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Development Plan

100 Highton Lane and 52 Crosbys Lane Mansfield

October 2022

Approval is granted for this Development Plan
Planning Environment Act 1987
Mansfield Planning Scheme

.....
Senior Planning Officer
For and or on behalf of the Resposible Authority
Date:12/12/2022

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Contents

1 Introduction

This Development Plan has been prepared on behalf of Highton Developments Pty Ltd, the owners of the subject land parcels. It has been prepared to address the requirements of Development Plan Overlay Schedule 1 of the Mansfield Planning Scheme.

This Development Plan (DP) sets out the requirements for use and development of the land and provides the required information to enable assessment of planning permit applications within the area subject to the DP.

2 The Site

2.1 Subject Land

The land subject to this DP is known as 100 Highton Lane and 52 Crosbys Lane, Mansfield, and is shown in Figure 1 below:

Figure 1:Subject land (source www.mapshare.vic.gov.au)

The legal description of the properties is Lot 33 and Lot 34 LP135575. It is also noted that there is a proposed plan of subdivision which includes the creation of road on part of 102 Highton lane, to facilitate future road access as outlined further in this DP. Copies of title are included in Attachment A.

The land is accessed via battle axe accessways from both Crosbys Lane and Highton Lane. The accessway to Highton Lane is 12.5m wide, and to Crosbys Lane approximately the same.

Excluding the accessways, the site dimensions are approximately 260m north-south and 380m east-west.

The overall area of the subject land is approximately 10.37ha.

3 Planning Context

3.1 Zoning and Overlays

The subject site is predominantly zoned General Residential Zone – Schedule 1 (GRZ1), with the battleaxe 'handle' to Crosbys Lane located within the Rural Living Zone – Schedule 1.

The General Residential 1 zoned part of the site is also within the Development Plan Overlay – Schedule 1 (DPO1), which extends across the GRZ1 area between Ogilvies Lane and the Mt Buller Road to the north.

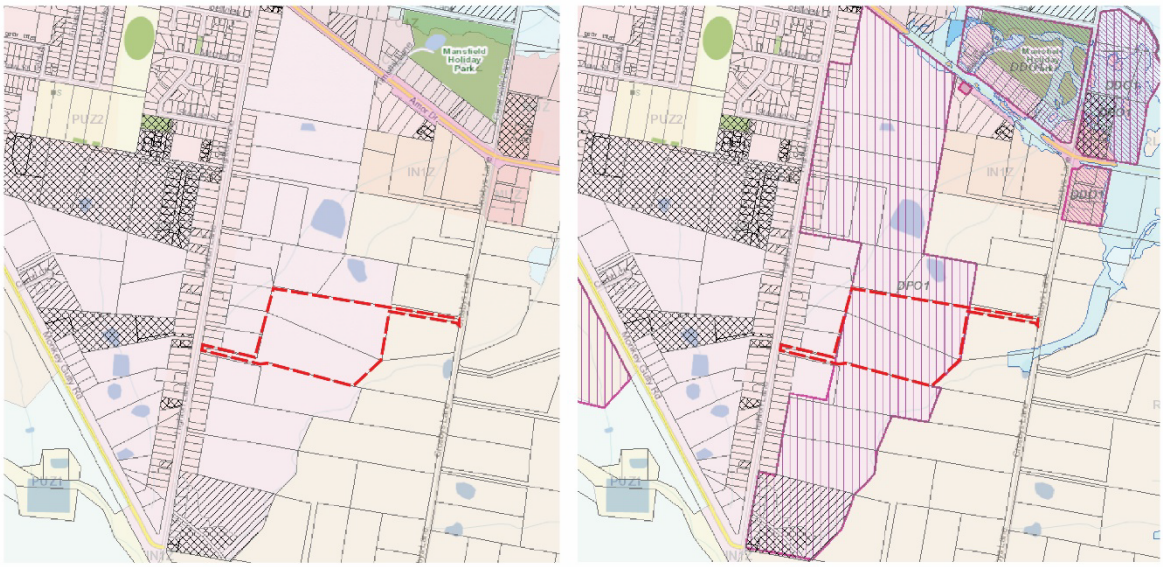

Figure 2: Zoning (a) and Overlays (b) (Source: www.mapshare.vic.gov.au)

The GRZ1 encourages development that respects neighbourhood character, encourages a diversity of housing types, and to allow a limited range of other non-residential uses that service local community needs.

The DPO1 relates to General Residential Zone and Mixed Use Zone land as defined in Mansfield. It specifies the requirements for a development plan, which include:

- *Proposed future subdivision and development to allow for the full development and servicing of the land in accordance with the General Residential Zone and ResCode.*
- *Site analysis and response, including natural features, slope, orientation, views, drainage lines, native vegetation, and impact on neighbouring and nearby land*
- *Proposed lot layout and density, including building envelopes if appropriate*
- *Internal road layout and external road access, including future road linkages, street lighting, and proposed road surfacing and standards*
- *All servicing, including water, sewerage, drainage and stormwater, electricity and telecommunications*
- *Existing and future open space, including linkages to and between areas of open space*
- *Landscaping, existing native vegetation and streetscape treatment*
- *Relationship, effect and linkages of proposed use and development of the land to uses and developments on adjoining land and nearby land*
- *The need to financially contribute toward development and community infrastructure that will be demanded by the residents of the future development, as specified in Section 13 of the Mansfield Urban Design Framework 2005. This will be achieved by negotiation with the Responsible Authority and formalised by a Section 173 Agreement as part of any Development Plan.*
- *The stages, if any, in which the land is to be subdivided and developed*

A Development Plan may be approved in stages.

3.2 Strategic Context

The Mansfield Planning Scheme promotes the managed growth of Mansfield, as the only urban centre within the municipality. As outlined in the Mansfield Structure Plan 2015 and the Township Framework Plan at Clause 11.01-1L-01, the Highton Lane Development Plan area is noted to eventually produce 300-400 lots subject to approval of appropriate DP's.

Clause 11.01-1L-01 identifies that residential development should be confined to existing residentially zoned land, and that development of currently vacant General Residential land should be encouraged. Clause 02.03-6 Housing also recognises the need to provide for a diversity of lot sizes within the town, to cater for housing diversity. Residential development should also respect existing environmental features including vegetation, waterways and views, and reflect sustainable development initiatives.

The Mansfield Township Structure Plan 2015 identified that the Highton Lane DP area should be finalised in the short term, to provide for opportunities to cater for land supply required in Mansfield. This structure plan was implemented into the planning scheme and is the basis for Clause 11.01-1L discussed above.

Mansfield Planning Strategy 2022

The Mansfield Planning Strategy was adopted by Council on 17 May 2022, but is not yet implemented into the planning scheme. The Mansfield Planning Strategy sets out land use and development priorities for the Shire, to 2040. It provides a framework for responding to population growth and change. It also considers how to protect and enhance valued economic, environmental, local character and landscape features associated with the Shire's towns and settlements.

Once of the key recommendations in the Implementation Plan in Section 9.5 of the Strategy for the town is "*To ensure sufficient residential land is available to meet future dwelling demand.*" To do this, the key implementation action in the short term (0-5 years) is to "*Prepare and adopt a Development Plan for Highton Lane to link existing approved development plans and ensure the orderly development of Highton Lane*."

Mansfield Highton Lane Development Plan February 2013 DRAFT

Planisphere prepared a draft of a Development Plan for the Highton Lane area, that has not been progressed past draft form. As such, it has not been approved under the DPO1 schedule.

The draft DP identified that the area should provide a high standard of and variety of housing opportunities, along with retention of vegetation and creation of open space areas. The key principles identified were to:

- Ensure integration for road and drainage infrastructure
- Utilise natural features
- Ensure provision of adequate infrastructure
- And be fair and equitable for the properties in the precinct.

The draft DP identifies the following for the subject site:

- Standard residential lots (800-3000sqm)
- Road links to both Highton and Crosbys Lane
- Road connectivity to properties north and south
- Provision for an overland flow path through the site in open space.

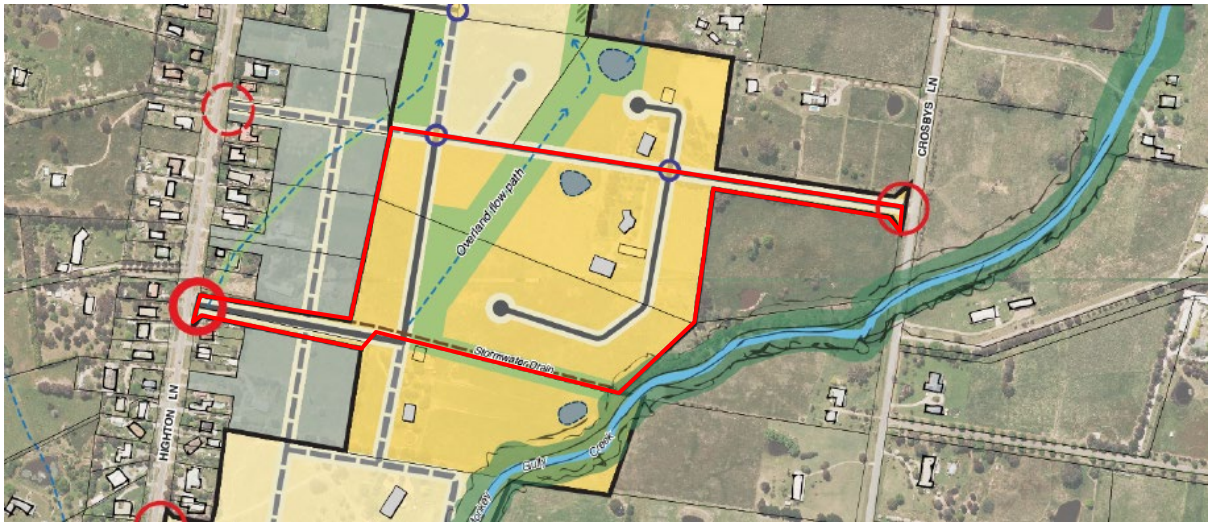

Figure 3: Extract from draft Highton Lane DP (source: Planisphere 2013)

Whilst it is recognised that the plan has not been progressed past draft stage, it is understood that many of the principles of this plan should be considered in this Development Plan.

4 Site and Context Analysis

4.1 Site Context

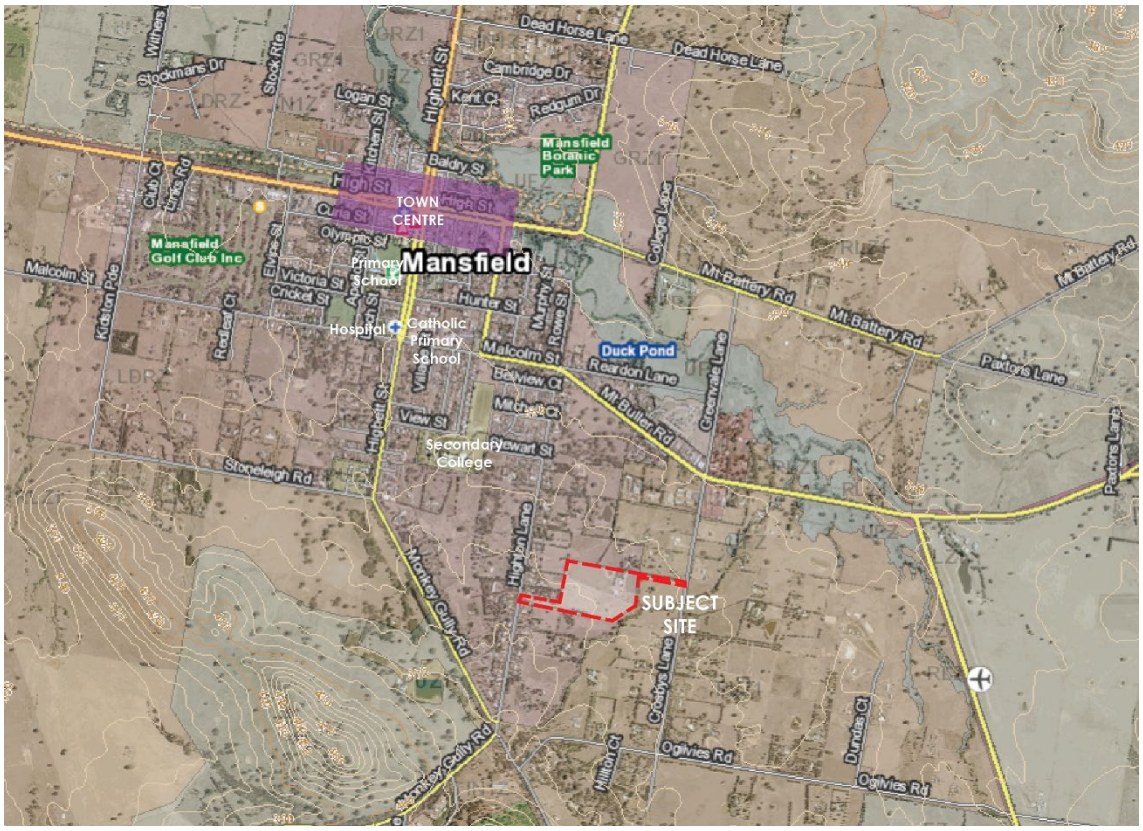

Figure 4: Site context (source: www.mapshare.vic.gov.au)

The site is located on the south eastern edge of the existing township of Mansfield and extends between Highton Lane and Crosbys Lane. The Mt Buller Road is approximately 500m north of the site from Crosbys Lane, and 1km north from the Highton Lane access. Monkey Gully Road is approximately 700m south-west of the site. Both roads provide access to the town centre of Mansfield.

Land to the west of the site, along both sides of Highton Lane is predominantly developed for large residential allotment ranging from 1000-2000sqm in size. A number of these larger lots have been further subdivided into 2 lots, creating some lots down to approximately 800sqm along Highton Lane. A number of the larger properties to the west of Highton Lane are currently undergoing further subdivision.

Land to the east, along Crosbys Lane is zoned for Rural Living, therefore the land is predominantly larger allotments, ranging from around 1-5ha.

Land to the immediate north and south of the subject land is made up of larger sites of approximately 5ha, that are all within the same DPO1 area and can be further subdivided with a Development Plan in place.

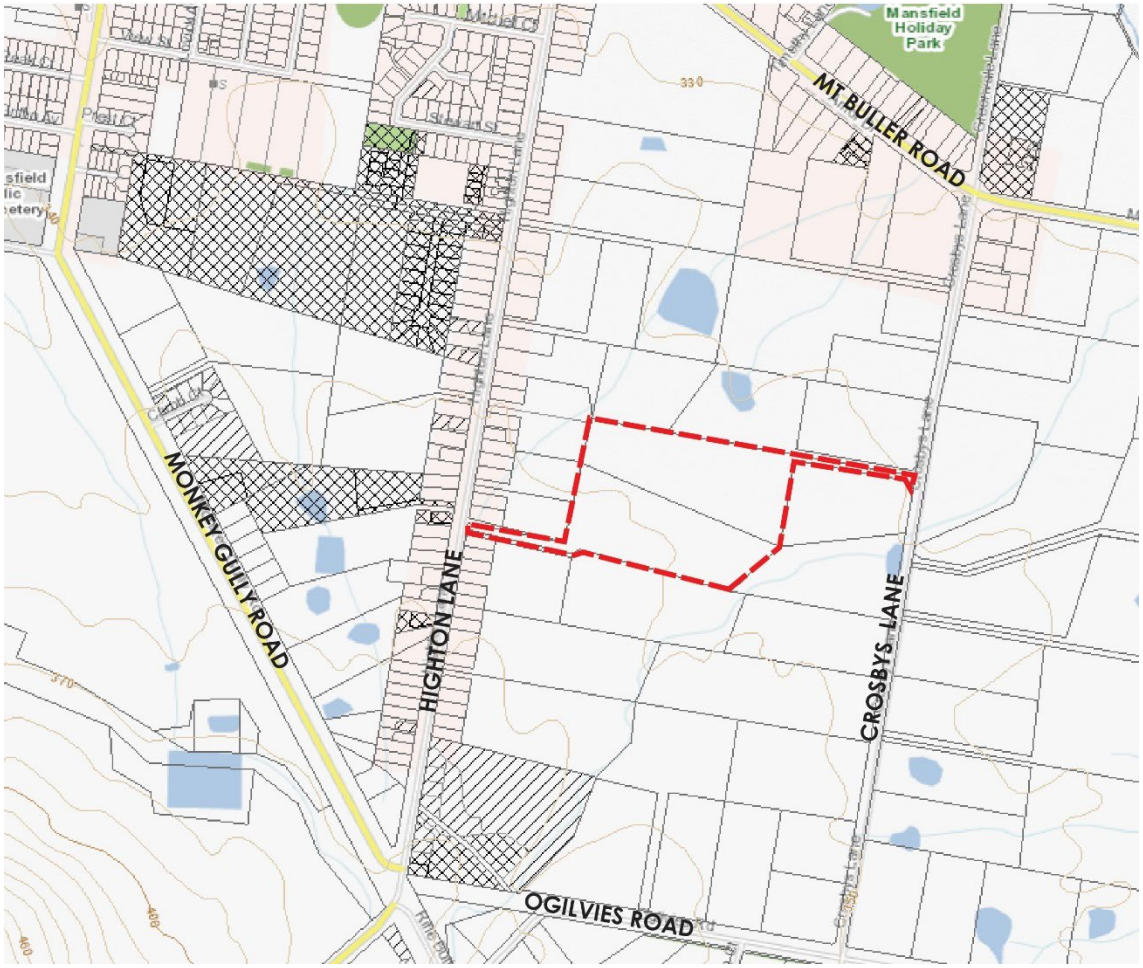

Figure 5: Immediate site context (Source: www.mapshare.vic.gov.au)

4.2 Site Analysis

As outlined above, the site is approximately 10.37 ha in area, and has access via battleaxe driveways to both Crosbys Lane and Highton Lane. The site falls approximately 10m from south-west to north east, from elevation 352m through to 342m as demonstrated on the Plan of Survey located in Attachment B.

The site at 52 Crosbys Lane contains an existing brick dwelling and some outbuildings, and a dam exists close to the northern boundary. The site is predominantly planted with vines, and planted trees exist around the dwelling and along the battleaxe driveway.

100 Highton Lane is not developed and contains limited vegetation.

Photos of the subject sites are included below:

Photo 1: Highton Lane, looking south (a) and north (b)

Photo 2: Looking into the sites at 100 (a) and 102 (b) Highton Lane

Photo 3: Crosby Lane, looking into the site (a) and south along Crosbys Lane (b)

Photo 4: Views north east (a) and north west (b) within the site

Photo 5: Views north across the site from the south-west corner

A Site Analysis Plan is included on the following page. The site affords views to the ranges to the north and east.

Figure 6: Site analysis

4.3 Site Investigations

Flora and Fauna Assessment

Included as **Attachment D** to this submission is a Flora and Fauna Assessment prepared by Hamilton Environmental Services for the subject land. A field assessment was undertaken on 28 September 2020. The field assessment found that the property has been predominantly cleared of indigenous woody vegetation. There is only one standing dead remnant indigenous tree (Red box) on the property, and no rare or threatened species were observed at the site. No patches of native vegetation were identified across the property.

The property is dominated at ground level by annual and perennial introduced plant species. The area around the existing dwelling and outbuildings and the accessway to Crosbys Lane are planted with a range of exotic, indigenous and non-indigenous native trees and shrubs.

