



17 January 2019

Department of Planning & Environment  
Planning Services, Resource Assessment &  
Compliance  
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SYDNEY NSW 2001

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**Attn:** Ms Lauren Evans  
Environmental Assessment Officer

**via email:** [lauren.evens@planning.nsw.gov.au](mailto:lauren.evens@planning.nsw.gov.au)

Dear Lauren,

**Stockton Sandpit (DA140-6-2005) – Proposed Modification 3**

## **1. Introduction**

Boral Resources (NSW) Pty Limited (hereafter 'Boral') currently operates the Stockton Sandpit, sand quarry located on the windblown dunes at Fullerton Cove in the Local Government Area (LGA) of Port Stephens, known as the "Windblown Project". The extraction activity is undertaken in accordance with development consent DA140-6-2005.

Sand harvested from the Stockton Sandpit is used in many construction related applications across the local Hunter and Sydney Metropolitan Regions. Sustained demand for sand related products in response to continued and anticipated growth in the residential and commercial markets has meant that the windblown sand resource will be exhausted sooner than expected.

To meet short term demand for sand, Boral is proposing to modify DA 140-6-2005 to permit a minor expansion to the approved extraction area for the Windblown Project which would add one to two years to the existing sand resource. The proposed modification would not exceed the transportation or depth extraction limits as set out in the existing conditions of consent.

In the longer term, Boral is investigating further options for sand extraction, including re-commencing excavation within the central portion of the site formerly covered by DA2010/94. This will form a further and separate application for which Secretary's Environmental Assessment Requirements have been obtained.

This correspondence forms an Environmental Impact Statement (EIS) that has been prepared in support of an application made under section 4.55 to modify development consent, DA140-6-2005. The EIS describes the proposed minor changes to the approved development, addresses any associated likely environmental impacts and demonstrates that the development, as proposed to be modified, is "substantially the same" as that approved.

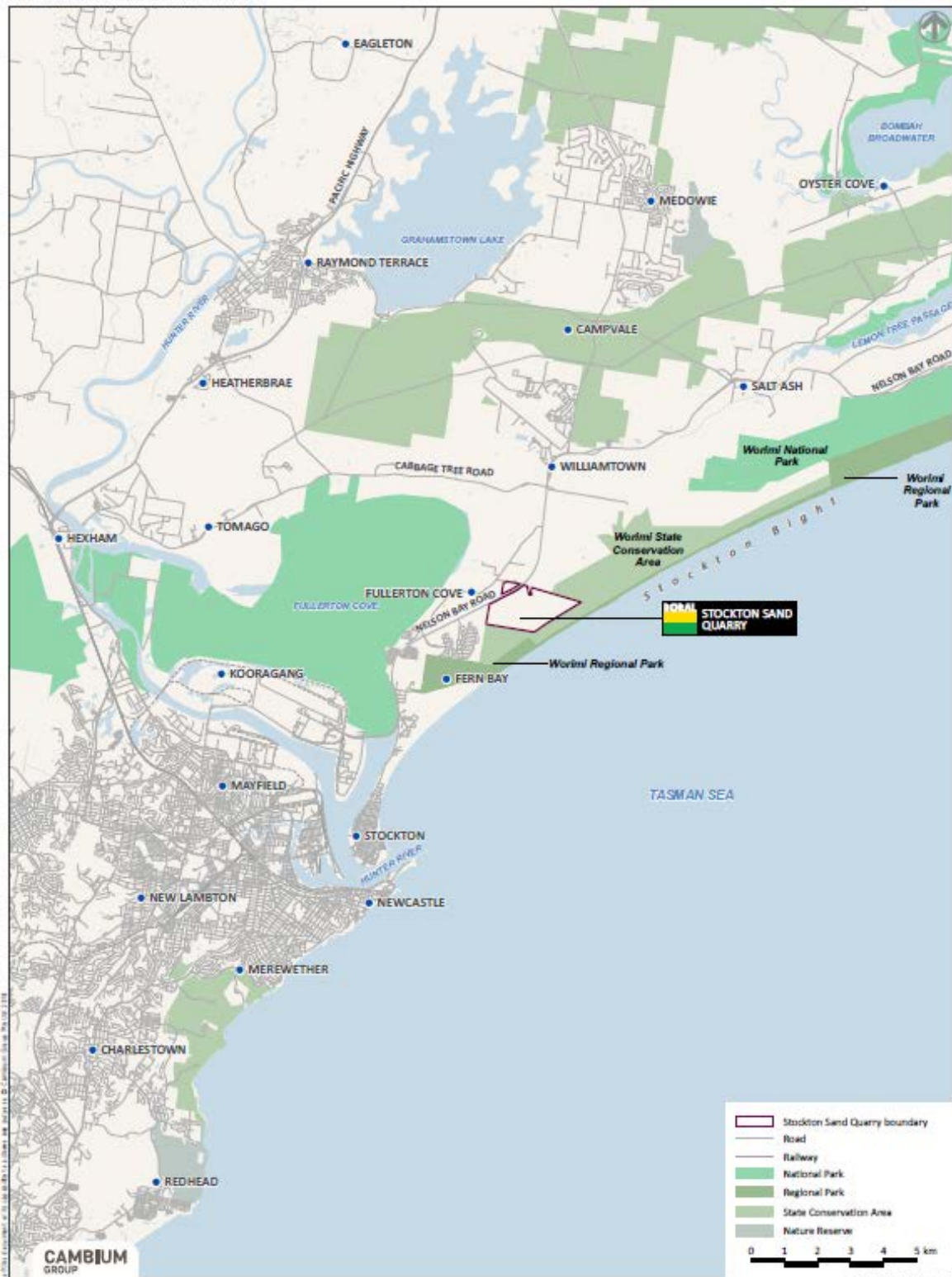


Figure 1.1 Locality Plan (Source: element, 2018)



## 2. Background

Boral commenced extraction from the Stockton Sandpit in the early 1990s, under a local level consent (DA2010/94) granted by Port Stephens Council. This consent related to an extraction area located within a central portion of the broader site (refer to **Figure 2.1**). This consent has since lapsed and the extraction area has been successfully rehabilitated to provide a safe and stable landform consistent with the surrounds.

In 2005, while extraction was continuing under the 1994 consent, Boral lodged a State Significant Development (SSD) application (DA140-6-2005) with the Department of Planning to extract sand from the windblown dunes to the southeast of the central extraction area (refer to **Figure 2.1**). This became known as the Windblown Project, and was located in an area previously dredged for mineral sands by Mineral Deposits Limited (MDL) between late 2000 and 2003. The dredge was dismantled in early 2004.

The Windblown Project was subsequently granted consent from the then Minister for Planning on 24 January 2006. The development consent was granted for a period of 20 years from the commencement of operations, being 15 October 2008. Accordingly, extraction of sand from the windblown dunes may continue under this consent until 15 October 2028.

Since the granting of consent in 2006, the project has been the subject of two modifications, including:

- **Modification 1:** to amend the Notice of Determination to correct a minor misdescription of the land tilte detials, as Lot 1 DP 242093 was not owned by or under the control of Boral; and
- **Modification 2:** amended conditions of consent, in relation to methods of onsite identifcaiton of the extraction area and warning signage for public safety purposes along the boundary of the extraction and site to improve site operaitons.



