



# Appendix 3

## Landscape Character Impact Assessment

(Total No. of pages including blank pages = 25)

Cleary Bros (Bombo) Pty Ltd

ABN: 28 000 157 808



**CLEARY BROS**

# Albion Park Quarry Extraction Area Stage 7 Extension

## Landscape Character Impact Assessment

*Prepared by*



**RWCorkery&co**

October 2022



**RWC**Corkery&co

# Cleary Bros (Bombo) Pty Ltd

ABN: 28 000 157 808

## Albion Park Quarry Extraction Area Stage 7 Extension

# Landscape Character Impact Assessment

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## Executive Summary

The Landscape Character Impact Assessment has established that two landscape character zones in the vicinity of the amended Project Area would experience Moderate to Low landscape character impacts, namely the area west of the Princes Highway and the Shell Cove West residential area. The assessment has also established that the landscape character impacts associated with the Princes Highway and the Illawarra Escarpment would be low.

The landscape character impacts for the area west of the Princes Highway relate principally to the removal of some infrastructure and buildings associated with the dairy industry and early settlement in this area. The impacts for the Shell Cove West residential area relate to the minor changes in the landform within the amended Project Area and the progressive exposure of vegetated extraction benches in the second half of the Project life.

The extent of the predicted landscape character impacts would be mitigated throughout the life of the Stage 7 extension as a result of the careful design of internal stage boundaries, the use of amenity barriers and tree screens, adoption of 7m final benches on the visible western and northern faces of the extraction area and the progressive rehabilitation of the final benches.

Overall, the landscape character impacts are assessed to be acceptable, particularly in light of the management and mitigation measures to be adopted.



# 1. Introduction

This report has been prepared to address the landscape character impacts of the proposed Stage 7 extension of the Albion Park Quarry Extraction Area at Croom. It is noted that the SEARs issued for the Project on 3 October 2019 focused upon the detailed visual assessment “before, during and post mining on private land owners in the vicinity of the development and key vantage points in the public domain, paying particular attention to any new landforms”.

Following the exhibition of the EIS for the Project<sup>1</sup>, the Department of Planning and Environment (DPE) requested the following landscape character-related matters be addressed given the DPE considered the EIS.

*“does not consider the potential impact of the proposal on the local and regional landscape character”.*

*“The department requires a landscape character impact assessment. The assessment of landscape character is distinct from the visual impact of the exposed quarry faces and should consider the overall impact of the proposal on an area’s character and sense of place.”*

The DPE recommended that the “Transport for NSW 2020 Guideline for Landscape Character and Visual Impact Assessment (EIA-NO4)” be used as a guide for the methodology and assessment process. It is noted that TfNSW (2020) differentiates between landscape character impact assessment and visual impact assessment in the following manner.

- Landscape Character Assessment helps determine the overall impact of a project on the aggregate of an area’s built, natural and cultural character or sense of place (what people think and feel about a place and how society values it whether or not they are physically present at it).
- Visual Impact Assessment helps define the day-to-day visual effects of a project on peoples’ views (what people see at a place, when they are there).

This report presents:

- a brief description of the amended Project and an overview of the components of the amended Project that would influence its landscape character impacts;
- the existing landscape character focussing upon the landforms within the amended Project Area and the surrounding landscape character zones together with a sensitivity and magnitude analysis;
- the amended Project management and mitigation measures that are proposed to minimise the landscape character impact of the amended Project; and
- an assessment of the amended Project’s impacts upon the landscape character assuming the adoption of all of the proposed management and mitigation measures.

