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Dear Brendan

Barangaroo South & Central - SEPP 55 Letter, Stage 1B Public Domain Development Works, DA SSD 7944, Hickson Road, Millers Point

1.0 Introduction

This letter has been prepared by AECOM Australia Pty Limited (AECOM) for Lendlease Building Pty Ltd (Lendlease) in support of the State Significant Development Application (**SSD 7944**) to be submitted to the Minister for Planning pursuant to Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and to respond to Condition 1 and 5 of the Secretary's Environmental Assessment Requirements (SEARs) for the **Stage 1B Public Domain Works - Barangaroo South and Central Precincts** (dated 5 October 2016).

SSD 7944 seeks approval for construction of the Stage 1B public domain as is described in **Section 4.0** (Overview of Proposed Development). The public domain works will be constructed in the following site areas (referred to herein as 'the Site', refer to **Figure 1, Attachment 1**):

- Barangaroo South:
 - Stage 1B (Block 4) including the Watermans Quay roadway at the southern end, adjacent to Stage 1A;
 - Parts of the Other Remediation Works North (ORWN) Area including
 - § part of the Crown Hotel development site (Barangaroo Avenue); and
 - § Watermans Cove and Wulugul Walk.
 - The proposed new boardwalk and public pier to be constructed directly adjacent to Barangaroo South (Harbour frontage). These works are to be assessed separately by the Seawalls / Over-Water Structures Impact Assessment (Royal Haskoning, 2016) including assessment of whether remediation of the sediments is required.
- Barangaroo Central:
 - The southern portion of Block 5 (that will become the northern portion of the proposed Hickson Park).

The above Site areas are presented in **Figure 2, Attachment 1**.

In preparing this letter, AECOM has reviewed the following Lendlease design drawings:

- Barangaroo South Stage 1B Public Domain, SIN-SB72-Design Advisors Update (Grant Associates).

1.1 Related Remedial Action Plans

The Remedial Action Plans (RAPs) prepared for the various Site areas (as described in **Section 1.0**) are as follows (hereafter referred to as 'the RAPs'). The areas of the Site to which each of the RAPs applies are shown on **Figure 2, Attachment A**.

- Barangaroo South:
 - RAP, NSW EPA Declared Remediation Site 21122 and Block 4 (Stage 1b) Development Works, Barangaroo, Millers Point, NSW (AECOM, 2013a) - referred to as the 'VMP/Block 4 RAP'. The VMP/Block 4 RAP was approved under delegation by the Minister of Planning as part of SSD 5897 (dated 10 November 2014);
 - RAP, Crown Hotel Development (Part of ORWN Area), Barangaroo South (AECOM, 2015) – referred to as the 'Crown RAP';
 - RAP, Barangaroo South Stage 1B Waterfront Public Domain (AECOM, 22 January 2016a) – referred to as the 'Stage 1B Waterfront Public Domain RAP'; and
 - VMP/Block 4 RAP Addendum - Part Stage 1B Public Domain (Watermans Quay), Hickson Road, Millers Point, Barangaroo South (AECOM, 16 February 2017a) – referred to as the 'Watermans Quay RAP Addendum'.
- Barangaroo Central:
 - RAP, Block 5 Public Domain, Barangaroo South (AECOM, 19 April 2017b) – referred to as the 'Block 5 Public Domain RAP'.

It is noted that:

- Barangaroo South and Central RAPs detailed above have all been reviewed/endorsed by a NSW EPA Accredited Site Auditor;
- As shown in **Figure 2, Attachment A**, part of the Barangaroo Avenue area is assessed in the Crown RAP (AECOM, 2015) and the 'Barangaroo South - Stage 1B Basement and Residential Towers, Revised SEPP 55 Letter, Hickson Road, Millers Point. SSD Applications SSD 6960, 6964, 6965 & 6966' (AECOM, 2016c); and
- The Block 5 Public Domain RAP (AECOM, 2017b) was prepared on the basis that the VMP Remediation Works (as detailed in the Section 8.5 of the VMP/Block 4 RAP) will have been completed prior to commencement of the Stage 1B public domain development works (which are the subject of this letter). The Block 5 Public Domain RAP (AECOM, 2017b) only assesses the requirement for remediation, or otherwise, of that portion of Block 5 which is outside the VMP Remediation Extent (as illustrated in Figure F10 and F11 of the VMP/Block 4 RAP). Completion of the VMP Remediation Works within the Site (in accordance with the VMP/Block 4 RAP) will ensure that the Block 5 portion of the VMP Remediation Extent is remediated to a standard which is suitable for the proposed public domain land use.

