Environmental Resources Management Australia Pty Ltd

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17 March, 2017

Ms Kathryn Hills
Tree Assessment Officer
Northern Beaches Council
725 Pittwater Road
DEE WHY NSW 2099

Our Reference: *0371068_L01_TREE REMOVAL APPLICATION.DOCX*

Dear Kathryn,

RE: TREE REMOVAL APPLICATION

ROCHE PRODUCTS PTY LIMITED
SITE: 4 - 10 INMAN ROAD, DEE WHY
REMEDIATION WORKS – ASBESTOS FILL AREA

1. INTRODUCTION

Environmental Resources Management Australia Pty Ltd (ERM) and Roche Products Pty Ltd (Roche) have been liaising with Northern Beaches Council (Council) regarding the remediation of Roche's facility located at 4-10 Inman Road Dee Why, NSW (Lot 1 DP 1220196) (the 'Site'). In particular, reference is made to recent communications between ERM, yourself and Council's Senior Strategic Planner, Ms Janine Formica regarding the requirement to remove a limited number of trees in a portion of the Site in order to facilitate certain elements of the proposed remedial activities.

In accordance with Council's Tree Preservation Order, the attached Tree Removal Application, this letter and supporting documentation seek approval from Council for the removal of a limited number of trees located within the immediate remediation area of the '**Asbestos Fill Area'**. This letter summarises the required remediation works, provides justification for the need for the removal of the identified trees and addresses Council's requirements for the tree removal application.

2. OVERVIEW OF ROCHE SITE

The Site occupies an area of approximately 8 hectares and currently includes 20 buildings of various sizes and purposes which are distributed across the entire Site. The remainder of the Site includes a number of bitumen car parking areas and roadways as well as landscaped areas. A drainage line flows through the central portion of the Site from north to south and ultimately discharges to Dee Why Creek.

The Site currently operates as a dedicated distribution facility of imported packaged goods for Roche, and also includes administrative offices. Between the 1960s and 2007 the Site was an operational pharmaceutical manufacturing facility. Manufacturing at the Site ceased in December 2007 and as a consequence of reduced operations, approximately half of the buildings are now either vacant or operating at a significantly reduced capacity. These reductions in Roche's operational use of the Site, and changing business needs of the company has meant that the Site is currently significantly underutilised and no longer fit for purpose. As a result, Roche is relocating its current Australian pharmaceutical headquarters in early to mid-2017. Warehousing and distribution activities are scheduled to be relocated in late 2017.

3. CONTAMINATION INVESTIGATIONS

In preparation for potential divestment of the Site, Roche has undertaken a number of environmental investigations across the Site in order to understand current site conditions and any potential contamination issues as a result of historical activities, including the completion of a Phase 1 and 2 Environmental Site Assessment. These investigations included soil, soil vapour, indoor air, groundwater and surface water sampling and subsequent laboratory analysis to assess the extent of contamination across the Site. The investigations have been undertaken in consultation with the NSW Environment Protection Authority (EPA). The key outcome of the investigations completed has been the identification of three areas of contamination as summarised below and shown on *Figure 1* within *Annex A*:

- Part A Unregulated Area on eastern side of the site impacted by asbestos in fill material (**the subject of this tree removal application)**;
- Part B Unregulated Area to the north of the site impacted by petroleum hydrocarbons beneath a portion of the northern carpark area; and
- Regulated Area in southwest corner of the site impacted by chlorinated and petroleum hydrocarbons. Note: This portion of the Site is subject to regulation as significantly contaminated land (No. 20161101) by the NSW EPA as a result of a Section 60 notification under the *Contaminated Land Management Act 1997* (CLM Act, 1997). This portion of the Site has been regulated under the CLM Act (1997) and is currently managed under a Voluntary Management Proposal.

This letter and Tree Removal Application **relates to the Asbestos Fill Area only** located within the Part A Unregulated Area of the Site**.** Should remediation works within other areas of the Site require approval in accordance with Council's Tree Preservation Order, a separate application will be made for those areas.

Following detailed environmental investigations, planned remediation works are to be undertaken by Roche as part of its commitment to meeting its environmental responsibilities and to facilitate the potential future sale and reuse of the Site. Roche has previously met with Council on a number of occasions to brief Council on the status of the relocation and the contamination investigations. The works are being undertaken in accordance with the provisions of State Environmental Planning Policy 55 –Remediation of Land, Clause 14, Category 2 remediation work not requiring development consent. Council concurred with this planning pathway following a meeting between Roche and Council officers on 26 October 2016 and subsequent email correspondence dated 13 December 2016.

4. ASBESTOS FILL AREA – REMEDIATION WORKS

4.1 OVERVIEW OF PROPOSED REMEDIATION

The environmental investigations undertaken across the Site have identified the following contamination with the Asbestos Fill Area identified in *Figure 1*:

- an area of asbestos impacted fill material on the Unregulated Area of the Site within a non-operational portion of the Site;
- there is evidence to suggest that the source of the asbestos is demolition waste associated with a small cottage like structure that existed on the north eastern portion of the Site or with the previous removal of the upper floors of Building 10;
- bonded fragments have been identified primarily below ground within soils and are considered unlikely to generate airborne fibres; and
- this area is not regulated under the CLM Act and based on the current location and form of the bonded asbestos, it was not considered to represent an unacceptable risk to human health or the environment.

4.2 REMEDIATION OPTIONS

4.2.1 Consideration of Remedial Options

Final contamination delineation works were recently completed and a Remedial Action Plan is currently being finalised. In response to Roche's decision to voluntarily remediate this portion of the Site, a number of remediation options have been considered for the remediation of the Asbestos Fill Area, as detailed in *Table 1*.

Remedial options considered for the asbestos impacts have been assessed in accordance with the objectives and policies outlined in adopted and relevant guidelines for the assessment and management of soil and groundwater contamination. Additionally, the proposed remediation activities have been designed to comply with the requirements of the site remediation policy outlined in the NSW DEC (2008) *Guideline for the NSW Site Auditor Scheme* (2nd Edition), with an intention to achieve a Site Audit Statement by the accredited Site Auditor engaged by Roche.

Table 1: Asbestos Remedial Options Assessment

#	Option	Advantages	Disadvantages
1	Do nothing / implement an unexpected finds protocol during construction phase earthworks	• Minimal volumes of waste generated; • Minimal off site transport volumes; • No disturbance of asbestos, no dust and noise emissions; • Lowest cost option.	• Unlikely to achieve Auditor endorsement / issue of Site Audit Statement; • Potential risk to future occupiers may exist if sub-soils are disturbed during construction and / or ACM is not identified during the construction phase earthworks. • Not consistent with Roche corporate values (zero harm approach).
2	Cap the affected area with clean fill, implement long term restrictions on sub-surface soil disturbance	• Less waste generation than options 3-4; • No disturbance of asbestos, low dust and noise emissions; • Better control of risks to human health than Option 1; • Low cost option.	• Restricts potential range of construction options in the area, precludes earthworks; • Not consistent with Roche corporate values(zero harm approach); • Requires long term Site Environmental Management Plan to manage any risks to human health, including ongoing restrictions on sub-surface soil disturbance by residents and maintenance personnel.
3	Excavate and replace soils in areas of known ACM impact	• Approach likely to be viewed favourably by the auditor / Site Audit Statement sign off likely; • Good control of risks to human health; • Allows for unrestricted development of the area and no long term management requirements; • Consistent with Roche corporate values (zero harm approach).	• Moderate volume of contaminated spoil to landfill; • Moderate volume of waste hauled over local road network; • Moderate volume of imported fill required; • Generation of dust and noise emissions, possibly including airborne asbestos fibres; • **Requires the removal of a limited number of trees**; • Higher cost option than Options 1 or 2.

#	Option	Advantages	Disadvantages
4	Excavate and replace the entirety of the imported fill in the central part of the site.	• Best control of risks to human health; • Greater confidence of outcomes; • Allows for unrestricted development of the area and no long term management requirements; • Consistent with Roche corporate values (zero harm approach).	• Significant volume of contaminated spoil to landfill. Potential for the unnecessary disposal of un-contaminated spoil to landfill; • Significant volume of waste hauled over local road network; • Significant volume of imported fill required • Generation of dust and noise emissions, possibly including airborne asbestos fibres; • **Requires the removal of a large number of trees**; • Most costly option.

4.2.2 Preferred Option to Address Contamination

Table 1 demonstrates that consideration has been given to all feasible remedial options, with options involving both tree preservation and removal. However, Option 3 has been identified as the preferred option as it delivers adequate control of the risks to human health while permitting unrestricted development of the site (from a contamination perspective) and does not impose a long term contamination management burden on future owners / occupiers of the Site. This option is preferred to Option 4 from a sustainability perspective as it only targets areas of known Asbestos Containing Material (ACM) contamination, thereby reducing volumes of waste generated. The decision to take the remedial option requiring removal of the identified trees is not taken lightly by Roche, however, it is viewed as the only feasible option to achieve the required remediation outcomes at the Site.

4.2.3 Preferred Option 3 Remediation Methodology

Consideration has also been given into the methodologies to be adopted in implementing the Option 3 remedial works to minimise impact on the area and to determine if the works can be undertaken in a manner that negates the need for tree removal. These options are discussed in *Table 2.*

Table 2: Preferred Option 3 – Remediation Methodologies Considered

Method	Implementation
Mechanical Excavation – 20 tonne excavator	Involves the excavation of the asbestos impacted soils and direct loading onto a truck for off-site disposal at a licensed facility. In order to excavate and clean-up the area effectively in accordance with the guidance it is estimated that a 20 tonne excavator would be utilised, this will enable for the removal of the impacted material in an effective and efficient way. Given the asbestos impacted soils have been identified in close proximity to a number of trees it is expected that removal of the trees will be required so that the integrity of the tree is not compromised and all the asbestos impacts are removed in order to satisfy the Site Auditor for sign-off.
Mechanical Excavation – small excavator	There is an alternative to use a smaller excavator to potentially negate the requirement to remove the trees however this is not considered practicable given the depth of the excavation required and the potential health and safety hazards it may create working in close proximity to the trees if they were to remain. Additionally given the assumed exclusion zone that would be required around each potentially impacted tree, there is no guarantee made that all impacted soil will be removed and therefore sign-off by the Site Auditor would not be achieved.
Vacuum Removal	This would involve a less destructive method of using a vacuum excavator to remove the impacted soils. Given validation sampling is required in order to achieve sign-off by the Site Auditor, it is considered that vacuum excavation does not allow for this process and visible inspection of the soil being removed off-site as it is vacuumed with the use of high pressure air through a long PVC pipe directly into a holding tank on the back of a truck. Following the removal it is then directly taken off-site to a licensed facility for disposal. Additionally the use of this technique is considered not reliable, given that a number of problems are likely to be encountered with the interference of building rubble (concrete, bricks etc) that are known to exist in the impacted area
Hand Digging	This method would involve manual removal of the asbestos impacted soil via such technique as hand digging without the use of mechanical means. Based on the vertical extent of the impacts, this is not considered an effective and efficient way of removing the impacted material. In accordance with the Guidelines for the *Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia* (May, 2009) this method is not considered viable for the removal of asbestos fines within soil.

Table 2 demonstrates that consideration has been given to all feasible methodologies for implementing the works, with options involving both tree preservation and removal. However, in order to ensure all the asbestos impacts are removed to satisfy the Site Auditor for sign-off, the use of a 20 tonne excavator and resulting removal of a limited number of trees has been identified as the preferred option to ensure adequate control of the risks to human health, permitting unrestricted development of the site (from a contamination perspective) and not imposing the long term contamination management onto future owners / occupiers of the Site.

4.2.4 Requirement for Removal of Trees

The preferred remedial works will require the removal of the following trees within the asbestos fill area (refer *Figure 1* in *Annex A* for location of the proposed tree removal on the Site):

- *Corymbia maculata* - Spotted Gum – three trees;
- *Araucaria heterophylla* - Norfolk Island Pine – one tree;
- *Eucalyptus robusta* – Swamp Mahogany – one tree; and
- *Glochidion ferdinandi* – Cheese Tree – one tree.