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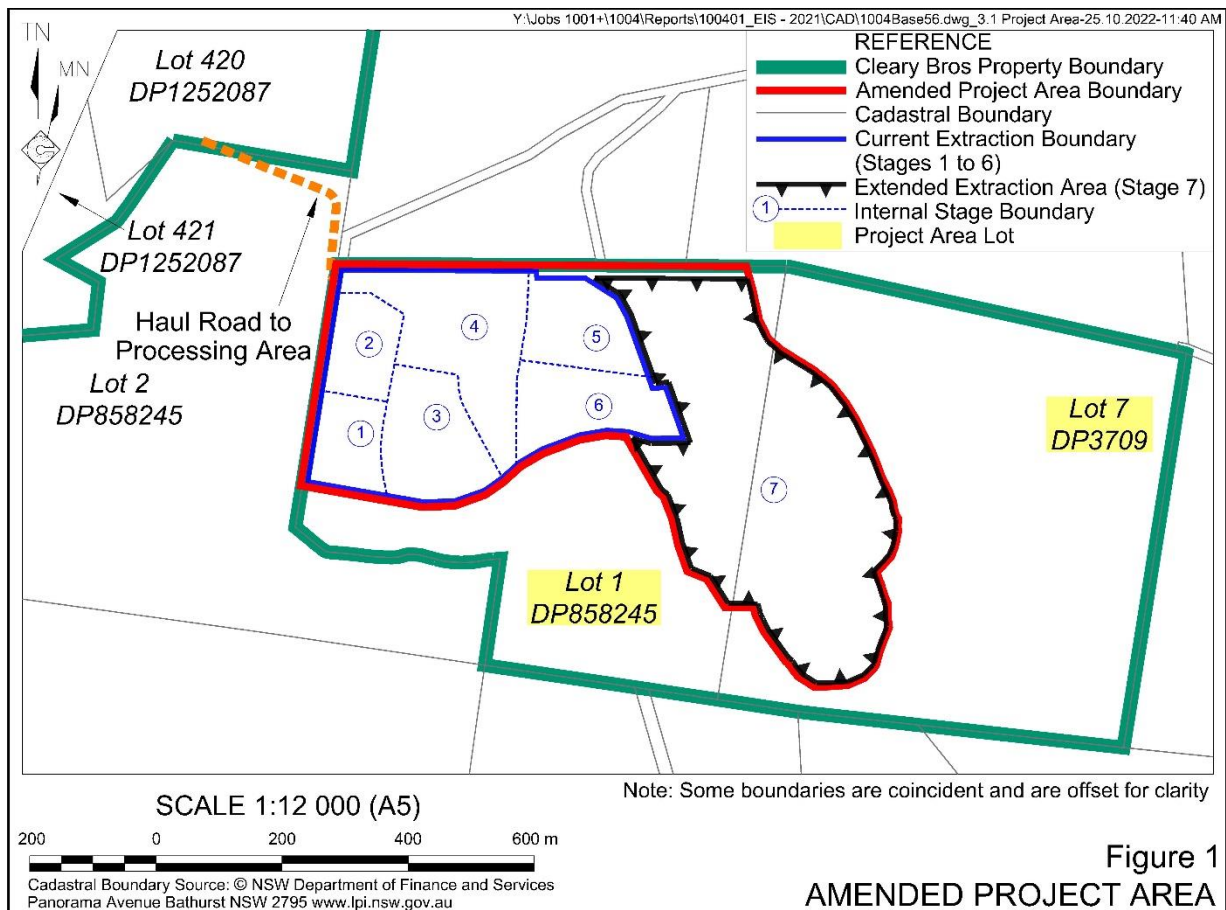
<sup>1</sup> The Project as presented in the EIS which was placed on exhibition has been amended in response to a range of matters raised by some Government Agencies and is the subject of an *Amendment Report*. Throughout this report, references are made in text and on figures to the “amended Project”.



## 2. The Amended Project and Potential Landscape Character Impacts

### 2.1 Amended Project

Cleary Bros proposes to extend the operational life of the Albion Park Quarry through the extension of its current extraction area which originally commenced operations in 2006. The current extraction area comprises six stages covering approximately 18ha and it is proposed to extend the extraction area into an adjoining area covering approximately 17.5ha referred to as Stage 7. For the purposes of the proposed development, Stages 1 to 7 are collectively referred to as the “amended Project Area” (see **Figure 1**). Stages 1 to 6 are included in the amended Project Area as a quantity of rock remains to be extracted in those stages and greater efficiencies would be achieved by extracting the remaining rock currently in Stages 4, 5, 6 in conjunction with Stage 7. Some recoverable rock also remains to be extracted in Stage 2. Furthermore, some of the overburden and soil from Stage 7 would be used for the rehabilitation of Stages 1 to 4.





**Figure 2** displays the layout of the amended Project Area and the internal stage boundaries with the key components being the amenity barriers, tree screens and proposed haul road. Extraction within Stage 7 is proposed to occur within five substages, namely Stages 7a, 7b, 7c, 7d and 7e. It is noted that the boundaries of all substages have been defined largely as a result of the Visual Impacts Assessment. Stage 7e would be the final area extracted in order to minimise views of the extraction operations from the east and southeast.

It is proposed that the extraction of the hard rock materials in Stage 7 (latite and agglomerate) would generally continue as it has in the past in Stages 1 to 6 with the rock removed by blasting. Primary crushing and screening of the majority of blasted material would be undertaken by a mobile jaw crusher and screen within the amended Project Area. These processed materials would be loaded into haul trucks and transported to the fixed processing plant for additional processing as necessary, stockpiling and load-out for delivery to customers. Additional mobile secondary crushing and screening plant would continue to be used on a campaign basis within the amended Project Area.

## 2.2 Potential Landscape Character Impacts

The amended Project would involve the extraction of rock from the top of and beneath a local ridge within the hills to the southwest of Shellharbour City. The extraction would create a different landform within the amended Project Area which, when viewed externally from surrounding landscape character zones, would be different in the following ways.

1. In some cases, the removal of the upper section of the ridge would effectively change the skyline for people looking towards the ridge from the east through either the minor reduction in the height of the ridge topography or removal of vegetation currently visible on the skyline. Conversely, for many viewers, the change in landform within the amended Project Area would not change the skyline.
2. The character of the final landform after the cessation of extraction, and during stages of operations, would be different to the current landform. Essentially, natural slopes would be replaced by more linear, and near horizontal features, reflecting the final vegetated benches within the extraction area. It is likely that the extent of the final vegetated benches observed from external locations would be limited to the upper two to six benches.





