Asphaltite and tarball surveys

APPENDIX 5

Beach Dossiers

Andrew Ross, Alex Corrick, Christine Trefry, Se Gong, David McKirdy, Tony Hall, Chris Dyt, Zack Angelini, Richard Kempton, April Pickard, Cameron White, Stacey Maslin, David Griffin, John Middleton, John Luick, Stephan Armand, Tania Vergara and Richard Schinteie

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GREAT AUSTRALIAN BIGHT RESEARCH PROGRAM
The Great Australian Bight Research Program is a collaboration between BP, CSIRO, the South Australian Research and Development Institute (SARDI), the University of Adelaide, and Flinders University. The Program aims to provide a whole-of-system understanding of the environmental, economic and social values of the region; providing an information source for all to use.
Figure 1 Beaches surveyed by CSIRO during the 2014, 2015 and 2016 seasons
<table>
<thead>
<tr>
<th>Beach details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beach Name: <strong>Waitpinga Beach</strong></td>
</tr>
<tr>
<td>Access point location (DD): Latitude: -35.6345797309 Longitude: 138.498864676</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>General description and information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beach exposure or shape: <strong>Concave (cove)/Straight/Convex (headland)</strong></td>
</tr>
<tr>
<td>Beach Width: ~50m</td>
</tr>
<tr>
<td>Backshore type</td>
</tr>
</tbody>
</table>

| General description: | 3.1 km long beach is backed by largely vegetated dunes back, with Waitpinga creek and elongated lagoon behind the centre of the beach |
| Beach classification | Wave dominated rhythmic bar and beach |
| General information: | The beach faces almost due south exposing it to persistent high swell which averages about 2 m. Ninety metre high Newland Head forms the eastern boundary, with a 40 m high Waitpinga Hill head separating it from adjoining Parsons Beach. |
| Permits and access: | 3 km long sealed road leading from the main road right to the beach. There is a car park behind the dune with bathroom facilities and an elevated walkway across the dune to the centre of the 3.1 km long beach. |
Oil Spill Response Atlas (OSRA) map layers provided courtesy of the Australian Maritime Safety Authority (AMSA)
Beach: Waitpinga Beach

Photographs

<table>
<thead>
<tr>
<th>Year</th>
<th>To Sea</th>
<th>To Shore</th>
<th>Along</th>
<th>Back</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>![Image]</td>
<td>![Image]</td>
<td>![Image]</td>
<td>![Image]</td>
</tr>
<tr>
<td>2015</td>
<td>![Image]</td>
<td>![Image]</td>
<td>![Image]</td>
<td>![Image]</td>
</tr>
<tr>
<td>2016</td>
<td>![Image]</td>
<td>![Image]</td>
<td>![Image]</td>
<td>![Image]</td>
</tr>
</tbody>
</table>
Beach Summary Data

Sample types include asphaltite, tarball and resinite.

**Beach Character Chart**

*Waitpinga Beach*

**Asphaltite Frequency Chart**

*Waitpinga Beach*

**Tarball Frequency Chart**

*Waitpinga Beach*

**Sample Loadings per 100m Chart**

*Waitpinga Beach*
### Beach details

<table>
<thead>
<tr>
<th>Beach Name: 28 Mile Crossing Crossing</th>
<th>Beach ID: E3c</th>
<th>Priority: 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access point location (DD):</td>
<td>Maximum Beach survey length (km): 1.07</td>
<td></td>
</tr>
<tr>
<td>Latitude: -36.2000387669 Longitude: 139.64144551</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### General description and information

<table>
<thead>
<tr>
<th>Beach exposure or shape: Concave (cove)/Straight/Convex (headland)</th>
<th>Aspect: N NE E SE S SW W NW</th>
<th>Likely beach gradient: Shallow/Medium/Steep</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beach Width: ~60m</td>
<td>Likely substrate: Coarse sand</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Backshore type: Vegetated dunes; Dunes</td>
<td></td>
</tr>
</tbody>
</table>

**General description:**
The 42 Mile Crossing leaves the main highway and skirts the southern most of the usually full Coorong Lakes for 2 km. Before following a sandy track for another 2 km to the beach. The beach (148J) remains steep and coarse fronted by a wide energetic surf zone between the 42 Mile and Tea Tree Crossing, 11 km to the north.

