rock resources from the Mineral Resource Area would continue, should the Project be approved.

2.3 Key Features

2.3.1 Introduction

The key features within the area surrounding the Project Area that could affect or be affected by the Project include the local and regional community, surrounding land uses and land ownership, and the surrounding natural and built features.

2.3.2 Local and Regional Community

The Illawarra Region, comprising the Shellharbour, Wollongong and Kiama Local Government Areas (**Figure 2.1**), has a growing population of over 310 000 people, which expanded by 6% in the five years to June 2018. The number of businesses and vehicle registrations in the

² <https://www.rms.nsw.gov.au/projects/berry-to-bomaderry/index.html>


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Illawarra Region is also expanding, as shown in **Table 2.1**. Projections for the region published³ by the NSW DPIE predict population growth of approximately 25% and an increase in the number of households of approximately 32% in the 25 year period to 2036, as shown in **Table 2.2**.

Table 2.1
Australian Bureau of Statistics (ABS) – Demographic data for the Illawarra Region¹

LGA		Shellharbour	Wollongong	Kiama	Total
Population²	Total	72 240	216 071	23 006	311 317
	Working Age (15-64 years)	63.6%	65.0%	59.6%	62.7%
	Growth 2013-2018	6.7%	5.6%	8.2%	6.0%
Businesses²	With >=1 employees	1 630	6 035	797	8 462
	With >=5 employees	26.0%	27.8%	22.6%	27.0%
	Growth 2014-2018	11.5%	10.9%	5.8%	10.5%
Registered Motor Vehicles³	Cars ⁴	41 791	116 362	13 869	172 022
	Light Commercial	8 817	20 828	2 896	32 541
	Trucks	1 166	3 531	408	5 105
	Car Growth 2013-2018	12.4%	10.1%	9.7%	10.6%
	Light Commercial Growth 2013-2018	31.5%	26.2%	24.6%	27.5%
	Truck Growth 2013-2018	20.9%	16.1%	15.7%	17.2%

Notes: 1. Downloaded from ABS website 25/10/2019 for Shellharbour, Wollongong and Kiama LGAs
2. As at 30 June 2018
3. As 31 January 2018
4. Includes passenger vehicles and campervans

The Illawarra-Shoalhaven Region is traditionally known for its industrial production and mining, however its economic base is currently transitioning into service-based industries such as health care, education and knowledge based services (DPE, 2015). The significance of these trends and other social matters are considered further in Section 6.12.

The urban areas of Wollongong and Shellharbour form a contiguous community that is one of the top ten largest urban areas in Australia, which is likely to be home to half a million people by 2050. The Illawarra-Shoalhaven Region generated \$16 billion Gross Regional Product in 2013, which is the third largest economic contributor to regional growth in NSW (DPE, 2015).

2.3.3 Surrounding Land Uses

The Dunmore – Shellharbour Hills Area (**Figure 2.2**) and the area extending east to the coast was formerly a dairy farming district. As a result, most of the original vegetation was cleared by the early settlers for timber and dairying in the 1860s (DECCW, 2011). Since the 1960s, the Dunmore – Shellharbour Hills Area has been the focus of extractive industries with current operations at Albion Park (Cleary Bros and Holcim) and Dunmore (Boral) targeting hard rock resources.

³ <https://www.planning.nsw.gov.au/Research-and-Demography/Demography/Population-projections>



