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## Lots 122 and 123 Dacelo Vista, Waterford

### Bushfire Attack Level (BAL) Compliance Report

Prepared for  
Richard Noble  
by Strategen

March 2019





# **Lots 122 and 123 Dacelo Vista, Waterford**

## **Bushfire Attack Level (BAL) Compliance Report**

Strategen is a trading name of  
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March 2019

## ***Limitations***

### **Scope of services**

This report ("the report") has been prepared by Strategen Environmental Consultants Pty Ltd (Strategen) in accordance with the scope of services set out in the contract, or as otherwise agreed, between the Client and Strategen. In some circumstances, a range of factors such as time, budget, access and/or site disturbance constraints may have limited the scope of services. This report is strictly limited to the matters stated in it and is not to be read as extending, by implication, to any other matter in connection with the matters addressed in it.

### **Reliance on data**

In preparing the report, Strategen has relied upon data and other information provided by the Client and other individuals and organisations, most of which are referred to in the report ("the data"). Except as otherwise expressly stated in the report, Strategen has not verified the accuracy or completeness of the data. To the extent that the statements, opinions, facts, information, conclusions and/or recommendations in the report ("conclusions") are based in whole or part on the data, those conclusions are contingent upon the accuracy and completeness of the data. Strategen has also not attempted to determine whether any material matter has been omitted from the data. Strategen will not be liable in relation to incorrect conclusions should any data, information or condition be incorrect or have been concealed, withheld, misrepresented or otherwise not fully disclosed to Strategen. The making of any assumption does not imply that Strategen has made any enquiry to verify the correctness of that assumption.

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### **Environmental conclusions**

Within the limitations imposed by the scope of services, the preparation of this report has been undertaken and performed in a professional manner, in accordance with generally accepted environmental consulting practices. No other warranty, whether express or implied, is made.

## ***Document control***

Client: Richard Noble

Report Version	Revision No.	Purpose	Strategen author	Strategen reviewer	Submitted to Client	
					Form	Date
Final Report	Rev A	To accompany building permit applications	Brodie Mastrangelo (BPAD 45985, Level 1)	Zac Cockerill (BPAD 37803, Level 2)	Electronic (email)	15/03/2019

Filename: RNO19070\_01 M001 Rev A - 15 March 2019

## Table of contents

<b>1. Introduction</b>	<b>2</b>
1.1 Site/development summary	2
1.2 Purpose of report	2
<b>2. Bushfire assessment results</b>	<b>3</b>
2.1 Assessment inputs	3
2.1.1 Vegetation classification	3
2.1.2 Effective slope	3
2.1.3 Summary of inputs	3
2.2 Assessment outputs	5
2.2.1 Bushfire Attack Level (BAL) contour assessment	5
2.2.2 BAL certificates	5
<b>3. Conclusion and recommendations</b>	<b>7</b>
<b>4. References</b>	<b>8</b>

## List of tables

Table 1: Site summary	2
Table 2: Summary of vegetation classifications, exclusions and effective slope	3
Table 3: BAL contour assessment results	5

## List of figures

Figure 1: Vegetation classification and effective slope	4
Figure 2: BAL contour map	6

## List of appendices

Appendix 1 BAL certificates
Appendix 2 Vegetation plot photos and description

# 1. Introduction

## 1.1 Site/development summary

Table 1 provides a summary of the site and proposed development.

Table 1: Site summary

Site details	
Address details	Lot 122 (7) and Lot 123 (5) Dacelo Vista, Waterford Western Australia 6152
Local government area	City of South Perth
Description of building works	Construction of a single residential dwelling (Class 1a building and associated Class 10a structures) within each lot

## 1.2 Purpose of report

This Bushfire Attack Level (BAL) compliance report has been prepared for Lot 122 (7) and Lot 123 (5) Dacelo Vista, Waterford (hereafter referred to as the project area).

This report provides Bushfire Attack Level (BAL) ratings for individual lots within the project area and has been prepared for the benefit of the developer, future lot purchasers and decision makers. BAL certificates for each individual lot (contained in Appendix 1) have been prepared based on the site compliance check and are appended to this report for use at the building permit stage.

The BAL assessment outlined in this report is the most up to date assessment relating to the project area.

