

Environmental Assessment and Management Strategy

Hazelmere Enterprise Area Precinct 9A

Project No: EP13-027(05)

**Prepared for Hazelmere Landowners Group
December 2018**



Environmental Assessment and Management Strategy

Hazelmere Enterprise Area Precinct 9A



Document Control

Doc name:		Environmental Assessment and Management Strategy Hazelmere Enterprise Area Precinct 9A			
Doc no.:		EP13-027(05)--004			
Version	Date	Author		Reviewer	
1	March 2015	Vanessa Keating	VMK	Jason Hick	JDH
	Submitted to client for review/comment.				
A	December 2015	Vanessa Keating	VMK	Jason Hick	JDH
	Updated following changes to the LSP.				
B	December 2015	Vanessa Keating	VMK	Jason Hick	JDH
	Updated following comment from client/project team.				
C	November 2018	Vanessa Keating	VMK	Jason Hick	JDH
	Updated to address changes to structure plan				
D	December 2018	Bianca Bertelli	BRB	Jason Hick	JDH
	Updated following comment from client/project team and updates to LSP				

© 2018 Emerge Associates All Rights Reserved. Copyright in the whole and every part of this document belongs to Emerge Associates and may not be used, sold, transferred, copied or reproduced in whole or in part in any manner or form or in or on any media to any person without the prior written consent of Emerge Associates.

Environmental Assessment and Management Strategy

Hazelmere Enterprise Area Precinct 9A



Executive Summary

Emerge Associates were engaged by the Hazelmere Landowners Group to provide a range of environmental consulting services to support the design and documentation of a Local Structure Plan (LSP) to guide the future industrial development of part Lots 2 and 3, Lot 15, 50, 199, 200, 201 and 500 Midland Road; Lot 10, part Lot 148 and Lot 149 Talbot Road; and Lots 6 and 97 Adelaide Street, Hazelmere. This LSP area is referred to herein as “the site.” The site forms Precinct 9A of the wider Hazelmere Enterprise Area Structure Plan (HEASP) area within the City of Swan.

The site was rezoned in 2014 from ‘Rural’ to ‘Urban Deferred’ under the Metropolitan Region Scheme (MRS) and is currently zoned ‘General Rural’ (with ‘Additional Use’ over the south of the site) under the City of Swan’s Local Planning Scheme No. 17 (LPS No. 17). The ultimate gazettal of the MRS amendment (Amendment No. 1256/57) will trigger an amendment to the City of Swan’s LPS No. 17, rezoning the site from ‘General Rural’ to ‘Industrial Development’. The City of Swan LPS 17 (in Schedule 2, #75) identifies Lot 198 (now 500), Lot 97 and part of Lot 6 as able to accommodate ‘Caravan Park’ as a permitted land use. Until the LPS is modified, this use will be permitted even if the local structure plan is approved.

This Environmental Assessment and Management Strategy (EAMS) has been prepared to address the requirements of the Western Australian Planning Commission’s (WAPC) *Structure Plan Framework* (WAPC 2015) to support the LSP design and implementation, and to outline future environmental management requirements for the future subdivision, or other changes in land use within the site.

This report provides a synthesis of information from a range of sources regarding the environmental features, attributes and values of the site. It is based on publicly available information, plus site specific assessments and reporting that have been undertaken over the site including:

- *Hazelmere Enterprise Area District Structure Plan, Environmental Assessment* (ENV 2010).
- *District Stormwater Management Strategy* (AECOM 2010).
- *Level 2 Flora and Vegetation Assessment* (Emerge Associates 2015a), as attached in **Appendix C**.
- *Fauna Assessment* (Greg Harewood 2014), as attached in **Appendix D**.
- *Bushfire Management Plan* (Emerge Associates and Bushfire Safety Consulting 2018).
- *Local Water Management Strategy* (Emerge Associates 2018).
- *Contamination Risk Assessment* (Emerge Associates 2015b), as attached in **Appendix E**.
- Bush Forever Site No. 481 boundary resolution investigations and consultation with relevant authorities (letter from Emerge Associated to the WAPC dated 22 May 2014, as attached in **Appendix F**).

