



- Legend**
- Straight Line Kilometre Marker (1km)
  - Town
  - Weed (Phoenix, 5/04/2017)**
    - ◆ *Asparagus asparagoides*
    - ◆ *Echium plantagineum*
    - ◆ *Moraea flaccida*
    - ◆ *Moraea miniata*
    - ◆ *Zantedeschia aethiopica*

- Significant Flora (Phoenix, 5/04/2017)**
- ◆ *P3, Acacia drummondii subsp. affinis*

- Muecha North Alignment
- Existing GNH Alignment
- Freeway / Highway
- Minor Road
- NVCP Application Area

Joint Venture Partners:

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Coordinate System: GDA 1994 MGA Zone 50

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Client  
Project

**Great Northern Highway  
Muecha to Wubin Upgrade Stage 2**

**Conservation Significant  
Flora and Weeds  
Map 4 of 4**

Drawing No: GNH-CN03-EN01-GIS-0044 Issue: B

Task No: GNH-1329 Drawing Status / Other: Draft

Date	By	Chkd	Appd
11/04/2017	SP	CG	XX

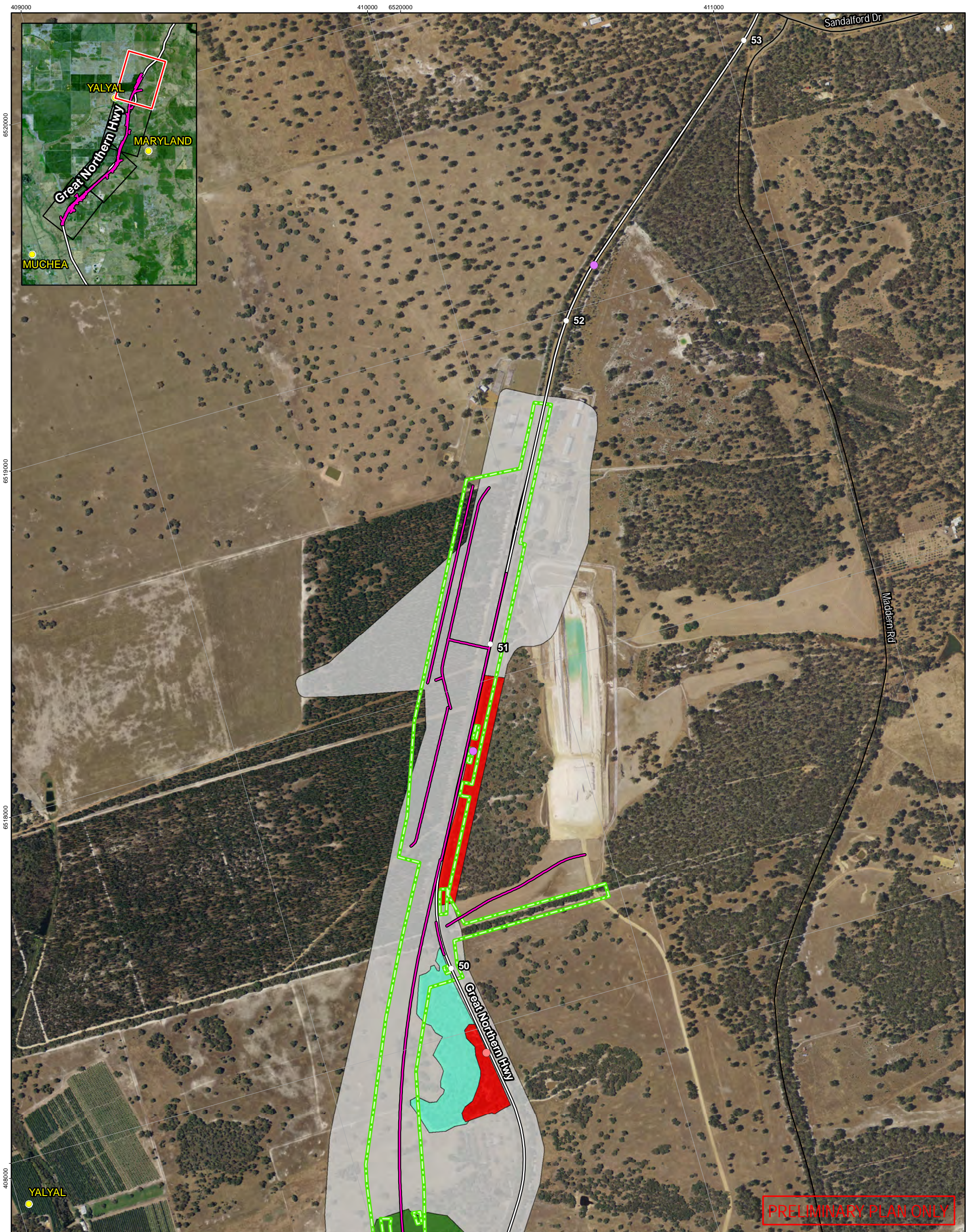
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Figure 7 : Dieback Survey Mapping

*[refer to GNH-CN03-EN01-GIS-0045]*

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- Legend**
- Straight Line Kilometre Marker (1km)
  - Town
  - Field Data Sites (TerraTree)
    - Infested
    - Infested (Historical)
  - Muchea North Alignment
  - Existing GNH Alignment
  - Freeway / Highway
  - Minor Road

- NVCP Application Area
- Dieback Occurrence (TerraTree)
  - Excluded
  - Infested
  - Uninfested
  - Uninterpretable

