

# Great Central Road Warburton & Warakurna Biological Survey Addendum

Prepared for



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Prepared by



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Cover Photo: Great Central Road survey area vegetation (taken 1<sup>st</sup> November 2021)

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## Contents

<b>1 INTRODUCTION</b>	<b>1</b>
1.1 Objectives	1
<b>2 Methodology</b>	<b>3</b>
<b>3 Results</b>	<b>4</b>
3.1 Vegetation Types	4
3.2 Vegetation Condition	12
3.3 Fauna Habitat	13
3.4 Significant Flora	16
3.5 Significant Fauna	18
<b>4 Conclusions</b>	<b>20</b>
<b>5 References</b>	<b>21</b>

## Tables

Table 3-1: Summary of vegetation types within the survey area	5
Table 3-2: Vegetation assemblage for Low woodland of <i>Acacia aptaneura</i> / <i>A. incurvaneura</i> / <i>A. paraneura</i> over mid shrubland of <i>Eremophila latrobei</i> / <i>Ptilotus obovatus</i> / <i>Senna artemisioides</i> and tussock grassland of <i>Aristida contorta</i> / <i>Eragrostis eriopoda</i> on clay-loam plain	6
Table 3-3: Vegetation assemblage for Low woodland of <i>Acacia caesaneura</i> / <i>A. incurvaneura</i> over mid shrubland of <i>Eremophila latrobei</i> / <i>Senna artemisioides</i> and low shrubland of <i>Ptilotus obovatus</i> on clay-loam plain	7
Table 3-4: Vegetation assemblage for Mid woodland of <i>Corymbia opaca</i> over low woodland of <i>Acacia incurvaneura</i> and tussock grassland of <i>Aristida contorta</i> on clay-loam plain	8
Table 3-5: Vegetation assemblage for Mid woodland of <i>Eucalyptus camaldulensis</i> subsp. <i>obtusa</i> over mid shrubland of <i>Acacia victoriae</i> subsp. <i>victoriae</i> / <i>Eremophila longifolia</i> and tussock grassland of <i>Cenchrus ciliaris</i> in drainage line	9
Table 3-6: Vegetation assemblage for Low woodland <i>Acacia incurvaneura</i> / <i>A. pruinocarpa</i> over <i>Eremophila latrobei</i> / <i>Acacia paraneura</i> and hummock grassland of <i>Triodia basedowii</i> / <i>T. melvillei</i> on sandplain	10
Table 3-7: Vegetation assemblage for Mid mallee woodland of <i>Eucalyptus gamophylla</i> over low woodland of <i>Acacia paraneura</i> and hummock grassland of <i>Triodia basedowii</i> on sandplain	11
Table 3-8: Vegetation condition rating within the survey area	12
Table 3-9: Main terrestrial fauna habitats within the survey area	14
Table 3-10: Significant flora likelihood of occurrence-extrapolation area	17
Table 3-11: Significant fauna likelihood of occurrence	18

## Figures

Figure 1-1: Regional location of the total survey area	2
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## Plates

Plate 3-1: Low woodland of <i>Acacia aptaneura</i> / <i>A. incurvaneura</i> / <i>A. paraneura</i> over mid shrubland of <i>Eremophila latrobei</i> / <i>Ptilotus obovatus</i> / <i>Senna artemisioides</i> and tussock grassland of <i>Aristida contorta</i> / <i>Eragrostis eriopoda</i> on clay-loam plain .....	6
Plate 3-2: Low woodland of <i>Acacia caesaneura</i> / <i>A. incurvaneura</i> over mid shrubland of <i>Eremophila latrobei</i> / <i>Senna artemisioides</i> and low shrubland of <i>Ptilotus obovatus</i> on clay-loam plain .....	7
Plate 3-3: Mid woodland of <i>Corymbia opaca</i> over low woodland of <i>Acacia incurvaneura</i> and tussock grassland of <i>Aristida contorta</i> on clay-loam plain.....	8
Plate 3-4: Mid woodland of <i>Eucalyptus camaldulensis</i> subsp. <i>obtusa</i> over mid shrubland of <i>Acacia victoriae</i> subsp. <i>victoriae</i> / <i>Eremophila longifolia</i> and tussock grassland of <i>Cenchrus ciliaris</i> in drainage line .....	9
Plate 3-5: Low woodland <i>Acacia incurvaneura</i> / <i>A. pruinocarpa</i> over <i>Eremophila latrobei</i> / <i>Acacia paraneura</i> and hummock grassland of <i>Triodia basedowii</i> / <i>T. melvillei</i> on sandplain.....	10
Plate 3-6: Mid mallee woodland of <i>Eucalyptus gamophylla</i> over low woodland of <i>Acacia paraneura</i> and hummock grassland of <i>Triodia basedowii</i> on sandplain.....	11
Plate 3-7: <i>Seringia exastia</i> .....	16

## Appendices

Appendix A: Vegetation Type Maps .....	22
Appendix B: Vegetation Condition Maps .....	23
Appendix C: Fauna Habitat Maps.....	42
Appendix D: Significant Flora and Fauna Records .....	52

## 1 INTRODUCTION

Botanica Consulting Pty Ltd (Botanica) conducted a previous biological survey of the Great Central Road (The Outback Way) Road number 6120015 realignment upgrades (the Project), *Great Central Road Warburton & Warakurna Biological Survey* (Botanica, 2022). Following this initial survey, changes to the road design has resulted in some areas of the revised Development Envelope not being covered by flora and fauna field surveys. As such, Main Roads Western Australia (Main Roads) commissioned Botanica to conduct extrapolation of mapping data adjacent to previous biological surveys to delineate vegetation association, vegetation condition and fauna habitat within the Warburton section of the Outback Way SLK 538.6 – 559 Development Envelope (referred to as the 'extrapolation area'). The total survey area (encompassing the existing field survey area and extrapolation area) is shown in Figure 1-1 and is approximately 887 ha in extent.

### 1.1 Objectives

The objectives of the assessment were to:

1. Extrapolate mapping of vegetation types, vegetation condition and fauna habitat identified during the existing field survey to include the revised Development Envelope within the Warburton section of the Outback Way SLK 538.6 – 559 (referred to as the 'extrapolation area');
2. Describe the vegetation types, vegetation condition and fauna habitat within the total survey area;
3. Complete a likelihood of occurrence assessment for all significant flora and fauna taxa previously identified in Botanica's field surveys to be present within the extrapolation area; and
4. Described the status of the Commonwealth listed Threatened Flora taxon, *Seringia exastia* previously identified in Botanica's field surveys including a likelihood of impact from the Project development on this taxon.



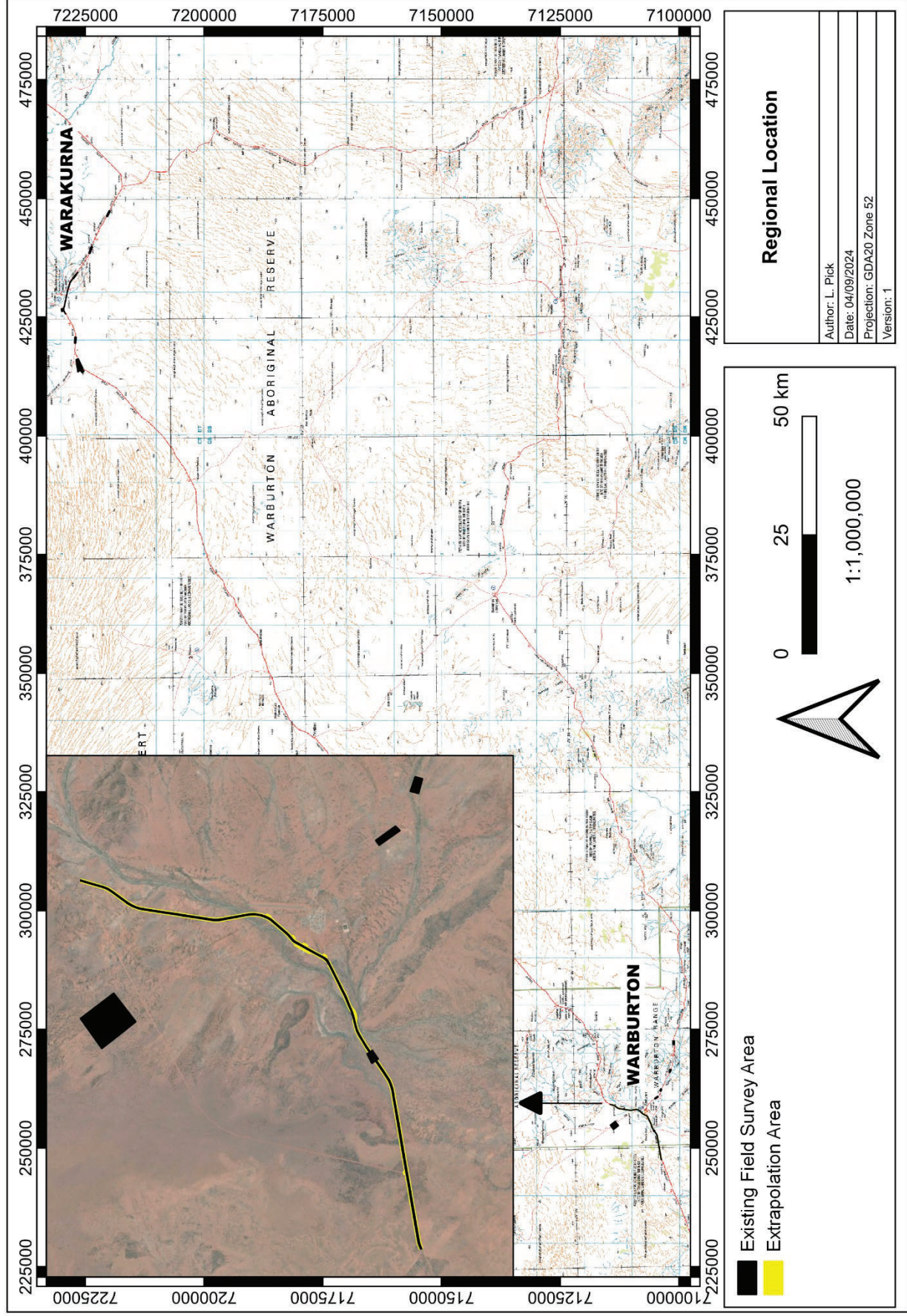


Figure 1-1: Regional location of the total survey area

## 2 METHODOLOGY

Existing vegetation type, fauna habitat and vegetation condition spatial mapping conducted from the Botanica field survey was overlayed on aerial imagery to identify visual similarities in vegetation in the extrapolation area to those mapped from the field assessment.

Vegetation types were classified in accordance with the NVIS Level V-Association classification.

### 3 RESULTS

#### 3.1 Vegetation Types

A total of six vegetation types (not including cleared vegetation) were identified within the existing field survey area, four of which were identified within the extrapolation area. These four vegetation types were located within three landform types and comprised of three major vegetation groups. Maps showing the vegetation types present in the survey area are provided in Appendix A. A summary of vegetation types is presented in Table 3-1.

None of these vegetation types were representative or occur within any known Threatened Ecological Community listed under the Commonwealth *Environment Protection Biodiversity Conservation Act 1999* (EPBC Act) or the Western Australian *Biodiversity Conservation Act 2016* (BC Act). None of these vegetation communities were representative or occur within any known Priority Ecological Community listed by DBCA.



Table 3-1: Summary of vegetation types within the survey area

Landform	NVIS Major Vegetation Group	Vegetation Type	Vegetation Code	Existing Field Survey (ha)	Extrapolation Area (ha)	Total Area (ha)	Total Area (%)
Clay-Loam Plain	Acacia Forest and Woodland (MVG 6)	Low woodland of <i>Acacia aptaneura</i> / <i>A. incurvaneura</i> / <i>A. paraneura</i> over mid shrubland of <i>Eremophila latrobei</i> / <i>Ptilotus obovatus</i> / <i>Senna artemisioides</i> and tussock grassland of <i>Aristida contorta</i> / <i>Eragrostis eriopoda</i> on clay-loam plain	CLP-AFW1	237	67	304	34.3
		Low woodland of <i>Acacia caesaneura</i> / <i>A. incurvaneura</i> over mid shrubland of <i>Eremophila latrobei</i> / <i>Senna artemisioides</i> and low shrubland of <i>Ptilotus obovatus</i> on clay-loam plain	CLP-AFW2	67	0	67	7.5
Open Depression	Other Forest and Woodland (MVG 10)	Mid woodland of <i>Corymbia opaca</i> over low woodland of <i>Acacia incurvaneura</i> and tussock grassland of <i>Aristida contorta</i> on clay-loam plain	CLP-OFW1	48	5	53	6.0
		Mid woodland of <i>Eucalyptus camaldulensis</i> subsp. <i>obtusa</i> over mid shrubland of <i>Acacia victoriae</i> subsp. <i>victoriae</i> / <i>Eremophila longifolia</i> and tussock grassland of <i>Cenchrus ciliaris</i> in drainage line	OD-EW1	2	8	10	1.1
Sandplain	Acacia Forest and Woodland (MVG 6)	Low woodland <i>Acacia incurvaneura</i> / <i>A. pruinocarpa</i> over <i>Eremophila latrobei</i> / <i>Acacia paraneura</i> and hummock grassland of <i>Triodia basedowii</i> / <i>T. melvillei</i> on sandplain	SP-AFW1	121	24	145	16.3
		Mid mallee woodland of <i>Eucalyptus gamophylla</i> over low woodland of <i>Acacia paraneura</i> and hummock grassland of <i>Triodia basedowii</i> on sandplain	SP-MWS1	212	0	212	23.9
N/A	N/A	Cleared Vegetation	CV	92	4	96	10.9
Total						887	100

### **Clay-Loam Plain: Acacia Forest and Woodland**

#### **3.1.1 Low woodland of *Acacia aptaneura*/ *A. incurvaneura*/ *A. paraneura* over mid shrubland of *Eremophila latrobei*/ *Ptilotus obovatus*/ *Senna artemisioides* and tussock grassland of *Aristida contorta*/ *Eragrostis eriopoda* on clay-loam plain (CLP-AFW1)**

The total flora recorded within this vegetation type was represented by a total of 14 families, 27 genera and 48 taxa (Plate 3-1 and Table 3-2). Dominant taxa from the vegetation type are shown in Table 3-2. According to the NVIS, this vegetation type is best represented by the MVG 6 – Acacia Forest and Woodland (DotEE, 2017).

**Table 3-2: Vegetation assemblage for Low woodland of *Acacia aptaneura*/ *A. incurvaneura*/ *A. paraneura* over mid shrubland of *Eremophila latrobei*/ *Ptilotus obovatus*/ *Senna artemisioides* and tussock grassland of *Aristida contorta*/ *Eragrostis eriopoda* on clay-loam plain**

Life Form/Height Class	Canopy Cover	Dominant Taxa
Tree <10m	10-30%	<i>Acacia aptaneura</i> <i>Acacia incurvaneura</i> <i>Acacia paraneura</i>
Shrub 1-2m	30-70%	<i>Eremophila latrobei</i> subsp. <i>glabra</i> <i>Eremophila latrobei</i> subsp. <i>latrobei</i> <i>Ptilotus obovatus</i> <i>Senna artemisioides</i> subsp. <i>x artemisioides</i> <i>Senna artemisioides</i> subsp. <i>filifolia</i>
Tussock Grass <1m	30-70%	<i>Aristida contorta</i> <i>Eragrostis eriopoda</i>



**Plate 3-1: Low woodland of *Acacia aptaneura*/ *A. incurvaneura*/ *A. paraneura* over mid shrubland of *Eremophila latrobei*/ *Ptilotus obovatus*/ *Senna artemisioides* and tussock grassland of *Aristida contorta*/ *Eragrostis eriopoda* on clay-loam plain**



### 3.1.2 Low woodland of *Acacia caesaneura*/ *A. incurvaneura* over mid shrubland of *Eremophila latrobei*/ *Senna artemisioides* and low shrubland of *Ptilotus obovatus* on clay-loam plain (CLP-AFW2)

The total flora recorded within this vegetation type was represented by a total of 12 families, 20 genera and 28 taxa (Plate 3-2 and Table 3-3). Dominant taxa from the vegetation type are shown in Table 3-3. According to the NVIS, this vegetation type is best represented by the MVG 6 – Acacia Forest and Woodland (DotEE, 2017).