The approach for preparation of this BAL compliance report is consistent with Section 4.2 and Appendix 3 of *Guidelines for Planning in Bushfire Prone Areas* (the Guidelines; WAPC 2017).

Should the classified vegetation extent be further modified prior to building construction, then an updated BAL assessment for the affected lots may need to be undertaken to account for these changes.

## 2. Bushfire assessment results

### 2.1 Assessment inputs

#### 2.1.1 Vegetation classification

Strategen assessed classified vegetation and exclusions within the 150 m assessment area through on-ground verification on 25 February 2019 in accordance with *AS 3959—2009 Construction of Buildings in Bushfire-Prone Areas* (AS 3959; SA 2009) and the *Visual Guide for Bushfire Risk Assessment in Western Australia* (DoP, 2016). Results are provided in Figure 1. Georeferenced site photos and a description of the vegetation classifications and exclusions are contained in Appendix 2.

#### 2.1.2 Effective slope

Strategen assessed effective slope under classified vegetation within the 150 m assessment area through on-ground verification on 25 February 2019 in accordance with AS 3959. Results were cross-referenced with DAFWA 2 m contour data and are depicted in Figure 1.

#### 2.1.3 Summary of inputs

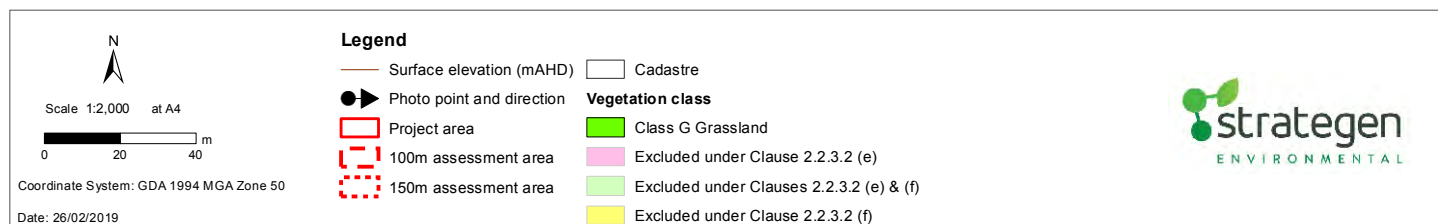
Figure 1 illustrates the current vegetation classifications and exclusions observed during the inspection. The vegetation classifications/exclusions and effective slope are summarised in Table 2.

Table 2: Summary of vegetation classifications, exclusions and effective slope

Vegetation plot	Vegetation classification	Effective slope	Comments
1	Class G Grassland	Flat/upslope (0°)	The wetland area is undergoing rehabilitation to remove weeds and reintroduce native grasses. The area is dominated by wetland grasses and reeds.
2	Excluded – Non-vegetated (Clause 2.2.3.2 [e])	N/A	Non-vegetated component of the wetland (i.e. standing water).
3	Excluded – Non-vegetated & Low threat (Clauses 2.2.3.2 [e] and [f])	N/A	Non-vegetated and low threat areas comprising managed gardens, managed road verges, roads, paths and built form.
4	Excluded – Low threat (Clause 2.2.3.2 [f])	N/A	Low threat managed vegetation. This area is a public open space consisting of walking paths and managed gardens. There is no vegetation in the understorey.



**Figure 1: Vegetation classification and effective slope**



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Data source: Neamap: Aerial image, flown 12/2018. Landgate: Cadastre, 07/2018. Client: Richard Noble. Development layout, 02/2019. Created by: jcrute

## 2.2 Assessment outputs

### 2.2.1 Bushfire Attack Level (BAL) contour assessment

Strategen has undertaken a BAL contour assessment in accordance with Method 1 of AS 3959 for the project area (Figure 2). The Method 1 procedure incorporates the following factors:

- state-adopted FDI 80 rating
- vegetation class
- effective slope
- distance maintained between proposed development areas and the classified vegetation.

The BAL contours are based on the current on-ground site conditions.

The results of the BAL contour assessment are detailed in Table 3 and illustrated in Figure 2. Where applicable, Table 3 recommends building setbacks for future buildings to achieve a lower BAL rating.