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Client  
Project

Great Northern Highway  
Muchea to Wubin Upgrade Stage 2

**Dieback Survey Mapping  
Map 1 of 4**

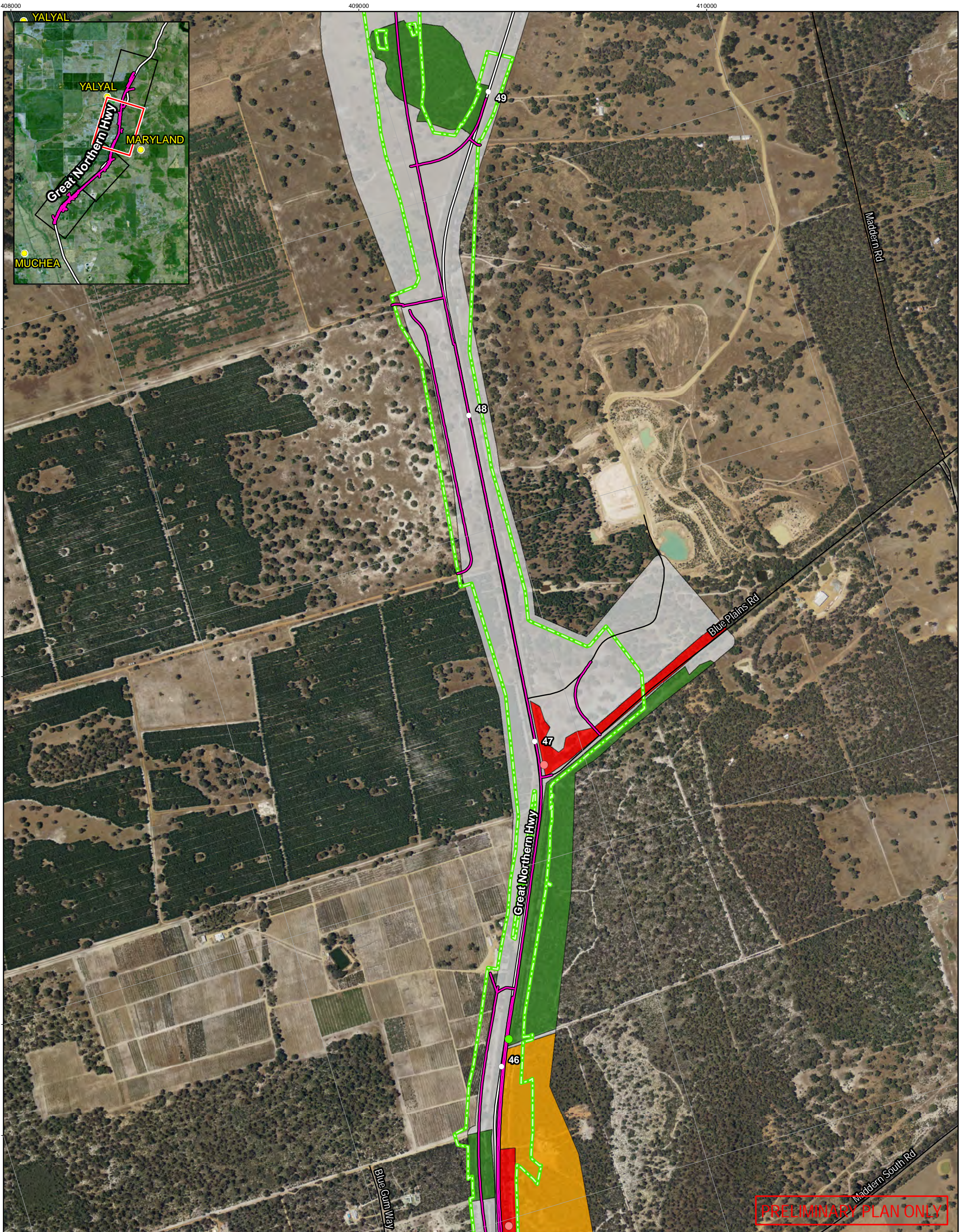
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Task No: GNH-1329 Drawing Status / Other: Draft

Date	By	Chkd	Appd
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Data Source: Main Roads WA, Landgate

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- Legend**
- Straight Line Kilometre Marker (1km)
  - Town
  - Field Data Sites (TerraTree)
    - Infested
    - Uninfested
  - Muchea North Alignment
  - Existing GNH Alignment
  - Freeway / Highway
  - Minor Road

- NVCP Application Area
- Dieback Occurrence (TerraTree)
  - Excluded
  - Infested
  - Not Assessed due to No Access
  - Uninfested

North Arrow

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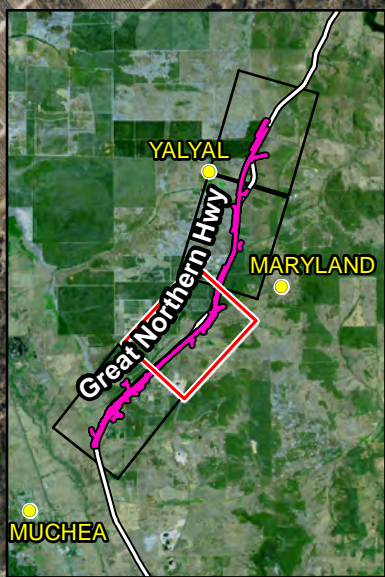
Client  
Project

**Great Northern Highway  
Muchea to Wubin Upgrade Stage 2**

**Dieback Survey Mapping  
Map 2 of 4**

Drawing No <b>GNH-CN03-EN01-GIS-0045</b>		Issue <b>B</b>	
Task No <b>GNH-1329</b>		Drawing Status / Other <b>Draft</b>	
Date <b>11/04/2017</b>	By <b>SR</b>	Chkd <b>CG</b>	Appd <b>XX</b>