2.0 Objectives

The objectives of this letter are to confirm that the proposed Stage 1B public domain development works:

- are consistent with what was contemplated in the RAPs prepared for the various Site areas (refer to **Section 1.1**) and can be appropriately managed by those documents; and
- will enable the relevant consent authority to comply with Clause 7 of *SEPP 55 - Remediation of Land* (1998) as required by Condition 1 of the SEAR's (dated 5 October 2016) in relation to the proposed future use of the land as a public domain.

3.0 Site Location

Barangaroo is located on the north western edge of the Sydney Central Business District, bounded by: Sydney Harbour to the west and north; the historic precinct of Millers Point (for the northern half), The Rocks and The Sydney Harbour Bridge approach to the east; and, a range of new developments dominated by large CBD commercial tenants to the south.

The Barangaroo site has been divided into three distinct redevelopment areas (from north to south) - the Barangaroo Reserve, Barangaroo Central and Barangaroo South.

The Stage 1B Public Domain site is generally located to the north of the Stage 1A site, on land identified as public domain between and around Blocks 4A, 4B and Y in the approved Concept Plan (Mod 8), as shown in **Figure 1, Attachment 1**. The majority of the site is legally described as Lot 212 in DP 1217691 but also includes an area of Darling Harbour. It is noted that an additional area of Darling Harbour was added to the site by the Planning Assessment Commission in their determination of Concept Plan MOD 8. This additional area is reflected in the site area identified in **Figure 1, Attachment 1**.

4.0 Overview of Proposed Development

The SSD application will seek consent for all public domain works within 'Stage 1B' of Barangaroo South as well as part of Hickson Park, added through Concept Plan MOD 8. The extent of public domain works is illustrated on **Figure 1, Attachment 1**.

The public domain works include the construction of Waterman's Cove and public pier along the foreshore (including for the potential provision of a community facility on the public pier), public domain works associated with Hickson Park as well as all typical public domain features such as trees and other landscape features, walkways, street paving, street furniture, lighting, roads and planting. Various services and infrastructure such as power and water with Landowner consent will also be included in the public domain to enable it to be used for a range of different activities. Opportunity for boat set down/pick up (i.e. no berthing), including the potential for water taxi drop off and pick up is also included in the design.

Staging of the proposed public domain works will be a key component in order to accommodate the efficient and timely construction of the works and to integrate with the construction of the residential buildings R4A, R4B and R5 located within Stage 1B and The Crown Sydney Hotel Resort.

The proposed Stage 1B Public Domain SSD DA will be submitted to reflect the public domain as envisaged in the Concept Plan (Mod 8) layout. The Statement of Commitments (Schedule 3) of the Mod 8 Instrument of Approval specifies some key conditions and commitments relevant to public domain applications which will need to be considered, with one of the key commitments being the provision of a public domain plan to be prepared for any public domain project application. Accordingly, the public domain design to be included with the project application will provide details with respect to the following:

- Proposed levels in parks, streets and other spaces, edge conditions/integration of public domain and private development, and pedestrian connections;
- Materials and planting;
- Safe and convenient walking routes and facilities;
- Street furniture;
- Proposed built forms such as public amenities building;
- Design standards for road network (dimensions, materials, drainage), kerb parking and loading spaces, crossings, cycling, and taxi facilities, including bicycle parking facilities);
- Design guidelines/requirements for integrated water management/water sensitive urban design consistent with Water Management Plan; and
- Design requirements and details relating to recreational facilities.

The proposed Stage 1B public domain development works will involve removal of the existing concrete slabs at the Site and, separation and stockpiling of the materials (i.e. concrete, steel, etc). The underlying soils are not anticipated to be excavated during the project.