Table 3: BAL contour assessment results

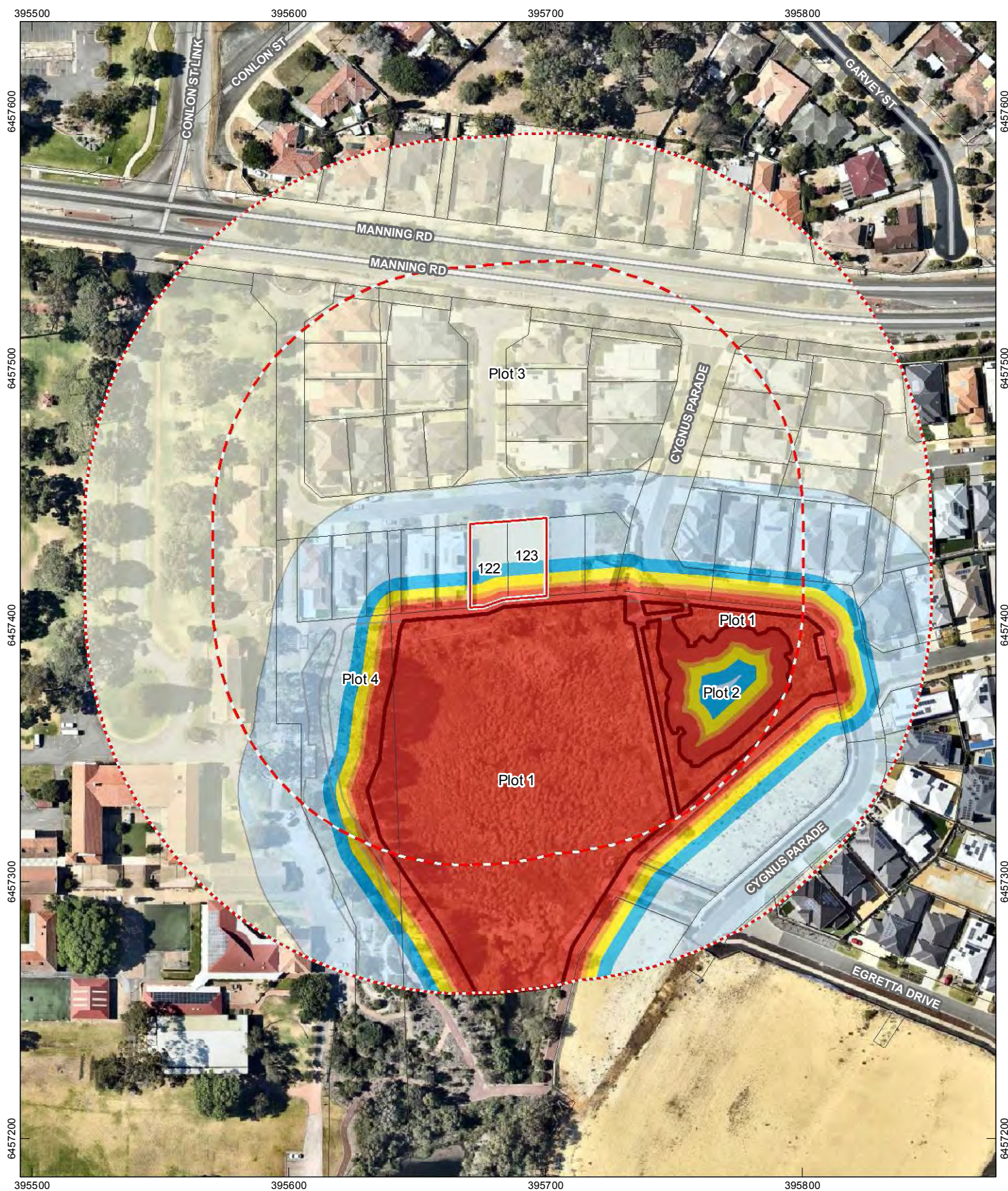
Method 1 BAL determination							
Lot	Vegetation Plot	Vegetation classification	Effective slope	Separation distance	Highest BAL	Setback required to achieve lower BAL	Potential modified BAL <sup>^</sup>
122 and 123	1	Class G Grassland	Flat/upslope (0°)	3 m	BAL-FZ	5 m rear building setback	BAL-29
122 and 123	2	Excluded – Non-vegetated (Clause 2.2.3.2 [e])	N/A	N/A	N/A	N/A	N/A
122 and 123	3	Excluded – Non-vegetated & Low threat (Clauses 2.2.3.2 [e] and [f])	N/A	N/A	N/A	N/A	N/A
122 and 123	4	Excluded – Low threat (Clause 2.2.3.2 [f])	N/A	N/A	N/A	N/A	N/A

<sup>^</sup> The modified BAL can only be confirmed once the building plan for the relevant lot has been prepared to demonstrate compliance with the recommended setback.