Data Source: Main Roads WA, Landgate

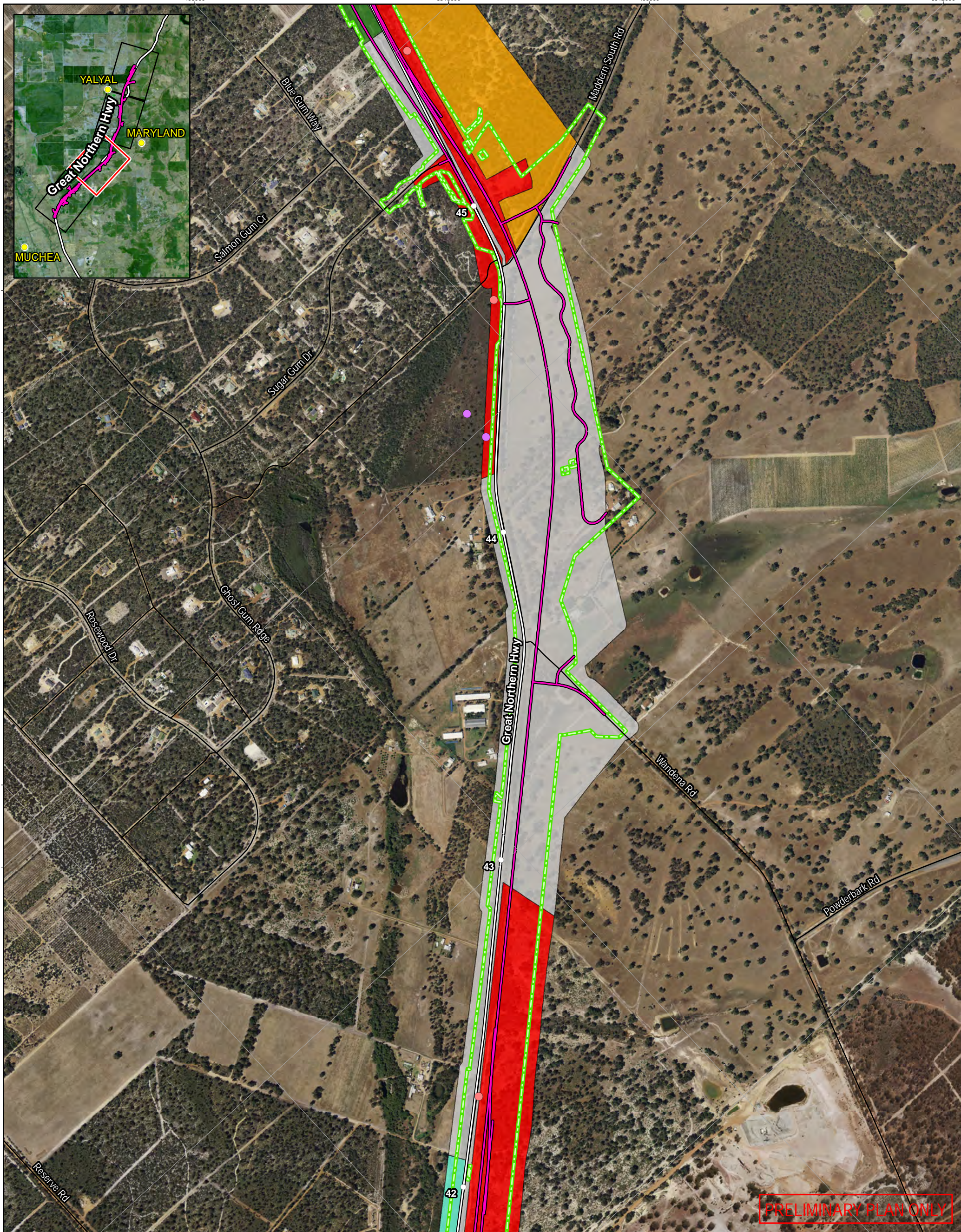


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- Legend**
- Straight Line Kilometre Marker (1km)
  - Town
  - Field Data Sites (TerraTree)
    - Infested
    - Infested (Historical)

- Muchea North Alignment
- Existing GNH Alignment
- Freeway / Highway
- Minor Road

- NVCP Application Area
- Dieback Occurrence (TerraTree)
  - Excluded
  - Infested
  - Not Assessed due to No Access
  - Uninfested
  - Uninterpretable



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Great Northern Highway  
Muchea to Wubin Upgrade Stage 2