In relation to fauna, 10 species were observed during the site inspection, mainly birds. There were no rare or threatened fauna species observed at the site.

Figure 7: Extract from Flora and Fauna Assessment

As a result of these findings, there is a single scattered tree (dead) impacted by the proposed development. Its removal will need to be included in the future planning permit application for the subdivision.

Traffic Impact Assessment

A Traffic Impact Asessment (TIA) has been prepared for the DP by Trafficworks, and is included in **Attachment E**. The TIA assessed the impact of the development on the local road network as well as the internal proposed street network. The TIA found that the proposed development will not significantly impact the existing road network, and that the increase in traffic as a result of the development is acceptable.

The TIA recommends that:

- A basic left (BAL) turn treatment for the Highton Lane / Development Access intersection be included for the development.
- Development access requires widening of the road reserve from Highton Lane and Crosbys Lane which includes the removal of the adjacent trees to satisfy the access street criteria in the Infrastructure Design Manual (IDM).
- Temporary court bowls would need to be constructed to facilitate turns by vehicles at the termination of all roads for each stage of development.
- Footpaths within the subdivision would need to be provided in accordance with the IDM.

Following the review of the Traffic Impact Assessment and draft DP, it was agreed that Crosbys Lane be used for egress only from the site, as well as for a pedestrian link.

Servicing and Infrastructure investigation

A servicing and infrastructure investigation has also been prepared and is included in **Attachment F.** This confirms that the site can be serviced with required infrastructure.

5 The Development Plan

The proposed Development Plan for 100 Highton Lane and 52 Crosbys Lane is provided below, and is included as **Attachment D** to this report:

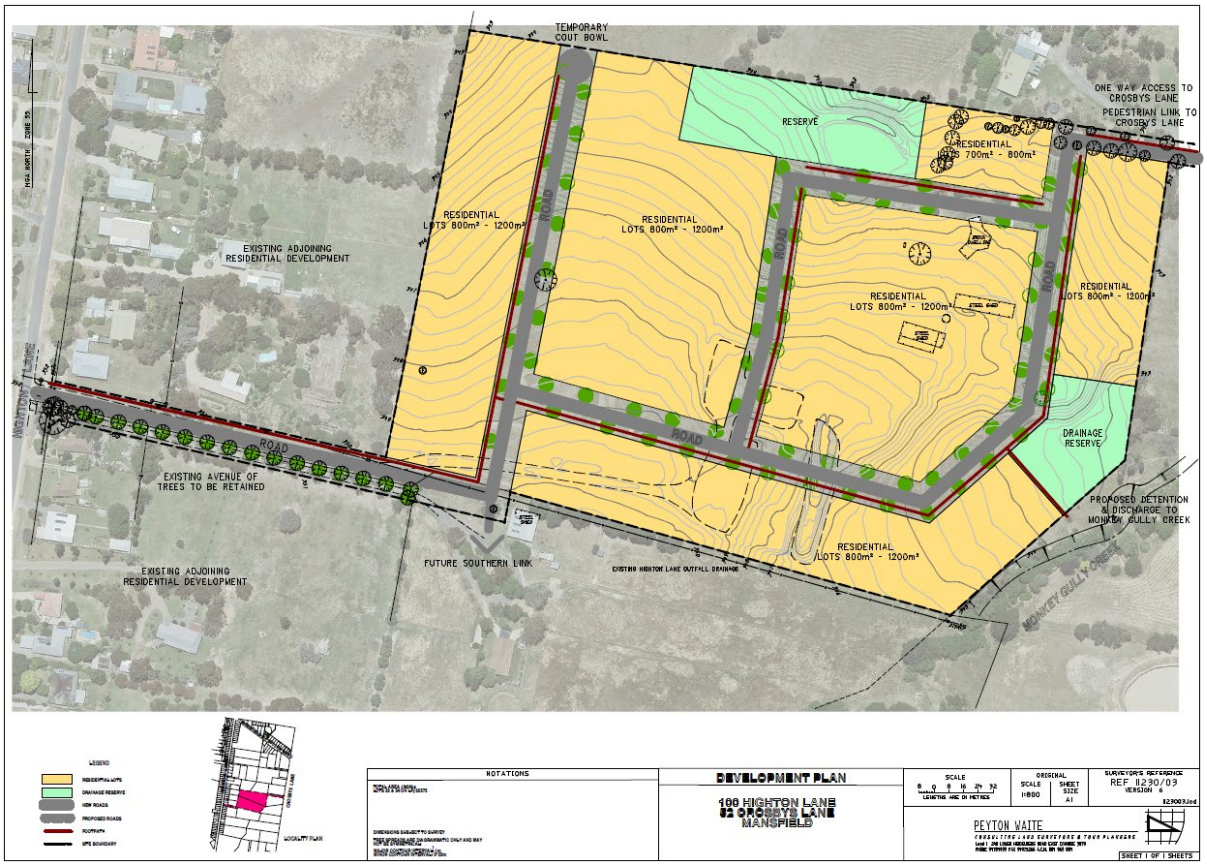

Figure 8: Proposed Development Plan

5.1 Objectives and Vision

The Vision for the DP is to provide for residential development that respects the environment and surrounds and provides an opportunity for sensitive greenfield housing development that integrates with the existing and future community.

To implement this vision, the Objectives for the DP are:

- Provide the opportunity for through connectivity between Highton Lane and Crosbys Lane.
- Provide opportunities for connectivity to future development north and south through both streets and open spaces.
- Address integrated stormwater management through the development, and ensure protection of Monkey Gully Creek.
- Include a diversity of lot sizes in the general range of 700-1600sqm.
- Maximise views to the mountain ranges to the north and west through the streetscape design.

5.2 Performance measures

Performance Measures that can assist in meeting the above objectives and vision are:

- Provide a road network that includes connectivity between Highton Lane and Crosbys Lane, in accordance with the requirements of the Infrastructure Design Manual. It is proposed that egress only is provided to Crosbys Lane, whilst full access is provided to Highton Lane. Pedestrian links are also provided along all streets, including out to Crosbys Lane
- Ensure all lots are provided with access to essential services including water supply, sewer connection, electricity, and telecommunications.
- Ensure road and any open space connectivity is provided to future development to the north and south of the DP area.
- Ensure stormwater drainage is catered for within underground drainage or through overland flow paths or reserves so that there is no increased impact downstream of the DP area.
- Any open space and all streetscapes are to be landscaped to enhance the natural environment.

5.3 Use of land

Use of land within the DP area is to be in accordance with the requirements of the General Residential Zone Schedule 1, and no specific provisions apply.

5.4 Development of land

The provisions for buildings and works in the General Residential Zone Schedule 1 apply to the development of land within the DP area. In accordance with those provisions, a planning permit is not required for a dwelling on lots over 300sqm, and lots must maintain a 'garden area' of at least 35% of the allotment and must meet the requirements of Clause 54 of the Mansfield Planning Scheme.

It is also noted that a permit is required for any outbuildings (ie. sheds) that are more than 10sqm in gross floor area, or if their maximum building height is more than 3m above ground level.

Front fences (fences within 3m of the road) must be a maximum of 1.5m in height

5.5 Assessment against the Mansfield Planning Scheme

This DP implements the requirements of the Mansfield Planning Scheme, and in particular addresses the requirements of Schedule 1 to the Development Plan Overlay. Section 2.0 of the DPO1 requires that any development plan must outline and assess:

Requirement:	How it is addressed in this DP:
Proposed future subdivision and development to allow for the full development and servicing of the land in accordance with the General Residential Zone and ResCode	**The DP plan and the included servicing investigation show that the land can be developed and fully serviced.**
Site analysis and response, including natural features, slope, orientation, views, drainage lines, native vegetation, and impact on neighbouring and nearby land	**A Site Analysis plan is included in Figure 6, and Section 2 of this DP report outlines the site features and context.**
Proposed lot layout and density, including building envelopes if appropriate	**The DP plan shows the proposed road layout and lot densities.**
Internal road layout and external road access, including future road linkages, street lighting, and proposed road surfacing and standards	**The internal road layout is shown on the DP, and the future road linkages are also shown. All roads will be designed and constructed in accordance with the IDM**

All servicing, including water, sewerage, drainage and stormwater, electricity and telecommunications	**A servicing report is provided which details the servicing strategy for the DP**
Existing and future open space, including linkages to and between areas of open space	**A reserve of 0.5ha is provided along the site's northern boundary, which can provide for integration with future development to the north.** **A drainage reserve is also provided on the south-eastern boundary to manage drainage adjacent to the creek.**
Landscaping, existing native vegetation and streetscape treatment	**Existing vegetation has been assessed and is detailed in Attachment D and is shown on the site analysis plan.** **A landscape masterplan will be required for a planning permit for the subdivision.**
Relationship, effect and linkages of proposed use and development of the land to uses and developments on adjoining land and nearby land	**The DP demonstrates how the proposal integrates with the surrounds, and how it relates to the draft Highton Lane DP 2013**
The need to financially contribute toward development and community infrastructure that will be demanded by the residents of the future development, as specified in Section 13 of the Mansfield Urban Design Framework 2005. This will be achieved by negotiation with the Responsible Authority and formalised by a Section 173 Agreement as part of any Development Plan.	**The proposed plan will provide for appropriate intersection treatment with Highton Lane as detailed in the attached Traffic Impact Assessment.** **All servicing and drainage infrastructure will be provided, and the subdivision will make its 5% contribution to public open space through the provision of land for the Reserve on the northern boundary**
The stages, if any, in which the land is to be subdivided and developed	**Staging of the development will be addressed as part of a future planning permit application.**

5.6 Staging

It is proposed that the area subject to this DP will be developed in stages. It is expected as a general principle that the site will develop from west to east. Detailed staging will be provided as part of an application for planning permit for the subject land

5.7 Life of plan

This Development Plan is to be reviewed after 10 years from its approval if the subdivision and development of the land in accordance with the DP has not been completed.

Review of the DP should generally involve making sure that the requirements and objectives are reviewed and updated to be in line with any change in Mansfield Council, state government policy and servicing authority requirements.

Approval is granted for this Development Plan
Planning Environment Act 1987
Mansfield Planning Scheme

.....
Senior Planning Officer
For and or on behalf of the Responsible Authority
Date: 12/12/2022

Attachments

Attachment A – Copy of Titles

Attachment B – Plan of Survey

Attachment C– Proposed Development Plan

Attachment D – Flora and Fauna Assessment

Attachment E – Traffic Impact Assessment

Attachment F – Servicing Report

Attachment A – Copy of Titles

Attachment B – Plan of Survey

NOTATIONS
TREE SPREADS ARE DIAGRAMMATIC ONLY AND MAY NOT BE SYMMETRICAL.
MAJOR CONTOUR INTERVAL: 1m MINOR CONTOUR INTERVAL: 0·25m DATE OF SURVEY: 27/8/2020 DATE OF PLAN: 14/9/2020

PLAN OF EXISTING CONDITIONS

100 HIGHTON LANE
52 CROSBYS LANE
MANSFIELD

SCALE
8 0 8 16 24 32
LENGTHS ARE IN METRES

ORIGINAL	
SCALE	SHEET SIZE
1:800	A1

SURVEYOR'S REFERENCE
REF 11230/02
VERSION 1
11230O2.lcd

PEYTON WAITE
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Level 1 240 LOWER HEIDELBERG ROAD EAST IVANHOE 3079
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Attachment C– Proposed Development Plan

TEMPORARY COUT BOWL

ONE WAY ACCESS TO CROSBYS LANE

PEDESTRIAN LINK TO CROSBYS LANE

RESERVE

RESIDENTIAL LOTS 700m² - 800m²

RESIDENTIAL LOTS 800m² - 1200m²

RESIDENTIAL LOTS 800m² - 1200m²

RESIDENTIAL LOTS 800m² - 1200m²

RESIDENTIAL LOTS 800m² - 1200m²

BRICK DWELLING

STEEL SHED

STEEL SHED

STEEL SHED

ROAD

ROAD

ROAD

ROAD

DRAINAGE RESERVE

PROPOSED DETENTION & DISCHARGE TO MONKEY GULLY CREEK

MONKEY GULLY CREEK

EXISTING ADJOINING RESIDENTIAL DEVELOPMENT

EXISTING AVENUE OF TREES TO BE RETAINED

EXISTING ADJOINING RESIDENTIAL DEVELOPMENT

FUTURE SOUTHERN LINK

EXISTING HIGHTON LANE OUTFALL DRAINAGE

MGA NORTH ZONE 55

HIGHTON LANE

CROSBYS LANE

LEGEND

- RESIDENTIAL LOTS
- DRAINAGE RESERVE
- NEW ROADS
- PROPOSED ROADS
- FOOTPATH
- SITE BOUNDARY

LOCALITY PLAN

NOTATIONS

TOTAL AREA 10.24ha
LOTS 33 & 34 ON LP135575

DIMENSIONS SUBJECT TO SURVEY

TREE SPREADS ARE DIAGRAMMATIC ONLY AND MAY NOT BE SYMMETRICAL.

MAJOR CONTOUR INTERVAL: 1m
MINOR CONTOUR INTERVAL: 0·25m

DEVELOPMENT PLAN

100 HIGHTON LANE
52 CROSBYS LANE
MANSFIELD

SCALE
8 0 8 16 24 32
LENGTHS ARE IN METRES

ORIGINAL
SCALE 1:800
SHEET SIZE A1

SURVEYOR'S REFERENCE
REF 11230/03
VERSION 6
11230O3.lcd

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SHEET 1 OF 1 SHEETS

Attachment D – Flora and Fauna Assessment

Hamilton Environmental Services
ABN: 89 108 410 911

FLORA AND FAUNA ASSESSMENT, AND NET LOSS REPORTING – 100 HIGHTON LANE, MANSFIELD

Flora and Fauna Assessment and Net Loss Reporting – 100 Highton Lane, Mansfield

Submitted to:

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Version 1, 2nd November 2020

Cover Photo: The entrance to the property on Crosbys Lane.

TABLE OF CONTENTS

1. INTRODUCTION

The landholder of 100 Highton Lane Mansfield is planning to develop a residential subdivision at the property.

Hamilton Environmental Services (HES) were provided with the opportunity to quote for the site assessment and preparation of this Report for the landholder.

Dr. Steve Hamilton (HH129) undertook field evaluation at the site on the 28th September 2020 to assess the extent of indigenous vegetation on the site and determine the condition of the vegetation, to inform avoidance and minimisation of native vegetation loss.

Following the compilation of field assessment findings, and after consideration of minimisation of native vegetation loss, mapping of the likely native vegetation losses were submitted to the EnSym NVR Support Team from the Department of Environment, Land, Water and Planning (DELWP), and a Biodiversity report provided. This report outlines the Net Loss of native vegetation proposed, the process followed in terms of native vegetation loss avoidance and minimisation, and arrangements put in place to meet the offset requirements.

2. BACKGROUND

2.1 Location and Description

The freehold property of 10.2 ha is broadly rectangular in dimensions, and is found 1.9 km south-east of the centre of Mansfield (Fig. 2-1; VicRoads 679 Q8), the property has two narrow strips of land that act as access points to both Crosbys Lane to the east and Highton Lane to the west (see Fig. 2-2).

The property has been predominantly cleared of indigenous woody vegetation and is dominated at ground level by annual and perennial introduced plant species; there is only one standing dead remnant indigenous tree on the property.

The fenced property slopes gently to the north, and has until recently been utilised as a vineyard– 3.16 ha has been planted to vines (see Fig. 2-2). The site is no longer being used for grape production, and parts of the property are currently being used for horse grazing.

There is an older dwelling on the site that has an access track to Crosbys Lane, and several equipment sheds that have been used to house the vineyard equipment and operations are found around this dwelling. There is a large dam in the north of the property adjacent to the northern boundary (see Fig. 2-2).

The area around the dwelling and buildings, the Crosby Lane access laneway, and a plantation on the southern boundary, have all been planted with a range of exotic, indigenous and non-indigenous native trees and shrubs; there are a number of other plantations on the boundary of the property on the adjacent freehold land – on the northern boundary and on the north-western corner (see Fig. 2-2).

The Proposed Plan for Subdivision for the residential development is shown in Fig. 2-3.

2.1.1 Bioregion and Ecological Vegetation Class

The proposed is found wholly within the Central Victorian Uplands Bioregion (DELWP 2020a).

In Victoria, DELWP have developed an on-line mapping layer that categorises pre-1750 and 2005 natural vegetation communities into Ecological Vegetation Classes (EVCs), and have developed EVC Benchmark Statements for each of these EVCs that represent the best known example of this EVC.

Prior to European settlement, the vegetation of the whole property is projected to have been a mixture of Valley Grassy Forest Ecological Vegetation Class [EVC](EVC 803; Biodiversity Conservation Status [BCS] Vulnerable)(DELWP 2020a and 2020b).

Ground-truthing was not able to confirm the former presence of this EVC based on the remaining native vegetation (one dead remnant tree), and the mapping layer is presumed to be correct.

The relevant EVC Benchmark Statement can be seen in Appendix C.

2.1.2 Land Tenure and Planning Scheme Overlays

The property is two parcels – Lot 33 and 34 LP135575 (Council Property Numbers A5012 and A5354), Township of Mansfield, Mansfield Shire Council, and are mostly *General Residential Zone* and subject to the *General Residential Zone – Schedule 1;* the laneway to access Crosby Lane is *Rural Living Zone*. The majority of both parcels – except the laneways to both Highton and Crosby Lane – are subject to a *Development Plan Overlay* and a *Development Plan Overlay – Schedule 1* (DELWP 2020d).

Figure 2-1 Aerial image of the assessed property, outlined with a solid red border (Image from Google Earth 2020).

Figure 2-2 Aerial image of the assessed proposed development area (Image from ESRI 2020).