Figure 2 of *Annex A* provides an annotated photograph of the trees to be removed. A report from a qualified ecologist confirming the species of the trees to be removed is provided in *Annex B*.

Further, an arborist letter is also attached in *Annex B*. The arborist has stated that '*it is considered impossible to remove contaminated soils / materials in a manner that was viably able to preserve any individual tree root system. This is additionally reinforced on the basis same tree species (three trees Corymbia maculata, Spotted Gums) often have shared roots systems as a consequence of below ground root grafting*'.

The arborist has recommended that tree replacement post remediation works be undertaken with at least an equal number of preferably 'locally indigenous' trees.

5. SITE VALUES

5.1 HERITAGE LISTING

The Site is listed on the Warringah Local Environmental Plan 2011 (LEP 2011) Schedule 5 for the following historic heritage items:

- I38 Trees, Campbell Avenue (generally the eastern portion of the site) (Part Lot 100, DP 611332);

- I52 Roche Building, 100 South Creek Road, Cromer (Part Lot 100, DP 611332) - substantial and excellent example of an industrial complex in the late 20th Century international style relating to the construction period 1951- 1975; and

- I53 Givaudan-Roure office (former), 96 South Creek Road, Cromer (Part Lot 100, DP 611332) - representative example of an inter-war dwelling and rare survivor of development of the area prior to release & development for industrial purposes.

The Heritage Map of LEP 2011 also identifies the Site as being a General Heritage Item. The Site is not listed as being located within the Heritage Conservation Area under Schedule 5 of LEP 2011 nor is it mapped as being within a Heritage Conservation Area under LEP 2011.

The Aboriginal Heritage Information Management System (AHIMS) has three recorded Aboriginal heritage items located within or in close proximity to the Site.

5.2 STATEMENT OF HERITAGE IMPACT

A Statement of Heritage Impact (SOHI) has been prepared to support this tree removal application relating to the asbestos fill area (refer *Annex C*).

6. PLANNING CONSIDERATIONS

Heritage conservation is specified in Clause 5.10 of the Warringah Local Environmental Plan 2011. Specifically, Clause 5.10(2) identifies that development consent is required for any of the following:

- demolish or move any of the following: a heritage item; an Aboriginal object; or a building, work, relic or tree within a heritage conservation area (5.10(2)(a));

- alter a heritage item or a building, work, relic, tree or place within a heritage conservation area including (in the case of a building) making changes to the detail, fabric, finish or appearance of its exterior (5.10(2)(b));

- alter a heritage item that is a building by making structural changes to its interior (5.10(2)(c));

- disturb or excavate an archaeological site while knowing, or having reasonable cause to suspect, that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed (5.10(2)(d));

- disturb or excavate a heritage conservation area that is a place of Aboriginal heritage significance (5.10(2)(e));

- erect a building on land on which a heritage item is located or that is within a heritage conservation area (5.10(2)(f)); and/or subdivide land on which a heritage item is located or that is within a heritage conservation area (5.10(2)(g)).

This tree removal application seeks development consent for the removal of the trees. Previous discussion with Council officers has been undertaken in respect to the proposed remediation works and the need for the removal of a limited number of trees to ensure remedial outcomes are achieved. The discussions specifically relating to the proposed removal of trees has included:

- telephone conversation with Council's Janine Formica on 9 March 2017 confirming requirement for a tree removal application for the removal of the trees within the asbestos fill area of the site (the subject of this application);

- telephone discussions with Council's Kathryn Hills and Janine Formica on 21 December 2016 and 11 January 2017 respectively regarding Council requirements for the removal of the proposed trees. Discussions identified the need for a Statement of Heritage Impact to accompany a tree removal application;

- email from Council's Kathryn Hills dated 22 December 2016 advising of the requirements for tree removal approval;

- email from ERM (on behalf to Roche) to Council's Tash Mitrevska dated 22 December 2016 responding to questions from Council (raised in previous Council correspondence dated 13 December 2016) relating to the proposed remediation works, including identification of the tree removal works and Council requirements (based on above discussions); and

- discussion and follow up email to Council's Kathryn Hills dated 8 February 2017 confirming Council tree removal requirements.

The proposed impact on these trees has been assessed in a Statement of Heritage Impact (SOHI) as discussed in *Section 5.2*.

7. CONCLUSION

This tree removal application seeks development consent for the removal of the trees. The remediation works require the removal of six trees. The proposed impact on these trees is the subject of this tree removal application. The trees requiring removal are located on the edge of the eastern portion of the Site as detailed in *Figure 1* (refer *Annex A*). *Figure 2* of *Annex A* provides an annotated photograph detailing the trees to be removed. The proposed impact on these trees has been assessed in a Statement of Heritage Impact (SOHI) as discussed in *Section 5.2*.

Roche appreciates the ongoing interest and support of Council relating to the contamination investigations, future remediation works and future sale and reuse of the Site. Roche is committed to continuing open dialogue with Council regarding the relocation of current Roche activities and the progress of the remediation works on the Site. Should you have any comments or questions regarding the above, or attached Tree Removal Application, please contact the undersigned, or Roche's Tim Woodhouse, Project Manager - Safety, Environment and Site Services on 0438 832 683.

Yours sincerely,
for Environmental Resources Management Australia Pty Ltd

Amanda Antcliff
Senior Environmental Planner

Peter Lavelle
Partner

Annex A

FIGURES

Site Plan and Asbestos Fill Area

1

Drawing No:	0349667s_L_G001_R2.mxd		
Date:	27/02/2017	Drawing Size: A4	
Drawn By:	GC	Reviewed By: AA	

Coordinate System: GDA 1994 MGA Zone 56

0 25 50m

N

Roche Products
4-10 Inman Road, Dee Why NSW

Client: Roche Products Pty Ltd

ERM

Tree No.	Scientific Name	Common Name
1	*Corymbia maculata*	'Spotted Gum'
2	*Araucaria heterophylla*	'Norfolk Island Pine'
3	*Corymbia maculata*	'Spotted Gum'
4	*Eucalyptus robusta*	'Swamp Mahogany'
5	*Glochidion ferdinandi*	'Cheese Tree'
6	*Corymbia maculata*	'Spotted Gum'

Legend

Tree 1 Tree ID Number

Trees Requiring Removal - Asbestos Fill Area

2

Drawing No:	0349667s_L_C002_R0.cdr		**Roche Products** **4-10 Inman Road, Dee Why NSW**
Date:	27/02/2017	Drawing size: A4	Client: Roche Products Pty Ltd
Drawn by:	GC	Reviewed by: AA	

ERM

Annex B

SPECIES IDENTIFICATION LETTER

Environmental Resources Management Australia Pty Ltd

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17 March, 2017

Ms Kathryn Hills
Tree Assessment Officer
Northern Beaches Council
725 Pittwater Road
DEE WHY NSW 2099

Our Reference: 1. ANNEX B TREE ID LETTER F01.DOCX

Dear Kathryn,

RE: ROCHE TREE REMOVAL APPLICATION ASBESTOS FILL AREA - TREE IDENTIFICATION

This letter provides the details of tree species proposed for removal that exceed the size thresholds for tree removal approval according to the Warringah Development Control Plan 2011 (DCP).

Five trees greater than the DCP 2011 size thresholds will be removed in the Asbestos Fill Area as shown in *Figure 1*. The tree species and provenance notes are detailed in *Table 1* and shown in *Figure 2* within *Annex A*. In summary there is a mix of species native and non-native to the Northern Beaches Council area, although the species which are native are likely not remnant trees and their provenance is unknown (that is, whether they are from locally indigenous parent trees). They are species commonly selected for horticultural purposes.

Table 1: Tree Identification

Tree No. (refer Figure 2)	Scientific Name	Common Name	Provenance Detail
1	*Corymbia maculata*	Spotted Gum	Native and local species. Likely not remnant. A common tree used for horticultural amenity.
2	*Araucaria heterophylla*	Norfolk Island Pine	Native to Norfolk Island but widely planted in coastal NSW.

Tree No. (refer Figure 2)	Scientific Name	Common Name	Provenance Detail
3	*Corymbia maculata*	Spotted Gum	Native and local species. Likely not remnant. A common tree used for horticultural amenity.
4	*Eucalyptus robusta*	Swamp Mahogany	Native and local species. Likely not remnant. A common tree used for horticultural amenity.
5[1]	*Glochidion ferdinandi*	Cheese Tree	Native and local species. Likely not remnant. A common tree used for horticultural amenity.
6	*Corymbia maculata*	Spotted Gum	Native and local species. Likely not remnant. A common tree used for horticultural amenity.

1. Denotes tree below the minimum threshold size for consideration in tree removal for the DCP.

Should you have any comments or questions regarding the above please contact the undersigned on 02 4903 5500.

Yours sincerely,

for Environmental Resources Management Australia Pty Ltd

Matt Flower

Senior Ecologist

Pete Lavelle

Partner

Site Plan and Asbestos Fill Area

1

Drawing No:	0349667s_L_G001_R2.mxd		
Date:	27/02/2017	Drawing Size: A4	
Drawn By:	GC	Reviewed By: AA	

Coordinate System: GDA 1994 MGA Zone 56

0 25 50m

N

Roche Products
4-10 Inman Road, Dee Why NSW

Client: Roche Products Pty Ltd

ERM

Tree No.	Scientific Name	Common Name
1	*Corymbia maculata*	'Spotted Gum'
2	*Araucaria heterophylla*	'Norfolk Island Pine'
3	*Corymbia maculata*	'Spotted Gum'
4	*Eucalyptus robusta*	'Swamp Mahogany'
5	*Glochidion ferdinandi*	'Cheese Tree'
6	*Corymbia maculata*	'Spotted Gum'

Legend

Tree 1 Tree ID Number

Trees Requiring Removal - Asbestos Fill Area

2

Drawing No:	0349667s_L_C002_R0.cdr		**Roche Products** **4-10 Inman Road, Dee Why NSW**
Date:	27/02/2017	Drawing size: A4	Client: Roche Products Pty Ltd
Drawn by:	GC	Reviewed by: AA	

ERM

"GROWING MY WAY"
Tree Consultants
Established 1977
EXCELLENCE in ALL ASPECTS OF TREE MANAGEMENT
FULL INSURANCE PROTECTION
PO Box 35, Newport Beach NSW 2106
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E-mail: kyleahill@optusnet.com.au
ABN 97 965 355 200

5 March 2017

Roche Products
Attention: Wai Lau
4-10 Inman Road
Dee Why, NSW

Tree Removal - Asbestos Contamination Remediation Site

The purpose of this document is to confirm required Tree Removal is linked solely to the remediation procedure within the defined area known to have "*asbestos contaminated soils*" below their root systems.

Six (6) trees are identified/confirmed as being required to be removed. (See below)

Tree No.	Scientific Name	Common Name
1	*Corymbia maculata*	'Spotted Gum'
2	*Araucaria heterophylla*	'Norfolk Island Pine'
3	*Corymbia maculata*	'Spotted Gum'
4	*Eucalyptus robusta*	'Swamp Mahogany'
5(1)	*Glochidion ferdinandi*	'Cheese Tree'
6	*Corymbia maculata*	'Spotted Gum'

Legend
Tree ID Number

Notes:
(1) Denotes tree below the minimum threshold size for consideration in tree removal for the DCP.

Trees Requiring Removal - Asbestos Fill Area 2

Drawing No: 0349667s_L_C002_R0.cdr
Date: 27/02/2017 Drawing size: A4
Drawn by: GC Reviewed by: AA

Roche Products
4-10 Inman Road, Dee Why NSW
Client: Roche Products Pty Ltd

ERM

Figure 1: Previous page confirms trees (by Number, Tree #1 thru Tree #6) required to be removed. Above illustrates location (yellow circle) of trees required to be removed.