**Table 3-3: Vegetation assemblage for Low woodland of *Acacia caesaneura*/ *A. incurvaneura* over mid shrubland of *Eremophila latrobei*/ *Senna artemisioides* and low shrubland of *Ptilotus obovatus* on clay-loam plain**

Life Form/Height Class	Canopy Cover	Dominant Taxa
Tree <10m	10-30%	<i>Acacia caesaneura</i> <i>Acacia incurvaneura</i>
Shrub 1-2m	30-70%	<i>Eremophila latrobei</i> subsp. <i>glabra</i> <i>Eremophila latrobei</i> subsp. <i>latrobei</i> <i>Senna artemisioides</i> subsp. <i>x artemisioides</i> <i>Senna artemisioides</i> subsp. <i>filifolia</i>
Shrub <1m	10-30%	<i>Ptilotus obovatus</i>



**Plate 3-2: Low woodland of *Acacia caesaneura*/ *A. incurvaneura* over mid shrubland of *Eremophila latrobei*/ *Senna artemisioides* and low shrubland of *Ptilotus obovatus* on clay-loam plain**



### **Clay-Loam Plain: Other Forest and Woodland**

#### **3.1.3 Mid woodland of *Corymbia opaca* over low woodland of *Acacia incurvaneura* and tussock grassland of *Aristida contorta* on clay-loam plain (CLP-OFW1)**

The total flora recorded within this vegetation type was represented by a total of 10 families, 15 genera and 21 taxa (Plate 3-3 and Table 3-4). Dominant taxa from the vegetation type are shown in Table 3-4. According to the NVIS, this vegetation type is best represented by the MVG 10 – Other Forest and Woodland (DotEE, 2017).

**Table 3-4: Vegetation assemblage for Mid woodland of *Corymbia opaca* over low woodland of *Acacia incurvaneura* and tussock grassland of *Aristida contorta* on clay-loam plain**

Life Form/Height Class	Canopy Cover	Dominant Taxa
Tree >10m	10-30%	<i>Corymbia opaca</i>
Tree <10m	10-30%	<i>Acacia incurvaneura</i>
Tussock Grass <1m	30-70%	<i>Aristida contorta</i>



**Plate 3-3: Mid woodland of *Corymbia opaca* over low woodland of *Acacia incurvaneura* and tussock grassland of *Aristida contorta* on clay-loam plain**



### **Open Depression: Eucalypt Woodland**

#### **3.1.4 Mid woodland of *Eucalyptus camaldulensis* subsp. *obtusa* over mid shrubland of *Acacia victoriae* subsp. *victoriae*/ *Eremophila longifolia* and tussock grassland of *Cenchrus ciliaris* in drainage line (OD-EW1)**

The total flora recorded within this vegetation type was represented by a total of 8 families, 9 genera and 10 taxa (Plate 3-4 and Table 3-5). Dominant taxa from the vegetation type are shown in Table 3-5. According to the NVIS, this vegetation type is best represented by the MVG 5 – Eucalypt Woodland (DotEE, 2017).

**Table 3-5: Vegetation assemblage for Mid woodland of *Eucalyptus camaldulensis* subsp. *obtusa* over mid shrubland of *Acacia victoriae* subsp. *victoriae*/ *Eremophila longifolia* and tussock grassland of *Cenchrus ciliaris* in drainage line**

Life Form/Height Class	Canopy Cover	Dominant Taxa
Tree >10m	10-30%	<i>Eucalyptus camaldulensis</i> subsp. <i>obtusa</i>
Shrub 1-2m	30-70%	<i>Acacia victoriae</i> subsp. <i>victoriae</i> <i>Eremophila longifolia</i>
Tussock Grass <1m	30-70%	<i>Cenchrus ciliaris</i>



**Plate 3-4: Mid woodland of *Eucalyptus camaldulensis* subsp. *obtusa* over mid shrubland of *Acacia victoriae* subsp. *victoriae*/ *Eremophila longifolia* and tussock grassland of *Cenchrus ciliaris* in drainage line**

### **Sandplain: Acacia Forest and Woodland**

#### **3.1.5 Low woodland *Acacia incurvaneura*/ *A. pruinocarpa* over *Eremophila latrobei*/ *Acacia paraneura* and hummock grassland of *Triodia basedowii*/ *T. melvillei* on sandplain (SP-AFW1)**

The total flora recorded within this vegetation type was represented by a total of 12 families, 20 genera and 32 taxa (Plate 3-5 and Table 3-6). Dominant taxa from the vegetation type are shown in Table 3-6. According to the NVIS, this vegetation type is best represented by the MVG 6 – Acacia Forest and Woodland (DotEE, 2017).

**Table 3-6: Vegetation assemblage for Low woodland *Acacia incurvaneura*/ *A. pruinocarpa* over *Eremophila latrobei*/ *Acacia paraneura* and hummock grassland of *Triodia basedowii*/ *T. melvillei* on sandplain**

Life Form/Height Class	Canopy Cover	Dominant Taxa
Tree <10m	10-30%	<i>Acacia incurvaneura</i> <i>Acacia pruinocarpa</i>
Shrub >2m	10-30%	<i>Acacia paraneura</i>
Shrub 1-2m	10-30%	<i>Eremophila latrobei</i> subsp. <i>glabra</i> <i>Eremophila latrobei</i> subsp. <i>latrobei</i>
Hummock Grass <1m	30-70%	<i>Triodia basedowii</i> <i>Triodia melvillei</i>



**Plate 3-5: Low woodland *Acacia incurvaneura*/ *A. pruinocarpa* over *Eremophila latrobei*/ *Acacia paraneura* and hummock grassland of *Triodia basedowii*/ *T. melvillei* on sandplain**



## **Sandplain: Mallee Woodland and Shrubland**

### **3.1.6 Mid mallee woodland of *Eucalyptus gamophylla* over low woodland of *Acacia paraneura* and hummock grassland of *Triodia basedowii* on sandplain (SP-MWS1)**

The total flora recorded within this vegetation type was represented by a total of 11 families, 17 genera and 19 taxa (Plate 3-6 and Table 3-7). Dominant taxa from the vegetation type are shown in Table 3-7. According to the NVIS, this vegetation type is best represented by the MVG 13 – Mallee Woodland and Shrubland (DotEE, 2017).

**Table 3-7: Vegetation assemblage for Mid mallee woodland of *Eucalyptus gamophylla* over low woodland of *Acacia paraneura* and hummock grassland of *Triodia basedowii* on sandplain**

Life Form/Height Class	Canopy Cover	Dominant Taxa
Tree Mallee <10m	10-30%	<i>Eucalyptus gamophylla</i>
Tree <10m	10-30%	<i>Acacia paraneura</i>
Hummock Grass <1m	30-70%	<i>Triodia basedowii</i>



**Plate 3-6: Mid mallee woodland of *Eucalyptus gamophylla* over low woodland of *Acacia paraneura* and hummock grassland of *Triodia basedowii* on sandplain**

### 3.2 Vegetation Condition

Based on the vegetation condition rating scale obtained from the EPA (2016), vegetation ranged from 'good' to 'very good' condition with the majority of vegetation in 'good' condition (Table 3-8). Majority of the exploration area (approximately 86%) was rated as being in 'good' condition.

Disturbance in the area was a result of recent and/ or frequent fires and road siding of the Great Central Road. Maps of the vegetation condition across the survey area are provided in Appendix B.

**Table 3-8: Vegetation condition rating within the survey area**



Condition rating	Description (EPA, 2016a)	Existing Field Survey (ha)	Extrapolation Area (ha)	Total Area (ha)	Area (%)
Very Good	Some relatively slight signs of damage caused by human activities since European settlement. For example, some signs of damage to tree trunks caused by repeated fire, the presence of some relatively non-aggressive weeds, or occasional vehicle tracks.	54	11	65	7.3
Good	More obvious signs of damage caused by human activity since European settlement, including some obvious impact on the vegetation structure such as that caused by low levels of grazing or slightly aggressive weeds.	633	93	726	82.0
Cleared Vegetation	Existing Clearing (Great Central Road)	92	4	96	10.9
<b>TOTAL</b>		<b>779</b>	<b>108</b>	<b>887</b>	<b>100</b>

### 3.3 Fauna Habitat

Three broad scale terrestrial fauna habitat (not including cleared vegetation) were identified within the field survey area, all of which were identified within the extrapolation area. The extent of the identified fauna habitat and a summary description is provided in Table 3-9 below. Maps of fauna habitats are provided in Appendix C.



Table 3-9: Main terrestrial fauna habitats within the survey area

Fauna Habitat	Description	Representative Attributes	Fauna	Conservation Significant Species that possibly occur in habitat	Example Image
<u>Clay-Loam Plain</u>  Acacia Woodland/ Corymbia Woodland  Existing Field Survey= 352 ha  <u>Extrapolation Area= 72 ha</u>  <u>Total Area= 424 ha (47.7%)</u>	Clay-loam plain comprising of Acacia/ Corymbia woodland over low mixed shrubs and tussock grassland	<ul style="list-style-type: none"><li>• Ground not especially suited to burrowing species.</li><li>• Moderately diverse vegetation strata supporting diverse avifauna assemblage.</li><li>• Moderately dense vegetation and low to moderate leaf litter.</li></ul>		<div>Grey Falcon <i>Falco hypoleucos</i></div> <div>Peregrine Falcon <i>Falco peregrinus</i></div>	
<u>Open Depression</u>  Eucalypt Woodland  Existing Field Survey= 2 ha  <u>Extrapolation Area= 8 ha</u>  <u>Total Area= 10 ha (1.1%)</u>	Ephemeral creekline comprising of Eucalypt woodland over low mixed shrubs and Buffel Grass	<ul style="list-style-type: none"><li>• Ground suited to burrowing species.</li><li>• Moderately diverse vegetation strata supporting diverse avifauna assemblage.</li><li>• Freshwater source during periods of high rainfall.</li><li>• Moderately dense vegetation and moderate to high leaf litter.</li></ul>	<div>Grey Falcon <i>Falco hypoleucos</i></div> <div>Princess Parrot <i>Polytelis alexandrae</i></div> <div>Peregrine Falcon <i>Falco peregrinus</i></div> <div>Striated Grasswren (inland) <i>Amytornis striatus</i> subsp. <i>striatus</i></div> <div>Great Desert Skink <i>Liopholis kintorei</i></div>		

Fauna Habitat	Description	Representative Attributes	Fauna	Conservation Significant Species that possibly occur in habitat	Example Image
<u>Sandplain</u> Acacia Woodland/ Mallee Woodland Existing Field Survey= 334 ha <u>Extrapolation</u> <u>Area= 23 ha</u> <u>Total Area= 357 ha</u> <u>(40.3%)</u>	Sandplain comprising of Acacia/ woodland over low mixed shrubs and spinifex grassland	<ul style="list-style-type: none"><li>• Substrate very well suited to a variety of burrowing small mammals and reptiles.</li><li>• Less diverse vegetation strata supporting a less diverse avifauna assemblage.</li></ul>		Grey Falcon <i>Falco hypoleucos</i>  Princess Parrot <i>Polytelis alexandrae</i>  Peregrine Falcon <i>Falco peregrinus</i>  Striated Grasswren (inland) <i>Amytornis striatus</i> subsp. <i>striatus</i>  Great Desert Skink <i>Liopholis kintorei</i>	



### 3.4 Significant Flora

One Threatened Flora taxon was recorded during the previous field assessment conducted by Botanica (2022); *Seringia exastia*. This taxon is described as an erect, compact, multi-stemmed shrub that can grow to 0.9 m high. The flowers are purple, the lobes ovate and 9–12 mm, and the flowering period is from April to December (WAHERB, 2024). Four locations of this taxon were recorded during the field survey roadside within the Low woodland *Acacia incurvaneura*/ *A. pruinocarpa* over *Eremophila latrobei*/ *Acacia paraneura* and hummock grassland of *Triodia basedowii*/ *T. melvillei* on sandplain (SP-AFW1) vegetation type. Given the presence of this vegetation type within the extrapolation area, and the fact that this taxon is now known as a common widespread taxon (as described below) it is considered likely this taxon may occur within the extrapolation area.

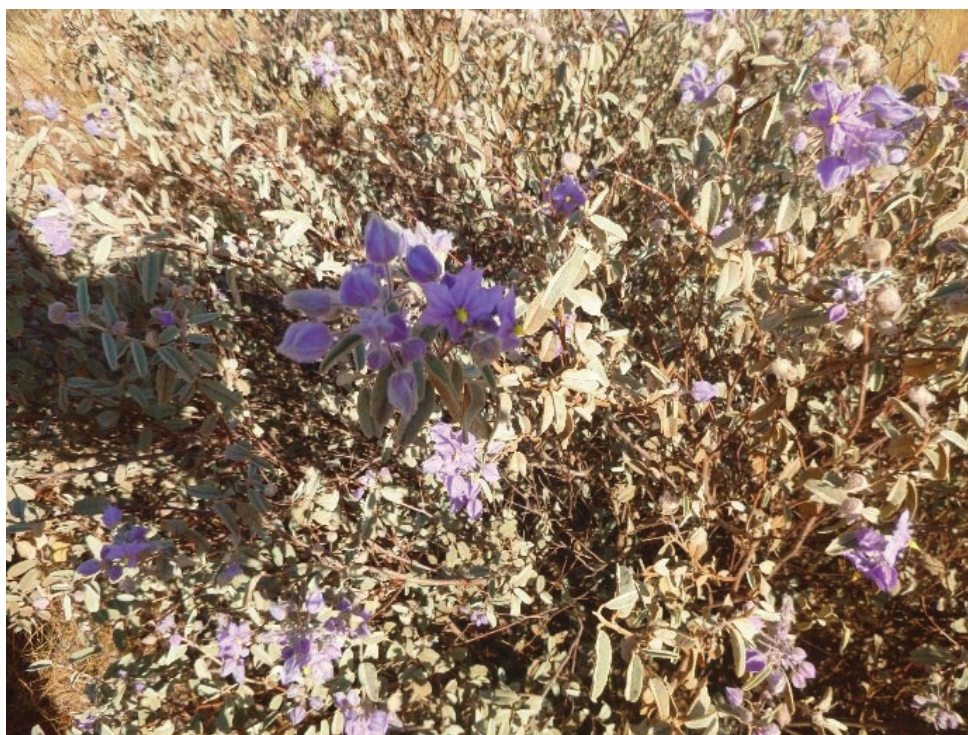


Plate 3-7: *Seringia exastia*

*Seringia exastia* is currently listed as Threatened (Critically Endangered) under the Commonwealth EPBC Act only; it was recently delisted from Threatened status in WA under the BC Act. The listing of this taxon as Threatened was supported by knowledge at the time of listing, which indicated that this taxon was discrete from all other *Seringia* taxa on morphological grounds and was known from a single population within the Port of Broome. Further taxonomic work determined that *Seringia exastia* is conspecific with (the same as) *Seringia elliptica*, which is widespread across northern and central WA, Northern Territory and extending into South Australia (Binks *et al.*, 2020). Consequently, *Seringia elliptica* and *Seringia exastia* were synonymised under the oldest valid name, being *Seringia exastia*. This synonymisation has created an anomalous situation whereby *Seringia exastia* as now circumscribed is a common, widespread species that clearly no longer meets the criteria for Threatened status under The EPBC Act or BC Act. It is expected that this taxon will be delisted on a Commonwealth level in the near future given its delisting in WA and is now considered a common and widespread species, but it is unclear when this will occur (Umwelt, 2022).

No other significant flora were identified during the field survey (Botanica, 2022) however six Priority Flora are considered as possible to occur within the extrapolation area based on habitat preferences as described in Table 3-10.

A map showing all known significant flora records (both Botanica and DBCA records) is provided in Appendix D.

**Table 3-10: Significant flora likelihood of occurrence-extrapolation area**

Taxon	Conservation Status	Habitat Description (DBCA, 2021a; WAHERB, 2024)	Comments	Likelihood of Occurrence
<i>Comesperma viscidulum</i>	P4	No description available.	Previously recorded ~210 km north-east of the extrapolation area, habitat requirements unknown	Possible
<i>Dicrastylis subterminalis</i>	P1	Red sand. By creeklines.	Previously recorded ~240 km north-east of the extrapolation area, habitat may be present	Possible
<i>Fuirena nudiflora</i>	P3	Sand. Swamps, creek beds.	Previously recorded ~200 km north-east of the extrapolation area, habitat may be present	Possible
<i>Goodenia gibbosa</i>	P3	Sandy soils.	Previously recorded approximately ~75 km of the extrapolation area, habitat may be present	Possible
<i>Tephrosia</i> sp. Central (P.K. Latz 17037)	P3	In creek bed, by rocky outcrop.	Previously recorded ~120 km north of the extrapolation area, habitat may be present	Possible
<i>Thysanotus</i> sp. Desert East of Newman (R.P. Hart 964)	P2	Red-brown loamy sand or red sand, sometimes silty. Sand plain, pisolitic buckshot plain.	Previously recorded ~30 km west of the extrapolation area, habitat may be present	Possible

### 3.5 Significant Fauna

No significant fauna were recorded during the previous field assessment conducted by Botanica (2022). As a result it is considered unlikely any significant fauna would be recorded within the extrapolated area.

