



## Statement of Heritage Impact

330 Captain Cook Drive, Kurnell, NSW  
Project SSD-10412

Sutherland Shire LGA



12 March 2021

Report to Breen Resources Pty Ltd

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## Definitions

|                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Breen</b>                        | Breen Resources Pty Ltd                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>DA269/90</b>                     | A consent applying across the Proposal Site which provides for the establishment of a depot to receive excavated materials and selected demolition materials (including bricks, tiles and concrete spall), and for the restoration of the land by application of the materials to the land.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>DA11-0665</b>                    | <p>A consent applying across part of the Proposal Site (i.e. parts of Lot 1122, Lot 11223, Lot 5 and Lot 6) as well as adjacent land, which provides a masterplan for the construction of playing fields in accordance with VPA.</p> <p>DA11-0665 is a Staged Development Consent, and subsequent detailed approvals are provided under the following related consents:</p> <ul style="list-style-type: none"> <li>• DA11-0941 for Stage 1B playing fields bulk earthworks</li> <li>• DA12-0083 for Stage 2 playing fields and the roads, services and landscaping for Stage 1B.</li> <li>• DA12-0439 for Stage 3 playing fields.</li> <li>• DA12-1066 for Stage 1C skate park.</li> </ul> <p>DA11-0665 also included the detailed development consent for the first stage of works, being the development of the Stage 1A playing fields on Lot 1 DP1101922.</p> |
| <b>DA11-0941</b>                    | A consent applying across part of Lot 1122 for the development of the Stage 1B playing fields bulk earthworks. DA11-0941 is a Stage 2 consent, related to the partial delivery of the masterplan approved under Staged Development Consent DA11-0665.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>DA12-0083</b>                    | A consent applying across part of Lot 1122 and part of Lot 6 for the development of the Stage 2 playing fields and the roads, services and landscaping for Stage 1B playing fields. DA12-0083 is a Stage 2 consent, related to the partial delivery of the masterplan approved under Staged Development Consent DA11-0665.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>DA12-0439</b>                    | A consent applying across part of Lot 1122 for the development of the Stage 3 playing fields. DA11-0439 is a Stage 2 consent, related to the partial delivery of the masterplan approved under Staged Development Consent DA11-0665.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>DA12-1066</b>                    | A consent applying on Lot 1 DP1101922 for the development of the Stage 1C skate park. DA11-0941 is a Stage 2 consent, related to the partial delivery of the masterplan approved under Staged Development Consent DA11-0665.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>EIS</b>                          | Environmental Impact Statement                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>EPL</b>                          | Environment Protection Licence issued by the Environment Protection Authority under the <i>Protection of the Environment Operations Act 1997</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Embellished Marang Parklands</b> | The Marang Parkland as now proposed to be delivered as part of this SSDA, which contain a range of improvements and embellishments over and above the 2010 Voluntary Planning Agreement commitments.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

|                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Existing Breen Resources Facility</b> | <p>Existing facility owned by Breen Property Pty Ltd and operated by Breen Resources Pty Ltd at 330 Captain Cook Drive, Kurnell which receives excavated materials and selected C&amp;D waste, and carries out site restoration by application of these materials to land in accordance with DA269/90 on:</p> <ul style="list-style-type: none"> <li>• Lot 1122 in DP794114 (Lot 1122);</li> <li>• Lot 1123 in DP794114 (Lot 1123);</li> <li>• Lot 5 in DP1158627 (Lot 5);</li> <li>• Lot 6 in DP1158627 (Lot 6)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Former Landfill Area</b>              | <p>Parts of the Existing Breen Resources Facility that were historically managed under one license as one site and used for landfilling pursuant to DA269/90 and EPL 4608, but where landfilling has since ceased, comprising parts of Lots 1122, 1123 and Lot 6 (noting that landfilling remains active on Lot 5).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Landfill</b>                          | <p>A landfill is an engineered, in-ground facility for the safe and secure disposal of waste by applying the waste to the land.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Marang Parklands</b>                  | <p>The regional recreation facilities and parklands proposed under the 2010 Voluntary Planning Agreement (VPA).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>New Resource Recovery Facility</b>    | <p>Proposed new facility on Lot 5 DP1158627 to receive and process up to 650,000 tonnes per year of C&amp;D and non-putrescible C&amp;I wastes. The New Resource Recovery Facility comprises:</p> <ul style="list-style-type: none"> <li>• Waste processing building – incorporating the Recycling Plant and light residuals processing</li> <li>• Soils processing building – incorporating soil processing plant</li> <li>• Concrete processing building – incorporating processing plant for concrete, aggregate, brick, tiles, rock and other similar materials.</li> <li>• Three weighbridges and an internal weighing zone</li> <li>• Site office and administration building</li> <li>• Workshop</li> <li>• Parking area</li> <li>• Three wheel washes</li> <li>• Two recovered water basins</li> <li>• Internal roadways</li> <li>• Fencing and visual screening</li> <li>• Stockpiles and storage areas</li> <li>• Skip bin storage area</li> </ul> |
| <b>Playing Fields</b>                    | <p>The playing fields and associated works approved under:</p> <ul style="list-style-type: none"> <li>• DA11-0665;</li> <li>• DA11-0941;</li> <li>• DA12-0083;</li> <li>• DA12-0439; and</li> <li>• DA12-1066</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |



|                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Proposal Site</b> | The entirety of the Existing Breen Resources Facility, being Lot 1122 and Lot 1123, and Lot 5 and Lot 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>SEARs</b>         | Secretary's Environmental Assessment Requirements. In this case SSD-10412 dated 14 February 2020.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>SSDA</b>          | State significant development application                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>The Proposal</b>  | <ul style="list-style-type: none"> <li>Construction and operation of a resource management facility, comprising: <ul style="list-style-type: none"> <li>A resource recovery facility on Lot 5 to process up to 650,000 tonnes per year of C&amp;D and non-putrescible C&amp;I wastes, including consolidation of existing waste management activities within this part of the Proposal Site.</li> <li>A waste disposal facility being the continuation of current landfilling, land rehabilitation operations and contouring by permanent application of some of the residual waste materials from the New Resource Recovery Facility to land on Lot 5.</li> </ul> </li> <li>Demolition and/or relocation to Lot 5 (as required) of the Existing Breen Resources Facility on Lots 1122, 1123 and 6 (this includes those parts of Lots 1122, 1123 and 6 that will comprise the Playing Fields).</li> <li>Capping, closing and contouring areas within Lots 1122, 1123 and Lot 6 with suitable material recovered from the New Resource Recovery Facility and the material currently stockpiled on site that meets a relevant 2014 resource recovery orders, This includes ensuring a consistent and appropriate land form between the Marang Parklands and Lot 5. Some specific material would be imported to the site for capping and covering, such as low permeability clay.</li> <li>Delivery of activated community space in the form of the Embellished Marang Parklands on Lots 1122, 1123 and Lot 6.</li> </ul> |
| <b>VPA</b>           | <p>The Voluntary Planning Agreement entered into between Breen Holdings Pty Ltd (subsequently novated to Breen Property), Australand Kurnell Pty Ltd (now renamed Frasers Property Australia Limited) and Sutherland Shire Council in June 2010 which requires:</p> <ul style="list-style-type: none"> <li>A staged transfer of 91 ha of land to public ownership for the purpose of environmental conservation and public open space.</li> <li>Construction of regional recreation facilities, including 10 playing fields, a skate park, 3 amenities buildings, walking and cycling tracks, picnic facilities and associated parking for over 400 cars.</li> <li>Rehabilitation and landscaping of degraded land previously dredged for sand mining to support an ecological 'green corridor' stretching from the Towra Point Nature Reserve to the ocean at Wanda Beach.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

# 1 Introduction

Coast History and Heritage (Coast) has prepared this Statement of Heritage Impact to inform a development application submitted by Breen Resources Pty Ltd (Breen) for the provision of recreational facilities and parklands and the construction of a resource recovery facility at 330 Captain Cook Drive, Kurnell. The Proposal is to be assessed as a State Significant Development (SSD-10412) under Part 4 (Division 4.7) of the *Environmental Planning and Assessment Act* (1979).

## 1.1 Background

### *Property*

The Proposal Site for the purposes of this report comprises Lots 1122 and 1123 DP794114, and Lots 5 and 6 DP1158627 in the Parish of Sutherland, County of Cumberland. The Proposal Site (approximately 68 hectares) has been subject to extensive sand mining in the past and currently operates a waste facility (which is located on the in the western part of the Proposal Site) that receives excavated materials and selected building/demolition material, and carries out the simultaneous restoration of the Proposal Site by application of these materials to the land pursuant to existing development consent DA/269/90.

The Proposal Site is generally bounded to the north by Captain Cook Drive, which is the thoroughfare providing access between North Cronulla and the village of Kurnell. The main access to the site is from the north and via an entranceway on this road. North of Captain Cook Drive are the foreshores of Botany Bay, including Towra Point Nature Reserve. To the south, the Proposal Site adjoins the dune system of Wanda Beach-Bate Bay (including a heritage-listed Sand Dune and Cronulla State Park).

To the east, the Proposal Site is bounded by an unconstructed extension of Lindum Road, within the easement of which a pedestrian footpath has been constructed for beach and foreshore access. The constructed section of Linden Road provides access to recreational facilities including three sporting fields and a Skate Park, which have recently been constructed are now operational (Lot 1 DP 1101922; Lot 111 DP777967 and part of Lot 1123 DP794114). Further east, beyond Lindum Road is an operational sand mining site that extracts sand for the building industry and receives virgin land fill. To the west, the Proposal Site adjoins Charlotte Breen Memorial Reserve and Sydney Water's Cronulla wastewater treatment plant. Beyond Charlotte Breen Memorial Reserve (to the south west is the new residential suburb of Greenhills Beach), comprising low density residential housing.

Refer **figures 1 – 6**.

A portion of the Proposal Site (being Lots 1122 and 1123 DP794114 and Lot 6 DP1158627) is subject to a 2010 Voluntary Planning Agreement (VPA) entered into between Breen Holdings Pty Ltd (subsequently novated to Breen Property), neighbouring Frasers and Council. This requires site remediation and the provision of regional recreational facilities and parklands (which has already commenced with the master planned Stage 1 development of the aforementioned playing fields and skate park).

Refer **figure 7**.

### *Activities*

At present, landfilling on Lots 1122 and 1123 DP 794114 and Lot 6 has ceased, and landfilling activities on the Proposal Site are limited to a portion of Lot 5. Activities associated with the depot proper are still carried out: predominantly on Lots 1122 and 1123 DP794114.

Refer **figure 8**.

## **1.2 Proposal**

The current proposal involves following key integrated components, being:

- Construction and operation of a resource management facility, comprising:
  - A New Resource Recovery Facility on the eastern part of the Proposal Site (Lot 5), including consolidation of existing waste management activities within this part of the Proposal Site; and
  - A waste disposal facility, being the continuation of current land restoration, landfilling and contouring operations at the Proposal Site by permanent application of some of the residual waste materials from the New Resource Recovery Facility to land on Lot 5;
- Use of suitable material processed by the New Resource Recovery Facility to cap, contour and re-profile areas of the Proposal Site and to construct the Embellished Marang Parklands on Lots 1122, 1123 and Lot 6;
- Re-profiling of parts of the Proposal Site within Lots 1122, 1123 and 6, with some existing waste materials from those lots;
- Delivery of an activated and integrated community space in the form of the Embellished Marang Parklands on Lots 1122, 1123 and Lot 6, to provide a superior parkland to that proposed under the VPA. This will include, among other things, integrated water usage and management and utilising personnel, plant, material and infrastructure across the whole of the Site.
- To enable the above Proposal, the Existing Breen Resources Facility on Lots 1122, 1123 and 6 (this includes those parts of Lots 1122, 1123 and 6 that will comprise the Playing Fields) will be demolished and/or relocated (as required) to Lot 5.

The proposed Embellished Marang Parklands include the following improvements and benefits to the community over and above those contemplated by the 2010 VPA:

- A cleared 'Village Green' area in the middle of the parklands with amphitheatre, providing a place for the community to hold events and celebrations in a semi natural setting; and
- Associated picnic areas for all members of the local and wider community to use and enjoy; and
- A playground; and

- A network of accessible paths, including key pedestrian and cycle links between Quibray Bay and Cronulla Beach, to allow visitors to easily access the parklands for pedestrians and cycling, reinforcing the Sydney Green Grid; and
- An elevated landscape, including a panoramic look out in the western part of the parklands, that offers spectacular all-round regional views that will assist in a better understanding of the varied landscapes of this part of Sydney.
- Construction and operation of a resource recovery facility *on the eastern part* of the Proposal Site (Lot 5 DP1158627). This will consolidate existing waste management activities in this part of the Proposal Site.
- Continuation of current land restoration operations at the Proposal Site by permanent application of some of the residual waste materials from the resource recovery facility to land on Lot 5 and part of Lot 6 DP1158627.
- Capping and contouring areas of the Proposal Site within Lot 1122 and 1123 DP794114 with suitable material recovered from the resource recovery facility. Some specific material would be imported to the site for capping, such as low-permeability clay.
- Delivery of activated community space in the form of parklands on Lots 1122 and 1123 DP794114 and Lot 6 DP1158627.

Refer **figures 9 and 10**.

### **1.3 Requirements**

The Environmental Impact Statement (EIS) for the Proposal must meet the form and content requirements in clauses 6 and 7 of Schedule 2 of the *Environmental Planning and Assessment Regulation 2000* (the Regulation). As part of the planning process and to inform the EIS, the Planning Secretary's Environmental Assessment Requirements (SEARS) have requested that the EIS (under Heritage and Aboriginal Cultural Heritage) is to address and include:

- *identification and description of the relevant non-Aboriginal heritage items, including built heritage, landscapes and archaeology, that exist across the development - documented in a Statement of Heritage Impact (SOHI);*
- *description and assessment of potential impacts on non-Aboriginal heritage item(s) such as Cronulla sand dune and Wanda Beach coastal landscape, Towra Point Nature Reserve and Quibray Bay;*
- *measures to avoid and/or mitigate the impact on the heritage significance or cultural heritage values of the site and the surrounding heritage item(s)*
- *identification and description of the Aboriginal cultural heritage values that exist across the development - documented in an Aboriginal Cultural Heritage Assessment Report (ACHAR)*
- *consultation with Aboriginal people must be undertaken and documented in the ACHAR*

- *a description and assessment of potential impacts on Aboriginal cultural heritage values such as Cronulla Sand Dune and Wanda Beach Coastal Landscape.<sup>1</sup>*

## **1.4 Report**

This report is a Statement of Heritage Impact (SoHI) prepared for, and at the request of, Breen Resources Pty Ltd. It addresses the first three SEARS requirements listed in section 1.3 above, which relate to cultural heritage. A separate Aboriginal Cultural Heritage Assessment Report (ACHAR) has been prepared by Coast to address the SEARS requirements as they relate to Aboriginal cultural heritage.<sup>2</sup> This SoHI acknowledges the Burra Charter and the policies and guidelines issued by Heritage NSW, within the NSW Department of Premier and Cabinet (and its predecessors):

- Assessing Significance for Historical Sites and Relics (NSW Heritage Branch 2009)
- Historical Archaeology Code of Practice (Heritage Office 2006)
- Statements of Heritage Impact (NSW Heritage Office 2002)
- Assessing Heritage Significance (NSW Heritage Office 2001)

This SoHI includes:

- A brief history of the Proposal Site
- Listing and legislative considerations
- Details of a site survey
- Identification of heritage items
- Historic heritage significance assessment
- Proposal details
- Impact Assessment
- Conclusions
- Recommendations.

## **1.5 Authorship**

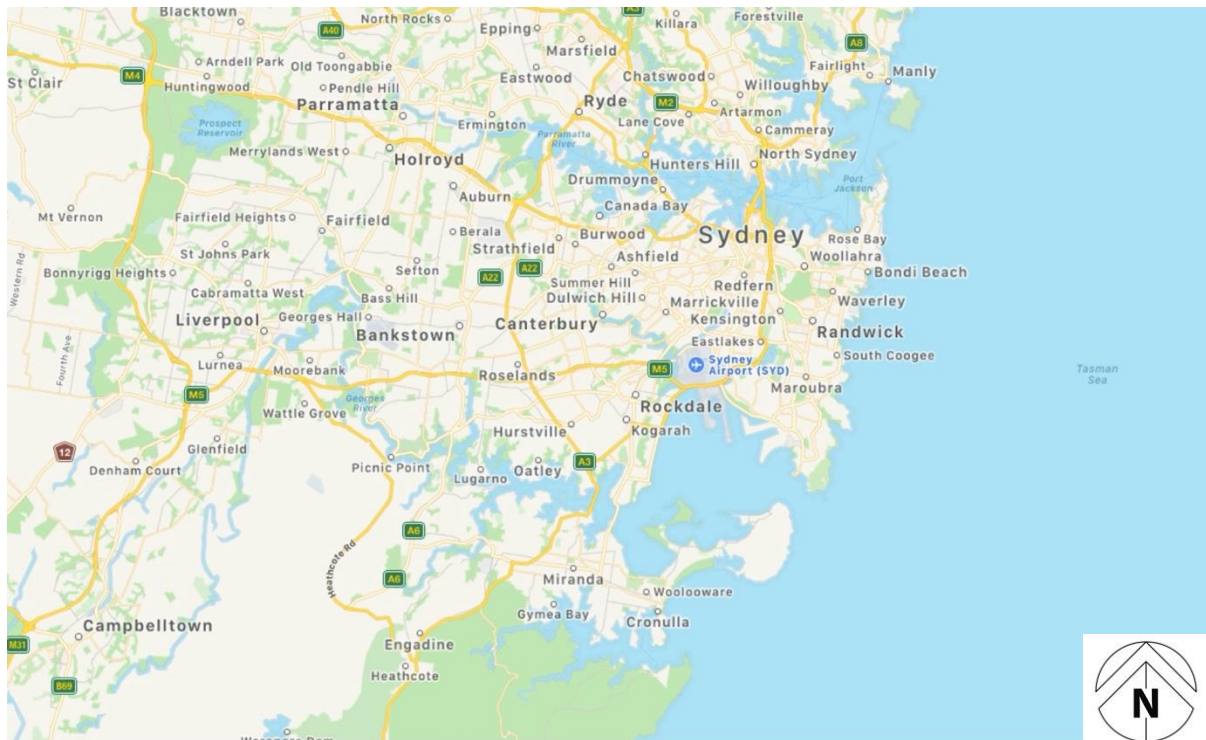
This report was prepared by Dan Tuck (historical archaeologist and heritage consultant) with input from Dr Paul Irish (Coast Director) and Fenella Atkinson (Coast Senior Archaeologist).