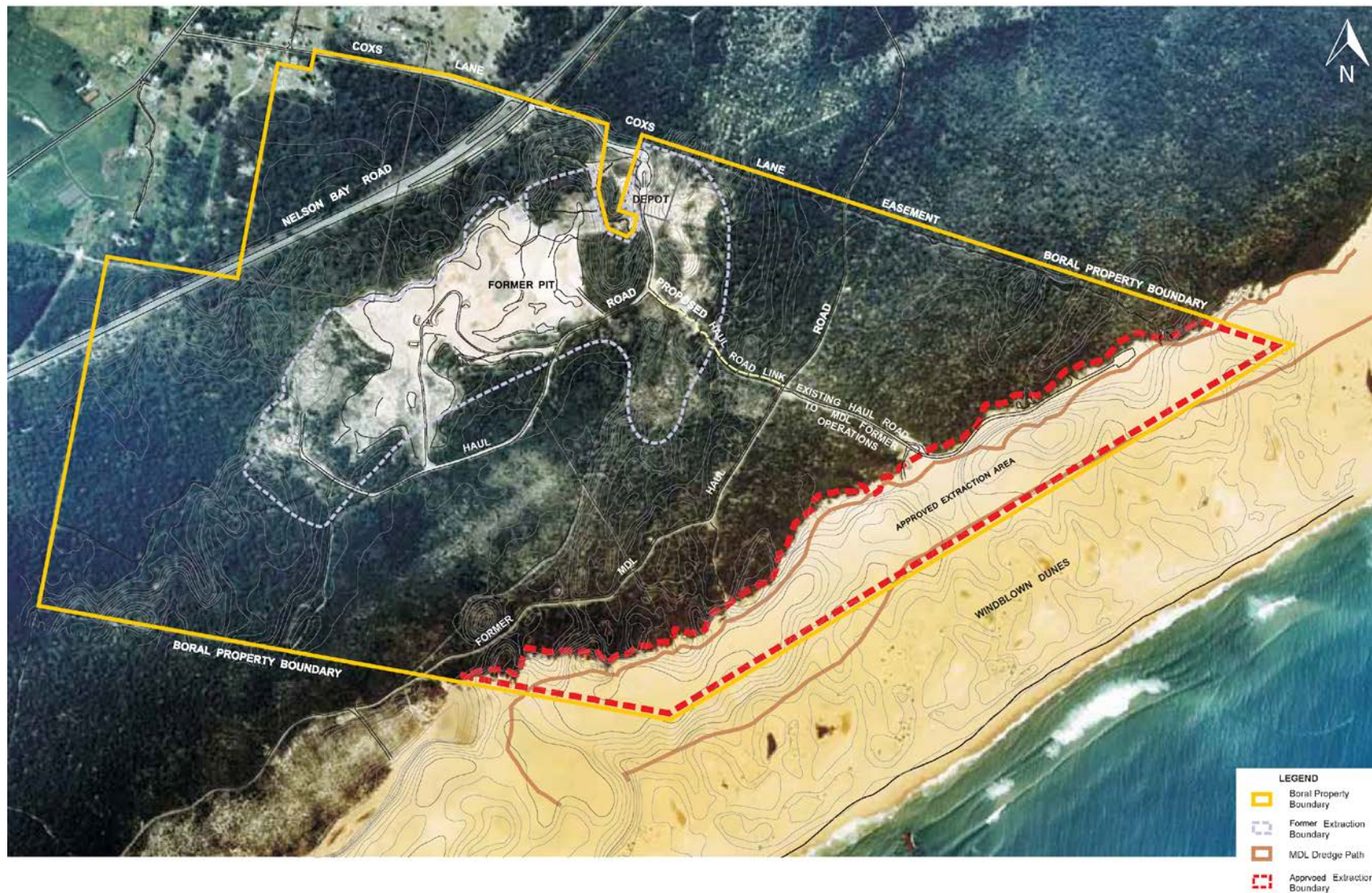


Figure 2.1 Stockton Quarry – former and current extraction areas (Source: EIS 2005 – adapted)





### 3. Site description

The following section describes the generally locality of the site, legal description and site characteristics.

#### 3.1 Site location

The site is located in Fullerton Cove, approximately 9.8 kilometres (km) north north-east of the Newcastle Central Business District (CBD), within the Port Stephens Local Government Area (LGA) (refer to **Figure 1.1**).

Access to the site is via Nelson Bay Road and Coxs Lane. Coxs Lane is a local roadway which terminates at the entrance to the quarry at its eastern end. Nelson Bay Road is a major arterial roadway which links the Newcastle CBD to Newcastle Airport, Nelson Bay and the wider Port Stephens area to the north.

#### 3.2 Land use and ownership

The site is owned and operated by Boral and covers an approximate area of 246 hectares. Boral's land holding is identified as:

- Lots 1 DP 1006399 comprising approximately 234 hectares located predominantly on the eastern side of Nelson Bay Road, with a small portion also situated on the western side of Nelson Bay Road;
- Lot 2 DP 1006399 comprising 10.4 hectares and located predominantly on the western side of Nelson Bay Road, with a small portion also positioned on the eastern side of Nelson Bay Road (formerly Part Lot 167, Part Portion 167); and
- Lot 3 DP 664552 comprising 1.619 hectares and located wholly on the eastern side of Nelson Bay Road, and within which the existing depot and weighbridge are located (formerly within Part Lot 3, Part Portion 3).

Land use surrounding the site is a mixture of rural residential, public recreation and environmental conservation areas.

There are no formal public access points through Boral's holding to Stockton Bight. Formal access to the dunes and beach is via Lavis Lane near Williamtown, and a new access within Seaside Estate at Fern Bay.

The former Sygna ship wreck is located near the site and was previously a significant landmark to which a number of tourist operators conducted sand based tours.

#### 3.3 Zoning and land use

The land is zoned RU2 Rural Landscape under the Port Stephens Local Environmental Plan 2013 (PSLEP 2013). "*Extractive Industry*" is permitted with consent pursuant to the land use table adopted under clause 2.3 of PSLEP 2013.

The proposed modification to extend the boundary of the active extraction area to an approved sand quarry is considered to be consistent with the definition of an "*Extractive Industry*". Accordingly, the proposal is a permissible.

Land immediately adjoining the site to the northeast, southeast and southwest is a mix of RE1 Public Recreation, E3 Environmental Management and E1 National Parks.



### **3.4 Geomorphology and dune dynamics**

The Stockton sandpit is located on the transverse dune system that is the product of strong winds and fine to medium bare sand.

Prevailing winds from the southwest are contributing to migration of the dunes in a northeast direction (parallel to the beach) at a rate of up to 7 metres per year. The western crests of the dunes also migrate to the northwest at rates between 3 to 5 metres per year driven by the onshore southeast winds.

The northwest movement of the dune is moving sands into the extraction area and the associated buffer areas. The dunes are being replenished by sand blown from the bare beach fore dune located outside the boundary of Boral's landholdings.

### **3.5 Biodiversity and vegetation**

Owing to the dynamic nature of sand dunes, influenced by prevailing winds, the area of the windblown project (subject of this modification) is currently bare of vegetation and do not presently provide faunal habitat.

### **3.6 Hydrology and groundwater**

The groundwater level below the area of extraction has an average standing level of approximately 1.5 – 1.7 metres AHD.

Owing to the highly permeable nature of sand, the height of the water level fluctuates in response seasonal patterns and rain events. Groundwater levels are monitored by Boral to ensure they remain below the extraction limit of 2.5 metres AHD.

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## 4. The proposed modification

Boral is seeking approval to expand the active extraction area granted under DA140-6-2005 to include the 15 metre wide “buffer” that extends along the northeast, southeast and southwest perimeter of Boral’s landholding.

The area of extension is limited to the southwest and southeast buffer areas and combined with allowing extraction of sand would also relocate the existing batters outward, with the 1:3 crest line repositioned towards Boral’s property boundary allowing for the capture and use of the additional sand (refer to **Figures 4.1 – 4.4** and **Appendix 1**).

The boundaries around the additional extraction area, to the southeast (seaward) and southwest boundaries measure approximately 1,680 metres and 421 metres respectively. The additional area is approximately 3.2 ha and would allow for the capture and use of around 475,000 tonnes of additional sand resource.

The Environmental Impact Statement (EIS) submitted in support of the original application provides minimal context or intended purpose of the buffer area, with references limited to statements made in relation to progressive stabilising works following extraction (ERM, 2005 p.11). However, it is our understanding that a 15 metre wide buffer is typically a feature of hard rock quarries, that serves to provide a setback between the quarry edge and surrounding land. In the context of sand quarries these buffers are not necessary due to the presence of the 1:3 batters.

There will be no modification to the approved extraction depth of 2.5 metres AHD or transportation limit of 500,000 tonnes per annum. Furthermore, there is no requirement to amend the Environmental Protection Licence issued in relation to the activity.

The modification as set out above will require an amendment to the conditions of consent as follows:

- Condition 2 ‘Terms of Approval’ (schedule 2) - adding a condition requiring Boral to carry out the development in accordance with this document (MOD3).
- Addition of a condition following condition 1 (schedule 3) - requiring Boral to redefine and remark boundaries within three months of the approval of MOD3.
- Condition 18 (schedule 3) – modification of condition to delete the word ‘buffer area’.
- Addition of a condition following condition 20 ‘Rehabilitation and Landscape Management Plan’ (schedule 3) – requiring Boral to prepare and submit an updated RLMP consistent with new extraction boundaries.

### 4.1 Proposal need and justification

As set out in **section 1**, Boral proposes to modify the existing consent to meet the increasing demand for sand related products within the Lower Hunter-Newcastle and Sydney Regions.

The proposed modification seeks to expand the approved extraction area to maximise the use of available high quality sand within the landholding.

By extending the boundary of the extraction area, Boral will be able to extend the sand resource and enable the site to continue for another 1 to 2 years depending on market conditions, with negligible change in operations, and associated environmental impacts. The existing 20 years of consent life would not need to change, as the additional sand would make up for recent sand resource losses experienced due to high demand.