The current status of some species on site and/or in the general area is difficult to determine, however, based on the habitats present and/ or recent nearby records, the following species of significance can be regarded as possibly occurring in the wider area (but not necessarily within the total survey area) as described in Table 3-11.

**Table 3-11: Significant fauna likelihood of occurrence**

Taxon	Conservation Status	Habitat Description	Comments	Likelihood of Occurrence
Grey Falcon <i>Falco hypoleucos</i>	Vulnerable (EPBC Act and BC Act)	The Grey Falcon occurs at low densities across inland Australia. The species frequents timbered lowland plains, particularly acacia shrublands that are crossed by tree-lined water courses. The species has been observed hunting in treeless areas and frequents tussock grassland and open woodland, especially in winter. While breeding Grey Falcons feed almost exclusively on birds (DCCEEW, 2024).	Survey area may form part of larger home range and has potential to pass through the survey area. Only potential breeding site would be Elder Creek in a high rainfall period, however no nesting sites/ direct bird observations identified during the field survey.	Possible
Princess Parrot <i>Polytelis alexandrae</i>	Vulnerable (EPBC Act) Priority 4 (DBCA)	Confined to arid regions of Western Australia, the Northern Territory, and South Australia. In Western Australia, it is sparsely distributed from near Coolgardie in the west and the Murchison River to the east, and north to near the Fitzroy River in Western Australia and to Howell Ponds in the Northern Territory. It is believed that the population is mainly concentrated in the Great Sandy, Gibson, Tanami and Great Victoria Deserts, and in the central ranges. It inhabits sand dunes and sand flats in the arid zone of western and central Australia, in open savanna woodlands and shrublands that usually consist of scattered stands of Eucalyptus (including <i>E. gongylocarpa</i> , <i>E. chippendalei</i> and mallee species), Casuarina or Allocasuarina trees; an understorey of shrubs such as <i>Acacia</i> (especially <i>A. aneura</i> ), <i>Senna</i> , <i>Eremophila</i> , <i>Grevillea</i> , <i>Hakea</i> and <i>Senna</i> ; and a ground cover dominated by <i>Triodia</i> species (DCCEEW, 2024).	Recent records (2012) located at Lake Christopher near the Rawlinson Range, located approximately 70km north-west of the survey area. This species has the potential to pass through the survey area, however no potential breeding trees identified during the field survey.	Possible
Peregrine Falcon <i>Falco peregrinus</i>	Other Specially Protected Species (BC Act)	The Peregrine Falcon is found in most habitats, from rainforests to the arid zone, and at most altitudes, from the coast to alpine areas. It requires abundant prey and secure nest sites and prefers coastal and inland cliffs or open woodlands near water and may even be found nesting on high city buildings (Birdlife Australia, 2019).	This species potentially occurs aurally over the survey area as part of a much larger home range, though records in this area are rare and therefore it is likely to be present occasionally. No potential nest sites observed during the field survey.	Possible



Taxon	Conservation Status	Habitat Description	Comments	Likelihood of Occurrence
Striated Grasswren (Sandplain) <i>Amytornis striatus</i> subsp. <i>striatus</i>	Critically Endangered (EPBC Act) <sup>1</sup> Priority 4 (DBCA)	Open mallee over a sparse layer of shrubs and a ground layer dominated by spinifex ( <i>Triodia</i> ), though they are sometimes found in other vegetation types (DCCEEW, 2024).	The survey area is located within its known range and suitable habitat is present, however this taxon was not observed during the field survey.	Possible
Great Desert Skink <i>Liopholis kintorei</i>	Vulnerable (EPBC Act and BC Act)	The Great Desert Skink generally occurs on red sandplains and sand ridges. Vegetation usually consists of hummock grassland ( <i>Triodia basedowii</i> , <i>Triodia pungens</i> and <i>Triodia schinzii</i> ), with some scattered shrubs and occasional trees (e.g. <i>Acacia</i> spp., <i>Eucalyptus</i> spp., <i>Hakea</i> spp., <i>Grevillea</i> spp. and <i>Allocasuarina decaisneana</i> ) (DCCEEW, 2024).	The survey area is located within its known range and suitable habitat is present, however this taxon was not observed during the field survey.	Possible

A map showing all known significant fauna records (DBCA, 2021b) is provided in Appendix D.

<sup>1</sup> Listed as of 5<sup>th</sup> July 2023

## 4 CONCLUSIONS

Six vegetation types were recorded in the total survey area, four of which were included in the extrapolation area. None of the vegetation types present within the total survey area or extrapolation area are representative of a Threatened Ecological Community, Priority Ecological Community or otherwise significant vegetation as defined by EPA (2016).

Vegetation within the total survey area and extrapolation area ranged from 'good' to 'very good' with majority of the vegetation (82% of the total survey area) rated as good condition.

One Threatened Flora taxon as listed under the Commonwealth EPBC Act occurs within the existing field survey area and is considered likely to occur within the extrapolation area given the presence of similar vegetation and the current status of this taxon as common, widespread species. Despite this taxon currently being listed as a Threatened species under the EPBC Act, this is likely due to a formality with the delisting process as this taxon no longer meets the criteria for threatened status. No other significant flora were identified within the field survey area, however six Priority Flora are considered as possible to occur within the extrapolation area based on habitat preferences.

Three fauna habitats were recorded in the total survey area, all of which were included in the extrapolation area. The fauna habitats are typical of those in the wider region with no unique fauna habitats (i.e. caves, rock outcrops, overhangs or crevices) or inland waters within the total survey area.

No significant fauna were recorded within the existing field survey area, and it is unlikely significant fauna will occur within the extrapolation area.

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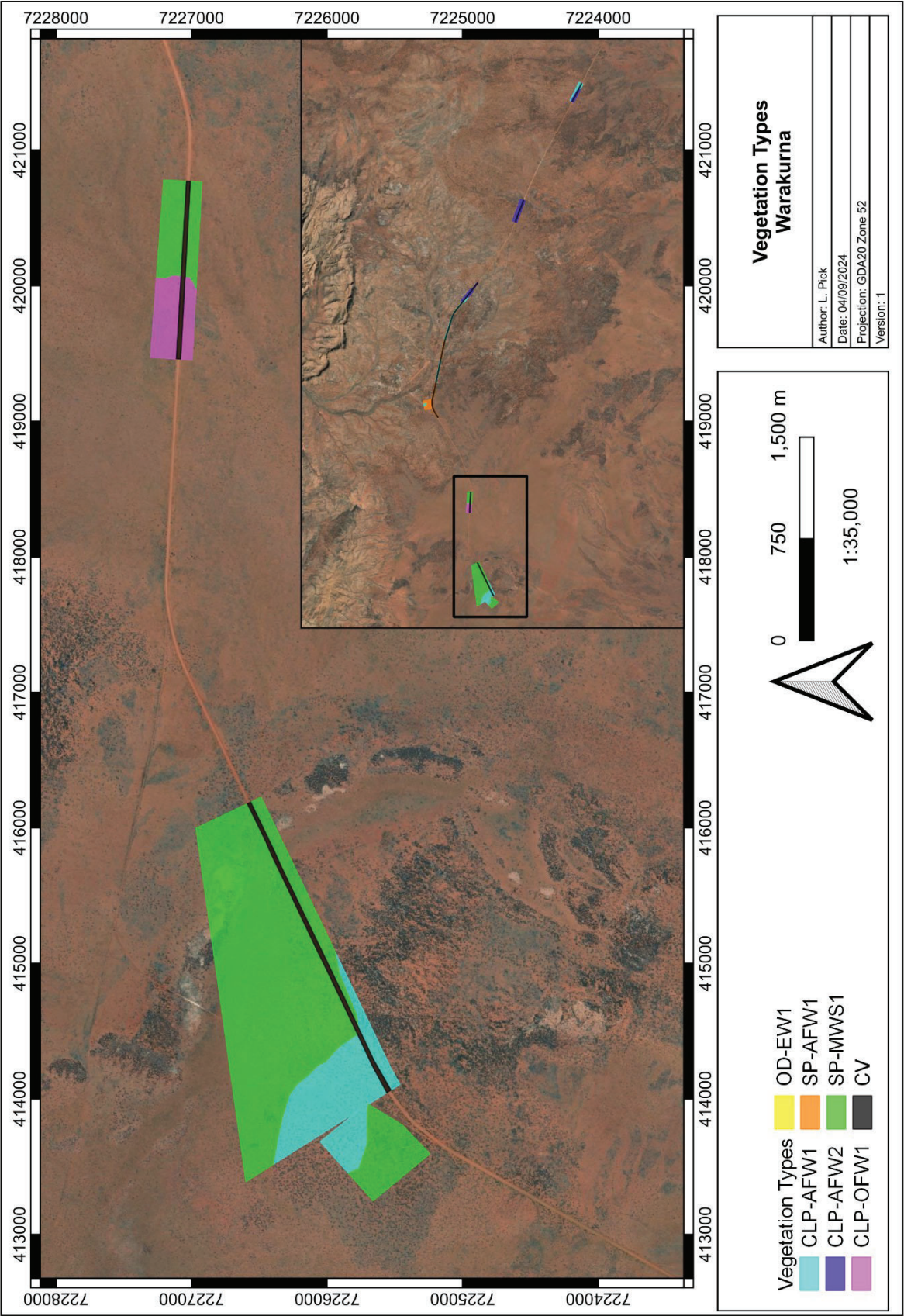
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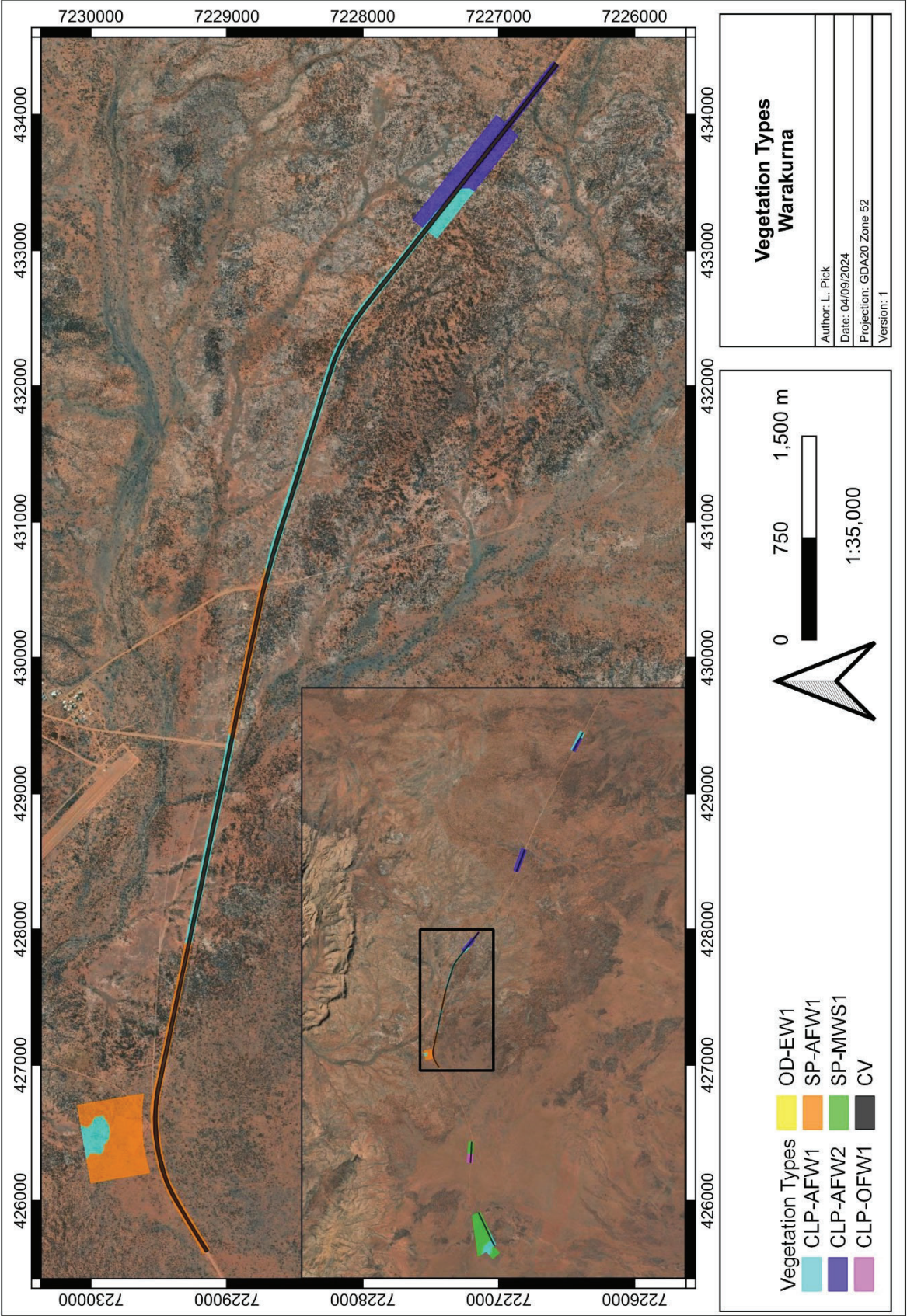
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Available: <https://florabase.dpaw.wa.gov.au/>  
Accessed: 4<sup>th</sup> September 2024.