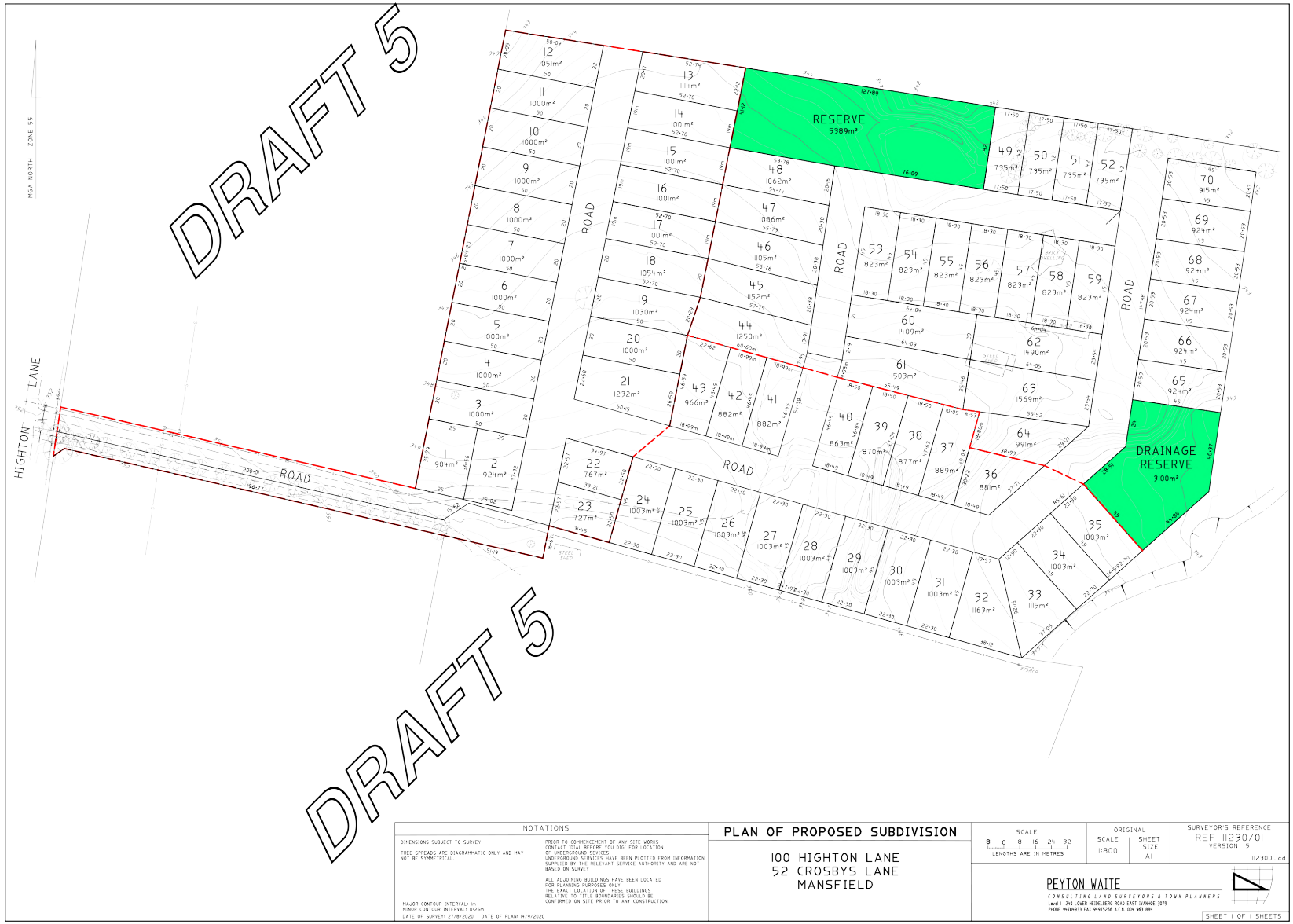

Figure 2-3 The Plan of Proposed Subdivision at 100 Highton Lane Mansfield.

3. METHOD

3.1 Desktop Review

The following desktop information was gathered on the two land parcels assessed before field evaluation:

- Aerial imagery;
- Planning information;
- Both pre-1750 and current EVC mapping;
- Relevant EVC benchmark documents;
- Threatened species sightings within a 10 km radius of the site using the Victorian Biodiversity Atlas (DELWP 2020c), NatureKit (DELWP 2020b), and the Matters of National Environmental Significance search tool (Department of Agriculture, Water and Environment [DAWE] 2020).

Following assessments, derived flora and fauna lists were checked against reference lists of rare and threatened species in Victoria (DSE 2009 and 2013, and Department of Environment and Primary Industries [DEPI] 2014).

3.2 Field Assessment

On the 28th September 2020, Dr. Steve Hamilton visited the proposed clearance area to undertake the assessment. On the day of observation, air temperatures were between 10 and 13°C, the sky was clear, and there was no wind (Bureau of Meteorology 2020).

The property was traversed by foot, with continuous active searching for flora and fauna conducted over a total period of 1 ½ hours, with the following assessments undertaken:

- Compilation of a detailed flora species list, across the assessed area, excluding the former garden, including the attribution of cover/abundance to each species;
- Casual sightings of fauna noted;
- The individual recording of any significant indigenous trees (i.e. > 3 m in height) across the site, including their geo-location by GPS, diameter at breast height (dbh), their health, and presence of hollows. A *Scattered Tree* is a native canopy tree that does not form part of a *Patch* (DELWP 2017);
- A *Patch* of native vegetation is either: an area of vegetation where at least 25 % of the total perennial understorey plant cover is native, or any area with three or more native canopy trees where the drip line of each tree touches the drip line of at least one other tree, forming a continuous canopy, or any mapped wetland included in the current wetlands map, available in DELWP systems and tools and these areas were mapped (DELWP 2017);
- A Vegetation Quality Assessment was completed if any *Patches* were defined in order to determine the potential Net Loss under the *2017 Native Vegetation Removal Guidelines*;
- Recording and location of any specific instances related to land management, such as noxious weed or pest animal infestations, etc.

One hundred and fifty two (152) images were taken the property during assessment.

3.3 Taxonomy

3.3.1 Flora

For plants that could not be identified in the field, specimens and images were collected for identification using the *Flora of Victoria* (Walsh and Entwisle 1994, 1996 and 1999), and PlantNet Flora On-line (Royal Botanic Gardens Victoria 2020).

3.3.2 Fauna

Lists of fauna present across the site were compiled, with the nomenclature based variously on the compilations of Hero *et al.* (1991), Menkhorst (1995), Cogger (1996) and Simpson and Day (1998), and utilising Triggs (1996) for identification using indirect methods, such as the presence of scats or tracks.

4. FLORA AND FAUNA ASSESSMENT

4.1 Vegetation

The inventory of species noted across the areas of evaluation by Zone, is recorded in Appendix A.

A total of 41 vascular plant species were recorded across the property; 36 of these were planted exotic, or non-indigenous native trees or shrubs, or introduced species, and 4 were indigenous species, 2 of which were planted (Appendix A).

As indicated previously, the property has been predominantly cleared of indigenous woody vegetation; there is only one standing dead remnant indigenous tree on the property. The property has until recently been utilised as a vineyard– 3.16 ha has been planted to vines.

The property is dominated at ground level by annual and perennial introduced plant species, such as Capeweed, Phalaris, Cocksfoot, Yorkshire Fog-grass, Barley Grass, Wimmera Ryegrass, Great Brome, Cat's Ear, Paspalum, Milk Thistle, White and Subterranean Clover, Rat's-tail Fescue, Water Couch, Small-flowered Mallow, and Onion-grass (80 % projective foliage cover). There are scattered plants and small patches of Weeping Grass, but these are the only indigenous ground layer species observed, and are in very low abundance (< 1 % projective foliage cover; Appendix A)

The area around the dwelling and buildings, the Crosby Lane access laneway, and a plantation on the southern boundary, have all been planted with a range of exotic, indigenous and non-indigenous native trees and shrubs, such as Radiata Pine, Red Box, Yellow Box, Prunus, European Olive, Willow-leaved Peppermint, Desert Ash, Red Tip Photinia, Prickly-leaved Paperbark, Willow Bottlebrush, London Oak, Southern Mahogany, Yellow Gum and Red Ironbark; there are a number of other plantations on the boundary of the property on the adjacent freehold land – notably on the northern boundary and on the north-western corner – which include species such as Tasmanian Blue Gum, Spotted Gum, Yellow Box and River Red Gum (Appendix A).

There were no rare or threatened species observed at the site (DEPI 2014).

Victorian Biodiversity Atlas, NatureKit and Matters of National Environmental Significance searches revealed that there were records of ten (10) threatened flora species recorded or likely to occur within a 10 km radius of the property. Likelihood analysis based on site, and the highly disturbed and degraded habitat of the assessed area and the level of site disturbance, as well as the lack of recent records for many species, indicates that none of these species are unlikely to be found on-site; twelve of these species are unlikely to have ever been found in such an EVC and its available habitats because they prefer wetland or seasonally inundated environments (DELWP 2020c, DAWE 2020; Appendix D).

Matters of National Environmental Significance searching also identified the nationally critically endangered *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Grassland*

community could occur within a 10 km radius of the proposed clearance area (DAWE 2020). It is possible that the entire property would have been dominated by this community in pre-European times; however, the only remnants of this community is one large standing dead Red Box.

Plate 4-1 **A range of views across the property: the access track to Highton Lane (top left), the access track to Crosbys Lane (top right), looking south-east from the north-western corner of the property (middle left), the dam and vineyard in the northern section of the property (middle right), looking south from the northern boundary of the property (bottom left), and the looking west towards the existing infrastructure on the site (bottom right).**

4.2 Fauna

There were 10 species of fauna observed or their presence inferred during the assessment, including one species that was introduced - the Common Blackbird. Details of those species noted or inferred over the assessment periods are detailed in Appendix B.

The species that were noted across the property are typically those observed in peri-urban environments, such as the indigenous Australian Magpie, Australian Raven, Crimson and Eastern Rosella, Laughing Kookaburra, Noisy Miner, Red-rumped Parrot and Sulphur-crested Cockatoo; the presence of a predator such as Red Fox is likely, and this will severely limit the range of indigenous fauna that can potentially occupy the site.

Given the poor quality and simplified nature of the vegetation across the assessed site, it was no surprise that a low diversity of species were observed:

- the site has experienced significant surface soil disturbance in the past up until the time of assessment, and hence, on most of the property, there is no vegetation structure and no understorey diversity, and woody vegetation regeneration is absent;
- there is only one dead scattered indigenous tree on the property, there was no fallen wood left on ground across site, and no other standing dead trees;
- the property is poorly connected in the landscape. There is no native vegetation on any of the roadsides in proximity to the property, and no continuous vegetation to the closest remnant vegetation block – the Loyola Bushland Reserve 1.5 km to the south of the property, and the Paps Natural features and Scenic Reserve 7 km to the west of the property;
- the likely presence of both a fox and feral cat population.

There were no rare or threatened fauna species observed at the site (DSE 2009 and 2013).

Victorian Biodiversity Atlas, NatureKit and Matters of National Environmental Significance searches revealed that there were records of twenty three (23) threatened fauna (excluding aquatic-dependent species) within a 10 km radius (DELWP 2020c, DAWE 2020; Appendix D).

The likelihood of the presence of these species and their likelihood of utilisation of the proposed clearance area was considered, and rated based on the prevailing habitat and habitat quality of the site, the poor landscape connectivity, and known records for species, and the composition and structure of the indigenous vegetation (Appendix D). On this basis, all of the 23 species were considered not likely to occur on the property or to utilise it, because of the lack of connectivity of the site, and the highly modified environment.

4.3 Patches

A *Patch* of native vegetation is either: an area of vegetation where at least 25 % of the total perennial understorey plant cover is native, or any area with three or more native canopy trees where the drip line of each tree touches the drip line of at least one other tree, forming a continuous canopy, or any mapped wetland included in the current wetlands map, available in DELWP systems and tools and these areas were mapped (DELWP 2017).

There were no *Patches* identified across the property, and therefore, no Vegetation Quality Assessment was required.

Figure 4-1 Aerial image of the property showing the indigenous tree, planted exotic trees and tree plantations (Image from ESRI 2020).

4.4 Significant Trees

A *Scattered Tree* is a native canopy tree that does not form part of a *Patch* (DELWP 2017).

There were 14 trees separately assessed across the property; only one of these was a remnant indigenous tree (Tree 1), which was a dead tree, likely a Red Box, of 80 cm diameter at breast height (dbh); this is a Large Tree according to the benchmark diameter for Valley Grassy Forest EVC (70 cm diameter; Appendix C).

Trees 2 to 10 were planted Prunus, and Trees 11 to 14 were planted European Olives.

The location of all of these trees can be seen in Fig. 4-1.

As previously indicated, the area around the dwelling and buildings, the Crosby Lane access laneway, and a plantation on the southern boundary, have all been planted with a range of exotic, indigenous and non-indigenous native trees and shrubs, such as Radiata Pine, Red Box, Yellow Box, Prunus, European Olive, Willow-leaved Peppermint, Desert Ash, Red Tip Photinia, Prickly-leaved Paperbark, Willow Bottlebrush, London Oak, Southern Mahogany, Yellow Gum and Red Ironbark; there are a number of other plantations on the boundary of the property on the adjacent freehold land – notably on the northern boundary and on the north-western corner – which include species such as Tasmanian Blue Gum, Spotted Gum, Yellow Box and River Red Gum.

The location of the plantations on the property and those along the boundary of the property, can be seen in Fig. 4-1.

The planted trees and shrubs on the property – which were not established with public funding - can be cleared without a Planning Permit as an exemption under Clause 52.17 of the Local Planning Provisions (see below):

Planted vegetation	Native vegetation that is to be removed, destroyed or lopped that was either planted or grown as a result of direct seeding. This exemption does not apply to native vegetation planted or managed with public funding for the purpose of land protection or enhancing biodiversity unless the removal, destruction or lopping of the native vegetation is in accordance with written permission of the agency (or its successor) that provided the funding.

5. NET GAIN AND LOSS REPORTING

5.1 Quantification of loss

5.1.1 Avoid and Minimise

The nature of the subdivision development (with all blocks < 0.4 ha) results in all native vegetation in all lots across the property being considered as losses, and no avoidance or minimisation strategy can be employed on that basis.

5.1.2 Quantification of Loss

No *Patches* will be cleared.

There is one *Scattered Tree* totalling 0.070 ha proposed to be lost as a consequence of the proposed subdivision development; this is a Large Tree according to the benchmark for Valley Grassy Forest EVC (70 cm dbh; see Appendix C).

Plate 4-2 **Views of the vegetation across the site: Tree 1, the standing dead *Scattered Tree* proposed for removal (top left), the plantation on the southern boundary of the property (top right), the Blue Gum plantation on the northern boundary of the property (middle left), the plantation on the north-western boundary fence (middle right), and views of the planted vegetation around the buildings (bottom).**

5.2 Offset requirements

Mapping files outlining the habitat scoring and precise location of the *Scattered Tree* proposed for clearance across the property were submitted to the EnSym NVR Team Support in the outlined format following scenario-testing to clarify the requirements for offset to develop the application. The Native Vegetation Removal Report for the likely native vegetation clearance for the proposed development on the site (Appendix F; DELWP 2020e) was received on the 6th October 2020, and provided the following assessment:

- The outlined proposed clearance was assessed as being an Intermediate Assessment Pathway;
- The *Location Category* for the losses are mapped as *Location 1*;
- The total extent of the clearance is 0.070 ha, comprising 1 *Scattered Tree*, which is a Large Tree;
- A General Offset of 0.014 General Habitat Units (GHUs) is required for the proposed clearance based on a 1.5x multiplier, with 1 Large Tree;
- There are no Specific Offsets;
- The Offset Site must be within the Goulburn Broken Catchment Management Authority catchment (or Local Government Area – Mansfield Shire Council);
- The Offset must have a minimum overall Strategic Biodiversity Value of 0.280.

6. MEETING THE OFFSET REQUIREMENT

A third party offset quote to satisfy the offset requirement from a credit broker is attached in Appendix G.

7. REFERENCES

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APPENDIX A FLORA INVENTORY OF 100 HIGHTON LANE MANSFIELD

Vascular flora has been recorded for presence across the property, and using a cover-abundance scale that is shown in the Table immediately below.

An asterisk denotes an introduced species.

Each plant species present were assessed for cover-abundance using the scale outlined below. Nomenclature and taxonomy of plants based variously on Hnatiuk (1990), and Walsh and Entwistle (1994, 1996 and 1999).

Visual assessment of cover/abundance	
Symbol	*Description*
+	rare, cover < 5%
1	Uncommon, cover < 5 %
2	Very common, cover < 5 % or cover 5-25 % with any number of individuals
3	Cover 25-50 % with any number of individuals
4	Cover 50-75 % with any number of individuals
5	Cover 75-100 % with any number of individuals

Common name	Scientific name	Lifeform[#]	Paddock
Sheep Sorrel	*Acetosella vulgaris**	MH	2
Gossamer Wattle (planted)	*Acacia floribunda**	MS	1
Capeweed	*Arctotheca calendula**	MH	2
Great Brome	*Bromus diandrus**	MTG	2
Willow Bottlebrush (planted)	*Callistemon salignus**	MS	2
Spear Thistle	*Cirsium vulgare**	LH	+
Cocksfoot	*Dactylis glomeratus**	LTG	1
Southern Mahogany (planted)	*Eucalyptus botryoides**	T	2
Tasmanian Blue Gum (planted)	*Eucalyptus globulus**	T	2
Yellow Gum (planted)	*Eucalyptus leucoxylon**	T	2
Spotted Gum (planted)	*Eucalyptus maculata**	T	2
Yellow Box (planted)	*Eucalyptus melliodora*	T	1
Willow-leaved Peppermint (planted)	*Eucalyptus nicholii**	T	2
Red Box	*Eucalyptus polyanthemos*	T	+
Red Box (planted)	*Eucalyptus polyanthemos*	T	1
Red Ironbark (planted)	*Eucalyptus sideroxylon**	T	2
Desert Ash (planted)	*Fraxinus* sp.*	T	2
Yorkshire Fog-grass	*Holcus lanatus**	MTG	2
Barley Grass	*Hordeum leporinum**	2	
Cat's Ear	*Hypochaeris radicata**	MH	2
European Privet (planted)	*Ligustrum vulgare**	MS	2
Wimmera Ryegrass	*Lolium rigidum**	MTG	2
Small-flowered Mallow	*Malva parviflora**	MH	2
Prickly-leaved Paperbark (planted)	*Melaleuca stypheloides**	MS	2
Weeping Grass	*Microlaena stipoides*	MNG	+
European Olive (planted)	*Olea europea**	MS	1
Paspalum	*Paspalum dilitatum**	MNG	1
Water Couch	*Paspalum distichum**	MNG	2
Toowoomba Canary Grass	*Phalaris aquatica**	LTG	2

Common name	Scientific name	Lifeform#	Paddock
Red Tip Photinia (planted)	*Photinia robusta**	MS	2
Radiata Pine (planted)	*Pinus radiata**	T	1
Winter-grass	*Poa annua**	MTG	2
Prunus	*Prunus* sp.*	MS	1
London Oak (planted)	*Quercus robur**	T	2
Onion-grass	*Romulea rosea**	MTG	1
Blackberry	*Rubus fruticosus* complex*	MS	+
Milk Thistle	*Sonchus oleraceus**	LH	2
White Clover	*Trifolium repens**	MH	2
Subterranean Clover	*Trifolium subterraneum**	MH	1
Rat's-tail Fescue	*Vulpia myuros**	MTG	2

abbreviations for lifeform for indigenous species are T = tree, MS = medium shrub, SS = small shrub, LH = large herb, MH = medium herb, SH = small herb, LTG = large tufted graminoid, MTG = medium tufted graminoid, STG = small tufted graminoid, MNG = medium non-tufted graminoid, SC = scrambler/climber, P = parasite.

APPENDIX B OBSERVED OR INFERRED FAUNA AT 100 HIGHTON LANE MANSFIELD

Observed or inferred fauna at the property between 9.00 and 10.30 am on the 28th September 2020.

An asterisk indicates an introduced species.

Common name	Scientific name	Mode of observation[1]
Birds		
Australian Magpie	*Cracticus tibicen*	A
Australian Raven	*Corvus coronoides*	A
Australian Wood Duck	*Chenonetta jubata*	A,V
Common Blackbird	*Turdus merula**	A,V
Crimson Rosella	*Platycercus elegans*	A,V
Eastern Rosella	*Platycercus eximius*	A,V
Laughing Kookaburra	*Dacelo novaeguineae*	A
Noisy MIner	*Manorina melanocephala*	A,V
Red-rumped Parrot	*Psephotus haematonotus*	A,V
Sulphur-crested Cockatoo	*Cacatua galerita*	A

1. Method observed: V is visual observation; C is call heard; N indicates a nest observed; Sc is scat found.

APPENDIX C EVC BENCHMARK DESCRIPTION

EVC/Bioregion Benchmark for Vegetation Quality Assessment

Central Victorian Uplands bioregion

EVC 47: Valley Grassy Forest

Description:
Valley Grassy Forest occurs under moderate rainfall regimes of 700-800 mm per annum on fertile well-drained colluvial or alluvial soils on gently undulating lower slopes and valley floors. Open forest to 25 m tall may carry a variety of eucalypts, usually species that prefer more moist or more fertile conditions over a sparse shrub cover. In season, a rich array of herbs, lilies, grasses and sedges dominate the ground layer but at the drier end of the spectrum the ground layer may be sparse and slightly less diverse, but with the moisture-loving species still remaining.