Based on the above information, the environmental attributes and values identified within the site have been outlined in **Section 2** and include:

- The site has a “moderate to low risk” of Acid Sulfate Soils (ASS) occurring within three metres of the natural soil surface.
- One federally and State listed Threatened Flora species and one Priority Flora species occur within the site.
- Remnant native vegetation occurs in patches throughout the site, the majority of which is in ‘Completely Degraded’ to ‘Degraded’ condition due to historic clearing and agricultural land

Environmental Assessment and Management Strategy

Hazelmere Enterprise Area Precinct 9A



uses. Some small areas are considered to be in 'Good' condition. These areas are considered representative of a Threatened Ecological Community (TEC) and should be retained through any future change in land use or subdivision.

- Bush Forever Site No. 481 lies to the west of the site, and its boundary encroaches into Lot 3 Midland Road. There is no remnant vegetation within Lot 3 to support this area's inclusion with Bush Forever Site No. 481, so it would seem logical that industrial development could be considered within this area. A submission on MRS Amendment No. 1256/57 was lodged on behalf of the current landowner of Lot 3 in this regard (see **Appendix G**).
- The site contains some vegetation that could be considered suitable habitat for the conservation significant Black Cockatoo species, although this habitat is quite limited in terms of quality and extent.
- One registered Indigenous heritage site occurs over the south-east corner of the site.

The LSP, attached in **Appendix A**, has responded to the environmental values and attributes of the site through the broad scale planning and identification of significant vegetation for retention in order to minimise the impact on those values considered significant. Specific responses to the environmental values and attributes of the site can be addressed at future subdivision and/or development stages by individual lot owners, or at the time of any future change in the current land uses. These future management requirements/responses have been outlined in **Section 4**.

Land ownership across the site is fragmented, therefore there is not likely to be a single or consistent progression of development or subdivision within the site resulting from the endorsement of the LSP. It is also envisioned that in some cases current lots are unlikely to be subdivided further. The LSP has been prepared to guide any future development or subdivision that may occur at an individual lot level to ensure that overall development, when this occurs, is undertaken in a planned and coordinated way. The LSP does not provide an indicative road network, and while some subdivision may occur, this is likely to be constrained by the extent of the existing road network. Each land owner will therefore be required to specifically address environmental values and servicing requirements applicable to their property as part of any future subdivision or development approval process.

Overall, the environmental attributes and values of the site have been accommodated within the LSP, or can be managed appropriately through future subdivision and development in line with the relevant federal, state and local government legislation, policies and guidelines and best environmental management practices. As such, the proposed future development of the site will not significantly impact on the environmental values and attributes of the site.

Environmental Assessment and Management Strategy

Hazelmere Enterprise Area Precinct 9A



Table of Contents

1	Introduction	1
1.1	Background	1
1.2	Purpose of this Report	1
1.3	Scope of Work	1
2	Description of the Existing Environment	3
2.1	Local context	3
2.2	Climate	3
2.3	Landforms and soil	3
2.3.1	Topography	3
2.3.2	Regional geomorphology	3
2.3.3	Soils	4
2.3.4	Acid Sulfate Soils	4
2.4	Biodiversity and natural assets	5
2.4.1	Flora and Vegetation	5
2.4.1.1	Regional vegetation context	5
2.4.1.2	Extent and condition of remnant vegetation	5
2.4.1.3	Significant Flora	5
2.4.1.4	Plant communities	6
2.4.1.5	Threatened and/or Priority Ecological Communities	8
2.4.2	Bush Forever and conservation reserves	9
2.4.3	Biodiversity linkages	9
2.4.4	Environmentally Sensitive Areas	10
2.4.5	Terrestrial fauna	10
2.5	Hydrology	11
2.5.1	Groundwater	11
2.5.2	Surface Water	11
2.5.3	Wetlands	11
2.5.4	Public Drinking Water Sources	12
2.6	Heritage	12
2.6.1	Indigenous Heritage	12
2.6.2	Non-indigenous Heritage	12
2.7	Land Use considerations	13
2.7.1	Historic land uses and potential contamination	13
2.7.2	Surrounding land uses	14
2.7.2.1	Western Power easement	14
2.7.2.2	Roe Highway	14
2.7.2.3	Landfill	14
2.8	Natural hazards	15
2.8.1	Bushfire hazard	15
3	The Local Structure Plan	16
3.1	Historic planning and environmental assessment context	16
3.2	Hazelmere Precinct 9A Local Structure Plan	17
3.3	Future planning and environmental approvals process	18
3.4	Relevant environmental factors and considerations	18
4	Environmental Assessment and Management Strategy	20
4.1	Acid Sulfate Soils	20
4.1.1	Policy framework and management objective	20
4.1.2	Summary of existing conditions	20