**Table 2.2
Population and Household Projections for the Illawarra Region¹**

Projection ²	LGA / Region	2011	2016	2021	2026	2031	2036	Total Change	Total % Change	Annual % Change
Population	Kiama	20 800	22 150	23 450	24 700	25 900	27 100	6 300	30.27%	1.06%
	Shellharbour	66 200	71 150	76 200	81 100	85 850	90 500	24 250	36.64%	1.26%
	Wollongong	202 050	211 750	220 750	229 250	237 150	244 400	42 350	20.95%	0.76%
	Illawarra	289 050	305 050	320 400	335 050	348 900	362 000	72 950	25.24%	1.01%
	Greater Sydney	4 288 361	4 683 816	5 108 471	5 539 826	5 977 731	6 423 986	2 135 625	49.80%	1.99%
Households	Kiama	8 100	8 850	9 500	10 100	10 750	11 350	3 250	40.38%	1.40%
	Shellharbour	24 250	26 900	29 400	31 750	34 050	36 300	12 050	49.78%	1.60%
	Wollongong	79 150	83 850	88 250	92 150	95 800	99 150	20 000	25.28%	0.90%
	Illawarra	111 500	119 600	127 150	134 000	140 600	146 800	35 300	31.66%	1.27%
	Greater Sydney	1 566 500	1 726 900	1 891 500	2 058 350	2 230 600	2 409 300	842 800	53.80%	1.74%

Notes: 1. Downloaded from DPE website 4/11/2019
2. Projections based on 2016 data

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Most of the land in the Dunmore – Shellharbour Hills Area consists of grassland for grazing, however, stands of remnant vegetation remain on steeper slopes and within gullies, as shown in **Figure 2.3**. Most of these vegetated areas are identified as Environmentally Sensitive Land on the *Shellharbour Local Environmental Plan 2013* mapping. Grazing and dairying is conducted to varying degrees on properties, north, east and southeast of the Cleary Bros property.

The Project Area is located within a rural area where single residences are located on rural and semi-rural lifestyle properties. **Figure 2.4** displays the closest residences to the north of the Project Area namely, “The Cottage” and “The Hill”. Both of these residences are located on the “Figtree Hill” property. Six rural residences are located on properties to the northeast, east and southeast fronting onto James Road. There are no nearby occupied residences to the southwest and west of the Project Area.

Figure 2.4 also displays sections of the low-medium density residential development within the nearby suburbs of Albion Park Rail, Blackbutt, Flinders and Shell Cove. The increase in residential development in this area in recent years has been accompanied by the construction of a new railway station on the South Coast line (Shellharbour Junction) and other community facilities. Construction of residences is currently underway immediately east of Shellharbour Junction and is likely to continue adjacent to Dunmore Road.

The presence of the surrounding residential development provides a constraint with regard to visual impacts, however, the Project Area is sufficiently distant from these residential areas for noise and air quality issues not to be a substantial constraint.