Large trees:

Species	DBH(cm)	#/ha
Eucalyptus spp.	70 cm	20 / ha

Tree Canopy Cover:

%cover	Character Species	Common Name
20%	*Eucalyptus melliodora*	Yellow Box
	Eucalyptus radiata s.l.	Narrow-leaf Peppermint
	Eucalyptus obliqua	Messmate Stringybark
	Eucalyptus rubida	Candlebark

Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Understorey Tree or Large Shrub	2	10%	T
Medium Shrub	3	10%	MS
Small Shrub	4	5%	SS
Prostrate Shrub	2	1%	PS
Large Herb	2	1%	LH
Medium Herb	8	15%	MH
Small or Prostrate Herb	2	5%	SH
Large Tufted Graminoid	2	10%	LTG
Large Non-tufted Graminoid	1	1%	LNG
Medium to Small Tufted Graminoid	7	20%	MTG
Medium to Tiny Non-tufted Graminoid	1	5%	MNG
Ground Fern	1	5%	GF
Scrambler or Climber	1	1%	SC
Bryophytes/Lichens	na	20%	BL

Ecological Vegetation Class bioregion benchmark

Victoria The Place To Be

EVC 47: Valley Grassy Forest - Central Victorian Uplands bioregion

LF Code	Species typical of at least part of EVC range	Common Name
T	*Acacia melanoxylon*	Blackwood
T	*Acacia dealbata*	Silver Wattle
MS	*Daviesia leptophylla*	Narrow-leaf Bitter-pea
MS	*Epacris impressa*	Common Heath
SS	*Hovea heterophylla*	Common Hovea
SS	*Pimelea humilis*	Common Rice-flower
SS	*Dillwynia cinerascens* s.l.	Grey Parrot-pea
SS	*Acacia aculeatissima*	Thin-leaf Wattle
PS	*Acrotriche serrulata*	Honey-pots
PS	*Bossiaea prostrata*	Creeping Bossiaea
LH	*Senecio tenuiflorus*	Slender Fireweed
LH	*Senecio quadridentatus*	Cotton Fireweed
MH	*Gonocarpus tetragynus*	Common Raspwort
MH	*Drosera peltata* ssp. *auriculata*	Tall Sundew
MH	*Burchardia umbellata*	Milkmaids
SH	*Opercularia varia*	Variable Stinkweed
SH	*Goodenia lanata*	Trailing Goodenia
LTG	*Poa labillardierei*	Common Tussock-grass
LTG	*Deyeuxia quadriseta*	Reed Bent-grass
MTG	*Lomandra filiformis*	Wattle Mat-rush
MTG	*Poa sieberiana*	Grey Tussock-grass
MTG	*Dianella revoluta* s.l.	Black-anther Flax-lily
MNG	*Microlaena stipoides* var. *stipoides*	Weeping Grass
GF	*Pteridium esculentum*	Austral Bracken
SC	*Hardenbergia violacea*	Purple Coral-pea

Recruitment:
Continuous

Organic Litter:
20 % cover

Logs:
20 m/0.1 ha.

Weediness:

LF Code	Typical Weed Species	Common Name	Invasive	Impact
LH	*Cirsium vulgare*	Spear Thistle	high	high
MH	*Hypochoeris radicata*	Cat's Ear	high	low
MH	*Centaurium erythraea*	Common Centaury	high	low
LNG	*Holcus lanatus*	Yorkshire Fog	high	high
MTG	*Anthoxanthum odoratum*	Sweet Vernal-grass	high	high

APPENDIX D EPBC AND VICTORIAN THREATENED SPECIES AND LIKELIHOOD OF OCCURRENCE

List of threatened flora species recorded by the Victorian Biodiversity Atlas and NatureKit in a 10 km radius around the property, and by Matters of National Environmental Significance search of the district, their status, and their likelihood of occurrence on the subject land (DELWP 2020b and 2020c; DAWE 2020).

Scientific name	Common Name	Victorian status[1]	Commonwealth status[2]	Records within 10 km[3]	Last record[4]	Appropriate habitat[5]	Likelihood of presence[6]
Amphibromus fluitans	River Swamp Wallaby-grass		V	0		No	Highly unlikely
Amphibromus pithogastrus	Plump Swamp Wallaby-grass	e,L		3	2018	No	Highly unlikely
Cullen tenax	Tough Scurf-pea	e,L		2	1892	Yes	Highly unlikely
Geranium potentilloides var. *abditum*	Soft Crane's-bill	r		1	2018	Yes	Highly unlikely
Glycine latrobeana	Clover Glycine	v,L	V	1	1891	Yes	Highly unlikely
Leptorhynchos elongatus	Lanky Buttons	e,L		2	1891	Yes	Highly unlikely
Lotus australis var. *australis*	Austral Trefoil	k		2	2018	Yes	Highly unlikely
Solanum cinereum	Narrawa Burr	k		1	1956	Yes	Highly unlikely
Thesium australe	Austral Toad-flax	v,L	V	1	1800	Yes	Highly unlikely
Dianella amoena	Matted Flax-lily	e,L	E	0		Yes	Highly unlikely

1. x = presumed extinct in Victoria; e = endangered in Victoria; v = vulnerable in Victoria; r = rare in Victoria; k = insufficiently known in Victoria; L = listed under the *Flora and Fauna Guarantee Act* (from DEPI 2014);
2. CE = critically endangered nationally; E = endangered nationally; V = vulnerable nationally (DAWE 2020);
3. As recorded in the Victorian Biodiversity Atlas (DELWP 2020c);
4. As recorded for the species in the Victorian Biodiversity Atlas (DELWP 2020c);
5. Determination based on known habitat preferences for the species and the assessed habitat characteristics of the site, from Royal Botanic Gardens Victoria (2020) and Walsh and Entwisle (1994, 1996 and 1999);
6. Based on known habitat preferences for the species and the assessed habitat characteristics of the site, known records for the species, and their proximity and time of record.

List of threatened fauna species recorded by the Victorian Biodiversity Atlas and NatureKit in a 10 km radius around the property, and by Matters of National Environmental Significance search of the district, their status, and their likelihood of occurrence on the subject land (DELWP 2020b and 2020c; DAWE 2020).

Scientific name	Common Name	Victorian status[1]	Commonwealth status[2]	Records within 10 km[3]	Last record[4]	Appropriate habitat[5]	Likelihood of presence[6]
Ceyx azureus	Azure Kingfisher	nt		1	1932	No	Highly unlikely
Ninox connivens	Barking Owl	e,L		2	2017	Yes	Highly unlikely
Monarcha melanopsis	Black-faced Monarch		MTS	0		No	Highly unlikely
Climacteris picumnus	Brown Treecreeper	nt		23	2019	No	Highly unlikely
Phascogale tapoatafa	Brush-tailed Phascogale	v,L		2	1973	No	Highly unlikely
Burhinus grallarius	Bush Stone-curlew	e,L		1	1924	No	Highly unlikely
Stagonopleura guttata	Diamond Firetail	nt,L		6	2019	No	Highly unlikely
Synemon plana	Golden Sun Moth	ce,L	CE	1	1905	No	Highly unlikely
Pteropus poliocephalus	Grey-headed Flying-fox	v,L	V	0		No	Highly unlikely
Litoria raniformis	Growling Grass Frog	e,L	V	1	1905	No	Highly unlikely
Acrodipsas brisbanensis	Large Ant Blue Butterfly	e,L		1	1993	No	Highly unlikely
Grantiella picta	Painted Honeyeater	v,L	V	0		No	Highly unlikely
Aprasia parapulchella	Pink-tailed Worm-lizard	e,L	V	0		No	Highly unlikely
Anthochaera phrygia	Regent Honeyeater	ce,L	CE	6	1979	No	Highly unlikely
Myiagra cyanoleuca	Satin Flycatcher		MTS	0		No	Highly unlikely
Pyrrholaemus sagittatus	Speckled Warbler	v,L		6	2019	No	Highly unlikely
Dasyurus maculatus maculatus	Spot-tailed Quoll	e,L	E	2	1986	No	Highly unlikely
Circus assimilis	Spotted Harrier	nt		1	1931	Yes	Unlikely
Cinclosoma punctatum	Spotted Quail-thrush	nt		1	1973	No	Highly unlikely
Delma impar	Striped Legless Lizard	e,L	V	4	2014	No	Highly unlikely
Lathamus discolor	Swift Parrot	e,L	CE	1	2006	No	Highly unlikely
Pseudemoia pagenstecheri	Tussock Skink	v,L		2	2012	No	Highly unlikely
Hirundapus caudacutus	White-throated Needletail	v,L	V	5	1978	No	Highly unlikely

1. x = presumed extinct in Victoria; rx = regionally extinct; e = endangered in Victoria; v = vulnerable in Victoria; r = rare in Victoria; k = insufficiently known in Victoria; L = listed under the *Flora and Fauna Guarantee Act* (from DEPI 2014);
2. CE = critically endangered nationally; E = endangered nationally; V = vulnerable nationally; MTS = Migratory Terrestrial Species; MMB = Migratory Marine Bird (DAWE 2020);
3. As recorded in the Victorian Biodiversity Atlas (DELWP 2020c);
4. As recorded for the species in the Victorian Biodiversity Atlas (DELWP 2020c);
5. Determination based on known habitat preferences for the species and the assessed habitat characteristics of the site, from various State and Commonwealth conservation advice and listings, recovery plans, etc.;
6. Based on known habitat preferences for the species and the assessed habitat characteristics of the site, landscape connectivity of the site, known records for the species, and their proximity and time of records.

APPENDIX E NATIVE VEGETATION REMOVAL REPORT (DELWP) ISSUED 6TH OCTOBER 2020

Native vegetation removal report

This report provides information to support an application to remove, destroy or lop native vegetation in accordance with the *Guidelines for the removal, destruction or lopping of native vegetation*. The report **is not an assessment by DELWP** of the proposed native vegetation removal. Native vegetation information and offset requirements have been determined using spatial data provided by the applicant or their consultant.

Date of issue: **06/10/2020**
Time of issue: **12:26 pm**

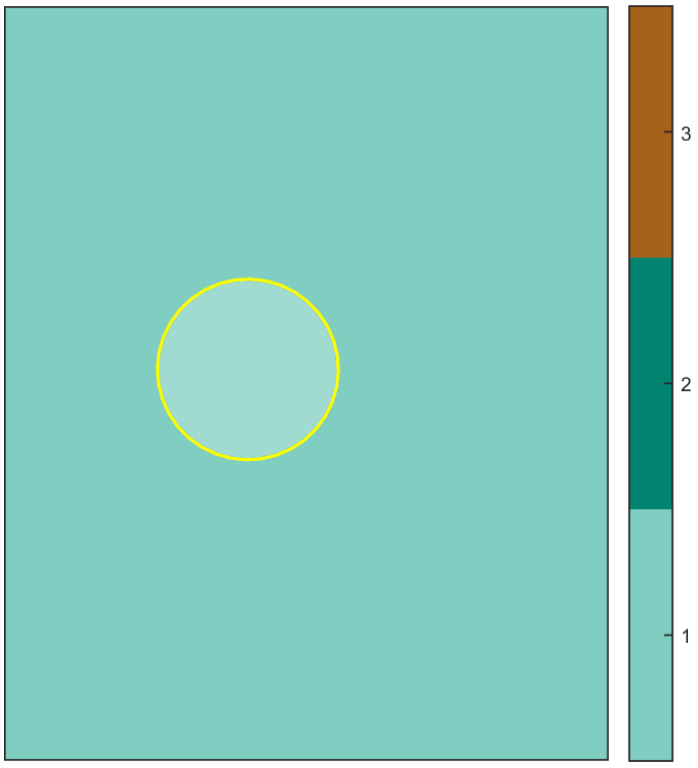
Report ID: HAE_2020_067

Project ID	100_Highton_Lane_Mansfield_GDA94

Assessment pathway

Assessment pathway	**Intermediate Assessment Pathway**
Extent including past and proposed	0.070 ha
Extent of past removal	0.000 ha
Extent of proposed removal	0.070 ha
No. Large trees proposed to be removed	1
Location category of proposed removal	Location 1 The native vegetation is not in an area mapped as an endangered Ecological Vegetation Class (as per the statewide EVC map), sensitive wetland or coastal area. Removal of less than 0.5 hectares in this location will not have a significant impact on any habitat for a rare or threatened species

1. Location map



Offset requirements if a permit is granted

Any approval granted will include a condition to obtain an offset that meets the following requirements:

General offset amount[1]	0.014 general habitat units
Vicinity	Goulburn Broken Catchment Management Authority (CMA) or Mansfield Shire Council
Minimum strategic biodiversity value score[2]	0.280
Large trees	1 large tree

NB: values within tables in this document may not add to the totals shown above due to rounding

Appendix 1 includes information about the native vegetation to be removed

Appendix 2 includes information about the rare or threatened species mapped at the site.

Appendix 3 includes maps showing native vegetation to be removed and extracts of relevant species habitat importance maps

1 The general offset amount required is the sum of all general habitat units in Appendix 1.

2 Minimum strategic biodiversity score is 80 per cent of the weighted average score across habitat zones where a general offset is required

Next steps

Any proposal to remove native vegetation must meet the application requirements of the Intermediate Assessment Pathway and it will be assessed under the Intermediate Assessment Pathway.

If you wish to remove the mapped native vegetation you are required to apply for a permit from your local council. Council will refer your application to DELWP for assessment, as required. **This report is not a referral assessment by DELWP.**

This *Native vegetation removal report* must be submitted with your application for a permit to remove, destroy or lop native vegetation.

Refer to the *Guidelines for the removal, destruction or lopping of native* vegetation (the Guidelines) for a full list of application requirements This report provides information that meets the following application requirements:

- The assessment pathway and reason for the assessment pathway
- A description of the native vegetation to be removed (met unless you wish to include a site assessment)
- Maps showing the native vegetation and property
- The offset requirements determined in accordance with section 5 of the Guidelines that apply if approval is granted to remove native vegetation.

Additional application requirements must be met including:

- Topographical and land information
- Recent dated photographs
- Details of past native vegetation removal
- An avoid and minimise statement
- A copy of any Property Vegetation Plan that applies
- A defendable space statement as applicable
- A statement about the Native Vegetation Precinct Plan as applicable
- An offset statement that explains that an offset has been identified and how it will be secured.

Authorised by the Victorian Government, 8 Nicholson Street, East Melbourne.

For more information contact the DELWP Customer Service Centre 136 186

www.delwp.vic.gov.au

Appendix 1: Description of native vegetation to be removed

All zones require a general offset, the general habitat units each zone is calculated by the following equation in accordance with the Guidelines:

General habitat units = extent x condition x general landscape factor x 1.5, where the general landscape factor = 0.5 + (strategic biodiversity value score/2)

The general offset amount required is the sum of all general habitat units per zone.

Native vegetation to be removed

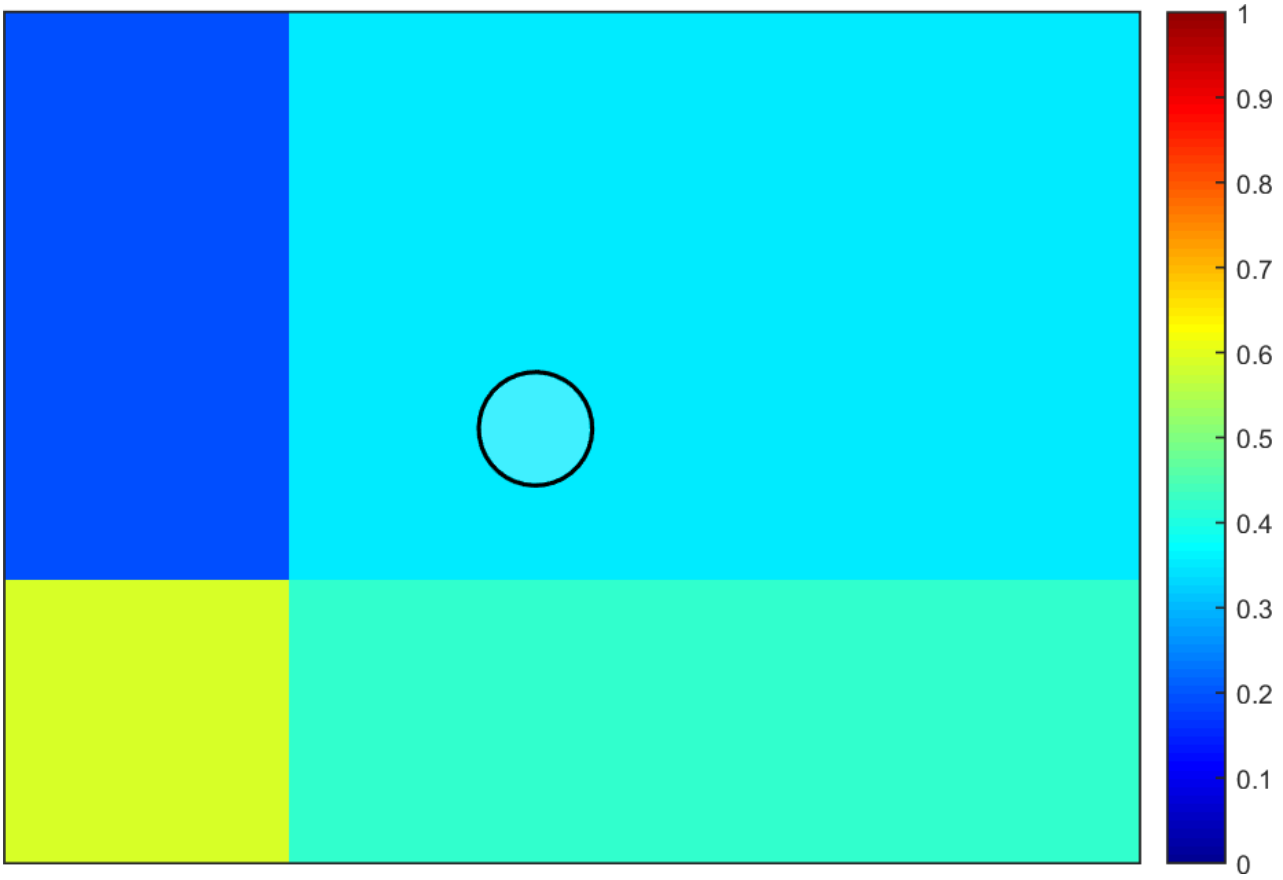
Information provided by or on behalf of the applicant in a GIS file							Information calculated by EnSym					
Zone	**Type**	**BioEVC**	**BioEVC conservation status**	**Large tree(s)**	**Partial removal**	**Condition score**	**Polygon Extent**	**Extent without overlap**	**SBV score**	**HI score**	**Habitat units**	**Offset type**
1-B	Scattered Tree	cvu_0047	Vulnerable	1	no	0.200	0.070	0.070	0.350		0.014	General

Appendix 2: Information about impacts to rare or threatened species' habitats on site

This is not applicable in the Intermediate Assessment Pathway.