**Dieback Survey Mapping  
Map 3 of 4**

Drawing No  
GNH-CN03-EN01-GIS-0045

Issue  
B

Task No  
GNH-1329

Drawing Status / Other  
Draft

Date	By	Chkd	Appd
11/04/2017	SR	CG	XX



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<p><b>Legend</b></p> <ul style="list-style-type: none"> <li>○ Straight Line Kilometre Marker (1km)</li> <li>● Town</li> <li>● Field Data Sites (TerraTree)</li> <li>● Infested</li> <li>● Infested (Historical)</li> <li>● Uninfested</li> </ul>	<ul style="list-style-type: none"> <li>— Muchea North Alignment</li> <li>— Existing GNH Alignment</li> <li>— Freeway / Highway</li> <li>— Minor Road</li> </ul>	<ul style="list-style-type: none"> <li>■ NVCP Application Area</li> <li>■ Dieback Occurrence (TerraTree)</li> <li>■ Excluded</li> <li>■ Gravel Pit</li> <li>■ Infested</li> <li>■ Uninfested</li> <li>■ Uninfested Unprotectable</li> <li>■ Uninterpretable</li> </ul>	<p>Joint Venture Partners:</p> <p>Arup Pty Ltd Level 14 Exchange Tower 2 The Esplanade Perth WA 6000 Tel +61 8 9327 8300 Fax +61 8 9481 1334 www.arup.com</p> <p>Jacobs Group (Australia) Pty Ltd Durack Centre, 263 Adelaide Terrace, Perth WA 6000 Tel +61 8 9469 4400 Fax +61 8 9469 4488 www.jacobs.com</p> <p>© Main Roads Western Australia</p> <p>Scale at A3 <b>1:10,500</b></p> <p>0 125 250 Metres</p> <p>Coordinate System: GDA 1994 MGA Zone 50</p>	<p><b>Main Roads Western Australia</b></p> <p><b>ARUP</b>   TRADING AS ASJV <b>JACOBS</b></p> <p>Client Project</p> <p><b>Great Northern Highway Muchea to Wubin Upgrade Stage 2</b></p>	<p><b>Dieback Survey Mapping Map 4 of 4</b></p> <table border="0"> <tr> <td>Drawing No <b>GNH-CN03-EN01-GIS-0045</b></td> <td>Issue <b>B</b></td> </tr> <tr> <td>Task No <b>GNH-1329</b></td> <td>Drawing Status / Other <b>Draft</b></td> </tr> <tr> <td>Date <b>11/04/2017</b></td> <td>By <b>SR</b></td> <td>Chkd <b>CG</b></td> <td>Appd <b>XX</b></td> </tr> </table>	Drawing No <b>GNH-CN03-EN01-GIS-0045</b>	Issue <b>B</b>	Task No <b>GNH-1329</b>	Drawing Status / Other <b>Draft</b>	Date <b>11/04/2017</b>	By <b>SR</b>	Chkd <b>CG</b>	Appd <b>XX</b>
Drawing No <b>GNH-CN03-EN01-GIS-0045</b>	Issue <b>B</b>												
Task No <b>GNH-1329</b>	Drawing Status / Other <b>Draft</b>												
Date <b>11/04/2017</b>	By <b>SR</b>	Chkd <b>CG</b>	Appd <b>XX</b>										

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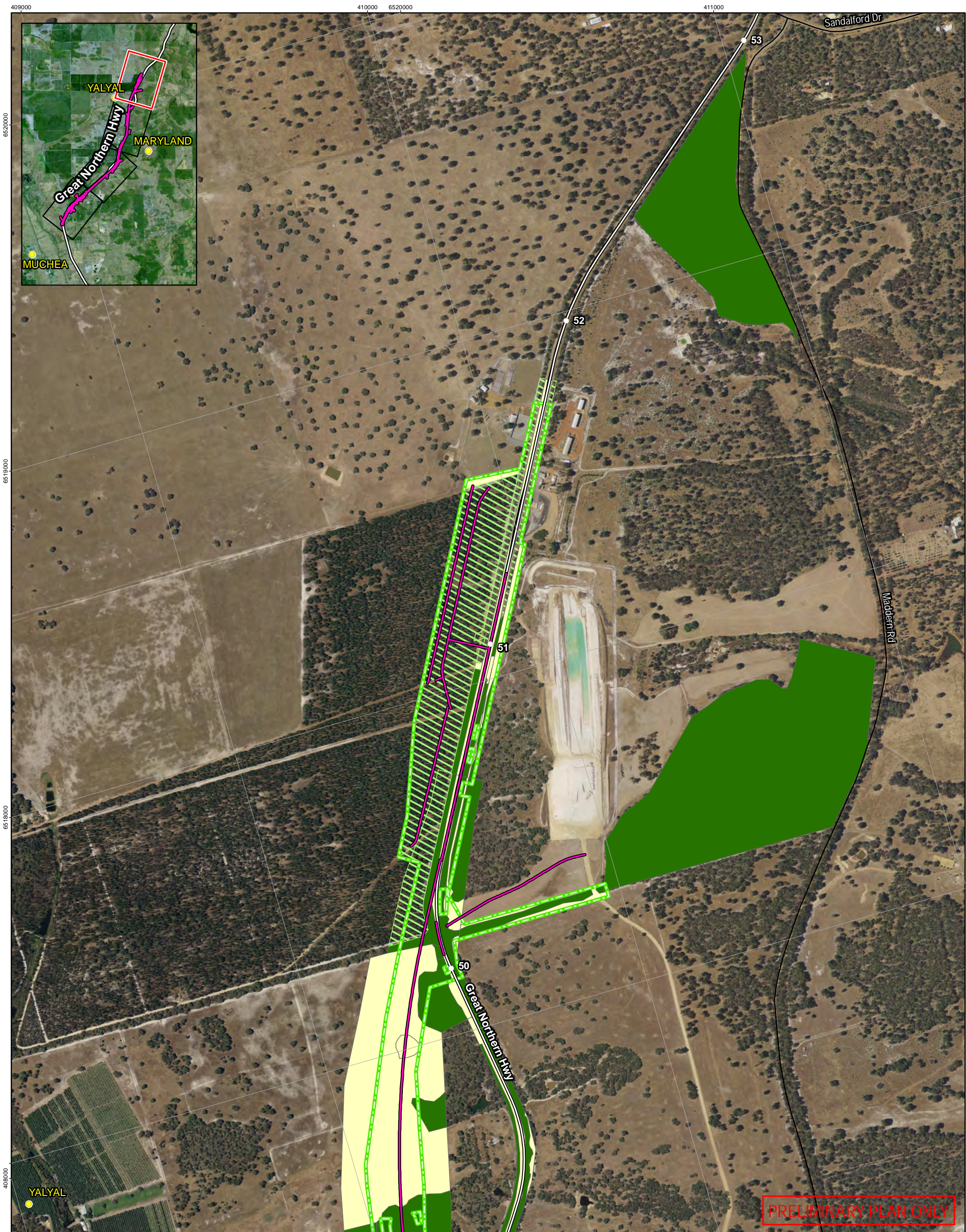


