Appendix 3 Environmental Report

ENVIRONMENTAL FEASIBILITY ASSESSMENT OF A POTENTIAL SANDPIT ON LOT 751 PLAN 49008 BEELERUP

PREPARED FOR:

FRONTINO FAMILY

DECEMBER 2013

PREPARED BY:

Martinick Bosch Sell Pty Ltd
4 Cook Street
West Perth WA 6005
Ph: (08) 9226 3166
Fax: (08) 9226 3177
Email: info@mbsenvironmental.com.au
Web: www.mbsenvironmental.com.au

MBS ENVIRONMENTAL

MARTINICK BOSCH SELL PTY LTD
ABN 50 102 514 479
MBS ENVIRONMENTAL
environmental and geoscience consultants

4 Cook Street
West Perth WA 6005
Australia

Telephone +61 8 9226 3166
Facsimile +61 8 9226 3177
Email: info@mbsenvironmental.com.au

MEMORANDUM

Attention:	Carmel Frontino	From:	Kirsi Kauhanen
Company:	-	Date:	19 December 2013
Subject:	Environmental Feasibility Assessment	Project:	Lot 751 Plan 49008 Beelerup

Please advise if any part of this transmission failed or was misdirected.

1. INTRODUCTION

MBS Environmental was engaged by landowner Carmel Frontino and family to undertake a desktop assessment of a potential sandpit in the southern portion of Lot 751 on Plan 49008 in Beelerup ('Project Area') presented in Figure 1. A Level 1 vegetation and flora survey and a Level 1 fauna survey were undertaken to provide additional ecological information to support this assessment. The purpose of the assessment was to identify potential environmental and planning issues involved with the site and their likely implications on the approval processes. Results of the assessment are summarised in this document.

2. ZONING

In the Shire of Donnybrook-Balingup Town Planning Scheme Number 4, Lot 751 is zoned 'General Farming Pastoral' (Figure 2). Extractive industry operations in this zone are subject to an approval being granted by the Shire Council.

It is noted that the Planning Scheme Number 4 identifies a 'Road Protection Area' along Donnybrook - Boyup Brook Road that runs along the northern edge of Lot 751. The purpose of this zone is to protect the function, amenity and visual character of these roads. The zone extends to 50 m either side of the centre line. Whilst the impact of the zone on extractive industry is not specified in the Scheme text, it can be presumed that any extractive operations should remain out of sight from the road.

Shire of Donnybrook-Balingup Extractive Industry Local Law sets general limits on excavation near property and other boundaries. Limits applicable to Lot 751 include 20 m setback from property boundaries and 40 m setback from any road (including any unformed road reserves). Excavation within these setbacks requires separate written approval from the local government.

3. SURROUNDING LANDUSE AND CLOSEST RESIDENCES

All adjacent properties are zoned 'General Farming Pastoral' apart from state owned Reserve 22860 to the southeast that is zoned as 'Parks and Recreation' and has been used for sand extraction. Within 500 m radius of Lot 751 there is also government owned land zoned for 'General Industry' (mainly undeveloped) and an unnamed nature reserve (R26238, further details in Section 7). Sand extraction has been undertaken on several of the surrounding properties. Despite this and other landuses, native vegetation has largely been retained on the surrounding properties forming a remnant of several hundred hectares.

An aerial photograph from 2012 was studied to identify closest residential dwellings and other sensitive premises and these are presented in Figure 3. Six residential dwellings were identified within 1 km radius of the project area, with only one of these located within 500 m radius (being Lot 750 Plan 49008). Further, Horseman's Club on adjoining Lot 3122 was identified as a sensitive premise. Noise, dust and other potential nuisance from the

extractive operations are unlikely to impact on the identified six residential dwellings, however may impact on the Horseman's Club.

4. SITE ACCESS

The Project Area is currently accessed from the north via Frontino Road that connects to the Donnybrook - Boyup Brook Road. However, the Town Planning Scheme Number 4 indicates that Frontino Road does not extend all the way to the Project Area but rather a narrow strip of land belonging to Lot 3122 (D12025) lies in between. This land is owned by the Shire of Donnybrook-Balingup and the use of this access for extractive industry purposes would need to be clarified with the Shire (contact with Shire made, waiting for response). An alternative unsealed access track to Lot 751 is present in the south, connecting to the Sandhills Road (Figure 2).

5. VEGETATION AND FLORA

Botanist Daniel Marsh undertook a Level 1 vegetation and flora survey of the Project Area on 11 November 2013. A complete survey report is provided as Appendix 1. The survey identified two vegetation communities occurring in the Project Area. The first community comprised open woodland of *Eucalyptus marginata* over a low open woodland of *Nuytsia floribunda*, *Xylomelum occidentale* or *Banksia* spp. over *Xanthorrhoea preissii*, *Dasypogon bromeliifolius* and *Patersonia* spp. The second community comprised low open woodland of *Nuytsia floribunda* and/or *Eucalyptus marginata* over a tall shrubland of *Kunzea glabrescens* over various weed species and the occasional native shrub. The two vegetation communities were similar, with the second one occurring in more degraded parts of the survey area. Both vegetation communities are well represented in the general area and Lot 751 is not considered significant as a remnant of native vegetation that has been extensively cleared. There are no known records of threatened ecological communities in the local area (10 km radius).