### 3. Approach and Methodology

The approach to and methodology for this assessment has been informed by the *Guideline for landscape character and visual impact assessment (TfNSW, 2020)*.

The methodology to assess landscape character impacts of the amended Project is based upon the combination of the sensitivity of the area or view to change and the magnitude (scale, contrast, quality, distance) of the amended Project on that area or view(s).

Sensitivity refers to the qualities of an area, the number and types of receivers and how sensitive the existing character is to the proposed nature of change. Consideration of sensitivity also involves the sense of place held by those who live or visit the respective landscape zones.

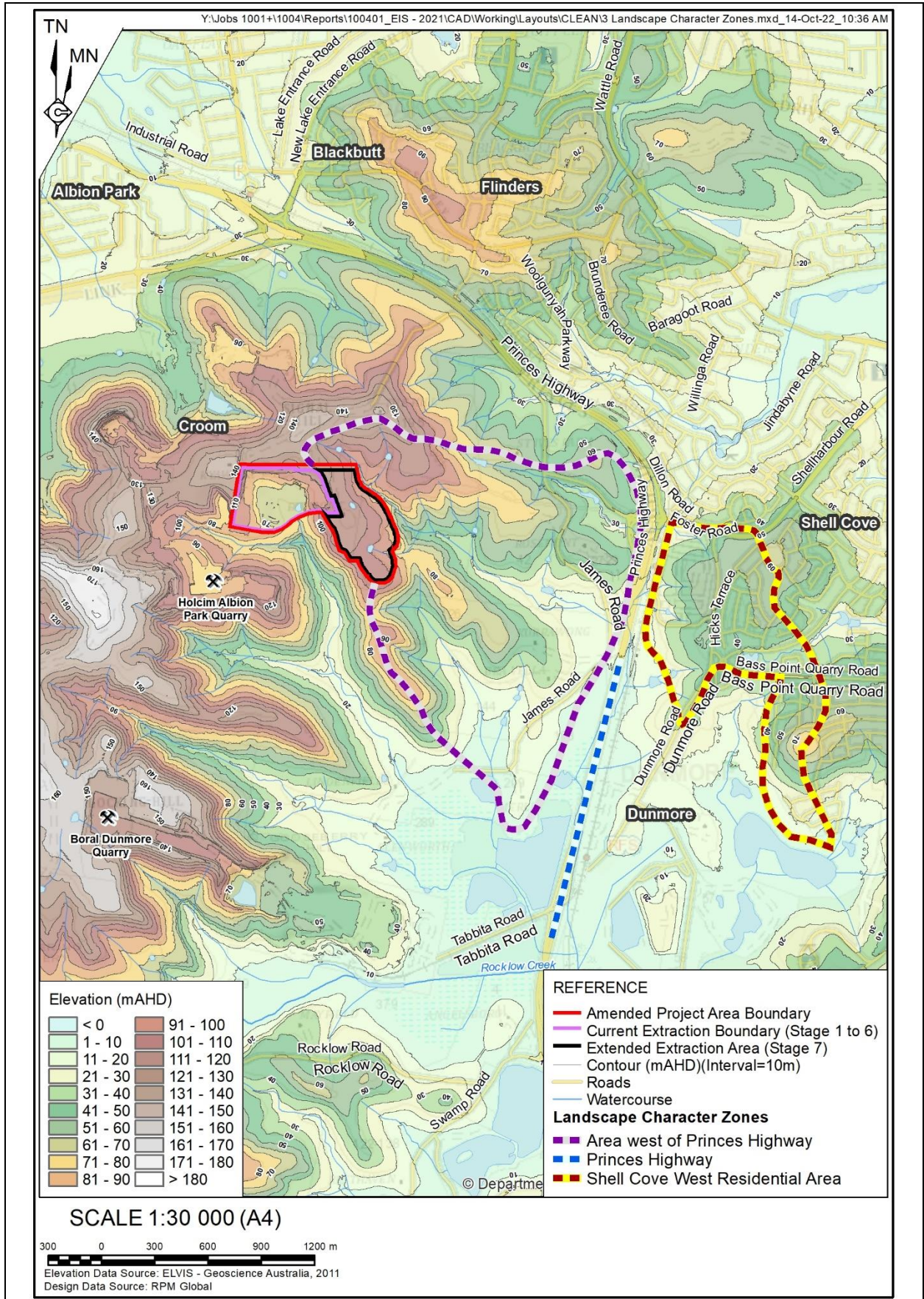
Magnitude refers to the physical scale of the amended Project, how distant it is and the contrast it presents to the existing conditions. Cumulative impacts are also relevant in the consideration of magnitude.

