



APPENDIX 4

4. DWER BASIC SUMMARY OF RECORDS

Department of Water and Environmental Regulation

(SITE doc ref: 201103 DWER Basic_Summary_Of_Records64547_Lot 804 and 200918 DWER Basic_Summary_Of_Records64544_BAE Seabed)

DEPARTMENT OF PLANNING, LANDS AND HERITAGE	
DATE	FILE
23-Mar-2021	SDAU-037-21



Contaminated Sites Act 2003 Basic Summary of Records Search Response

Report generated at 05:22:28PM, 03/11/2020

Receipt No:

ID No: 64547

Search Results

This response relates to a search request received for:

124 Quill Way

Henderson, WA, 6166

Part of Lot 804 On Deposited Plan 38196, as shown on certificate of title 2615/365, shown as Subject G On Deposited Plan 405715 known as 124 Quill Way, Henderson WA 6166

This parcel belongs to a site that contains 4 parcel(s).

According to Department of Water and Environmental Regulation records, this land has been reported as a known or suspected contaminated site.

Address

124 Quill Way

Henderson, WA, 6166

Part of Lot 804 On Deposited Plan 38196, as shown on certificate of title 2615/365, shown as Subject

Parcel Status

Classification: 28/02/2019 - Remediated for restricted use

Nature and Extent of Contamination:

Metals, tributyltin, hydrocarbons (such as from diesel or oil) and asbestos-containing materials (ACM) are present in soils at the site, contained beneath a pavement hardcover.

Metals, tributyltin and per- and polyfluoroalkyl substances (PFAS) are present in groundwater at the site.

Restrictions on Use:

The land use of the site is restricted to commercial/industrial use, which excludes sensitive uses with accessible soil such as childcare centres, kindergartens, pre-schools and primary schools. The site should not be developed for a more sensitive use such as recreational open space; residential use or childcare centres without further contamination assessment and/or remediation.

Other than for analytical testing or remediation, groundwater abstraction is not permitted at this site because of the nature and extent of groundwater contamination.

Due to the presence of asbestos in soils beneath hardcover at the site, the site is to be managed in accordance with the document 'Management Plan, Henderson Shipyard, 42 Quill Way, Henderson, WA 6166 (Worley Parsons, June 2014)' or any subsequent versions of that plan. The site management plan is held by the site's occupiers, or can be requested from DWER for a fee via a detailed summary of records request.

Reason for Classification:

This site was reported to the Department of Water and Environmental Regulation (DWER) as per reporting obligations under section 11 of the 'Contaminated Sites Act 2003' (the Act), which commenced on 1 December 2006. The site was first classified under section 13 of the Act based on information submitted to DWER by November 2009. The site was classified again under section 13 of

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Contaminated Sites Act 2003

Basic Summary of Records Search Response

Report generated at 05:22:28PM, 03/11/2020

the Act based on information submitted to DWER by April 2015.

The site was reported again under section 11 of the Act, and classified again under section 13 of the Act based on information submitted to DWER by February 2019.

This site has been used for boat building and maintenance for approximately 30 years. This is a land use that has the potential to cause contamination, as specified in the guideline 'Assessment and Management of Contaminated Sites' (DER, 2014).

As an operational shipyard, the site is currently licensed under Part V of the Environmental Protection Act 1986 (licence number L5897/1993/10). Information relating to the site was submitted to DWER to comply with the conditions of the licence.

During monitoring of the site in 2008 copper and zinc were present in surface soils at concentrations exceeding Ecological Investigation Levels, as published in 'Assessment Levels for Soil, Sediment and Water' (Department of Environment, 2003), which were the appropriate assessment levels at that time.

During monitoring of the site in 2008 copper and tributyltin (TBT) were identified in groundwater at concentrations exceeding marine ecosystem trigger values, as published in the 'Australian and New Zealand Guidelines for Fresh and Marine Water Quality' (ANZECC, 2000).

Monitoring of near-shore sediments in the adjacent harbour area found that TBT was present in sediments in the harbour adjacent to the site, at concentrations exceeding interim sediment quality guidelines high trigger value, as published in the 'Australian and New Zealand Guidelines for Fresh and Marine Water Quality' (ANZECC, 2000) and the Environmental Quality Criteria for Cockburn Sound as published in the 'Environmental Quality Criteria for Cockburn Sound Reference Document for Cockburn Sound' (EPA, 2005).

A Preliminary Site Investigation and a series of 'Baseline Site Investigations' were conducted at the site in 2010-2012 to characterise the contamination status of soil and groundwater across the shipyard's lease area. The findings of these investigations were largely consistent with those of the 2008 investigations with the additional finding that asbestos-containing materials (ACM) were present in fill soils on some portions of the site. The investigation also found that impacts at the site were in many cases associated with the site's drainage and stormwater management system, and that upgrades were required to ensure that site drainage did not contribute to further impacts in groundwater or the marine environment.