Figure 8 : Fauna Habitats

*[refer to GNH-CN03-EN01-GIS-0046]*



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- Legend**
- Straight Line Kilometre Marker (1km)
  - Town
  - Muchea North Alignment
  - Existing GNH Alignment
  - Freeway / Highway
  - Minor Road

- NVCP Application Area
- Fauna Habitat (Phoenix, 15/02/2017)
- 4 - Woodland (Jarrah, Marri, Wandoo and/or banksia)
- 7 - Cleared and revegetated non-native woodland mosaic
- 8 - Cleared (agriculture, road, infrastructure)

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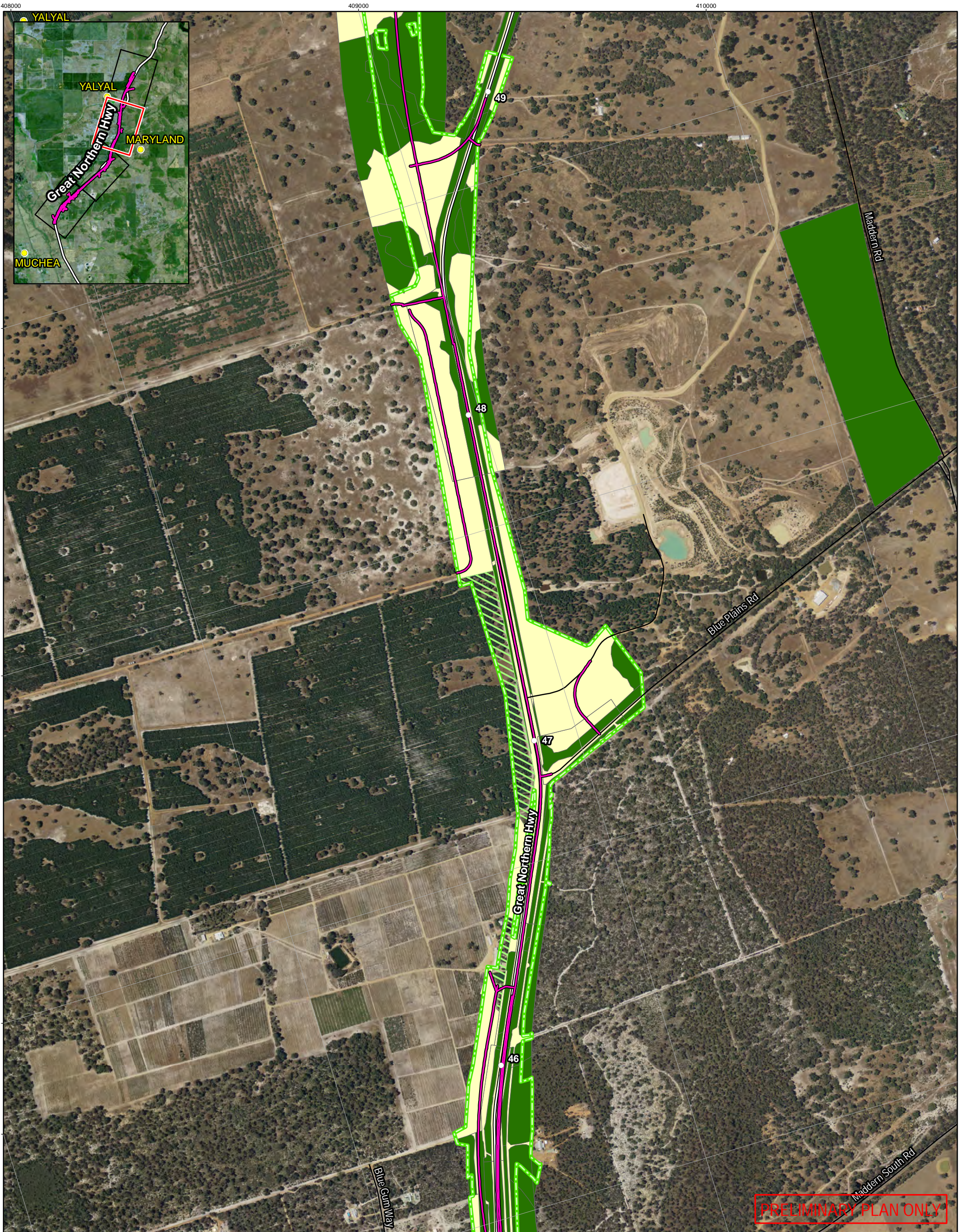
Great Northern Highway  
Muchea to Wubin Upgrade Stage 2

**Fauna Habitats**  
Map 1 of 4

Drawing No GNH-CN03-EN01-GIS-0046	Issue B		
Task No GNH-1329	Drawing Status / Other Draft		
Date 11/04/2017	By SR	Chkd CG	Appd XX

Data Source: Main Roads WA, Landgate

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- Legend**
- Straight Line Kilometre Marker (1km)
  - Town
  - Muccha North Alignment
  - Existing GNH Alignment
  - Freeway / Highway
  - Minor Road