On the basis, these trees are located relatively close to each other (i.e. tree trunk bases) it is considered impossible to remove contaminated soils/materials in a manner that was viably able to preserve any individual tree root system. This is additionally reinforced on the basis same species trees, [three (3) trees are *Corymbia maculata*, Spotted Gums] often have shared root systems as a consequence of below ground root grafting.

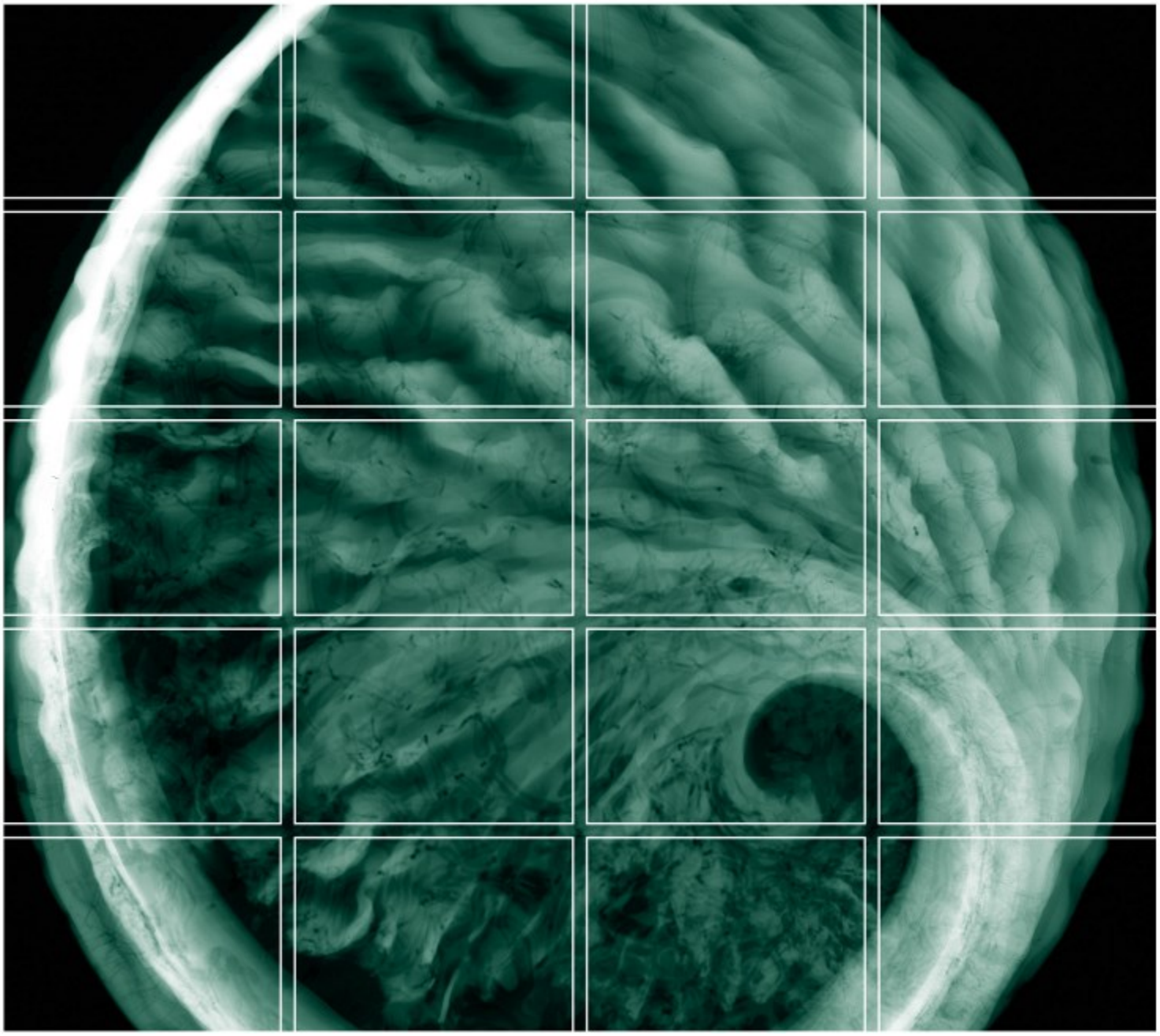
It is presumed that all six (6) required to be removed trees will be replaced post soil remediation process with at least an equal number of preferably "locally indigenous" trees.

Replacement trees must be sourced from suppliers/growers whose product meets the "*production benchmarks*" of the *Australian Standard (AS2303-2015 Tree Stock for Landscape Use). This document is available thru Standards Australia*®. Replacement trees are additionally specified to be professionally planted & maintained for at least one (1) full local environ growing season, (August thru May).

Should any additional questions arise or further explanation be required please do not hesitate to contact this documents author, Kyle A Hill, Senior Practicing & Consulting Arborist, [*AQF level 5 Diploma of Horticulture (Arboriculture), TAFE NSW & AQF level 8 Post Graduate Certificate of Arboriculture, University of Melbourne]*

Annex C

STATEMENT OF HERITAGE IMPACT



4-10 Inman Road, Dee Why NSW

Heritage Listed Trees
Statement of Heritage Impact

Roche Products Pty Limited

March 2017

0371068_SoHI

www.erm.com

The business of sustainability

ERM

4-10 Inman Road, Dee Why NSW
Heritage Listed Trees
Statement of Heritage Impact

Roche Products Pty Limited

March 2017

0371068_SoHI_Draft

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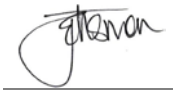
Approved by:	*Jane Ehsman*
Position:	Project Manager
Signed:	
Date:	*17 March, 2017*
Approved by:	*Peter Lavelle*
Position:	Partner
Signed:	
Date:	*17 March, 2017*

Environmental Resources Management Australia Pty Ltd

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LIST OF TABLES

1 INTRODUCTION

Environmental Resources Management Australia Pty Ltd (ERM) was engaged by Roche Products Pty Ltd (Roche) to prepare a Statement of Heritage Impact (SoHI) to assess the potential impact of the removal of six trees and subsequent remedial activities on the heritage values of the eastern portion of the Project Area at 4-10 Inman Road, Cromer NSW 2099.

In accordance with the NSW Heritage Office guidelines for the preparation of Statements of Heritage Impact, this SoHI addresses the:

- heritage significance of the Project Area;
- impact that proposed works will have on that significance;
- proposed measures to mitigate any potential heritage impact; and
- considers the viability of alternative proposals (2002:2).

Whilst the SoHI does consider Aboriginal heritage values, it was not produced in accordance with the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (DECCW 2010) and thus does not fulfil the requirement of the *Code* as this was beyond this specific scope of work.

1.1 PROJECT AREA

The Project Area is the 8-hectare Roche Products property located at 4-10 Inman Road, Cromer NSW, approximately 20 kilometres (km) north of the Sydney Central Business District (CBD). Described as Lot 1 DP 1220196 (formerly Lot 100 DP 611332) the Project Area is bounded by Orlando Road, Inman Road, South Creek Road, and Campbell Avenue (*Figure 1, Annex A*).

1.2 PROPOSED WORKS

Following the completion of multiple Environmental Site Assessments (ESAs) across the Project Area it has been identified that some surface and sub-surface fill material in the central portion of the Project Area have been impacted by asbestos containing material (ACM). In order to effectively manage the asbestos contamination identified within the Project Area it is proposed that the ACM impacted soil be remediated so that the following objectives are achieved;

- control of potential risks to human health;
- maintaining regulatory compliance;
- ensuring compliance with Roche's global corporate social responsibility and sustainability policies; and
- rendering the site suitable for alternative potential future land uses.

In order to achieve the above objectives, it is proposed that the fill material impacted with ACM be excavated and direct loaded onto trucks for off-site disposal at a licensed Type 2 Special Waste Facility. The inferred lateral extent of the ACM impacted fill corresponds to the lateral extent of the required remedial excavations in the central part of the Project Area. The precise lateral and vertical extent of excavation will be informed by the field observations of ERM's Environmental Consultant on-site. As recommended by the WA DOH, *Guidelines for the Assessment and Remediation and Management of Asbestos-Contaminated Sites in Western Australia* (WA DoH, 2009) and ASC NEPM (2013) the vertical extent of remedial excavation would extend to a depth corresponding to 0.3 metre (m) below the deepest observed impact or the natural soil interface. Additionally, to the extent practicable, an extra 1 metre will be removed in all directions beyond the measured lateral boundaries of observed impact.

Environmental Site Assessment works completed to date indicated that the depth of the excavation within the proposed remediation area is estimated to be approximately 1.3 m below ground surface (bgs); however this will be reviewed based on visual observations undertaken during excavation works. It is proposed that six trees within the proposed excavation footprint will need to be removed to facilitate this process.

This SoHI will assess the impact of the proposed tree and subsequent ACM impacted fill removal.

1.3 LIMITATIONS

This report has not been unduly constrained by any timing or budgetary limitations, relative to its purpose and the questions being asked. It must be emphasised that, apart from analysis of historic graphics and the review of previous heritage studies, no detailed primary site-specific historical research has been undertaken. As is always the case with historical research, it is possible that further investigation will reveal relevant information not presented in this report.

1.4 TERMINOLOGY

The terms relating to heritage conservation used within this report are consistent with the definitions contained in *The Burra Charter: The Australia ICOMIS Charter for Places of Cultural Significance* (AICOMOS 2013a) and *Heritage Terms and Abbreviations* (NSW Heritage Office 1996). For ease of reading, several key definitions are provided in *Annex B* to this report.

1.5 *REPORT STRUCTURE*

The remainder of this report is structured as follows:

- *Section 2* reviews the legislative and regulatory regime under which this investigation was carried out;
- *Section 3* presents the historical context pertinent to understanding the significance of the Project Area;
- *Section 4* outlines the heritage context within which the results of the SoHI can be interpreted;
- *Section 5* provides the results of the visual inspection, including a site description;
- *Section 6* presents the significance assessment using the NSW Heritage Office (2002) criteria;
- *Section 7* investigates the potential heritage impacts of the proposal, presents remediation and decontamination considerations and discusses why an alternative proposal is not viable;
- *Section 8* draws conclusions, provides measures to mitigate any heritage impacts and provides recommended management responses; and
- *Section 9* provides references; and is followed by the annexures.

1.6 *AUTHORSHIP AND ACKNOWLEDGEMENTS*

This report was authored by ERM Principal Cultural Heritage Consultant, Sarah Ward with contributions from ERM Senior Ecologist, Matthew Flower. The report was reviewed by ERM's Project Manager, Jane Ehsman and ERM Senior Environmental Planner, Amanda Antcliff and quality assurance review and approval was completed by the ERM Partner in Charge of the Project, Peter Lavelle.

ERM gratefully acknowledges the assistance of the following individuals and organisations:

- Janine Formica, Senior Strategic Planner; Northern Beaches Council;
- Stuart Read, Landscape Architect, Heritage Division, Office of Environment and Heritage; and
- Rebecca Ward, Library Officer, Heritage Division, Office of Environment and Heritage.

2 LEGISLATIVE CONTEXT

Together with best practice principles outlined in documents such as *The Burra Charter* (AICOMOS 2013a), the following legislative and regulatory context forms basis of the framework within which heritage is managed in NSW.

2.1 ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

The *Environmental Planning and Assessment Act 1979* (EP&A Act) regulates a system of environmental planning and assessment for New South Wales. Land use planning requires that environmental impacts, including those on cultural heritage, be considered.

Under the EP&A Act, State and local government authorities prepare local environmental planning instruments, Local Environmental Plans (LEPs), to give statutory force to planning controls. These instruments may incorporate specific provisions for the conservation and management of heritage sites including buildings, works, relics, archaeological sites, cultural landscapes and features within lakes and rivers.