The vegetation and flora survey included a search for potential conservation significant species, including both Threatened and Priority species. Database searches identified 29 Threatened and Priority species as potentially occurring in the local area as listed in the survey report (Appendix 1). Search of the Project Area found three locations of *Acacia semitrullata* (Priority 4) presented in Figure 1 of Appendix 1. No other Priority species or any Threatened species were recorded. Priority 4 taxa are defined as species that have been adequately surveyed and that are currently not considered threatened, but that may become threatened in the future if circumstances change and as such these species are in need of monitoring. Generally the presence of Priority 4 taxa does not prevent obtaining a Clearing Permit for the area, although any future extractive operations should try to avoid the recorded individuals of *Acacia semitrullata* where possible.

Vegetation condition was assessed as part of the vegetation survey and the results are presented in Figure 2 of Appendix 1. Vegetation condition varied from completely degraded in the northern portion of the Project Area to very good and excellent in the southern parts of the property. The majority of the property was rated as degraded. It is considerably easier to obtain a Clearing Permit for vegetation in degraded condition than for vegetation in excellent condition. Considering that the area also forms part of an ecological linkage (see Section 6), retention of vegetation that is in excellent and very good condition should be considered in preparation of a Clearing Permit application.

Any Clearing Permit granted for the Project Area is likely to include a condition requiring revegetation of all working areas following completion of sand extraction. Such revegetation condition has been placed on all granted Clearing Permits in the local area.

6. ECOLOGICAL LINKAGES

The Project Area and surrounds form part of the South West Regional Ecological Linkages area. Lot 751 is located less than 100 m from the linkage line that roughly follows the Preston River and is thus classified as a 1a (core linkage) remnant. Impacts on ecological linkages are assessed as part of the Clearing Permit application process. Department of Environment Regulation (DER) has granted a clearing permit (CPS 3451) for a neighbouring property that also contributed to the linkage. In that proposal, clearing was limited to vegetation in

degraded condition, with vegetation in good condition being retained. Further, revegetation of cleared areas following completion of extractive operations was required.

7. CONSERVATION AREAS

The closest conservation area to Lot 751 is an unnamed nature reserve (R26238) approximately 500 m to the south. This reserve is managed by the Conservation Commission for the Purpose of conserving flora and fauna. Further, the Boyanup State Forest, Wellington State Forest and a Conservation Commission timber reserve are located within 5 km of Lot 751. Potential extractive operations on Lot 751 are unlikely to directly impact on any conservation area; however DER may raise the issue of indirect impacts via degradation of local ecological linkages.

8. WEEDS

The vegetation survey recorded several weed species, including one declared pest species *Asparagus asparagoides* (Bridal Creeper). Under the *Biosecurity and Agriculture Management Act 2007* (the BAM Act), all declared pests are placed in one of three categories, namely C1 (exclusion), C2 (eradication) or C3 (management). Bridal Creeper is a C3 species meaning that the species is established in Western Australia but it is feasible, or desirable, to manage them in order to limit their damage. Control measures can prevent a C3 pest from increasing in population size or density or moving from an area in which it is established into an area which currently is free of that pest. It is recommended that a weed management plan is prepared as part of any future extractive operations, in order to minimise the spread of weeds within the property and into other areas.

9. DIEBACK

Phytophthora dieback (mostly *P. cinnamomi*) is known to occur in the general area. No dieback survey has been undertaken on Lot 751. Some dieback susceptible species on the property (e.g. Jarrah and Banksia) appear to be in poor health or are dying, however other cause factors such as drought, pests and other diseases cannot be ruled out.

Some clients purchasing sand may ask for evidence that the sand resource is dieback free. The most feasible way to provide such evidence is to undertake a dieback survey of the property prior to vegetation clearing as such a survey involves sampling of vegetation. Dieback status of areas that have already been cleared of vegetation cannot be verified and are described as uninterpretable.

10. FAUNA

Zoologist Greg Harewood undertook Level 1 fauna assessment of the Project Area with field survey on 5 November 2013. A targeted assessment of the site for Western Ringtail Possum and several species of Black Cockatoos was also undertaken. These species are significant as they are protected by the Western Australian *Wildlife Conservation Act 1950* and the commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and are known to occur in the general area. A complete survey report is provided as Appendix 2, including results of database searches undertaken to build an inventory of species potentially occurring in the Project Area.