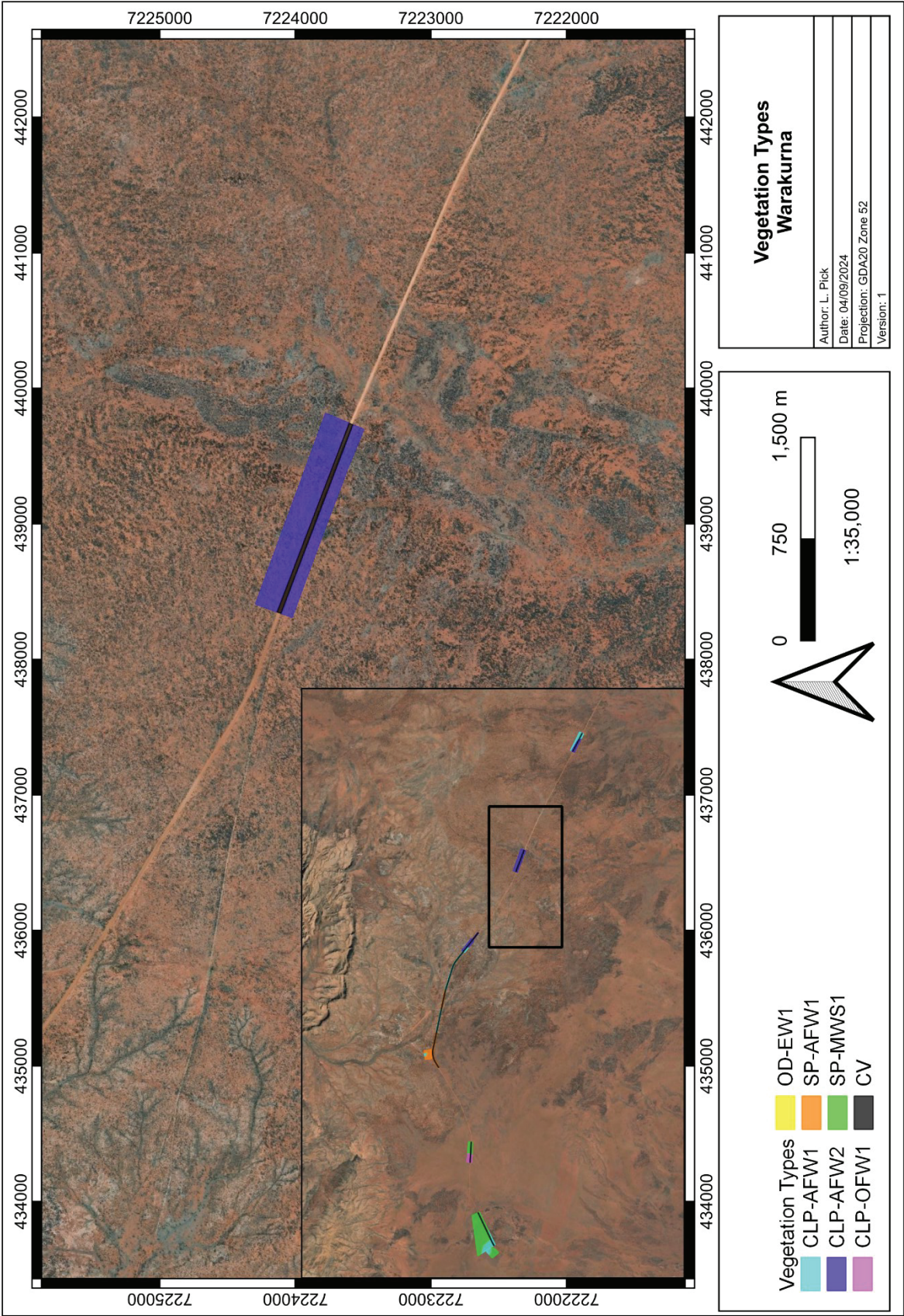
## **Appendix A: Vegetation Type Maps**



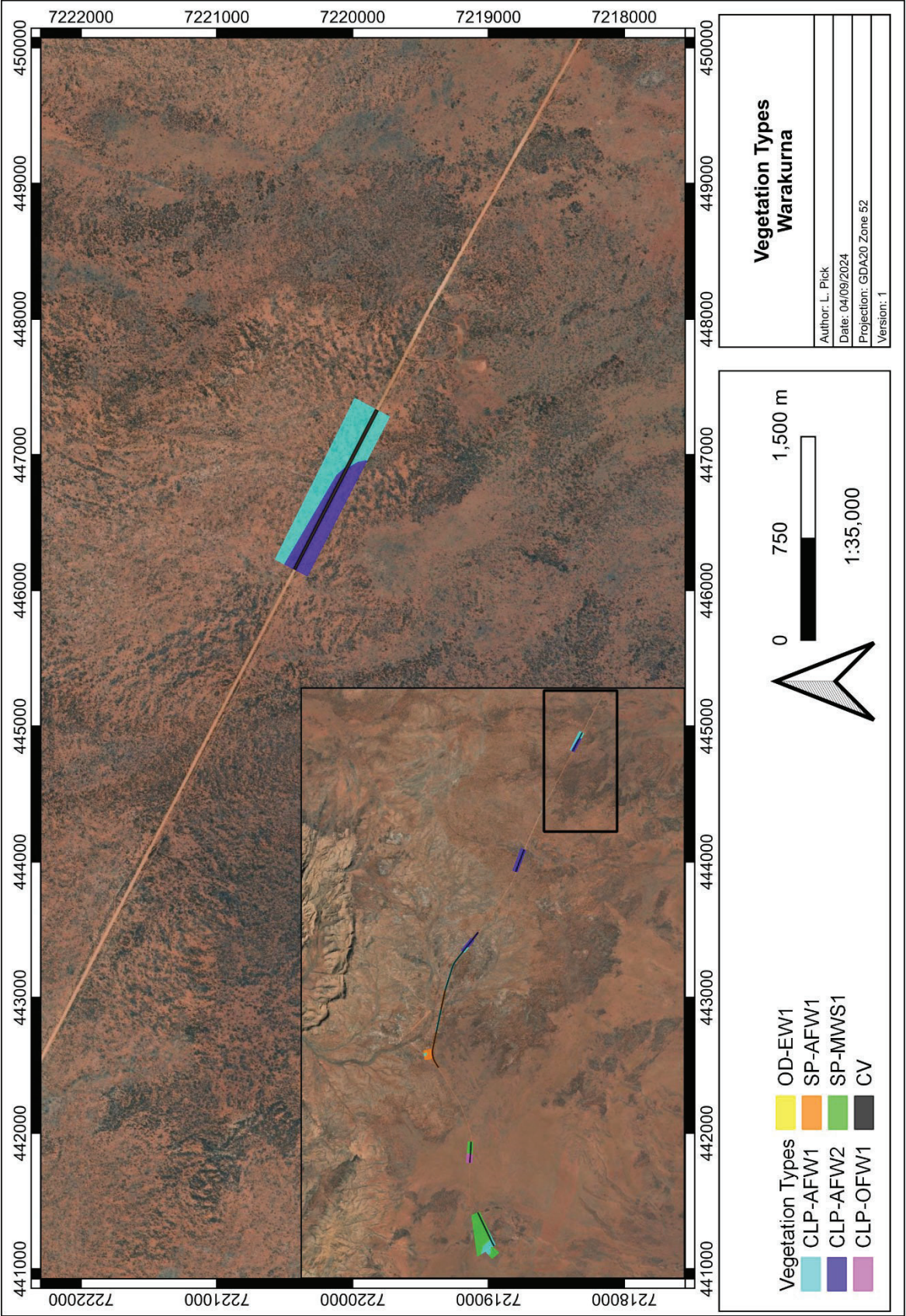




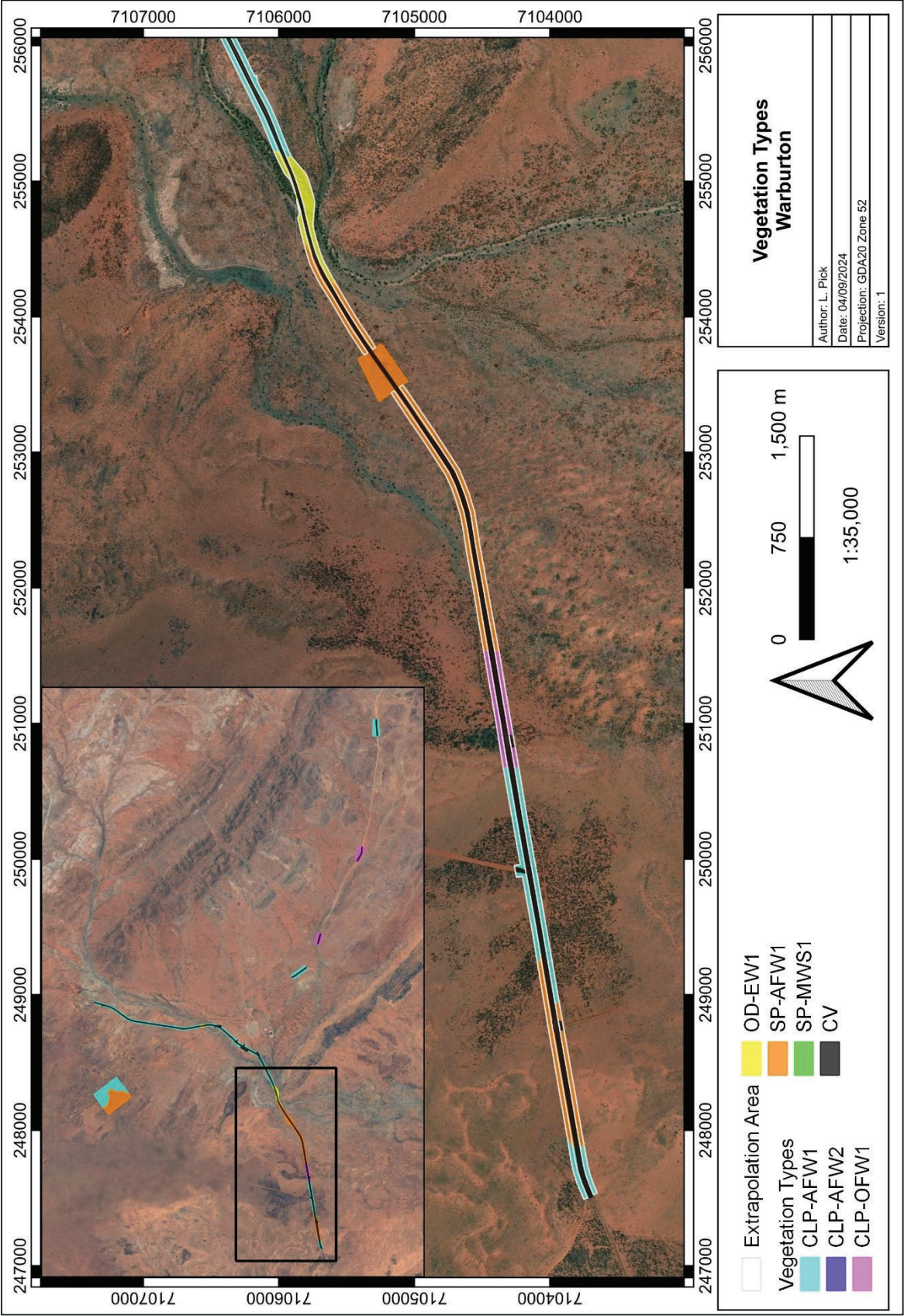




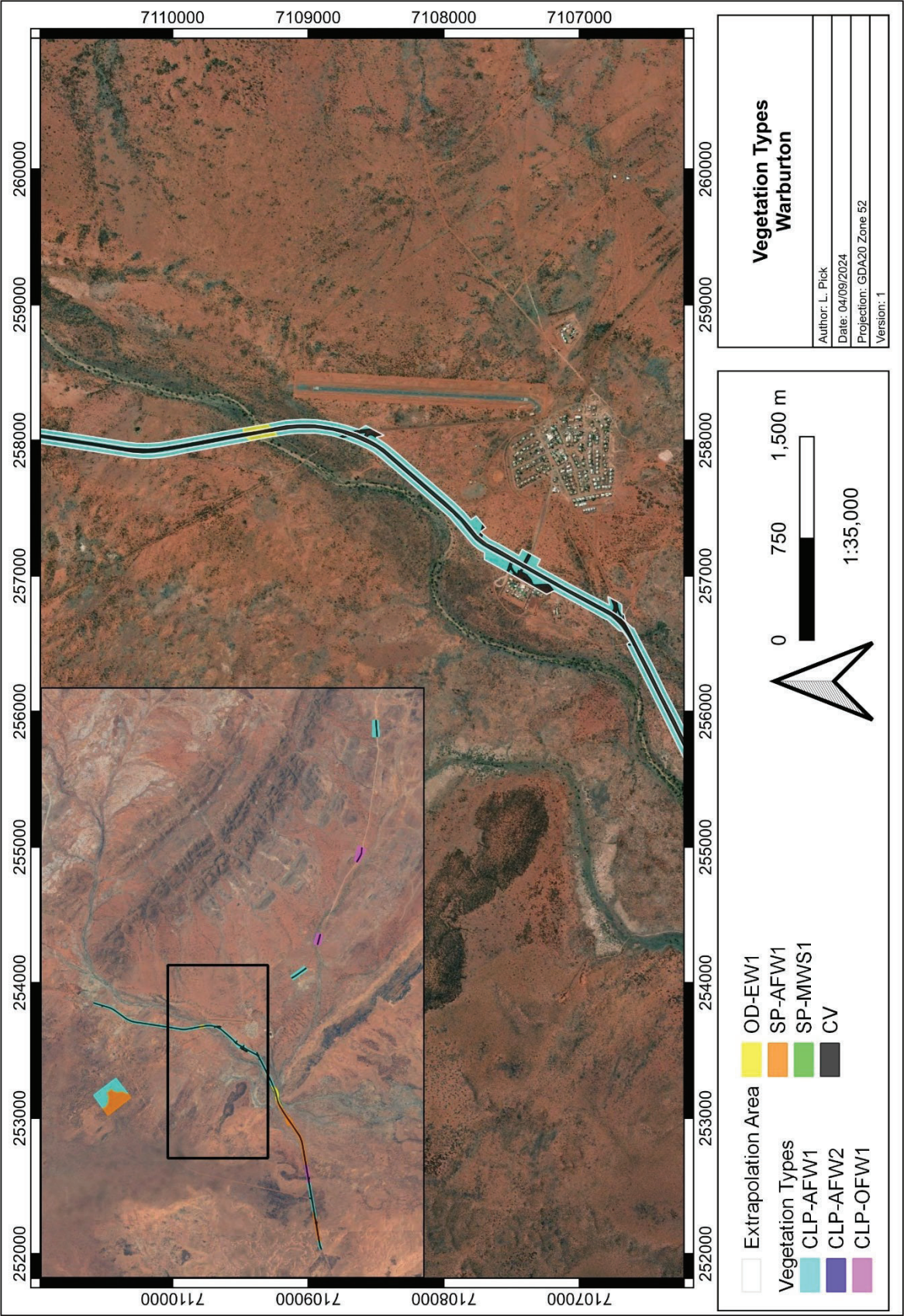




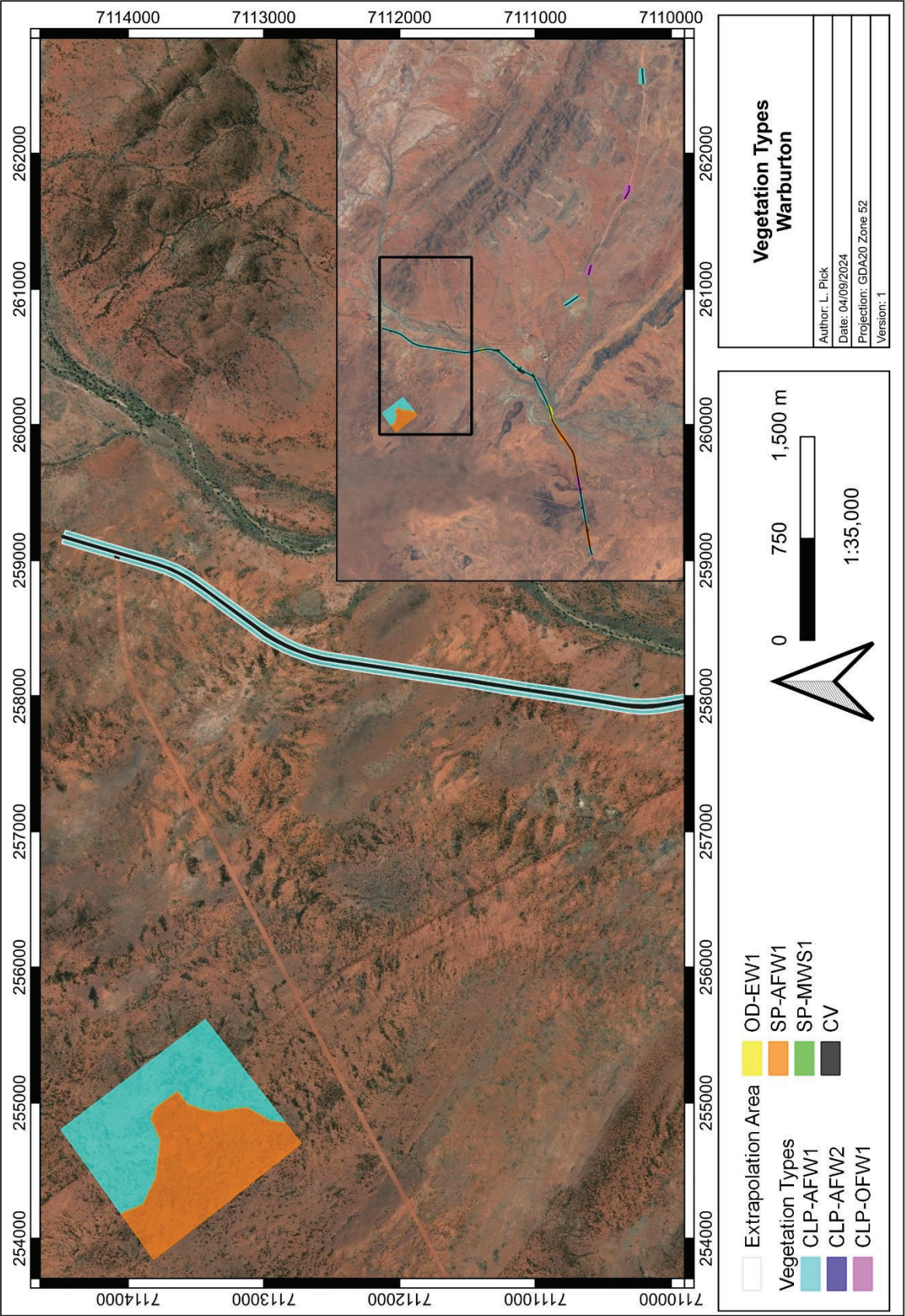