- NVCP Application Area
- Fauna Habitat (Phoenix, 15/02/2017)**
- 4 - Woodland (Jarrah, Marri, Wandoo and/or banksia)
- 7 - Cleared and revegetated non-native woodland mosaic
- 8 - Cleared (agriculture, road, infrastructure)



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Project  
**Great Northern Highway  
Muccha to Wubin Upgrade Stage 2**

**Fauna Habitats  
Map 2 of 4**

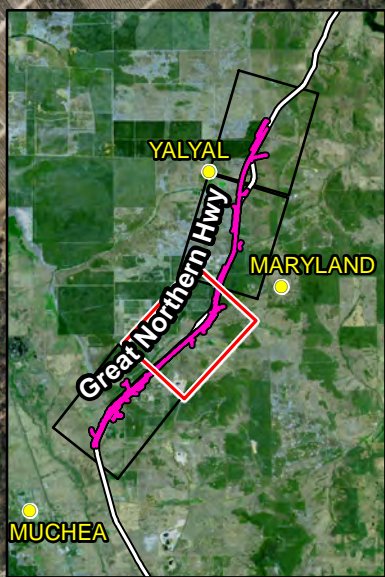
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Issue  
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Task No  
**GNH-1329**

Drawing Status / Other  
**Draft**

Date	By	Chkd	Appd
11/04/2017	SR	CG	XX

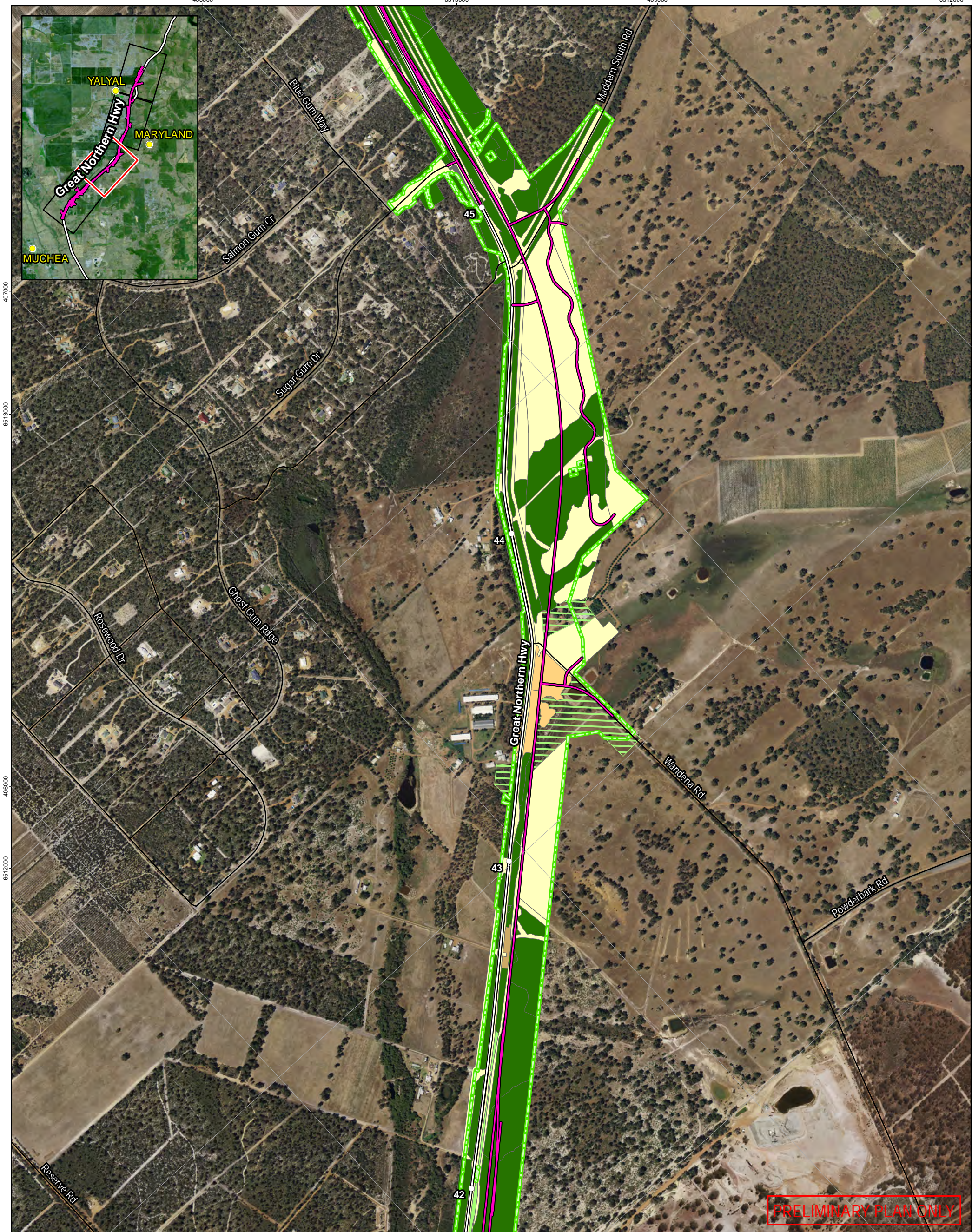


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PRELIMINARY PLAN ONLY

- Legend**
- Straight Line Kilometre Marker (1km)
  - Town
  - Muchea North Alignment
  - Existing GNH Alignment
  - Freeway / Highway
  - Minor Road