The field survey found evidence of three listed threatened species (Carnaby's and Baudin's black cockatoos and Forest red-tailed black cockatoo) and one migratory species (Rainbow bee-eater). No evidence of any priority species was recorded. The survey also found no evidence of Western Ringtail Possum and the vegetation within the Project Area was assessed as mostly unsuitable or at best marginal for this species. Rainbow bee-eater, recorded at the site is a common seasonal visitor to the general area and its presence in the Project Area is highly unlikely to impact on the success of any approval applications.

The confirmed occurrence of the three black cockatoo species in the Project Area is significant in terms of environmental approvals for an extractive project. Most of the remnant vegetation within the Project Area was found to represent foraging habitat for the black cockatoo species. Further, a habitat tree assessment was undertaken in line with guidelines from the commonwealth Department of Environment (DoE). The habitat tree

assessment identified 63 trees with diameter at breast height (DBH) of more than 50 cm (potential future nesting trees), with 24 of these trees containing visible hollows. Only four of these trees were considered to contain hollows large enough for black cockatoos and none of these hollows showed any evidence of past or present use. Locations of the habitat trees are presented in Figure 4 of Appendix 2.

The presence of black cockatoo foraging and nesting habitat in the Project Area is likely to trigger referral requirements to the DoE. Any future extractive operations should be planned taking into consideration the EPBC Act referral guidelines for three threatened black cockatoo species (available on the DoE website). Removal of habitat trees, particularly those with hollows large enough for black cockatoos should be avoided and disturbance of foraging vegetation (particularly vegetation in good or better condition) should be minimised. Disturbance of foraging or potential nesting habitat may require environmental offsets to be negotiated with the DoE.

The impacts of vegetation clearing on native fauna will also be assessed as part of the state Clearing Permit application process. It is recommended that vegetation clearing is limited to areas where vegetation condition is already poor and that areas in excellent and very good condition are retained. The quality of fauna habitat is generally directly related to the condition of the vegetation and consequently impacts on fauna can be minimised by limiting clearing on degraded areas.

11. SURFACE AND GROUNDWATER

No surface water is present within the Project Area. The closest expression of surface water to the Project Area is the Preston River approximately 700m to the north and the Thomson Brook approximately 1 km to the east. Potential extractive operations within the Project Area would be very unlikely to impact on either system.

Aquifers in the area have been described as unconfined and localised (Department of Water, Hydrogeological Atlas 2013). The Water Information Reporting tool by Department of Water was used to identify bores in the vicinity of the Project Area and obtain available information on groundwater levels. Only one potentially relevant bore was identified, located approximately 500 m to the northeast of the Project Area on Lot 34. The only groundwater level data for this bore is from 30 September 1989, when standing water level was found to be 12.1 m below ground level, equating to approximately 78 mAHD.

Groundwater level within the Project Area is uncertain and may need to be verified further. In accordance with Department of Water guidelines, sand extraction is required to remain at least 2 m above the maximum groundwater level in order to protect the groundwater resource. It is noted that sand extraction on adjacent Lot 74, located to the west of the Project Area, has not intersected the groundwater table and it is thus unlikely that operations within the Project Area would do so. Groundwater salinity in the general area has been estimated as TDS 0-1,000 mg/L which is defined under water quality guidelines/standards as fresh water.

12. LANDFORM

Approximate landform contours are presented in Figure 4. The elevations range from 95 mAHD to 120 mAHD, with majority of the Project Area sloping gently to the east-northeast.

13. OTHER CLEARING PERMITS

The following Clearing Permit applications were identified in the local area:

- CPS 934 - Shire of Donnybrook-Balingup, up to 26.9 ha, approved in 2007.
- CPS 3195 - Greenside enterprises, 0.1 ha, refused.
- CPS 3451 - TG and JD Sheenan, 3 ha, approved in 2010.
- CPS 4283 - G and S Delfino, 1 ha, approved in 2011.

Copies of these Clearing Permit decisions, including assessment reports, are available on the website of DER at http://der.wa.gov.au/your-environment/native-vegetation/27-clearing-permits.

14. REQUIREMENTS FOR EXTRACTIVE APPROVAL

The results of the feasibility assessment indicate the following in relation to the necessary extractive approvals:

- **Clearing Permit from Department of Environment Regulation:** Clearing Permit applications are assessed against ten clearing principles. Review of decision reports for other Clearing Permit applications in the local area indicate that depending on the scale of the proposed clearing within the Project Area, the proposal may be assessed as 'may be at variance' to some of the clearing principles, most possibly in relation to impacts on fauna and conservation areas. Overall the outlook for a Clearing Permit is viewed as positive due to Clearing Permits having been granted for other proposals in the local area comprising similar vegetation.
- **EPBC Approval from commonwealth Department of Environment:** Due to the presence of black cockatoo foraging habitat and potential breeding habitat within the Project Area, any proposal to clear vegetation for a sandpit will require referral to the DoE. Prior to such a referral, efforts should be made to plan the proposal so that impacts on black cockatoos are either avoided or minimised. Depending on the scale of residual impacts on the species, an environmental offset package may need to be developed. Offsets may include for example improving or re-establishing black cockatoo foraging and nesting habitat and placing land under conservation covenant. Overall the outlook for an EPBC approval is viewed as positive, as long as impacts on black cockatoos can be minimised and there is willingness to offer additional offsets if need be.
- **Extractive Industry Licence from Shire of Donnybrook-Balingup:** Contact has been made with Principal Planner Bob Wallin at the Shire in order to obtain preliminary feedback on feasibility of sand extraction on Lot 751 and response is expected in the next few weeks. On the basis of information available on zoning and landuse of Lot 751 and the surrounds, there appears to be no barriers to sand extraction on Lot 751. Sand extraction has occurred on several of the neighbouring properties, which indicates that sand extraction has been found to be an acceptable landuse in the local area.