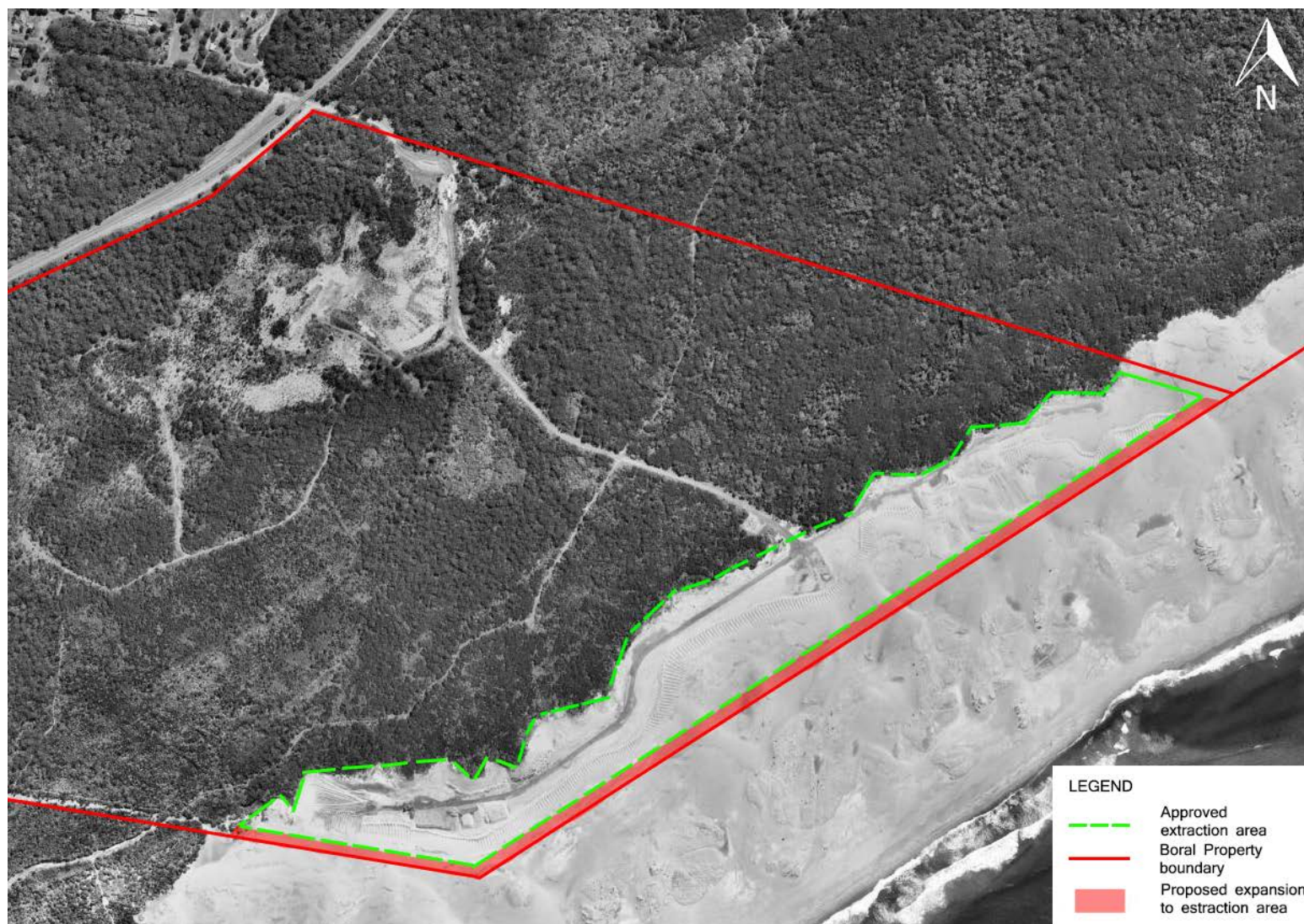


Figure 4.1 Proposed expansion to extraction area



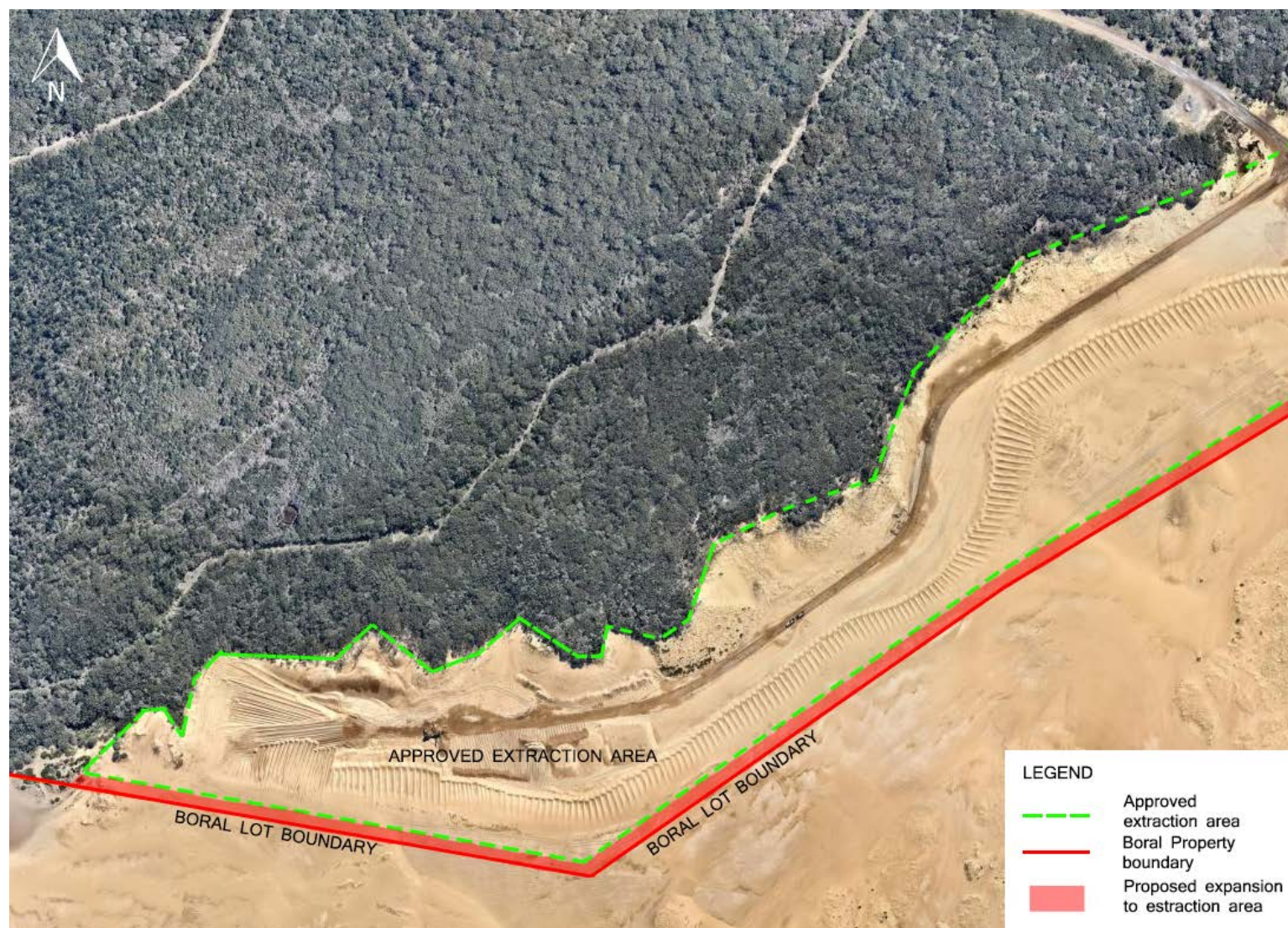


Figure 4.2 Proposed expansion to extraction area (south-west)