The EP&A Act also includes requirements for the preparation of a Statement of Environmental Effects (SoEE), Review of Environmental Factors (REF), or an Environmental Impact Statement (EIS) for certain types of development. The latter are usually broad ranging studies that address a series of specific requirements by the Director General of Department of Planning and Infrastructure. Both Aboriginal and non-Aboriginal archaeological sites are normally included in specified Director General's requirements for such studies.

2.1.1 Warrringah Local Environmental Plan 2011

The *Warringah Local Environmental Plan* (WLEP) 2*011* is a plan registered under s33A of the EP&A Act. It adopts the mandatory provisions of the *Standard Instrument (Local Environmental Plans) Order 2006*, and provides environmental planning provisions for land formerly within Warringah Local Government Area (LGA) (now part of Northern Beaches LGA) that are applied in determining the acceptability of development proposals including those impacting heritage items, including archaeological sites and relics.

With regard to heritage items, development consent is required by the WLEP in order to:

- demolish or move any of the following: a heritage item; an Aboriginal object; or a building, work, relic or tree within a heritage conservation area (5.10(2)(a));
- alter a heritage item or a building, work, relic, tree or place within a heritage conservation area including (in the case of a building) making changes to the detail, fabric, finish or appearance of its exterior (5.10(2)(b));

- alter a heritage item that is a building by making structural changes to its interior (5.10(2)(c));

- disturb or excavate an archaeological site while knowing, or having reasonable cause to suspect, that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed (5.10(2)(d));

- disturb or excavate a heritage conservation area that is a place of Aboriginal heritage significance (5.10(2)(e));

- erect a building on land on which a heritage item is located or that is within a heritage conservation area (5.10(2)(f)); and/or subdivide land on which a heritage item is located or that is within a heritage conservation area (5.10(2)(g)).

Before granting consent under this clause in respect of a heritage item, the consent authority, Northern Beaches Council, must consider the effect of the proposal on the heritage significance of the item or area concerned (5.10(4)), notably if the development is on land:

- on which a heritage item is situated (5.10(5)(a));

- that is within a heritage conservation area (5.10(5)(b)); or

- is within the vicinity of land referred to in (a) or (b) above (5.10(5)(c)).

In accordance with the NSW Heritage Office *Local Government Heritage Guidelines* (2002:49), this Statement of Heritage Impact (SoHI) is a recognised heritage management document suitable for this purpose (5.10(5)).

As described in *Section 4.1* searches of the WLEP 2011 identified three items (*Figure 1, Annex A*) within the Project Area listed in Schedule 5. These are as follows:

- Roche Building (WLEP no. I52);

- Givaudan-Roure Building (WLEP no. I53); and

- Trees (WLEP no. I38).

The proposed impact on the Trees (a heritage item under WLEP s5.10(2), the moving or demolition of which requires consent under s5.10(5)(a)) is the subject of this SoHI. Accordingly, a tree removal application is being submitted seeking development consent.

2.2 *HERITAGE ACT 1977*

The *Heritage Act 1977* (Heritage Act) administered by the Heritage Division, Office of Environment and Heritage (OEH), protects the cultural and natural history of NSW with emphasis on historic (European) heritage items, including places, buildings, works, relics, moveable objects, precincts, historic shipwrecks and archaeological sites of State or local significance, through protection provisions and the establishment of a Heritage Council and State Heritage Register (SHR).

It should be noted that Section 136 of the Heritage Act allows for the Minister or Chair of the Heritage Council to place a 'Stop Work' Order on a building, work, relic or place, such as that within the Project Area, that is not subject to an Interim Heritage Order or listed on the SHR and that is being or about to be harmed. Work can be stopped for 40 days, whilst the imposition of an Interim Heritage Order is considered.

Section 139 of the Heritage Act also prohibits the disturbance of archaeological relics without a gazetted exemption or an excavation permit issued by the Heritage Council of NSW. The potential for the Project Area to contain archaeological relics will be addressed in the accompanying archaeological assessment report.

Under s170 of the Heritage Act, State government agencies have responsibilities to identify, conserve and manage heritage assets owned, occupied or managed by that agency and in doing so, keep a publically accessible register of these heritage items. The register is called the State Government Agency Heritage and Conservation Register or more commonly, the Section 170 Register. Section 170 requirements do not apply to the Project Area described herein.

The Heritage Act protects also historic shipwrecks (Part 3C) and associated relics that have been situated in State Waters for 75 years or more. Similarly Part 3C does not apply to this study.

Although Aboriginal heritage is primarily protected by the *National Parks and Wildlife Act 1974* (NPW Act), if an Aboriginal site, object or place is of State significance, it may be protected by an Interim Heritage Order or by virtue of listing on the SHR.

2.3 *NATIONAL PARKS AND WILDLIFE ACT 1974*

Aboriginal heritage within New South Wales is predominantly protected by the NPW Act, also administered by OEH. The object of the NPW Act is to consolidate and amend the law relating to the establishment, preservation and management of national parks, historic sites, certain other areas, and the protection of certain fauna, native plants and Aboriginal objects. Measures in place to deter Aboriginal Heritage Offences include:

- penalties of up to $1.1 million apply in the case of companies who do not comply with the legislation;

- strict liability offences ensure companies or individuals cannot claim no knowledge in cases of serious harm to Aboriginal heritage places and objects;

- remediation provisions ensure those who illegally harm significant Aboriginal sites are forced to repair the damage, without need for a court order;

- unification of Aboriginal heritage permits into a single, more flexible permit, the Aboriginal Heritage Impact Permit (AHIP); and

- offences around breaches of AHIP conditions have been strengthened.

The NPW Act provides defences, applicable where a person harms an Aboriginal object without knowing what it was and without a permit from OEH. One of these defences is the due diligence defence (s87(2)). This states that if a person or company has exercised due diligence to ascertain that no Aboriginal object was likely to be harmed as a result of the activities proposed for the site, then liability from prosecution under the NPW Act will be removed, or mitigated, if it transpires that an object was harmed.

The NPW Act also provides a generic code of practice to explain what due diligence means. Carefully following this code of practice, which is adopted by the Regulation made under the NPW Act, would be regarded as due diligence. The code sets out the reasonable and practicable steps to: identify whether or not Aboriginal objects are, or are likely to be, present in an area; determine whether or not their activities are likely to harm Aboriginal objects, if present; and determine whether an AHIP is required.

The steps to identify whether or not Aboriginal objects are, or are likely to be, present in an area, have been undertaken in preparing the due diligence assessment contained within this SoHI:

- the OEH Aboriginal Heritage Information Management System (AHIMS) database was searched to ensure no registered Aboriginal sites or declared places are within the Project Area;

- previous archaeological investigations in the Project Area were reviewed, and

- relevant landscape features were assessed and a visual inspection undertaken to assess whether there are, or are likely to be, Aboriginal objects present within the Project Area.

The Due Diligence Assessment is outside the specific scope of this report.

2.4 NATIVE TITLE ACT 1993

The Commonwealth Government enacted the *Native Title Act 1993* (NT Act) to formally recognise and protect native title rights in Australia following the decision of the High Court of Australia in Mabo & Ors v Queensland (No. 2) (1992) 175 CLR 1.

Although there is a presumption of native title in any area where an Aboriginal community or group can establish a traditional or customary connection with that area, there are a number of ways in which native title is extinguished. For example, land that was designated as having freehold title prior to 1 January 1994 extinguishes native title, as does any commercial, agricultural, pastoral or residential lease. Land that has been utilised for the construction or establishment of public works also extinguishes any native title rights and interests for as long as they are used for that purpose. Native Title is considered extinguished within the Project Area.

3 HISTORICAL CONTEXT

Until the development of the first scientific dating techniques around the beginning of the century, the dating of built heritage depended almost entirely on historical methods, by using a documented historical chronology. The historical period in New South Wales begins with European land settlement in 1788 when Governor Philip claimed possession of the land now known as Australia, on behalf of the British Government. The documentary evidence relating to this period helps us to better understand the patterning of European settlement and to contextualize its material remains. This section contains an overview of the development of Northern Beaches, as it pertains to the Project Area.

3.1 HISTORY OF THE NORTHERN BEACHES

Early European land settlement on Sydney's Northern Beaches began in 1818 when Governor Macquarie granted John Ramsey 410 acres along Long Reef and Narrabeen Lagoon. The following year, William Cosser was granted 500 acres between Collaroy and the Dee Why Lagoon. Later, ex-convict James Jenkins was granted 200 acres between Dee Why Lagoon and Pacific Parade. Jenkins later acquired Ramsey and Cosser's grants and eventually owned 1,800 acres of land on the northern beaches. Jenkins' estate was left to the Salvation Army in 1900.

A lack of transport into the area and the Salvation Army's extensive land ownership meant that Dee Why and Dee Why West (now Cromer) were slow to develop. By 1911, there were only five recorded dwellings in Dee Why which had a population of sixty-two. In 1911, the Salvation Army began subdividing and selling off land, allowing for improved transport networks into the area. This stimulated land sales, the majority of which were associated with weekenders and holiday houses.

By 1915, Dee Why had its own postal service and 120 new dwellings had been built in the area. The Dee Why Public School was opened in 1922 and in 1924 the Spit and Roseville bridges opened and these provided additional access to the area. During the Second World War, the army developed coastal regions, building air raid shelters and concrete tank traps at Dee Why Beach and Lagoon. The end of the war saw another boost in Dee Why's population with 5,940 people living in Dee Why in 1947 and growing to 11,770 by 1956.

In 1940, Dee Why West was taken over by the Cromer Country Club which petitioned to have Dee Why West incorporated into its own suburb. The application was granted and the new suburb was named 'Cromer' after the late 19th century Cromer Cottage (which in turn was named after the seaside town of Cromer in Norfolk, England) located near the Cromer Golf Course. The Warringah Shire Council officially renamed Dee Why West 'Cromer' in 1964.

Prior to the renaming, Cromer was semi-rural, mainly associated with small fruit and vegetable farms, market gardens, poultry and pig farms. Residential development in the suburb began in the 1950s and '60s, reaching its peak in the '70s and '80s. This was largely due to smaller farm holdings being subdivided in the 1960s and shops for local residents being established in the 1970s. The northern and western boundaries of Cromer have remained predominantly bushland. In the 1950s the Warringah Council rezoned a number of areas for industrial use, including land located within the Project Area.

3.2 HISTORY OF THE ROCHE SITE

The land associated with the project area was originally granted to J R Lyell. L Little, H A Middleton, M McRae and C Oatway in the late 19th and early 20th century. In 1880, the south eastern corner of the project area (Lot 629, originally granted to Oatway) was purchased by Edward Edget Baylis who owned the property until 1914. Baylis excised the north eastern portion of the property to nurseryman Charles Gottlieb Daniel Hirsch in 1898. Hirsch also acquired Lot 639 (originally granted to Middleton), directly north of Lot 629. It is possible that Hirsch established a nursery on his land which is today associated with trees listed on the WLEP (item no. I38) and located within the project area, however there is no direct evidence of this.

Lot 629 underwent a number of transfers between 1914 and 1921. In 1921, Ronald Talbot Smyth King purchased the lot (by this time significantly reduced) and remained there until 1968 when Roche acquired the land. Smyth King built a cottage on the lot. The cottage was built in a heavily treed area and is visible in the 1930 (*Figure 2*), 1943 and 1959 aerial photographs. The cottage was removed at some time after 1959 and the area it occupied is now associated with a warehouse. Smyth King excised a portion of his lot to a Mr Surovsov in the 1920s at which time a small timber weatherboard cottage was built close to South Creek Road. The cottage was later converted into offices around for Givaudan Pty Ltd and is listed on the Warringah Council LEP as the Givaudan-Roure Building (WLEP no. I53)(Artefact Heritage 2015:8-9).