2.3.4 Land Ownership

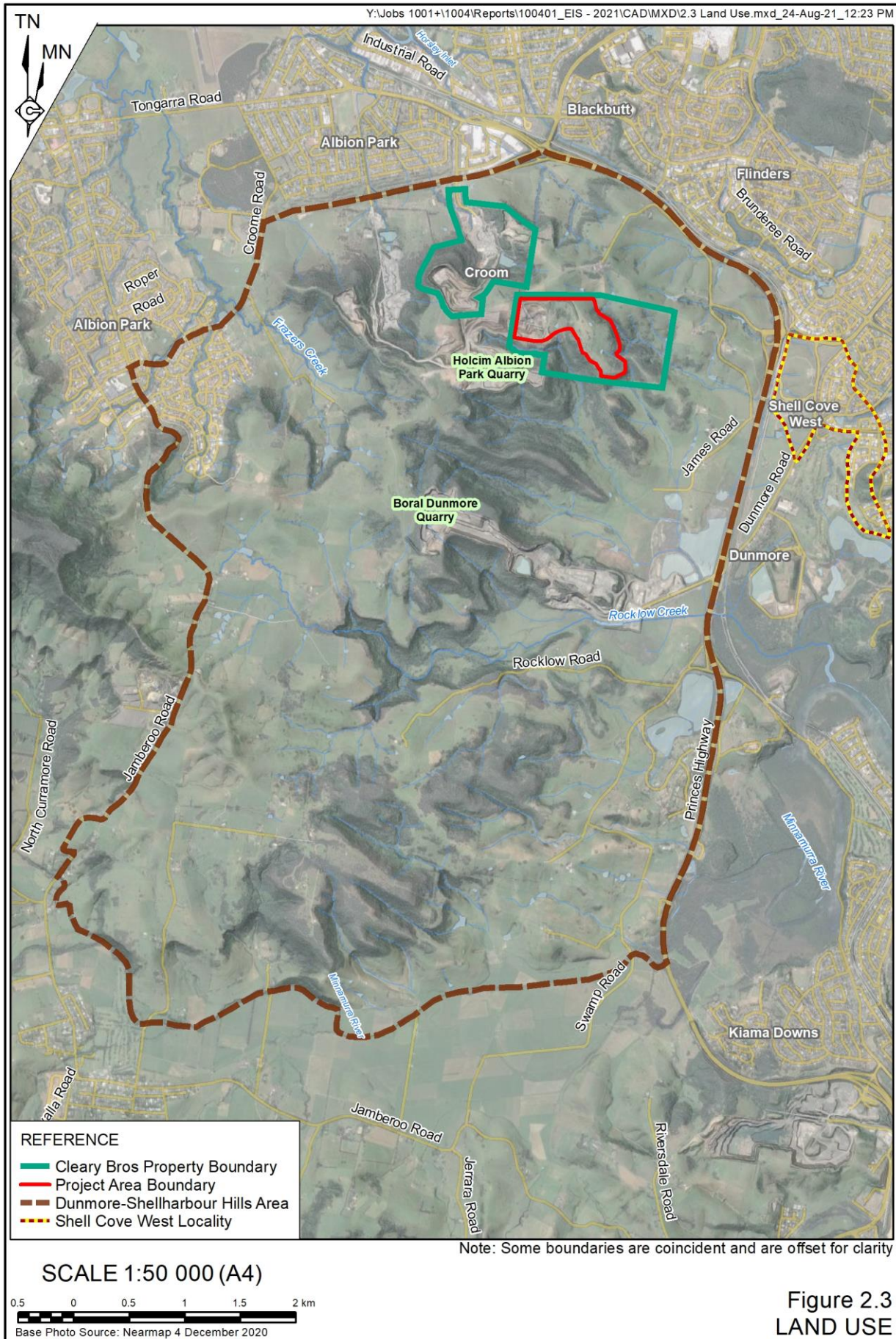
The Dunmore – Shellharbour Hills Area has been the focus of the extractive industry for many decades, therefore most of the land is owned by companies involved with that industry, as shown in **Figure 2.4**. The Project Area is located on land owned by Bridon Pty Ltd, an associated entity of Cleary Bros (Bombo) Pty Ltd. Private land holdings are present to the north, east and southeast of the Project Area and west and south of the Princes Highway. These properties range in area from 1.7ha to 89ha. Transport for NSW (through the former Roads and Maritime Services) has acquired property adjacent to the East-West Link for the Princes Highway Albion Park Rail bypass, which is currently under construction (**Figure 2.4**).

Sections 6.2 and 6.3 respectively provide further information regarding the proximity of the residences on the surrounding properties as they relate to air quality and noise-related impacts.