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<sup>1</sup> Breen Resource Recovery Facility SSD-10412 SEARS Pp: 3-4

<sup>2</sup> Coast History and Heritage 2020





**FIGURE 1. Sydney Region**

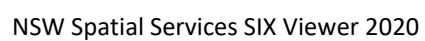
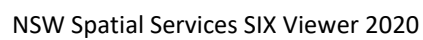
NSW Spatial Services SIX Viewer 2020



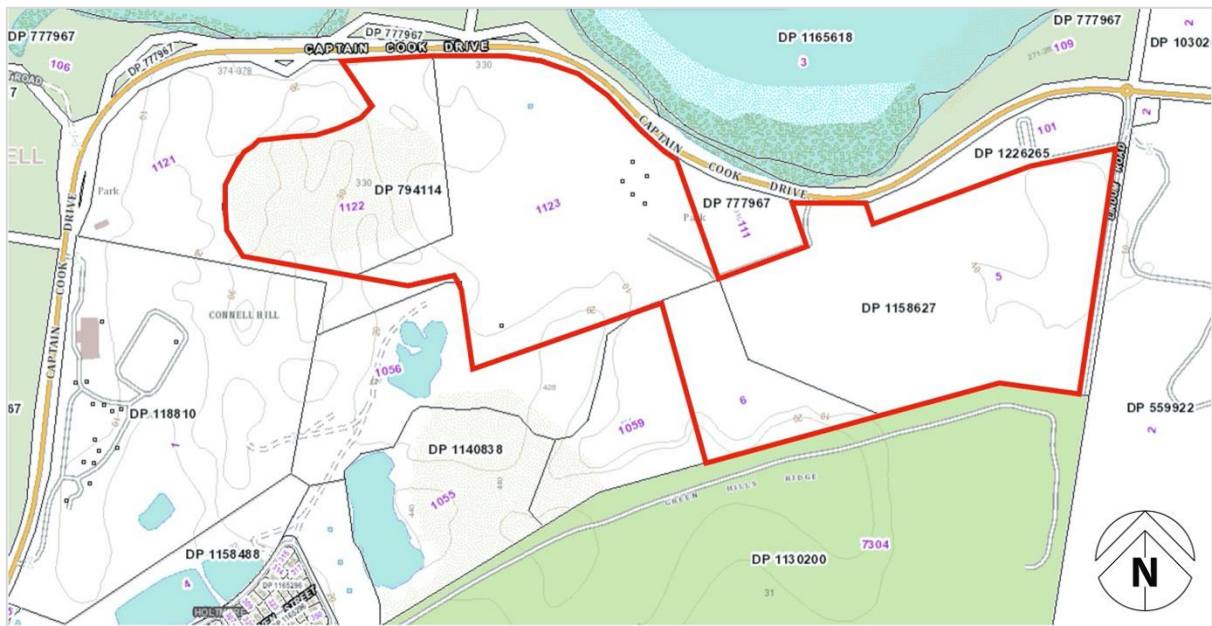
**FIGURE 2. Kurnell Peninsula (topographic)**

NSW Spatial Services SIX Viewer 2020









**FIGURE 5: Proposal Site Context (topographic)**

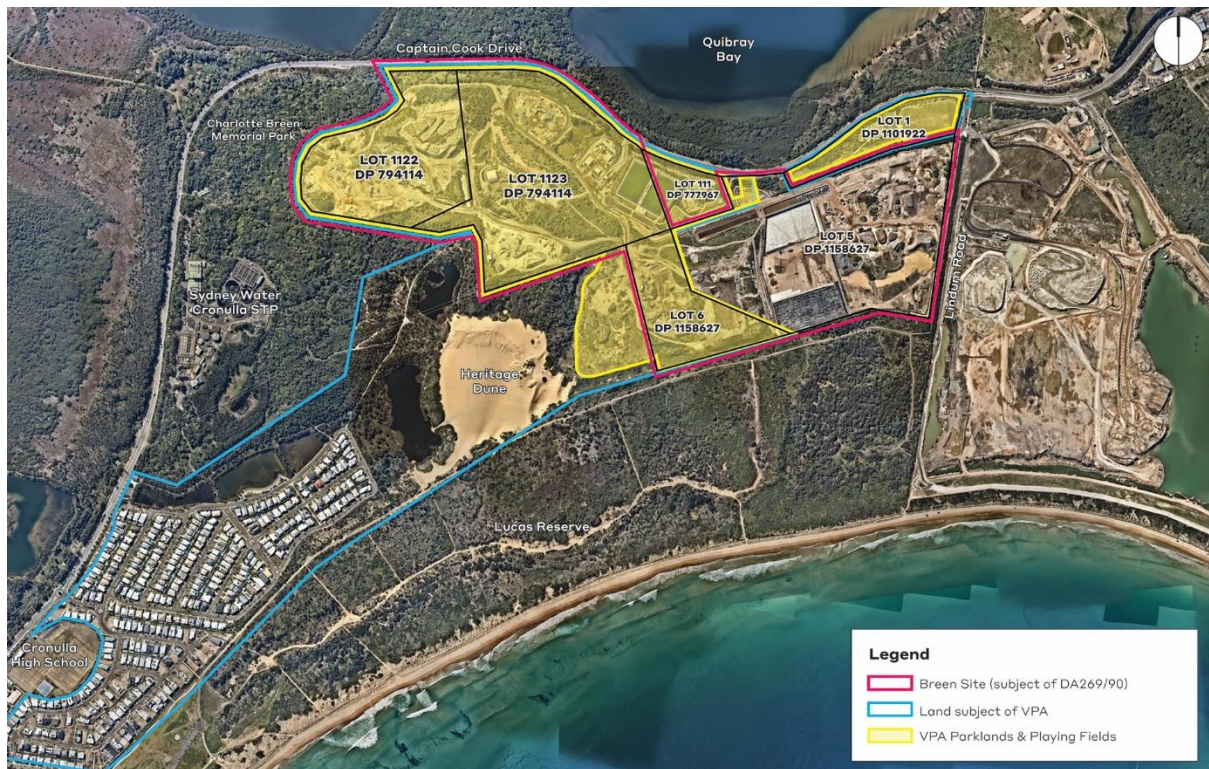
NSW Spatial Services SIX Viewer 2020



**FIGURE 6: Site Area**

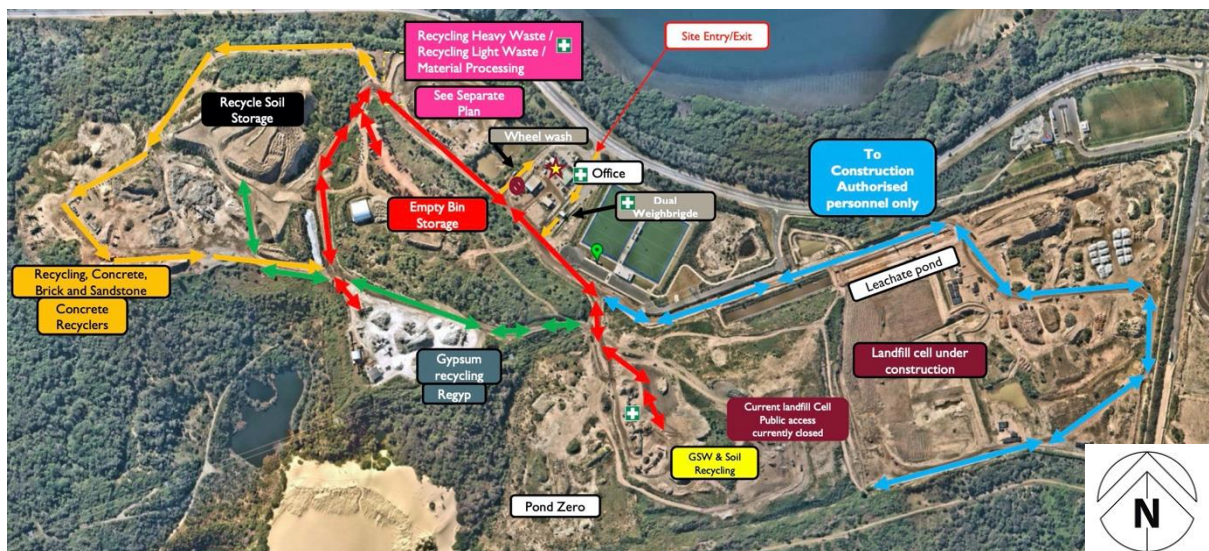
Ethos Urban 2021 EIS





**FIGURE 7: VPA Context**

Ethos Urban 2021 EIS



**FIGURE 8: Current Site Arrangement**

Breen Resources Pty Ltd





**FIGURE 9: Proposal (Breen SSD Resource Recovery Project)**

Clouston Associates

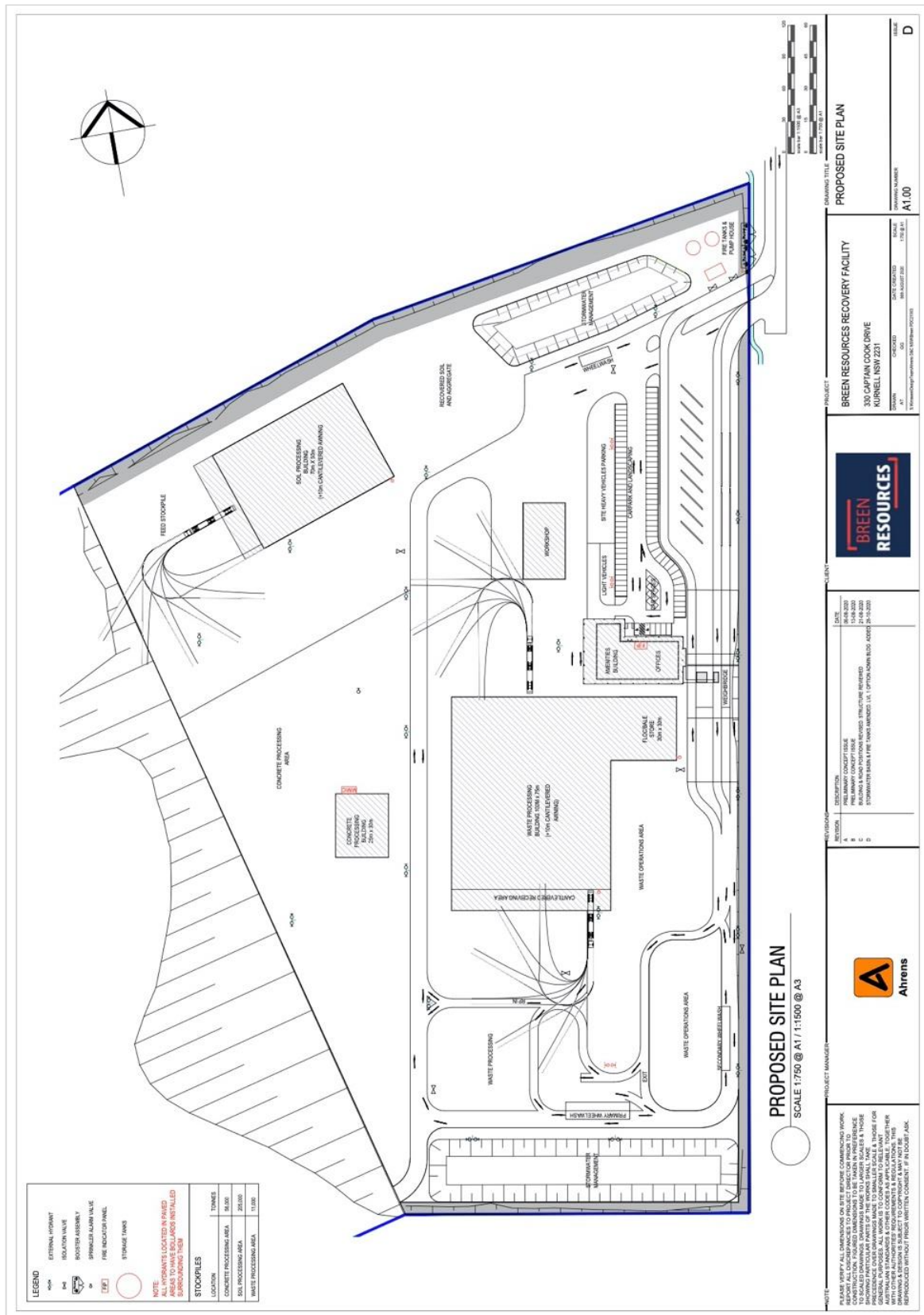


FIGURE 10: Proposed New Resource Recovery Facility Layout Plan

AHRENS 2020



## 2 History

The following section provides a contextual history of Kurnell Peninsula and the Proposal Site.

### 2.1 First People

Aboriginal people have been living along the shore of Kamay (Botany Bay) and across the Kurnell peninsula for thousands of years. They watched and experienced the sandy central peninsula form – the creation of Kamay, the diversion of the Cooks and Georges River, and the formation of large dunes and mangrove wetlands. Kurnell is the land of the Gweagal people, though it would have been visited and used by other Aboriginal people around Kamay also. The peninsula provided Aboriginal people with a host of terrestrial, maritime and estuarine resources: the consequence of a unique and varied landscape that included the bountiful Botany Bay, rugged Cape Solander, the swamplands of Weeney and Quibray Bay and the extensive peninsula dune system.<sup>3</sup>

The name Kurnell is an Aboriginal word: *Cunnell*.<sup>4</sup> It appears to be related to a significant local Aboriginal family group: a notable member of which was Cundlemong (pronounced *Cunnelmong* and often corrupted to *Colonel*). Cundlemong was born at Kurnell in the late eighteenth century and died and was buried at Alpha Farm within what is now the Meeting Place Precinct at Kamay Botany Bay National Park at Kurnell in the 1840s.<sup>5</sup>

### 2.2 Settlement

The first land granted on the Kurnell Peninsula (and indeed within the Sutherland Shire) was to Captain James Birnie: a mercantile trader who had arrived in Sydney in 1806 and settled in Pitt Street. His land was portion 1 of 700 acres (excluding 160 acres of salt marshes) in the Parish of Sutherland, County of Cumberland. It was granted in 1815 under the *Free Grants Scheme*.

The property was known as *Alpha Farm* (also First Farm), and within it he built a small cottage near Captain Cooks landing place, which he called *Curnell*. Birnie cleared land (as per grant conditions), ran cattle and established a small mixed farming and dairying enterprise.<sup>6</sup>

#### 2.2.1 John Connell

John Connell, a merchant and free settler, was another who obtained land on the peninsula soon after settlement. He acquired 1000 acres at Quibray Bay (west of Birnie's land) in 1821. James Birnie was declared insane in 1828 and as a consequence, the trustees of his estate sold his lands to John Connell. Connell ran cattle at Kurnell and through various acquisitions, eventually increased his district holdings to 3000 acres. By 1838, Connell owned almost the entire Kurnell peninsula.<sup>7</sup>

---

<sup>3</sup> Attenbrow 2010; Salt 2000; Kohen and Lampert 1987; Lawrence 1996

<sup>4</sup> There has been some suggestion that Kurnell was a corruption of (John) Connell, an early landholder in the area (refer *The Sunday Times*, April 30, 1899). This is unlikely however as the Kurnell name predates his arrival.

<sup>5</sup> Nugent 2005; Tuck 2002; Salt 2000

<sup>6</sup> Tuck 2002; Salt 2000; Curby 1998

<sup>7</sup> Salt 2000; Holt 1972; Cridland 1924; Larkin 1998

Connell rebuilt Birnie's cottage as *Alpha House* (on the foundations of the original) and engaged in the wholesale modification of the local landscape. He cleared heavily, selling timber to Sydney merchants and growing feed grass in cleared areas. The timbers cut by Connell, from Kurnell and Port Hacking, included ironbark, turpentine, blackbutt, mahogany and red cedar. The timber extracted from Kurnell was collected by bullock teams and floated through a canal dug to Woollooware Bay (near the current Sharks Leagues Club).<sup>8</sup>

Despite the clearing instigated by Connell, the area retained a great array of flora and fauna for many years. These resources, the coastal and bushland setting, and the relative closeness to Sydney, made Kurnell a popular destination for hunting and fishing trips from the 1840s. Kurnell was considered by many at the time to be a 'veritable sportsman's paradise'. In the 1840s for instance, a Sydney Solicitor named Shuttleworth visited Kurnell every Saturday to shoot quail.<sup>9</sup>

John Connell died in 1849, where after his property passed to his grandsons: John Connell (JC) Laycock and Elias Pearson (EP) Laycock. Unlike their productive and wily grandfather, both proved to be poor financial managers and their tenure was short.<sup>10</sup>

During the 1850s, there was a significant Aboriginal presence in the Kurnell area. Long Ned, a Weeney Bay Shellgritter, recalled that in the 1850s '... blacks were more numerous than whites in the vicinity'.<sup>11</sup> Augmenting the local Aboriginal population were a range of social outcasts, including sailors who had deserted their ships for the gold rushes. Many of the deserters lived with shellgritters like Long Ned at Weeney Bay and the area, and indeed the district, became a haven for outsiders: well known for its illicit stills and prize fighting.<sup>12</sup>

### 2.2.2 The Laycocks

In 1856, the Colonial administration held the first land auctions in the Sutherland district. The land was priced at £1 per acre and excluded a reserve of 1500 acres retained for East Coast fortifications from Cape Solander to Boat Harbour.<sup>13</sup> John Connell Laycock secured over 700 acres at the sale and by 1858 the family owned over 4500 acres.<sup>14</sup> JC Laycock was ruined in 1860 after buying extensive properties in Sydney, Sutherland, Liverpool and Queensland, and mortgaging the bulk to farmer and grazier, magistrate, socialite, philanthropist and politician Thomas Holt.

Six months after buying the *Prince of Wales Theatre* and adjoining properties, fire destroyed the buildings and killed two people. Laycock was not adequately insured and had to sell his mortgaged properties.<sup>15</sup>

Refer **figures 11 and 12**.

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<sup>8</sup> Salt 2000; Lawrence 1998

<sup>9</sup> *The Sunday Times* 30 April 1899; Larkin 1998

<sup>10</sup> Larkin 1998

<sup>11</sup> *St George Call* 8 September 1906: 3

<sup>12</sup> *St George Call* 30 March 1907: 3; Larkin 1998

<sup>13</sup> Salt 2000

<sup>14</sup> Tuck 2002

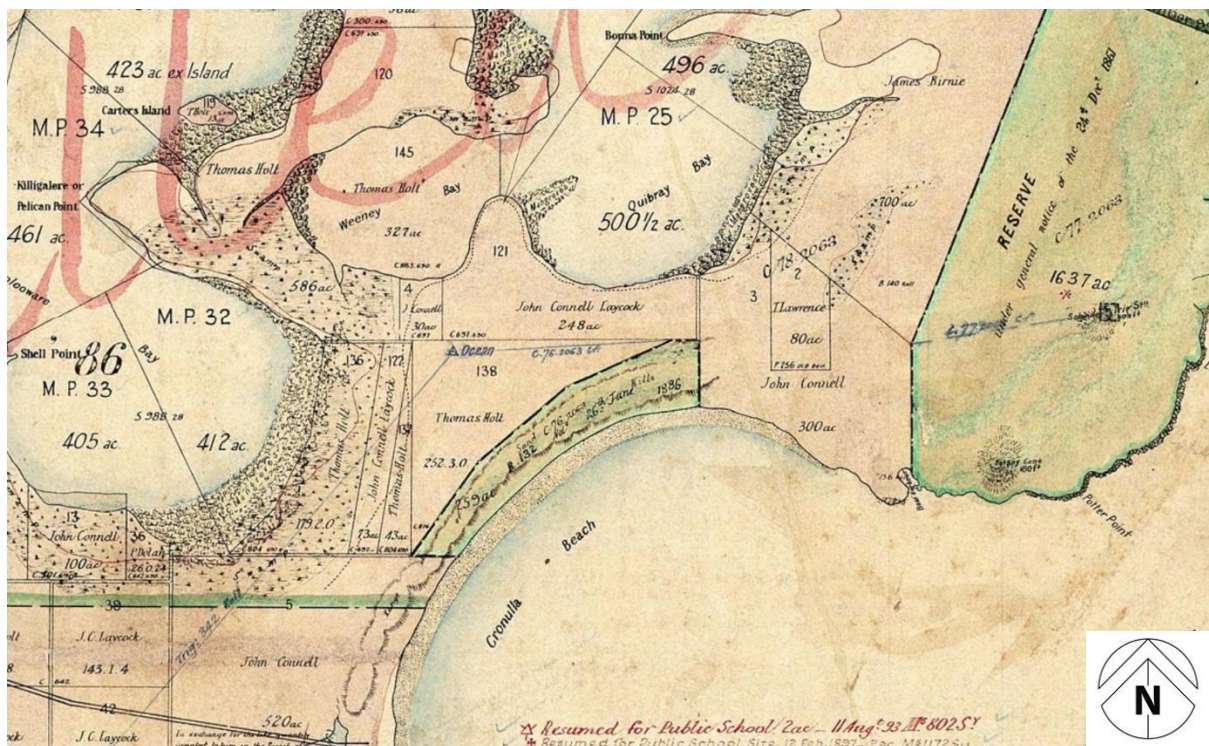
<sup>15</sup> Salt 2000





**FIGURE 11: Map of the Parish of Sutherland (c.1830s)**

Land Registry Services HLRV AO Map 359 NSW



**FIGURE 12: Map of the Parish of Sutherland (Nd)**

NSW Land Registry Services HLRV AO Map 26048



### 2.2.3 Thomas Holt

Thomas Holt became the largest landowner in the district when he purchased 4600 acres from the indebted John Laycock in 1861.<sup>16</sup> His bid of £3275 acquired Laycock's holdings in their entirety.