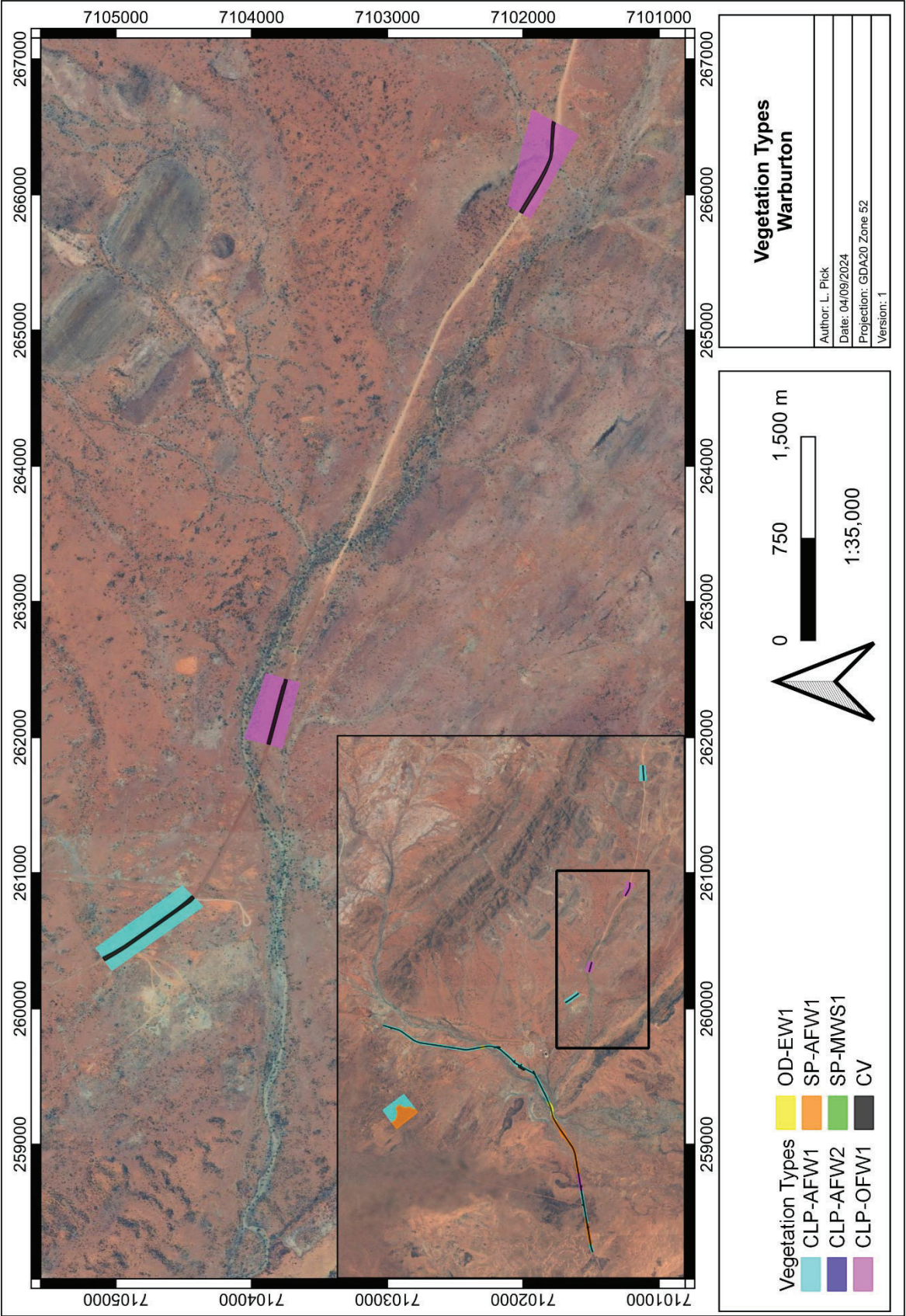




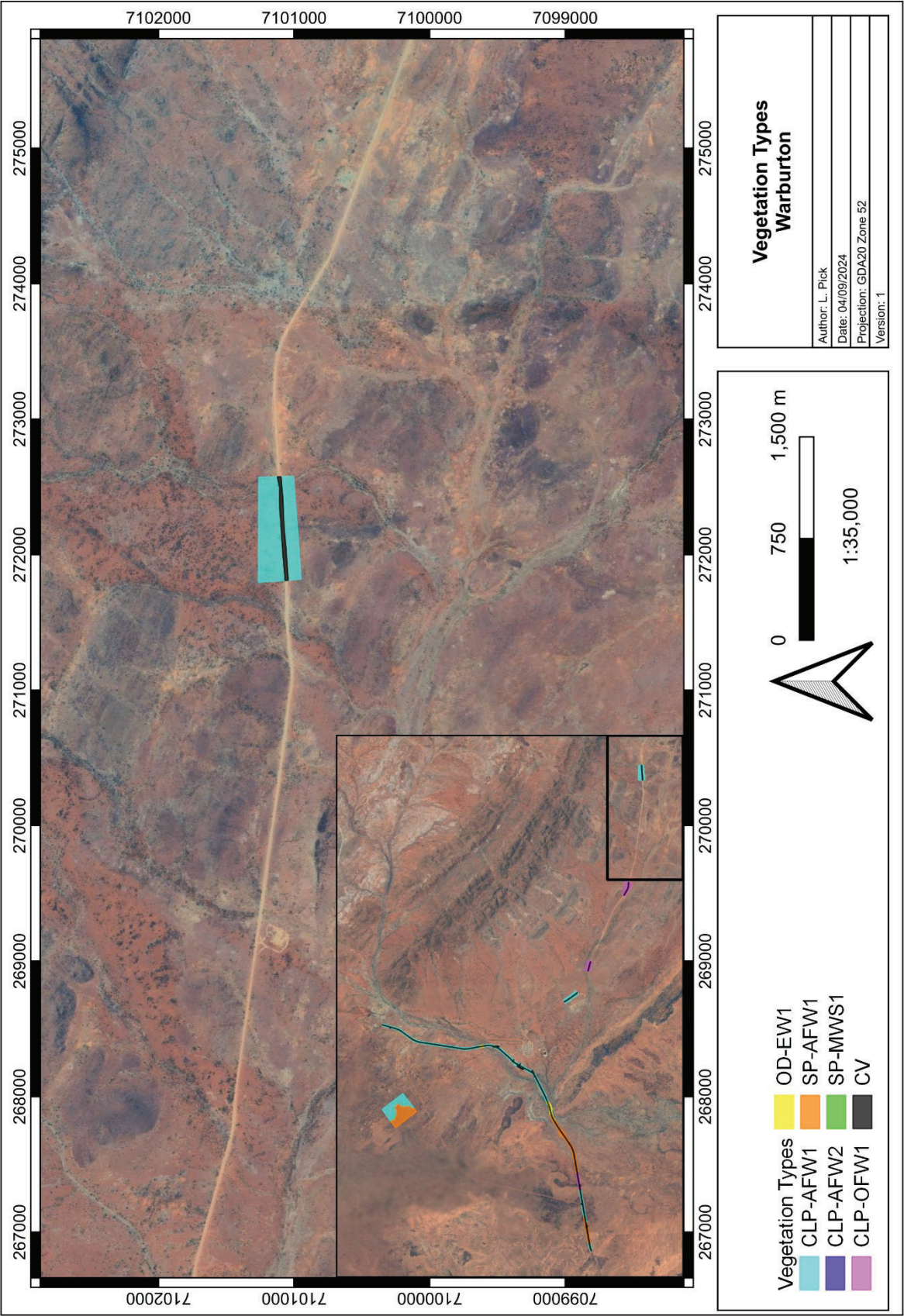






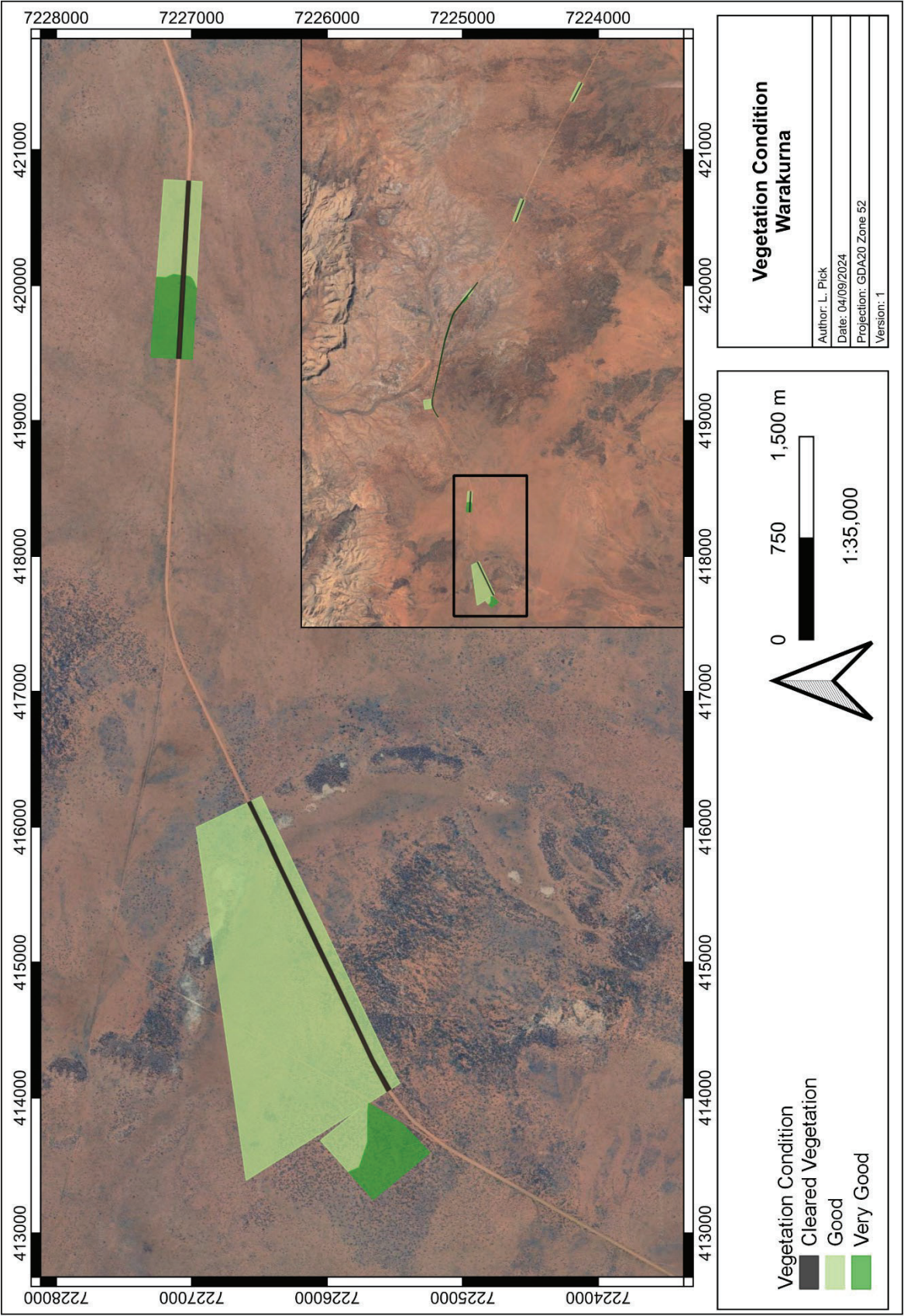




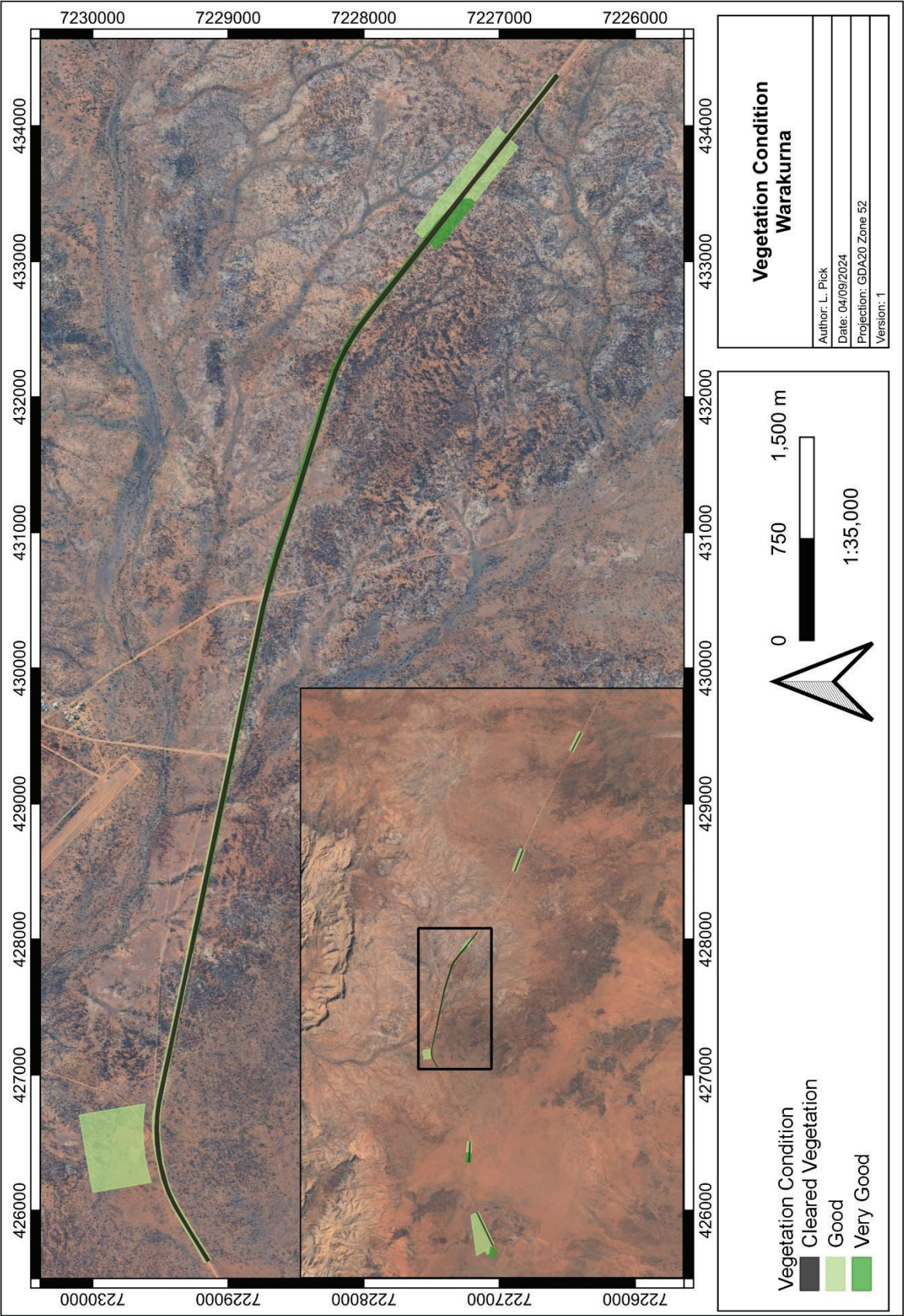


## Appendix B: Vegetation Condition Maps