For the purpose of this assessment, the impacts upon the landscape character have been assembled for four landscape zones or areas surrounding the amended Project Area, all of which have views to varying extents of parts of the amended Project Area from either residences or surrounding land. Areas excluded from the assessment include those to the north, northwest and west as these areas are screened from viewing the amended Project Area by intervening topography and/or vegetation. The four landscape character zones or areas assessed are:

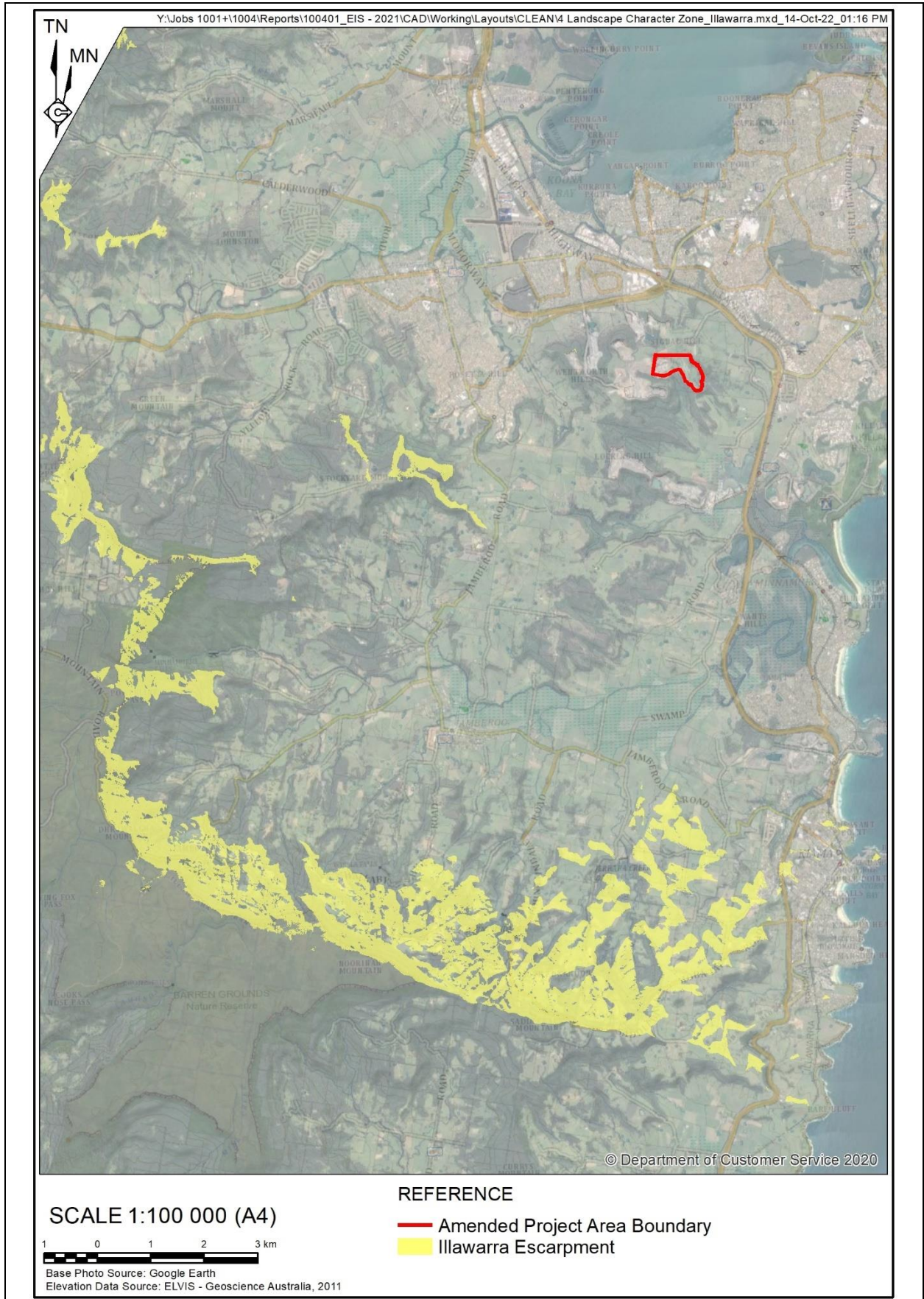
1. the rural/rural residential area west of the Princes Highway;
2. a 1.5km section of the Princes Highway from Dunmore towards Albion Park;
3. the residential area principally within Shell Cove West, including the proposed Shellharbour Hospital site; and
4. elevated areas on the Illawarra escarpment.

Landscape character zones 1 to 3 are displayed on **Figure 3**, whilst zone 4 is displayed on **Figure 4**.

The assessment initially presents a description of the landscape within the amended Project Area and the four surrounding landscape zones or areas and then examines the relevant sensitivity and magnitude attributes for each landscape zone. The amended Project's management and mitigation measures (drawn largely from the Visual Impacts Assessment – R.W. Corkery & Co., 2022) are presented. The report concludes with an evaluation of impacts through the use of the landscape character rating matrix within TfNSW (2020) with recognition of the predicted effectiveness in mitigating the impacts upon the landscape's character.