2.3.5 Natural and Built Features

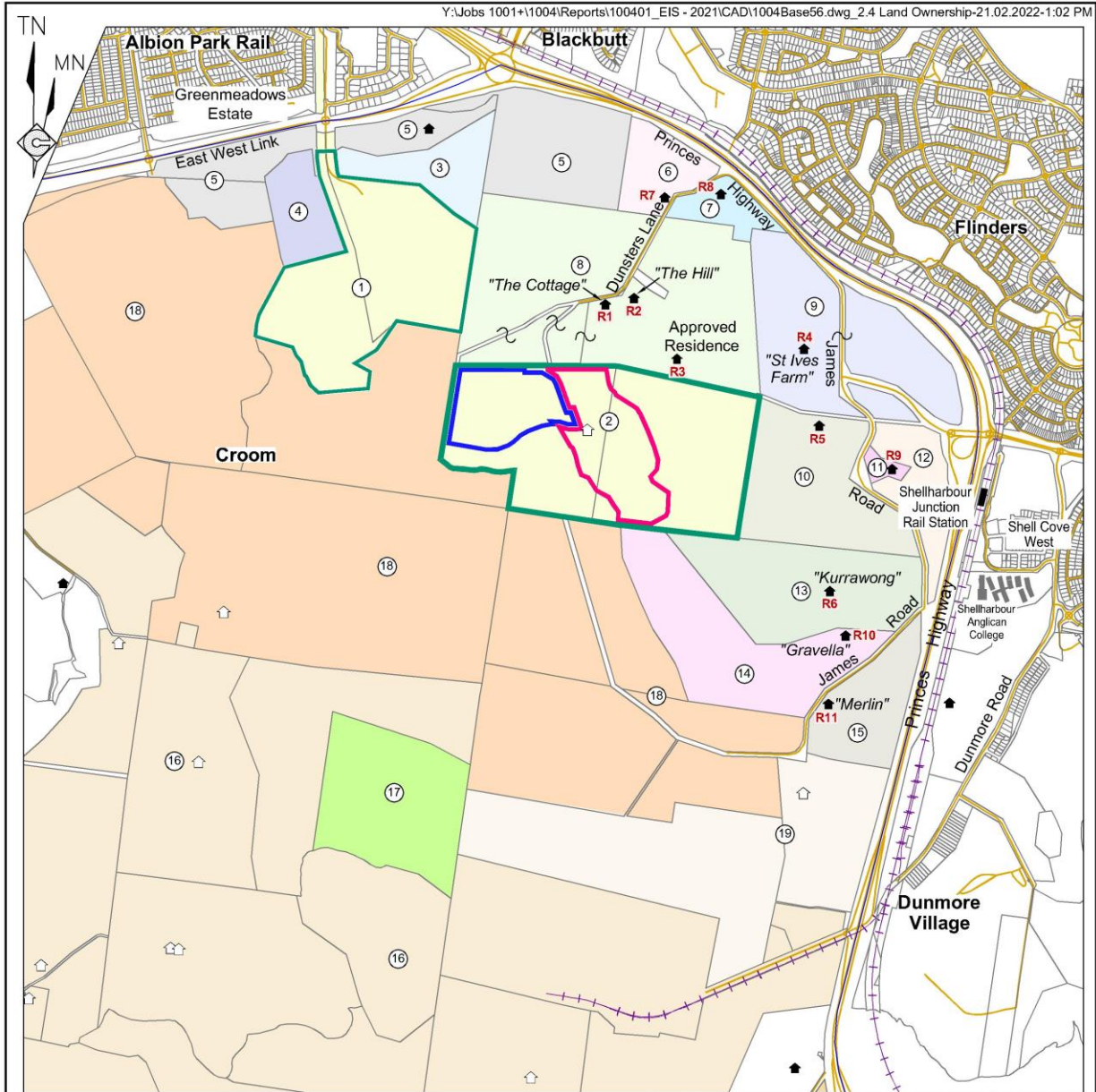
Most of the original vegetation in the Dunmore-Shellharbour Hills Area was previously cleared for timber and dairying purposes, and since the 1960s the area has been the focus of grazing, dairying and extractive activities. Most of the land in the Dunmore-Shellharbour Hills Area is classified as grazing (native vegetation or modified pastures) or mining and extraction on NSW land use mapping⁴, as shown in **Figure 2.5**. Transport infrastructure includes the East-West Link, Princes Highway, other roads and the railway corridor east of the Princes Highway. Residential and farm infrastructure and services infrastructure are located north of East-West Link and north and east of the Princes Highway (**Figure 2.5**). There are no national parks or conservation areas in the Dunmore-Shellharbour Hills Area.