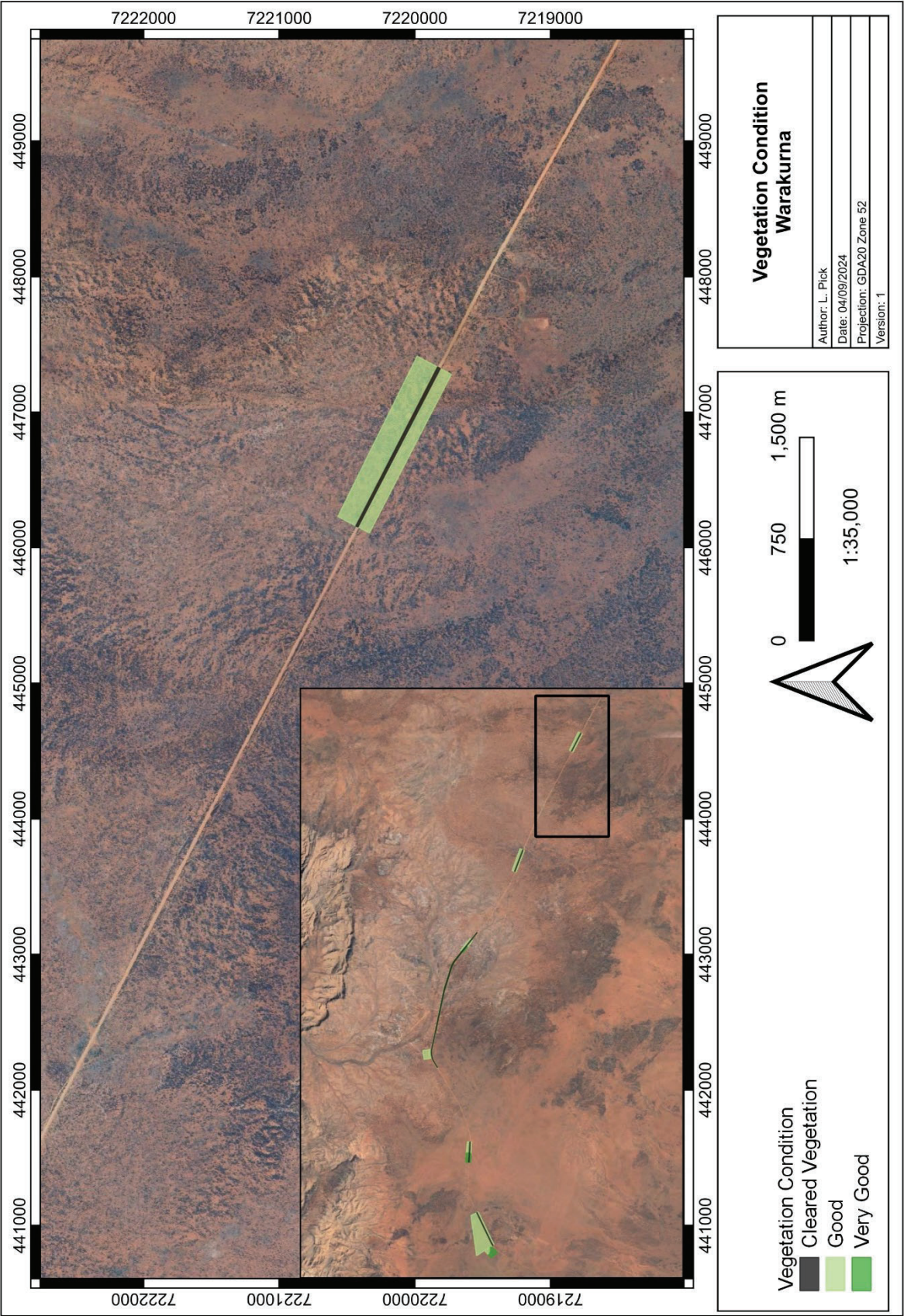




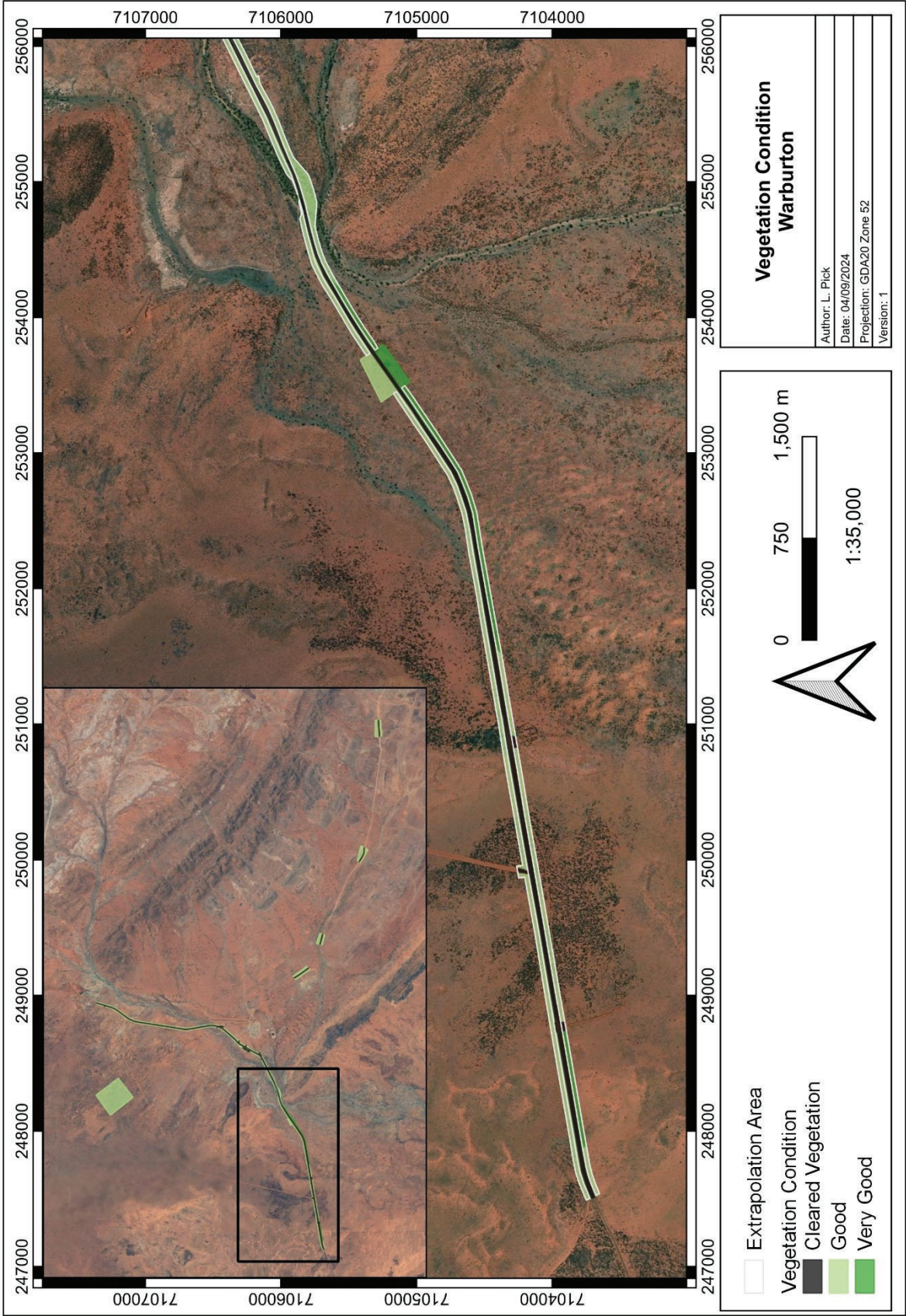








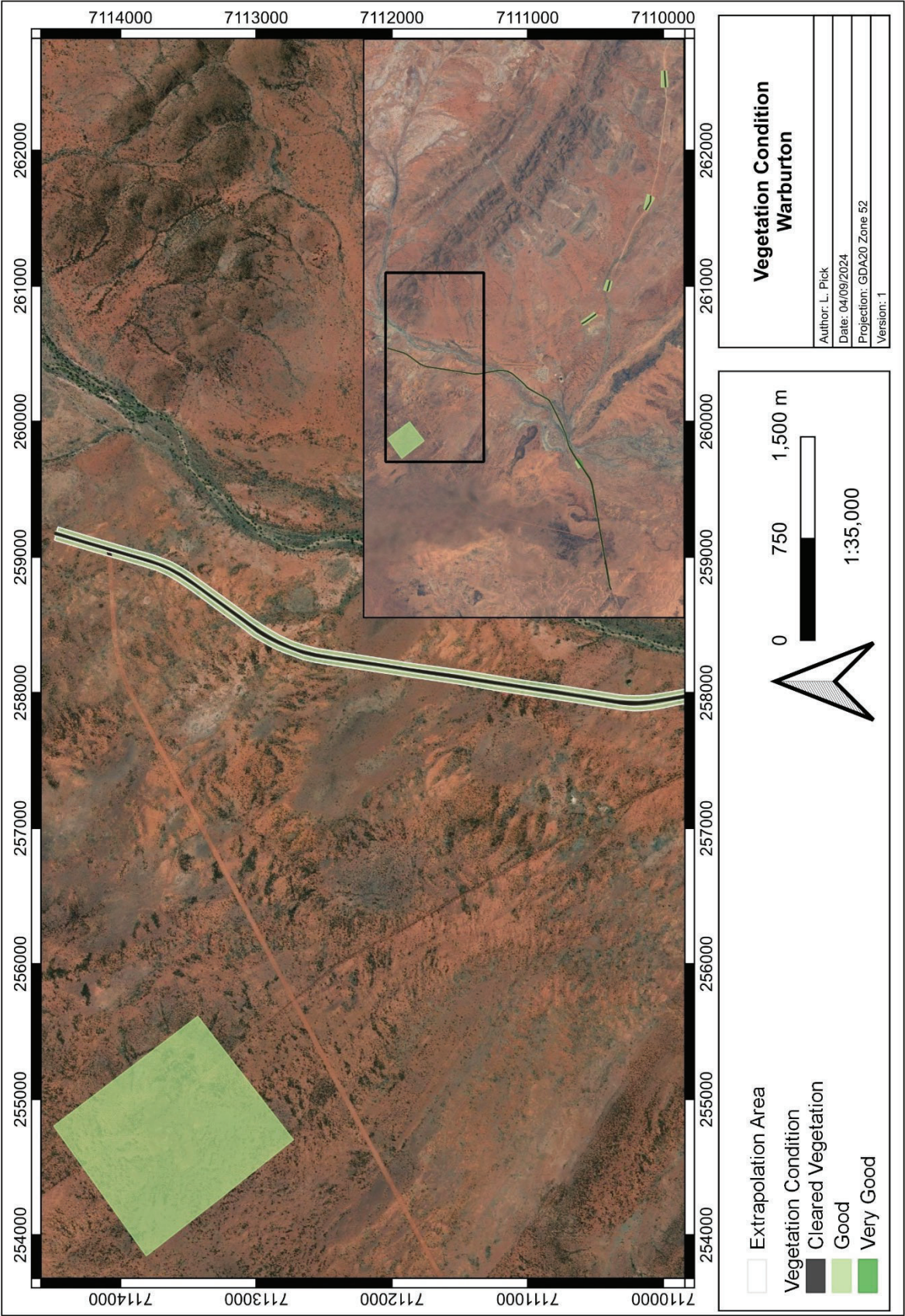




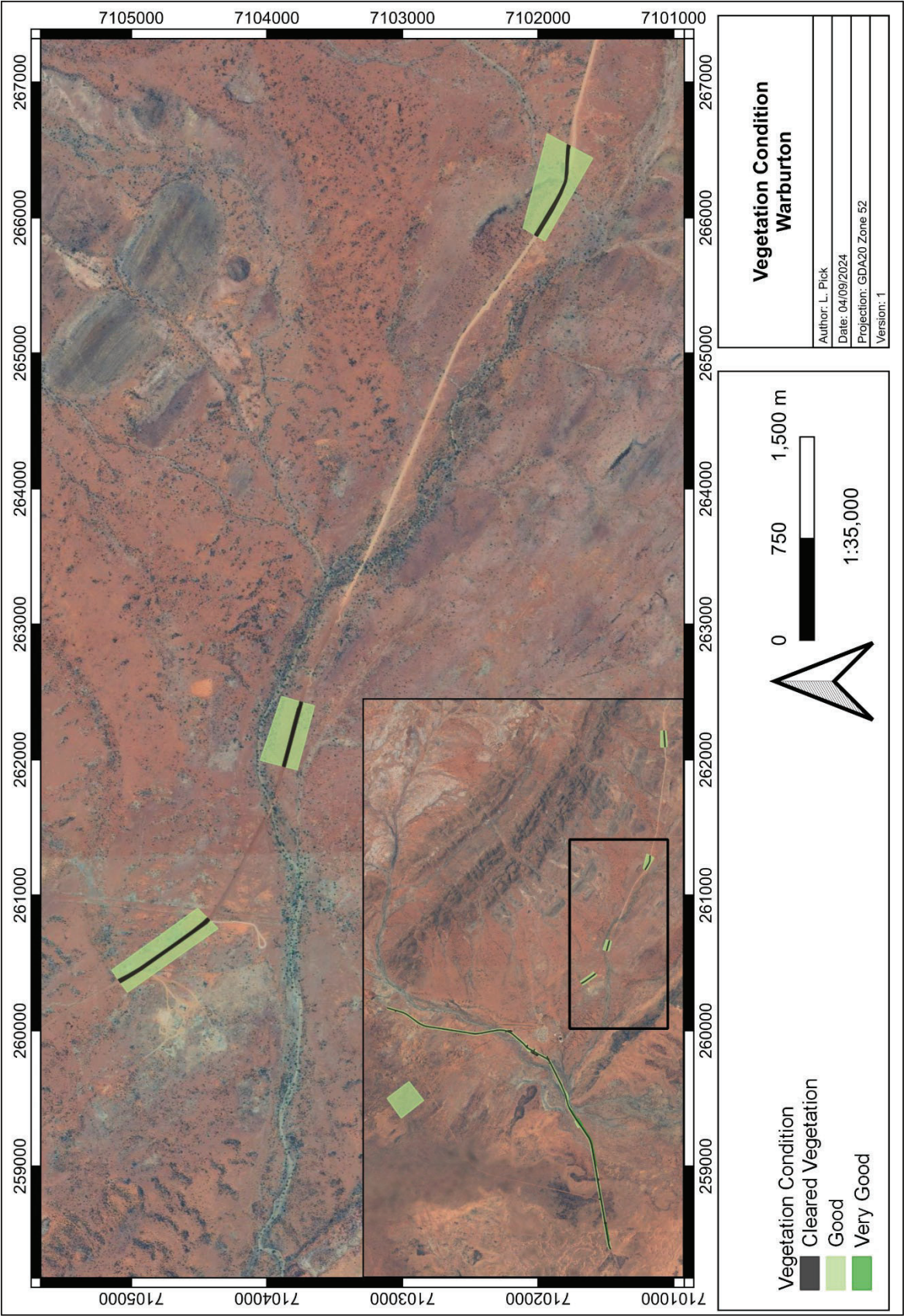




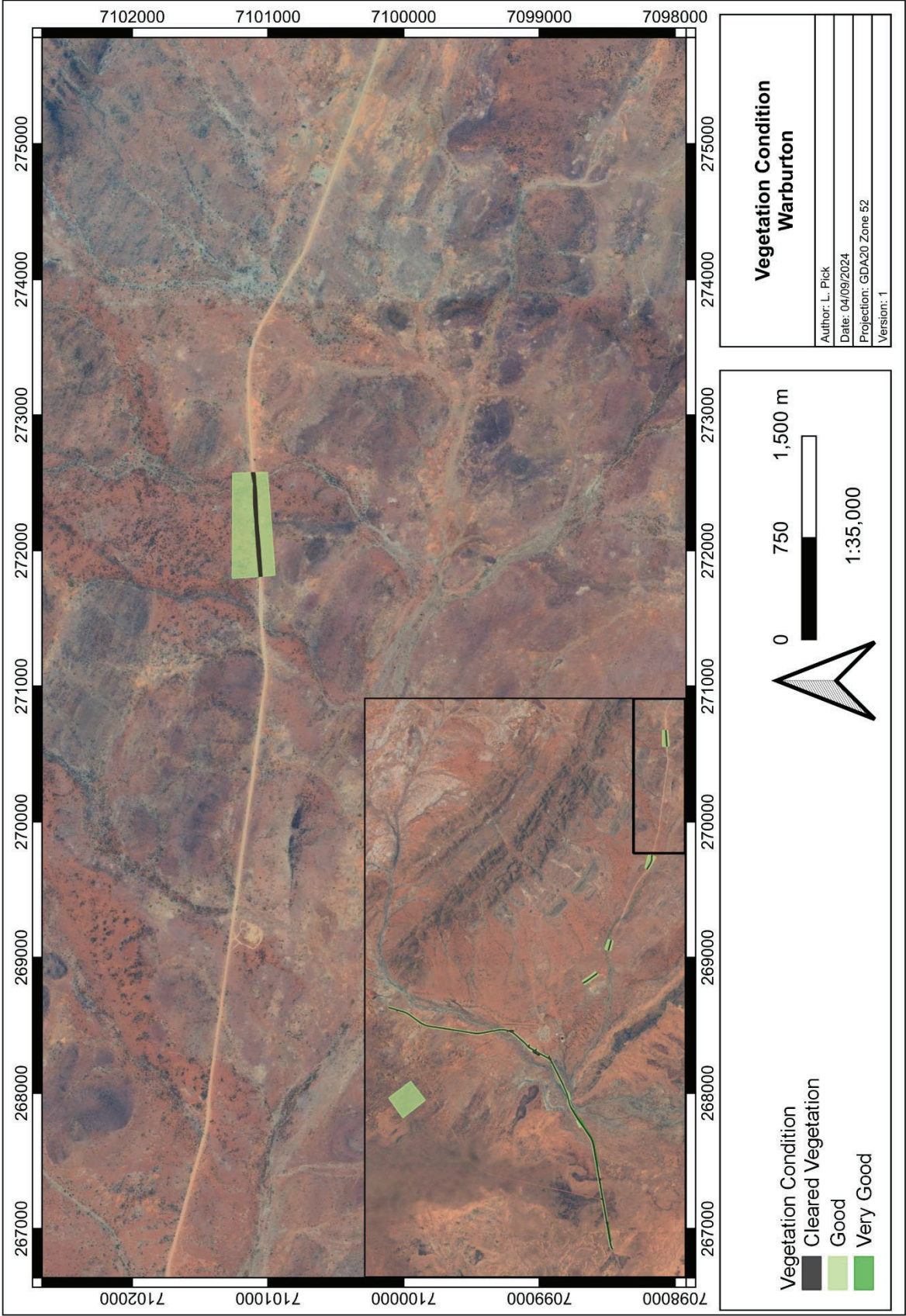