Further Detailed Site Investigations were carried out over the period 2012-2014. Remedial works comprising the expansion and upgrading of surface hardcover, and the repair and upgrading of drainage and stormwater infrastructure were carried out in conjunction with these investigations. Following the remedial works, potential contaminants in soils at the site are contained beneath a hardcover layer such that human and environmental receptor exposure is restricted as long as the seal remains intact.

A management plan for the site (dated 25 March 2015) outlines management measures for any activity (such as excavation) that may disturb contaminated soils, including buried ACM. The management plan also provides for ongoing monitoring of groundwater beneath the site and of sediments in the adjacent harbour.

The investigations, remediation, risk assessment works and management plan were the subject of an

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Contaminated Sites Act 2003

Basic Summary of Records Search Response

Report generated at 05:22:28PM, 03/11/2020

independent review by an accredited contaminated sites auditor who provided mandatory auditor's reports (MARs) dated June 2014 and March 2015. The MARs recommended that the site is suitable for ongoing commercial/industrial land use subject to the management plan being implemented for the site, and provided that groundwater is not abstracted. DWER accepts the auditor's findings.

In late 2018, per- and polyfluoroalkyl substances (PFAS) were included in analysis for one of the quarterly rounds of groundwater monitoring undertaken to comply with the requirements of the site's licence. The results indicated that PFAS are present in groundwater at concentrations exceeding recreational water quality and guideline values for marine ecosystems, as published in the 'PFAS National Environmental Management Plan' (Heads of EPAs Australia and New Zealand, January 2018). These are relevant criteria given the proximity of the site to Cockburn Sound.

Further soil and groundwater investigations are required to identify PFAS sources and pathways at the site, and to characterise the potential risks to the marine environment.

As the site is contaminated and has been remediated such that it is suitable for commercial/industrial use, subject to implementation of the management plan, but may not be suitable for more sensitive land uses, the site is classified as 'remediated for restricted use'.

When the results of further investigations and risk assessment relating to PFAS impacts are submitted to DWER, these will be reviewed, and the site may be reclassified.

DWER, in consultation with the Department of Health, has classified this site based on the information available to DWER at the time of classification. It is acknowledged that the contamination status of the site may have changed since the information was collated and/or submitted to DWER, and as such, the usefulness of this information may be limited.

Other Relevant Information:

Additional information included herein is relevant to the contamination status of the site and includes DWER's expectations for action that should be taken to address potential or actual contamination described in the Reasons for Classification.

Based on the available information, contamination present on this site has also been identified beyond the site boundary on adjacent land, and as such, DWER considers this site meets the definition of a "source site" as specified in Part 1, Section 3 of the Act. In accordance with Regulation 31(1)(b) of the Contaminated Sites Regulations 2006, any reports or information submitted to DWER that are relevant to the investigation, assessment, monitoring or remediation of a "source" site are required to be accompanied by a mandatory auditor's report (MAR) prepared by an accredited contaminated sites auditor.

Action Required:

Further investigations and risk assessments are required to adequately characterise the nature and extent of per-and poly-fluoroalkyl substances' (PFAS) impacts at the site. All investigations and assessment are to be carried out in accordance with DWER's Contaminated Sites Guidelines and the NEPM. PFAS investigations and assessment are also to be carried out in accordance with the 'PFAS National Environmental Management Plan' (Heads of EPAs Australia and New Zealand, January 2018).

The site is currently managed under the conditions of a licence under Part V of the Environmental

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Contaminated Sites Act 2003 Basic Summary of Records Search Response

Report generated at 05:22:28PM, 03/11/2020

	<p>Protection Act 1986 (licence number L5897/1993/10), which include requirements for ongoing monitoring of groundwater and harbour sediments.</p> <p>The site is to be managed in accordance with the document 'Management Plan, Henderson Shipyard, 42 Quill Way, Henderson, WA 6166 (Worley Parsons, June 2014)' or any subsequent versions of that plan.</p>
Certificate of Title Memorial	<p>Under the Contaminated Sites Act 2003, this site has been classified as "remediated for restricted use". For further information on the contamination status of this site, please contact Contaminated Sites at the Department of Environment Regulation.</p>
Current Regulatory Notice Issued	<p>Type of Regulatory Notice: <i>Nil</i></p> <p>Date Issued: <i>Nil</i></p>
General	<p>No other information relating to this parcel.</p>

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Contaminated Sites Act 2003 Basic Summary of Records Search Response

Report generated at 11:13:24AM, 18/09/2020

Receipt No:

ID No: 64544

Search Results

This response relates to a search request received for:

Lot 4552

Henderson, WA, 6166

Harbour area, part of Lot 4552 On Deposited Plan 220690, as shown on certificate of title LR3116/733 known as Henderson WA 6166

This parcel belongs to a site that contains 1 parcel(s).

According to Department of Water and Environmental Regulation records, this land has been reported as a known or suspected contaminated site.