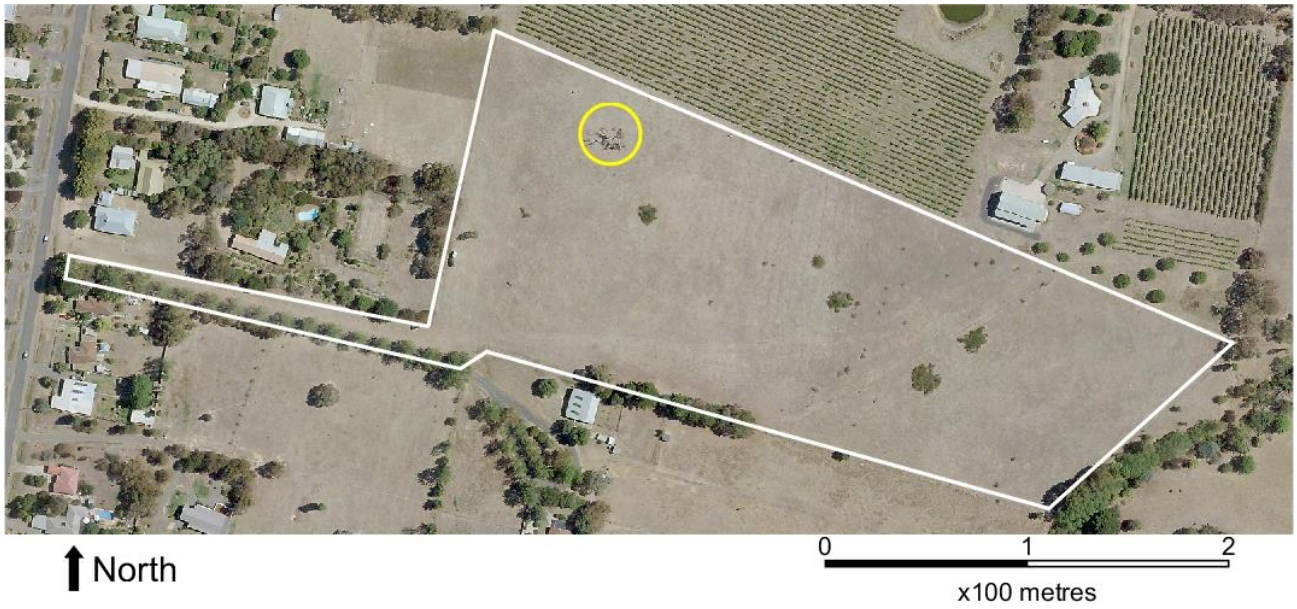
Appendix 3 – Images of mapped native vegetation

2. Strategic biodiversity values map



3. Aerial photograph showing mapped native vegetation

4. Map of the property in context



Yellow boundaries denote areas of proposed native vegetation removal.

APPENDIX F THIRD PARTY OFFSET QUOTE FROM VEGETATION LINK

vegetationlink

12 October 2020

Our Reference: VLQ-6177
Your Reference: 100 Highton Lane, Mansfield

Steve Hamilton
Hamilton Environmental Services
Email: hammys2345@bigpond.com

Dear Steve,

RE: Quotation for the supply of Native Vegetation Credits

Vegetation Link is an accredited offset provider with the Department of Environment, Land, Water & Planning (DELWP). We offer a specialised brokerage service to enable permit holders and developers to identify suitable native vegetation credits to meet their planning permit offset requirements.

Based upon the information you provided, I understand you require the following native vegetation offset:

Offset Type	Attributes	General Habitat Units (GHU)	Min. Strategic Biodiversity Value (SBV)	Large Trees
General	Goulburn Broken CMA	0.014	0.280	1

To meet your offset requirements, you can purchase native vegetation credits from a third party as per the option quoted below[1]. This quotation is valid for 14 days, subject to credit availability and landholder pricing.

CTA Pathway – offset site located in the Mitchell Shire area (approx. 2-5 week turnaround from acceptance of quote)	
Cost of Native Vegetation Credits – invoiced by Credit Owner	$1,900.00
Transaction Fees – invoiced by Vegetation Link	$1,165.00
Total (ex GST)	**$3,065.00**
Total (Inc. GST)	$3,371.50

If you would like to purchase credits let us know that you accept the quote, and return the attached Purchaser Details Form by email. Upon receipt of the form, we will begin the trade process. Further details of the process for credit allocation is in the FAQ below.

Should you have any queries, please do not hesitate to contact us on (03) 5470 5232 or email offsets@vegetationlink.com.au.

Sincerely,

Tesha Mahoney
Biodiversity Offset Broker

[1] Note that the Transaction Fee includes DELWP NVOR transfer and allocation fees and a Vegetation Link fee

FAQs:

What is a third party offset?

A third party offset is an offset site owned by another landowner who manages and protects native vegetation on their land. Landowners who establish these offset sites are required to:

- Enter into a Landowner Agreement for the specified offset site. A landowner agreement is in perpetuity and is binding upon the current and future landowners of the site. It permanently restricts use of the site for many purposes.
- Implement a detailed 10-year Management Plan endorsed by the DELWP Native Vegetation Offset Register to manage and improve the biodiversity values of the site.

How is the price of Native Vegetation Offset Credits (GHUs, GBEUs etc.) determined?

Landowners who own offset sites set their own price for native vegetation credits. They determine the price based on numerous factors. This includes but not limited to site establishment, the cost to manage the site in perpetuity (e.g., maintain fencing, control pest species), foregone use cost, and administrative costs. Depending on how the site is registered, the credit fee may be paid to either DELWP or directly to the landowner.

Further information about the work some of our landowners are doing can be found here:

https://www.vegetationlink.com.au/landowner-profiles

Further information on pricing can be found here:

https://www.environment.vic.gov.au/__data/assets/pdf_file/0030/329466/Info-sheet-Pricing-native-vegetation-credits.pdf

What is the process after I accept the Quote?

After you accept the quote and return the Purchaser Table, the following steps will be undertaken:

1. We will set up a contract between the parties involved and send the contract out for signing by all parties.
2. Once the contract is signed by all parties, invoices will be issued for the fees listed in the quotation. We will send you two invoices, one for our transaction fee invoiced by Vegetation Link and one for the credit fee, usually to be paid to DELWP or the landowner. We recommend providing remittances for your payments.
3. Once payments are received, Vegetation Link will send you an Allocated Credit Extract from the Native Vegetation Offset Register and your Executed Contract as evidence that you have purchased the offset.

How long will the process take? When will I get my credits?

Generally the process from quote acceptance to having evidence of allocated credits takes between 2-6 weeks. This is dependent on a range of factors including the type of landholder agreement, contract types and organisational workflows. We work as quickly as possible to get your credits to you within this time period.

We note that you cannot remove vegetation until you have been given permission by the Responsible Authority (usually the Council that has issued your permit).

What happens if I don't have a permit yet?

When people are buying credits before a permit is issued the following three options are most common:

1. You can pay for the offsets before the planning permit is available, and then the offsets are allocated to the permit when it is available. This will incur an additional $50 fee from DELWP. When considering this option, it is important to realise that your estimated offset requirements may be different than the actual permit requirements.
2. You can wait for the planning permit to be approved first and then request a quote to meet the requirements in your permit. Should credits be available, you can then start the offset purchase process. We then use the planning permit number for allocating the credits. Allocating credits to the permit is evidence that you have purchased your offset.
3. You can request a quote to confirm availability and to get an idea of the cost of offsetting before you apply for a permit. Once you receive the planning permit you can request an updated quote. It is at this point that you can then go through the offset purchase process.

We cannot guarantee credit availability until a) contracts are executed, or b) credits have been held via a pending trade lodged with DELWP Native Vegetation Offset Register.

We cannot guarantee price until a) a quote has been accepted within 14 days, and b) a Credit Trading Agreement is signed within 21 days, and c) the invoice for the Credits is paid within 28 days of the date the invoice is issued.

If I sign the contract, does that mean I MUST pay for the credits?

Yes, you have entered into a contract agreeing to pay for the offset credits therein and are required to pay for those credits. The Credits must be paid for within 28 days of the date of the invoice.

Can you hold the credits for me, as I want to pay later?

We are unable to hold credits for later payment. Please also see 'What happens if I don't have a permit yet?' above.

For further information, see our website or look at the DELWP website:

http://www.vegetationlink.com.au/ **OR** https://www.environment.vic.gov.au/native-vegetation/native-vegetation/offsets-for-the-removal-of-native-vegetation

Attachment E – Traffic Impact Assessment

100 Highton Lane and 52 Crosbys Lane, Mansfield

Residential Subdivision

Traffic Impact Assessment Report

Client:

Highton Developments Pty Ltd

Project No. 200270

FINAL2 Report – 27/10/2022

1st Floor 132 Upper Heidelberg Road Ivanhoe Vic 3079
PO Box 417 Ivanhoe Vic 3079 Ph: (03) 9490 5900
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Document Control				
Report Title	100 Highton Lane and 52 Crosbys Lane, Mansfield - Residential Subdivision Traffic Impact Assessment			
Project Number	200270			
Client	Highton Developments Pty Ltd			
Client Contact	Glenn Morsley of Peyton Waite Pty Ltd			
Rev	Date Issued	Revision Details / Status	Prepared by	Authorised by
Draft	05/10/20	for review	David Do	Stuart Redman
FINAL	10/12/20	Issued to client	Stuart Redman	Kate Kennedy
FINAL2	27/10/22	Updated plan	Stuart Redman	Kate Kennedy

EXECUTIVE SUMMARY

Trafficworks has been engaged by Peyton Waite Pty Ltd, on behalf of Highton Developments Pty Ltd, to undertake a Traffic Impact Assessment for the proposed residential subdivision at 100 Highton Lane and 52 Crosbys Lane in Mansfield.

A Traffic Impact Assessment was carried out to:

- estimate traffic generation and distribution associated with the proposed development
- determine the suitability of the proposed access locations onto the adjacent road network
- determine the likely traffic impacts on the existing road network
- identify any necessary mitigating works.

A summary for the site and the proposed development is shown below.

Address	100 Highton Lane, Mansfield (Lot 33 of LP135575) 52 Crosbys Lane, Mansfield (Lot 34 of LP135575)
Zoning	100 Highton Lane: • General Residential Zone (GRZ) 52 Crosbys Lane: • General Residential Zone (GRZ) • Rural Living Zone 1 (RLZ1)
Proposed development	The proposed residential development consists of the following: • 70 residential dwelling lots • internal trafficable road network
Road Network	Highton Lane: • sealed two-way local road Crosbys Lane: • sealed two-way local road
Traffic Generation	• 700 vehicles per day (vpd) • 60 vehicles per hour (vph)
Recommendations	**Recommendation 1:** provide a BAL treatment for the Highton Lane / Development Access intersection **Recommendation 2:** development access requires widening of the road reserve which includes the removal of the adjacent trees to satisfy the access street criteria in the IDM **Recommendation 3:** temporary court bowls be constructed to facilitate turns by vehicles at the termination of all roads for each stage **Recommendation 4:** the final development plans need to indicate footpaths within the subdivision in accordance with the IDM.

Referenced Documents

References used in the preparation of this report include the following:

- *RTA Guide to Traffic Generating Developments, Version 2.2, October 2002*
- *Austroads Guide to Road Design - Part 4A: Unsignalised and Signalised Intersections*
- *Austroads Guide to Road Design – Part 4: Intersections and Crossings - General*
- *The Infrastructure Design Manual (IDM) version 5.20, April 2019.*

TABLE OF CONTENTS

1 INTRODUCTION

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A Traffic Impact Assessment was carried out to:

- estimate traffic generation and distribution associated with the proposed development
- determine the suitability of the proposed access locations onto the adjacent road network
- determine the likely traffic impacts on the existing road network
- identify any necessary mitigating works.

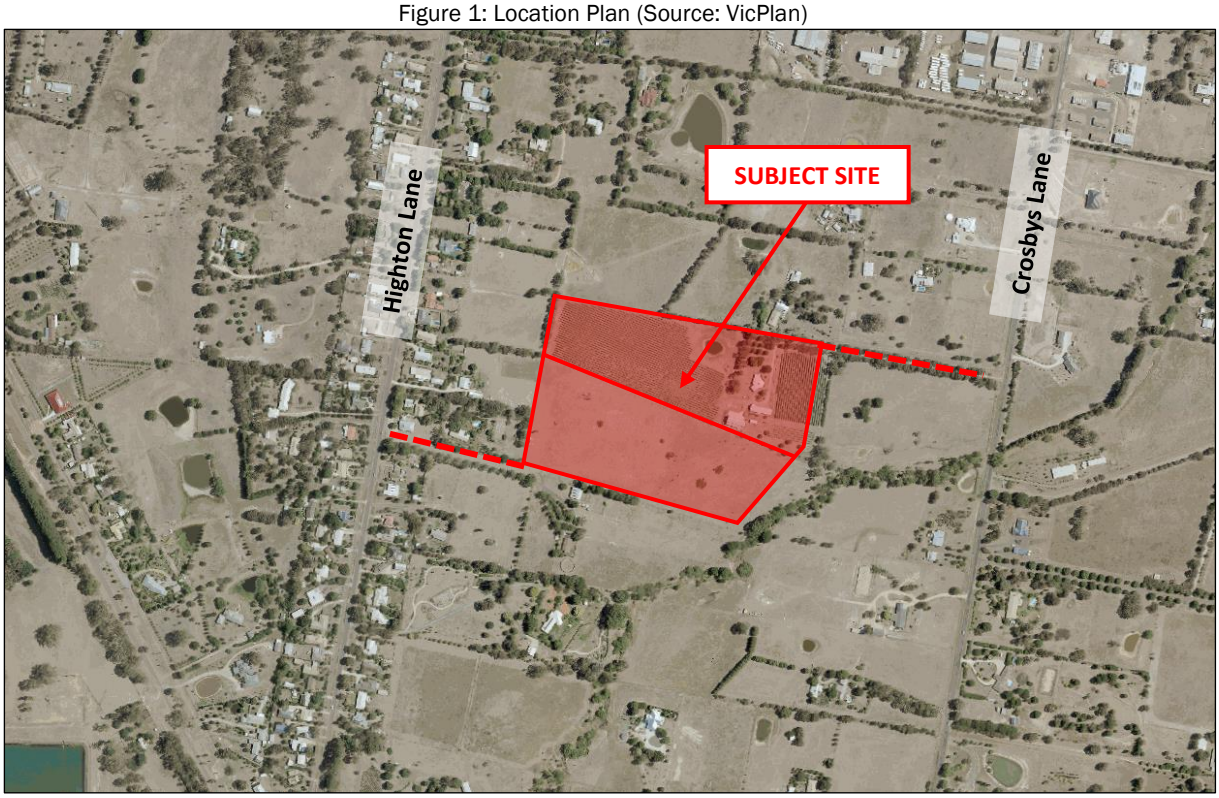
2 EXISTING CONDITIONS

2.1 Subject site

The residential subdivision is located at 100 Highton Lane and 52 Crosbys Lane and is approximately 2.1 km southeast of the Mansfield town centre. The subject site comprises land enclosed by Highton Lane to the west, Crosbys Lane to the east and rural residential properties to the north and south.

The subject site (Lot 33 and 34 of LP135575) and the surrounding area are shown in Figure 1. The site is located within a General Residential Zone (GRZ) and Rural Living Zone (RLZ1), refer to Figure 2.

Figure 1: Location Plan (Source: VicPlan)



2.2 Road network

2.2.1 Highton Lane

Highton Lane is a local collector road and is managed by Mansfield Shire Council (the Council). It is aligned in a north-south direction and provides a connection to Mount Buller Road to the north and Monkey Gully Road to the south. Near the subject site, Highton Lane forms a two-way sealed road with a road width of approximately 5.8 m. Refer to Photos 1 and 2.

A posted speed limit of 50 km/h applies along this section of Highton Lane.

Figure 2: Land use zoning surrounding the subject site (Source: planning.vic.gov.au)

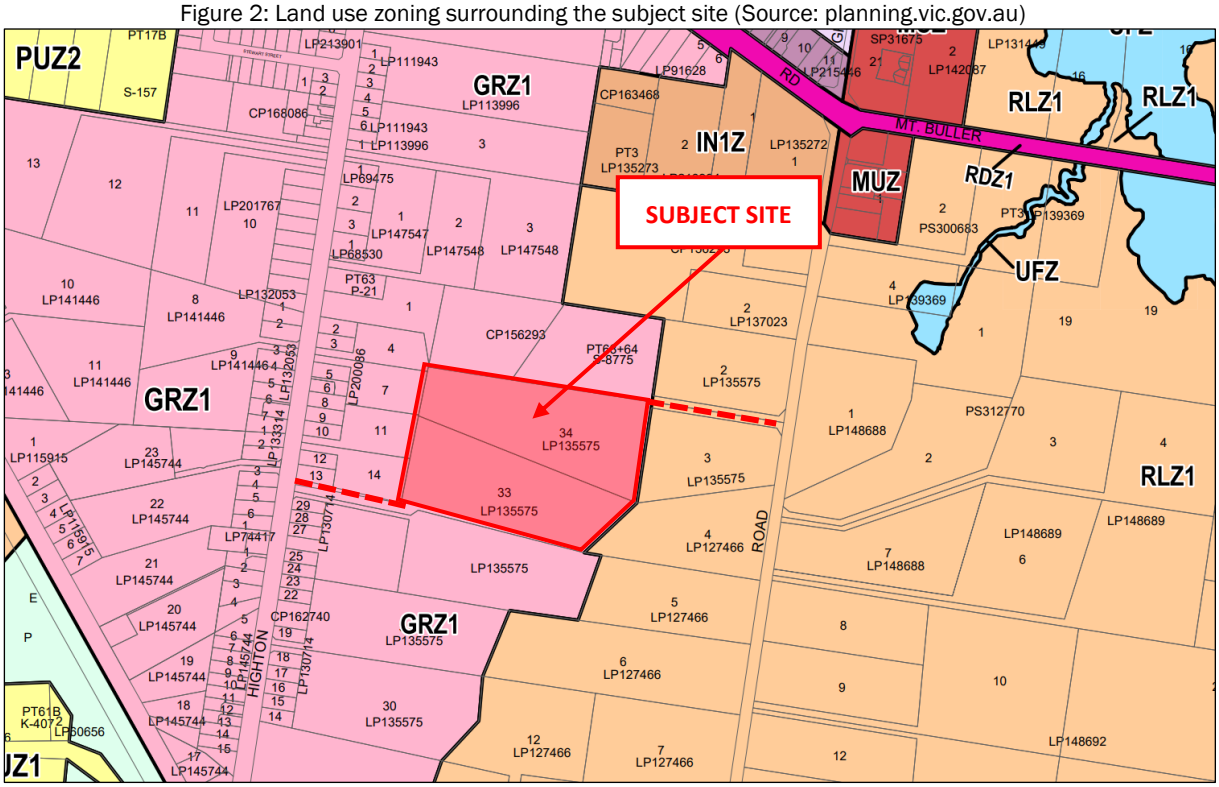


Photo 1: Highton Lane at the development access looking north

Photo 2: Highton Lane at the development access looking south

2.2.2 Crosbys Lane

Crosbys Lane is a local access road and is managed by Council. It is aligned in a north-south direction and provides a connection to Mount Buller Road to the north and Ogilvies Road to the south. Near the subject site, Crosbys Lane forms a two-way sealed road with a road width of approximately 6.3 m. Refer to Photos 3 and 4.