**FIGURE 3**  
**LANDSCAPE CHARACTER ZONES: DUNMORE-SHELLHARBOUR AREA**



**FIGURE 4**  
**LANDSCAPE CHARACTER ZONE: ILLAWARRA ESCARPMENT**



## 4. Existing Landscape Character

### 4.1 The Project Area

**Figure 3** shows the Project Area is located on a ridge within the elevated rural land south and west of the Princes Highway. The ridge within the Project Area trends north-northwest to south-southeast and varies in elevation from approximately 125m AHD in the north to 65m AHD in the south. The centreline of the ridge traverses generally along the eastern side of Stage 7a. The land on the eastern side of the ridge falls steeply for the last 150m to elevations on the eastern boundary of between approximately 90m AHD in the north and 75m AHD in the south.

### 4.2 Landscape Character Zones

#### Area west of Princes Highway

The topography of the rural land east of the Project Area and west of the Princes Highway has elevations of approximately 30m AHD to 50m AHD. Whilst none of the occupants of the residences in this area have views of the amended Project Area due to the intervening topography and vegetation, some views are possible from other locations on the properties on which the residences are constructed.

#### Princes Highway

The Princes Highway is located between 1.3 km and 2.0km east and southeast of the Project Area at elevations of approximately 5m AHD to 10m AHD. For those motorists travelling northwards, occasional views / glimpses are possible from this zone towards the ridge within the amended Project Area.

#### Shell Cove West Residential Area

The eastern side of the Project Area is visible from land to the east of the Princes Highway within the residential area of Shell Cove West, as well as from the proposed Shellharbour Hospital site. It is noted that a proportion of this area is topographically lower than the proposed eastern rim of the amended Project Area and the ridge within the amended Project Area effectively forms the skyline when viewed from the lower areas. For the more elevated land within Shell Cove West, the entire ridge within the amended Project Area is positioned below the skyline formed by the distant Illawarra escarpments.

#### Illawarra Escarpment

The Illawarra coastal plain is backed by an escarpment set back at various distances from the Pacific Ocean. In the vicinity of the Project Area, the closest parts of the escarpment are approximately 9km to 11km south and southwest of the amended Project Area.



## 4.3 Sensitivity and Magnitude Analysis

### Area West of Princes Highway

The sensitivity of this zone reflects that this is an area in which its rural character underpins the values of the land to both its occupants and those that look onto the land from external locations. The sloping nature of the land, largely to the east, provides many opportunities for views from the residences and properties within this zone with some able to enjoy views towards the Pacific Ocean. It is noted that this zone has remained in its rural condition principally because of its long-term protection of defined hard rock resources in the Dunmore-Shellharbour Hills area (see EIS Section 2.2.2.3). These properties have co-existed with quarry operations for many decades and are likely to continue to coexist for many more decades.

This zone is also recognised for its contribution to the historic heritage of the area, principally through the remains of some infrastructure and buildings associated with the dairy industry and early settlement in this area. Details of the historic heritage within this zone is provided in the Historic Heritage Assessment prepared by Biosis (2021).

From a sensitivity perspective, this area is sparsely populated and the occupants are familiar with the current quarrying operations within the three quarries in the Dunmore-Shellharbour Hills area.

Cleary Bros holds a negotiated agreement with one of the owners of the rural properties adjacent to the amended Project Area which addresses the relevant visibility matters of the potential impacts. For the remaining landowners in this area, the level of sensitivity would remain low given very little would change for them throughout the ongoing operations within the Stage 7 extension.

The matters relating to magnitude for the persons within this zone would be limited as there would be no change in the maximum annual production level and no visible changes to the landform when viewed from the residences. It is noted, however, that some minor changes to the landform within the amended Project Area may be observed from some of the rural/semi-rural areas on these nearby properties.

### Princes Highway

The sensitivity of this zone reflects its use as a major thoroughfare for vehicular traffic travelling from Kiama and the South Coast to Wollongong and beyond.

The level of change in the topography on the ridge within the amended Project Area would not be discernible at the distances between the highway and the amended Project Area. Furthermore, the lack of contrasting colours between the extracted rock and foreground vegetation would result in little opportunity for motorists travelling at 100km/h to observe any landscape characters impacts.

The highway has a low elevation and is bordered by intermittent screening vegetation for much of its length which allows motorists travelling northwards only brief opportunities to gain glimpses of the entire ridge system within the Dunmore-Shellharbour area, including the amended Project Area. In particular, the Project Area would be located at approximately 45° to the left of the driver's line of sight and the vehicles would pass through this section of the Highway in approximately 55 seconds.



### **Shell Cove West Residential Area**

The sensitivity of this zone reflects its west-facing topography and the opportunities, albeit from different elevations, for views towards and across the amended Project Area. This area has been developed over the past 10 years and is still subject to ongoing housing construction and related development, including the proposed Shellharbour Hospital on the western side of Dunmore Road near the southern end of this zone.