Address

Lot 4552

Henderson, WA, 6166

Harbour area, part of Lot 4552 On Deposited Plan 220690, as shown on certificate of title

Parcel Status

Classification: 02/06/2015 - *Contaminated - restricted use*

Nature and Extent of Contamination:

Tributyltin (TBT) is present in near-shore marine sediments at the site.

Restrictions on Use:

Due to the presence of tributyltin in marine sediments at the site, the site is to be managed in accordance with the document 'Management Plan, Henderson Shipyard, 42 Quill Way, Henderson, WA 6166 (Worley Parsons, June 2014)' or any subsequent versions of that plan. The site management plan is held by the site's occupiers, or can be requested from DER for a fee via a detailed summary of records request.

Reason for Classification:

This site was reported to the Department of Environment Regulation (DER) as per reporting obligations under section 11 of the 'Contaminated Sites Act 2003' (the Act), which commenced on 1 December 2006. The site has been classified under section 13 of the Act based on information submitted to DER by April 2015.

This site comprises an area within Cockburn Sound that has been used as a harbour for an adjacent boat building and maintenance facility for approximately 30 years. This is a land use that has the potential to cause contamination, as specified in the guideline 'Assessment and Management of Contaminated Sites' (Department of Environment Regulation, 2014).

As an operational shipyard, the adjacent shipyard is currently licensed under Part V of the Environmental Protection Act 1986 (licence number L5897/1993/10). Information relating to this site was submitted to the Department of Environment Regulation (DER) to comply with the conditions of the licence.

Routine monitoring of near-shore sediments at the site, carried out in 2008 to comply with the conditions of the shipyard's licence, found that tributyltin (TBT) was present in sediments at

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Contaminated Sites Act 2003

Basic Summary of Records Search Response

Report generated at 11:13:24AM, 18/09/2020

concentrations exceeding the interim sediment quality guidelines (ISQG-high) trigger value, as published in the 'Australian and New Zealand Guidelines for Fresh and Marine Water Quality' (ANZECC, 2000) and the Environmental Quality Criteria for Cockburn Sound as published in the 'Environmental Quality Criteria for Cockburn Sound Reference Document for Cockburn Sound' (EPA, 2005).

Further Detailed Site Investigations carried out over the period 2012-2014 included additional sediment sampling, and a review of historical sediment monitoring results. During this period, remedial works comprising the expansion and upgrading of surface hardcover, and the repair and upgrading of drainage and stormwater infrastructure were carried out at the adjacent shipyard site to eliminate pathways for the further transfer of potential contaminants to the marine environment.

A management plan for the adjacent shipyard (dated 25 March 2015) provides for in-situ management of impacted sediments through ongoing monitoring and minimisation of any activities likely to cause disturbance or redistribution of the sediments. The management plan also provides for ongoing monitoring of groundwater beneath the shipyard site and of sediments in the harbour.

The investigations, remediation, risk assessment works and management plan were the subject of an independent review by an accredited contaminated sites auditor who provided mandatory auditor's reports (MARs) dated June 2014 and March 2015. The MARs recommended that the site is suitable for ongoing use as a harbour, subject to the management plan being implemented for the site. DER accepts the auditor's findings.

As the site is contaminated and is suitable for its current use as an industrial harbour, subject to implementation of the management plan, but may not be suitable for a more sensitive use, the site is classified as 'contaminated - restricted use'.

DER, in consultation with the Department of Health, has classified this site based on the information available to DER at the time of classification. It is acknowledged that the contamination status of the site may have changed since the information was collated and/or submitted to DER, and as such, the usefulness of this information may be limited.

Other Relevant Information:

Additional information included herein is relevant to the contamination status of the site and includes DER's expectations for action that should be taken to address potential or actual contamination described in the Reasons for Classification.

Based on the available information, contamination present on this site has originated from the adjacent shipyard, which has been classified separately under the Act. As such, DER considers this site meets the definition of an "affected site" as specified in Part 1, Section 3 of the Act. Under the Act, the person responsible for the remediation of a source site is also responsible for remediation of any related affected sites.

Action Required:

The adjacent shipyard is currently managed under the conditions of a licence under Part V of the Environmental Protection Act 1986 (licence number L5897/1993/10), which include requirements for ongoing monitoring of groundwater and harbour sediments.

The site is to be managed in accordance with the document 'Management Plan, Henderson Shipyard,

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Contaminated Sites Act 2003 Basic Summary of Records Search Response

Report generated at 11:13:25AM, 18/09/2020

	42 Quill Way, Henderson, WA 6166 (Worley Parsons, June 2014)" or any subsequent versions of that plan.
Certificate of Title Memorial	Under the Contaminated Sites Act 2003, this site has been classified as "contaminated - restricted use". For further information on the contamination status of this site, please contact Contaminated Sites at the Department of Environment Regulation.
Current Regulatory Notice Issued	Type of Regulatory Notice: <i>Nil</i> Date Issued: <i>Nil</i>
General	No other information relating to this parcel.

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