- NVCP Application Area
- Fauna Habitat (Phoenix, 15/02/2017)
- Null
- 2 - Shrubland (low heath/scrub)
- 3 - Shrubland (thicket)
- 4 - Woodland (Jarrah, Marri, Wandoo and/or banksia)
- 5 - Woodland (paperbark or sheoak)
- 7 - Cleared and revegetated non-native woodland mosaic
- 8 - Cleared (agriculture, road, infrastructure)

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Great Northern Highway  
Muchea to Wubin Upgrade Stage 2

**Fauna Habitats**  
Map 3 of 4

Drawing No GNH-CN03-EN01-GIS-0046	Issue B		
Task No GNH-1329	Drawing Status / Other Draft		
Date 11/04/2017	By SR	Chkd CG	Appd XX

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- Legend**
- Straight Line Kilometre Marker (1km)
  - Town
  - Muchea North Alignment
  - Existing GNH Alignment
  - Freeway / Highway
  - Minor Road

- NVCP Application Area
- Fauna Habitat (Phoenix, 15/02/2017)
- 2 - Shrubland (low heath/scrub)
- 4 - Woodland (Jarrah, Marri, Wandoo and/or banksia)
- 5 - Woodland (paperbark or sheoak)
- 7 - Cleared and revegetated non-native woodland mosaic
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Client Project  
Great Northern Highway  
Muchea to Wubin Upgrade Stage 2

**Fauna Habitats**  
**Map 4 of 4**

Drawing No <b>GNH-CN03-EN01-GIS-0046</b>	Issue <b>B</b>		
Task No <b>GNH-1329</b>	Drawing Status / Other <b>Draft</b>		
Date <b>11/04/2017</b>	By <b>SR</b>	Chkd <b>CG</b>	Appd <b>XX</b>

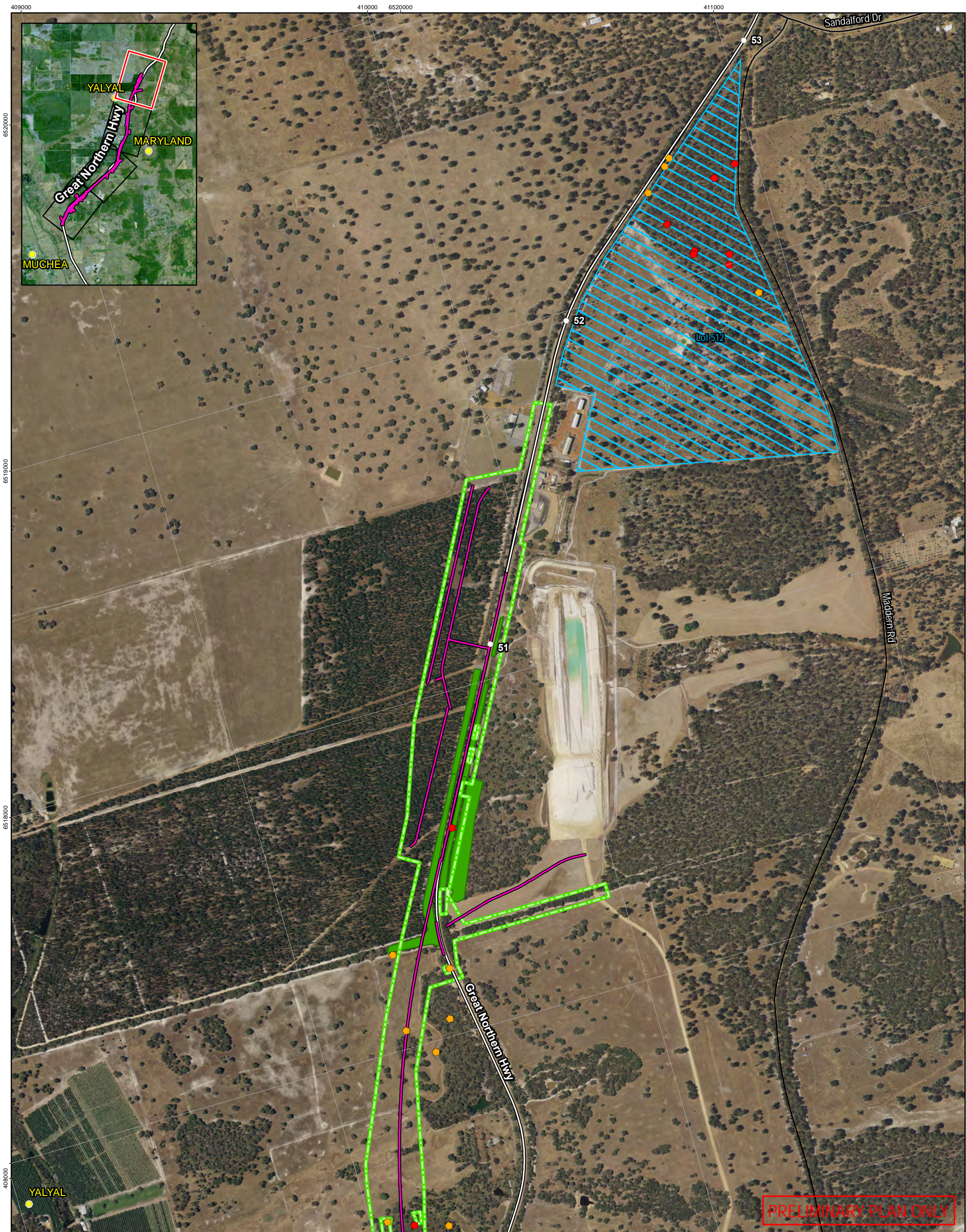
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Figure 9 : Carnaby's Black Cockatoo Habitat