Aerial photographs taken of the project area in 1930 (*Figure 2* of *Annex* A), 1943 and 1959 show a number of structures within the Project Area facing onto Orlando Road, South Creek Road and Campbell Avenue. It is likely these structures were constructed in the early to mid-20th century, prior to Roche ownership. It is further evident from the 1930 aerial imagery that the treed area which is the subject of the SoHI was still part of a naturally wooded area, not yet cleared for use, hence the subject trees not cultural plantings (*Figure 2* of *Annex* A).

In 1962 the Project Area was purchased by Roche Products from Yugoslavian market gardeners and moved onto the site in that same year and proceeded to develop a pharmaceutical manufacturing and distribution facility (Gojak 2009:1). A 1959 aerial of the study area shows what is likely to be these market gardens on the western side of the study area, facing west towards Inman Road (Artefact Heritage 2015:10).

Between 1963 and 1973, Roche constructed four buildings on the site, including the heritage listed Roche Building (WLEP no. I52). The Roche Building was designed by Stafford, Moor and Farrington and completed in 1965. The Roche Building was one of the first industrial complexes set on substantial landscaped grounds. In 1972, an extension was added to the Roche Building. In 1973, The Roche Institute of Pharmacology was opened on site, closing in 1981.

Manufacturing at the Site ceased in December 2007 and as a consequence approximately half of the buildings are currently underutilised and either vacant or operating at a significantly reduced capacity. Roche is now undertaking a program of remediation with a view to making the Project Area viable for alternate uses should Roche divest the property.

4 HERITAGE CONTEXT

In preparing a Statement of Heritage Impact, it is necessary to include knowledge and information pertaining to NSW's heritage. The primary purpose of reviewing the data contained in this section is to assist in identifying whether heritage buildings, works, relics, places or objects are present within the Project Area.

4.1 LITERATURE REVIEW

A review of previous heritage reports is required as part of the desktop assessment and was undertaken on 13 January 2017. The reports which directly assess the Project Area are described below.

4.1.1 *Artefact Heritage 2015*

Artefact Heritage produced a heritage assessment letter report on behalf of JBA Urban. The aim of this assessment is to outline the heritage constraints and opportunities in relation to proposed rezoning and potential future redevelopment of the Roche site at 4-10 Inman Road, Cromer. This report has considered built heritage, non-Aboriginal (historical) and Aboriginal archaeological constraints associated with the site and its future redevelopment and acknowledges the three listed areas.

4.1.2 *Hughes, Treuman Ludlow 1994*

Hughes, Treuman and Ludlow produced the original heritage study of Warringah Shire in 1994. The study provides a broad overview of the shire, together with an assessment of places that the authors believed were worthy of local heritage listing. These places include two of the three listed items within the Project Area, the 'architectural award winning' (1994:38) Roche Products Laboratory at 100 South Creek Road and Givaudan Pty Ltd (part of) (now listed as the Givaudan Roure Building) at 96 South Creek Road.

The Roche building is acknowledged for its architectural excellence, being a well-designed mix of off-form reinforced concrete and glass curtain-walling construction, the whole form strongly expressing the design aesthetic and its use of new materials and construction techniques is considered representative of non-residential buildings of this period. The report notes that the building complex is dramatically sited on a rise above a main thoroughfare with a deliberate use of site planting to soften the edges of the building forms. (1994: 45-46). No description is provided of the Givaudan building although it is recommended for listing and no mention is made of the trees.

4.1.3 Thorp 1988

In 1988 Wendy Thorp undertook an assessment of the historical archaeological resource of the Warringah shire. The report provides a broad understanding of the development of the former Warringah shire, however makes no comment on the Project Area, with the exception of a notation about the site being auctioned in 1909 (Thorp 1988:63).

4.1 REVIEW OF HERITAGE REGISTERS

Items considered being of heritage significance in Australia and NSW may be included on registers or scheduled at the national, State, or local government level. The listing reflects the level of significance of that heritage item, with items of national significance recorded on the National Heritage List, items of significance to NSW on the SHR and items of local significance recorded on schedules within the Local Environmental Plans of local government. These registers are not static with sites recorded and removed as deemed necessary.

4.1.1 National Heritage Database

Archaeological sites and heritage items in Australia may be registered as significant at the National or International level and appear in the National Heritage Database, a searchable heritage list of all heritage items within Australia. The National Heritage List (and the Register of the National Estate before it), is the lead statutory document for the protection of heritage places considered to be of national significance. Although the Register of the National Estate no longer has statutory status, the Australian Minister for the Environment is still required to consider this Register when making decisions about significance, so it is prudent to conduct searches of this Register.

Like the State s170 Register, the Commonwealth Heritage list contains all of the Australian Government assets considered to be of heritage significance. Searches of the Australian Heritage Database with reference to the World Heritage List, National Heritage List, Register of the National Estate (RNE) archive and Commonwealth Heritage List were made on 13 January 2017.

The search revealed **one heritage item in Cromer listed on the RNE archive** (non-statutory) (Table 1) however the significance of these items has not been assessed as part of the RNE listing. **The searches have confirmed that no items of universal or national heritage significance are located within or near to the Project Area.**

Table 1 Heritage items listed on the Register of the National Estate Archive

Item	Address	Significance	Register	Place ID
Indigenous Place	**Cromer Heights, NSW**	**Not Assessed**	**RNE Archive**	**2941**

1. Source: Australian Heritage Database, 2017

4.1.2 State Heritage Register

Heritage items in NSW may be registered as important at the State or Local level. The Heritage Council has developed a set of seven criteria (refer 7.1) to help determine whether a heritage item is of State or local significance to the people of New South Wales. If deemed eligible, i.e. of State significance, and nominated for listing, heritage items may be referred to the Minister for Heritage for Listing on the SHR, a statutory register of heritage items established under the Heritage Act. Note that an item may be of State significance however it may not (yet) appear on the State Heritage Register due to the absence of an authorised nomination.

A search of the SHR on 13 January 2017 revealed no items of State heritage significance in Cromer and that **no items of State Heritage Significance are located within, or near to, the Project Area**.

4.1.1 State Heritage Inventory

The State Heritage Inventory (SHI) is the complete inventory of heritage items in NSW. It contains items of state heritage significance not listed on the SHR, along with heritage places that may be of local heritage significance. Local heritage items contained within the SHI may also be listed on and afforded statutory protection under the WLEP or the State Government Agency Heritage and Conservation Register.

A search of the SHI on 13 January 2017 revealed **three items of local heritage significance within the Project Area**, all of which were similarly listed on the WLEP (Table2).

Table 2 Items of Local Heritage Significance within the Project Area

Item	Address	Significance	Register	Place ID
Trees	Campbell Avenue, Dee Why	Local	State Heritage Inventory; Warringah LEP 2011	SHI #2610141 WLEP #I38
Roche Building	100 South Creek Road, Dee Why	Local	State Heritage Inventory; Warringah LEP 2011	SHI #2610051 WLEP #I52
Givaudan-Roure office'	96 South Creek Road, Dee Why	Local	State Heritage Inventory; Warringah LEP 2011	SHI #2610058 WLEP #I53

1. Source: NSW State Heritage Inventory, 2017 and WLEP 2011.

The SHI search confirmed that there are **no known archaeological sites located within the Project Area** and **no heritage items located within the Project Area subject to an Interim, or authorized Interim Heritage Order** and **no heritage items within the Project Area subject to a s.136 'stop work' order**.

4.2 SYNTHESIS OF HERITAGE CONTEXT

A review of the existing historical and limited environmental data, along with previous work undertaken in the area, suggests that the Project Area was utilised by early historic European communities from as early as 1819.

The impact of subsequent land use practices, including multiple phases of redevelopment has resulted in the extant remains of two different heritage-listed buildings which related to different phases of occupation on site, as well as the "Trees" heritage item. The 1930 aerial imagery shows that the area containing the "Trees" was naturally occurring woodland over 10 years after the heritage inventory sheet says the Trees were planted (i.e. 1900-1920), whilst the 1943 and 1959 aerial imagery shows the same area (as indicated by the orange shaded area depicted in *Figure 1, Annex A*) as being substantially cleared. As such, it is ERMs assessment that the Trees which are the subject of this SoHI were not culturally planted in 1900-1920 as described in the Heritage Inventory Sheet (*Annex B*) and as such do not form part of, nor are contributory to the WLEP no. I38 Trees heritage listing. This is supported by the Arborist (Kyle Hill) letter provided as *Annex D*.

Given the level of previous land clearance, excavation and ground disturbance within the Project Area, there is considered to be a very low potential to impact heritage values a result of the proposed works.

5 VISUAL INSPECTION

Visual inspections are undertaken to identify whether heritage items were present within a Project Area. The visual inspection was undertaken by a qualified, experienced Principal Cultural Heritage Consultant inspection with input from a Senior Ecologist and Environmental Scientist.

5.1 PHYSICAL DESCRIPTION

A visual inspection of the Project Area was undertaken at 09:30am on Tuesday 17 January 2017 by ERM Principal Heritage Consultant, Sarah Ward and ERM Environmental Scientist, Jane Ehsman, with the specific intent of identifying and assessing potential impacts on the trees proposed for removal to facilitate remediation.

Table 3 Trees Proposed for Removal to Facilitate Remediation

No.	Area	Species	Common Name	Estimated Age (years)	Comment
1	Asbestos remediation area (orange)	*Corymbia maculata*	Spotted Gum	35	Native and local species. Likely not remnant. Not present in the 1943 aerial imagery; not associated with Hirsch
2	Asbestos remediation area (orange)	*Araucaria heterophylla*	Norfolk Island Pine	40	Native to Norfolk Island but widely planted in coastal NSW. Not present in the 1943 aerial imagery; not associated with Hirsch.
3	Asbestos remediation area (orange)	*Corymbia maculata*	Spotted Gum	35	Native and local species. Not present in the 1943 aerial imagery; not associated with Hirsch.
4	Asbestos remediation area (orange)	*Eucalyptus robusta*	Swamp Mahogany	20	Native and local species. - Native and local species. Not present in the 1943 aerial imagery; not associated with Hirsch
5	Asbestos remediation area (orange)	*Glochidion ferdinandi*	Cheese Tree	15	Tree below the minimum threshold size for approval under DCP 2011. Native and local species. Not present in the 1943 aerial imagery; not associated with Hirsch.
6	Asbestos remediation area (orange)	*Corymbia maculata*	Spotted Gum	45	Native and local species. - Not present in the 1943 aerial imagery; therefore not associated with Hirsch .

1. Source: ERM 2017

The Project Area was observed to be heavily developed and as a consequence presents as a highly disturbed, culturally modified landscape containing a variety of mid-20th to early 21st century buildings. A number of office buildings, warehouses, carparks, recreational grounds, including a tennis court were observed in conjunction with infrastructure associated with the Roche occupation of the Project Area and its previous uses.

Road, carpark and footpath surfaces are capped with bitumen and/or concrete. The remaining areas of the Project Area, notably to the east of and screening the Roche Building and setting the Givaudan-Roure Building is formally and informally landscaped with remnant natural vegetation and sandstone outcropping observed elsewhere. The cluster of trees proposed for removal is identified *Figure 3 (Annex A)* and described in *Table 3* below.

An area on the corner Inman and Orlando Road contains the remains of what appear to be a garden landscaped with sandstone retaining walls and associated with a concrete ramp. The garden is located to the west of a building visible in 1943 aerial photographs of the Project Area. A drainage channel, identified in blue in *Figure 1 (Annex A)*, was identified to the west of the mature trees and plantings, below a sandstone outcrop and a drystone retaining wall had been constructed along the channel.

Although areas of the Project Area, notably those around the Givaudan-Roure Building (WLEP no. I53) are associated with formally and informally landscaped areas containing mature trees and plantings, it was apparent that those trees identified for removal are not of the age and species specified in the Trees (LEP no. I38) listing and thus are not contributory to the listing.