⁴ <https://data.nsw.gov.au/data/dataset/nsw-landuse-2017>





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Note: Some boundaries are coincident and are offset for clarity

- REFERENCE**
- Cleary Bros Property Boundary
 - Stages 1 to 6 Boundary
 - Stage 7 Boundary
 - Cadastral Boundary
 - Existing Road (Sealed)
 - - - Existing Railway Line
 - ⬆ Residence (Resource company-owned)
 - ⬆ R6 Residence (Privately-owned)
 - ▨ Suburban Housing
 - ① Landowner Identifier (See table)
 - Croom** Suburb Identifier

Ref	Landowner
1	Cleary Bros (Bombo) Pty Ltd
2	Bridon Pty Ltd
5	Roads and Maritime Services
8	Figtree Hill Pty Limited
12	Rosemount Heights Pty Ltd
16	Boral Resources (NSW) Pty Ltd
17	Railcorp
18	Holcim (Australia) Pty Ltd
19	Dunmore Sand and Soil Pty Ltd
○	All other numbered land is privately owned

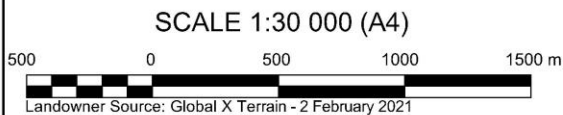
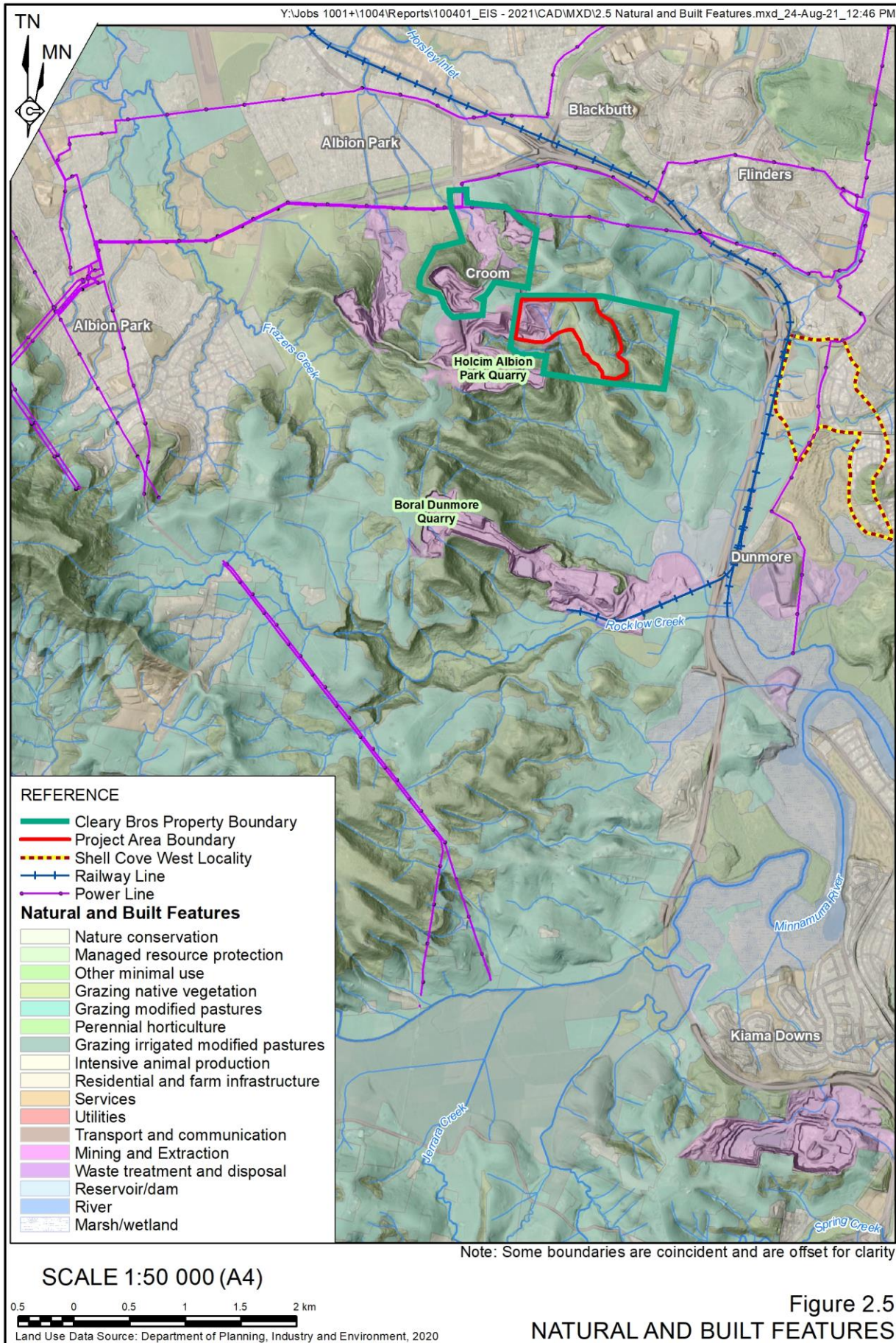