5.0 Remedial Action Plans and Proposed Land Use

A summary of the RAPs, confirmation of the land use which was anticipated by those documents and whether remediation is required to facilitate the proposed Stage 1B public domain development works is provided below (refer to **Figure 2, Attachment 1** for clarification of the RAP areas):

Table 1 Details of the Applicable RAPs

Site Area	Applicable RAP	Related SSD	Public Domain Land Use Proposed & Assessed?	Remediation Works Required to facilitate Public Domain development?
Barangaroo South - Stage 1B and the Declaration Area	VMP/ Block 4 RAP	SSD 5897 (remediation) & SSD 6960 (Stage 1B basement)	Yes for the Stage 1B basement area – described as: <i>construction of a basement across the entire footprint of Block 4... and overlying land uses (including commercial, retail, high density residential and public open space)</i>	No. The public domain to be constructed within Block 4 (i.e. the proposed Hickson Park) will be constructed above the Stage 1B basement
Barangaroo South – Watermans Quay	Watermans Quay RAP Addendum	SSD 6960	Yes – described as: <i>public open space in the form of the Watermans Quay roadway built on grade</i>	Yes – within the VMP Remediation Extent. Beyond the VMP Remediation Extent, subject to additional validation of the unsaturated soils (as detailed in Section 9.0 of the Watermans Quay RAP Addendum)
Barangaroo South – Public Domain areas associated with Watermans Cove and Wulagul Walk	Stage 1B Waterfront Public Domain RAP	SSD 6960	Yes – described as: <i>Public open space, landscaping, roads, pedestrian ways and cycle paths, built on grade</i>	Subject to additional validation of the unsaturated soils (as detailed in Section 16.4.1 of the Stage 1B Waterfront Public Domain RAP)
Barangaroo South – Barangaroo Avenue	Crown RAP	SSD 6956	Yes – described as: <i>Public open space, landscaping, roads, pedestrian ways and cycle paths, largely built on grade.</i>	No. The proposed Barangaroo Avenue portion of the Site will be constructed above the Crown (Stage 1C) basement
Barangaroo Central – the southern portion of Block 5	Block 5 Public Domain RAP	-	Yes - described as: <i>public open space comprising predominantly grassed parkland, pedestrian ways and cycle paths, built on grade.</i>	Subject to additional validation of the unsaturated soils (as detailed in Section 9.0 of the Block 5 Public Domain RAP)

The validation of the unsaturated soils (that is those parts of the Site where the existing fill material will remain in place as part of the Stage 1B public domain development) will confirm whether remediation of the unsaturated soils is required and ensure that these areas are suitable for the proposed land uses (specifically public domain / public open space).

The RAPs detailed above have been audited by a NSW EPA Accredited Site Auditor. This will also include review of the proposed unsaturated soil validation works and preparation of a Site Audit Statement(s) to confirm site suitability as required by the Guidelines for the NSW Site Auditors Scheme (2nd Edition) (Department of Environment and Conservation, 2006) and the CLM Act (1997).

Based on the above information, the proposed Stage 1B public domain development works, as proposed by SSD 7944, are consistent with the land uses that were envisaged in the RAPs. Therefore, the Site will be suitable for the land use proposed by SSD 7944 following remediation (as required) in accordance with the RAPs.

6.0 Consideration of the Presence of Contamination

Soil and groundwater investigations have been historically undertaken across the Site to assess Barangaroo South and Central. The previous investigations undertaken on the different parts of the Site are detailed in each of the RAPs and a summary of the site history and analytical results is included in the RAPs. An exception to this is the contamination status of sediments in the area of the proposed new boardwalk and potential community building which was assessed by Royal Haskoning (2016) based on the sediment analytical results from the investigations:

- ERM, 2008. Preliminary Screening Works at East Darling Harbour, adjacent to Barangaroo, NSW. August; and
- WorleyParsons, 2010. Barangaroo Concept Plan Amendment (MP06-0162MOD4) – Marine Ecology, Water Quality and Contaminated Sediment Impact Assessment.