5.2 SUMMARY OF VISUAL INSPECTION

During the visual inspection, no new historic heritage items, buildings, works or relics, were identified within the Project Area. The cluster of trees which form the basis of this SoHI did not appear physically in the area described as containing the listed Trees in the Heritage Inventory Sheet (*Annex C*) , or as described in the Inventory sheet for Trees (LEP no. I38). Similarly none of the trees identified and inspected are of the species listed in the Heritage Inventory Sheet and as such the visual inspection has confirmed that the trees which will be impacted by this proposal do not form part of the group listed.

6 SIGNIFICANCE ASSESSMENT

Before making decisions about the future of a heritage item it is first necessary to understand its heritage significance and the values it embodies. The aim of this particular significance assessment is to explain the heritage values embodied by the Project Area to enable an understanding of the likely heritage impact of the proposed development.

6.1 BASIS OF THE ASSESSMENT

The *NSW Heritage Manual*, published by the then NSW Heritage Office and Department of Urban Affairs and Planning (1996), sets out a detailed process for conducting assessments of heritage significance.

The Manual provides a set of specific criteria for assessing the significance of an item, including guidelines for inclusion and exclusion. The following assessment has been prepared in accordance with these guidelines.

The Heritage Council of NSW has adopted specific criteria for significance assessment, which have been gazetted pertinent to the Heritage Act. The seven criteria upon which the following significance assessment has been prepared are as follows:

Criterion (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);*

Criterion (b) *an item has strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (or the cultural or natural history of the local area);*

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);*

Criterion (d) *an item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons;*

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);*

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); and*

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

The Australia International Council of Monuments and Sites (AICOMOS) recommends *The Burra Charter* (2013a) and it's Practice Note on *Understanding and Assessing Cultural Significance* (2013b) that significance be assessed on the basis of aesthetic, historic, scientific, social and spiritual value (2013a:1). Relative scientific value, that which connotes research potential and/or archaeological significance, is subject to the application of two comparative or modifying criteria (rarity and representativeness) in determining assess the significance of heritage items.

Regardless of whether the criteria are sourced from the *NSW Heritage Manual* (as these have been) or *The Burra Charter (2013a)*, the criteria are intended to provide an overall framework for significance assessment. As the criteria used by *The Burra Charter* (2013a), are included within the criteria outlined within the Heritage Manual, they have not been considered separately.

6.2 HISTORICAL THEMES IN EVIDENCE

National and State-level patterns of historical development are useful in determining the historical value of a site under Criterion C. Nine historical themes have been developed and adopted by the Heritage Council of NSW (2006). They are derived from the Australian Historical Themes prepared by the Australian Heritage Commission (2001). *Table 4* (below) notes the NSW historical themes considered to be in evidence within the Project Area.

Table 4 Historical Themes Associated with the Project Area

Australian Theme	NSW Theme	Relevance to the Project Area
Tracing the Evolution of the Australian Environment	Environment – natural evolved	Features occurring naturally in the physical environment which have shaped or influences human life and cultures.
Developing local, regional and national economies	Environment – cultural landscape	Activities associated with the interactions between humans, human societies and the shaping of their physical suroundings
Building Settlements, Towns and Cities	Towns, Suburbs and Villages	Activities associated with creating, planning and managing urban functions, landscapes and lifestyles in towns, suburbs and villages.

1. Australian Heritage Commission, Australian Historic Themes
2. Heritage Council of NSW, New South Wales Historical Themes

6.3 SIGNIFICANCE OF THE PROJECT AREA

6.3.1 Criterion A (Historical Significance)

The eastern portion of the Project Area is not considered to be significant under this criterion. The importance of the trees in the course, or pattern, of the Northern Beaches' cultural history cannot be determined from the historical record.

6.3.2 Criterion B (Associative Significance)

The eastern portion of the Project Area is not considered to be significant under this criterion as a 'strong' and 'special' association with Horticulturalist Charles Hirsch cannot be determined from the historical record, especially as the trees under consideration were not planted at the time of Hirsch's occupation of the site.

6.3.3 Criterion C (Aesthetic Significance)

The cluster of trees within the eastern portion of the Project Area is assessed to have aesthetic value, arising from the vertical green forms and screening effect, however it is not considered to meet the threshold for listing as the historical record indicates that the trees under consideration were not cultural plantings intended to screen a light industrial site as they are not of the species appropriate to this activity.

6.3.4 Criterion D (Social Significance)

The Project Area is not considered to be significant under this criterion at a local level, even within the subset of people employed by Roche Products Group. Community consultation and/or a social impact assessment is the accepted method of determining value under this criterion and neither of these assessments has been undertaken.

6.3.5 Criterion E (Research Potential)

The eastern portion of the Project Area is not considered to be significant under this criterion as the trees are all commonly grown the Sydney region, are not rare, representative, or historically, aesthetically or socially significant and are not of the species favoured for cultural plantings in the Hirsch area or at the time the Roche building was constructed.

6.3.6 Criterion F (Rarity)

The Project Area is not considered to be significant under this criterion as neither individual trees nor the mixed collection is considered rare as culturally planted clusters like this exist throughout the Northern Beaches and the greater Sydney region.

6.3.7 Criterion G (Representativeness)

The Project Area is not considered to be significant under this criterion as although the cluster of mixed cultural plantings is not representative of the species favoured in the early period of Cromer's development, it is not considered to meet the threshold for local significance.

6.4 SUMMARY STATEMENT OF SIGNIFICANCE

Although the cluster of trees in the eastern portion of Project Area are considered aesthetically pleasing, they are not considered to be of local heritage significance as they are not assessed to meet threshold for listing at a local level.

7 ASSESSMENT OF HERITAGE IMPACTS

Generally, and consistent with best practice, physical changes to heritage components that are considered to have high or exceptional heritage value should be avoided. These components contribute the most to maintaining the heritage significance of the item or place. Any justified physical changes to components that have moderate or low heritage value should be considered with care and be sympathetic to original form, scale and location. The proposed works and the assessed impacts of the proposal, are outlined below.

7.1 PROPOSED WORKS

The proposed remediation activities involve the excavation of soils impacted with ACM for off-site disposal at a selected licensed Type 2 Special Waste Facility. In order to facilitate the excavation of the soils impacted by ACM, the six aforementioned trees will need to be removed.

7.2 ALTERNATIVE PROPOSALS

In response to Roche's decision to voluntarily remediate the Site, a number of remediation options have been considered for the remediation of the Asbestos Fill Area, as detailed in *Table 5* below.

Table 5 Asbestos Remedial Options Assessment

No.	Option	Advantages	Disadvantages
1	Do nothing / implement an unexpected finds protocol during construction phase earthworks	• Minimal volumes of waste generated; • Minimal off site transport volumes; • No disturbance of asbestos, no dust and noise emissions; • Lowest cost option.	• Unlikely to achieve Auditor endorsement / issue of Site Audit Statement; • Risk to future residents may exist if sub-soils are disturbed during construction and / or ACM is not identified during the construction phase earthworks. • Not consistent with Roche corporate values (zero harm approach).
2	Cap the affected area with clean fill, implement long term restrictions on sub-surface soil disturbance	• Less waste generation than options 3-4; • No disturbance of asbestos, low dust and noise emissions; • Better control of risks to human health than Option 1; • Low cost option.	• Restricts potential range of construction options in the area, precludes earthworks; • Not consistent with Roche corporate values (zero harm approach); • Requires long term site Environmental Management Plan to manage any risks to human health, , including ongoing restrictions on sub-surface soil disturbance by residents and

No.	Option	Advantages	Disadvantages
			maintenance personnel.
3	Excavate and replace soils in areas of known ACM impact	• Approach likely to be viewed favourably by the auditor / Site Audit Statement sign off likely; • Good control of risks to human health; • Allows for unrestricted development of the area and no long term management requirements; • Consistent with Roche corporate values (zero harm approach).	• Moderate volume of contaminated spoil to landfill; • Moderate volume of waste hauled over local road network; • Moderate volume of imported fill required; • Generation of dust and noise emissions, possibly including airborne asbestos fibres; • **Requires the removal of a limited number of trees**; • Higher cost option than Options 1 or 2.
4	Excavate and replace the entirety of the imported fill in the central part of the site.	• Best control of risks to human health; • Greater confidence of outcomes; • Allows for unrestricted development of the area and no long term management requirements; • Consistent with corporate values (zero harm approach).	• Significant volume of contaminated spoil to landfill. Potential for the unnecessary disposal of un-contaminated spoil to landfill; • Significant volume of waste hauled over local road network; • Significant volume of imported fill required • Generation of dust and noise emissions, possibly including airborne asbestos fibres; • **Requires the removal of a large number of trees**; • Most costly option.

1. Source: Remedial Action Plan, Annex E (ERM 2017)

Option 3 has been identified as the preferred option as it delivers adequate control of the risks to human health while permitting unrestricted land use of the project area (from a contamination perspective) and does not impose a long term contamination management burden on future owners / occupiers of the Site. This option is preferred to Option 4 from a sustainability perspective as it only targets areas of known Asbestos Containing Material (ACM) contamination, thereby reducing volumes of waste generated.

7.3 *DISCUSSION*

Change is often necessary to retain cultural significance. In this case the proposed development is necessary to enable remediation of a contaminated area containing asbestos material, delivering adequate control of the risks to human health while permitting unrestricted land use of the project area (from a contamination perspective) and not imposing a long term contamination management process on any future owners/occupiers of the Project Area.

Although change is undesirable where it reduces heritage significance, the proposed works are deemed to have no adverse impact on the heritage values of the Project Area for the following reasons:

- the trees proposed for removal do not appear physically in the area described in the listing i.e. "in the south-east sector of the Roche Products site, facing South Creek Rd and Campbell Avenue" and are therefore deemed to be excluded from the listing;

- the trees proposed for removal do not date to the period described in the listing (the Heritage Inventory Sheet in *Annex B* describes the listed trees as being planted in the early 20th century, with most significant plantings between 1900 and 1920; whereas the trees earmarked for removal are between 15-45 years old and would therefore have been planted after the Roche occupation of the site (circa 1972-2002);

- the trees in question are not associated with horticulturalist Charles Hirsch, as evidenced by the 1930 aerial imagery that depicts this area to contain remnant naturally occurring woodland and the 1943 and 1959 aerials showing this area as substantially cleared. As the culturally planted trees were not physically present on site during Hirsch's occupation of the Project Area, they do not form part of and are deemed not to be contributory to, the heritage listed Trees;

- the trees earmarked for removal are not the same species as those specified in the Trees (LEP no. I38) heritage listing and Heritage Inventory Sheet (*Annex B*);

- the Heritage Inventory Sheet describes the listed trees as positioned at crossroads (of Campbell Avenue and South Creek Road), an internal planting arrangement, as providing welcoming, softening, screening (of the buildings) and green vertical forms, however these descriptions to not correlate with nor describe the trees proposed for removal as observed during the site visit. This assessment is supported by the Arborist Letter in *Annex C*;

- the Trees Heritage Listing and Heritage Inventory Sheet both state that the trees are esteemed by local residents, however no community consultation or social impact assessment has been undertaken to determine community esteem so the statements remain unsubstantiated and therefore cannot be used as a basis for listing;

- the Heritage Inventory Sheet states that the listed trees are representative of the 1920s species favoured however this is not supported by the historical record nor borne out by the site visit or the Arborist Letter (*Annex C*);
- the integrity/intactness of the listed trees described in the Project Area refers only to the south eastern corner road frontage and not to the trees earmarked for removal as these are in the centre of the Project Area and do not have road frontage. Similarly the photos of the trees in the inventory sheet used to depict the listed trees are not of any trees internal to the site, only those on the road frontage, and it is only a limited number of trees to the north and south of the Project Area assessed to form part of the listed Trees, an assessment supported by an Arborist (*Annex C*); and
- the significance assessment of the trees earmarked for removal (refer Section *6.3*) indicates that the earmarked trees do not meet the threshold for listing at a local level, contain no inherent heritage values and therefore there will be no impact to heritage values or significance as a result of their removal.