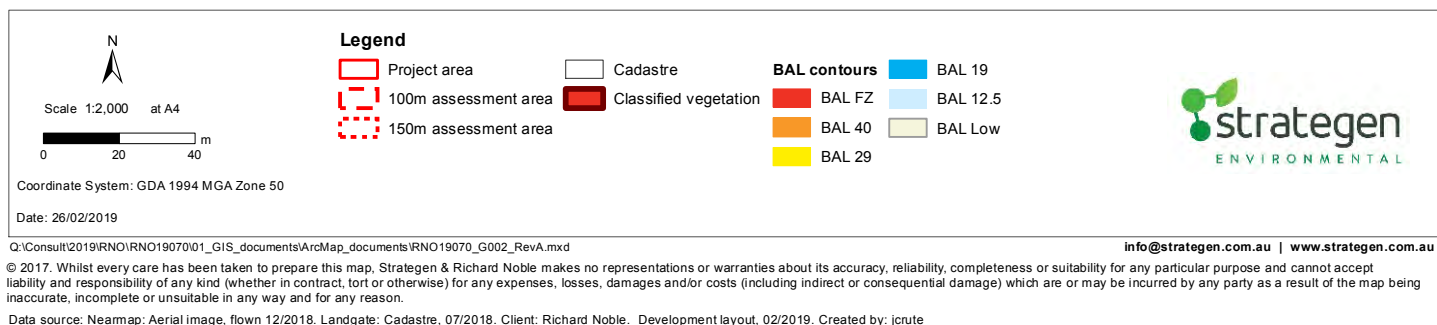
### 2.2.2 BAL certificates

BAL certificates for the subject lots are provided in Appendix 1 in accordance with the BAL contour assessment results detailed in Table 3.

Should a lower BAL rating be realistically achievable through an appropriate building setback, then the landowner can refer to the recommended setbacks listed in Table 3. The lower BAL rating may be achieved if the recommended building setback is reflected on the building plan for that lot and a revised BAL certificate can be issued at that time.



**Figure 2: BAL contour map**



### 3. Conclusion and recommendations

This BAL compliance report has been prepared for two residential lots along Dacelo Vista in Waterford to provide a BAL check for use at the building permit stage. Assessment results are consistent with current on-ground conditions.

Strategen considers that the BAL contour assessment and BAL certificates outlined in this report are accurate to inform individual lot building permit applications. Should the extent of classified vegetation change or new vegetation be introduced within 100 m of proposed development, then the BAL ratings should be reassessed at the building permit stage to ensure accuracy with on-ground conditions.

Should it be determined through demonstration on individual building plans that compliance with the recommended building setbacks has been achieved and subsequently a lower BAL rating has been attained (as per Table 3), then the lower BAL rating should apply and be reflected in an updated BAL certificate prepared at that time.

Ongoing requirements of the current City of South Perth annual firebreak notice should continue to be implemented as required, particularly with regards to ongoing fuel management of road reserves.

## 4. References

Department of Planning (DoP) 2016, *Visual guide for bushfire risk assessment in Western Australia*, Department of Planning, Perth.

Standards Australia (SA) 2009, *Australian Standard AS 3959–2009 Construction of Buildings in Bushfire-prone Areas*, Standards Australia, Sydney.

Western Australian Planning Commission (WAPC) 2017, *Guidelines for Planning in Bushfire Prone Areas*, Version 1.3 August 2017, Western Australian Planning Commission, Perth.

## **Appendix 1**

### **BAL certificates**



# Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959-2009

This Certificate has been issued by a person accredited by Fire Protection Association Australia under the Bushfire Planning and Design (BPAD) Accreditation Scheme. The certificate details the conclusions of the full Bushfire Attack Level Assessment Report (full report) prepared by the Accredited Practitioner.