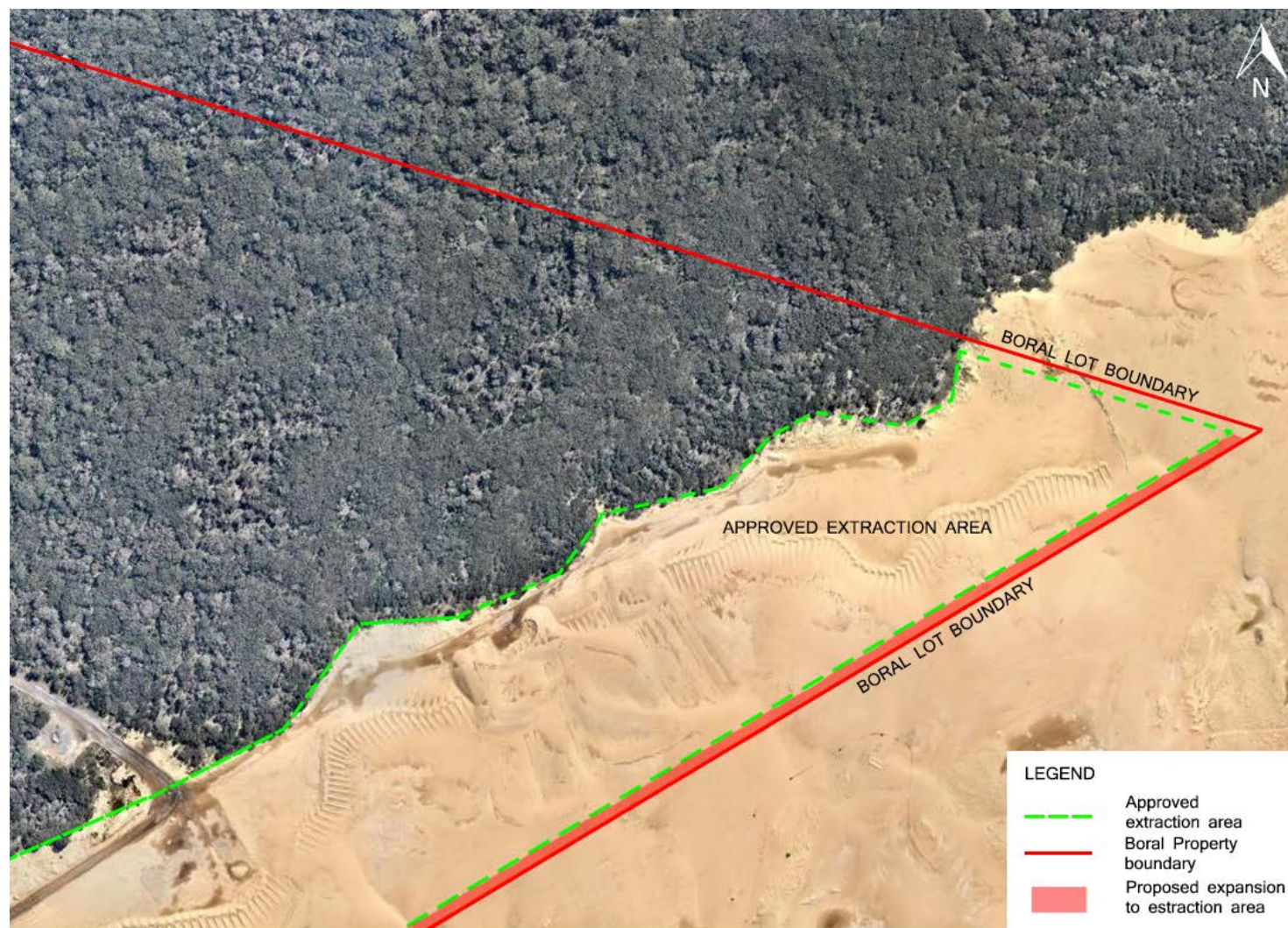
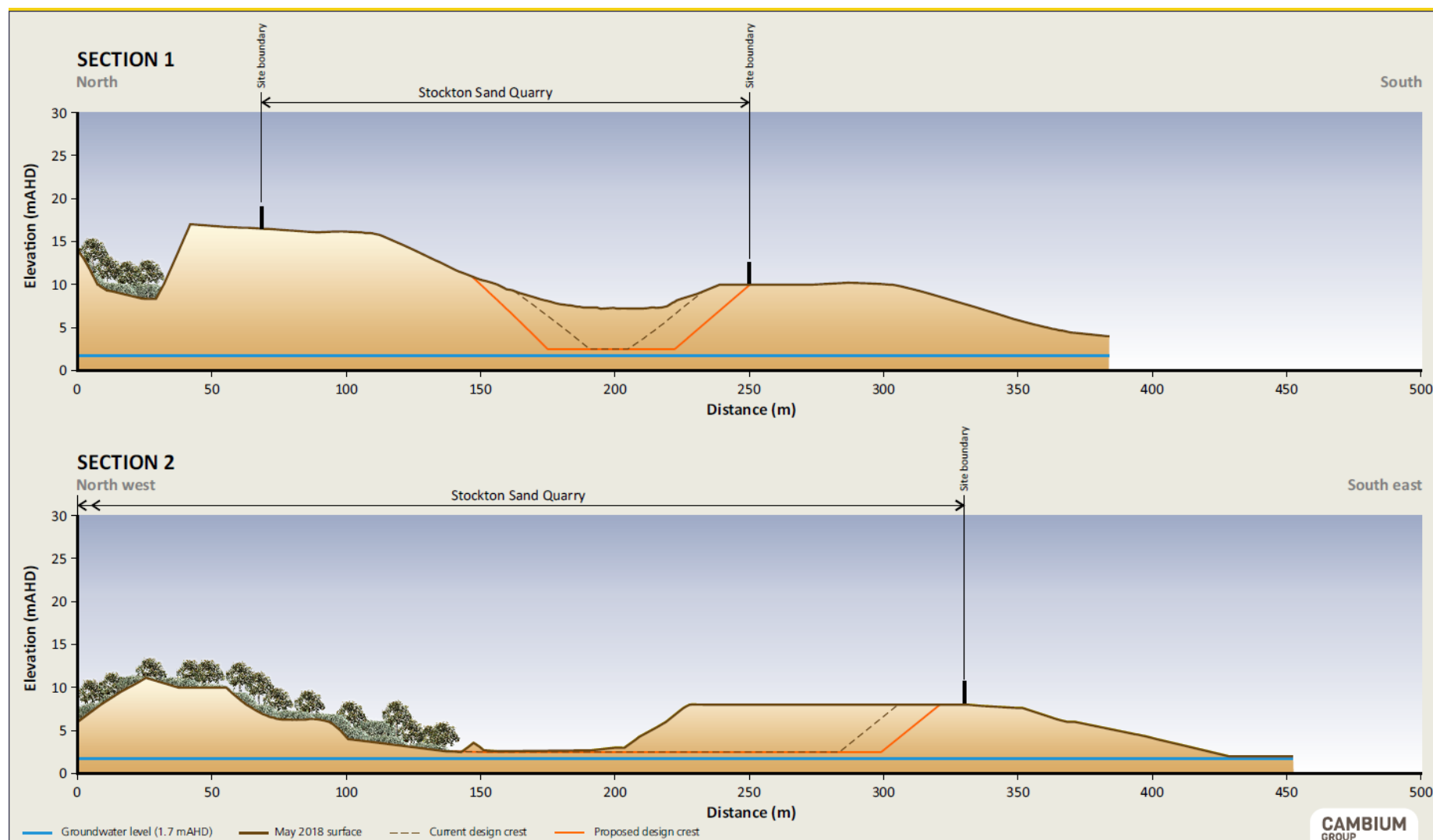


Figure 4.3 Proposed expansion to extraction area (north-east)





**Figure 4.4** Cross section, showing existing and proposed pit extent/design (sections 1 and 2)



## 5. Planning considerations and approvals

The following section considers the proposed modification against the relevant legislative provisions.

### 5.1 Environmental Planning and Assessment Act 1979

The existing windblown sand project was approved as a State Significant Development (SSD) and can be modified under the provisions of section 4.55 where the proponent can satisfy the consent authority that the modified development remains “*substantially the same*” as the original approved development.

**Section 4** contains a description of the proposed modification that is primarily administrative in nature, involving an adjustment to the boundary in relation to the ongoing and approved extraction activities, with minimal change in the assessed impacts of the original proposal.

The proposed modification is sought under Section 4.55 (1A) of the *Environmental Planning and Assessment Act 1979* (EP&A Act 1979) as it would result in only minimal environmental impact. These matters are considered in more detail in **section 7** of this EIS.

To draw a conclusion as to whether a proposal is “*substantially the same*” development as approved, regard has been given to the relevant decisions of the NSW Land and Environment Court (NSWLEC) as set out below.

(a) “*Substantially*” means “*essentially or materially*” or “*having the same essence*”.<sup>1</sup>

Schedule 1 of the Notice of Determination issued by the Department of Planning, granted consent to development described as “*Stockton Sand Quarry – Windblown Sand Extraction*”.

The proposal involves a modification to the extraction boundary involving no modification to the operational characteristics of the development as approved. Fundamentally the modification does not cause an alteration in the primary purpose or the purpose for which consent was expressly granted. Accordingly, the development, as proposed to be modified, retains the “*essence*” of the development as approved and is demonstrably “*materially and essentially*” the same.

(b) *A development can still be substantially the same even if the development as modified involves land that was not the subject of the original consent (provided that the consent authority is satisfied that the proposal is substantially the same).*<sup>2</sup>

The existing “buffer area” is located within the boundary of Boral’s landholding, principally being Lot 1 in DP1006399.