15. POTENTIAL EXTRACTIVE AREA

On the basis of the findings of the vegetation and flora survey, the fauna survey and the desktop assessment, the most feasible areas (High Feasibility) with respect to clearing vegetation and avoiding impacts to conservation significant fauna and habitat within the Project Area are the degraded areas as presented in Figure 5. The selected area avoids the four trees with significant hollows and excludes the southern portion of the Project Area that was found to have high environmental values (Low Feasibility). The High Feasibility area would have minimal impact on the environment and should minimise the need for environmental offsets.

A Potential Extractive Area of approximately 14.5 ha has been delineated (Figure 5) which incorporates most of the degraded areas and some of the intact vegetation. The area maximises the potential sand resource within the southern portion of Lot 751 while minimising the impact (less than 46%) on the intact higher value vegetation and habitat.

It may also be desirable to pursue an exemption to the setback along the western boundary of the Potential Extractive Area. On the western side, there is an old sandpit on Lot 74 (P23472) and connecting this old pit with the proposed sandpit on Lot 751 would achieve a more even and stable post-extraction landform across the area. There is a narrow strip of land between Lot 751 and Lot 74 that forms part of Lot 3122 (D12025) and an agreement would also need to be reached on the associated sand resource with the land owner Shire of Donnybrook-Balingup.

Another option to explore would be the potential to resume or arrange a land swap of the southern portion of Lot 3122 which appears not to be used by the Horseman's Club. This would provide additional degraded land for clearing and extraction.

MBS Environmental has experience in obtaining environmental and other approvals required by extractive industry operations, including handling of potential appeal processes and negotiating of environmental offset agreements. Please do not hesitate to contact us should you require any further assistance with this project.