Furthermore as the trees proposed for removal comprise approximately 1% of the trees contained within the Project Area, it is considered that their removal will have no adverse impact on the heritage values of the Project Area.

7.4 SUMMARY OF HERITAGE IMPACT

Change is often necessary to retain cultural significance. In this case the proposed development is necessary to enable remediation of a contaminated area containing fill material impacted by ACM, delivering adequate control of the risks to human health while permitting unrestricted land use of the site (from a contamination perspective) and not imposing a long term contamination management process on future owners/occupiers of the Site.

Although change is undesirable where it reduces heritage significance, the proposed change is will have no adverse impact on the heritage values of the Project Area as the trees proposed for removal not appear physically in the area described in the listing, are not of the appropriate age, and not of the same species as those stipulated in the Trees (WLEP no. I38)listing. Given this assessment, the statutory and regulatory requirements, the comparatively minor nature of the works, the assessed heritage significance of the trees being removed (nil), the determination that the trees earmarked for removal do not in fact form part of the listing and are not contributory to that listing, and that there will be no known impacts on historic heritage values or significance as a result of the proposal. The proposal is considered to be reasonable and acceptable in heritage terms and should proceed in accordance with the recommendations contained in *Section 8*.

The Heritage Council of NSW (2002) guidelines require that the SoHI, together with supporting information, address what measures are proposed to mitigate the negative impacts of the proposal, and why more sympathetic solutions are not viable. In accordance with *The Burra Charter* procedures for undertaking studies and reports (AICOMOS 2013a) the following recommendations have been formulated in consideration of all available information and have been prepared in accordance with the relevant legislation.

Recommendation 1

The proposed works within the Project Area are appropriate on heritage grounds and should proceed, provided that Recommendations 2-5 are followed.

Recommendation 2

All relevant staff, contractors and subcontractors should be made aware of their statutory obligations for heritage under NSW *National Parks and Wildlife Act 1974*, NSW *Heritage Act 1977* and best practice as outlined in *The Burra Charter* 2013a. This may be implemented as a heritage induction.

Recommendation 3

In the unlikely event that any Aboriginal objects or places of Aboriginal heritage significance are identified in the Project Area during proposed, all works in the area should cease. The area should be cordoned off and contact made with the Heritage Division, Office of Environment and Heritage, NSW Department of Planning and Environment (131 555), a suitably qualified archaeologist and the relevant Aboriginal stakeholders, so that the Aboriginal heritage can be adequately assessed and managed.

Recommendation 4

In the unlikely event that skeletal remains are identified during the proposed works, work in the vicinity of the remains must cease immediately. The area must be cordoned off. The NSW Police Coroner must be contacted in order to determine if the material is of Aboriginal origin. If determined to be of Aboriginal origin, the Client must contact the Heritage Division, Office of Environment and Heritage, NSW Department of Planning and Environment (131 555), along with a suitably qualified archaeologist and the relevant Aboriginal stakeholders, so that the remains can be adequately assessed and managed.

Recommendation 5

If, during the proposed works, suspected archaeological relics, as defined by the Heritage Act 1977 are uncovered, work should cease in that area immediately. The Heritage Division, Office of Environment and Heritage, NSW Department of Planning and Environment (131 555) should be notified and works only recommence when relevant permits and an appropriate and approved management strategy instigated.

9 REFERENCES

AICOMOS (2013a), **The Burra Charter: The Australia ICOMIS Charter for Places of Cultural Significance.**

AICOMOS (2013b), **Understanding and Assessing Cultural Significance.**

Australian Heritage Commission (2001), **Australian Historical Themes.**

Gojak, D (2009), **People in glass houses: the disappearance of 'Crystal Valley', Warriewood, NSW and Implications for Heritage Conservation.**

Hughes Trueman Ludlow (1994) **Warringah Heritage Study: Volume 1 Reports.**

Hughes Trueman Ludlow (1994) **Warringah Heritage Study: Volume 2 Inventory.**

NSW Heritage Office and Department of Urban Affairs and Planning (1996) **NSW Heritage Manual.**

NSW Heritage Office (1996), **Heritage Terms and Abbreviations.**

NSW Heritage Office (2002), **Local Government Heritage Guidelines.**

Thorp, W., (1988a), Historical Archaeological Resource of Warringah Shire for the Warringah Shire Heritage Study.

Thorp, W., (1988b), Thematic Development History of Warringah Shire for the Warringah Shire Heritage Study.

Annex A

Figures

Site Features

Heritage Items	
1	Roche Building, 100 South Creek Road
2	Building 17 - Cottage
3	Heritage Listed Trees

Legend

- Site Boundary
- Cadastre
- Drainage Line
- Drainage Line (Culverted)

Approximate Extent of Impact in Unregulated Areas:

- Asbestos in Fill Material

Source:
Imagery Data: nearmap Jan 2016
Spatial Data: © Department Finance, Services and Innovation Sep 2016

Site Plan Showing Asbestos Fill Area and Heritage Items

1

Drawing No:	0315053s_SOHI_G001_R0.mxd		
Date:	17/03/2017	Drawing Size: A4	
Drawn By:	GC	Reviewed By: SW	

Coordinate System: GDA 1994 MGA Zone 56

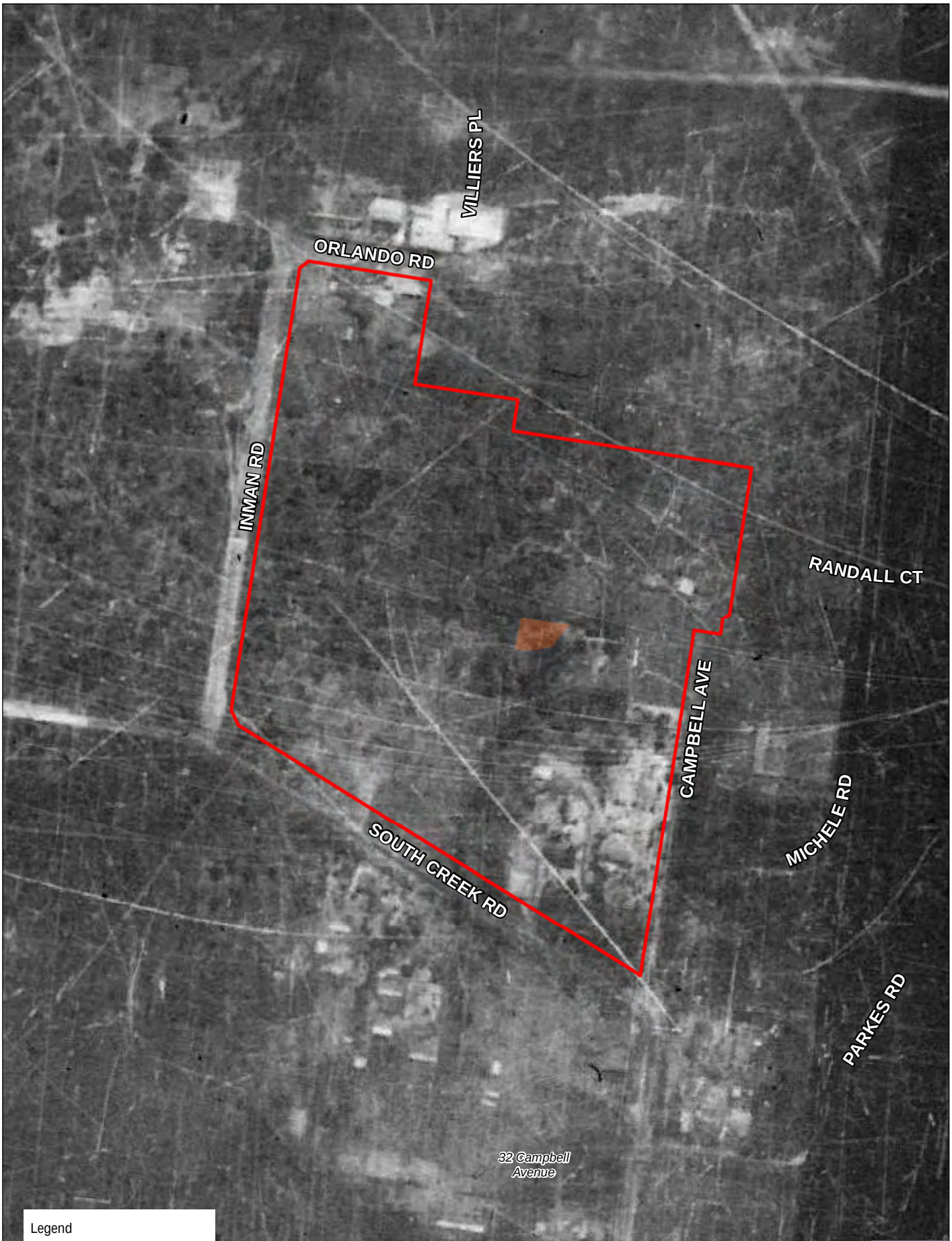
0 25 50m

N

Statement of Heritage Impact
4-10 Inman Road, Dee Why NSW

Client: Roche Products Pty Ltd

ERM



Legend

Site Boundary

Approximate Extent of Impact in Unregulated Areas:

Asbestos in Fill Material

Source:
Spatial Data: © Department Finance, Services and Innovation Sep 2016

Project Area in 1930

2

Drawing No:	0315053s_SOHI_G002_R0.mxd	
Date:	27/02/2017	Drawing Size: A4
Drawn By:	GC	Reviewed By: SW

Coordinate System: GDA 1994 MGA Zone 56

0 25 50m

N

Statement of Heritage Impact
4-10 Inman Road, Dee Why NSW

Client: Roche Products Pty Ltd

ERM

Tree No.	Scientific Name	Common Name
1	*Corymbia maculata*	'Spotted Gum'
2	*Araucaria heterophylla*	'Norfolk Island Pine'
3	*Corymbia maculata*	'Spotted Gum'
4	*Eucalyptus robusta*	'Swamp Mahogany'
5[(1)]	*Glochidion ferdinandi*	'Cheese Tree'
6	*Corymbia maculata*	'Spotted Gum'

Legend

Tree 1 Tree ID Number

Notes:

[(1)] Denotes tree below the minimum threshold size for consideration in tree removal for the DCP.

Trees Requiring Removal - Asbestos Fill Area

3

Drawing No:	0315053s_SOHI_C001_R0.cdr		Statement of Heritage Impact 4-10 Inman Road, Dee Why NSW
Date:	27/02/2017	Drawing size: A4	
Drawn by:	GC	Reviewed by: SW	Client: Roche Products Pty Ltd

ERM

Annex B

Glossary

Aboriginal object means any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of New South Wales, including Aboriginal remains. Aboriginal objects may also be referred to as Aboriginal sites, relics or cultural material.

Aboriginal place means an area of land that it is, or was, of special significance to Aboriginal culture. An area can have spiritual, historical, social, educational or other significance or could have been used by Aboriginal people for its natural resources. Aboriginal places may not contain any Aboriginal objects or physical evidence of Aboriginal occupation or use.

Adaptation means changing a place to suit the existing use or a proposed use.

Environmental heritage means those places, buildings, works, relics, infrastructure, movable objects, landscapes and precincts of State or local heritage significance.

Conservation means all the processes of looking after a place so as to retain its cultural significance.

Cultural significance means aesthetic, historic, scientific, social or spiritual value for past, present or future generations. Cultural significance is embodied in the place itself, its fabric, setting, use, associations, meanings, records, related places and related objects. Places may have a range of values for different individuals or groups.

Fabric means all the physical material of the place including elements, fixtures, contents and objects.

Interpretation means all the ways of presenting the significance of an item or place.

Interpretation plan is a document that provides the policies, strategies and detailed advice for interpreting a heritage item. It is based on research, analysis and plans to communicate the significance of the item, both during a conservation project and in the ongoing life of the item. The plan identifies key themes, storylines and audiences and provides recommendations about interpretation media. It includes practical and specific advice about how to implement the plan.