As set out in **section 4** and shown in **Figures 4.1, 4.2 and 4.3** the proposed modification will include land not previously used for the purpose of sand extraction. Notwithstanding the increase in the area of extraction, we note that the land subject of the extension was considered in the assessment of the original application. Despite this change in the extent of extraction, the area of extraction was the subject of detailed site investigation included in the original EIS.

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<sup>1</sup> Vacik Pty Limited v Penrith City Council (1992) NSWLEC 8

<sup>2</sup> Scrap Realty Pty Limited v Botany Bay City Council [2008] NSWLEC 333



The modified development will retain the essence of the original approval to extract sand from windblown sand dunes. There is no modification to the extraction methods or depths and the area of potential impact is not vegetated due to the effects of the prevailing winds. Accordingly, the potential for impacts, beyond those previously considered and accepted by the Department of Planning and Environment is considered unlikely.

The development as approved and proposed to be modified will retain all existing measures to ensure ongoing and appropriate management of the site.

*(c) If the development as modified, involves an “additional and distinct land use”, it is not substantially the same development.<sup>3</sup>*

The development, as proposed to be modified, remains consistent with the approved primary purpose for the land, being an “*Extractive Industry*”. The modification does not seek to alter any of the previously considered operational characteristics of the development nor does it introduce new or additional land uses that would be considered independent of or distinct from the purpose for which consent was originally granted.

*(d) Notwithstanding the above [point (c)], development, as modified, would not necessarily be substantially the same solely because it was for precisely the same use as that for which consent was originally granted.*

*(e) To determine whether something is “substantially the same” requires a comparative task between the whole development as originally approved and the development as proposed to be modified. In order for the proposal to be “substantially the same”, the comparative task must:*

- result in a finding that the modified development is “essentially or materially” the same;*
- appreciate the qualitative and quantitative differences in their proper context; and*

*(f) In addition to the physical difference, consider the environmental impacts of proposed Modification Applications to approved developments.<sup>45</sup>*

*(g) The results of the comparative task “does not eclipse or cause to be eclipsed a particular feature of the development, particularly if that feature is found to be important, material or essential.”<sup>6</sup>*

A comparative task has been undertaken and is provided at **Appendix 2**. The outcome of this task demonstrates that the development, as proposed to be modified will not be “*materially or essentially*” altered as:

- The modification does not alter the primary purpose of the approved development, nor does it introduce any additional or distinctly new land uses that would substantially alter the outcome of the original assessment or require reconsideration of key aspects of the original assessment;

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<sup>3</sup> Vacik Pty Limited v Penrith City Council (1992) NSWLEC 8

<sup>4</sup> Tipalea Watson Pty Ltd v Ku-Ring-Gai Council [2003] NSWLEC 253

<sup>5</sup> Moto Projects (No 2) Pty Ltd V North Sydney C [1999] NSWLEC 280

<sup>6</sup> Moto Projects (No 2) Pty Ltd V North Sydney C [1999] NSWLEC 280





- The modification does not alter the operational characteristics of the approved development in relation to employee numbers, hours of operation, extraction or transportation limits, methods or management techniques;
- The modification will not require any amendment or modification to the relevant Environment Protection Licence;
- The development, as proposed to be modified, does not introduce new matters for assessment or alter the environmental impacts as assessed under the original application; and
- The proposal reasonably relates to land that was the subject of the original application, using the existing access/egress points, haulage roads and extraction from within a portion of Lot 1 DP1006399, which was assessed for impacts by the relevant technical specialists as part of the EIS.

Accordingly, it is considered that the proposed development, as proposed to be modified, will be “*substantially the same as the development*” for which consent was originally granted and as such is within the scope of Section 4.55.

## 5.2 Protection of the Environment Operations Act 1977

The proposed modification would not change the approved development in a way that would require a variation to the site’s Environment Protection Licence (EPL 10132). Accordingly, the modified development would be able to continue operations under the current EPL.

## 6. Stakeholder engagement and consultation

Prior to the lodgement of the modification application, Boral sought to actively engage with a number of stakeholders as part of a consultation program for the proposed dredging State Significant Development application. During this program, this proposed modification was also presented in written materials and discussions. **Table 1.1** presents a summary of the activities undertaken.

**Table 1.1 Summary of engagement activities**

Stakeholder	Engagement details	Feedback
Local community (Fullerton Cove, and sections of Fern Bay)	Letterbox drop of community newsletter and invitation to meet with Boral representatives from 2pm on Wednesday, 9 May 2018 and all day Thursday, 10 May 2018 to discuss the proposed dredge application and proposed modification.	No specific feedback regarding the proposed modification
Port Stephens Council (administration)	Face to face briefing with Brett Gardiner (Senior Planner) on 10 May 2018.	No specific feedback regarding the proposed modification
Port Stephens Council (Councillors)	Face to face briefing with Mayor Ryan Palmer and Cr Giacomo Arnott and Cr Paul Le Mottee on the evening of 26 July 2018.	No specific feedback regarding the proposed modification
National Parks & Wildlife Service (Hunter Central Coast Branch)	Face to face briefing with Andrew Bond (Area Manager) on 9 April 2018.	No specific feedback regarding the proposed modification



Local State Member for Port Stephens	Face to face briefing with Kate Washington MP and advisor on 27 July 2018.	No specific feedback regarding the proposed modification
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## 7. Environmental Assessment

The proposed extension to the extraction area are anticipated to have minimal environmental impact in addition to those identified in the EIS. Key environmental issues relevant to the proposed modification have been identified as biodiversity, Aboriginal cultural heritage and groundwater, and are discussed further below.

### 7.1 Rehabilitation (stabilisation and landform)

While the principal purpose of the “buffer area” was not set out in the original EIS, progressive vegetation planting using *spinifex* was implemented to trap sand and reduce the rate of hind dune advance was proposed. Vegetation planting applied to the inland side of the buffer and the extraction batters. No vegetation planting was applied to the floor of the quarry area. These works have since been included in the approved RLMP.

Notwithstanding Boral's ongoing vegetation works, prevailing winds over bare foredunes, influenced by active recreation use by 4 wheeldrive vehicles of the beachfront, is contributing to the movement of the dune system and the deposition of sand within the quarry boundary, including the “buffer area”. This progressive movement is making current vegetation works counterproductive.

Accordingly, following extraction from within the buffer it is proposed to allow the south eastern, and south western edges of the extraction area to naturally fill with windblown sand. This will promote, overtime, a return to the natural form of the dune system through natural geomorphology and dune dynamics.

The north western batter (landward) of the extraction area would be stabilised consistent with the measures and species outlined for the buffer area within the approved RLMP. These measures would be included in an updated RLMP.

### 7.2 Biodiversity

The original EIS and associated assessment of potential impacts on flora did not identify the presence of vegetation or faunal habitat in the “buffer area”. As set out in **section 6.1** above, heavy prevailing winds and dune movement influenced by processes beyond the Boral landholding, means the buffer remains free of established vegetation.

Accordingly, the proposed modification will extract sand from the bare dunes 15 metres beyond the current extraction limit up to the Boral property boundary. The area remains bare of native vegetation, therefore, the proposed modification would not have any impact on biodiversity values.



### 7.3 Heritage (Aboriginal and non-Aboriginal)

The original EIS considered in detail the potential for Aboriginal and Non-Aboriginal heritage to be present within the extraction area, including the proposed area of extension (refer to section 11 of the original EIS).

Since European settlement in the Fern Bay area in the mid 1800's, there have been a number of landuses that could have caused disturbance, prior to Boral's commencement of activity on the windblown dunes. Specifically, previous to Boral's operations commencing in the windblown area in 2008, several other companies operated sand extraction activities, including Mineral Deposits Limited (MDL), and G. Hawkins and Sons. The MDL activities, involved dredging to minus five metres AHD, well below Boral's extraction limit of 2.5 metres AHD. Furthermore, the dunes are extensively used for recreational purposes including four-wheel driving.

The area of extension, as shown in **Figures 4.1, 4.2 and 4.3**, formed part of the study area investigated for Aboriginal and Non-Aboriginal Cultural Archaeology and Heritage under the original SSD, Development Application. The relationship of the proposed extension to identified Aboriginal and Non-Aboriginal Cultural Heritage items is shown in **Figure 7.1**. This demonstrates that the proposed area of extension is unlikely to have a direct impact on surveyed and known items, in particular BFB 1 ("middens" and the bunker).

Notwithstanding the above, a NSW Aboriginal Heritage Information Management System (AHIMS) search was conducted on 25 October 2018 (see **Appendix 3**), which was compared the sites shown in **Figure 7.1**. This search confirmed that no new sites have been identified within Boral's property boundary.