**Beach classification:**
Assumed Wave dominated

**General information:**
The beach faces southwest directly into the persistent high southwest swell with waves averaging over 2 m, and breaking over 500 m out to sea, across a wide double bar surf zone. Massive dunes systems averaging 1.5 km wide back the beach

**Permits and access:**
Spoke with Joanne from Martin Washpool Conservation Park (08-8575-1200). She said that Tea Tree Crossing will most likely be under water because the lagoon does not dry up until around January. 42 Mile crossing was not a great catchment area and the beach was overrun with fisherman. Therefore, 28 Mile Crossing was chosen. There were sign posts for 28 Mile Crossing leading from the way points at 42 mile crossing to a car park behind the dunes. It was approximately a 0.4 km walk over the dunes to get from the car park to the beach.

There are many kilometres of beach camping. However, outside of Kings Camp and Kingston SE there are no facilities, apart from the camp sites.

(2015) – Spoke with Joanne again who said we won’t have any trouble with access.
Imagery

OSRA Map

Australia Map

Oil Spill Response Atlas (OSRA) map layers provided courtesy of the Australian Maritime Safety Authority (AMSA)
Large scale Google Earth map
Beach: 28 Mile Crossing

NOTE: 2014 transect travelled in the reverse direction
Beach Summary Data

[sample types include asphaltite, tarball and resinite]

**Beach Character Chart**

28 Mile Crossing

**Asphaltite Frequency Chart**

No asphaltites found on this beach

**Sample Loadings per 100m Chart**

28 Mile Crossing

**Tarball Frequency Chart**

28 Mile Crossing
Debris Loadings Chart

28 Mile Crossing

Shore Slope (deg)

Loadings pieces/100m

Major Debris Categories

Glass  Plastic Soft  Plastic Hard  Plastic Rope  Wood

2014  2015  2016
# Beach details

<table>
<thead>
<tr>
<th>Beach Name:</th>
<th>The Granites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beach ID:</td>
<td>E4</td>
</tr>
<tr>
<td>Priority:</td>
<td>1</td>
</tr>
<tr>
<td>Access point location (DD):</td>
<td>Latitude: -36.6575066742 Longitude: 139.854003111999</td>
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<tr>
<td>Maximum Beach survey length (km):</td>
<td>1.52</td>
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</table>

## General description and information

<table>
<thead>
<tr>
<th>Beach exposure or shape:</th>
<th>Concave (cove)/Straight/Convex (headland)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aspect:</td>
<td>N NE E SE S <strong>SW W NW</strong></td>
</tr>
<tr>
<td>Likely beach gradient:</td>
<td>Shallow/Medium/Steep</td>
</tr>
<tr>
<td>Beach Width:</td>
<td>~50m</td>
</tr>
<tr>
<td>Likely substrate:</td>
<td>Coarse sand</td>
</tr>
<tr>
<td>Backshore type:</td>
<td>Vegetated dunes;</td>
</tr>
</tbody>
</table>

**General description:** The Granites beach (148F) is the site of the only rocks on the entire beach, a few 2 m high rounded granite knobs that lie in the intertidal swash zone.

**Beach classification:** Assumed Wave dominated

**General information:** Local station owner have been cleaning up the beach and have agreed to keep in contact and inform us when they find any samples. Contact info was exchanged between David and her. Station owner had collected a large asphaltite sample and handed it to us. She also informed us she had seen a much larger sample along the beach but could not recollect exactly where. Can contact NRM Kingston SE for debris collection details. Waves average over 1 m along this 5 km section of beach, and maintain a surf zone up to 200 m wide containing three low bars.

**Permits and access:** Spoke with Meleny (08 8767 2033) from Kingston District Council and she said we will have no trouble accessing The Granites and that we can drive right onto the beach with a 4WD vehicle. There is a vehicle access track and car park behind the rocks, but no other facilities.