Amongst the properties was the old Birnie estate of *Curnell*, and a number of scattered portions. During 1861 and 1862, Holt consolidated his holdings by buying the Gwawley Bay and Weeney Bay waterways, as well as additional land between the Georges and Hacking Rivers. Holt's accumulated holdings totalled around 13,000 acres.<sup>17</sup>

#### *Holt Sutherland Estate*

In the years thereafter, Holt effectively acquired most of what became the Sutherland Shire by acquiring other grantee's holdings and buying crown land.<sup>18</sup> From his mansion *The Warren* overlooking the Cooks River, Holt oversaw a vast estate that ultimately stretched from the '... shifting shell sands at Kurnell in the east, through the marshy swamps at Towra and Weeney Bay, to the high steep rocky hills above the Woronora River and deep ravines at North West Arm'.<sup>19</sup>

Holt was determined to make his estate profitable and the ways in which he attempted to do this were many and varied. Like Connell, though to a much greater extent, Holt and his family transformed the landscape: most notably by dividing his land into eleven paddocks and then having them scrubbed, fenced and stocked with sheep and cattle. While Holt's livestock venture was largely unsuccessful, his timber leases were more profitable. The timber cut by Holt's workers included '... very fine ironbark and blackbutt forests', which were taken to the northern end of Woolooware Road and manoeuvred through the canal cut by John Connell before being floated across the bay.<sup>20</sup>

Thomas Holt's estate workforce was many and varied and in addition to free men he made use of government men (convicts), runaway sailors and Aborigines.<sup>21</sup> Holt employed Connell's former overseer Mr Justice on site at Kurnell and in addition employed a *Gweagal* Aborigine William Rowley as his foreman. William was born at Pelican Point (Towra Point) in 1831.<sup>22</sup>

Another Aborigine, Jimmy Lowndes - one of the best horsemen on the Castlereagh - drove a bullock team for the Holt family for many years.<sup>23</sup> Lowndes aside from being widely regarded as a magnificent horseman, was also an expert marksman and athlete.<sup>24</sup>

Refer **figures 13** and **14**.

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<sup>16</sup> Larkin 1998; Curby 1998

<sup>17</sup> Tuck 2002; Salt 2000

<sup>18</sup> Curby 1998

<sup>19</sup> Cridland 1924

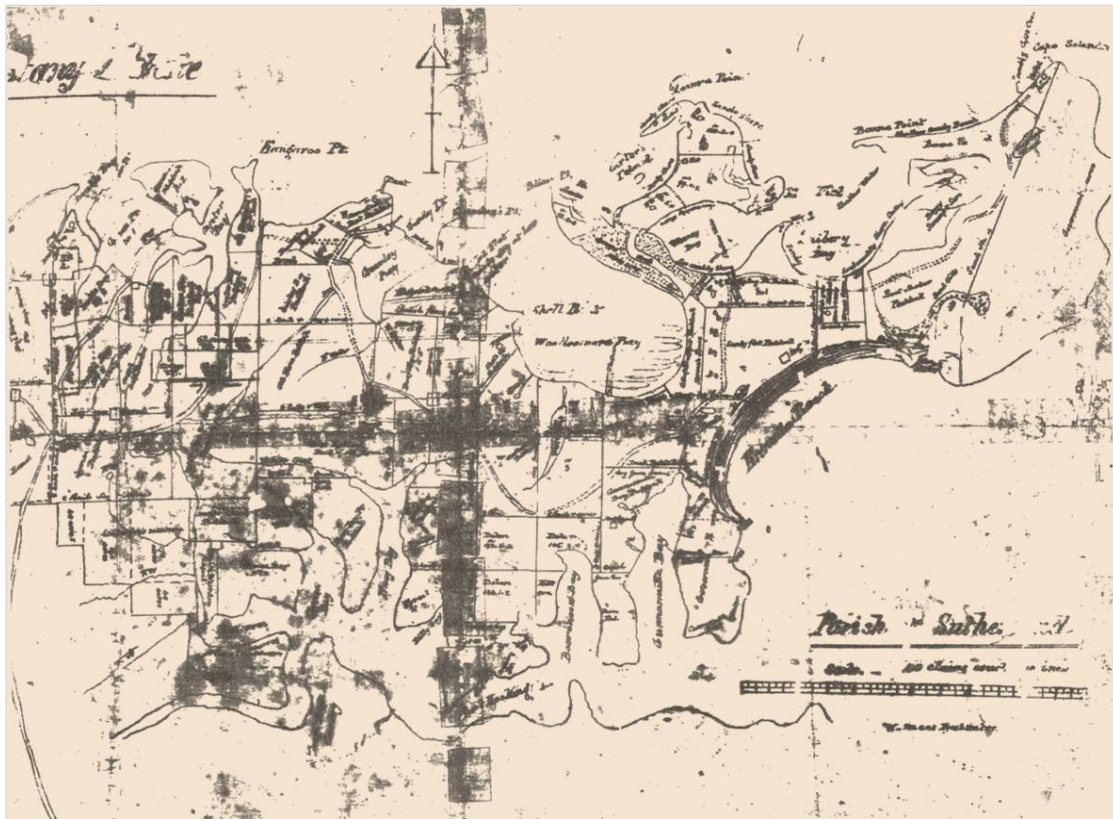
<sup>20</sup> Curby 1998; Cridland 1924

<sup>21</sup> Salt 2000

<sup>22</sup> Salt 2000

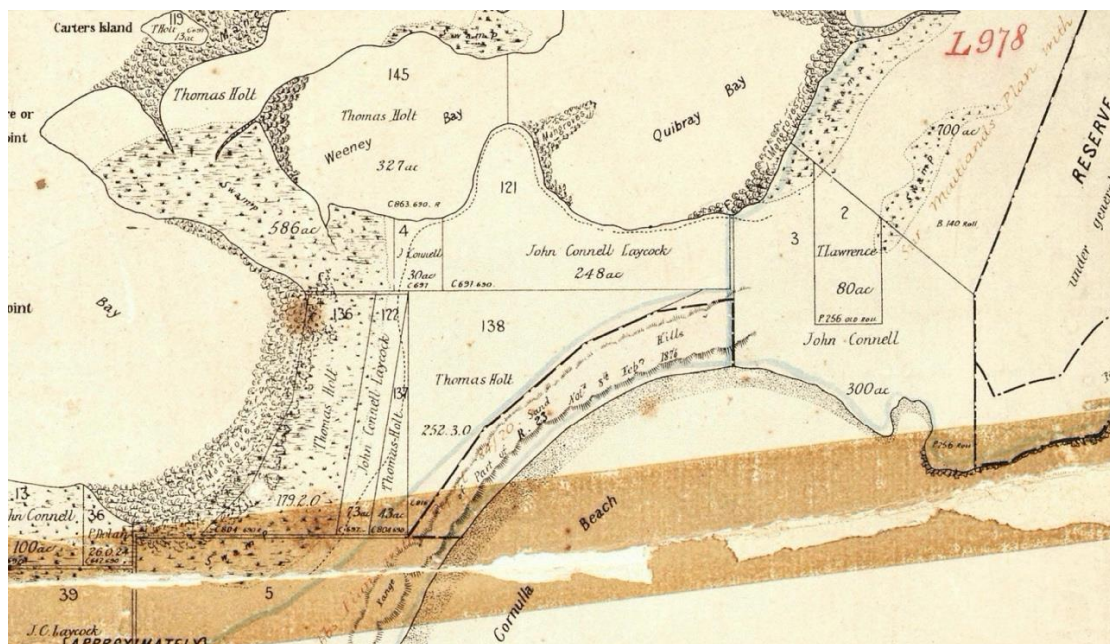
<sup>23</sup> Larkin 1998

<sup>24</sup> Salt 2000



**FIGURE 13: South Botany Estate Plan (1868)**

Southerland Shire Library Local Studies Collection



**FIGURE 14: Map of the Parish of Sutherland (c1880s)**

NSW Land Registry Services HLRV AO Map 26034

### *State of the Estate*

In 1868, Robert Cooper Walker, who co-managed the estate with Holt's eldest son Frederick, detailed the arrangement of the estate and the measures that had been taken to 'improve' it.<sup>25</sup> The *Report on the Sutherland Estate – January 1868* documents in detail the operation of the estate in the mid nineteenth century and the changes to the land wrought by Holt's activities.

Walker recorded that in 1868 the estate consisted of 12,000 acres containing 522 head of cattle, 1900 sheep, 30 head of horses and ponies.<sup>26</sup> The estate, though originally '... thickly timbered', had been ringbarked between 1862 and 1865. Walker noted that, three years on, '...the trees are now well killed and the effect on the land is very beneficial', further stating that grasses readily grew '... once the sun is allowed to get to the soil'.<sup>27</sup> English rib grasses, including Rye, had by this time been introduced to various parts of the run and feed crops such as corn and lucerne (alfalfa) where grown in some of the 'better' paddocks.

Sadly, broadscale logging and ringbarking all but wiped out the local stands of mature trees. One of the few remaining tall trees on the estate was near Woollooware Bay: a massive Red gum described by Walker as '... measuring over 20 feet in diameter and capable of shading over 1000 sheep'.<sup>28</sup>

### *Shifting Sands*

In his report, Robert Cooper Walker, noted that;

*'The whole length of Krenulla (Cronulla) Beach is backed by very large sand hills covering about 300 acres of ground'.<sup>29</sup>*

By the late 1860s though, the clearing and grazing and denudation that had taken place since the early nineteenth century had destabilized the dune systems, as evidenced by walker making reference to a number of already 'bald sand hills'. By the late nineteenth century, the dunes had been further denuded and the distinctive sandhills of the peninsula were well and truly on the move. Holt introduced Buffalo grass imported from America in an attempt to stabilise them.<sup>30</sup>

Thomas Holt had moved to London by the early 1880s, and of advancing years, devoted the remainder of his life to the poor and the Church. At the time of his death in 1888, his estate was valued at £330,000. He was survived by his wife, three sons and three daughters: descendants of whom remain associated with the Sutherland Shire.

Refer **figures 15 and 16**.

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<sup>25</sup> Walker 1868

<sup>26</sup> Walker 1868: 1

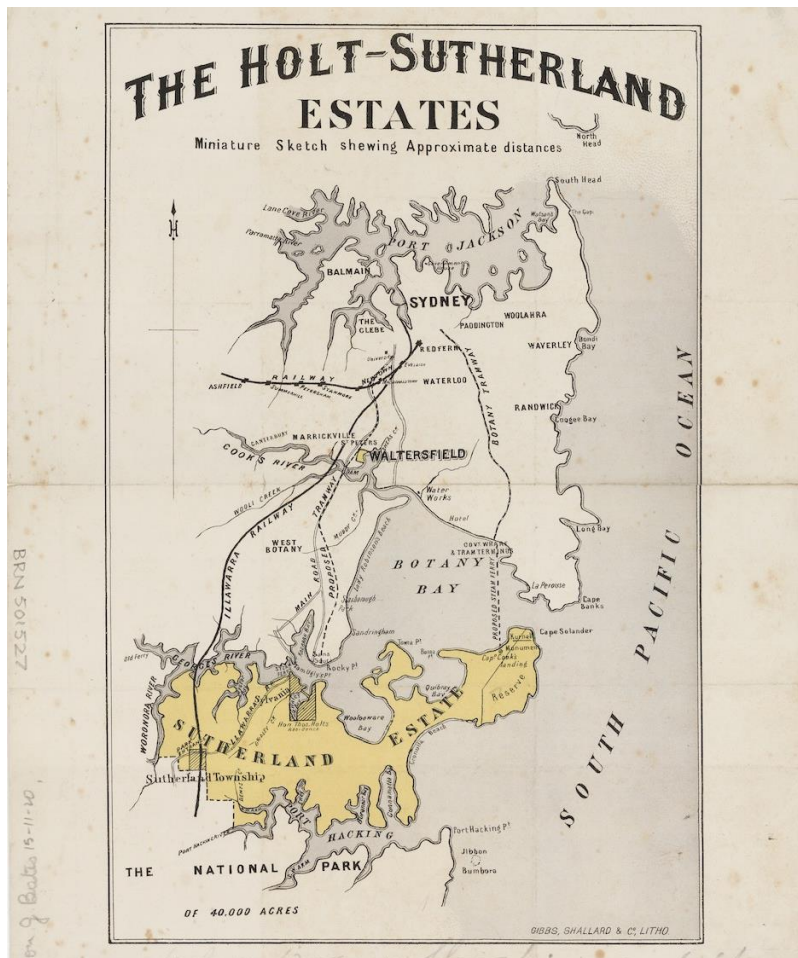
<sup>27</sup> Walker, 1868: 2-3

<sup>28</sup> Walker 1868: 2, 22, 47

<sup>29</sup> Walker, 1868

<sup>30</sup> Salt, 2000: 31





**FIGURE 15: The Holt Sutherland Estate (c1881)**

SLNSW Mitchell Map Collection Maps/0292



**FIGURE 16: View of the Kurnell Peninsula Beachfront and Sand Hills (Nd)**

Sutherland Shire Environment Centre

## 2.3 Kurnell Village

On Monday 9 October 1882, auctioneers Richardson and Wrench put up for sale a subdivision of the Holt Sutherland Estate referred to as *The Marine Township of Kurnell*.<sup>31</sup> Many of the blocks were narrow (with 21 to 22-foot frontages) as Kurnell Village was anticipated to develop as a fishing village come holiday resort. The blocks were considered to be adequate for weekenders, and there was perhaps some justification for this. The locale had been an informal tourist destination for many years. That aside, potential buyers considered the blocks too narrow and either doubled-up blocks to create better frontage or avoided them altogether.<sup>32</sup>

Perhaps not surprisingly, until a bus service connected the village to Cronulla from the late 1940s and Council and Caltex built the road out to Kurnell in the 1950s, the fledgling hamlet remained isolated: little developed, and with a closer relationship with its neighbours on the opposite shores of Botany Bay (including Botany and La Perouse) than with the remainder of the Shire.

At the turn of the century, an area of 100.86 hectares was set apart to the east of Kurnell and dedicated as a Public Recreation Reserve to formally acknowledge and memorialise the landing of James Cook. Expanded over time, this locality ultimately became the Landing Place Historic Site.<sup>33</sup>

## 2.4 Growth

Its relative remoteness ensured that Kurnell evolved only slowly during the early twentieth century. After WWI and especially at the height of the 1930s depression era, temporary happy valley-style camps sprang up around the peninsula with settlers simply squatting on Crown Land or paying landowners a notional fee for permissive occupancy.<sup>34</sup>

At Kurnell and other peaceable locations around Botany Bay, fledgling settlement amplified this transient occupancy. Building materials for the temporary homes that came to characterise the area in years before WWII were cut from the bushland or improvised from scrap, empty containers, abandoned items, and materials brought by boat from La Perouse, Botany or Sans Souci. To service these communities, the Botany Bay ferrymen carried foodstuffs, newspapers and household goods to the fringe settlers. In the midst of the depression era, the Village of Kurnell was officially proclaimed in the Government Gazette of November 1933.<sup>35</sup>

### 2.4.1 Captain Cook Drive

In 1950 the Captain Cook's Landing Place Road Trust (CCLPT) applied for assistance from Council to build a proper road between Cronulla and Kurnell. In the same year, Council dedicated a strip of land 80 feet wide for the road and named it *Captain Cook Drive*, though actual funding to build the thoroughfare was not immediately forthcoming. In 1953, in advance of the construction of their

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<sup>31</sup> Hutton-Neve 2000

<sup>32</sup> Hutton-Neve 2000

<sup>33</sup> Salt 2000; Curby 1998

<sup>34</sup> Salt 2000

<sup>35</sup> Tuck 2000

major refinery at Kurnell, Caltex paid Sutherland Council £50,000 to aid in the road's construction. Council contributed a further £30,000 (by way of a Federal Aid Grant).

The construction of the road was a considerable feat, with teams working from both the Cronulla and Kurnell ends, towards a central meeting point. The road spanned bush, bogs and mobile sand dunes, and the workers were obliged to contend with mosquitoes and the snakes (both of which were reputedly encountered in large numbers). On Saturday 28 February 1953, long serving State Premier, John Joseph Cahill turned the first sod at the Cronulla end of the road works (adjacent to the entrance to Towra Point).<sup>36</sup> Four months after turning the first sod the unsealed, unfinished road was open to limited trafficking. After controversy and budget blowouts, the sealed road proper was finally opened in July 1954.<sup>37</sup>

Refer **figures 17 – 21**.

#### **2.4.2 Caltex Refinery**

Caltex, a Chevron corporation, began construction of a crude oil refinery fronting the easement for the aforementioned Captain Cook Drive as road works were underway in 1953. Built for an estimated £25m, the refinery was the largest petroleum installation in NSW. It was set on 174 hectares (430 acres) of land with wharf access to Botany Bay and an immense network of storage and processing facilities, pipelines and wharfage. During peak-construction, this massive industrial enterprise, which made use of 31500 short tons of steel and 44000 cubic yards of concrete employed approximately 3,000 men.<sup>38</sup>

During the 1950s, after the road from Cronulla to Kurnell had been constructed and as the Caltex refinery came to dominate the locality, numerous second-hand houses were trucked to Kurnell from other places in Sutherland Shire to provide inexpensive homes for refinery workers and others.

The refinery was expanded in 1961 and 1971, in association with improved crude oil production and output.<sup>39</sup> At the height of production, the refinery had a capacity of around 125 thousand barrels per day; 56 storage tanks and a staff of around 700 employees. The Kurnell wharf servicing the plant was one kilometre long and could handle ships of up to 60,000 DWT.<sup>40</sup>

On 26 July 2012, Caltex announced its decision to close the refinery in the second half of 2014. Caltex said the closure would eliminate about 330 direct positions, and as many as 300 contracting jobs. The refinery ceased operation in October 2014 and was converted into an import only terminal to supply foreign fuels to Australian customers. The site was damaged by cyclonic storms in 2015.<sup>41</sup>

Refer **figures 22 – 24**.