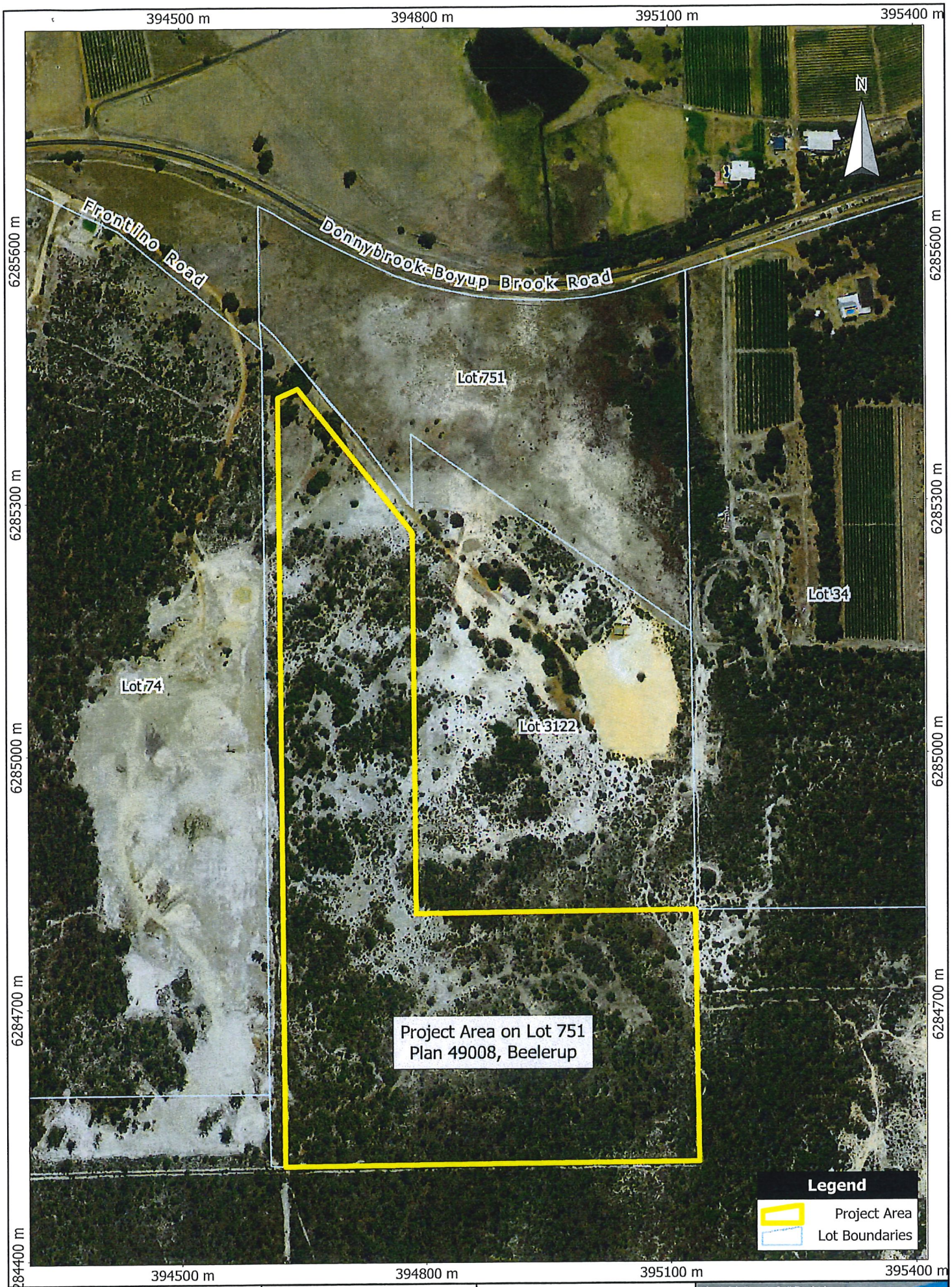
Yours sincerely
MBS Environmental

Kirsi Kauhanen
Senior Environmental Scientist

enc. Figure 1: Project Area
Figure 2: Zoning
Figure 3: Sensitive Premises
Figure 4: Landform Contours
Figure 5: Feasibility Assessment

Appendix 1: Level 1 Flora Survey
Appendix 2: Fauna Assessment

Figures



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Frontino and Family
Lot 751 Plan 49008 Beelerup
Environmental Feasibility Assessment

Figure 1

Project Area

Martinick Bosch Sell Pty Ltd
4 Cook St
West Perth WA 6005
Ph: (08) 9226 3166
Fax: (08) 9226 3177
info@mbsenvironmental.com.au
www.mbsenvironmental.com.au

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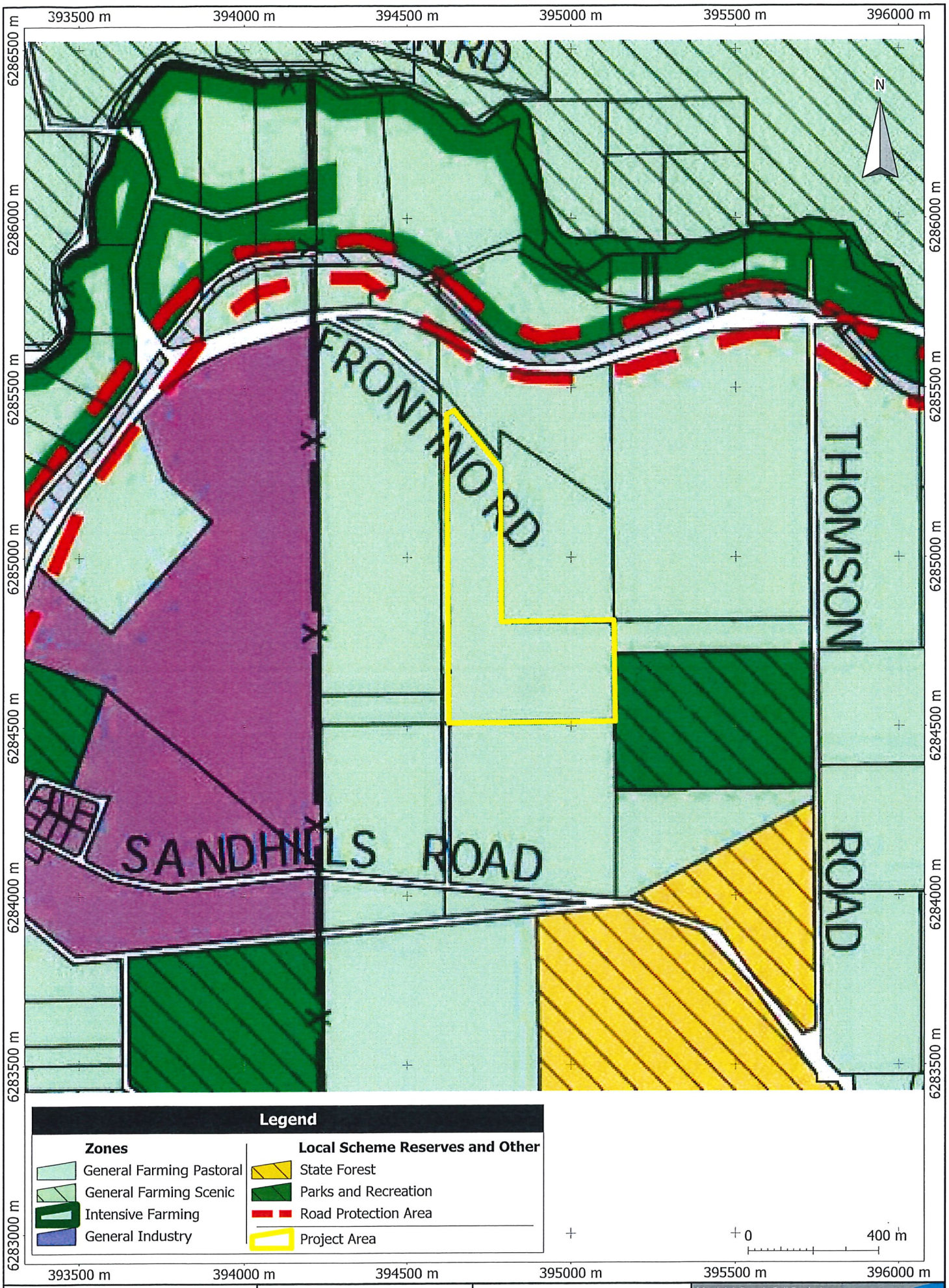