A posted speed limit of 80 km/h applies along this section of Crosbys Lane.

Photo 3: Crosbys Lane at the development access looking north

Photo 4: Crosbys Lane at the development access looking south

2.3 Traffic volumes

There is currently no traffic data available along Highton Lane. For this report, the average daily traffic volumes along Highton Lane have been estimated based on residential traffic generation[1]. It was estimated that there are approximately 150 residential dwellings along Highton Lane. Therefore, the average two-way daily traffic volumes along Highton Lane are estimated to be approximately 1,500 vehicles per day (vpd).

2.4 Crash history

The Department of Transport (DoT) Open Data website details all casualty crashes along major roads throughout Victoria. Scrutiny of these records indicates that no casualty crashes have occurred along the adjoining road network near the subject site, in the last five-year period that data is available for. There is no crash trend indicated near the subject site, hence it can be concluded that the roads adjacent to the subject site do not have a traffic safety problem that requires urgent remedial action.

2.5 Public transport

No bus routes are currently operating on the adjoining road network to the subject site.

2.6 Pedestrian and cyclist accessibility

There is currently no provision for pedestrians and cyclists on Highton Lane near the subject site.

[1] The Infrastructure Design Manual (IDM recommends a daily trip rate of 10 trips per dwelling)

3 PROPOSED DEVELOPMENT

3.1 Proposed development summary

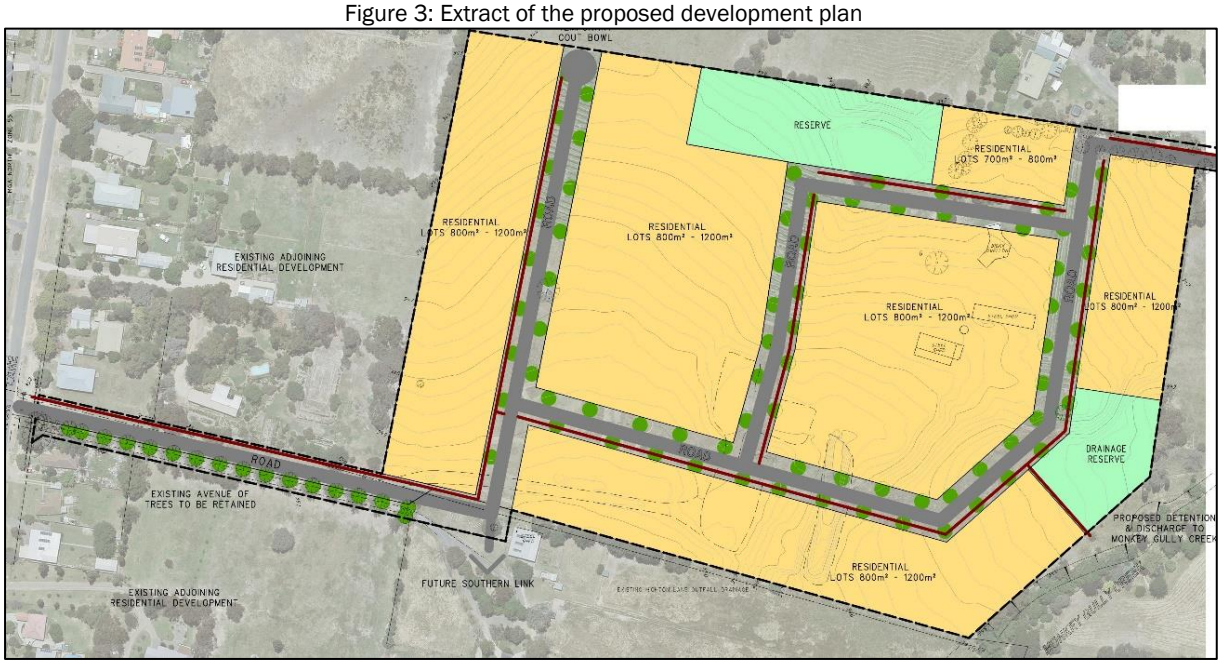
The proposed development consists of the following:

- 70 residential dwelling lots
- internal trafficable road network

Vehicular access to the site is proposed to be provided via a development access connecting to Highton Lane. No vehicular access to the site via Crosbys Lane is proposed as part of the development.

The concept development plan is shown in Figure 3.

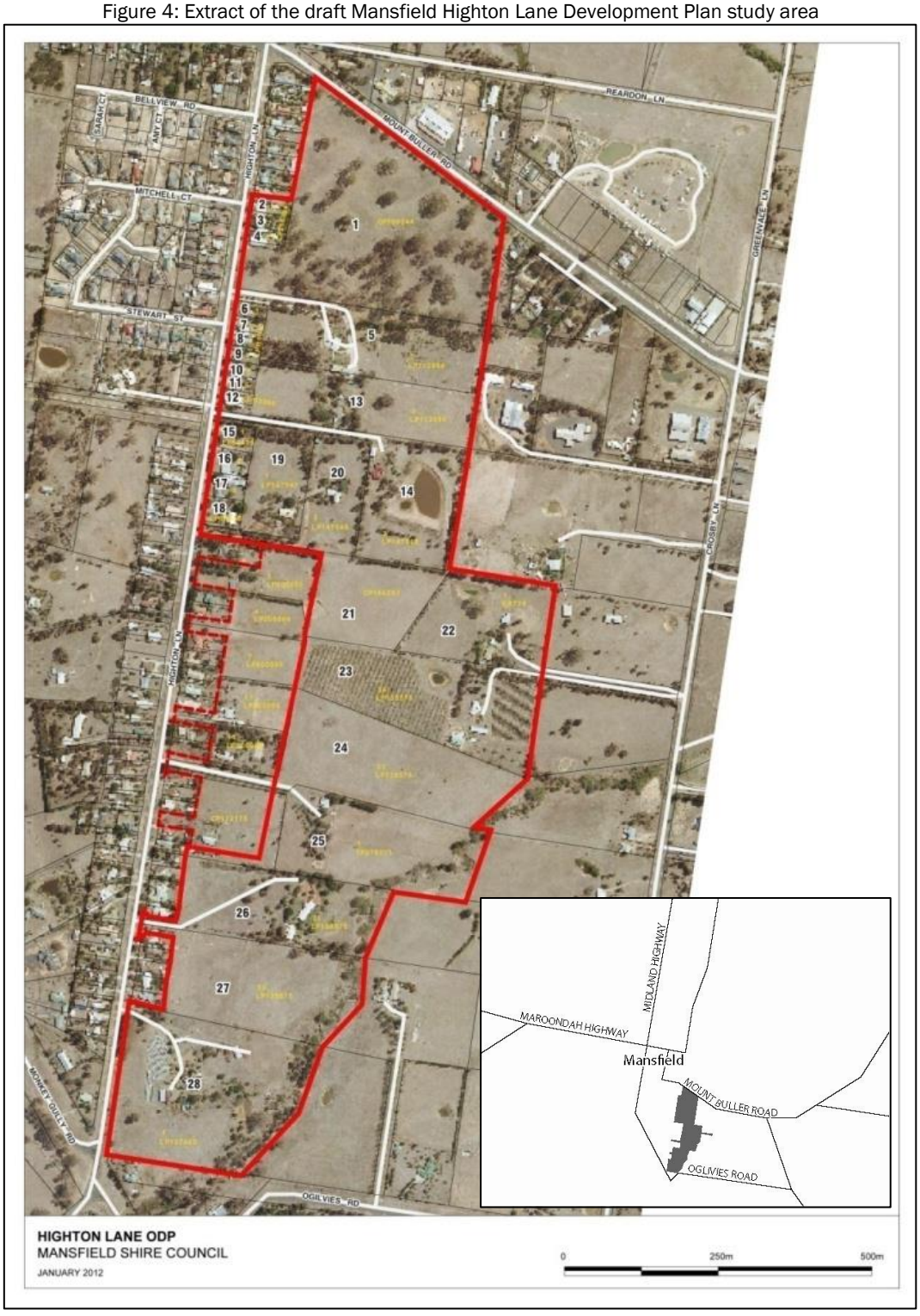
Figure 3: Extract of the proposed development plan



3.2 Mansfield Highton Lane Development Plan

The proposed residential subdivision development is located within the area of the Mansfield Highton Lane Development Plan (refer to Figure 4). Council has prepared a draft development plan for the area of land located east of Highton Lane. The draft Mansfield Highton Lane Development Plan is also referenced in the Mansfield Structure Plan (2015) and Mansfield Township Housing Strategy (2018). However, the draft Mansfield Highton Lane Development Plan has yet to be adopted by Council.

Figure 4: Extract of the draft Mansfield Highton Lane Development Plan study area



Council has advised that the proposed residential development at 100 Highton Lane and 52 Crosbys Lane can proceed as a stand-alone development on the basis that it is generally developed in accordance with the draft Mansfield Highton Lane Development Plan.

4 TRAFFIC GENERATION AND DISTRIBUTION

4.1 Traffic generation

Anticipated traffic generation levels from dwellings within the proposed development have been established by using the daily rate of 10 vehicle movements per day (vpd) from Section 12.3.1 of the Infrastructure Design Manual (IDM). The peak hour rate of 0.85 vehicle movements per hour per dwelling as specified in Section 3.3.1 for Residential Dwelling Houses in the RTA Guide to Traffic Generating Developments has been adopted.

The proposed development is estimated to yield 70 residential lots, which is estimated to result in a traffic generation of 700 vehicles per day (vpd) to and from the development, with morning and afternoon peaks of 60 vehicles per hour (vph).

Table 1 shows the summary traffic generation from the proposed development.

Table 1: Daily and peak traffic volumes - at full development

Land Use	Quantity	Unit	RTA Traffic Generation Rate		Development Traffic Generation	
			Daily Vehicle Trips (per unit)	Peak Vehicle Trips (per unit)	Daily Vehicle Trips (vpd)	Peak Vehicle Trips (vph)
Conventional Lots	70	Dwelling	10	0.85	700	60
				Total	**700**	**60**

Conclusion 1: The proposed residential development is likely to generate a daily traffic volume of 700 vpd and a peak hour traffic volume of 60 vph at full development.

4.2 Traffic distribution onto the surrounding road network

Peak hour traffic flow for the proposed development would generally be distributed as follows:

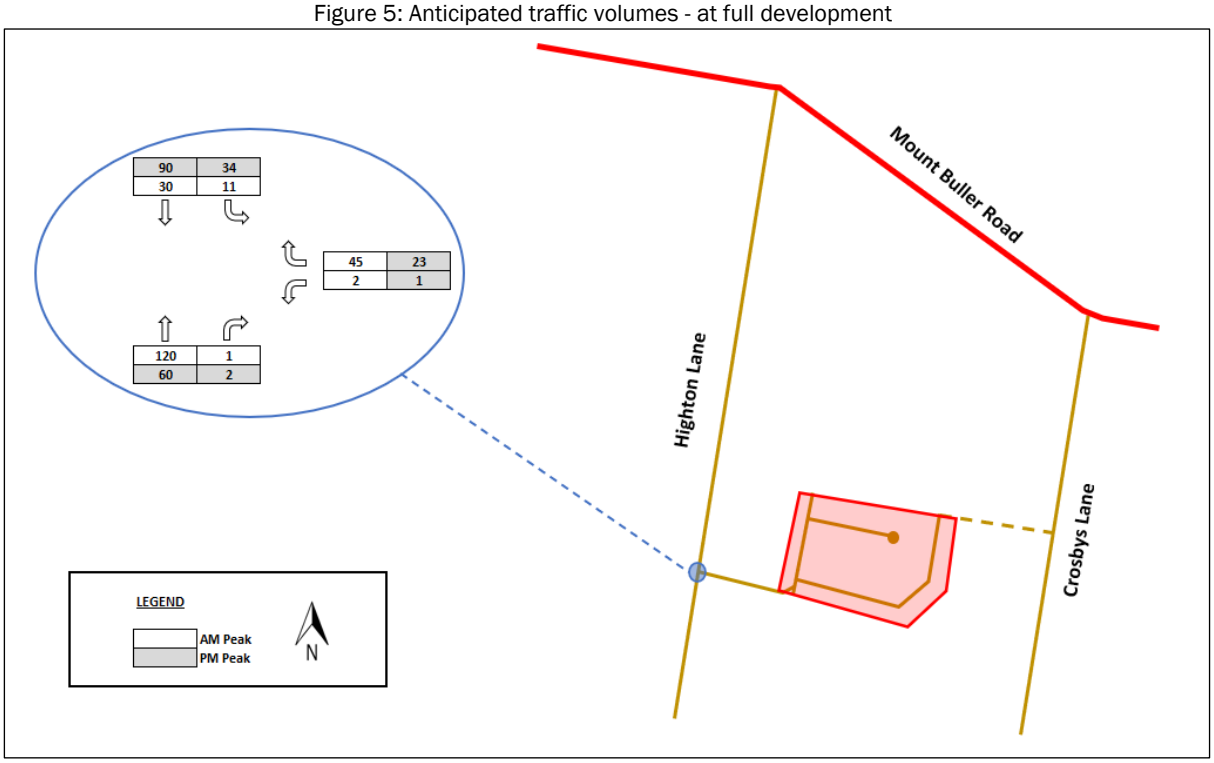
- AM peak: 80% leaving / 20% entering
- PM peak: 40% leaving / 60% entering

The traffic would predominately travel north along Highton Lane (95%) towards the Mount Buller Road, with the remaining travelling south towards Monkey Gully Road (5%).

4.3 Anticipated traffic volumes

The anticipated traffic volumes at full development are summarised in Figure 5.

Figure 5: Anticipated traffic volumes - at full development

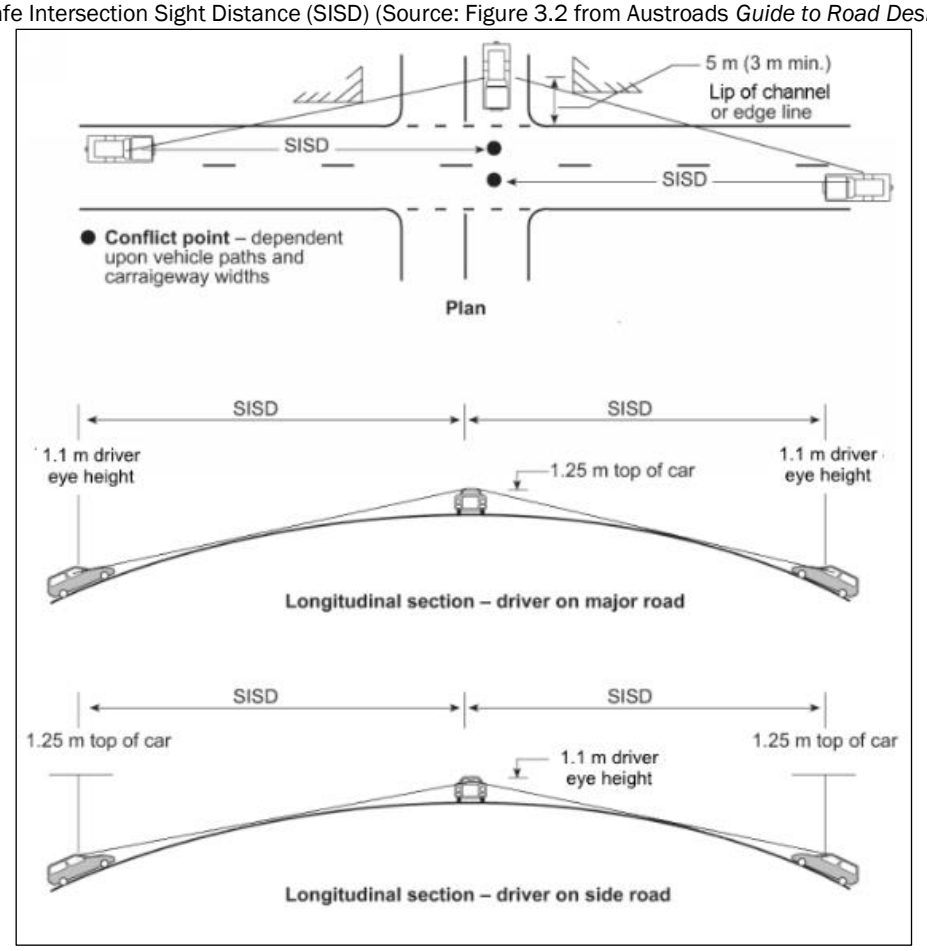


5 ASSESSMENT

5.1 Intersection sight distance

The visibility criterion normally applied to intersections is Safe Intersection Sight Distance (SISD). This is nominated in the Austroads Guide to Road Design, Part 4A (AGRD4) as the minimum distance which should be provided on the major road at any intersection (refer to Section 3.2.2 in AGRD4A). This provides sufficient distance for a driver of a vehicle on the major road to observe a vehicle from the minor access approach moving into a collision situation (e.g. in the worst case, stalling across the traffic lanes) and to decelerate to a stop before reaching the collision point (refer Figure 6 below).

Figure 6: Safe Intersection Sight Distance (SISD) (Source: Figure 3.2 from Austroads *Guide to Road Design Part 4A*)



The minimum SISD criterion specified in Table 3.2 of the Austroads Guide requires clear visibility for a desirable minimum distance of 97 m, measured 5.0 m back from the edge of traffic lane, relating to the general reaction time R_T of 2.0 seconds and a design speed[2] of 50 km/h. This sight distance is applicable to Highton Lane at the proposed development access.

Based on site observations, the visibility requirement, measured 5.0 m back from the edge of traffic lane, is satisfied at the development access, refer to Photos 5 and 6.

[2] Design speed = the posted limit for urban 50km/h local roads

Conclusion 2: The visibility requirement of 97 m, measured 5.0 m back from the edge of traffic lane is satisfied at the development access on Highton Lane.