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<sup>36</sup> Curby 1998; *The Sun* 12 June 1953: 5

<sup>37</sup> Midgley and Midgley 1997; Salt 2000

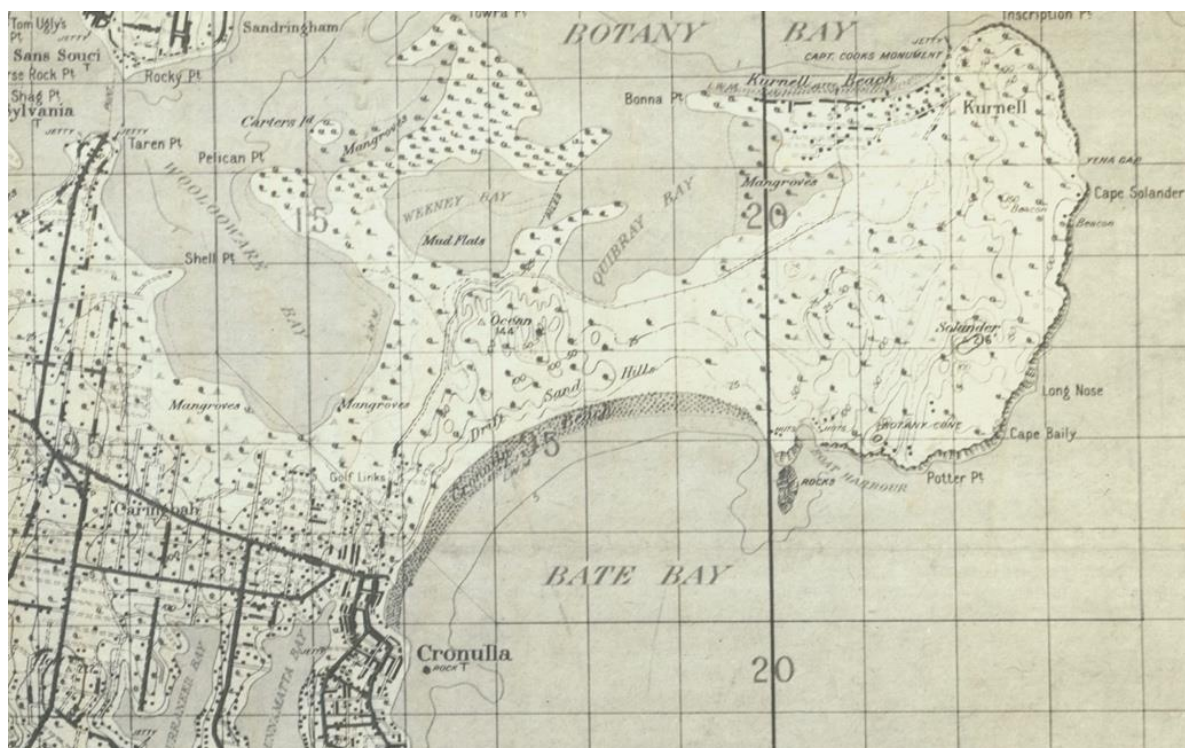
<sup>38</sup> Caltex c1981

<sup>39</sup> Salt 2000; Tuck 2002

<sup>40</sup> Caltex c1981; Curby 1998

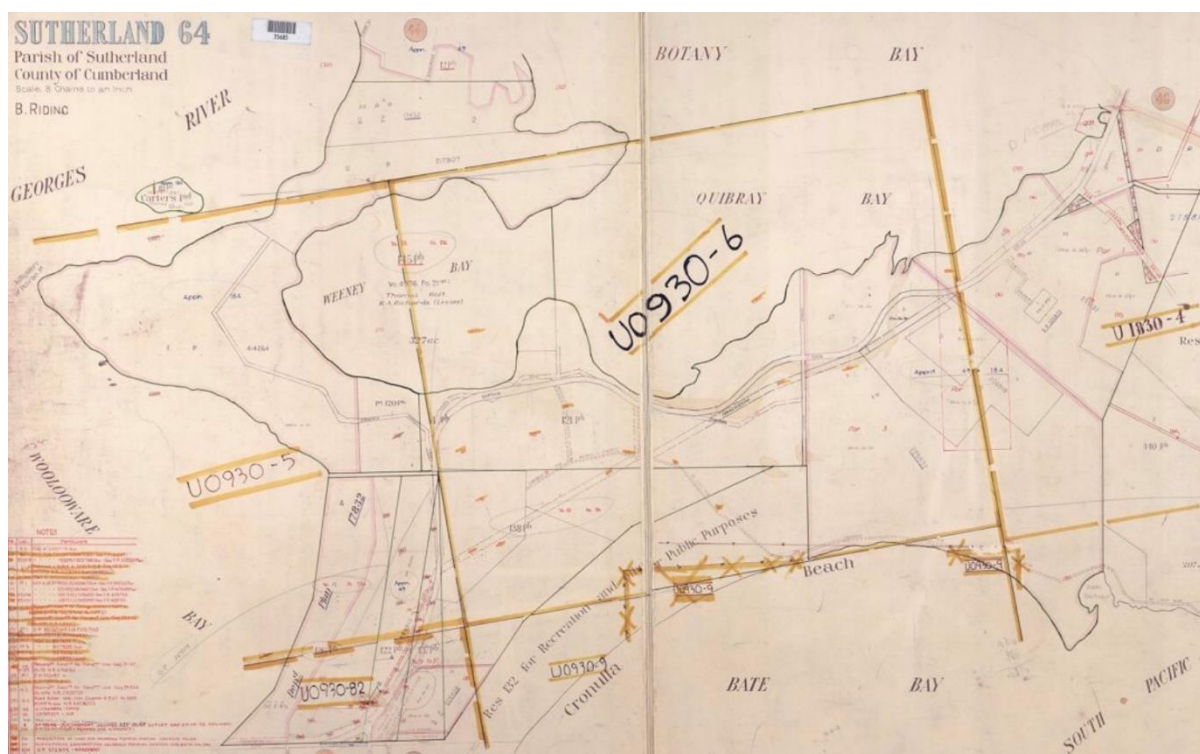
<sup>41</sup> Tuck 2018





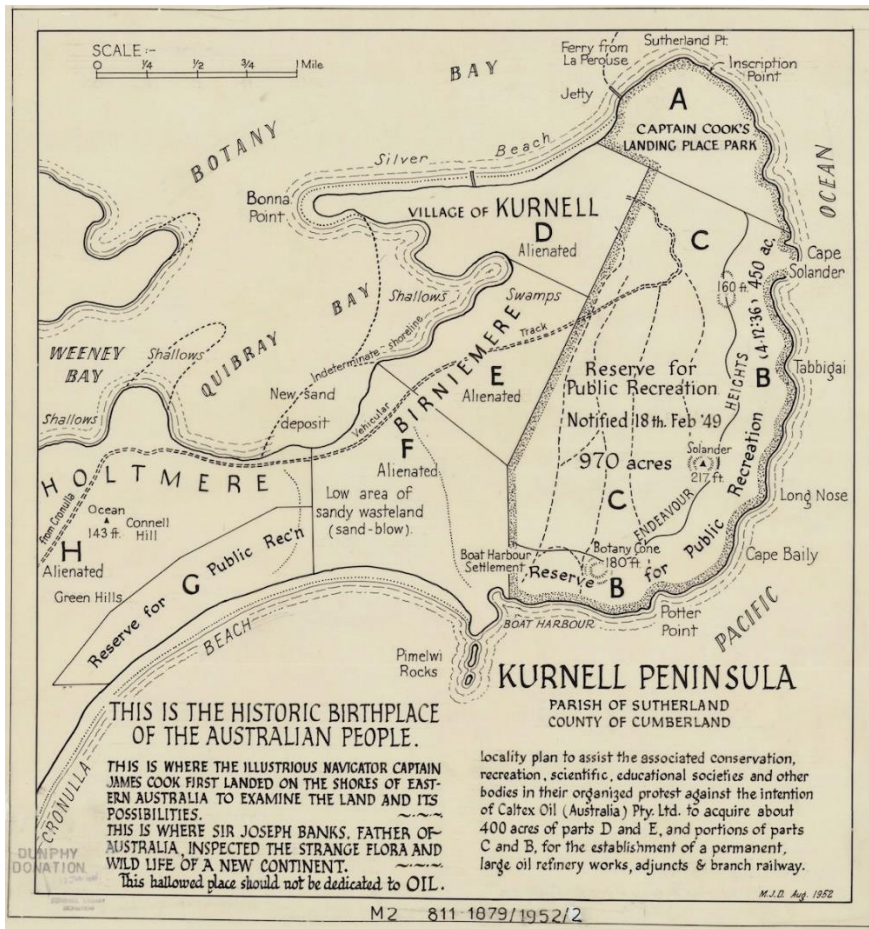
**FIGURE 17: Kurnell Peninsula (1935)**

Australian Section, Imperial General Staff SLNSW M2 811.187/1935/1



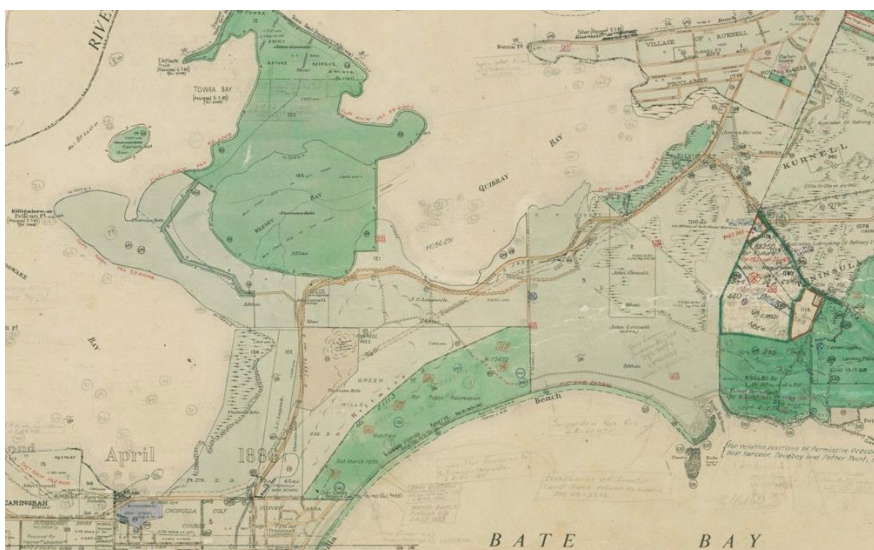
**FIGURE 18: Charting Map of Part of the Parish of Sutherland (c1940s)**

NSW Spatial Services HLRV



**FIGURE 19: Kurnell Peninsula (1952)**

Miles Dunphy SLNSW M2 811.1879/1952/2



**FIGURE 20: Map of the Parish of Sutherland (Nd)**

NSW Land Registry Services HLRV CMA Status Branch Charting Map





**FIGURE 21: Kurnell Peninsula showing Captain Cook Drive (September 1953)**

SLNSW ON 559/Box 1/nos. 98-118



**FIGURE 22: Caltex Oil Refinery Site on Captain Cook Drive (September 1953)**

SLNSW ON 559/Box 1/nos. 98-118





**FIGURE 23: Caltex Oil Refinery Site (September 1953)**

SLNSW ON 559/Box 1/nos. 98-118



**FIGURE 24: Caltex Oil Refinery (c.1970s)**

SLNSW Australian Photographic Agency – 44628

### 2.4.3 Cronulla Wastewater Treatment Plant

The Metropolitan Water Sewerage and Drainage Board (MWS&DB) established the Cronulla Sewage Treatment Plant (STP) in the mid-1950s, on 70-odd acres of land just off Captain Cook Drive to the immediate southeast of the Proposal Site. Designed to service Kurnell and Cronulla - and though later amplification much of the Sutherland Shire - the first stage put into service in 1956.<sup>42</sup>

Associated with the sewage treatment plant was an ocean outfall. Originally intended to discharge at Boat Harbour, the potential for pollution of Cronulla beaches meant that the line extended to Potter Point, with a 10-acre reservation placed around it to prevent any development in the vicinity). In 1964, work on amplification of the treatment plant commenced, and over the next decade, the whole works were reconstructed. Various staged expansions were planned as part of the amplification scheme: the final stages of which were implemented in the early 1990s. More recent development of the site has included the addition of tertiary treatment facilities.

## 2.5 Sand Mining

Captain Cook Drive, Caltex and the Cronulla STP paved the way for the development of the Kurnell Peninsula, from the residential village of Kurnell to the margins of Cronulla. Much of the subsequent development was industrial: driven by the voracious post-war appetite for new civic infrastructure and housing. Central to this effort was the establishment of extractive industry on the peninsula, namely, the mining and processing of the vast reserves of aeolian and windblown sand for concrete production and allied building material production enterprises (including brick making).<sup>43</sup>

### Kurnell Geomorphology

Kurnell Peninsula is comprised of five distinct geomorphological features. The oldest is the bedrock system of Hawkesbury Sandstone, which is overlaid with Pleistocene-era deposits, which are in-turn overlaid with Holocene sediments. The latter has been over-washed from Bate Bay, with the resultant, overlaying dune field comprising an intermixed transgressive (landward moving) sand sheet that includes offshore sand deposits that have been transported onshore and older reworked sediments.

The evolution of the peninsula itself occurred during the latter half of the Post-glacial Marine Transgression, which began about 10,000 years ago. The initial barrier deposits were established approximately 10,000 years ago, when sea level was around 20 to 25 metres below its current level. Following the stabilization of sea level between 6,000 and 7,000 years ago, foredune ridges began to form and the shoreline prograded seaward. This was followed by the development of massive transgressive dunes around 4,000 to 5,000 years ago. These dunes were stabilized with vegetation by at least 1,000 years ago.

Since European settlement, and particularly over the last 100-odd years, settlement activity and extractive industry has resulted in dune destabilisation that has led to massive dune transgression and intensified shoreline recession on the local beaches (of up to 75 metres).

*Refer Panayotou 1999; Kurnell Peninsula Planning Study 1979; Roy and Crawford 1979*

<sup>42</sup> Sydney Water – Cronulla STP s170 register listing

<sup>43</sup> Wallace c1975: 96

Sand extraction commenced at Kurnell in the 1920s when the State Government granted mining leases on freehold and Crown Land and has continued ever since. Notable individuals and companies who obtained land and entered the industry at around the time of the establishment Captain Cook Drive and improved access in the 1950s included the Metropolitan Sand Company and Processed Sand Pty Ltd (controlled by Tom Breen); Allsands and Australian Consolidated Developments (Holt family companies) and later Pioneer Concrete (NSW) Pty Ltd (under a lease arrangement with the Holts' company Besmaw Pty Ltd) and Metromix (formerly *Hooker Industrial Sands*).<sup>44</sup>

### 2.5.1 Precision Brick Company

In 1949 Precision Brick Pty Ltd set up a small brick works on their 33-acre site at North Cronulla (Cronulla High School site and land adjacent) to supply the post war building boom. It was outfitted with state-of-the-art technology, including a Jackson and Church Co. brick press and associated equipment imported from Michigan, USA. The company make bricks from clay, cement and sand, with the latter sourced from the sand dunes that comprised much of the area. After normal equipment commissioning and production trials were undertaken, the plant was officially opened by the NSW Minister for Housing in 1950. Unfortunately for the company, the brick press suffered a significant mechanical failure on that day and the entire venture was abandoned.<sup>45</sup>

### 2.5.2 Breen Holdings

Thomas Essington Breen, a Sydney based journalist and one of the shareholders and directors of Composite Holdings (parent company of Precision Brick Pty Ltd), salvaged the failed brickmaking operation. Utilising the large sand onsite deposit, and materials processing and handling plant, Breen established both the Metropolitan Sand Company and Processed Sand Pty Limited: the former becoming the largest privately-owned marine construction sand company in Sydney, and the latter pioneering the manufacture of a range of industrial sands and construction products.<sup>46</sup>

By 1957, Breen had acquired all the shares in Composite Holdings (from the other founding shareholders) and had changed the name of the company to Breen Holdings. Additional land and sand holdings (1000 acres) were subsequently added to the company's estate, extending along the Peninsula and including the current Proposal Site.<sup>47</sup> The brickworks site featured a number of buildings that housed processing, washing and bagging plant as well as offices, bulk sand storage, plant maintenance workshops, a public weighbridge and a company service station. During peak operation, up to 50 company sand trucks operated from the site each day, running four to five or more loads daily across the metropolitan area.<sup>48</sup> Sand extraction from within the Greenhills area ceased during the 1970s, but continued from company owned deposits further north and east along the Peninsula. The processing of sand at the processing and storage works described above ceased in 1985, with company buildings and plant removed and/or demolished thereafter.<sup>49</sup>

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<sup>44</sup> Salt 2000: 93-96

<sup>45</sup> Information provided by Tom Breen (MDCA 2012)

<sup>46</sup> MDCA 2012

<sup>47</sup> MDCA 2012

<sup>48</sup> MDCA 2012

<sup>49</sup> MDCA 2012





**FIGURE 25: Metropolitan Sand Co. Power Shovel at Kurnell (c.1950s)**

Photo courtesy of Tom Breen (Breen Holdings)



**FIGURE 26: Offices and Processed Sand Plant near the Cronulla High School site (c.1950s)**

Photo courtesy of Tom Breen (Breen Holdings)

### *Environment Impacts*

Exploitation of the peninsula's resources via extractive industry has been dramatic and has seen the loss of huge sand bodies and their replacement with sandy wastelands interspersed with artificial lakes and/or fill mounds. Mining has been controversial for some time, and it has been argued that sand removal from the peninsula has undone 6000 years of dune evolution and reduced the ability of the dune system to resist storm damage and ensuing erosion.<sup>50</sup>

Since the mid-1970s, there have been foredune stabilisation programs aimed at revegetation and recreating the foredune system to prevent further 'natural' sand loss.<sup>51</sup> From the 1980s, there have also been proactive attempts to reverse some of the sand mining damage and improve the locale more generally, with planned site rehabilitation and mixed residential and recreational precincts.

## **2.6 Recreation**

For as long as people have been visiting the Kurnell Peninsula and its beaches for recreational purposes the beach fronting sand dunes have been a particular focus. Expansive and undulating from the 1860s after clearing for grazing and subsequent transgression, the dunes have been used for parking, partying, picnicking, sporting activities and as a backdrop for movies, commercials and advertisements since the early twentieth century.

Notable use of the dunes has included:

- The dunes have been used for sand skiing and tobogganing since the 1930s
- The dunes have featured in numerous movies including 40,000 Horsemen (1941); The Rats of Tobruk (1944) and Mad Max: Beyond Thunderdome (1985)
- The dunes have provided a backdrop for photo shoots and advertising campaigns including some shot in the mid-1930s by renowned photographer Max Dupain
- The dunes have been used as a parking and recreational area by beach users including Wand Beach-Greenhills surfers from the 1950s
- The dunes have provided a training ground for many including AFL and NRL clubs.<sup>52</sup>

As a consequence of mining and development along the Peninsula, there are few remaining examples of the former open dunescape. The most notable example is that to the immediate southeast of the Proposal Site, which is now listed on the State Heritage Register as part of the 'Cronulla Sand Dune and Wanda Beach Coastal Landscape'.

Refer **figures 27 – 32**.

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<sup>50</sup> Panayotou 1999: 349; Salt 2000: 93

<sup>51</sup> Rendell cited in Panayotou 1999: 350

<sup>52</sup> Salt 2000; *The Guardian* 27 December 2015; Daily 10 February Mail 2019





**FIGURE 27: View over the Kurnell peninsula showing the extensive dune field (Nd)**

NLA Image by Frank Hurley presented in *The Daily Mail* 10 February 2019



**FIGURE 28: Fashion Shoot in the Cronulla-Greenhills sand dunes (1937)**

NLA Image Olive Cotton photograph of Max Dupain photographing a fashion model Noreen Hallard





**FIGURE 29: Visitors to the Cronulla-Green Hills Sand Dunes (1963)**

NLA Photograph by Jeff Carter NLA/13141



**FIGURE 30: Skiing on the Cronulla-Green Hills Sand Dunes (Nd)**

SLNSW Mitchell Library Collection Alec Everson/ACP Magazines



**FIGURE 31: Informal beach carparking in the Cronulla-Greenhills Dunes (1964)**

Cronulla Surf Museum



**FIGURE 32: Surfing the Peninsula (1964)**

Cronulla Surf Museum

## 2.7 Proposal Site

The Proposal Site comprises land that was granted to John Connell (predominantly part of Portion 121 of 428 acres) in the parish of Sutherland, County of Cumberland, in the early nineteenth century. It was owned thereafter by Connell's heirs (notably Thomas Connell Laycock) and was ultimately obtained (c1860s) by Thomas Holt: becoming part of the Holt-Sutherland Estate, which accounted for much of the Peninsula and indeed the Shire. The Holt Estate was broken up and sold off from the 1880s, though the family retained a considerable holding (including land on the Peninsula that has subsequently mined and developed).

*Aside from the ubiquitous clearing and coastal grazing undertaken across the Peninsula in the nineteenth century (and well into the twentieth) there is no indication that the Proposal Site was subject to any significant or lasting development prior to the mid-twentieth century.*

Thomas Breen (and associated groups and companies) appear to have utilised the Proposal Site in the 1950s/1960s as part of the expansion of early enterprises which included the processing works and mining operations at the Greenhills-Cronulla end of the Peninsula. Thereafter, the Proposal Site was subject to intensive mining, both of sandhills and surface deposits as well dredge mining to depths beyond 20 metres. This activity removed vast reserves of sand and remodelled the landscape creating flat vacant areas and interspersed with waste lakes.

### 2.7.1 Waste Management

In 1987 Breen Holdings established the Kurnell Landfill Company, which imported and stockpiled clean fill onto previously mined areas for the purposes of rehabilitating and recontouring the land – which by this point was completely denuded and marked with the vestiges of over 30 years of intensive sand extraction. Two of the most notable areas of fill were known as the Central Fill Mound and the Northeastern Fill Mound. Also known as Mount Westfield, the latter was derived from materials from Miranda Westfield site. One of the major mounds has replaced what was formerly a local peninsula highpoint, Connells Hill.

On 6 September 1990, Council granted consent to DA/269/90, which provided for the establishment of a depot to receive excavated materials and selected demolition-type materials, as well as for the restoration of the land by application of the materials to the land. The depot and land restoration activities together comprise the existing Breen Resources Facility, located on the Proposal Site.