Maintenance means the continuous protective care of a place and its setting. Maintenance is to be distinguished from repair, which involves restoration or reconstruction.

Meanings denote what an item signifies, indicates, evokes or expresses. Meanings can be subjective and can vary from one individual or community to the next.

Place means a geographically defined area. It may include elements, objects, spaces and views. Place may have tangible and intangible dimensions.

Preservation means maintaining a place in its existing state and retarding deterioration.

Relic means any deposit, artefact, object or material evidence that relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and is of State or local heritage significance.

Restoration means returning a place to a known earlier state by removing accretions or by reassembling existing elements without the introduction of new material.

Reconstruction means returning a place to a known earlier state and is distinguished from restoration by the introduction of new material.

Use means the functions of a place, including the activities and traditional and customary practices that may occur at the place or are dependent on the place.

Annex C

Heritage Inventory Sheet

Warringah Heritage Inventory

State Heritage Inventory

SHI Number
2610285
Study Number

Item Name: **Trees**

Location: **Eastern part of Roche site, Campbell Avenue, Cromer**

Address:	Eastern part of Roche site, Campbell Avenue	**Planning:**	Sydney North
Suburb / Nearest Town:	Cromer 2099	**Historic Region:**	Sydney
Local Govt Area:	Warringah	**Parish:**	
State:	NSW	**County:**	
Other/Former Names:			
Area/Group/Complex:	Landscape - Cultural; Parks, Gardens & Trees	**Group ID:**	
Aboriginal Area:			
Curtilage/Boundary:			
Item Type:	Landscape	**Group:** Parks, Gardens and	**Category:** Garden Residential
Owner:	Private - Corporate		
Admin Codes:		**Code 2:** I38	**Code 3:**
Current Use:			
Former Uses:			
Assessed Significance:	**Local**	**Endorsed Significance:**	**Local**

Statement of Significance: The collection of trees in the south-east sector of the Roche Products site, facing south Creek Rd and Campbell Ave at Dee Why have a moderate degree of heritage significance at the Local level. They have existed on this site since the turn of the 19th -20th century and may have been associated with the nurseryman Charles Hirsch who owned the land immediately to the north during that period. They are esteemed by local residents and confer on the area a distinctive sense of place. While the trees are not individually rare, the presence in Dee Why of such a mixed collection of trees in good condition and respresenting planning takes of their period is rare.

Historical Notes or Provenance: During the 1980s, the land on which the Roche property stands was subdivided into six allotments, This was part of a much broader subdivision of lands and crown grants in the area. The former lots which make up the Roche grounds were numbered 629, 630, 631, 632, 633 and 639. The lots with the most significant plantings were 629 and 639. Lot 629 measured 4 acres and 14 perches and was purchased by Charles Oatway on 1/11/1888. In 1890, Oatway sold this lot to Edward Edget Baylis, cashier of Manly. In 1898, Baylis sold the northern part of lot 629 (3 roods 23 1/2 perches and abutted lot 639) to Charles Hirsch nursery man from Manly. In 1901 census, Hirsch was shown as living in Dee Why. In February 1915, Frederick and Elizabeth Baylis become proprietors of 3 acres 30 1/2 perches main portion of lot 619, and in March of that year, Elizabeth became the sole proprietor. In September 1914, E. Balylis sold the lot to Julia E.A Norman, and then she onsold in 1916 to Charles Fairfax Waterloo Lloyd, then to Leslie Ronald Mitchell until 1920, and then back to Norman. In 1921, the lot was sold to Ronald Smth King, Sydney solicitor, who then sold it to Roche Products in November 1968. Lot 639 was purchased by Henry Middleton on 1/11/1888 and then on-sold to E.E. baylis in 1890, then C.G Hirsch in 1899. In

Item Name: Trees

Location: Eastern part of Roche site, Campbell Avenue, Cromer

1921 Hirsch sold lot 639 , and northern portion of lot 629 to John Coxon of Freshwater. In 1936, parcels were transmitted to Sarch Coxon of DY and in 1949 were transferred to John A Coxon. The northern portion of former lot 629 was transferred to Fibrecell Products in November 1961.

Themes:

National Theme	State Theme	Local Theme
1. Environment	Environment - naturally evo	(none)
4. Settlement	Towns, suburbs and village	(none)

Designer: Not known. Possibly Charles Hirsch, but not proven.

Maker / Builder: Not known. Possibly Charles Hirsch, but not proven.

Year Started: 1890 **Year Completed:** **Circa:** No

Physical Description: The easternn side of the Roche property contains numerous mature cultural plantings and remnant specimens. Amongst these are Figs, Pines, Camphor Laurels, Turpentines, Agonis species, Melaleuca species, Willows, Brush Box, Coral Trees, Elms, Planes, Jacarandas, Magnolias, Tree Ferns and Eucalypts. The northern section of the eastern boundary also contains several old Pine Trees dating probably from the turn of the 19th-20th century. These were not associated with the trees on former Lot 629, but on Lot 639 to the north of it.

Physical Condition: Most of the trees are in good condition, and have been well maintained. The old Pines to the north are approaching senescence.

Modification Dates: If would appear from historic aerial photos and Land title research that most significance cultural plantings made on the site were planted between 1900 and 1920. Additional trees have been added from time to time, including a range of Eucalypts and Brush Box.

Recommended Management:

Management:

Further Comments: Roche Products insered two light industrial buildings into this eastern sector of the site some decades ago, mainly on land previously built upon, and avoiding for the most part the removal of many of the early trees.

Criteria a) As the group of trees existed on the site since the early 20th century, they have formed part of the cultural landscape of this sector of DY for 80-90 years and have a moderate degree of local significance.

Criteria b) Most likely with Charles Hirsch, nurseyman who owned a nursery in the immediate vicinity of the site, and may have leased it and used it for his nursery, and planted it for his neighbour.

Criteria c) The group of trees has a moderate degree of aesthetic significance because of their

Item Name: Trees

Location: Eastern part of Roche site, Campbell Avenue, Cromer

commanding position at a cross roads and their internal planting arrangement. They provide a welcome softening, screeing and rich green vertical forms to a light industrial site.

Criteria d) The group of trees at the corner of South Creek Road and Campbell aveneu are esteemed by local residnets, Roche workers and passersby for creating a distinctive place.

Criteria e) The trees are all commonly grown in the Sydney region and do not in themselves have technical or research significane. Some further research may be warranted to establish if possible who planted out the trees.

Criteria f) The trees individually are not rate; although the presence of such a mixed collection in DY is comparatively rare.;

Criteria g) The trees are generally representative of the species favoured in the period 1900-1925 and also the Eucalypts since 1970.

Integrity / Intactness: Most of the trees in the south-east corner of the site, adjoining Campbell Avenue are in good condition and have not been damaged by storms or disease.

References:

Author	Title	Year
Rappoport Pty Ltd	heritage Impact Statement 4-10 Inman Road Dee Why	2004

Studies:

Author	Title	Number	Year
Mayne Wilson and Associates	State Heritage Inventory Form		2004
Mayne Wilson and Associates	State Heritage Inventory Form		2004

Parcels:

Parcel Code	LotNumber	Section	Plan Code	Plan Number
PART LOT	100		DP	611332

Latitude: **Longitude:**

Location validity: **Spatial Accuracy:**

Map Name: **Map Scale:**

AMG Zone: **Easting:** **Northing:**

Listings:

Name:	Title:	Number:	Date:
Local Environmental Plan			

Name:

Road:

Suburb, Postcode:

Title:

Das/Modifications:

of Heritage significance:

Warringah Heritage Inventory

State Heritage Inventory

SHI Number
2610285
Study Number

Item Name: Trees

Location: Eastern part of Roche site, Campbell Avenue, Cromer

Data Entry: **Date First Entered:** 14/05/2007 **Date Updated:** 02/02/2016 **Status:** Basic

Image:

Caption: Trees - western end of Campbell Ave, Dee Why
Copyright:
Image by:
Image Date:
Image Number:
Image Path:
Image File: 2610285b2.JPG
Thumb Nail Path:
Thumb Nail File:

Item Name: Trees

Location: Eastern part of Roche site, Campbell Avenue, Cromer

Image:

Caption: Trees - western edge of Campbell Pde, Dee Why

Copyright: Warringah Council

Image by:

Image Date: 01/05/2004

Image Number:

Image Path:

Image File: 2610285b1.JPG

Thumb Nail Path:

Thumb Nail File:

Item Name: **Trees**

Location: **Eastern part of Roche site, Campbell Avenue, Cromer**

Image:

Caption: Trees - western end of Campbell Ave, Dee Why

Copyright:

Image by:

Image Date:

Image Number:

Image Path:

Image File: 2610285b3.JPG

Thumb Nail Path:

Thumb Nail File:

Item Name: Trees

Location: Eastern part of Roche site, Campbell Avenue, Cromer

Annex D

Arborist Letter

"GROWING MY WAY"
Tree Consultants
Established 1977
EXCELLENCE in ALL ASPECTS OF TREE MANAGEMENT
FULL INSURANCE PROTECTION
PO Box 35, Newport Beach NSW 2106
Phone: (02) 9997-4101 Mobile: 0412-221-962 Fax: (02) 994-0217
E-mail: kyleahill@optusnet.com.au
ABN 97 965 355 200

5 March 2017

Roche Products
Attention: Wai Lau
4-10 Inman Road
Dee Why, NSW

Tree Removal - Asbestos Contamination Remediation Site

The purpose of this document is to confirm required Tree Removal is linked solely to the remediation procedure within the defined area known to have "*asbestos contaminated soils*" below their root systems.

Six (6) trees are identified/confirmed as being required to be removed. (See below)

Tree No.	Scientific Name	Common Name
1	*Corymbia maculata*	'Spotted Gum'
2	*Araucaria heterophylla*	'Norfolk Island Pine'
3	*Corymbia maculata*	'Spotted Gum'
4	*Eucalyptus robusta*	'Swamp Mahogany'
5(1)	*Glochidion ferdinandi*	'Cheese Tree'
6	*Corymbia maculata*	'Spotted Gum'

Legend
Tree ID Number

Notes:
(1) Denotes tree below the minimum threshold size for consideration in tree removal for the DCP.

Trees Requiring Removal - Asbestos Fill Area 2

Drawing No: 0349667s_L_C002_R0.cdr
Date: 27/02/2017 Drawing size: A4
Drawn by: GC Reviewed by: AA

Roche Products
4-10 Inman Road, Dee Why NSW
Client: Roche Products Pty Ltd

ERM

Figure 1: Previous page confirms trees (by Number, Tree #1 thru Tree #6) required to be removed. Above illustrates location (yellow circle) of trees required to be removed.

On the basis, these trees are located relatively close to each other (i.e. tree trunk bases) it is considered impossible to remove contaminated soils/materials in a manner that was viably able to preserve any individual tree root system. This is additionally reinforced on the basis same species trees, [three (3) trees are *Corymbia maculata*, Spotted Gums] often have shared root systems as a consequence of below ground root grafting.

It is presumed that all six (6) required to be removed trees will be replaced post soil remediation process with at least an equal number of preferably "locally indigenous" trees.

Replacement trees must be sourced from suppliers/growers whose product meets the "*production benchmarks*" of the *Australian Standard (AS2303-2015 Tree Stock for Landscape Use). This document is available thru Standards Australia*®. Replacement trees are additionally specified to be professionally planted & maintained for at least one (1) full local environ growing season, (August thru May).

Should any additional questions arise or further explanation be required please do not hesitate to contact this documents author, Kyle A Hill, Senior Practicing & Consulting Arborist, [*AQF level 5 Diploma of Horticulture (Arboriculture), TAFE NSW & AQF level 8 Post Graduate Certificate of Arboriculture, University of Melbourne]*

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Italy	UK
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Korea	Venezuela
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