The sense of place recognised for this zone is the opportunity for occupants of the numerous residences to continue to benefit from the view of a rural area with grazing paddocks and protected native vegetation within the area referred to as Dunmore-Shellharbour Hills area. It is however recognised that this area incorporates three long standing substantial quarries that were developed in the mid-20<sup>th</sup> Century with operational areas that, while visible, are limited in extent. These quarries, including the Cleary Bros Albion Park Quarry, effectively pre-date all of the residential developments within Shell Cove West.

The matters relating to magnitude for this zone relate to the high number of residences within this zone. The extent to which occupants of the residences are able to view changes in the landscape within the amended Project Area would depend upon their aspect, elevation, surrounding development and intervening vegetation. In reality, the changes to the landscape would occur over considerable periods and Cleary Bros has committed to a range of management and mitigation measures to limit landscape character impacts both during and following the operation of the Stage 7 extension. Hence, the magnitude of changes to the landscape character from this zone would be low.

### **Illawarra Escarpment**

The sensitivity of this zone reflects its considerable distance from the amended Project Area and the fact that there would be no change to the skyline when viewed from this zone.

The matters relating to magnitude for this zone relate to the fact that it is sparsely populated and together with the considerable distances will generate negligible landscape character impacts.



## 5. Management and Mitigation Measures

The management and mitigation measures for the amended Project were developed throughout the design of the original Project as it was recognised that avoiding or minimising potential impacts was an important objective of the design of the Stage 7 extension. Consideration of the mitigation measures was undertaken through reference to views from a number of close, middle-distance and distant vantage points to the amended Project Area. It is noted that each of the landscape character zones referred to in this report were included during the design of the original Project and the development of the management and mitigation measures.

This section effectively duplicates the management and mitigation measures outlined within the Visual Impacts Assessment and where appropriate, adjustments have been made to accommodate the changes made to the amended Project and any others matters relating to the landscape character impacts discussed in this report. That said, the minor changes to the management and mitigation measures for the amended Project are highlighted for readers.

The following mitigation measures are proposed to reduce and/or remove the landscape character impacts of the amended Project.

### 1. Extraction Staging

The potential visibility of the completed upper benches in Stage 7 was recognised during the initial stage of the extraction area design. This enabled the substage boundaries within Stage 7 to be positioned to visually shield extraction activities as much as possible. Hence, the first substage of extraction (Stage 7a) would be confined largely to the western side of the central ridge within the amended Project Area, albeit with a strategically located amenity barrier and tree screens (see 2. below). Extraction in a north to south direction in Stage 7a would result in the creation of benches along the entire western side of Stage 7 before extraction then turns northwards towards the northern boundary of the amended Project Area.

### 2. Amenity Barriers and Tree Planting

In 2008, Cleary Bros constructed a 4m to 5m high amenity barrier on the eastern side of Stages 5 and 6 to limit views from the “Figtree Hill” property into the active extraction area. This barrier (as displayed in **Plates 1 and 2**) was immediately hydromulched and planted with a range of shrubs and trees which, after approximately 10 years, have now attained an average height of 4m to 6m above the top of the barrier. Consequently, the effective height of the amenity barrier is currently approximately 8m to 10m.



**Plate 1 View to the south along the western side of the existing amenity barrier east of Stage 5 with shrubs and trees  
(E1004D\_035)**



**Plate 2 Tree growth on the eastern slopes of the existing amenity barrier  
(E1004C\_025)**



Cleary Bros proposes to construct a 170m long amenity barrier during the early stage of extraction in Stage 7 in the location north and northeast of Stage 7a as displayed on **Figure 2**. This barrier would assist to minimise noise and reduce the opportunity for observers within the “Figtree Hill” property to view extraction activities underway in Stage 7a. The barrier would be constructed to a height of approximately 5m and with vegetation growth conservatively extending the effective height to approximately 8m in 5 years and 10m in 10 years.

In order to reduce and/or remove the visibility of the upper western extraction faces when viewed from Shell Cove West residential area, it is proposed that a tree screen is planted on the eastern side of Stage 7a from the southern end of the proposed amenity barrier discussed above to the existing regrowth vegetation near the southern end of Stage 7a. The tree screen on the eastern side of Stage 7a would cover a length of approximately 500m and width of approximately 10m and should attain an effective height of 3m, 5m and 10m in 5, 10 and 15 years respectively. It is noted that the tree screens would comprise both trees and appropriate shrubs to ensure that the maximum visual protection is achieved by the screen. The southernmost section of the tree screen would incorporate the existing regrowth vegetation to be cleared during Stage 7b.

### 3. Vegetation on the Upper Extraction Benches

Beyond the completion of Stage 7a, the progressive extraction of the eastern side of the ridge within Stages 7b and 7c would progressively expose the completed upper extraction faces and benches on the western side of Stage 7a to views from the Shell Cove West residential area. In order to mitigate the visual impacts of these exposed extraction faces and benches, Cleary Bros would undertake the following vegetation treatments.