### 2.7.2 Renewal

In September 2008, a joint rezoning proposal was submitted to Sutherland Shire Council by Breen Holdings Pty Ltd, Consolidated Development Pty Ltd (Breen Property Pty Ltd) and Australand Kurnell Pty Ltd (now renamed Frasers Property Australia Limited). The rezoning was approved by the Minister for Planning in August 2010. In June 2010, a Voluntary Planning Agreement (VPA) was entered into between Breen Holdings Pty Ltd (subsequently novated to Breen Property), Frasers Property Australia Limited and Council. At no cost to the community, the legally binding VPA required Breen Property and Frasers to deliver:

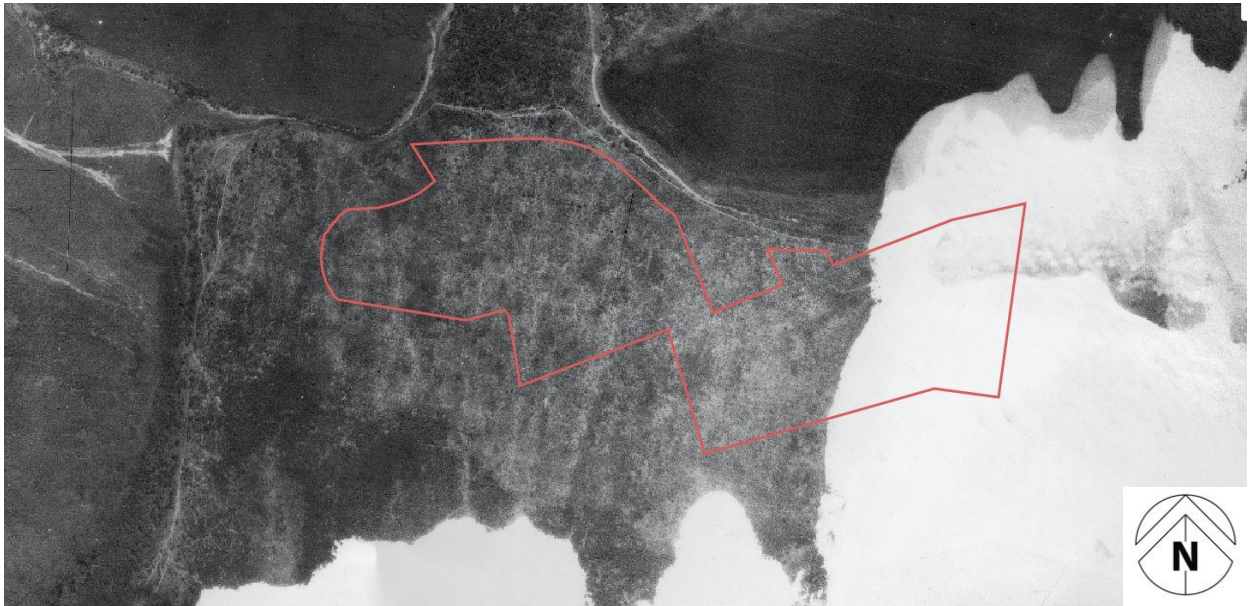
- Staged transfer of 91ha of land to public ownership for the purpose of environmental conservation and public open space.



- Construction of regional recreation facilities, including 10 playing fields, a skate park, 3 amenities buildings, walking and cycling tracks, picnic facilities and associated parking for over 400 cars.
- Rehabilitation and landscaping of degraded land previously dredged for sand mining to support an ecological 'green corridor' stretching from the Towra Point Nature Reserve to the ocean at Wanda Beach.

The delivery of the land and associated works is currently being undertaken in accordance with the VPA. Development Application DA/11/0665, which was approved by Council on 23 April 2012, allows for the first three stages of the works required by the VPA, including a concept masterplan for ten sporting fields, skate park, and associated parking, lighting, amenities building; habitat rehabilitation, and stormwater treatment facilities.

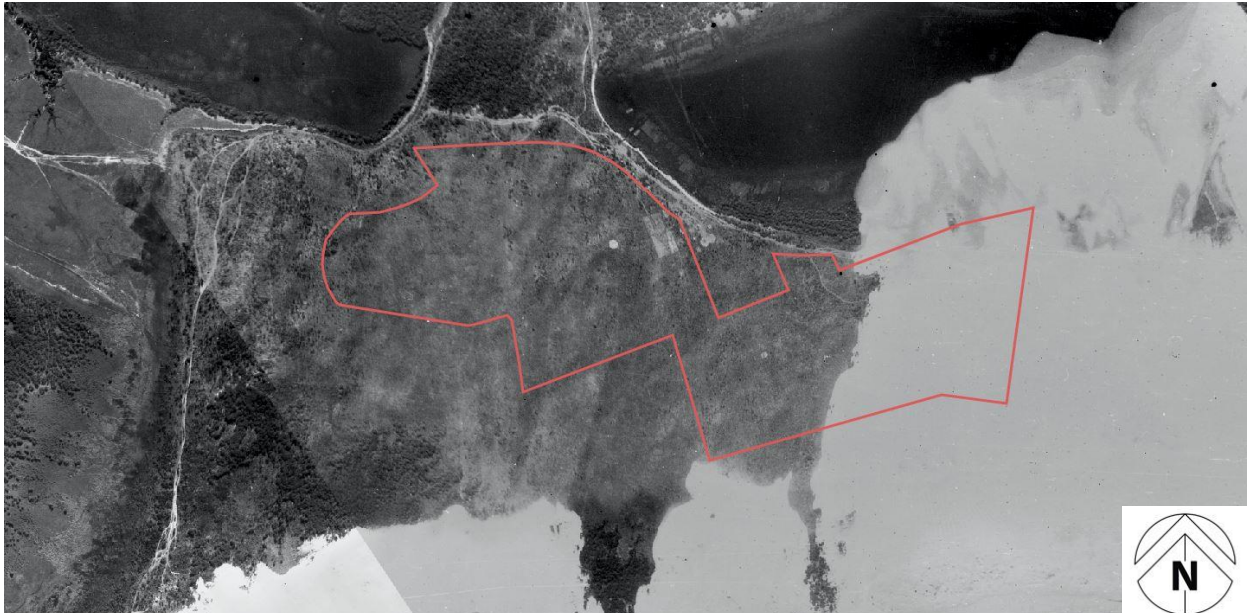
Refer **figures 33 – 42**, which show the evolution of the Proposal Site from the 1930s until modern times.



**FIGURE 33: Aerial Photograph of the Proposal Site (1931)**

This image shows the area mostly lightly vegetated but vacant. A massive transgressive sand sheet can be seen sweeping across the eastern end of the Proposal Site and various sandhills can be seen to the south.

Sutherland Shire Council Online Mapping (Shire Maps)

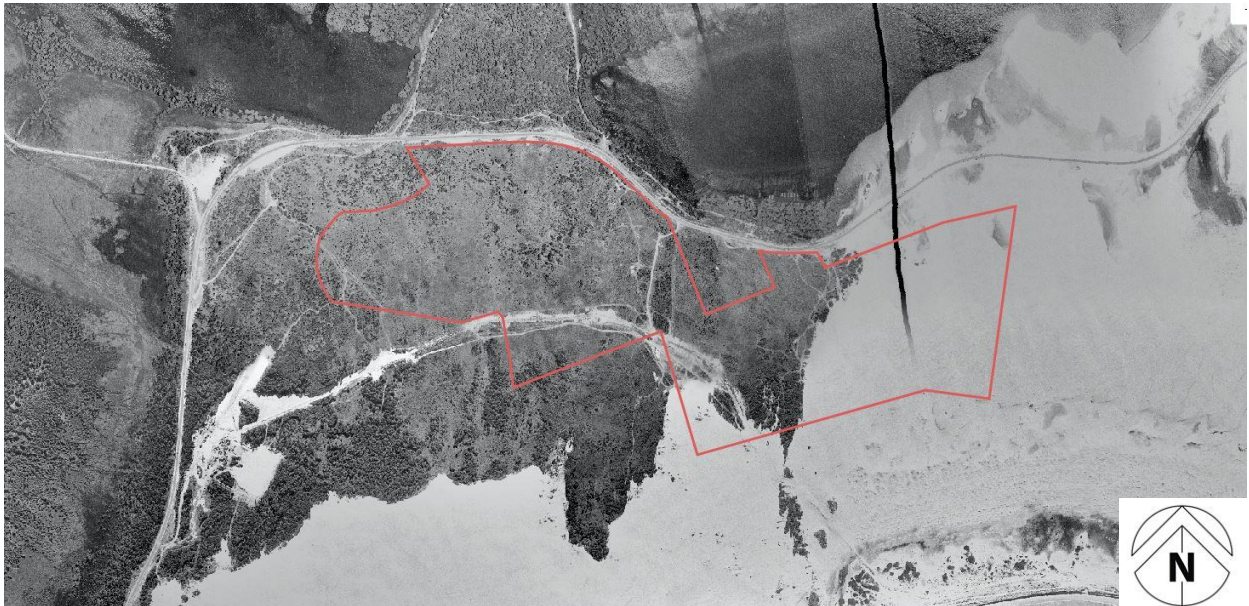


**FIGURE 34: Aerial Photograph of the Proposal Site (1943)**

This image again shows the Proposal Site mostly vegetated but vacant. A small cleared area can be seen in the northern central part of the Proposal Site approaching the bush track (proto-Captain Cook Drive). This is a minor, and temporary feature: perhaps a holding paddock for grazing cattle.

Sutherland Shire Council Online Mapping (Shire Maps)

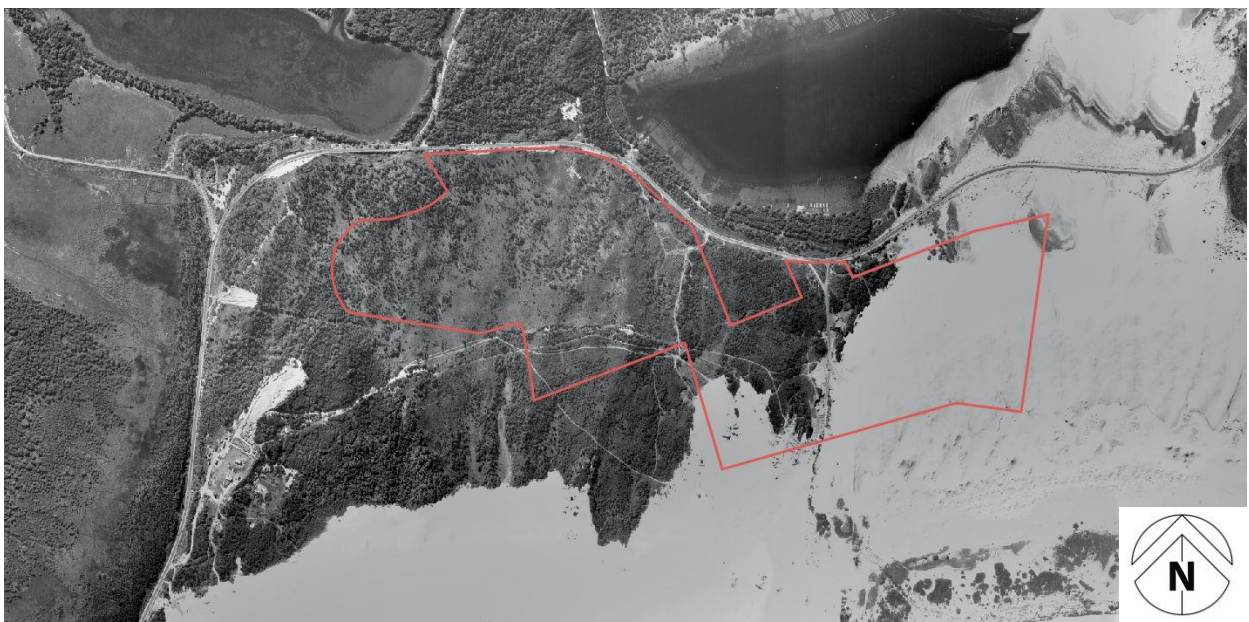




**FIGURE 35: Aerial Photograph of the Proposal Site (1955)**

This image shows the Proposal Site two years after the formalisation of Captain Cook Drive. Site establishment works associated with the Cronulla STP can be seen to the southwest of the Proposal Site, and a track runs east of the works through the southern part of the Proposal Site (which connects with a N-S track linking to Captain Cook Drive in the centre of the Proposal Site).

Sutherland Shire Council Online Mapping (Shire Maps)

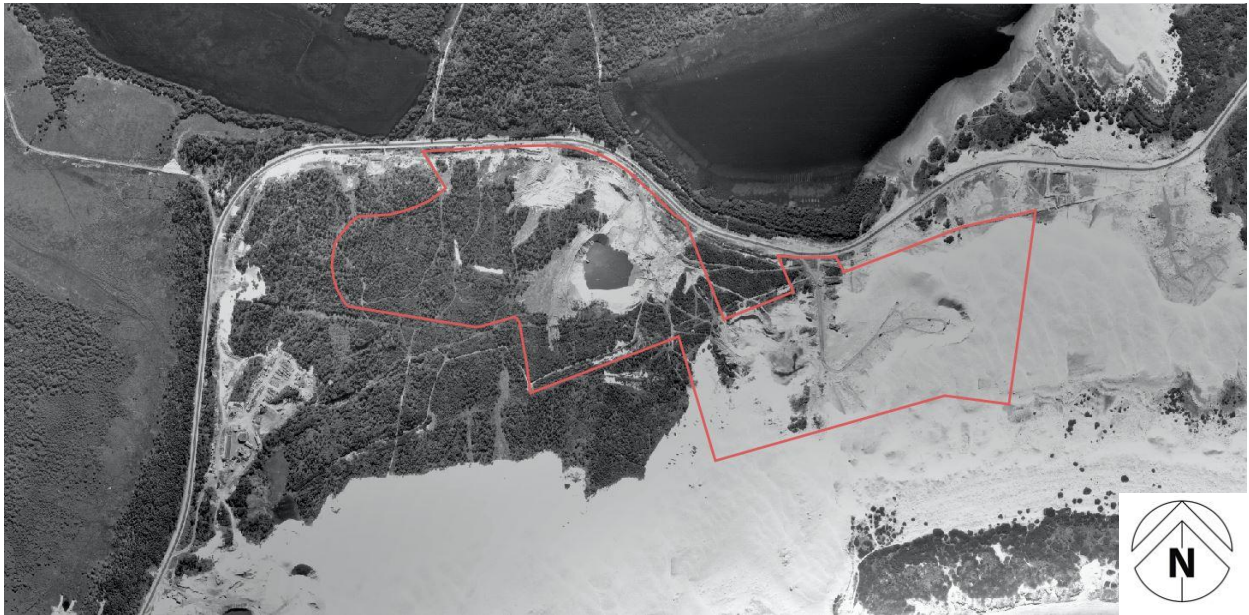


**FIGURE 36: Aerial Photograph of the Proposal Site (1961)**

As with previous images the Proposal Site remains largely undeveloped with the exception of a number of informal sandy thoroughfares. The STP to the southwest is clearly visible and in operation by this time.

Sutherland Shire Council Online Mapping (Shire Maps)





**FIGURE 37: Aerial Photograph of the Proposal Site (1970)**

By this time, the Proposal Site is being extensively mined. Surface deposit mining and dredging is occurring in the centre of frame, while activity has also commenced within the massive transgressive sand sheet that dominates the eastern side of the site. Numerous interlinking tracks and trails for machinery/plant have also been established.

Sutherland Shire Council Online Mapping (Shire Maps)



**FIGURE 38: Aerial Photograph of the Proposal Site (1978)**

This image shows that much of the Proposal Site (excepting the extreme east end/Connells Hill) is being mined. Other lands external to the Proposal Site and also being mined as is evidenced by increased sand exposures/decreased vegetation and dredge ponds.

Sutherland Shire Council Online Mapping (Shire Maps)





**FIGURE 39: Aerial Photograph of the Proposal Site (1984)**

This image shows the progression of sandmining across the site into the 1980s.

Sutherland Shire Council Online Mapping (Shire Maps)



**FIGURE 40: Aerial Photograph of the Proposal Site (1994)**

This composite image shows that the Proposal Site in during the mining site to waste management facility era in the 1990s. Probably half of the site comprises dredge or wastewater ponds and the remainder is largely barren. A site office complex can be seen in the centre of frame fronting Captain Cook Drive and a large mound of imported waste material is evident between the offices and the westernmost pond.

The remnant, heritage-listed dune can be seen to the immediate south of the western part of the site.

Sutherland Shire Council Online Mapping (Shire Maps)





**FIGURE 41: Aerial Photograph of the Proposal Site (2001)**

This image shows much of the western part of the Proposal Site under landfill/infill activity, while much of the eastern portion presents as an extensive dredge pond.

Sutherland Shire Council Online Mapping (Shire Maps)



**FIGURE 42: Aerial Photograph of the Proposal Site (2006)**

This image shows much of the western part of the Proposal Site under landfill/infill activity and numerous distinctive mounds are visible. Mining has clearly ceased, and much of the eastern portion presents as a dredge pond that is being infilled from west to east.

Sutherland Shire Council Online Mapping (Shire Maps)





**FIGURE 43: Aerial Photograph of the Proposal Site (2012)**

This image shows the Proposal Site in its entirety is functioning as waste management facility with distinctive waste material cells evident (particularly in the western half of the site). Parts of site are revegetating.

Sutherland Shire Council Online Mapping (Shire Maps)



**FIGURE 44: Current Site Arrangement**

This image shows the site as is. There are very distinctive management areas and a range of works underway including. Stage 1 recreational facilities are visible in the top right of frame.

NSW Spatial Services SIX Viewer 2020 – This image needs to be replaced with something more current.

## 3 Heritage

The following section details heritage legislation and listings schedules (statutory and non-statutory) as they relate to the Proposal Site.

### 3.1 Legislation

#### NSW Heritage Act 1977

The *NSW Heritage Act 1977* (The Heritage Act) is the principal document governing the management and protection of heritage items (relics and places containing relics) in NSW.

Environmental heritage is defined under section 4 of the Heritage Act as:

*'... those places, buildings, works, relics, moveable objects, and precincts, of State or local heritage significance.'*

The Heritage Act further defines a relic as:

*'any deposit, artefact, object or material evidence that:*

*(a) relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and*

*(b) is of State or local heritage significance.'*

Relics are afforded statutory protection under Division 9 of the Heritage Act. Specifically, section 139 prevents the excavation or disturbance of land knowing, or having reasonable cause to suspect that the disturbance or excavation will, or is likely to result in a relic being exposed, moved, damaged or destroyed, except by a qualified archaeologist to whom an excavation permit from the Heritage Council of NSW has been issued. Permits are applied for and issued under Sections 140 and 141 of the Heritage Act (for items that are not listed on a State Heritage Register or subject to an Interim Heritage Order), or under Sections 60 and 63 of the Heritage Act (in cases where relics are situated within sites or places listed on the State Heritage Register, or subject to an Interim Heritage Order).

Section 146 of the Heritage Act requires that the inadvertent discovery of relics be reported to Heritage NSW in a timely and appropriate manner.

#### Environmental Planning and Assessment Act 1979

The NSW Department of Planning, Industry and Environment (DPIE) administers the EP&A Act, which provides the legislative context for environmental planning instruments to be made to legislate and guide the process of development and land use. Local heritage items, including archaeological items, identified Aboriginal Places and heritage conservation areas, may be listed as items of local heritage significance Local Environmental Plans (LEPs) or Regional Environmental Plans (REPs).

The EP&A Act also requires that potential Aboriginal and historical archaeological resources are adequately assessed and considered as part of the development process, in accordance with the



requirements of the National Parks and Wildlife Act 1974 (NSW) and the Heritage Act.

Under Part 4 of the EP&A Act, excavation permits under the Heritage Act 1977 are not required for projects that are deemed to be State Significant Developments (SSD). Additional approvals specific to each SSD projects may however be required instead, as part of the environmental approvals process (as requested in the Department of Planning's site-specific Secretary's Environmental Assessment Requirements).

### 3.2 Listings

The following registers and planning documents were reviewed during preparation of this report:

- Sutherland Shire LEP 2015
- State Environmental Planning Policy (Kurnell Peninsula) 1989
- State Heritage Inventory (SHI)
- State Heritage Register (SHR)
- Australian Heritage Database (AHD)

The AHD incorporates the National Heritage List (NHL); Commonwealth Heritage list (CHL) and Register of the National Estate (RNE).