As discussed in **Section 5.0**, the proposed unsaturated soil validation works in some parts of the Site (where the existing soils will remain outside basement areas as part of the proposed development) will provide supplementary data to enable appropriate assessment of site suitability. The scope of these works will be described in Sampling and Analytical Quality Plans to be endorsed by the NSW EPA Accredited Site Auditor.

If Confirmed Impacted Material (CIM) and/or Separate Phase Gasworks Waste and Tar (SPGWT) is identified by the proposed validation sampling, remediation of the identified CIM/SPGWT and validation of the remediated areas will be conducted in consultation with the NSW EPA Accredited Site Auditor.

Specifically in relation to the sediments in the area of the proposed new boardwalk and public pier, Section 3.5.2 of the Royal Haskoning (2016) concludes that *while the existence of elevated concentrations of contaminants in sediments has the potential to impact on water quality and aquatic ecology, in practice any impacts would be negligible, for the following reasons:*

- *disturbance during construction activity would be minimal, limited to minor localised movement of surface sediments during piling;*
- *any disturbed sediments would locally re-settle and remain in the same physico-chemical environment;*
- *piling operations would be intermittent and temporary in duration;*
- *once constructed the proposed over-water structures would not lead to any significant alteration of existing low tidal velocities near the seabed given the large cross sectional area of the Darling Harbour waterway and limited 'blockage' caused by the isolated pile foundations.*

7.0 Compliance with SEPP 55

The presence, or otherwise, of contamination within the Site has been appropriately assessed by the review of soil and groundwater analytical data obtained by the environmental site investigations listed and summarised in the RAPs (refer to **Section 9.0**). Where there are data gaps in the existing soil analytical data, supplementary validation sampling will be undertaken. This approach has been endorsed and will be subject to a Site Audit process undertaken by a NSW EPA Accredited Site Auditor.

As described by **Section 5.0**, AECOM considers that the proposed Stage 1B public domain development works are consistent with the land uses and development works anticipated by the RAPs.

In addition, the Royal Haskoning (2016) report has assessed the contamination status of the sediments in the area of the proposed new boardwalk and potential community building based on the findings of the ERM (2008) and Worley Parsons (2010) sediment investigations. Royal Haskoning (2016) recommended that, while the potential for contamination in the sediment to impact on water quality and aquatic ecology was negligible, a

variety of mitigation measures should be adopted during the proposed Harbour construction works. The EIS will refer to the Royal Haskoning (2016) report for the recommended mitigation measures.

It is considered that the information presented above and including the proposed soil validation data will enable the relevant consent authority to comply with Clause 7 of *SEPP 55 - Remediation of Land* (1998) in relation to the proposed Stage 1B public domain development works.

8.0 Conclusions

In conclusion, it is AECOM's opinion that:

- The Stage 1B public domain development works (as proposed by SSD 7944):
 - are consistent with the land uses detailed in the RAPs and can be appropriately managed by those documents; and
 - will enable the relevant consent authority to comply with Clause 7 of *SEPP 55 - Remediation of Land* (1998) as required by Condition 1 of the SEAR's (dated 5 October 2016) in relation to the proposed Stage 1B public domain development works.
- The RAPs include contingency measures which are appropriately designed to manage a variety of possible events, in consultation with the NSW EPA Accredited Site Auditor, should unexpected finds be encountered during the proposed Stage 1B public domain development works; and
- The mitigation measures recommended by the Royal Haskoning (2016) report should be implemented during the proposed Harbour construction works to mitigate potential risks associated with the contamination status of sediments in the area of the proposed new boardwalk and public pier. The EIS will refer to the Royal Haskoning (2016) report for the recommended mitigation measures.

9.0 References

AECOM, 2010a. *Data Gap Investigation, Other Remediation Works (South) Area, Hickson Road, Millers Point, NSW*. May 2010

AECOM 2010b. *Draft Data Gap Investigation, Other Remediation Works (North) Area, Hickson Road, Millers Point, NSW*. July 2010.

AECOM 2010c. *Data Gap Investigation, EPA Declaration Area (Parts of Barangaroo and Hickson Road) Millers Point NSW*. 30 July 2010.