Figure 2.4
LAND OWNERSHIP





2.3.6 Risks and Hazards

2.3.6.1 Risk Assessment

An environmental risk assessment for the Project identified the following key risks (risk ranking of high or above) for the Project (**Appendix E**).

- Terrestrial Ecology – clearing of native vegetation within the Project Area.
- Historic Heritage – authorised removal of a registered locally significant historic heritage site.
- Visibility – amenity impact of operations within the extraction area to residences 1.1km to 2.4km east of the Project Area.

These key risks would be controlled using the management and mitigation measures detailed throughout Section 6. It is noted that the Project and surroundings would not be impacted by flooding, acid sulphate soils, contaminated land, steep slopes and landslips, mine subsidence and coastal hazards. Project-related risks and hazards related to climate change and bushfire are described in the following subsections.

2.3.6.2 Climate Change

Climate projections for the Illawarra-Shoalhaven Region are provided in the *Shoalhaven and Illawarra Enabling Regional Adaptation* report (OEH, 2019). The projections extend to the near future (to 2030) and the far future (to 2070). In summary, the region is expected to experience the following climate trends (OEH, 2019).

- An increase in temperature with more hot days and fewer cold nights and increasing heatwaves that will be hotter and last longer, in the near and far future.
- Rainfall seasonality would change, with increased rainfall in the autumn and decreased rainfall in winter, in the near and far future. Spring rainfall would decrease, and summer rainfall would increase in the near future.
- Fire risk would increase, with increases in average and severe forest fire and danger index values in the near and far future.

A greenhouse gas assessment for the Project determined that the annual Scope 1 greenhouse gas emissions generated by the Project would represent <0.0057% and <0.00014% of total NSW and Australian greenhouse gas emissions respectively (see Section 6.2.9).

2.3.6.3 Bush Fire

The Project Area consists of the current extraction area in Stages 1 to 6 in the west and the Stage 7 extension area in the east. Stage 7 is located on a north-northwest trending ridgeline comprising modified grazing pasture at an elevation generally above 100m AHD, which is flanked by bushland downslope to the east, south and southwest. Vegetation density generally increases towards the surrounding watercourses (**Figure 2.3**). The bushland is a mixture of native vegetation regrowth, which includes endangered ecological communities, and non-native vegetation, including weeds. The native vegetation comprises subtropical rainforest and tall shrubland communities (see Section 6.5), which are typically low fire risk.