#### Sutherland Shire LEP 2015

The *Sutherland Shire Local Environmental Plan* (Sutherland Shire LEP) as amended, is the primary environmental planning instrument for the Sutherland Shire LGA. Clause 5.10 (Heritage Conservation) provides objectives for environmental heritage conservation in Sutherland Shire and identifies when development consent is required (or not required) for heritage items, archaeological sites and Aboriginal places, or locations in the vicinity thereof.

**Schedule 5** Sutherland Shire LEP lists items of *Environmental Heritage* consecutively under Heritage Items (part 1) and Archaeological Sites (part 2).

*No items of heritage significance are listed within the Proposal Site.*

Nearby listings are:

- Cronulla Sand Dune and Wanda Beach Coastal Landscape (Item 2502)
- Towra Point Nature Reserve and Quibray Bay (Item 2509)
- Four-wheel drive track (A2523)

The dune and reserve landscapes are identified as items of State heritage significance at schedule 5(a). The 4WD track is identified as an archaeological item of local significance at schedule 5(2).

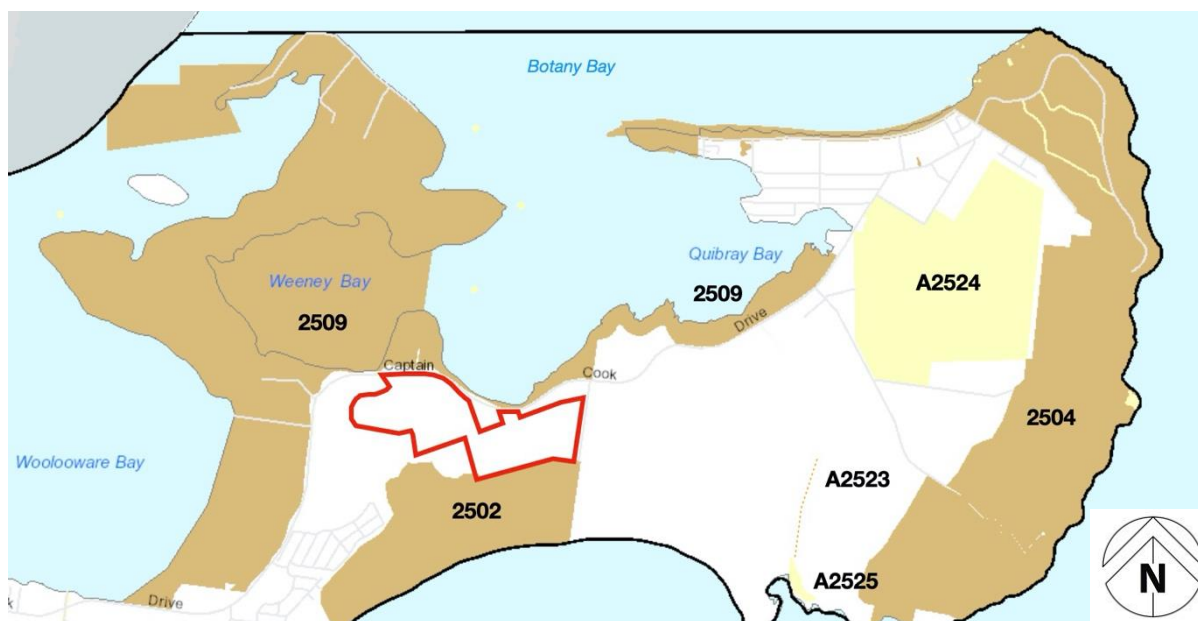
Distant listings include:

- Kurnell Historic Site in Kamay Botany Bay National Park (Item 2504)
- Australian Oil Refinery (A2524)

Details of these LEP-listed items are summarised on the table **overleaf** and shown on the amended LEP Heritage Map excerpt immediately below the table (**figure 44**).



| Table of LEP-listed Heritage Items in the General Vicinity of the Proposal Site |                                                           |                                                   |                                                                                                                                                                                                            |       |       |
|---------------------------------------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------|
| Suburb                                                                          | Name                                                      | Address                                           | Lot/DP/GPS                                                                                                                                                                                                 | Value | Item  |
| Cronulla                                                                        | Cronulla sand dune and Wanda Beach Coastal Landscape      | 434 and 440 Captain Cook Drive and 31 Lindum Road | Lot 1055, DP 1140838; Lot 1059, DP 1140838; Lot 7304, DP 1130200                                                                                                                                           | State | 2502  |
| Kurnell                                                                         | Towra Point Nature Reserve and Quibray Bay                | Towra Point                                       | Lots 101–109, DP 777967; Lot 31, DP 217907; Lot 101, DP 555205; Lot 4, DP 732257; Lot 2, DP 856868; Lot 1, DP 1014443; Lot 1, DP 1030269                                                                   | State | 2509  |
| Kurnell                                                                         | Kurnell Historic Site (in Kamay Botany Bay National Park) | Polo Street and Sir Joseph Banks Drive            | Lots 71–76 and 85, DP 908; Lot 7334, DP 1162374; land shown in Miscellaneous Plan of Sydney 20239-3000; Lot 1, DP 556396; land shown in NSW Government Gazette 13 December 1968: folio 4968.               | State | 2504  |
| Kurnell                                                                         | Four-wheel Drive Track                                    | Between Captain Cook Drive and Boat Harbour       | MGA Zone 56, 334150°E, 6232600°N                                                                                                                                                                           | Local | A2523 |
| Kurnell                                                                         | Boat Harbour House Sites Group                            | Sir Joseph Banks Drive                            | At boat harbour in Lot 7062, DP 1123911                                                                                                                                                                    | Local | A2525 |
| Kurnell                                                                         | Australian Oil Refinery                                   | Sir Joseph Banks Drive                            | Part of Lot 1, DP 215819; Part of Lot 25, DP 776328; Lot 283, DP 752064; Lot 570, DP 752064; Lot 56, DP 908; Lot 57, DP 908; Lot 62, DP 908; Lot 1, DP 132055; Part of Lot 2, DP 215818; Lot 1, DP 1044690 | Local | A2524 |



**FIGURE 45: Heritage Mapping from the SSLEP 2015**

Sutherland Shire Council's Shire Maps - Heritage SSLEP 2015 layer (as annotated and amended)

**State Environmental Planning Policy (Kurnell Peninsula) 1989**

The State Environmental Planning Policy (Kurnell Peninsula) 1989 (Kurnell SEPP) is s the principal environmental planning instrument which applies to the Proposal Site. Its aim is to protect and conserve the natural environment of the Kurnell Peninsula and ensure that development is managed with particular regard to the unique environmental, cultural and economic significance of the area to the nation, State, region and locality. The particular environmental planning aims and objectives set out in clause 2 of the Kurnell SEPP are:

- (a) to preserve and protect the wetland areas of the Kurnell Peninsula in the environmental and economic interest of the State, region and locality
- (b) to identify lands having high value and strategic importance as local or regional open space and national park or nature reserve areas and to facilitate bringing these lands into public ownership
- (c) to protect the health, well-being and safety of the local community
- (d) to identify and conserve areas, sites and features of natural, ecological, historic or cultural significance
- (e) to conserve and manage the aquatic environment and its resources in the interests of the community and the oyster, prawn and fishing industries
- (f) to identify and protect lands having regional and international significance as wildlife habitats,
- (g) to ensure that the recommendations of any relevant risk assessment or transportation studies are implemented
- (h) to control and progressively phase out sand mining and to facilitate the rehabilitation of degraded lands
- (i) to conserve the environmental heritage of the Kurnell Peninsula.

Schedules 2 and 3 of the Kurnell SEPP list archaeological sites and heritage items respectively.

*There are no items of heritage significance listed within the Proposal Site under the Kurnell SEPP.*

In the vicinity of the Proposal Site, the following sites are listed under the Kurnell SEPP:

- Schedule 2 (Archaeological Sites) lists Towra Point Nature Reserve and Quibray Bay (A103) and a Four-wheel Drive track (A028)
- Schedule 3 (Heritage Items) lists Towra Point Nature Reserve and Quibray Bay (L010-R)

These items are the same items listed as items of local heritage significance under the Sutherland Shire LEP.

### State Heritage Register and Inventory

The **State Heritage Register (SHR)** is a register of heritage items that have been assessed and acknowledged as having state heritage significance. The NSW Heritage Council maintains the register, and any development application that is likely to affect items on the register generally requires NSW Heritage Council approval (s60) or a relevant exemption (s57/2). However, pursuant to section 4.41(c) of the & Act, these provisions do not apply where the development application is deemed to be State significance development.

*Neither the Proposal Site, nor any items within it, are listed in the State Heritage Register.*

In the vicinity however, the following items are listed in the State Heritage Register:

- *Cronulla Sand Dune and Wanda Beach Coastal Landscape (01668)*
- *Kamay Botany Bay National Park (North and South) and Towra Point Nature Reserve (01918)*

*The listings for these two items are presented as **attachments A2 and A3**. The curtilage plans for each item are presented **figures 46 and 47**.*

The **State Heritage Inventory (SHI)** lists items of both state and local heritage significance. Generally, the listing of items on the SHI results from their inclusion in local and regional planning instruments, heritage studies or within the s170 registers of State government agencies. Any development proposal that is likely to affect items on the inventory generally requires Heritage NSW approval (s140) or a relevant exception (s139/4):

*Neither the Proposal Site, nor any items within it, are listed on the State Heritage Inventory.*

In the vicinity however, the following SHI item - *not* already listed in the SLEP - is:

- Cronulla Sewage Treatment Plant (listed as a consequence of its State agency/Sydney Water under section 170 of the Heritage Act (Listing No. 4573705))

*This item is shown at **figure 48** and the listing for this item is presented as **attachments A4**.*

### Australian Heritage Database

The Australian Heritage Database contains information about more than 20,000 natural, historic and Indigenous places and includes places in the World Heritage List; National Heritage List; Commonwealth Heritage list; and the Register of the National Estate.

*Neither the Proposal Site, nor any items within it, are listed in the AHD.*

In the vicinity however, the following items are listed:

- Kurnell Sand Dune (formerly on the RNE)
- Kurnell Peninsula Towra Point Area (formerly on the RNE).





**FIGURE 46: Figure 30: Heritage Curtilage Map for SHR 01918**

Heritage NSW



**FIGURE 47: Heritage Curtilage Map for SHR 01668**

Heritage NSW



## Summary

There are no statutory or non-statutory listings of heritage items within the boundaries of the Proposal Site.

Heritage items in the vicinity of the Proposal Site, that warrant consideration in this heritage impact assessment, are listed in the table below and shown at **figure 48**.

| Summary Table of Relevant Listed Heritage Items in the Vicinity of the Proposal Site |                                                                |                                                   |                                                                                                                                          |       |                           |
|--------------------------------------------------------------------------------------|----------------------------------------------------------------|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|-------|---------------------------|
| Suburb                                                                               | Name                                                           | Address                                           | Lot/DP                                                                                                                                   | Value | Item                      |
| Cronulla                                                                             | Cronulla sand dune and Wanda Beach coastal landscape           | 434 and 440 Captain Cook Drive and 31 Lindum Road | Lot 1055, DP 1140838; Lot 1059, DP 1140838; Lot 7304, DP 1130200                                                                         | State | SLEP/SHR 2502             |
| Kurnell                                                                              | Towra Point Nature Reserve and Quibray Bay                     | Towra Point                                       | Lots 101–109, DP 777967; Lot 31, DP 217907; Lot 101, DP 555205; Lot 4, DP 732257; Lot 2, DP 856868; Lot 1, DP 1014443; Lot 1, DP 1030269 | State | SLEP/SHR 2509             |
| Cronulla                                                                             | Cronulla Sewerage Treatment Plant (Wastewater Treatment Plant) | Captain Cook Drive Kurnell                        | Lot 1, DP 118810 (curtilage excludes new works to the east of Captain Cook Drive)                                                        | Local | Sydney Water s170 4573705 |



**FIGURE 48: Relevant Statutorily Listed Heritage Items in the Vicinity of the Proposal Site**

Google Earth Pro (as amended)



## 4 Survey

The Proposal Site was subject to site inspection-survey on Friday 26 June 2020. It was conducted in concert with the Aboriginal cultural heritage survey by Coast Historical Archaeologist Dan Tuck in association with Coast Director Dr Paul Irish, Coast Archaeologist Fenella Atkinson and La Prouse Local Aboriginal Land Council Sites Officer Steven Ella. Site induction, access and escort was kindly provided by Ben Warner (Breen Resources).

### 4.1 Method

Site survey involved a drive-over and selective walkover of the various areas subject to the current Proposal, with particular emphasis on notable site features (including fill mounds) and areas of least disturbance (including property margins). General observations and field notes were recorded in a field notebook; a plan of the site was annotated where required; and high-resolution photographs of the locality and its setting were captured with a high resolution DSLR.

### 4.2 Observations

The following notes highlight the main observations:

#### **Lots 5 and 6**

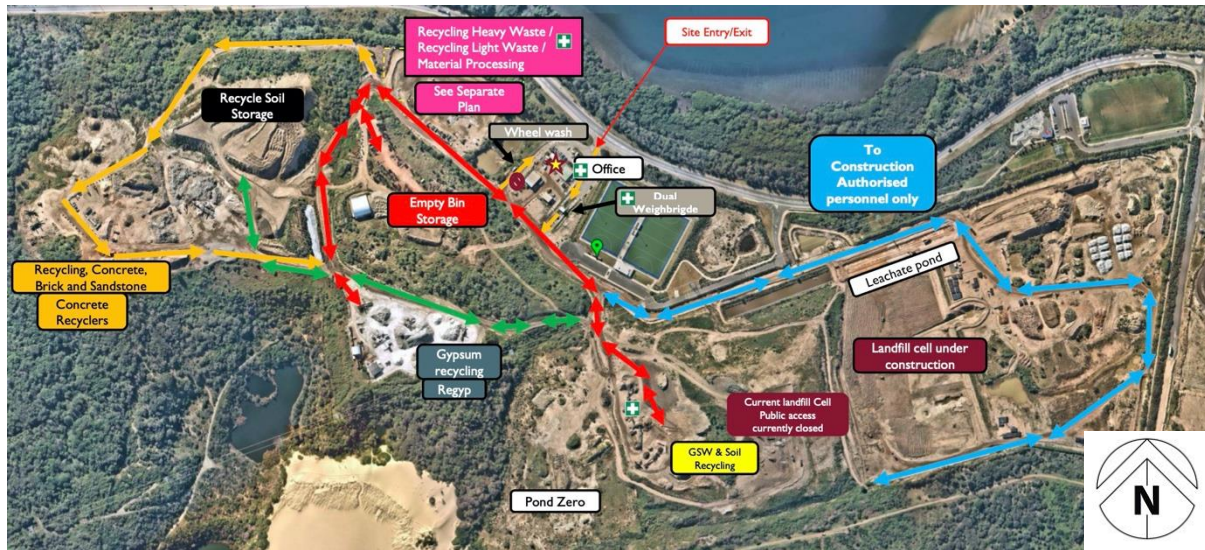
These two lots account for the eastern half of the Proposal Site. The western margin of this area is dominated by a fill mound (predominantly General Solid Waste/GSW and soil), which projects above ground level to height of around 30 metres. It (and the entirety of the eastern part of the Proposal Site) sits above land that has previously been mined to well below extant ground level (up to 20 metres below ASL). To the east of the mound are landfill cells, including one currently under construction that features an excavated area with the membrane and associated drainage works. To the immediate north are stage 1 sports fields and a leachate pond and along the northern margin (and running through the western part of the site on an ENE to WSW trajectory) is a high voltage overhead transmission line. Universally, the eastern part of the site has been thoroughly mined; is extensively disturbed and has been reshaped by post-mining, waste recovery operations.

#### **Lots 1122 and 1123**

These two lots account for the western half of the Proposal Site. Like the eastern part of the site, this area has been subject to extensive mining activity and is highly disturbed. Features include a massive hill of recycled soil (in the approximate location of the former Connells sand hill); a concrete, brick and sandstone storage area; a gypsum recycling facility; and an office complex and wheel wash bay (adjacent to the roadway and accessed by the facility entranceway). There are two new sports courts east of the office complex: part of the VPA staged recreation works.

Vegetation around the margins of the Proposal Site and surrounding ponds and water features is universally woody weeds and relatively recent vegetative regrowth (including bitou, lantana, swamp grasses, wattle and casuarina).

Refer figures 49 – 63.



**FIGURE 49: Current Site Plan and Arrangement of the Existing Breen Resources Facility**

Breen Resources Pty Ltd

### 4.3 Summary

- The Proposal Site presents as a heavily modified landscape that has been impacted by intensive land use since the 1960s (sand mining and subsequent infilling with acquired waste).
- Pre-mining land surfaces and features have been removed and local stratigraphy has been reconstituted and remodelled (both horizontally and vertically).
- There are no onsite items or features of particular historic interest, nor areas of historical archaeological potential-sensitivity.





**FIGURE 50: General view across eastern part of Proposal Site from fill mound**

View ENE – Dan Tuck 2020



**FIGURE 51: View over eastern part of the Proposal Site and new landfill cell (under construction)**

View ENE – Dan Tuck 2020





**FIGURE 52: View from northern boundary access road towards new cell and fill mound**

View S – Dan Tuck 2020



**FIGURE 53: General view along one of the internal site access roads (HV powerline overhead)**

View E – Dan Tuck 2020





**FIGURE 54: General view along HV powerline towards western part of Proposal Site/fill mounds**  
View W – Dan Tuck 2020



**FIGURE 55: Indicative view across Proposal Site (showing undulating, disturbed ground)**  
View SW – Dan Tuck 2020





**FIGURE 56: Open channel along eastern margin of the Proposal Site**

View S – Dan Tuck 2020



**FIGURE 57: View across site from the eastern property boundary fence**

View WSW – Dan Tuck 2020





**FIGURE 58: View across the Proposal Site from the western fill mound**

View E – Dan Tuck 2020



**FIGURE 59: View towards the gypsum recycling area from fill mound (with dunes to rear)**

View S – Dan Tuck 2020





**FIGURE 60: Indicative view across more elevated western part of the Proposal Site**

View ENE – Dan Tuck 2020



**FIGURE 61: Indicative view across western end of the Proposal Site**

View S – Dan Tuck 2020





**FIGURE 62: Distant view from heritage-listed dune (offsite) towards Proposal Site**

View NE – Dan Tuck



**FIGURE 63: Detail of heritage-listed dune (offsite)**

View ENE – Dan Tuck 2020

## 5 Significance

This following section provides an appraisal the heritage significance of the Proposal Site. The first part outlines the principles and criteria under which a significance appraisal is made; the second provides an assessment under the established criteria and presents a summary statement of significance.

Heritage significance and cultural significance are terms used to describe an item's value or importance to our society. The Australian ICOMOS Burra Charter defines cultural significance as,

*Aesthetic, historic, scientific or social value for past, present or future generations.*

This value may be contained in the fabric of the item, its setting and relationship to other items, the response that the item stimulates in those who value it now, or the meaning of that item to contemporary society.

Accurate assessment of the cultural significance of sites, places and items, is an essential component of the NSW heritage assessment and planning process. A clear determination of a site's significance allows informed planning decisions to be made, in addition to ensuring that heritage values are maintained, enhanced, or at least minimally affected by development.

Assessments of significance are made by applying standard evaluation criteria. These criteria can be used to assess both Aboriginal and European items and landscapes. These criteria are as follows:

- (a) An item is important in the course or pattern of NSW's cultural or natural history (or the cultural or natural history of the local area).
- (b) An item has strong or special associations with the life or works of a person, or group of persons, of importance in NSW' cultural or natural history (or the cultural or natural history of the local area)
- (c) An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area).
- (d) An item has strong or special associations with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons.
- (e) An item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area)
- (f) An item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the cultural or natural history of the local area).
- (g) An item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places; or cultural and natural environments.

The above criteria was approved by the Minister under section 4A of the Heritage Act to aid in the making of decisions as to whether or not an item is of state heritage significance. These criteria are commonly used to assess all items of heritage significance whether state or local.