- a) Once the 45° side slopes are created within the overburden, topsoil would be placed on the final surface and the surface hydromulched with a native grass and shrub/tree seed mix.
- b) The upper 14m extraction face on the western side of Stage 7a would be split into 2 x 7m faces with 3m benches to allow vegetation to be grown on each final bench. The practice of establishing vegetation on benches would continue on lower benches to soften views from the “Figtree Hill” property and to improve the ecological outcomes for the final landform.
- c) The upper 42m of the northern extraction faces in Stage 7d would be split into 6 x 7m faces with 3m benches to allow vegetation to be established progressively to minimise impacts particularly from the southeast. The introduction of the 7m faces has occurred since the original Project was designed to further reduce visual impacts and to advance vegetation growth more quickly.

Details of the methodology for the revegetation of the benches is presented in Section 3.11.6.2 of the EIS.



4. Removal of Heritage Items from within the amended Project Area

Cleary Bros would undertake a range of additional measures to mitigate the removal of the buildings, fences and dry stone walls within the amended Project Area. A digital photographic archive of the Belmont Main House has already been undertaken and Cleary Bros has committed to undertake further archaeological investigations, engage a dry stone waller to reconstruct two dry stone walls and to update the current Albion Park Quarry Heritage Management Plan.

Further details of the planned mitigation measures are provided in the Historic Heritage Impact Assessment (Biosis, 2021).



## 6. Impact Assessment

**Table 1** presents the landscape character impact assessment for each of the four landscape character zones outlined in Section 4.2 and displayed on **Figures 3** and **4**. These assessments have been established through the use of the Landscape Character Impact Rating Matrix and the qualitative ratings for sensitivity and magnitude.

**Table 1**  
**Landscape Character Impact Assessment**

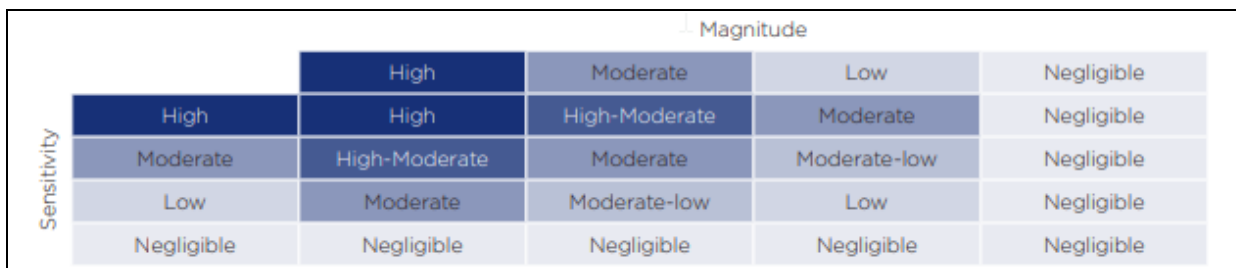
Page 1 of 2

| Sensitivity  | Magnitude  | Landscape Character Impact  |
|--|--|---|
| <b>Area West of Princes Highway</b>  |  |   |
| <p><b>Moderate</b></p> <ul style="list-style-type: none"> <li>This is an area in which its rural character underpins the value of the land to both its occupants and those that look onto the land.</li> <li>The sloping nature of the land provides many opportunities for views from the residences and properties within this zone towards the Pacific Ocean.</li> <li>These properties have co-existed with quarry operations for many decades and are likely to continue to coexist for many more decades.</li> <li>This zone is also recognised for its contribution to the historic heritage of the area, principally through the remains of some infrastructure and buildings associated with the dairy industry and early settlement in this area.</li> </ul> | <p><b>Low</b></p> <ul style="list-style-type: none"> <li>There would be no change in the maximum annual production level and no visible changes to the landform when viewed from the residences.</li> <li>Some minor changes to the landform within the amended Project Area may be observed from some of the rural areas on these nearby properties.</li> <li>This area is sparsely populated and the occupants are familiar with the ongoing quarrying operations within the three quarries in the Dunmore-Shellharbour Hills area.</li> </ul>                                     | <p><b>Moderate – Low</b></p> <ul style="list-style-type: none"> <li>Persons living in this zone would not observe any substantive changes to their surrounding landscape when viewed from their residences although some changes could be observed from the rural areas of their properties.</li> <li>The amended Project would result in the removal of some heritage items, namely a residence, fencing and dry stone walls from the existing landscape.</li> </ul> |
| <b>Princes Highway</b>   |  |   |
| <p><b>Low</b></p> <ul style="list-style-type: none"> <li>This zone reflects its use as a major thoroughfare for vehicular traffic travelling from Kiama and the South Coast to Wollongong and beyond.</li> <li>The level of change in the topography on the ridge within the amended Project Area would not be discernible at the distances between the highway and the amended Project Area.</li> <li>The lack of contrasting colours between the extracted rock and foreground vegetation would result in little opportunity for motorists to observe any landscape characters impacts.</li> </ul>   | <p><b>Negligible</b></p> <ul style="list-style-type: none"> <li>Vehicles travelling northwards along the Princes Highway would pass through this zone in approximately 55 seconds.</li> <li>The highway has a low elevation and is bordered by intermittent screening vegetation for much of its length which allows motorists travelling northwards only brief opportunities to gain glimpses of the entire ridge system within the Dunmore-Shellharbour area, including the amended Project Area. Such views would be at an angle of 45° from the drivers line of sight</li> </ul> | <p><b>Negligible</b></p> <ul style="list-style-type: none"> <li>It is likely that few motorists travelling northwards on the Princes Highway would observe any of the minor changes to the landform within the amended Project Area and those glimpses would be fleeting only.</li> </ul>   |