A review of the NSW National Parks and Wildlife Service fire history mapping⁵, which has a state-wide spatial record of fires since 1902, determined that there have been no recorded grass fires or bushfires in the Dunmore-Shellharbour Hills Area.

The NSW Rural Fire Service provides mapping of bush fire prone land⁶ (BFPL) which shows that most of the Dunmore-Shellharbour Hills Area is mapped as medium- or high-risk of bush fire (**Figure 2.6**). Land with quarries and associated infrastructure are outside of the BFPL medium- and high-risk categories, and these areas would provide fire breaks in the event of fire.

Threat from fire includes grass fires in modified pasture and bushfire in bushland. Given the rainforest vegetation, the high annual rainfall of 1 098mm (Section 6.1.3), the lack of previous fires and the quarries acting as fire breaks, the risk of bush fire, either being caused by the Project, or the Project being impacted by bush fire, is considered to be low. However, the climate projections outlined in Section 2.3.5.2 indicate that future fire risks are likely to increase. An assessment of bush fire risk for the Project is presented in Section 6.11.2.

Planning for bush fire protection, emergency management and evacuation procedures would continue to be managed in accordance with the Quarry's *Emergency Management Plan*, which would be updated to include the Project Area should the Project be approved.

2.4 Cumulative Impacts

Cumulative impacts from the Project are addressed in the relevant impact assessments provided in Section 6. In summary, the cumulative impacts from the Project and surrounding quarry operations is acceptable for key environmental factors such as air quality, noise and blasting, biodiversity and visual amenity. It is noted that the Project would not require any change in the currently approved transportation limits for the Quarry, and hence there would be no increase in cumulative impacts from increased traffic levels from the Project.

2.5 Agreements

Cleary Bros has consulted extensively with the owners of "Figtree Hill" during preparation of this document and in recent years. The parties have negotiated an agreement that addresses a range of matters, including air quality, noise, blasting and visual impacts. Under that agreement, the owners have agreed to accept Project-related impacts to the extent identified in the air quality, noise and blasting, and visual assessments as presented in Sections 6.2, 6.3 and 6.4 of this EIS. The agreement also provides:

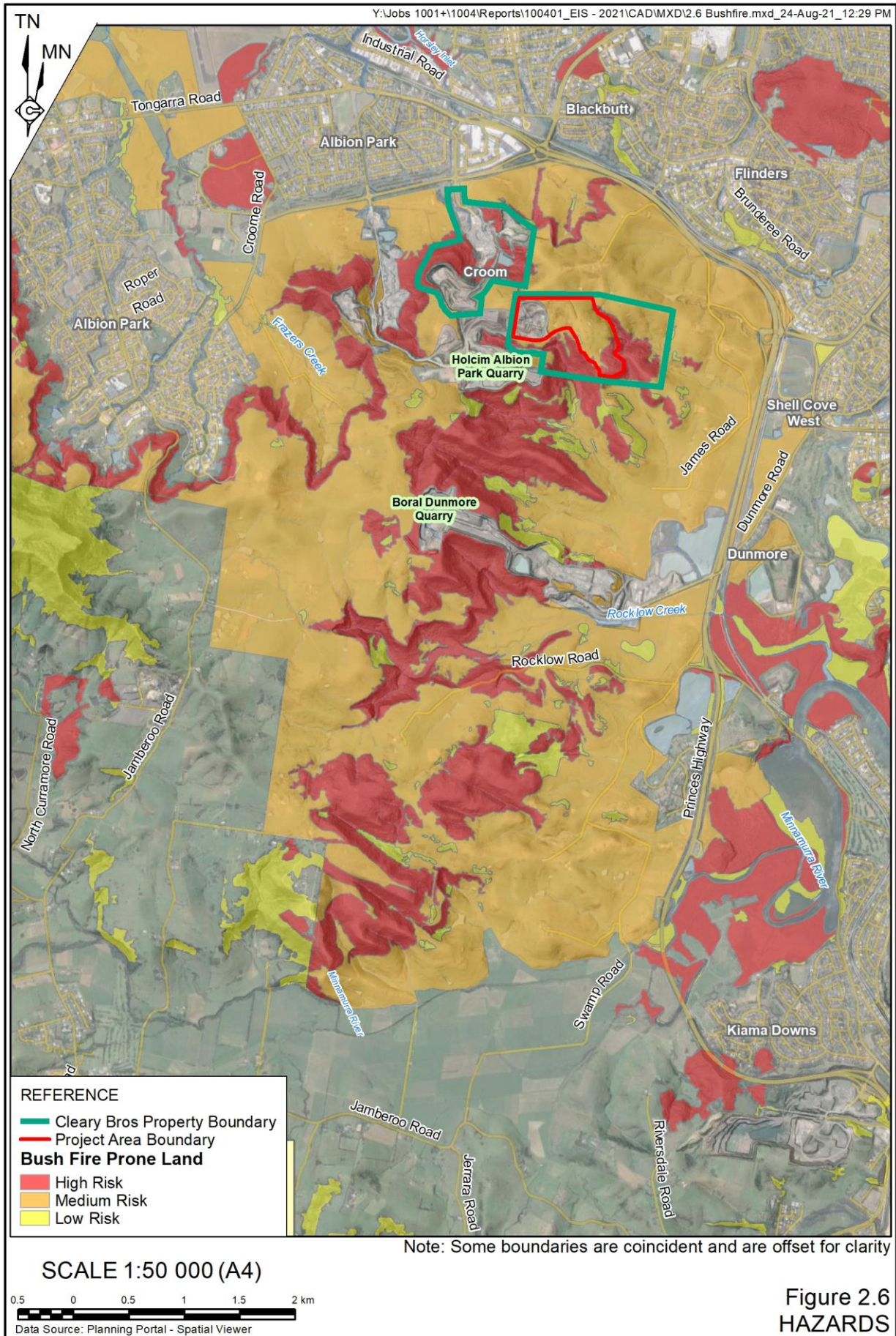
- that Cleary Bros will only perform operations within the Stage 7 Area on a maximum of 16 Saturdays per calendar year from 7:00am to 1:00pm (note there are no changes to operations on Monday to Friday);
- that Cleary Bros will limit blasting to one blast per week;
- that the "additional noise management and mitigation measures" assessed by SLR (2022a, [Section 7.3.3](#)) would not be required; and
- a means whereby the proposed northern amenity barrier and adjoining tree screen would not be constructed, which is subject to further negotiations with the owners of "Figtree Hill".

⁵ <https://data.nsw.gov.au/data/dataset/fire-history-wildfires-and-prescribed-burns-1e8b6>

⁶ <https://data.nsw.gov.au/data/dataset/nsw-bush-fire-prone-land>



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Given predicted residual noise impacts are less than the Project Noise Trigger Levels for all other residences and the Shellharbour Anglican College, the requirements of the *Voluntary Land Acquisition and Mitigation policy* would not be triggered for those properties.

2.6 Concluding Summary

The NSW Government planning documents and instruments described in this section provide strategic support for the Project, as outlined below.

- The high quality hard rock resources within the Project Area are located in a defined Mineral Resource Area. Cleary Bros' Quarry is one of three quarries in the contiguous defined Mineral Resources Area.
- The transition area around the defined Mineral Resource Area comprises predominantly rural land with a low population density and comparatively few landowners within 1.1km of the Project Area.
- The local and regional community provide both the markets for the Quarry's products and the workforce, suppliers and services required to operate the Quarry.
- The local infrastructure, particularly the local road network, provides an excellent basis for the distribution of the Quarry products.
- The Project Area is well situated in that it is not prone to flooding, landslips, mine subsidence or coastal hazards.