*[refer to GNH-CN03-EN01-GIS-0047]*

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- Legend**
- Straight Line Kilometre Marker (1km)
  - Town
  - Carnaby's Black Cockatoos Potential Breeding Trees (Phoenix, 15/02/2017)
  - Hollow with Evidence of Use
  - Suitable Hollow
  - Muchea North
  - Existing GNH
  - Freeway / Highway
  - Minor Road
  - Data Source: Main Roads WA, Landgate

- NVCP Application
- CBC Breed Rating (Phoenix, 15/02/2017)
- Foraging Habitat
- Cadastral Boundary (05-12-2016)

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Client  
Project  
Great Northern Highway  
Muchea to Wubin Upgrade Stage 2

**Carnaby's Black Cockatoo  
Habitat  
Map 1 of 4**

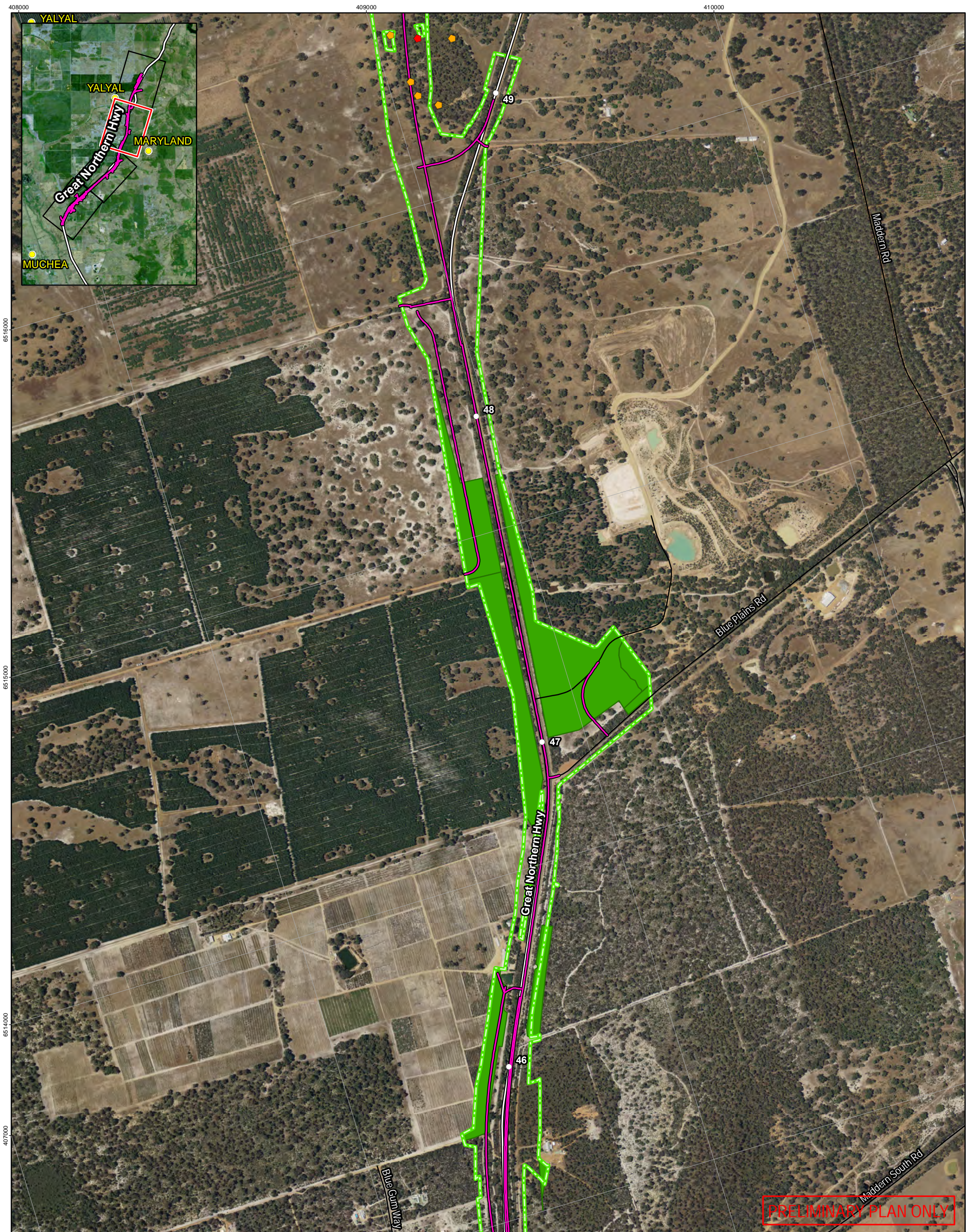
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Task No: GNH-1329 Drawing Status / Other: Draft

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- Legend**
- Straight Line Kilometre Marker (1km)
  - Town
  - Carnaby's Black Cockatoos Potential Breeding Trees (Phoenix, 15/02/2017)
  - Hollow with Evidence of Use
  - Suitable Hollow
  - Muchea North Alignment
  - Existing GNH Alignment
  - Freeway / Highway
  - Minor Road
  - Data Source: Main Roads WA, Landgate

- NVCP Application Area
- CBC Breed Rating (Phoenix, 15/02/2017)
- Foraging Habitat

North Arrow

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<b>Carnaby's Black Cockatoo Habitat</b>			
<b>Map 2 of 4</b>			
Drawing No	Issue		
<b>GNH-CN03-EN01-GIS-0047</b>	<b>B</b>		
Task No	Drawing Status / Other		
<b>GNH-1329</b>	<b>Draft</b>		
Date	By	Chkd	Appd
11/04/2017	SR	CG	XX

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