Based on the above, the proposed modification is not anticipated to impact on items of Aboriginal or Non-aboriginal heritage. The majority of the extraction area was heavily disturbed by previous heavy mineral dredging by MDL between 2002 and 2003. The Windblown Project EIS found that the proposed project would have *"very limited potential to impact on the Aboriginal cultural heritage given the high disturbance to this area"* (ERM, 2004, p.84)

The extraction area would continue to be managed under the adopted unexpected finds protocol, requiring works to cease and the relevant heritage office contacted.

The proposed modification is therefore considered to have very limited potential, and certainly no greater impact on items of Aboriginal cultural heritage than originally assessed within the EIS.

### 7.4 Groundwater

The extraction area and the site generally, has a shallow groundwater table, approximately between 1.5 – 1.7 metres AHD. To avoid impacts on groundwater, a maximum extraction depth of 2.5 metres AHD was adopted. This extraction depth forms part of the existing conditions of consent and will continue to be observed to ensure that the groundwater table remains undisturbed.

In accordance with the existing consent conditions, groundwater levels are monitored to ensure that the water height remains below the extraction level. The monitoring program would continue under the proposed modification.



As the proposal merely seeks to redefine the extent of the extraction area and the location of the associated batters, without increasing the depth of the extraction below the approved 2.5 metres AHD, the proposed modification is considered consistent with the approved development and is anticipated to have minimal impact on groundwater.

## 7.5 Public access and safety

In accordance with the conditions of consent, Boral currently maintains a fence and signage along the seaward (south/southeast) property boundary to visually delineate the property boundary so that the general public are aware of the operations and land ownership (See **Caption 1**).

A safety batter is also maintained from the extraction limit to the pit floor to ensure the safety of any vehicle that inadvertently enters the property.

While the proposal will involve a minor relocation of these batters outward, they will be maintained within the property boundary to ensure the ongoing safety for the general public.



**Caption 1: Extraction boundary fence and signage**

## 7.6 Other matters

The proposed modification is limited to a minor expansion of the extraction area. There is no material change to the volume of material transported from site or methods used thereby retaining operations at the scale approved under the original consent in 2006. Accordingly, the proposal is not anticipated to contribute to any additional impacts beyond those considered and assessed in the original EIS and determination of the application.

In particular, the proposal is considered unlikely to contribute to any alteration in the assessment of noise, air quality, dust, traffic, and waste management.



The site will continue to be managed in accordance with the adopted Environmental Management Plan (EMP).

## 8. Conclusion

As demonstrated by this EIS, the development, as proposed to be modified, is of a minor nature allowing for a nominal extension of the approved extraction area located on the windblown dunes.

The modification does not "*materially or essentially*" alter the approved development and as such satisfies the test of "*substantially the same*" allowing the proposal to be considered and determined under the provisions of section 4.55 of the EP&A Act 1979.

The modification is needed to ensure the continuation and the extraction of remaining sand within the Stockton Sandpit which supplies the Lower Hunter-Newcastle and Sydney metropolitan regions that have and continue to experience significant demand for sand related products to support numerous commercial and residential projects.

Given the need for the proposed development in meeting existing and likely future demand for sand used to support ongoing construction projects within the identified regions and the minimal environmental impacts likely to result as consequence, we are of the view that the modification is worthy of support.

Should any further additional information or clarification be required in relation to the modification, please contact the undersigned on phone 0401 894 110 or email [rachael.snape@boral.com.au](mailto:rachael.snape@boral.com.au)

Yours sincerely,

A handwritten signature in blue ink, appearing to be "Rachael Snape", written in a cursive style.

Rachael Snape  
Planning and Development Manager (NSW/ACT)

### Figure 6.1

### Registered sites near the extraction area



## Appendix 1

Plans and cross sections of the extraction area (existing and proposed)

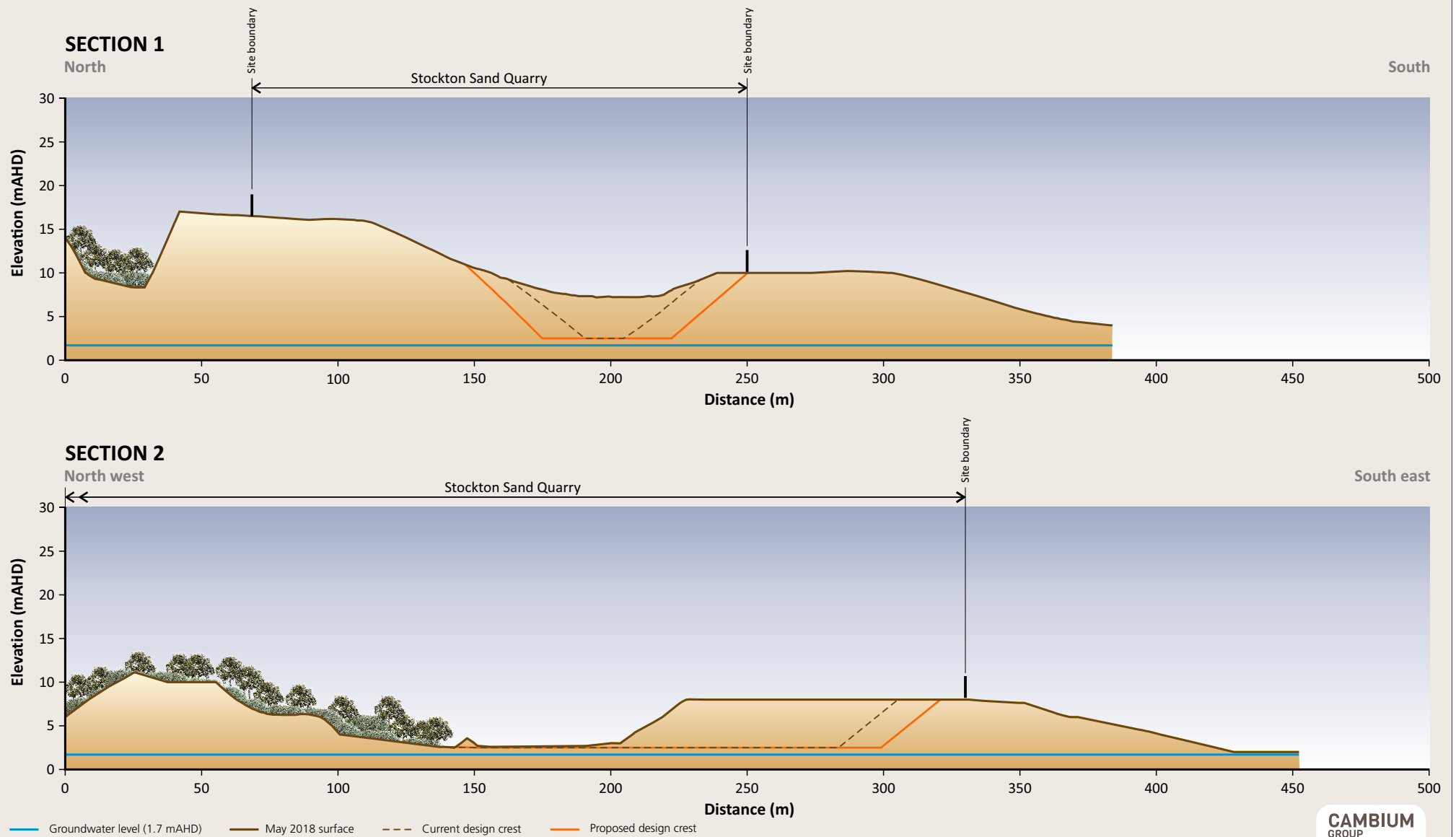
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Figure 1  
**SECTION LOCATIONS**  
Stockton Sand Quarry Dredging



Figure 2  
**SECTIONS**  
Stockton Sand Quarry Dredging



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Figure 3  
**SECTIONS**  
Stockton Sand Quarry Dredging