AECOM 2010d. *Groundwater Discharge Study, Stage 1 Barangaroo Development*. 3 November 2010.

AECOM 2012a. *Supplementary Data Gap Investigation, VMP Area, Hickson Road, Millers Point, NSW*. 9 March (Final).

AECOM 2012b. *Contaminant Flux and Discharge estimations for natural residual soil and marine sediments, EPA Declaration Area 21122 and adjacent areas of Barangaroo South and Barangaroo Central*. 14 March.

AECOM, 2013a. *Remedial Action Plan, NSW EPA Declared Remediation Site 21122 and Block 4 (Stage 1b) Development Works, Barangaroo, Millers Point, NSW*. 24 July.

AECOM 2013b. *VMP Remediation Extent, VMP Remediation Works Area, (Parts of Barangaroo and Hickson Road), Millers Point, NSW*. 23 July.

AECOM, 2016a. *RAP, Barangaroo South Stage 1B Waterfront Public Domain*. 22 January.

AECOM, 2016b. *Barangaroo South - Stage 1B Basement and Residential Towers, Revised SEPP 55 Letter, Hickson Road, Millers Point. SSD Applications SSD 6960, 6964, 6965 & 6966*. August.

AECOM, 2017a. *VMP/Block 4 Remedial Action Plan Addendum - Part Stage 1B Public Domain (Watermans Quay), Hickson Road, Millers Point, Barangaroo South*. 16 February.

AECOM, 2017b. *RAP, Block 5 Public Domain, Barangaroo South*. 19 April.

Coffey Environments 2008. *Preliminary Environmental Investigation, 30-38 Hickson Road, Millers Point, NSW 2000*. 12 May.

ERM, 2007. *Environmental Site Assessment, East Darling Harbour, Sydney, NSW*, Final Report, 21 June 2007.

ERM, 2008. Preliminary Screening Works at East Darling Harbour, adjacent to Barangaroo, NSW. August; and

ERM, 2008a. *Additional Investigation Works at Barangaroo, Hickson Road, Millers Point, NSW*. July 2008.

ERM, 2008b. *Preliminary Sediment Screening Works at East Darling Harbour, Adjacent to Barangaroo, NSW*, Draft, Rev 03. August.

JBS Environmental Pty Limited, 2012b. *Barangaroo Central DGI, Hickson Road, Sydney, NSW*. October.

NEPC, 2013. *National Environment Protection (Assessment of Site Contamination) Amendment Measure (No. 1)*. 11 April 2013.

Royal Haskoning, 2016. *Seawalls / Over-Water Structures Impact Assessment*. November.

URS, 2001. *Contamination Review for Darling Harbour Berths 3-8*.

WorleyParsons, 2010. *Barangaroo Concept Plan Amendment (MP06-0162MOD4) – Marine Ecology, Water Quality and Contaminated Sediment Impact Assessment*.