Scale: 1:15000 Original Size: A4 Grid: MGA94(50) Source: Shire of Donnybrook-Balingup Town Planning Scheme No 4.	Frontino and Family Lot 751 Plan 49008 Beelerup Environmental Feasibility Assessment	**Figure 2** **Zoning**	Martinick Bosch Sell Pty Ltd 4 Cook St West Perth WA 6005 Ph: (08) 9226 3166 Fax: (08) 9226 3177 info@mbsenvironmental.com.au www.mbsenvironmental.com.au MBS ENVIRONMENTAL

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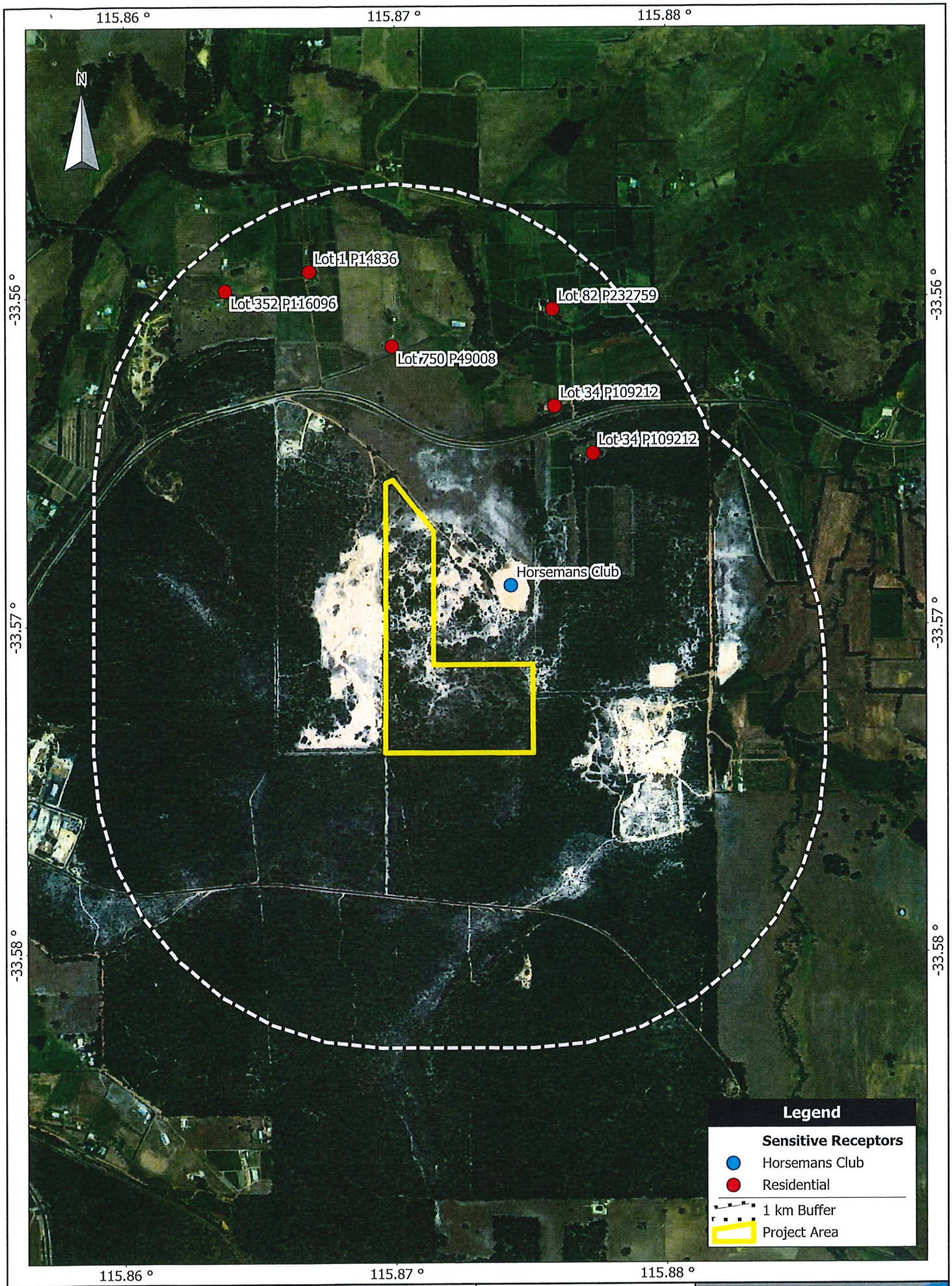