(2015) – Spoke with Meleny again who said we won’t have any trouble with access.
Oil Spill Response Atlas (OSRA) map layers provided courtesy of the Australian Maritime Safety Authority (AMSA)
Beach Survey Records

Transects and Imagery

Sample Type
- Asphaltite, 2014
- Asphaltite, 2015
- Asphaltite, 2016
- Oil, 2015
- Resinite/Amber, 2014
- Resinite/Amber, 2015
- Resinite/Amber, 2016
- Sooty Bitumen, 2014
- Sooty Bitumen, 2015
- Sooty Bitumen, 2016
- Greasy Bitumen, 2014
- Waxy Bitumen, 2014
- Waxy Bitumen, 2015
- Waxy Bitumen, 2016

2016 Survey
2015 Survey
2014 Survey
Debris Transects
Beach: The Granites

Photographs

To Sea | To Shore | Along | Back

2014

2015

2016
Beach Summary Data

[Sample types include asphaltite, tarball and resinite]

Beach Character Chart

The Granites

Asphaltite Frequency Chart

Tarball Frequency Chart

Sample Loadings per 100m Chart

The Granites
Debris Loadings Chart

The Granites

Shore Slope (deg)

Loadings pieces/100m

Major Debris Categories

Glass  Plastic Soft  Plastic Hard  Plastic Rope  Wood

2014  2015  2016
### Beach details

<table>
<thead>
<tr>
<th>Beach Name:</th>
<th>Eve’s Cove (AKA Evan’s Cave)</th>
<th>Beach ID:</th>
<th>E6</th>
<th>Priority:</th>
<th>1</th>
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</thead>
<tbody>
<tr>
<td>Access point location (DD):</td>
<td>Latitude: -37.1820822329 Longitude: 139.744265138</td>
<td>Maximum Beach survey length (km):</td>
<td>0.77</td>
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<td></td>
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</table>

### General description and information

<table>
<thead>
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<th>Beach exposure or shape:</th>
<th>Concave (cove)/Straight/Convex (headland)</th>
<th>Aspect:</th>
<th>N NE E SE S SW W NW</th>
<th>Likely beach gradient:</th>
<th>Shallow/Medium/Steep</th>
<th>Beach Width:</th>
<th>~40m</th>
<th>Likely substrate:</th>
<th>Fine sand</th>
<th>Backshore type</th>
<th>Dunes; Vegetated dunes</th>
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</thead>
<tbody>
<tr>
<td>General description:</td>
<td>No info available online</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Beach classification</td>
<td>Wave dominated transverse bar and rip</td>
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<tr>
<td>General information:</td>
<td>Large area of coastal sand dunes located behind beach. Weather started OK but a front came in later. Sheltered for a while then called off the survey as weather did not improve.</td>
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<tr>
<td>Permits and access:</td>
<td>Spoke with Barry (0417 019 247) from Little Dip Conservation Park - Coastal Department. He said that the terrain is typically soft so it can be treacherous. If there are tracks there already then we should be fine, but we should stick to the fore dunes and drop the tire pressure to 15 psi. He is out on the beaches every day and said to give him a call if we have any trouble. We had no issue travelling in the land cruiser with the tire pressure at 20 psi. We stopped on the side of the track prior to the beach and walked in.</td>
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<tr>
<td></td>
<td>Camping Fees: $13/ vehicle at Long Gully, Old Man Lake, Stony Rise, and The Gums</td>
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</tr>
<tr>
<td></td>
<td>2015) – Spoke w/ Barry again who said we will be able to access all of the beaches from here to Nene valley, but we shouldn’t drive onto them depending on weather/tides. He will be away the week we are there. Said to call Glen (87356053) to check conditions at closer date.</td>
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</tr>
</tbody>
</table>
Oil Spill Response Atlas (OSRA) map layers provided courtesy of the Australian Maritime Safety Authority (AMSA)
Large scale Google Earth map
Beach Survey Records

Transects and imagery
Beach: Eves Cove

**Photographs**

<table>
<thead>
<tr>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>To Sea</strong></td>
<td><strong>To Shore</strong></td>
<td><strong>Along</strong></td>
</tr>
</tbody>
</table>

**NOTE:** 2014 transect stopped 300m shorter than 2015/16
Beach Summary Data

Asphaltite Frequency Chart
No asphaltites found on this beach

Tarball Frequency Chart

Sample Loadings per 100m Chart