Yours faithfully,



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Attachment 1: Site Plans

Attachment 1: Site Plans

Figure 1



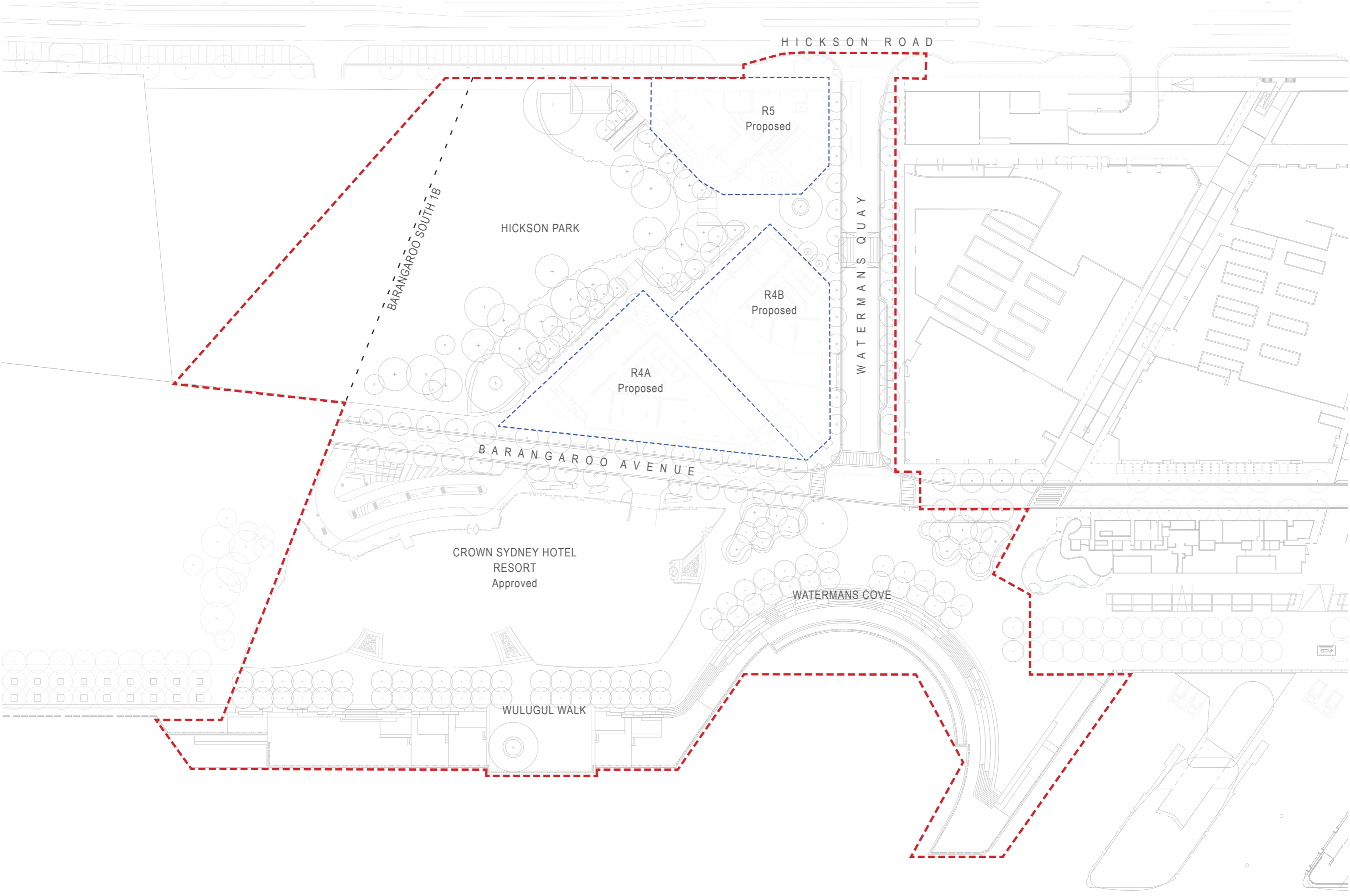
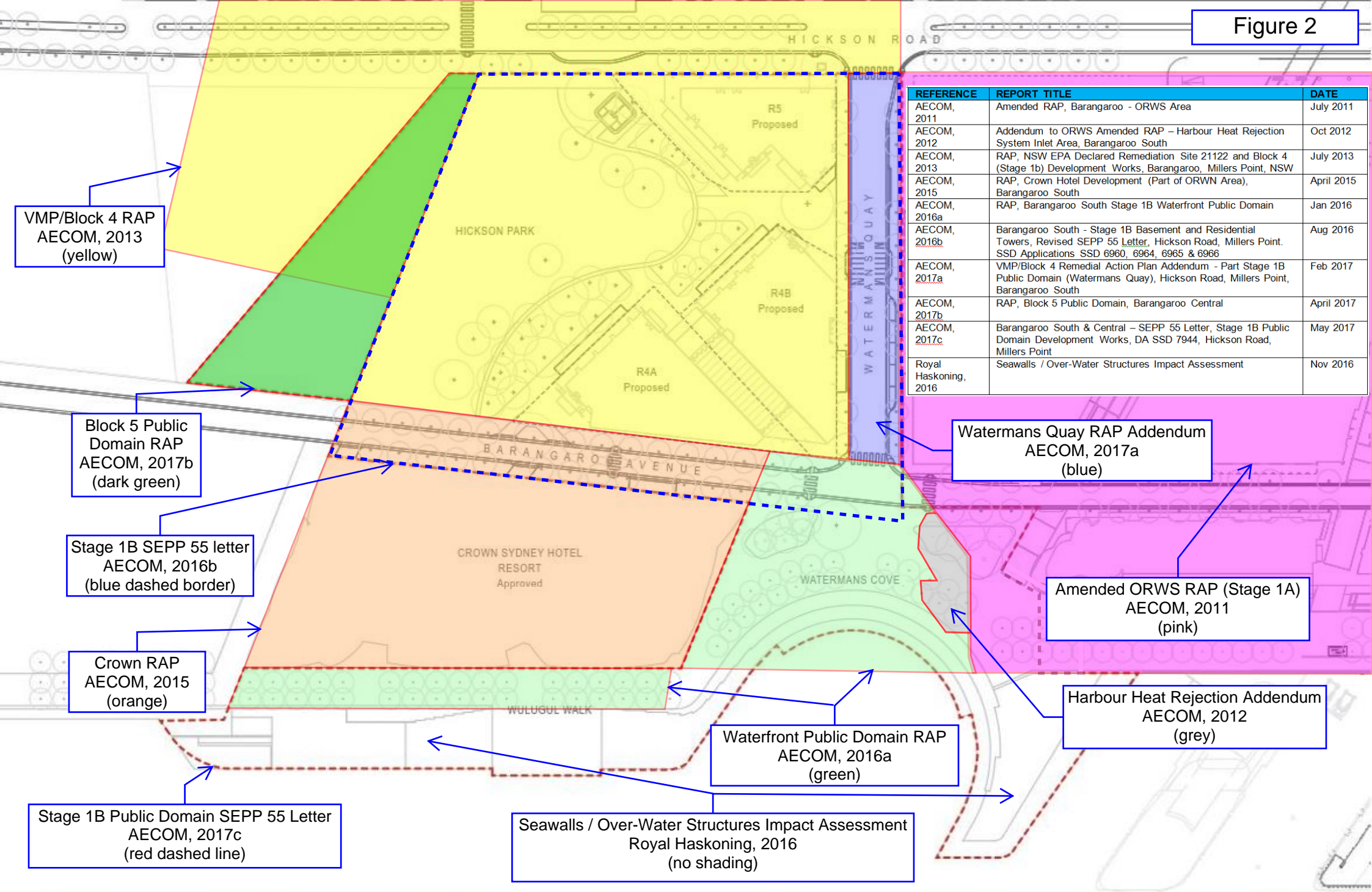