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Figure 3

Sensitive Receptors

Martinick Bosch Sell Pty Ltd
4 Cook St
West Perth WA 6005
Ph: (08) 9226 3166
Fax: (08) 9226 3177
info@mbsenvironmental.com.au
www.mbsenvironmental.com.au

MBS ENVIRONMENTAL

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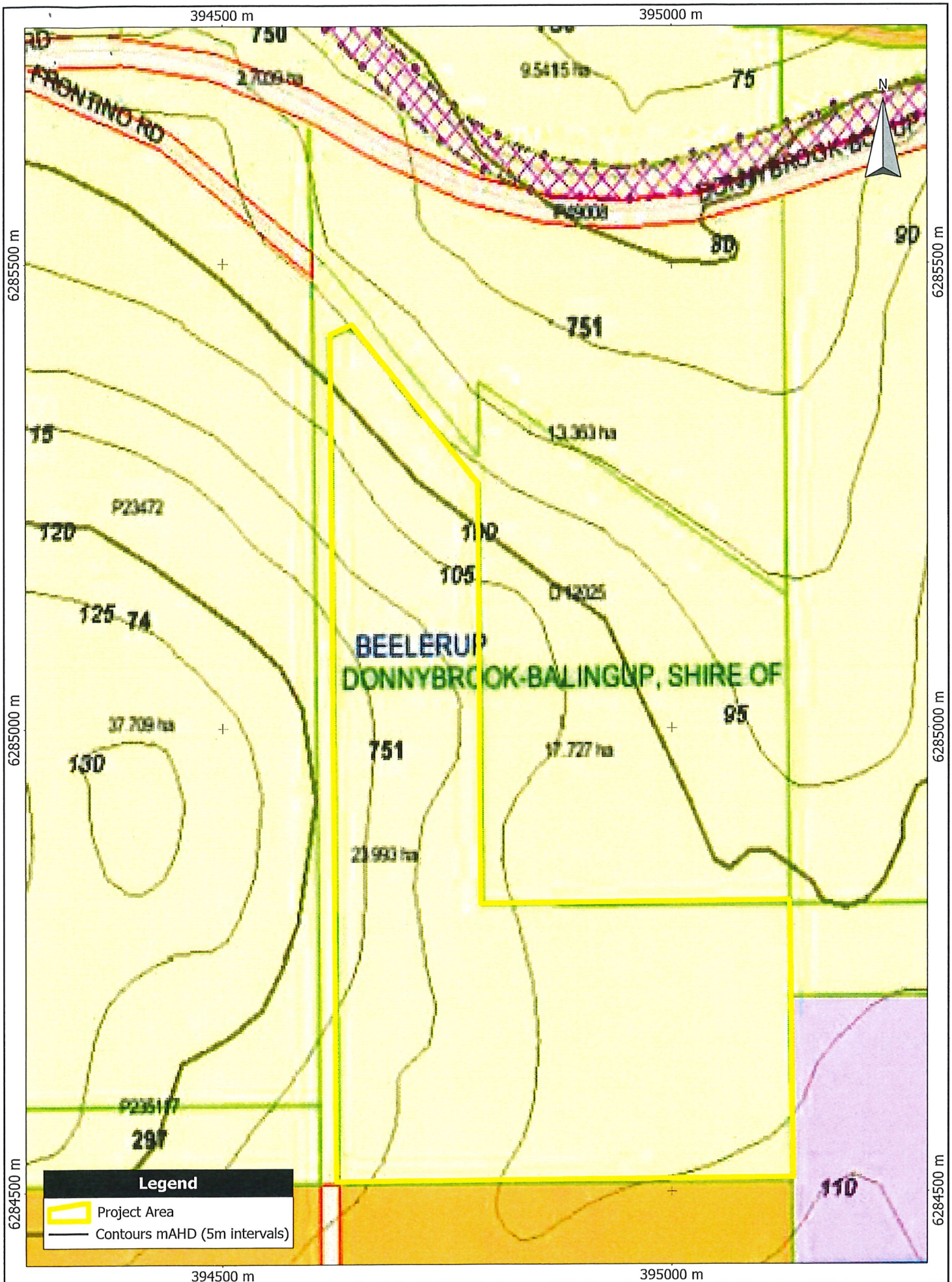