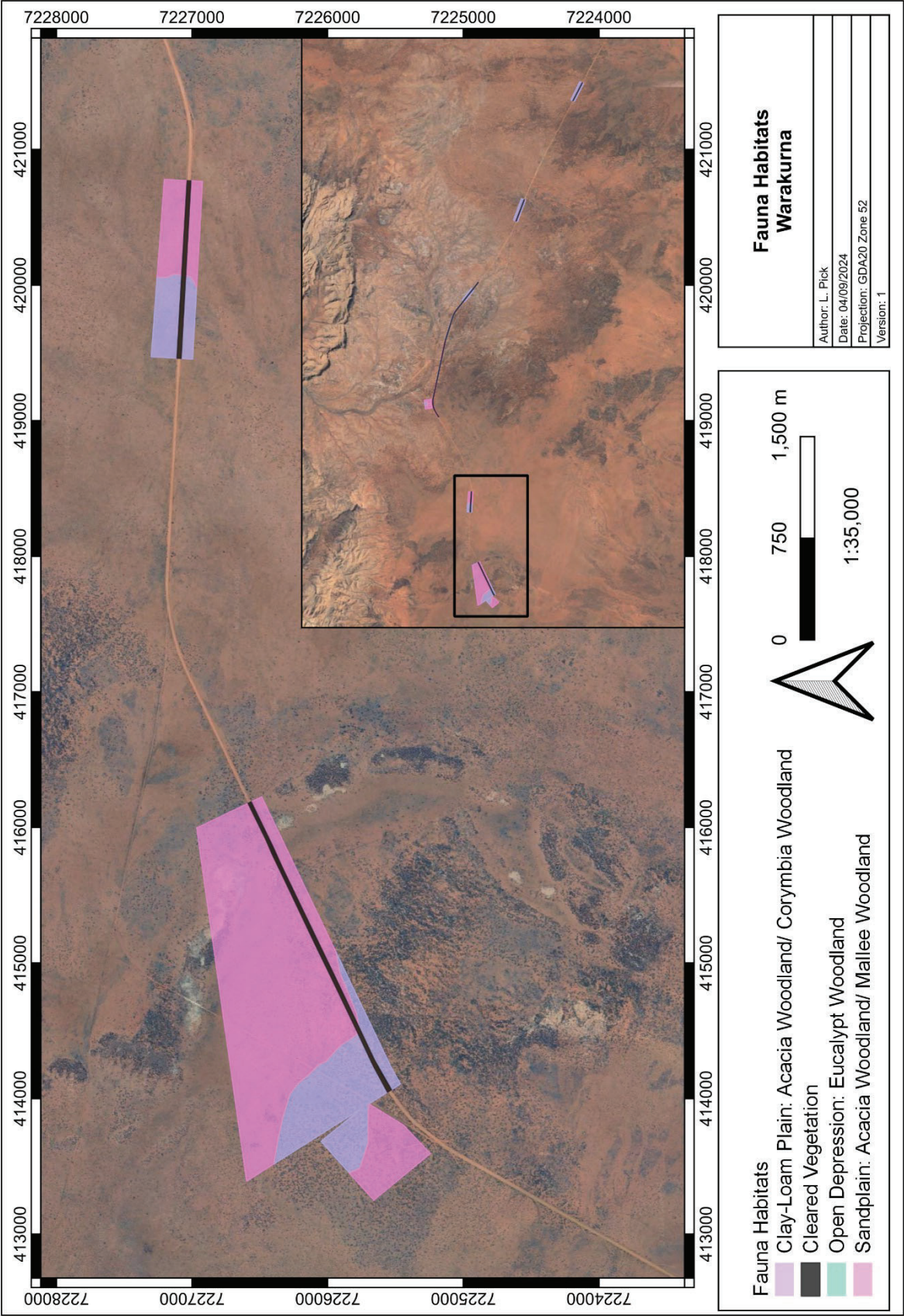




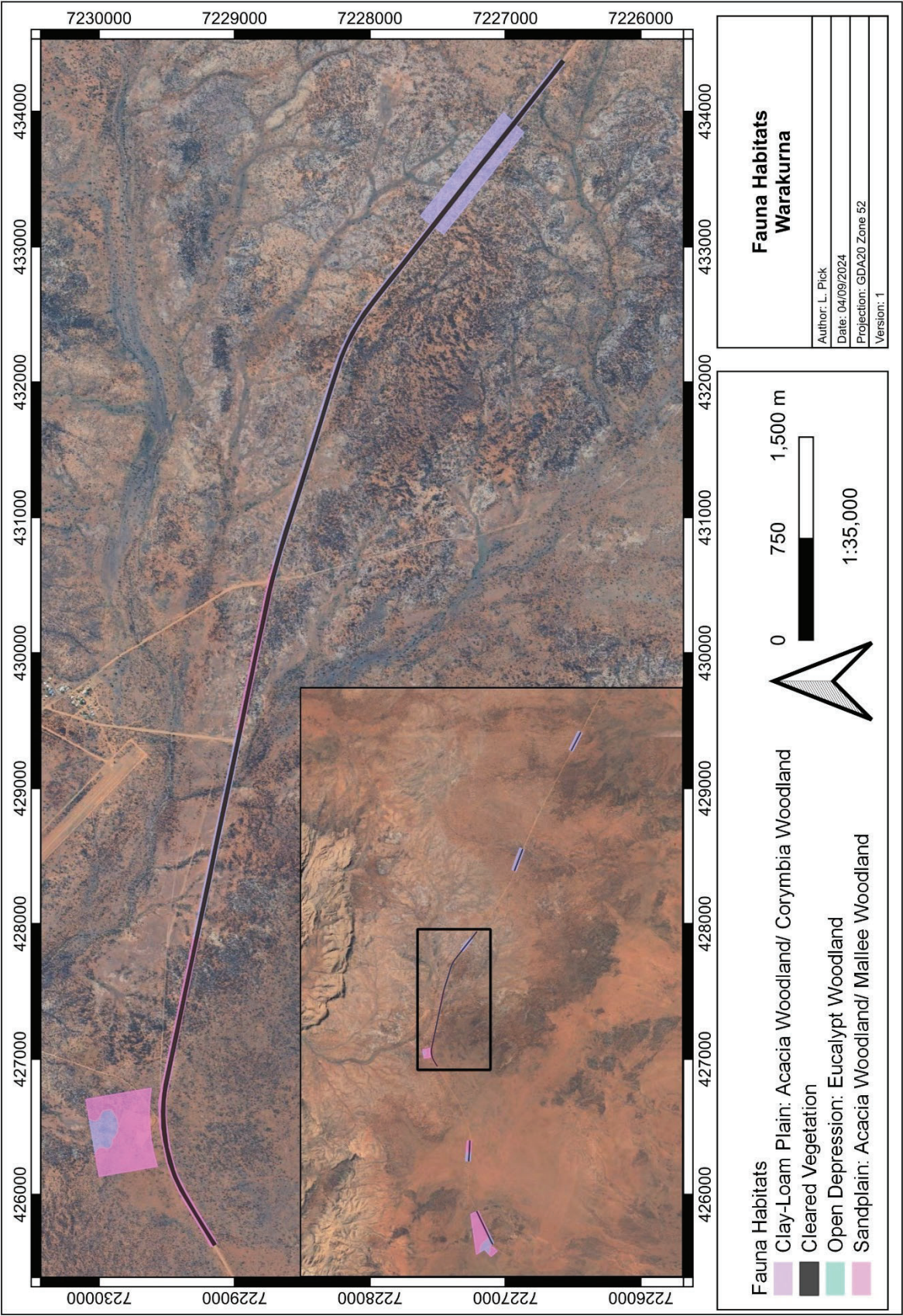


## Appendix C: Fauna Habitat Maps

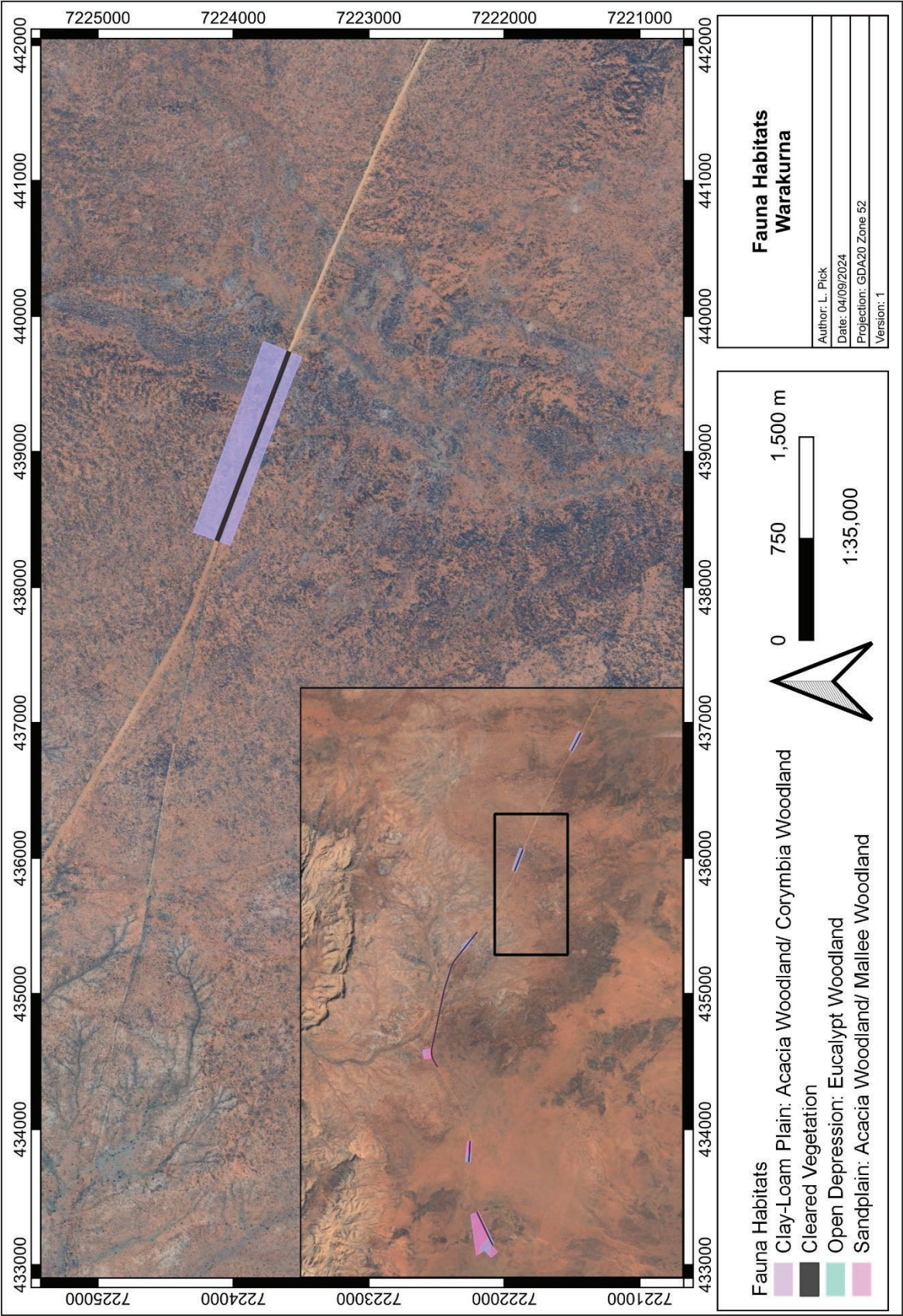




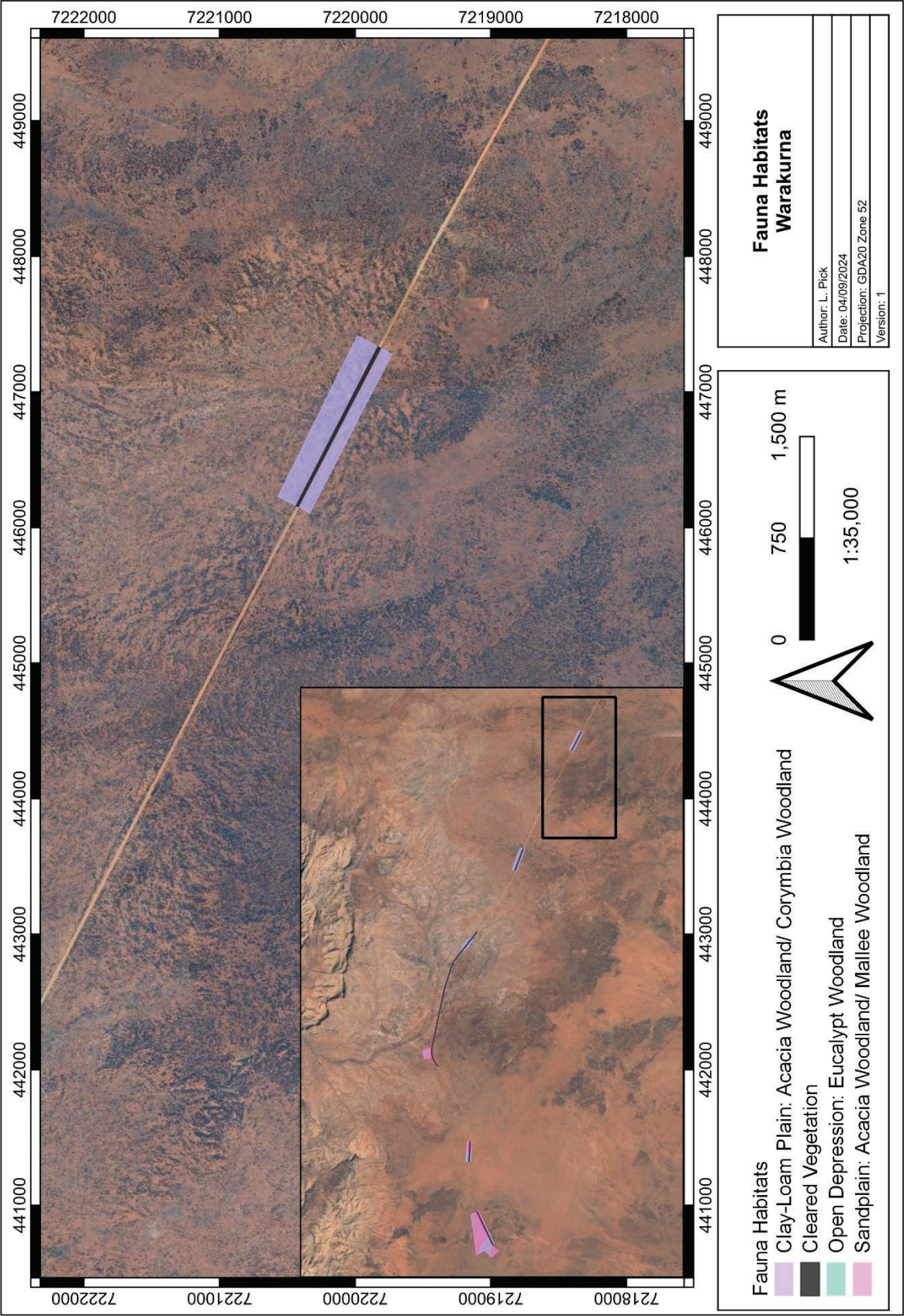




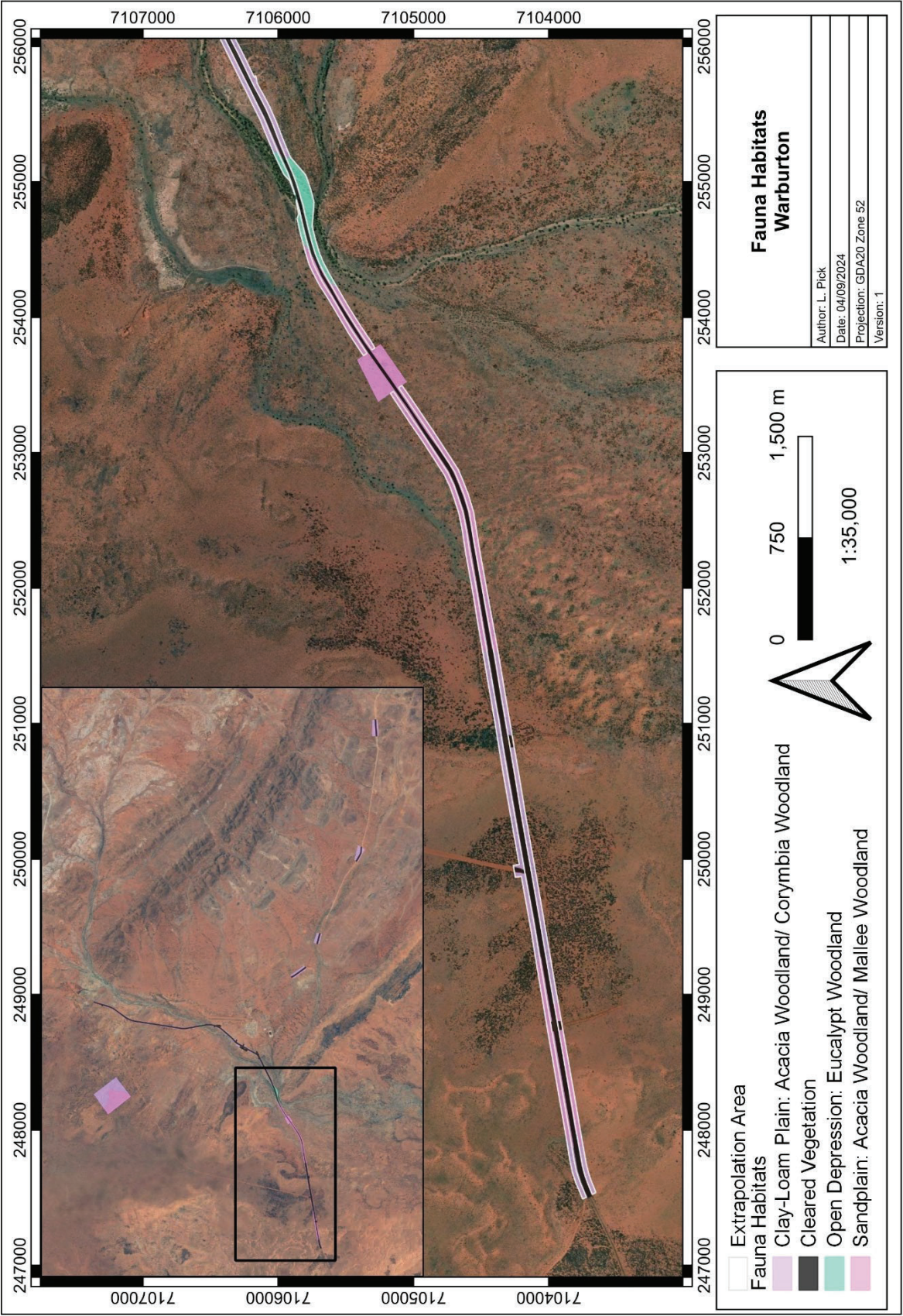