Figure 2



REFERENCE	REPORT TITLE	DATE
AECOM, 2011	Amended RAP, Barangaroo - ORWS Area	July 2011
AECOM, 2012	Addendum to ORWS Amended RAP - Harbour Heat Rejection System Inlet Area, Barangaroo South	Oct 2012
AECOM, 2013	RAP, NSW EPA Declared Remediation Site 21122 and Block 4 (Stage 1b) Development Works, Barangaroo, Millers Point, NSW	July 2013
AECOM, 2015	RAP, Crown Hotel Development (Part of ORWN Area), Barangaroo South	April 2015
AECOM, 2016a	RAP, Barangaroo South Stage 1B Waterfront Public Domain	Jan 2016
AECOM, 2016b	Barangaroo South - Stage 1B Basement and Residential Towers, Revised SEPP 55 Letter, Hickson Road, Millers Point. SSD Applications SSD 6960, 6964, 6965 & 6966	Aug 2016
AECOM, 2017a	VMP/Block 4 Remedial Action Plan Addendum - Part Stage 1B Public Domain (Watermans Quay), Hickson Road, Millers Point, Barangaroo South	Feb 2017
AECOM, 2017b	RAP, Block 5 Public Domain, Barangaroo Central	April 2017
AECOM, 2017c	Barangaroo South & Central - SEPP 55 Letter, Stage 1B Public Domain Development Works, DA SSD 7944, Hickson Road, Millers Point	May 2017
Royal Haskoning, 2016	Seawalls / Over-Water Structures Impact Assessment	Nov 2016