**Table 6.1 (Cont'd)**  
**Landscape Character Impact Assessment**

| Sensitivity   | Magnitude  | Landscape Character Impact  |
|---|--|---|
| <b>Shell Cove West Residential Area</b>   |  |   |
| <p><b>Low</b></p> <ul style="list-style-type: none"> <li>This zone has west-facing topography and the opportunities, albeit from different elevations, for views towards the amended Project Area.</li> <li>This area has been developed over the past 10 years and is still subject to ongoing housing construction and related development, including the proposed Shellharbour Hospital on the western side of Dunmore Road near the southern end of this zone.</li> <li>The sense of place recognised for this zone is the opportunity for occupants of the numerous residences to continue to essentially view a rural area with grazing paddocks and protected native vegetation within the area referred to as Dunmore-Shellharbour Hills area.</li> <li>This area incorporates three long standing substantial quarries that were developed in the mid 20<sup>th</sup> Century with operational areas that, while visible, are limited in extent.</li> <li>These quarries effectively pre-date all of the residential developments within Shell Cove West.</li> </ul> | <p><b>Moderate</b></p> <ul style="list-style-type: none"> <li>This zone contains a high number of residences. The extent to which occupants of the residences are able to view changes in the landscape within the amended Project Area would depend upon their aspect and elevation.</li> <li>The changes to the landscape within the amended Project Area would occur over considerable periods and Cleary Bros has committed to a range of management and mitigation measures to limit landscape character impacts both during and following the operation of the Stage 7 extension.</li> </ul> | <p><b>Moderate – Low</b></p> <ul style="list-style-type: none"> <li>The adoption of 7m benches in the areas to become visible from this zone and the progressive revegetation of the visible upper benches would minimise the impacts of the landform changes within the amended Project Area.</li> <li>The extraction staging would assist to maximise the period for bench rehabilitation before the upper benches become visible as later stages are extracted.</li> </ul> |
| <b>Illawarra Escarpment</b>   |  |   |
| <p><b>Low</b></p> <ul style="list-style-type: none"> <li>The sensitivity of this zone reflects its considerable distance from the amended Project Area and the fact that there would be no change to the skyline when viewed from this zone.</li> <li>The lack of contrasting colours between the extraction faces and the surrounding vegetation limits the opportunity for landscape character impacts to be observed.</li> </ul>   | <p><b>Negligible</b></p> <ul style="list-style-type: none"> <li>The escarpment is sparsely populated.</li> </ul>   | <p><b>Negligible</b></p> <ul style="list-style-type: none"> <li>The impacts arising from the amended Project upon this zone would be negligible. It is unlikely any changes to the landscape within the amended Project Area would be discernible from this zone.</li> </ul>  |



**Figure 5**  
**Landscape Character Impact Rating Matrix**

Source: TfNSW (2020) – Figure 7



## **7. Conclusion**

The Landscape Character Impact Assessment has established that two landscape character zones in the vicinity of the amended Project Area would experience Moderate to Low landscape character impacts, namely the area west of the Princes Highway and the Shell Cove West residential area. The assessment has also established that the landscape character impacts associated with the Princes Highway and the Illawarra Escarpment would be negligible.

The landscape character impacts for the area west of the Princes Highway relate principally to the removal of some infrastructure and buildings associated with the dairy industry and early settlement in this area. The impacts for the Shell Cove West residential area relate to the minor changes in the landform within the amended Project Area and the progressive exposure of vegetated extraction benches in the second half of the Project life.

Overall, the landscape character impacts are assessed to be acceptable, particularly in light of the management and mitigation measures to be adopted.



## 8. References

- Biosis Pty Limited (2021).** *Historic Heritage Impact Assessment* for Albion Park Quarry Extraction Area Stage 7 Extension. Prepared for Cleary Bros (Bombo Pty Ltd).
- R.W. Corkery & Co. Pty Limited (2022).** *Visual Impacts Assessment* for Albion Park Quarry Extraction Area Stage 7 Extension. Prepared for Cleary Bros (Bombo Pty Ltd).
- Transport for NSW (2020).** *Guideline for Landscape Character and Visual Impact Assessment – Environmental Assessment Practice Note EIA-NO4.*