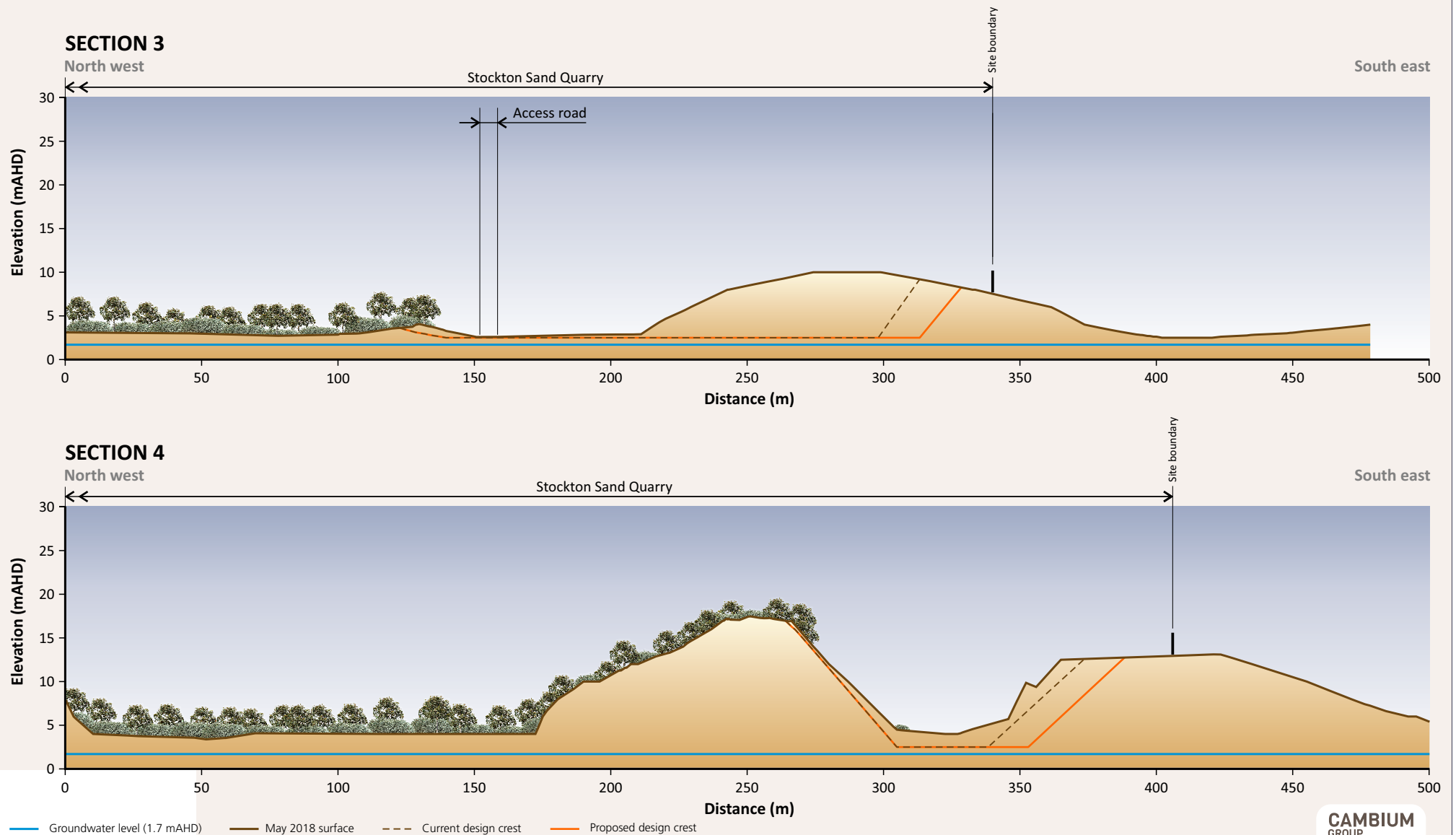
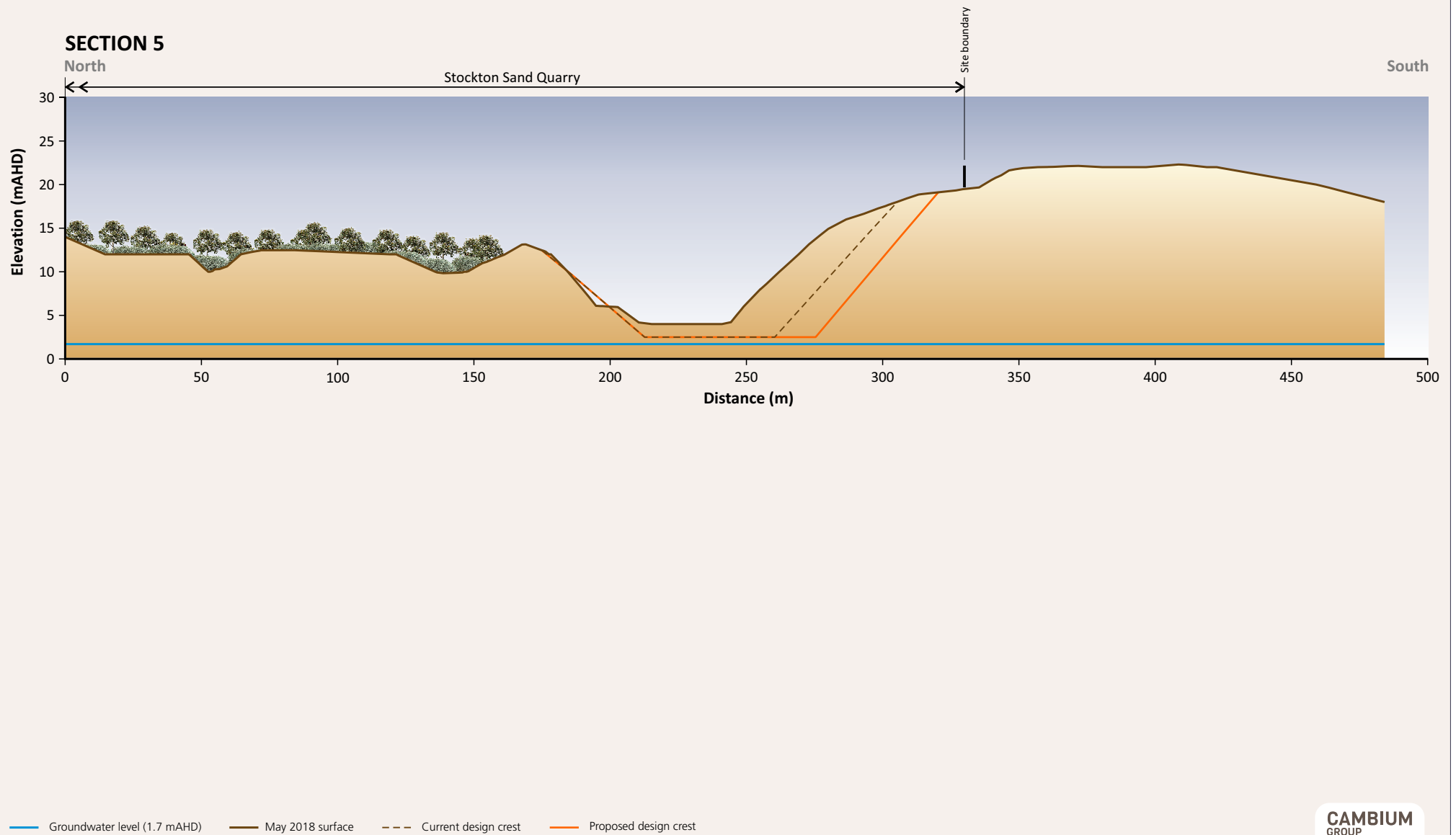


Figure 4  
**SECTIONS**  
Stockton Sand Quarry Dredging







## Appendix 2

Section 4.55 of the EP&A Act 1979 "*substantially the same development*" comparative test

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**Table A2.1 “substantially the same” comparison: DA-140-6-2005**

Element	Existing	Proposed
<b>Operations</b>		
<b>Hours of operation</b>	<p>Monday – Friday: 6:15am to 5:00pm, with allowance for extended hours during major supply contracts of 6.15am to 6.00pm.</p> <p>Saturday: 6.15am to 12:00pm, with allowance for extended hours during major supply contracts of 6.15am to 3.00pm.</p> <p>Sunday and public holidays: No works (Schedule 3, Condition 8)</p>	No change to hours of operation.
<b>Extraction area and depth</b>	<p>Approved extraction area to be extended as shown in Figures 4.1, 4.2 and 4.3 and Appendix 1.</p> <p>Depth of extraction to remain as approved, RL 2.5 m (AHD). Consistent with condition schedule 2, condition 7.</p>	Minor modification to extraction area. No change to depth.
<b>Transportation limits</b>	Up to 500,000 tpa may be transported from the site.	No increase in transportable loads or additional external truck movements.
<b>Extraction method</b>	Extraction involves dry extraction of the bare dunes	No change to extraction method.
<b>Site infrastructure and plant</b>	Site Infrastructure limited to an office and weighbridge and use of mobile plant.	No change to on-site infrastructure and plant.
<b>Product transport</b>	Truck via established access road	No change to method of transport or access.
<b>Environmental impacts</b>		
<b>Traffic</b>	Conditions 2 – 6 (inclusive) of schedule 3 manage transportation routes, haulage and onsite parking.	There is no change to transportation/haulage routes or site management methods in relation to loaded trucks exiting the site.
<b>Noise and vibration</b>	Schedule 3, Conditions 7 imposes operational noise limits (as measured at sensitive receivers)	No changes to extraction/processing methods and associated impacts to noise.
<b>Heritage</b>	The area of expansion was considered for impact in the original assessment. No sites or deposits were identified during assessment or since commencement of operations on site (refer to AHIMs search at <b>Appendix 3</b> ). The site will continue to be managed by the adopted unexpected finds protocol.	No change to the assessment outcomes. Site managed by suitable operational measures that are to be retained.
<b>Rehabilitation -</b>	As set out in section 7.1, the proposed modification seeks to amend the	Modification to the RLMP as set out in



<b>Stabilisation</b>	RLMP in relation to dune stabilisation works.	section 7.1 of this EIS.
<b>Safety</b>	No change in the management of public safety around the site. The perimeter of the extraction area will be marked using appropriate warning signs and ensure that all sand extraction working faces have a slope of no greater than 1:3. Condition 15 (a) and (b), schedule 3.	No change to management provisions.