Environmental Assessment and Management Strategy

Hazelmere Enterprise Area Precinct 9A



4.1.3	LSP considerations for Acid Sulfate Soils.....	20
4.1.4	Future Acid Sulfate Soils management requirements.....	20
4.1.5	Predicted environmental outcomes.....	20
4.2	Biodiversity and natural assets – flora and vegetation.....	21
4.2.1	Policy framework and management objective	21
4.2.2	Summary of existing conditions	21
4.2.3	LSP considerations for flora and vegetation	21
4.2.4	Future flora and vegetation management requirements	21
4.2.5	Predicted environmental outcomes.....	21
4.3	Biodiversity and natural assets – Environmentally Sensitive Areas.....	22
4.3.1	Policy framework and management objective	22
4.3.2	Summary of existing conditions	22
4.3.3	LSP considerations for Environmentally Sensitive Areas	22
4.3.4	Future management requirements for Environmentally Sensitive Areas.....	22
4.3.5	Predicted environmental outcomes.....	22
4.4	Biodiversity and natural assets – terrestrial fauna	22
4.4.1	Policy framework and management objective	22
4.4.2	Summary of existing conditions	23
4.4.3	LSP considerations for terrestrial fauna	23
4.4.4	Future terrestrial fauna management requirements.....	23
4.4.5	Predicted environmental outcomes.....	23
4.5	Hydrology – groundwater	24
4.5.1	Policy framework and management objective	24
4.5.2	Summary of existing groundwater.....	24
4.5.3	LSP considerations for groundwater	24
4.5.4	Future groundwater management requirements.....	25
4.5.5	Predicted environmental outcomes.....	25
4.6	Heritage – Indigenous heritage.....	25
4.6.1	Policy framework and management objective	25
4.6.2	Summary of existing conditions	25
4.6.3	LSP considerations for Indigenous heritage	26
4.6.4	Future Indigenous heritage management requirements.....	26
4.6.5	Predicted environmental outcomes.....	26
4.7	Historic land use consideration – potential contamination.....	26
4.7.1	Policy framework and management objective	26
4.7.2	Summary of existing conditions	26
4.7.3	LSP considerations for potential contamination	27
4.7.4	Future historic land use management requirements	27
4.7.5	Predicted environmental outcomes.....	27
4.8	Natural hazards – bushfire management	28
4.8.1	Policy framework and management objective	28
4.8.2	Summary of existing conditions	29
4.8.3	LSP considerations for bushfire management	29
4.8.4	Future bushfire management requirements.....	29
4.8.5	Predicted environmental outcomes.....	30
5	Summary and Conclusion.....	31
6	References.....	32
6.1	General references	32
6.2	Online references.....	32

Environmental Assessment and Management Strategy

Hazelmere Enterprise Area Precinct 9A



List of Tables

Table 1: Temperature and rainfall averages for the Perth Airport weather station (1944 to 2018) (BoM 2018)...	3
Table 2: Soil units found on site	4
Table 3: Relevant environmental factors and considerations for LSP	18

List of Plates

Plate 1: plant community CcOF in 'Degraded' condition	6
Plate 2: plant community EmBaBmW in the north of the site, in 'good' condition.....	7
Plate 3: plant community EmAfOW in 'Degraded' condition.....	7
Plate 4: Parkland Cleared/planted vegetation in 'Completely Degraded' condition	8

Figures

Figure 1: Site Location and Topographic Contours
Figure 2: MRS Zones and Reserves
Figure 3: Acid Sulfate Soils
Figure 4: Vegetation Complex Mapping
Figure 5: Vegetation Communities
Figure 6: Vegetation Condition
Figure 7: Bush Forever, ESAs and Ecological Linkages
Figure 8: Hydrology
Figure 9: Aboriginal Heritage Places
Figure 10: Regionally Significant Vegetation Values
Figure 11: Bushfire Prone Areas

Appendices

Appendix A

Local Structure Plan (Burgess Design Group 2018)

Appendix B

EPA Scheme Amendment Advice – MRS Amendment 1256/57

Appendix C

Level 2 Flora and Vegetation Assessment (Emerge Associates 2015)

Appendix D

Fauna Assessment (Greg Harewood 2014)

Appendix E

Contamination Risk Assessment (Emerge Associates 2015)

Appendix F

Bush Forever Site No. 481 boundary resolution

Appendix G

Report on Submissions – MRS Amendment 1256/57