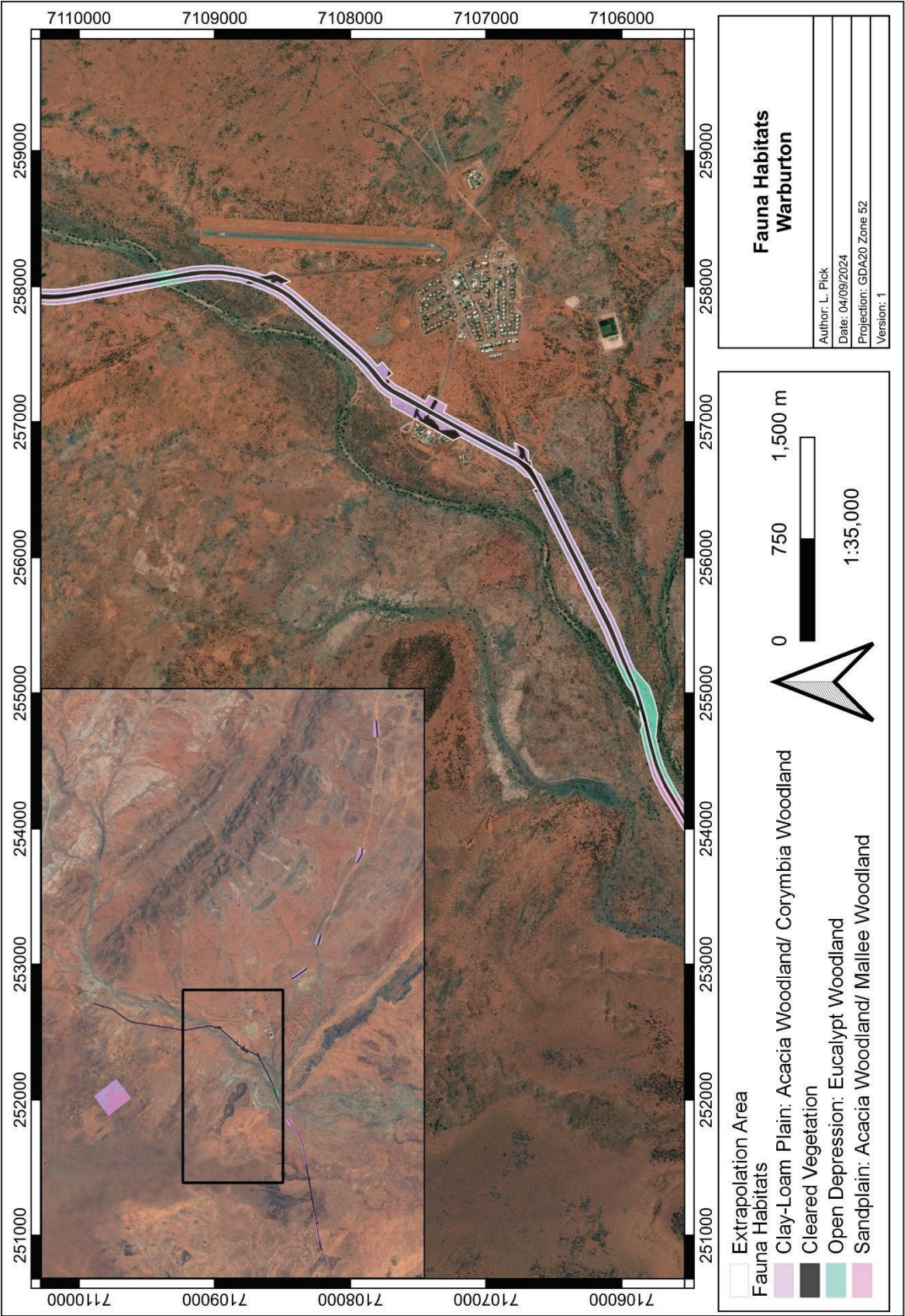




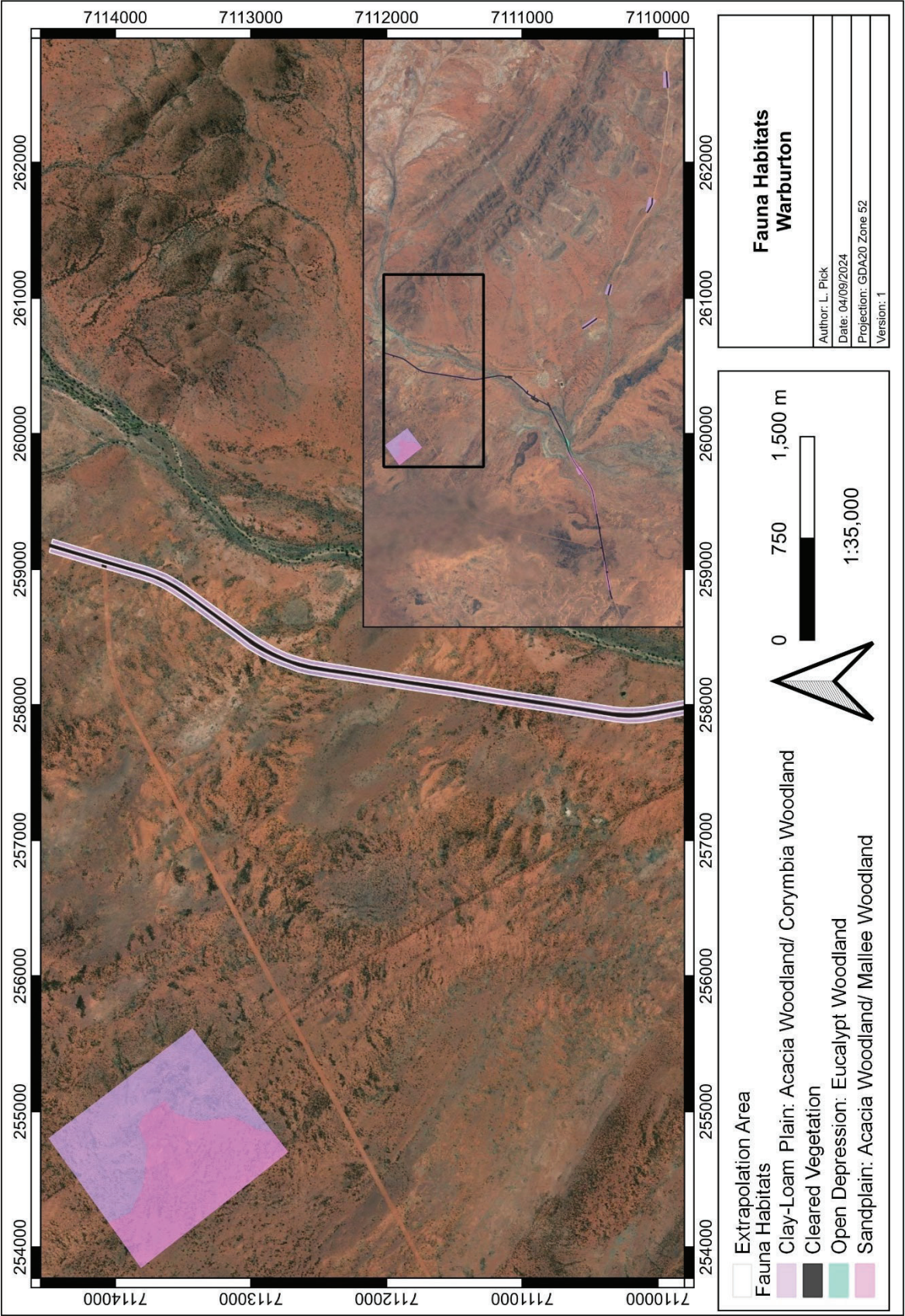




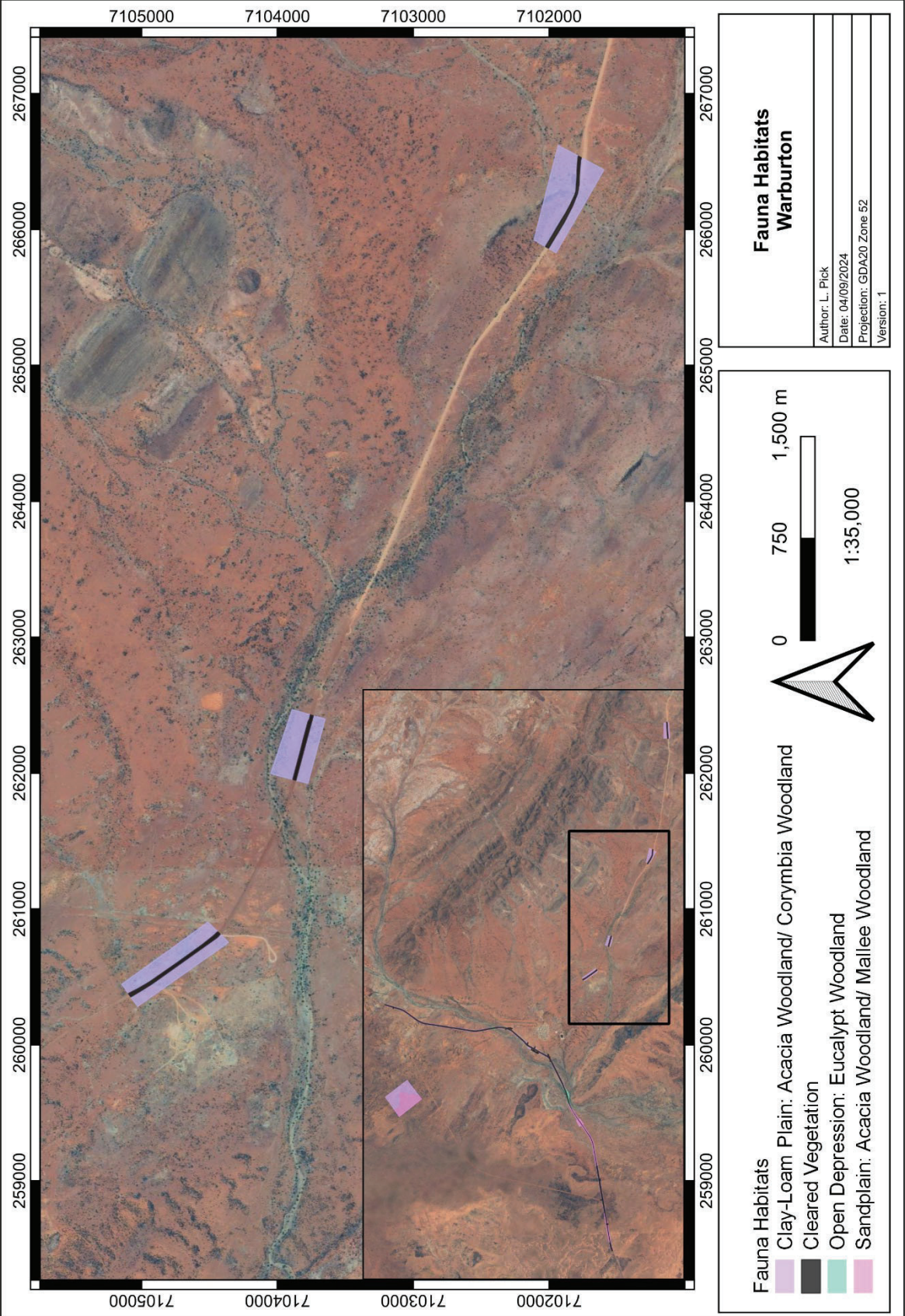




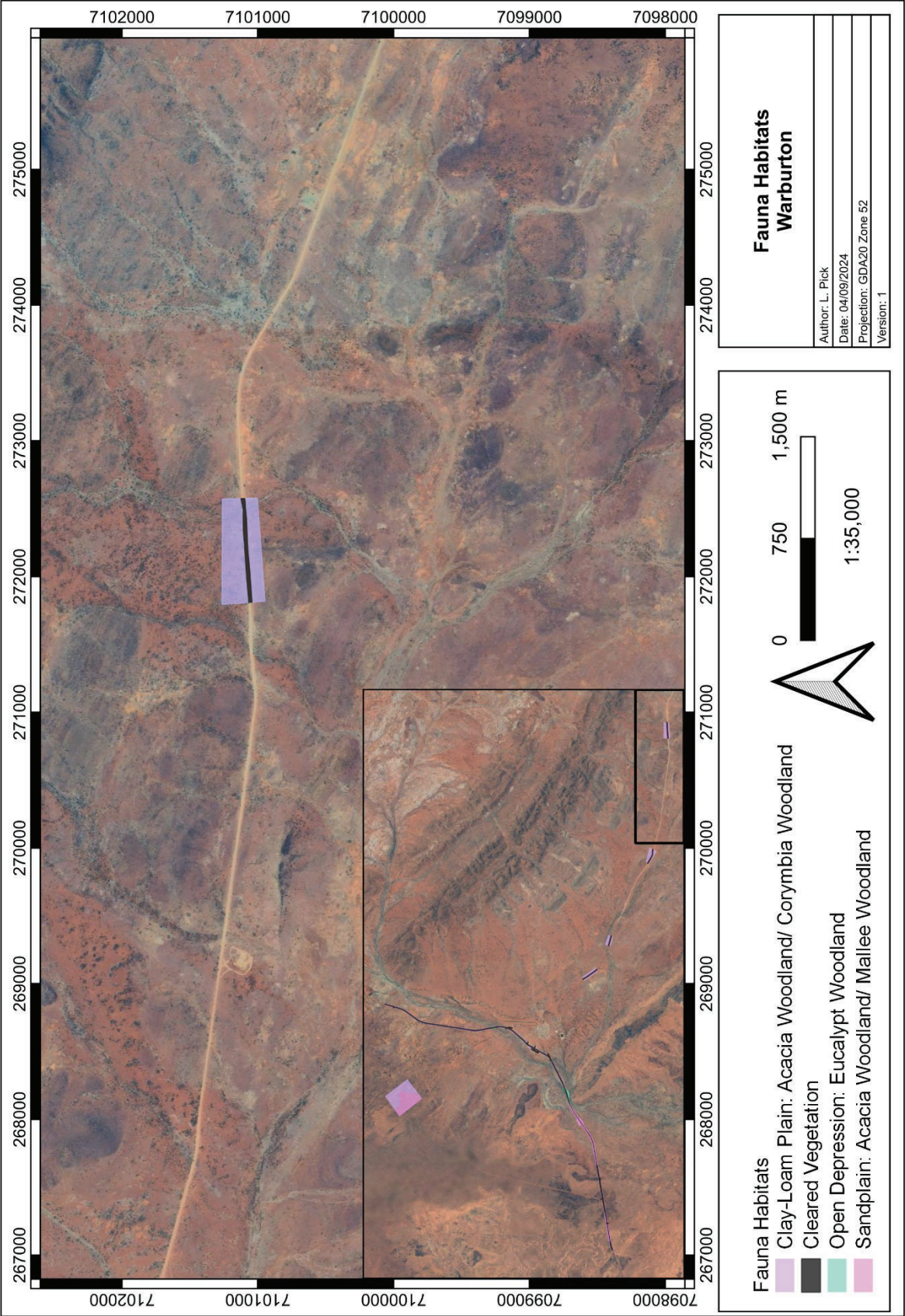












## Appendix D: Significant Flora and Fauna Records