## Property Details and Description of Works

Address Details	Unit no	Street no	Lot no	Street name / Plan Reference		
			122	Dacelo Vista		
Local government area	Suburb			State	Postcode	
	Waterford			WA	6152	
Main BCA class of the building	Class 1a	Use(s) of the building	Residential dwelling			
Description of the building or works	Construction of a Class 1a building and associated Class 10a structures.					

## Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class G Grassland	Flat/ upslope (0 degrees)	3 m (lower BAL achievable with building setback)	BAL – FZ

## BPAD Accredited Practitioner Details

<b>Name</b> Zac Cockerill	<div style="border: 1px solid black; padding: 5px;"> <p>I hereby declare that I am a BPAD accredited bushfire practitioner.</p> <p>Accreditation No. <u>37803</u></p> <p>Signature <u>[Signature]</u></p> <p>Date <u>15/3/19</u></p> </div>
<b>Company Details</b> Strategen Environmental	
I hereby certify that I have undertaken the assessment of the above site and determined the Bushfire Attack Level stated above in accordance with the requirements of AS 3959-2009 (Incorporating Amendments 1, 2 and 3).	

Authorised Practitioner Stamp

Reliance on the assessment and determination of the Bushfire Attack Level contained in this certificate should not extend beyond a period of 12 months from the date of issue of the certificate. If this certificate was issued more than 12 months ago, it is recommended that the validity of the determination be confirmed with the Accredited Practitioner and where required an updated certificate issued.

# Bushfire Attack Level (BAL) Certificate

Determined in accordance with AS 3959-2009

This Certificate has been issued by a person accredited by Fire Protection Association Australia under the Bushfire Planning and Design (BPAD) Accreditation Scheme. The certificate details the conclusions of the full Bushfire Attack Level Assessment Report (full report) prepared by the Accredited Practitioner.

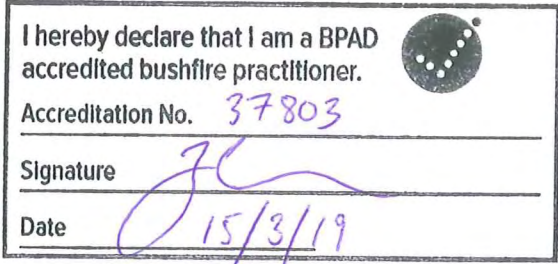
## Property Details and Description of Works

Address Details	Unit no	Street no	Lot no 123	Street name / Plan Reference Dacelo Vista		
	Suburb Waterford			State WA	Postcode 6152	
Local government area	City of South Perth					
Main BCA class of the building	Class 1a	Use(s) of the building		Residential dwelling		
Description of the building or works	Construction of a Class 1a building and associated Class 10a structures.					

## Determination of Highest Bushfire Attack Level

AS 3959 Assessment Procedure	Vegetation Classification	Effective Slope	Separation Distance	BAL
Method 1	Class G Grassland	Flat/ upslope (0 degrees)	3 m (lower BAL achievable with building setback)	BAL – FZ

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## **Appendix 2**

### **Vegetation plot photos and description**





Photo ID: 1a



Photo ID: 1b



Photo ID: 1c



Photo ID: 1d

Plot number		Plot 1
Vegetation classification	Pre-development	Class G Grassland
	Post-development	Class G Grassland
Description / justification		Wetland area undergoing rehabilitation to remove weeds and reintroduce native grasses. The area is dominated by wetland grasses and reeds.



Photo ID: 2

<b>Plot number</b>		Plot 2
<b>Vegetation classification</b>	<b>Pre-development</b>	Excluded – Non-vegetated (Clause 2.2.3.2 [e])
	<b>Post-development</b>	Excluded – Non-vegetated (Clause 2.2.3.2 [e])
<b>Description / justification</b>		Non-vegetated portion of the wetland (i.e. standing water).



Photo ID: 3a



Photo ID: 3b



Photo ID: 3c



Photo ID: 3d



Photo ID: 3e



Photo ID: 3f

Plot number		Plot 3
Vegetation classification	Pre-development	Excluded – Non-vegetated & Low threat (Clauses 2.2.3.2 [e] and [f])
	Post-development	Excluded – Non-vegetated & Low threat (Clauses 2.2.3.2 [e] and [f])
Description / justification		Low threat and non-vegetated areas comprising managed gardens, managed road verges, footpaths, road and built form.