## 5.1 Appraisal

**(a) An item is important in the course or pattern of NSW's cultural or natural history (or the cultural or natural history of the local area).**

The Proposal Site is set on land that was granted in the early nineteenth century and was held variously by notable district identities John Connell, the Laycocks and Thomas Holt. A relatively remote locale, it was subject to clearing and grazing but not to significant development until the mid-twentieth century when the area was opened up with the construction of Captain Cook Drive and the establishment of Caltex and the Cronulla STP.

From the mid-twentieth century the Proposal Site was progressively and dramatically transformed from vacant coastal grazing land to an extensive barren mining site. This transformation altered the nature of the landscape to the point where it no longer reflects the landscapes of the past and can demonstrate only a modern mining history with no significant structures, items or features.

*The Proposal Site is not considered significant under this criterion.*

**(b) An item has strong or special associations with the life or works of a person, or group of persons, of importance in NSW' cultural or natural history (or the cultural or natural history of the local area).**

The Proposal Site has tentative associations with notable nineteenth century district identities John Connell, the Laycocks and Thomas Holt. Their limited and ephemeral use of the Proposal Site is however not demonstratable.

*The Proposal Site is not considered significant under this criterion.*

**(c) An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area).**

Sandmining has altered the face of the land and impacted both the foredunes and transgressive sand sheets that once dominated the broader locale. The site is a modern mining and waste disposal site and has no inherent aesthetic appeal or historical technical merit.

*The Proposal Site is not considered significant under this criterion.*

**d) An item has strong or special associations with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons.**

*The Proposal Site is not considered significant under this criterion.*

**(e) An item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area).**

The Proposal Site has a limited and ephemeral history of pre-mining use. The landscape is a post-1960s one; the infrastructure modern. The site has been excavated, landscaped, remodelled and remediated to the point where its previous form is unrecognisable. It is highly unlikely to contain relics, heritage items or landscape features with significant archaeological potential-research value.

*The Proposal Site is not considered significant under this criterion.*

**(f) An item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the cultural or natural history of the local area).**

Prior to mining, the Proposal Site featured (in part) a rare dunescape of considerable natural and cultural historical importance. As a consequence of broadscale sand extraction and subsequent waste disposal, this is no longer the case.

*The Proposal Site is not considered significant under this criterion.*

**(g) An item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places; or cultural and natural environments.**

*The Proposal Site is not considered significant under this criterion.*

## **5.2 Summary**

The Proposal Site is a locality that was subject to early nineteenth century colonial land granting on the Kurnell Peninsula and was subsequently cleared and used for low impact grazing until the mid-twentieth century. Since the opening up of greater Kurnell in the c.1950s, the Proposal Site has been used exclusively and extensively for sand mining and the reception of waste materials, which has transformed the site and continues to do so. The current landscape reflects recent use and the site has no inherent cultural heritage value or historical archaeological potential.



## 6 Proposal

The following section provides a brief description of the Proposal.

### 6.1 *Rationale*

Breen is proposing to construct and operate a new integrated resource recovery facility to consolidate all functional recycling activities within the eastern part of the Proposal Site, being on Lot 5. This will allow Breen to deliver the recreational space and other publicly accessible Embellished Marang Parklands in the western part of the Proposal Site to the community. It will also provide improved recycling capability in line with NSW Government priorities and targets to increase resource recovery from the C&D and C&I sectors.

The Proposal is comprised of the delivery of the Embellished Marang Parklands, the continuation of landfilling on the residual parts of Lot 5 and the construction of the New Resource Recovery Facility.

### 6.2 *Works*

The Proposal involves the following key integrated components:

Construction and operation of a resource management facility, comprising:

- A New Resource Recovery Facility on the eastern part of the Proposal Site (Lot 5), including consolidation of existing waste management activities within this part of the Proposal Site; and
- A waste disposal facility, being the continuation of current land restoration, landfilling and contouring operations at the Proposal Site by permanent application of some of the residual waste materials from the New Resource Recovery Facility to land on Lot 5;
- Use of suitable material processed by the New Resource Recovery Facility to cap, contour and re-profile areas of the Proposal Site and to construct the Embellished Marang Parklands on Lots 1122, 1123 and Lot 6;
- Re-profiling of parts of the Proposal Site within Lots 1122, 1123 and 6, with some existing waste materials from those lots;
- Delivery of an activated and integrated community space in the form of the Embellished Marang Parklands on Lots 1122, 1123 and Lot 6, to provide a superior parkland to that proposed under the VPA. This will include, among other things, integrated water usage and management and utilising personnel, plant, material and infrastructure across the whole of the Site.
- Delivery of activated community space in the form of the Embellished Marang Parklands on Lots 1122 and 1123 and Lot 6.

- To enable the above Proposal, the Existing Breen Resources Facility on Lots 1122, 1123 and 6 (this includes those parts of Lots 1122, 1123 and 6 that will comprise the Playing Fields) will be demolished and/or relocated (as required) to Lot 5.

The proposed Embellished Marang Parklands include the following improvements and benefits to the community over and above those contemplated by the 2010 VPA:

- A cleared 'Village Green' area in the middle of the parklands with amphitheatre, providing a place for the community to hold events and celebrations in a semi natural setting; and
- Associated picnic areas for all members of the local and wider community to use and enjoy; and
- A playground; and
- A network of accessible paths, including key pedestrian and cycle links between Quibray Bay and Cronulla Beach, to allow visitors to easily access the parklands for pedestrians and cycling, reinforcing the Sydney Green Grid; and
- An elevated landscape, including a panoramic look out in the western part of the parklands, that offers spectacular all-round regional views that will assist in a better understanding of the varied landscapes of this part of Sydney.

Specific aspects of the proposal are detailed as follows:

### **6.2.1 Demolition**

As part of the Proposal, the existing Breen Resources Facility infrastructure and facilities located on Lots 1122 and 1123 DP 794114 would be demolished and/or relocated from this part of the Proposal Site, including:

- Weighbridge and wheel wash.
- Infrastructure including the site office and storage area (comprising the site office, lunchroom, office and ablutions block); two workshops, and a storage yard used for external storage and parking of heavy plant, equipment and site vehicles.
- Parking area
- Sedimentation, infiltration and recovered water basin
- Internal roadways and signage.

Demolition of existing waste management infrastructure on Lot 6 DP1158627 will also be required.



### 6.2.2 Construction

The Proposal will involve the construction and operation of the following key infrastructure and works:

- An enclosed recycling plant comprising plant and machinery, and concrete and soil recycling in a semi-enclosed building
- The resource recovery facility will be built up a further two metres on existing levels for flood mitigation purposes. Most parts of this also sit within sand mined areas
- An enclosed 10,000m<sup>2</sup> building (approximate) will be constructed to carry out processing of residual light waste materials that cannot be recycled (including selected timber, contaminated plastics, fibre, rubber and contaminated paper materials).
- Two (2) weighbridges to ensure secure access to the Proposal Site for commercial vehicles and public drop- off/small vehicles that are bringing material to or from the site.
- Site office, administration building and workshop.
- Associated facilities including a parking area, two (2) wheel washes, two recovered water basins (for management of stormwater and to allow for water recovery and reuse), internal roadways, fencing and visual screening.
- Stockpiles and storage areas (for stockpiling of recovered materials and temporary storage).

Access to the resource recovery facility will be established via a new access from Lindum Road, along the eastern boundary of the Proposal Site.

### 6.2.3 Processing

The main processing activities to be undertaken at the new proposed resource recovery facility are as follows:

- Processing of residual light waste
- Concrete processing: recovered concrete, brick and sandstone will be processed by crushing and screening to produce a variety of reusable aggregate products
- Plasterboard processing: plasterboard and other gypsum wastes will be processed to produce gypsum products for return to manufacturers, as well as fertilizer and soil conditioning products.
- Soil processing: soil material and smaller aggregate materials will be processed by crushing, screening and washing to produce recovered fines and recovered aggregate. This material will be on-sold or used to rehabilitate the site at the completion of waste emplacement activities), subject to approval.

- Mulching and composting: garden and landscaping organics, untreated timber and natural organic fibrous materials will be processed to create compost and other soil additives for use onsite (e.g. parklands) or external sale.

#### **6.2.4 Landfill**

The landfilling component of the proposal involves continuation of the current waste disposal and land rehabilitation operations, which comprise filling, capping and contouring/reprofiling with residual and recovered materials on parts of Lot 5.

The post-works landform is proposed to be suitable recovered material produced by the resource recovery facility for this specific purpose.

#### **6.2.5 Parklands**

Once Lots 1122 and 1123 and Lot 6 DP1158627 are reprofiled, the Embellished Marang Parklands would be established to provide for activated community space on the rehabilitated land within these lots, which will include:

- revegetation with Dune Forest and Heath, as well as informal native grass areas and managed native grass areas, with a number of informal picnic zones
- a cleared 'Village Green' area in the middle of the parklands with amphitheatre and associated BBQ/picnic amenities, with a panoramic look out to the west
- internal access road and parking areas, as well as pervious pathways for access throughout the parklands.

The areas would be transferred to Council in accordance with the VPA when the Embellished Marang Parklands and open space works have been completed to Council's satisfaction.





FIGURE 64: Proposal (Breen SSD Resource Recovery Project)

Clouston Associates

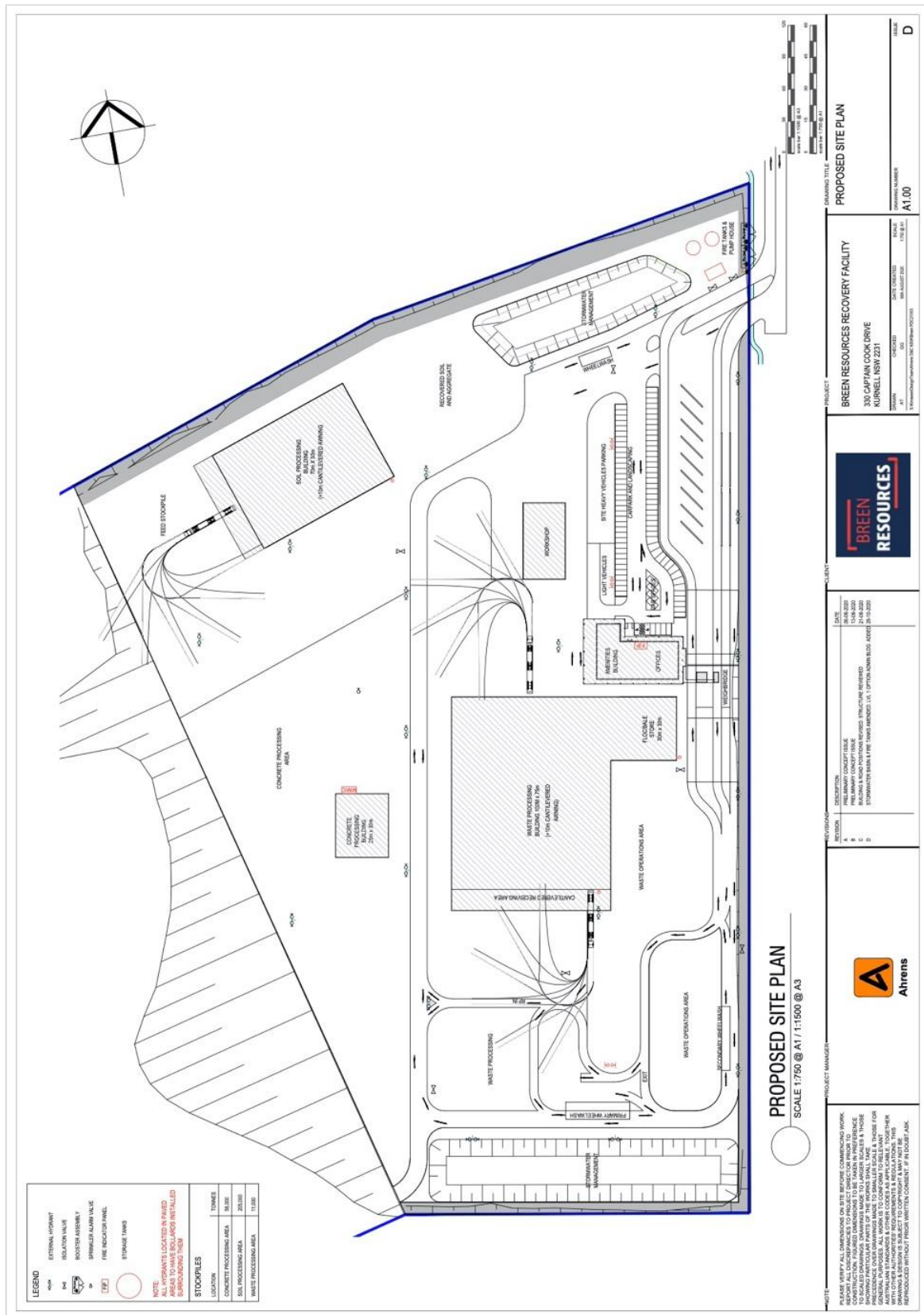


FIGURE 65: Proposed New Resource Recovery Facility Layout Plan

AHRENS 2020

## 7 Impacts

The following section discusses the potential impacts of the Proposal on the heritage values of the Proposal Site and nearest-listed heritage items.

### 7.1 Assessment

The ensuing questions are derived from the NSW Heritage Office guideline document *Statements of Heritage Impact* (2002) and are the established means of assessing the impact of development proposals on heritage items in NSW.

#### **What aspects of the Proposal respect or enhance the heritage significance of the Proposal Site?**

At present, the Proposal Site is a former sand mine and current waste recovery site and presents as such. It has no inherent heritage value and detracts from views to and from the heritage-listed dune and beach landscape to the immediate south-southwest. This will remain the case until the final stage of the Proposal is realised, being the revegetation and the creation and activation of the Embellished Marang Parklands and recreational facilities in accordance with the VPA. At that point, the landscape in both appearance and function will be much improved and provide a more appropriate, compatible and sympathetic backdrop for the heritage dune and the locality more generally. As such, conversion of the Proposal Site to the Embellished Marang Parklands will enhance the site and natural and cultural heritage values of the dunes.

New enhanced views between elevated spaces in the Proposal Site, the dunes to the south and wetlands of Botany Bay to the north, will be created by the delivery of the Embellished Marang Parklands. These will include never-before-seen view corridors that will allow for greater observation and appreciation of neighbouring natural and cultural heritage places.

#### **What aspects of the Proposal could detrimentally affect the heritage significance of the Proposal Site or sites nearby?**

The Proposal Site has no inherent historic heritage value, or historical archaeological potential, and the proposal will therefore have no direct effect on the site.

#### Sites nearby

The operation of the Proposed New Resource Recovery Facility, as well as works in advance of the delivery of the Embellished Marang Parklands, will be managed in accordance with any existing and/or future approvals. As such, the Proposal is unlikely to materially impact areas and/or items of significance nearby including:

- *Cronulla Sand Dune and Wanda Beach Coastal Landscape (SHR 01668)*
- *Kamay Botany Bay National Park (North and South) and Towra Point Nature Reserve (SHR 01918)*
- *Cronulla Sewage Treatment Plant (Sydney Water s170 listing: Nos. 4573705).*



Refer to section 9 **recommendations** for qualifications.

**Have more sympathetic development options been considered? If so, why were they discounted?**

Yes. The following development options have been considered and discounted:

1. Do nothing

Leaving the Proposal Site as is would result in an inability for Breen to deliver the Embellished Marang Parklands, or the Stage 2 and 3 playing fields approved under DA/11/0665 (as well as additional improvements and embellishments) in a timely manner. It would also prevent investment in modern waste processing-handling equipment, which would improve resource recovery rates and divert waste from landfill.

2. Alternative uses

It is understood that there are no realistic alternative uses for the Proposal Site, as the substantive majority of the Proposal Site is the subject of the VPA, with the agreed and intended final use being Embellished Marang Parklands and playing fields.

3. Delaying of the Proposal

It is understood that there is no benefit to Breen or the Sutherland Community in delaying the Proposal. The Proposal is considered the most appropriate option at this time, given the existing nature of the Proposal Site and the shared vision for its redevelopment for playing fields and Embellished Marang Parklands. The proposal also acknowledges the need for the continuation of onsite landfilling and resource recovery activities in the most environmentally sustainable and efficient way.

**7.1.1 Summary**

In the medium to longer term, the Proposal will ensure that the Proposal Site is appropriately rehabilitated, renewed and reactivated as the Embellished Marang Parklands and recreational facilities. This change in use, appearance and amenity will benefit the community at large and provide a much-improved backdrop to local heritage-listed landscape features (dunes and nature reserves) that are nearby. The Proposal is considered a worthwhile and positive one from a heritage perspective, that will improve the locale and the overall natural and heritage values of the Peninsula.

## 8 Conclusions

- The Proposal Site has a nineteenth century history of clearing and grazing that has been overprinted with massive landscape alteration: the consequence of intensive sand mining and subsequent waste management since the 1960s.
- The Proposal Site is degraded and a product of its recent history. It has no inherent on-indigenous cultural heritage value or historical archaeological potential.
- There are a number of heritage-listed locations/items on the Kurnell Peninsula. Of these, the following are relevant as a consequence of context and relative proximity to the Proposal Site:

*Cronulla Sand Dune and Wanda Beach Coastal Landscape (SHR 01668)*

*Kamay Botany Bay National Park (North and South) and Towra Point Nature Reserve (SHR 01918)*

*Cronulla Sewage Treatment Plant (Sydney Water s170 listing: Nos. 4573705).*

- The rehabilitation of the Proposal Site and the establishment of new recreational spaces and facilities – will enhance the site and the setting of nearby heritage-listed places.
- Elevated areas within the activated Embellished Marang Parklands will create new and improved views and view corridors, with multiple viewpoints both to and from the Proposal Site. These will allow for the observation and greater appreciation of nearby heritage-listed places: particularly the Cronulla Sand Dune and Wanda Beach Coastal Landscape (to the south-south west) and the Towra Point Nature Reserve (to the north)
- The Proposal, if fully realised, is considered a worthwhile and positive one from a heritage perspective, that will improve the locale and the overall natural and heritage values of the Peninsula.

## 9 Recommendations

The following acknowledges:

- The Burra Charter and the NSW Heritage Act 1977
- Heritage NSW guidelines and best practice
- Sutherland Shire Council Planning Documents.

It is stated that:

On the basis of the material presented herein the realisation of the Proposal and delivery of the Embellished Marang Parklands is considered warranted, much needed and unlikely to have deleterious impacts on the Proposal Site itself or the cultural heritage values of statutorily listed heritage items nearby/adjacent.

### Qualifications

Planning of the parklands and allied infrastructure and landscaping is yet to be fully detailed. Because the heritage-listed dune site has a hard boundary on paper but a soft boundary in reality, transition between the created the Embellished Marang Parklands and the existing dunescape to the south-southwest of the Proposal Site will need to be carefully and appropriately designed, managed and executed.

Detailed planning should address contouring, revegetation and infrastructure (such as security lighting and drainage) – especially on the approach to the dunescape, and more generally at property margins and where the works will interface with extant bushland/reserves.

It is therefore recommended that:

1. This document may be used to support approval of the proposal.
2. Preparation of a Landscape Management Plan prepared by a suitably qualified landscape architect with experience in coastal-dunescape contexts should be undertaken to inform detailed parkland planning. The design and management of transition zones between the Embellished Marang Parklands and dunes and at the property margins should be central to this plan. The plan should also consider ways of interpreting the shared history of the peninsula to parkland users.
3. This document should be reviewed (and possibly amended) at such time as detailed planning of the Embellished Marang Parklands (and any allied works) is advanced.