## Appendix 3

Aboriginal Heritage Information Management System (AHIMS) Search Outcomes

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# AHIMS Web Services (AWS)

## Extensive search - Site list report

Your Ref/PO Number : Stockton extensive

Client Service ID : 378666

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
38-4-0261	Fern Bay_5; <a href="#">Contact</a>	AGD	56	391200	6363700	Open site	Valid	Shell : -, Artefact : -	Midden	1845
38-4-0262	Fern Bay_6; <a href="#">Contact</a>	AGD	56	391500	6363900	Open site	Valid	Shell : -, Artefact : -	Midden	1845
38-4-0263	Fern Bay_7; <a href="#">Contact</a>	AGD	56	391600	6364000	Open site	Valid	Shell : -, Artefact : -	Midden	1845
38-4-0264	Fern Bay_8; <a href="#">Contact</a>	AGD	56	391800	6364100	Open site	Valid	Shell : -, Artefact : -	Midden	1845
38-4-0265	Fern Bay_9; <a href="#">Contact</a>	AGD	56	391900	6364200	Open site	Valid	Shell : -, Artefact : -	Midden	1845
38-4-0267	Fern Bay_11; <a href="#">Contact</a>	AGD	56	392200	6364300	Open site	Valid	Shell : -, Artefact : -	Midden	1845
38-4-0268	Fern Bay_12; <a href="#">Contact</a>	AGD	56	392300	6364400	Open site	Valid	Shell : -, Artefact : -	Midden	1845
38-4-0269	Fern Bay_13; <a href="#">Contact</a>	AGD	56	392400	6364400	Open site	Valid	Shell : -, Artefact : -	Midden	1845
38-4-0129	NBR7; <a href="#">Contact</a>	AGD	56	389850	6364380	Open site	Valid	Artefact : -	Open Camp Site	1269,101086
38-4-0321	Newcastle Bight 2; <a href="#">Contact</a>	AGD	56	390050	6364760	Open site	Valid	Artefact : -	Open Camp Site	2250,101086
38-4-0322	Newcastle Bight 1; <a href="#">Contact</a>	AGD	56	391670	6364600	Open site	Valid	Shell : -, Artefact : -	Midden	2250
38-4-0569	Fullerton 9 <a href="#">Contact</a>	AGD	56	392710	6364583	Open site	Valid	Artefact : 19, Shell : 1		
38-4-0563	Fullerton 1 <a href="#">Contact</a>	AGD	56	391352	6363717	Open site	Valid	Shell : -		
38-4-0564	Fullerton 3 <a href="#">Contact</a>	AGD	56	391828	6364079	Open site	Valid	Shell : 1		
38-4-0565	Fullerton 4 <a href="#">Contact</a>	AGD	56	391904	6364081	Open site	Valid	Shell : 1		
38-4-0566	Fullerton 5 <a href="#">Contact</a>	AGD	56	392065	6364201	Open site	Valid	Shell : 1		
38-4-0567	Fullerton 7 <a href="#">Contact</a>	AGD	56	392285	6364371	Open site	Valid	Shell : 1		

Report generated by AHIMS Web Service on 25/10/2018 for Christopher Colusso for the following area at Lot : 1, DP:DP1006399 with a Buffer of 200 meters. Additional Info : To inform planning decision. Number of Aboriginal sites and Aboriginal objects found is 33

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# AHIMS Web Services (AWS)

## Extensive search - Site list report

Your Ref/PO Number : Stockton extensive

Client Service ID : 378666

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
38-4-0568	Fullerton 8	AGD	56	392465	6364420	Open site	Valid	Shell : 1		
	<a href="#">Contact</a>	<a href="#">Recorders</a>		Umwelt (Australia) Pty Limited				<a href="#">Permits</a>		
38-4-0644	Fullerton Site 36	AGD	56	391496	6363762	Open site	Valid	Artefact : 1		
	<a href="#">Contact</a>	<a href="#">Recorders</a>		Umwelt (Australia) Pty Limited				<a href="#">Permits</a>		
38-4-0948	Fern Bay Estate 15	AGD	56	389847	6364460	Open site	Valid	Artefact : 1		
	<a href="#">Contact</a> T Russell	<a href="#">Recorders</a>		ERM Australia Pty Ltd- Sydney CBD				<a href="#">Permits</a>		
38-4-0949	Fern Bay Estate 16	AGD	56	389772	6364185	Open site	Valid	Artefact : 4		
	<a href="#">Contact</a> T Russell	<a href="#">Recorders</a>		ERM Australia Pty Ltd- Sydney CBD				<a href="#">Permits</a>		
38-4-0950	Fern Bay Estate 17	AGD	56	389785	6364535	Open site	Valid	Artefact : -, Shell : -		
	<a href="#">Contact</a> T Russell	<a href="#">Recorders</a>		ERM Australia Pty Ltd- Sydney CBD				<a href="#">Permits</a>		
38-4-0266	Fern Bay_10;	AGD	56	392100	6364200	Open site	Valid	Shell : -, Artefact : -	Midden	1845
	<a href="#">Contact</a>	<a href="#">Recorders</a>		Pam Dean-Jones,Mr.Luke Godwin,M Heath				<a href="#">Permits</a>		
38-4-1863	Restriction applied. Please contact ahims@environment.nsw.gov.au.					Open site	Valid			
	<a href="#">Contact</a>	<a href="#">Recorders</a>		Mr.Warren Mayers				<a href="#">Permits</a>		
38-4-1864	Restriction applied. Please contact ahims@environment.nsw.gov.au.					Open site	Valid			
	<a href="#">Contact</a>	<a href="#">Recorders</a>		Mr.Warren Mayers				<a href="#">Permits</a>		
38-4-1865	Restriction applied. Please contact ahims@environment.nsw.gov.au.					Open site	Valid			
	<a href="#">Contact</a>	<a href="#">Recorders</a>		Mr.Warren Mayers				<a href="#">Permits</a>		
38-4-1867	Restriction applied. Please contact ahims@environment.nsw.gov.au.					Open site	Valid			
	<a href="#">Contact</a>	<a href="#">Recorders</a>		Mr.Warren Mayers				<a href="#">Permits</a>		
38-4-1868	Worimi RVA 028	GDA	56	391971	6364367	Open site	Valid	Shell : 1		
	<a href="#">Contact</a>	<a href="#">Recorders</a>		Mr.Warren Mayers				<a href="#">Permits</a>		
38-4-1869	Restriction applied. Please contact ahims@environment.nsw.gov.au.					Open site	Valid			
	<a href="#">Contact</a>	<a href="#">Recorders</a>		Mr.Warren Mayers				<a href="#">Permits</a>		
38-4-1870	Restriction applied. Please contact ahims@environment.nsw.gov.au.					Open site	Valid			
	<a href="#">Contact</a>	<a href="#">Recorders</a>		Mr.Warren Mayers				<a href="#">Permits</a>		
38-4-1871	Restriction applied. Please contact ahims@environment.nsw.gov.au.					Open site	Valid			
	<a href="#">Contact</a>	<a href="#">Recorders</a>		Mr.Warren Mayers				<a href="#">Permits</a>		
38-4-1872	Restriction applied. Please contact ahims@environment.nsw.gov.au.					Open site	Valid			
	<a href="#">Contact</a>	<a href="#">Recorders</a>		Mr.Warren Mayers				<a href="#">Permits</a>		

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## AHIMS Web Services (AWS) Extensive search - Site list report

<u>SiteID</u>	<u>SiteName</u>	<u>Datum</u>	<u>Zone</u>	<u>Easting</u>	<u>Northing</u>	<u>Context</u>	<u>Site Status</u>	<u>SiteFeatures</u>	<u>SiteTypes</u>	<u>Reports</u>
38-4-1873	Restriction applied. Please contact ahims@environment.nsw.gov.au. <u>Contact</u>					Open site	Valid			
		<u>Recorders</u>	Mr.Warren Mayers					<u>Permits</u>		