Photo 5: Visibility to the north at the proposed development access on Highton Lane

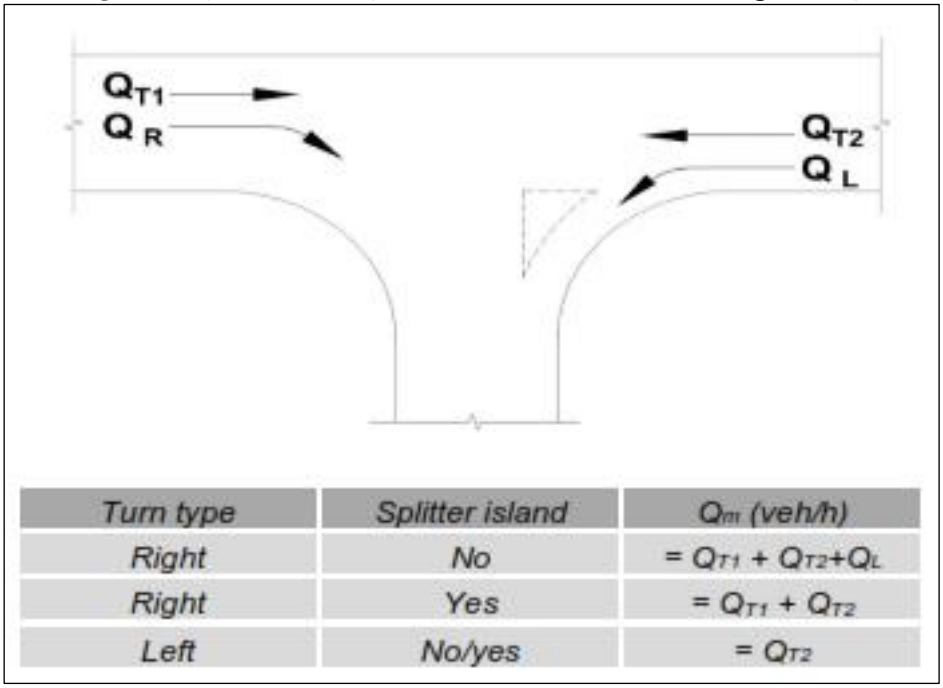
Photo 6: Visibility to the south at the proposed development access on Highton Lane

5.2 Turn provisions

The traffic turning from major roads into minor roads should not delay through traffic. The type of turn treatment is determined based on speed environment and the combination of through and turning traffic volumes. Figure 2.26 of the Austroads Guide to Traffic Management – Part 6 (AGTM6) is used for the selection of intersection treatments.

Using Figure A11 from the Austroads Guide to Road Design– Part 4 (AGRD4) (see Figure 7) the major road traffic parameters QM can be established and applied to the graph in Figure 2.26 of the AGTM6 to determine the turn treatments required at each intersection.

Figure 7: Major Road Traffic (Source Austroads *Guide to Road Design, Part 4*)



Turn type	*Splitter island*	*Q_m (veh/h)*
Right	*No*	*= Q_{T1} + Q_{T2}+Q_L*
Right	*Yes*	*= Q_{T1} + Q_{T2}*
Left	*No/yes*	*= Q_{T2}*

5.2.1 Highton Lane / Development Access

Table 2 summarises the anticipated through and turning traffic volumes at the Highton Lane / Development Access intersection. Figure 8 determines the turning warrants required at the intersection based on these traffic volumes.

Table 2: Design year AM and PM peak hour turn parameters at Highton Lane / Development Access intersection for use in Figure 8

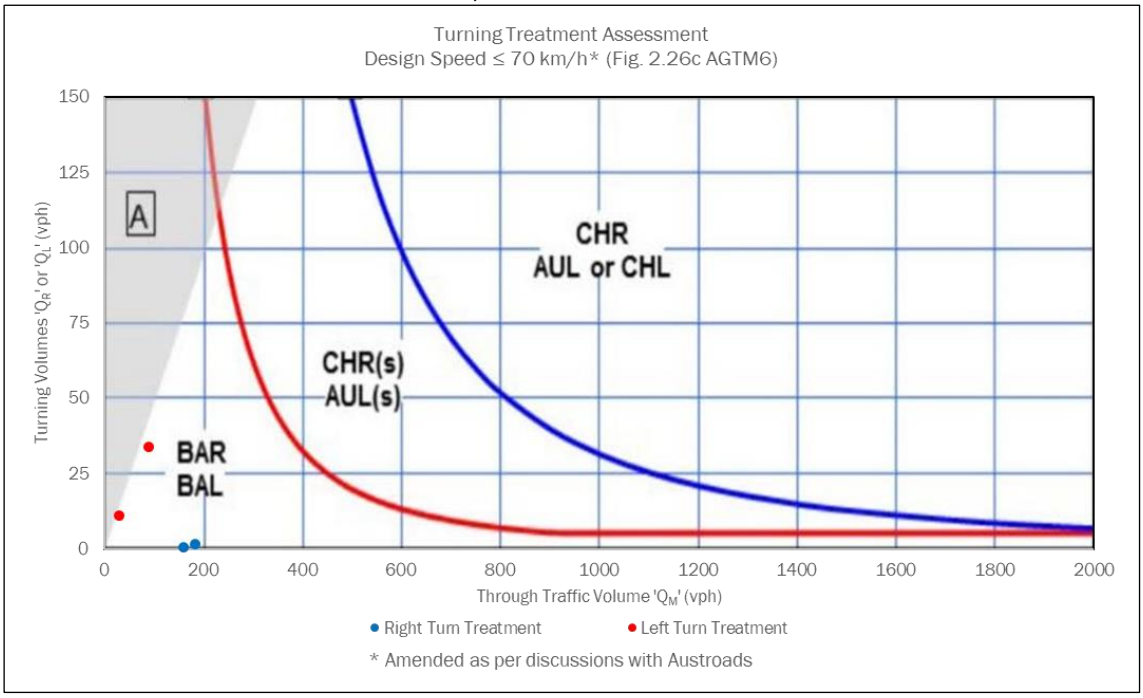
Major Road	Minor Road	Peak Period	Left Turn Q_L (vph)	Right Turn Q_R (vph)	Through Q_T (vph)		Q_M Left Turn	Q_M Right Turn
Highton Lane	Development Access	AM	11	1	Q_{T1}	120	30	161
					Q_{T2}	30		
		PM	34	2	Q_{T1}	60	80	184
					Q_{T2}	90		

Turning warrants assessment revealed that the Highton Lane / Development Access intersection warrants for a basic right (BAR) turn lane treatment and a basic left (BAL) turn lane treatment for a design speed of 50 km/h.

Conclusion 3: The Highton Lane / Development Access intersection warrants for a BAR and a BAL treatment.

However, due to the very low right turn volumes (one in the AM peak and two in the PM peak) the provision of a basic right (type BAR) turn lane treatment is not considered to be necessary at this intersection.

Figure 8: Graph used to determine the warrants for the left turn and right turn treatments at the Highton Lane / Development Access intersection



Recommendation 1: Provide a BAL treatment for the Highton Lane / Development Access intersection.

5.3 Internal roads

The design of the internal road has been based on the criteria set out in Table 2 of the IDM. The proposed access street within the development satisfies the minimum road reserve of 16 m, with the exception of the development access between Highton Lane and the subject site. The development access provides a road reserve of approximately 12 m.

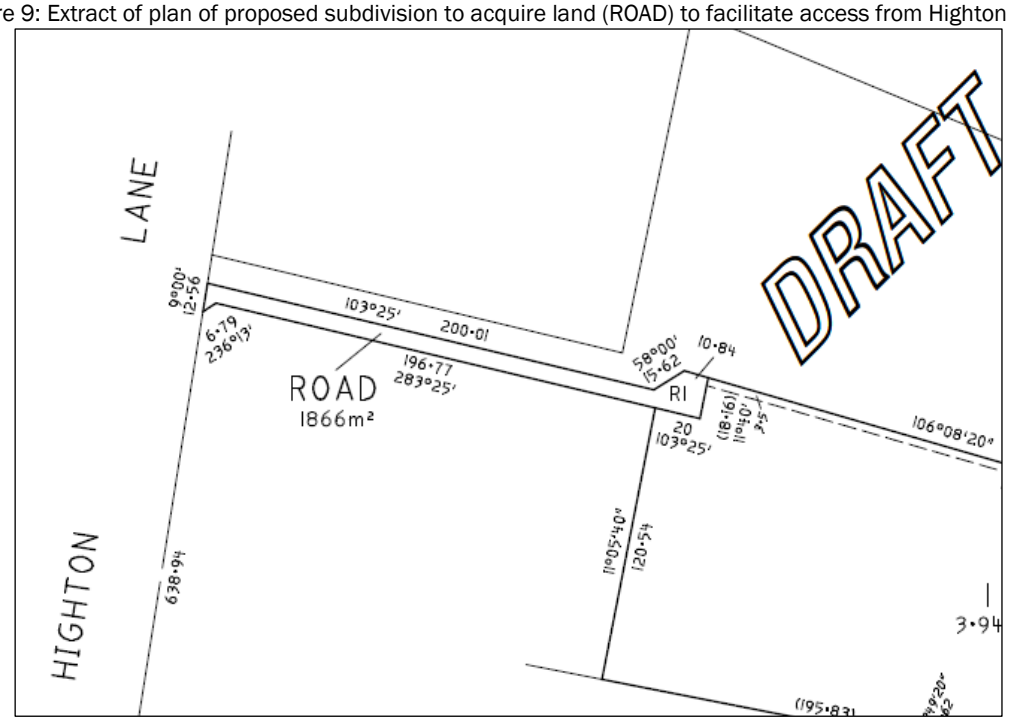
To satisfy the criteria, widening of the road reserve will be required which includes the removal of trees adjacent to the development access. It is understood that the client has an agreement with the adjoining land owner to the south to acquire a strip of land to facilitate the road access, refer to Figure 9.

Recommendation 2: development access requires widening of the road reserve which includes the removal of the adjacent trees to satisfy the access street criteria in the IDM.

No staging plan was provided for the proposed development. Staging of the development will require the internal roads to be temporarily terminated at the stage and/or property boundary. This may require vehicles accessing the section of the internal roads to make unnecessary reversing manoeuvres.

Recommendation 3: temporary court bowls be constructed to facilitate turns by vehicles at the termination of all roads for each stage.

Figure 9: Extract of plan of proposed subdivision to acquire land (ROAD) to facilitate access from Highton Lane



5.4 Pedestrian access

The plans of the proposed residential subdivision do not show if the road cross section will contain footpaths to both sides on the residential access streets.

Recommendation 4: the final development plans need to indicate footpaths within the subdivision in accordance with the IDM.

5.5 Vehicular access

It has been indicated that vehicular access to the site is proposed to be provided via a connection to Highton Lane and no access to the subject land from Crosbys Lane. The access to Highton Lane is restricted and will require widening of the road reserve and the removal of the adjacent trees.

As noted in Section 5.3 of this report, It is understood that the client has an agreement with the adjoining land owner to the south to acquire a strip of land to facilitate the road access to Highton Lane. It is expected that access to Crosbys Lane will be facilitated when the land to the north of the subject land is developed.

Table 6 of the IDM indicates that a rural collector road requires a minimum road width of 6.2 m which is applicable to Highton Lane. It noted that the road width along Highton Lane near the access does not meet minimum road width requirement of the IDM.

It is understood that the Council is in the process of having plans prepared for Highton Lane to be upgraded to ensure compliance with the IDM. It should be noted that the subject land has no lots fronting Highton Lane, and a minimal aspect that will facilitate the access road.

6 CONCLUSIONS AND RECOMMENDATIONS

Trafficworks has been engaged by Peyton Waite Pty Ltd, on behalf of Highton Developments Pty Ltd, to undertake a Traffic Impact Assessment of the proposed residential subdivision at 100 Highton Lane and 52 Crosbys Lane in Mansfield.

The key findings of the assessment are as summarised below.

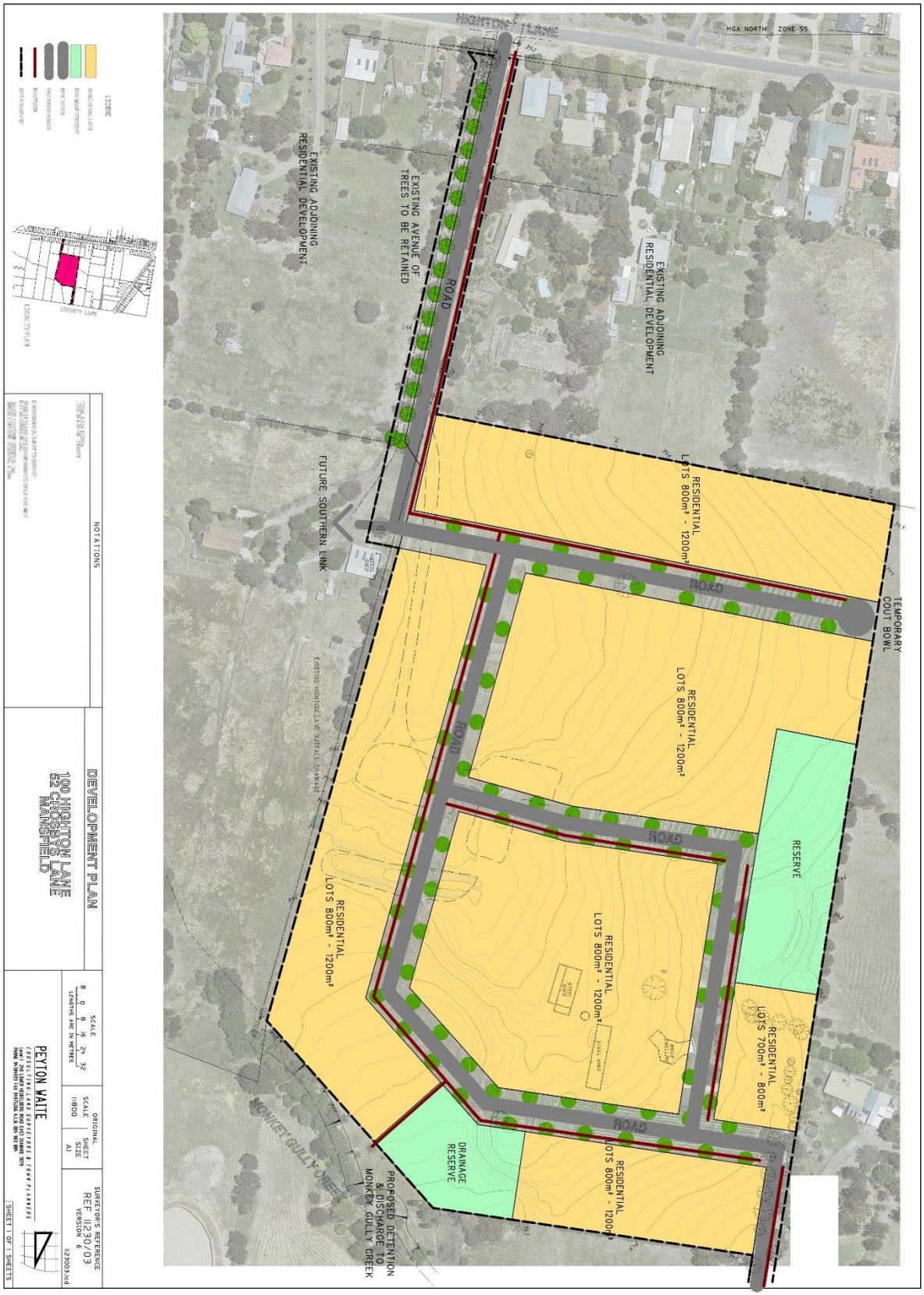
- **Conclusion 1:** the proposed residential development is likely to generate a daily traffic volume of 700 vpd and a peak hour traffic volume of 60 vph at full development
- **Conclusion 2:** the visibility requirement of 97 m, measured 5.0 m back from the edge of traffic lane is satisfied at the development access on Highton Lane
- **Conclusion 3:** the Highton Lane / Development Access intersection warrants for a BAR and a BAL treatment

The key recommendations made throughout the traffic impact assessment are summarised below.

- **Recommendation 1:** provide a BAL treatment for the Highton Lane / Development Access intersection
- **Recommendation 2:** development access requires widening of the road reserve which includes the removal of the adjacent trees to satisfy the access street criteria in the IDM
- **Recommendation 3:** temporary court bowls be constructed to facilitate turns by vehicles at the termination of all roads for each stage
- **Recommendation 4:** the final development plans need to indicate footpaths within the subdivision in accordance with the IDM.

It is concluded that the proposed development would not adversely impact the safety or the operation of the surrounding road network, provided the above recommendations are implemented. The proposed development complies with the relevant traffic requirements set out in Austroads and Australian Standards.

ATTACHMENT A – PROPOSED DEVELOPMENT PLAN



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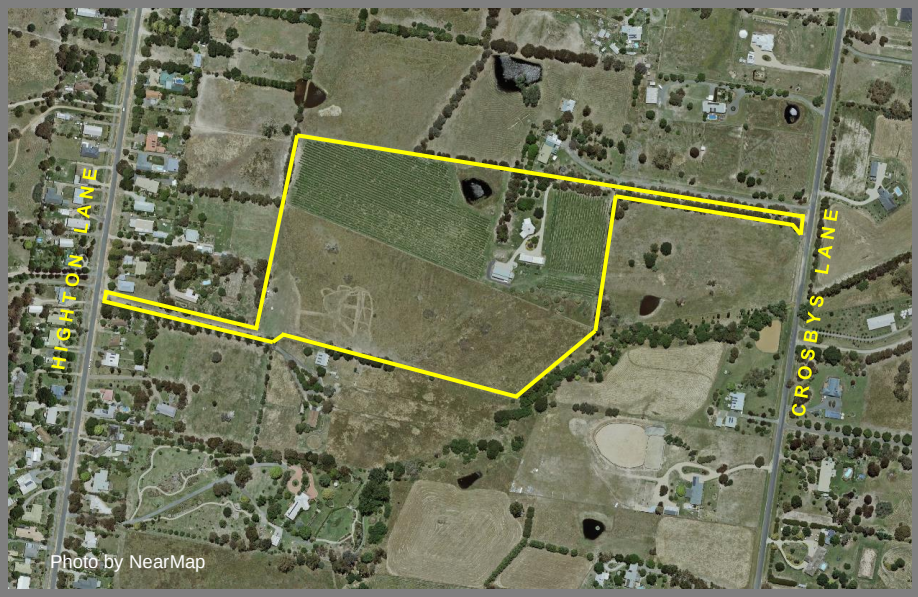
Attachment F – Servicing Report

UrbanDesign
and management

Land Development | Project Management
Planning | Urban Design | Civil Engineering

Servicing Report

100 Highton Lane and 52 Crosbys Lane, Mansfield



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Contents

1 Introduction

Urban Design and Management (UDM) has been engaged by Ashley Day to review the engineering servicing requirements/availability for sites at 100 Highton Lane and 52 Crosbys Lane, Mansfield to assess suitability for future urban development.

The subject sites are located within Mansfield Shire Council (MSC) municipal district. 100 Highton Lane is a battle-axe shaped property with a narrow frontage to Highton Lane and 52 Crosbys Lane is similarly battle-axe in shape with a narrow frontage to Crosbys Lane.

2 Engineering Services

2.1 Road Network

2.1.1 Existing

Highton Lane is a single carriageway sealed road with earthen table drains. Residential development abuts both sides of the road. Driveway cross-overs are typically gravel with pipe culverts at invert of the table drain. Crosbys Lane is also a single carriageway sealed road with shallow earthen table drains and gravel cross-overs with piped culverts.

Highton Lane

Crosbys Lane

2.1.2 Proposed

Internal roads will be vested with Mansfield Shire Council and are required to be designed and constructed by the developer to current Council standards and specifications via Mansfield Shire Council's Infrastructure Design Manual (IDM), established to document and standardise requirements for the design and development of municipal infrastructure.

All road and road-related areas and public open spaces/reserves within the development must be provided with public lighting approved by the Responsible Authority that incorporates the use of energy efficient globes.