## 10 References

- Aplin, G. (ed). 1988. *Sydney Before Macquarie: A Difficult Infant*. New South Wales University Press, Sydney.
- Anderson, D (ed). c1975. *The Botany Bay Project: A Handbook of the Botany Bay Region*. The Botany Bay Project Committee, Marrickville.
- Attenbrow, V. 2010. *Sydney's Aboriginal Past: Investigating the Archaeological and Historical Records*. NewSouth Publishing.
- Australia ICOMOS Inc. 1999. *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance*.
- Australian Heritage Commission. 1998. *Protecting Local Heritage Places: A Guide for Communities*. Australian Heritage Commission, Canberra.
- Balme, J. and Paterson, A. 2014. *Archaeology in Practice: A Student Guide to Archaeological Analysis*. Blackwell Publishing, Carlton, Victoria.
- Benson, D. and Howell, J. 1990. *Taken for Granted: The Bushland of Sydney and its Suburbs*. Kangaroo Press in association with the Royal Botanic Gardens, Sydney.
- Bourke, H., Morrison, M. and Smith, C. 2017. *The Archaeologists Field Handbook (2nd edition)*. Allen and Unwin, Crows Nest.
- Caltex Australia Limited. c1981. *The Kurnell Story*. Published by Caltex Australia Limited.
- Cleere, H. (ed.). 2005. *Archaeological Heritage Management in the Modern World*. Routledge, United Kingdom.
- Coast History and Heritage 2020. *Aboriginal Cultural Heritage Assessment Report. 330 Captain Cook Drive, Kurnell*. Report to Breen Resources Pty Ltd.
- Cridland, F. 1924 (1950). *The Story of Port Hacking, Cronulla and Sutherland Shire*. Angus and Robertson, Sydney.
- Curby, 1993. *A Thematic History of Sutherland Shire: Final Report* (with Terry Kass). Volume 1: Historical Context Report. Prepared for the Sutherland Shire Council.
- Curby, P. 1998. *A Pictorial History of Cronulla*. Kingsclear Books. Curby, 1998a. *Sutherland Shire Foreshore Study: Thematic History*. Report prepared for Paul Davies Pty Ltd Heritage Consultants.
- Curby, 1998b. *Sutherland Shire Foreshore Study: Thematic History (Maps)*. Report prepared for Paul Davies Pty Ltd Heritage Consultants.
- Hall, M. and Silliman, S. 2006. *Historical Archaeology*. Blackwell Publishing.

Holt, E. 1972. *An Energetic Colonist: A Biographical Account of the Activities of the late Hon. Thomas Holt, MLC*. The Hawthorn Press, Melbourne.

Hutton-Neve, M. 1970. *Bygone Days of the Sutherland Shire*. Shire Pictorial Publications.

Hutton-Neve, M. 1983. *The Early Days of Cronulla*. The Sutherland and District Historical Society.

Hutton-Neve, M. 2000. *A Brief History of the Sutherland Shire*. Sutherland Shire Studies Publication No. 1.

Kurnell Peninsula Planning Study. 1979. Report to the NSW Planning and Environment Commission.

Kohen, J. and Lampert, R. 1987. 'Hunters and Fishers in the Sydney Region' in Mulvaney, J. and White, J. (eds). 1988. *Australians to 1788*. Fairfax, Syme and Weldon, Sydney.

Lawrence, J. 1998. *A Pictorial History of the Sutherland Shire*. (Captions by Pauline Curby). Kingsclear Books, Crows Nest, NSW.

Larcombe, F. 1963. *The History of Botany: 1788 – 1963*. The Council of the Municipality of Botany.

Larkin, M. 1998. *Sutherland Shire: A History to 1939*. Sutherland History Press.

Mary Dallas Consulting Archaeologists (MDCA). 2018. *238-258 Captain Cook Drive, Kurnell, NSW Historical Archaeological Assessment + Statement of Heritage Impact*. Report to Dicker Data Pty Ltd and the NSW Dept of Planning and Environment

Mary Dallas Consulting Archaeologists. 2014. *Aboriginal Cultural Heritage Assessment Report: 238-258 Captain Cook Drive, Kurnell, NSW*. Report to Property Today Pty Ltd.

Mary Dallas Consulting Archaeologists. 2012. *Shearwater Landing, Bate Bay Road, Kurnell Peninsula: Aboriginal Archaeological Assessment, European Heritage Review and Statement of Heritage Impact*. Report to Breen Holdings.

Mary Dallas Consulting Archaeologists. 2002. *Sutherland Shire Aboriginal Cultural Heritage Study*. Report to Sutherland Shire Council.

Midgley, A. and Midgley, F. 1997. *History of Road Transport in the Sutherland Shire*. Sutherland Shire Studies Publication No. 7.

NSW Department of Planning. 1993. *Historical Archaeological Sites: Investigation and Conservation Guidelines*. NSW Department of Planning.

NSW Heritage Council. 2006. *Historical Archaeology: Code of Practice*. Published by the NSW Heritage Office.

NSW Heritage Office. 2002a. *Statements of Heritage Impact*. Update - first published in 1998 as part of the NSW Heritage Manual.

NSW Heritage Office. 2002b. *Local Government Heritage Guidelines*.

NSW Heritage Council. 2001. *Assessing Heritage Significance*. A NSW Heritage Manual Update. Published by the NSW Heritage Office.

NSW Heritage Office. 2000. *Heritage and Development: A Lawyer's Perspective*. Report prepared by Helen MacFarlane for the NSW Heritage Office's Heritage Information Series.

NSW Heritage Office. 1996. *Heritage Terms and Abbreviations*. Publication prepared by the Heritage Office (NSW), Department of Urban Affairs and Planning.

Nugent, M. 2005. *A Contextual of Botany Bay National Park (Kurnell section)*. School of Historical Studies, Monash University.

Panayotou, K. 1999. 'Shoreface Sediment Bypassing and Aeolian Rollover: Transgressive Volumetric Simulation of Kurnell Peninsula Sand Dune Evolution since European Settlement' in *9th Annual NSW Coastal Management Conference*: Pp: 339 – 348.

Perumal Murphy Wu Pty Ltd. 1993. *Sutherland Shire Heritage Study*.

Roy, P. and Crawford, E. 1979. *Holocene Geological Evolution of the Southern Botany Bay – Kurnell Region, Central New South Wales Coast*. Reprinted from the Dept. of Mineral Resources, Records of the Geological Survey of New South Wales 20(2): 159-250.

Salt, D. 2000. *Kurnell: Birthplace of a Modern Australia - A Pictorial History*. Clarion House, Como West.

Sutherland Shire Council. 1997. *The Development of Commerce and Industry*. Sutherland Shire Studies Publication No. 4.

Tuck, D. 2008. *La Perouse Headland: A Shared History*. Report to NSW NPWS/DECC.

Tuck, D. 2002. *Sutherland Shire Aboriginal Heritage Study (Contextual History)*. Report contribution for MDCA.

Turbet, P. 2001. *The Aborigines of Sydney before 1788*. Kangaroo Press (Simon and Schuster), East Roseville. Revised Edition.

Wallace, I. c1975. 'Extractive Resources of the Botany Bay Region: Construction Materials and Coal' in Anderson, D (ed). c1975. *The Botany Bay Project: A Handbook of the Botany Bay Region*. The Botany Bay Project Committee, Marrickville.

Walker, J. 1970. *Two Hundred Years in Retrospect: Kurnell-Sutherland 1770- 1970*. The Sutherland Shire Historical Society.

Walker, Robert Cooper. 1868. *Sutherland Estate Report (April 14, 1868)*. Unpublished Manuscript. SSL (Sutherland Shire Library).

Waugh, J. (Ed). 2001. *Aboriginal People of the East Coast of Sydney: Source Documents*. Randwick and District Historical Society.



## **11 Attachments**

## **A1. SEARS**

# Planning Secretary's Environmental Assessment Requirements

## Section 4.12(8) of the *Environmental Planning and Assessment Act 1979* Schedule 2 of the *Environmental Planning and Assessment Regulation 2000*

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Application Number</b>   | SSD-10412                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Project Name</b>         | Breen Resource Recovery Facility                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Development</b>          | The construction and operation of a resource recovery facility to process up to approximately 500,000 tonnes per year of construction and demolition (C&D) and commercial and industrial (C&I) wastes and the rehabilitation of land using recovered resources.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Location</b>             | 330 Captain Cook Drive, Kurnell in the Sutherland Shire                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Applicant</b>            | Breen Resources Pty Ltd                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Date of Issue</b>        | 14/02/2020                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>General Requirements</b> | <p>The Environmental Impact Statement (EIS) for the development must meet the form and content requirements in clauses 6 and 7 of Schedule 2 of the Environmental Planning and Assessment Regulation 2000 (the Regulation).</p> <p>In addition, the EIS must include a:</p> <ul style="list-style-type: none"> <li>· detailed description of the development, including: <ul style="list-style-type: none"> <li>- accurate history of the site, including development consents;</li> <li>- need for the proposed development;</li> <li>- justification for the proposed development;</li> <li>- staging of the development;</li> <li>- interactions between the development and existing, approved and proposed operations in the vicinity of the site;</li> <li>- interactions between the development and the existing Voluntary Planning Agreement (VPA)</li> <li>- plans of any proposed building works; and</li> <li>- contributions required to offset the proposal.</li> </ul> </li> <li>· consideration of all relevant environmental planning instruments, including identification and justification of any inconsistencies with these instruments;</li> <li>· consideration of issues discussed in Attachment 2 (public authority responses to key issues);</li> <li>· risk assessment of the potential environmental impacts of the development, identifying the key issues for further assessment;</li> <li>· detailed assessment of the key issues specified below, and any other significant issues identified in this risk assessment, which includes: <ul style="list-style-type: none"> <li>- a description of the existing environment, using sufficient baseline data;</li> <li>- an assessment of the potential impacts of all stages of the development, including any cumulative impacts, taking into consideration relevant guidelines, policies, plans and statutes; and</li> </ul> </li> </ul> |



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|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   | <ul style="list-style-type: none"> <li>- a description of the measures that would be implemented to avoid, minimise, mitigate and if necessary, offset the potential impacts of the development, including proposals for adaptive management and/or contingency plans to manage significant risks to the environment.</li> <li>- a consolidated summary of all the proposed environmental management and monitoring measures, highlighting commitments included in the EIS.</li> </ul> <p>The EIS must also be accompanied by a report from a qualified quantity surveyor providing:</p> <ul style="list-style-type: none"> <li>- a detailed calculation of the capital investment value (CIV) of the proposal as defined in clause 3 of the Environmental Planning and Assessment Regulation 2000, including details of all components of the CIV;</li> <li>- a close estimate of the jobs that will be created by the development during the construction and operational phases of the development; and</li> <li>- certification that the information provided is accurate at the date of preparation.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Key issues</b> | <p>The EIS must address the following specific matters:</p> <ul style="list-style-type: none"> <li>• <b>Suitability of the Site</b> – including: <ul style="list-style-type: none"> <li>- details of all development consents and approved plans previously and/or currently applicable to the site, including for the current waste management operations;</li> <li>- details of all legal requirements to deliver the recreation facilities and parklands, including any current Voluntary Planning Agreement (VPA);</li> <li>- details of phasing or staging of the development in order to deliver the proposed recreation facilities and parklands including relocating the existing waste management facility; and</li> <li>- a detailed justification that the site can accommodate the proposed resource recovery facility, having regard to the scope of the proposed operation, its environmental impacts and relevant mitigation measures.</li> </ul> </li> <li>• <b>Community and Stakeholder Engagement</b> – including: <ul style="list-style-type: none"> <li>- a detailed community and stakeholder participation strategy which identifies who in the community has been consulted and a justification for their selection, other stakeholders consulted and the form(s) of the consultation, including a justification for this approach;</li> <li>- a report on the results of the implementation of the strategy including issues raised by the community and surrounding landowners and occupiers that may be impacted by the proposal;</li> <li>- details of how issues raised during community and stakeholder consultation have been addressed and whether they have resulted in changes to the proposal;</li> <li>- details of consultation regarding the approach to the provision of recreation facilities and parklands and the need for any variation to the VPA, including evidence of consultation with Council; and</li> <li>- details of the proposed approach to future community and stakeholder engagement based on the results of the consultation.</li> </ul> </li> <li>• <b>Waste Management</b> – including: <ul style="list-style-type: none"> <li>- a description of each of the waste streams that would be accepted at the site including maximum daily, weekly and annual throughputs and the</li> </ul> </li> </ul> |

maximum size for stockpiles;

- details of the source of the waste streams to justify the need for the proposed processing capacity;
- a description of waste processing operations (including flow diagrams for each waste stream), including a description of the technology to be installed, resource outputs and the quality control measures that would be implemented;
- details of how waste would be stored (including the maximum daily storage capacity of the site) and handled on site, and transported to and from the site including details of how the receipt of non-conforming waste would be dealt with;
- details of the development's waste tracking system for incoming and outgoing waste;
- details of the quality of separated material produced and final dispatch locations;
- details of the waste management strategy for construction and ongoing operational waste generated;
- the measures that would be implemented to ensure that the development is consistent with the aims, objectives and guidance in the *NSW Waste Avoidance and Resource Recovery Strategy 2014-2021*; and
- details of consistency with the EPA's Standards for Managing Construction Waste in NSW (November 2018).

• **Soils and Water** – including:

- characterisation of the nature and extent of any contamination of the site based on the historic use as a landfill and a description of proposed measures;
- an assessment of potential impacts to soil and water resources, topography, hydrology, groundwater, drainage lines, watercourses and riparian lands on or nearby the site, including mapping and description of existing background conditions and cumulative impacts;
- a detailed site water balance including identification of water requirements for the life of the project, measures that would be implemented to ensure an adequate and secure water supply is available for the proposal and a detailed description of the measures to minimise the water use at the site;
- characterisation of water quality at the point of discharge to surface and/or groundwater against the relevant water quality criteria (including details of the contaminants of concern that may leach from the waste into the wastewater and proposed mitigation measures to manage any impacts to receiving waters and monitoring activities and methodologies);
- details of stormwater/wastewater management system including the capacity of onsite detention system(s), onsite sewage management and measures to treat, reuse or dispose of water;
- a description of erosion and sediment controls; and
- a detailed flooding assessment.

• **Heritage and Aboriginal Cultural Heritage** – including:

- identification and description of the relevant non-Aboriginal heritage items, including built heritage, landscapes and archaeology, that exist across the

development - documented in a Statement of Heritage Impact (SOHI);

- a description and assessment of potential impacts on non-Aboriginal heritage item(s) such as Cronulla sand dune and Wanda Beach coastal landscape, Towra Point Nature Reserve and Quibray Bay;
- measures to avoid and/or mitigate the impact on the heritage significance or cultural heritage values of the site and the surrounding heritage item(s);
- identification and description of the Aboriginal cultural heritage values that exist across the development - documented in an Aboriginal Cultural Heritage Assessment Report (ACHAR);
- consultation with Aboriginal people must be undertaken and documented in the ACHAR; and
- a description and assessment of potential impacts on Aboriginal cultural heritage values such as Cronulla Sand Dune and Wanda Beach Coastal Landscape.

• **Visual** – including:

- a detailed design analysis of the proposed development with reference to the building form, height, setbacks, bulk and scale in the context of the immediate locality, the wider area and the desired future character of the area, including views, vistas, open space and the public domain
- a detailed assessment (including photomontages and perspectives) of the facility (buildings and storage areas) including height, colour, scale, building materials and finishes, signage and lighting, particularly from nearby public receivers and significant or important vantage points of the broader public domain
- consideration of the layout and design of the development having regard to the surrounding vehicular, pedestrian and cycling networks

• **Air Quality and Odour** – including:

- a quantitative assessment of the potential air quality, dust and odour impacts of the development in accordance with relevant Environment Protection Authority guidelines;
- the details of buildings and air handling systems and strong justification for any material handling, processing or stockpiling external to buildings;
- a greenhouse gas assessment; and
- details of proposed mitigation, management and monitoring measures.

• **Noise and Vibration** – including:

- a quantitative assessment of potential construction, operational and transport noise and vibration impacts in accordance with relevant Environment Protection Authority guidelines and undertaken by a suitably qualified and experienced person(s); and
- details and justification of the proposed noise mitigation and monitoring measures.

• **Traffic and Transport** – including:

- details of all traffic types and volumes likely to be generated during construction and operation, including a description of haul routes. Traffic flows are to be shown diagrammatically to a level of detail sufficient for easy



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|                     | <p>interpretation;</p> <ul style="list-style-type: none"> <li>- plans demonstrating how all vehicles likely to be generated during construction and operation and awaiting loading, unloading or servicing can be accommodated on the site to avoid queuing in the street network;</li> <li>- an assessment of the predicted impacts of this traffic on road safety and the capacity of the road network, including consideration of cumulative traffic impacts at key intersections using SIDRA or similar traffic model;</li> <li>- swept path diagrams depicting vehicles entering, exiting and manoeuvring throughout the site;</li> <li>- plans of any proposed road upgrades, infrastructure works or new roads required for the development; and</li> <li>- an assessment of potential impacts on local road pavement lifespan.</li> </ul> <ul style="list-style-type: none"> <li>• <b>Fire and Incident Management</b> – including: <ul style="list-style-type: none"> <li>- identification of the aggregate quantities of combustible waste products to be stockpiled at any one time;</li> <li>- technical information on the environmental protection equipment to be installed on the premises such as air, water and noise controls, spill clean-up equipment and fire (including location of fire hydrants and water flow rates at the hydrant) management and containment measures;</li> <li>- details regarding the fire hydrant system and its minimum water supply capabilities appropriate to the site's largest stockpile fire load;</li> <li>- details of size and volume of stockpiles and their management and separation to minimise fire spread and facilitate emergency vehicle access;</li> <li>- consideration of consistency with NSW Fire &amp; Rescue Fire Safety Guideline – Fire Safety in Waste Facilities (October 2019); and</li> <li>- detailed information relating to the proposed structures addressing relevant levels of compliance with Volume One of the National Construction Code (NCC).</li> </ul> </li> <li>• <b>Hazard</b> – including: <ul style="list-style-type: none"> <li>- a preliminary risk screening completed in accordance with <i>State Environmental Planning Policy No. 33 – Hazardous and Offensive Development</i> and Applying SEPP 33 (DoP, 2011), with a clear indication of class, quantity and location of all dangerous goods and hazardous materials associated with the development. Should preliminary screening indicate that the project is “potentially hazardous” a Preliminary Hazard Analysis (PHA) must be prepared in accordance with <i>Hazardous Industry Planning Advisory Paper No. 6 – Guidelines for Hazard Analysis</i> (DoP, 2011) and <i>Multi-Level Risk Assessment</i> (DoP, 2011).</li> </ul> </li> <li>• <b>Coastal Management</b> – including: <ul style="list-style-type: none"> <li>- an assessment of the potential impacts on coastal wetlands and littoral rainforests in accordance with the <i>Coastal Management Act 2016</i>.</li> </ul> </li> <li>• <b>Biodiversity</b> – including: <ul style="list-style-type: none"> <li>- an assessment of the biodiversity impacts in accordance with the <i>Biodiversity Assessment Method</i> and documented in a Biodiversity Development Assessment Report (BDAR).</li> </ul> </li> </ul> |
| <b>Consultation</b> | During the preparation of the EIS, you must consult with the relevant local, State or                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

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|                                           | <p>Commonwealth Government authorities, service providers, community groups and affected landowners.</p> <p>In particular you must consult with:</p> <ul style="list-style-type: none"> <li>· NSW Environment Protection Authority</li> <li>· Climate Change and Sustainability Division of the Department of Planning, Industry and Environment (formerly Office of Environment and Heritage)</li> <li>· Department of Industry</li> <li>· Transport for NSW</li> <li>· NSW Roads and Maritime Services</li> <li>· NSW Fire and Rescue</li> <li>· Sutherland Shire Council</li> <li>· Local community and other stakeholders.</li> </ul> <p>The EIS must describe the consultation process and the issues raised and identify where the design of the development has been amended in response to these issues. Where amendments have not been made to address an issue, a short explanation should be provided.</p> |
| <b>Further consultation after 2 years</b> | <p>If you do not lodge a Development Application and EIS for the development within 2 years of the issue date of these SEARs, you must consult further with the Secretary in relation to the preparation of the EIS.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>References</b>                         | <p>The assessment of the key issues listed above must take into account relevant guidelines, policies, and plans as identified. While not exhaustive, the following attachment contains a list of some of the guidelines, policies, and plans that may be relevant to the environmental assessment of this proposal.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

## **A2. SHR – Dune**

<https://apps.environment.nsw.gov.au/dpcheritageapp/ViewHeritageItemDetails.aspx?ID=5051207>



### **A3. SHR – Towra**

<https://apps.environment.nsw.gov.au/dpheritageapp/ViewHeritageItemDetails.aspx?ID=5061543>

#### **A4. Sydney Water s170 – STP**

<https://www.sydneywater.com.au/SW/water-the-environment/what-we-re-doing/Heritage-search/heritage-detail/index.htm?heritageid=4573705&FromPage=searchresults>