Scale: 1:5500 Original Size: A4 Grid: MGA94(50) Source: Landgate 0 100 m	Frontino and Family Lot 751 Plan 49008 Beelerup Environmental Feasibility Assessment	**Figure 4** **Landform Contours**	Martinick Bosch Sell Pty Ltd 4 Cook St West Perth WA 6005 Ph: (08) 9226 3166 Fax: (08) 9226 3177 info@mbsenvironmental.com.au www.mbsenvironmental.com.au MBS ENVIRONMENTAL

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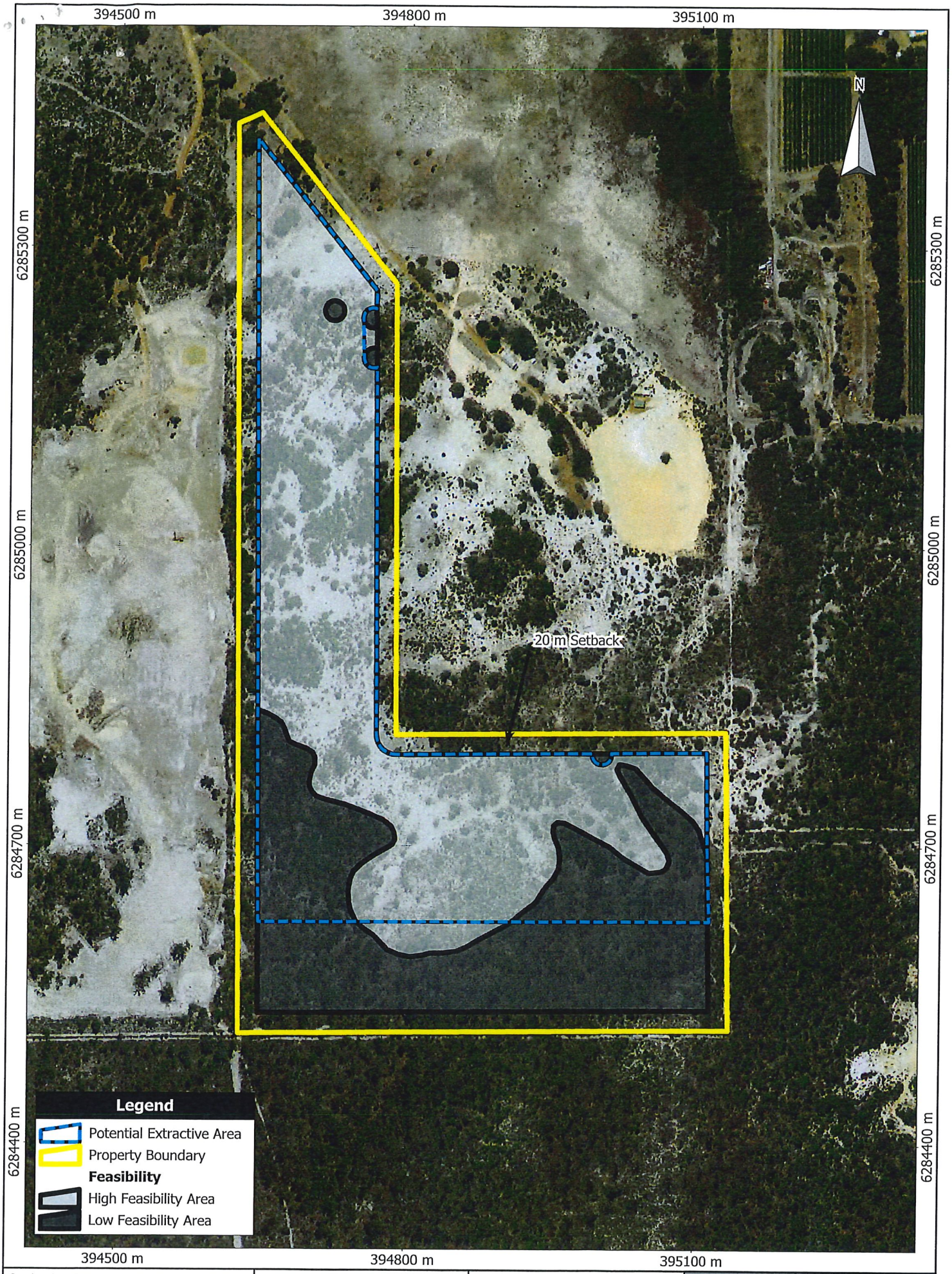

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Frontino and Family
Lot 751 Plan 49008 Beelerup
Environmental Feasibility Assessment

Figure 5

Feasibility Assessment

Martinick Bosch Sell Pty Ltd
4 Cook St
West Perth WA 6005
Ph: (08) 9226 3166
Fax: (08) 9226 3177
info@mbsenvironmental.com.au
www.mbsenvironmental.com.au

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