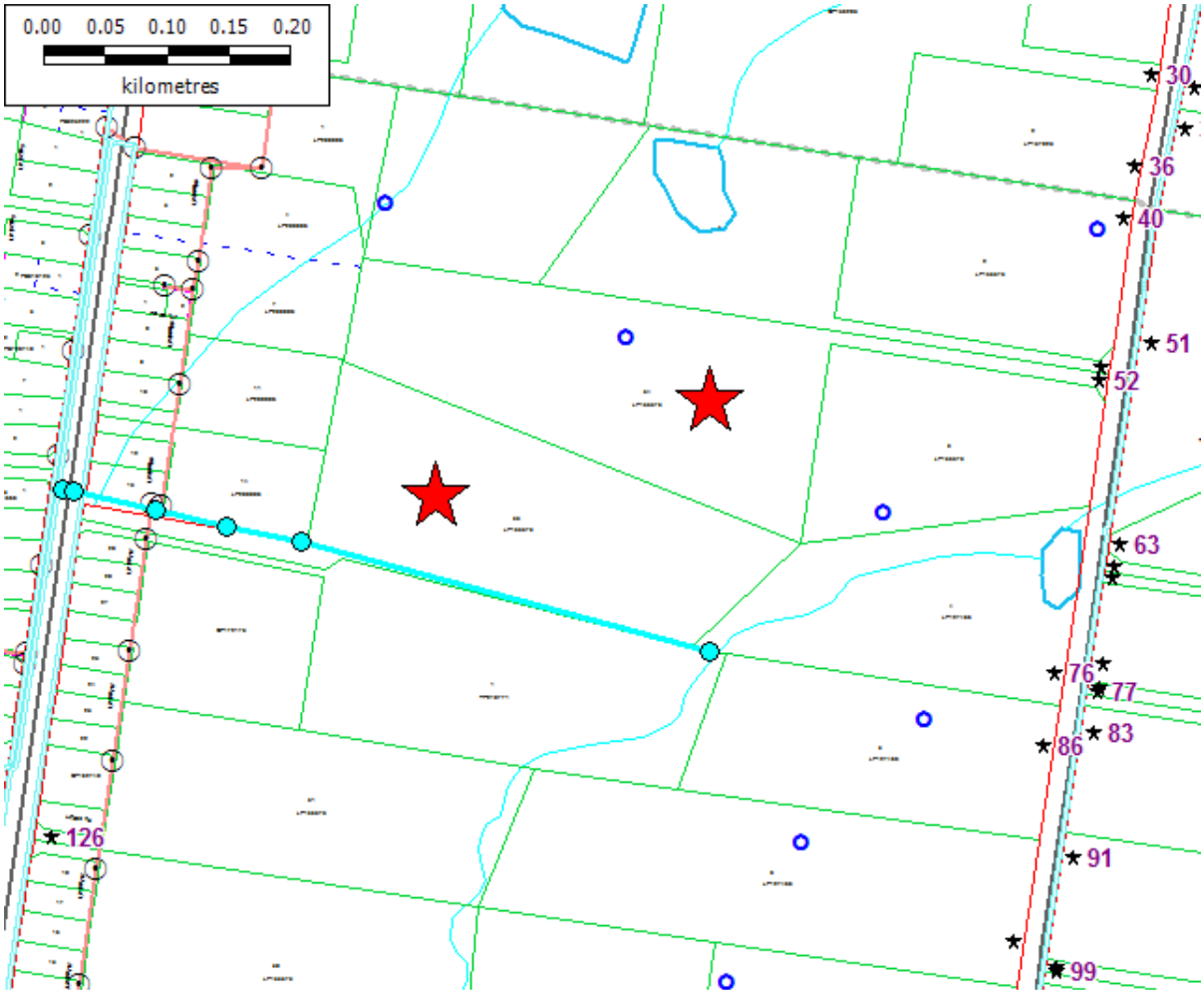
2.2 Drainage

The combined sites grade gently from the south-western corner in a north-easterly direction. Part of 100 Highton Lane falls to a shallow waterway just outside the eastern boundary of the site.

Mansfield Shire Council kindly provided below plan of the subject sites (indicated with the red stars) and the following advice regarding existing infrastructure.

There is a 375mm pipe with a series of pits (blue line and blue dots) running down the south boundary of 100 Highton Lane. Highton Lane and Crosbys Lane both have sealed roads and open swale drains. No other underground drainage exists within the vicinity of these properties.

Council advises that it has completed survey and design of Highton Lane for upgrade to underground drainage, kerb and channel and pavement widening, however there are no plans for construction within the next two years. Works will be programmed when funding becomes available.



Council advises that stormwater drainage discharge from the site must be connected to an approved point of discharge and must be discharged at a rate of no greater than pre development flows. Some form of retention will be required.

An on-site stormwater treatment facility is to be provided that will achieve a minimum of no net increase in pollutants discharging from the site.

Altered overland flow paths must pass through the designed routes within reserves for municipal purposes or within easements. No overland flow shall be allowed to impact on the adjacent lots.

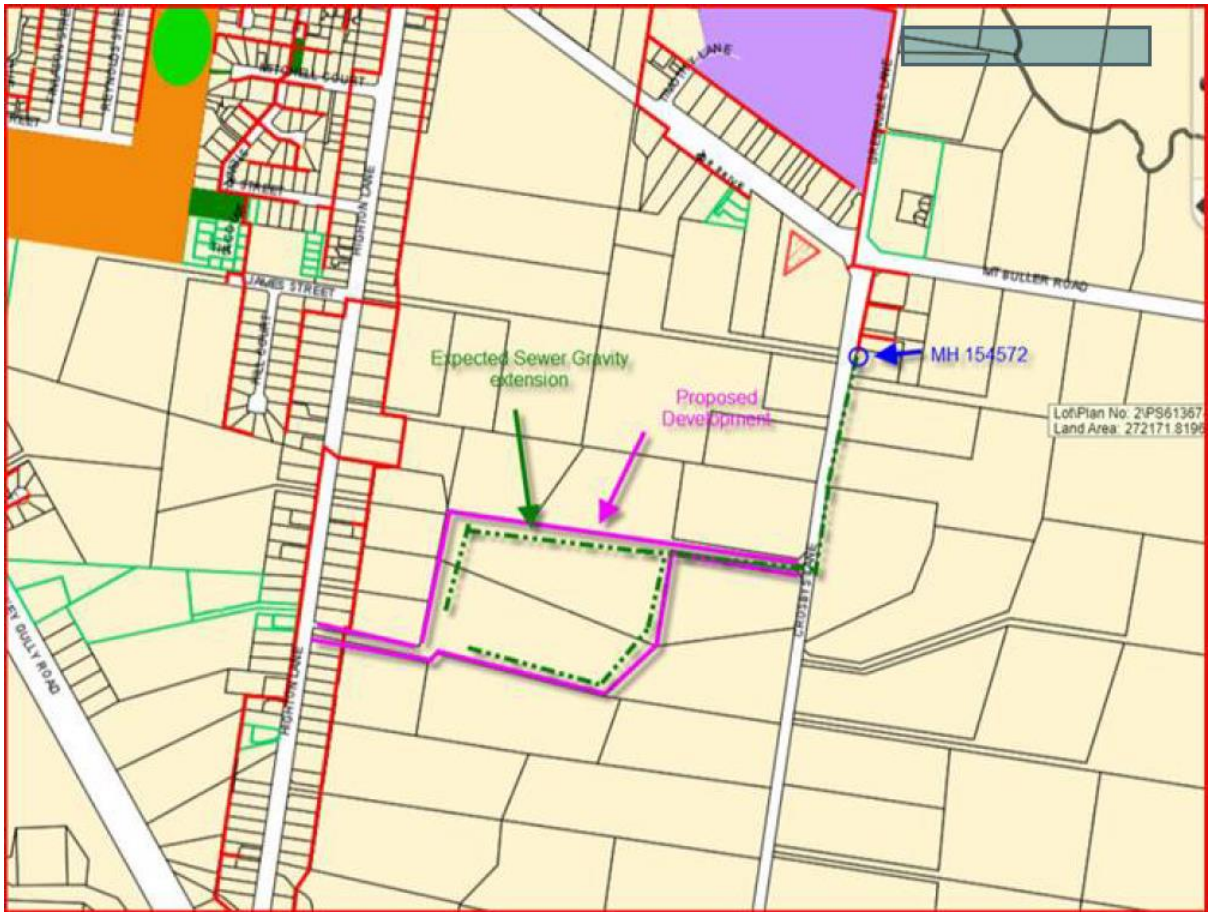
2.3 Sewerage

Goulburn Valley Water (GVW) is the authority responsible for the provision and approval of reticulated sewerage facilities. The site is located within the GVW sewer district boundary.

Advice from GVW is as follows:

- The development can be serviced by extending the existing gravity sewer network in Mansfield. This is based on GVW GIS 10m contour details and assumption there's no localised depression points inside the development area.
- Based on the GIS 10 m contour, it is proposed to connect the sewer via a 150mm gravity sewer main along Crosbys Lane to MH 154572 (refer Sewer Strategy plan below).
- The calibrated Mansfield sewer model predicts that both the existing 150mm diameter gravity sewer in Crosbys lane from MH 154572 and the downstream SPS have adequate capacity to service the development's sewer loading, estimated at 2.12L/s.

- This servicing advice considers only the current development area. Future development areas along Highton and Crosbys Lane may require outfall sewer main to be larger than 150mm.



Sewer strategy

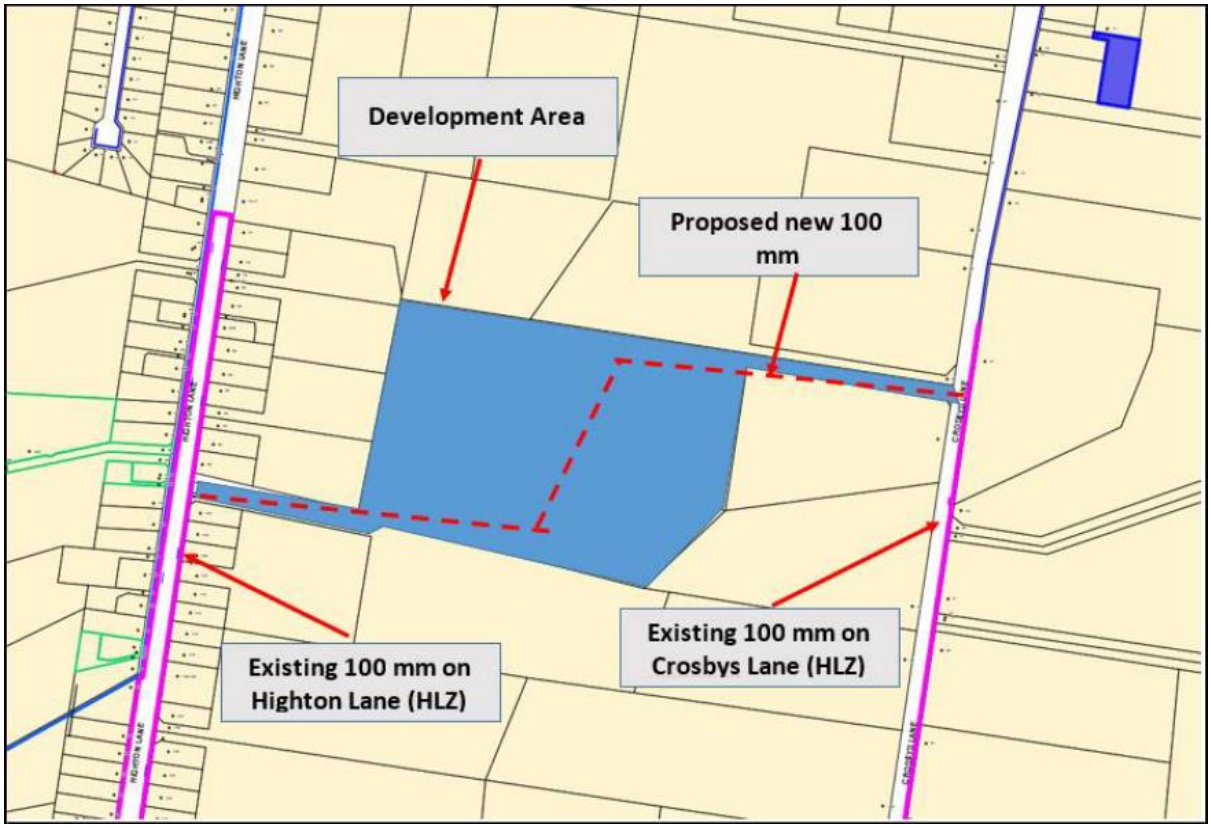
The developer is responsible for the construction of reticulated sewer within the development.

2.4 Potable Water

Goulburn Valley Water (GVW) is the authority responsible for the provision and approval of reticulated water facilities. The development is located within GVW water district boundary and can be serviced by the Mansfield water network.

Advice from GVW is as follows:

- The development is fronted by an existing 100 mm diameter water main in Highton Lane and a 100 mm diameter water main in Crosby's Lane. Both the water mains above are located within HLZ (High Level Zone).
- The following is proposed to service the development area (refer to Water Strategy plan below)
    - A minimum 100 mm diameter water main to be extended from the existing 100 mm diameter water main in Highton Lane;
    - A minimum 100 mm diameter water main to be extended from the existing 100 mm diameter water main in Crosby's Lane



Water strategy

The developer is responsible for the construction of reticulated potable water within the development.

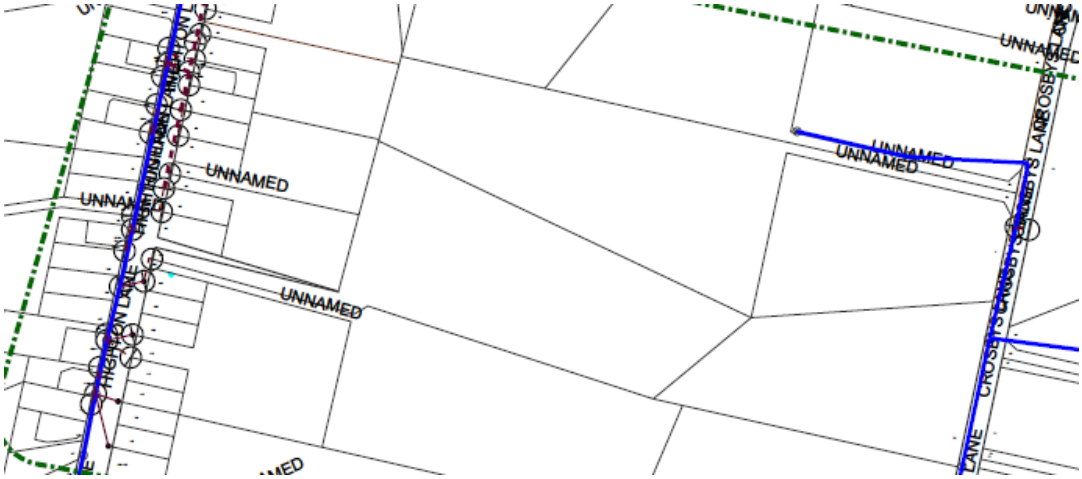
2.5 Recycled Water

Reticulated recycled water is not available for this development.

2.6 Electricity

AusNet Services is the authority responsible for the provision of electricity supply to the development.

DBYD data shows that existing electricity supply is available and it is expected that this supply has capacity to be extended to provide supply to the development. Details of the requirements for supply will be subject to receipt of formal offer from AusNet Services at the time of development and detailed electrical design.



LEGEND – Overview Plot of Electricity Assets

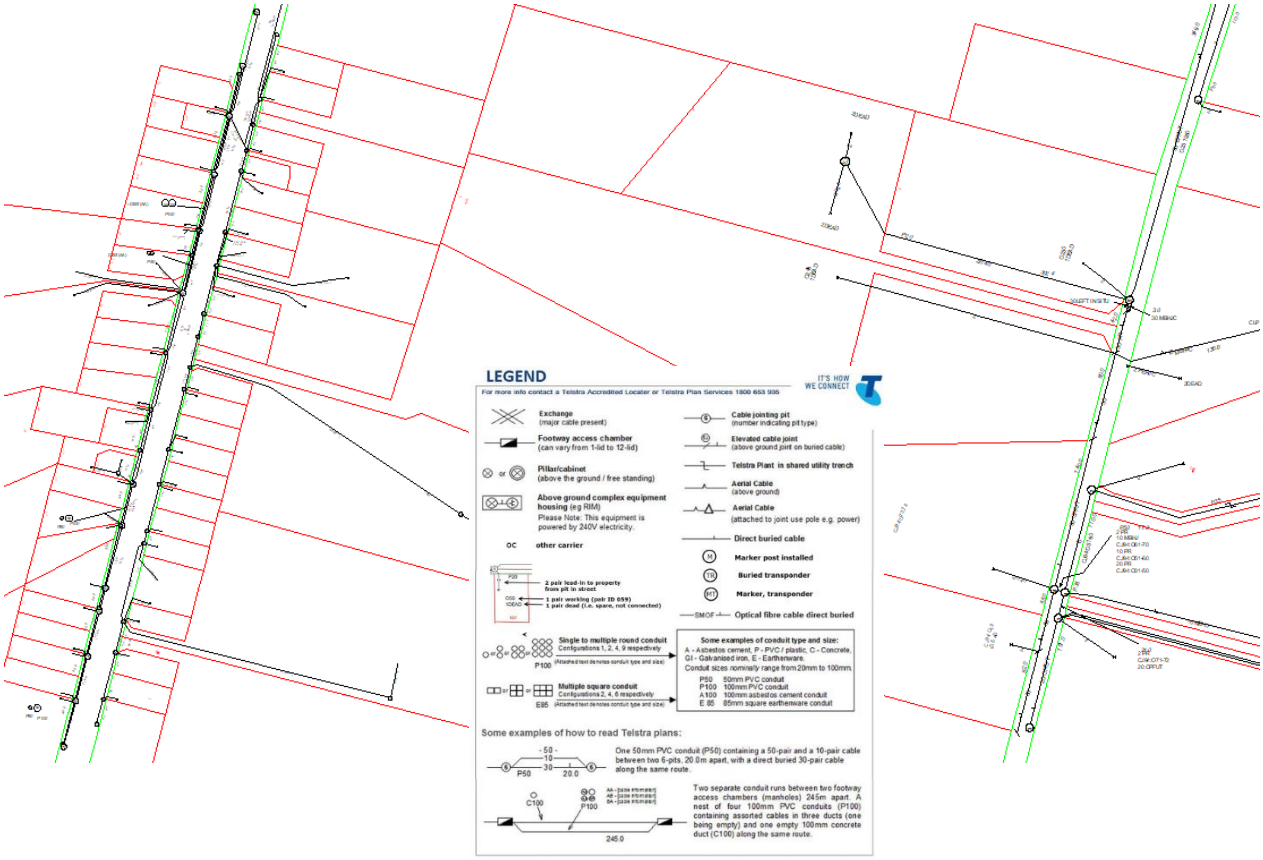
SYMBOL	NAME
	High Voltage Overhead Line

The developer is responsible for the construction of electricity infrastructure within the development.

2.7 Telecommunications

The site has access to telecommunications infrastructure. Refer to plans below for infrastructure as shown on DBYD data.

Telstra



DBYD investigations show that NBN assets exist in the area. The developer is required to install pit and pipe infrastructure suitable for optical fibre installation as part of the National Broadband Network.

2.8 Gas

DBYD investigations did not reveal any gas infrastructure in the area.

3 General

In summary, it appears that the site can be serviced by a combination of existing infrastructure and extensions/augmentation of existing infrastructure to service the proposed development.

It should be noted that this servicing report is based on preliminary information and informal discussions with relevant authority representatives and may be subject to change in the future. Urban Design and Management Pty Ltd cannot accept any responsibility should an authority change its position, strategy and/or requirements in the future.