



**Adelaide Plains Council**  
2017-0158  
5 July, 2017

The lower half of the page is a solid green background. Overlaid on this background are several concentric, hand-drawn style green circular lines that sweep across the bottom and sides of the page, creating a sense of movement and depth.

## Allied Food Industries Land Supply Study



URPS

# Allied Food Industries Land Supply Study

5 July 2017

<b>Lead consultant</b>	URPS
<b>Prepared for</b>	Adelaide Plains Council
<b>Consultant Project Manager</b>	Grazio Maiorano, Director Andrew Chown, Strategic Planner
	Suite 12/154 Fullarton Road (cnr Alexandra Ave) Rose Park, SA 5067 Tel: (08) 8333 7999 Email: grazio@urps.com.au
<b>URPS Ref</b>	2017-0158

## *Document history and status*

Revision	Date	Prepared	Reviewed	Details
1	20/6/17	AC	GM	Draft for Council Staff review
2	30/6/17	AC	ML & GM	Final V1
3	5/7/17	AC	RV & GM	Final

© URPS

All rights reserved; these materials are copyright. No part may be reproduced or copied in any way, form or by any means without prior permission.

This report has been prepared for URPS' client. URPS and its associated consultants are not liable to any person or entity for any damage or loss that has occurred, or may occur, in relation to that person or entity taking or not taking action in respect of any representation, statement, opinion or advice referred to herein.

[www.urps.com.au](http://www.urps.com.au)  
ABN 55 640 546 010

Allied Food Industries Land Supply Study - Final



# Contents

<b>Executive Summary .....</b>	<b>3</b>
<b>1.0 Introduction.....</b>	<b>4</b>
<b>2.0 Strategic Context .....</b>	<b>5</b>
2.1 Northern Economic Plan .....	5
2.2 Northern Adelaide Plains Agribusiness Initiative .....	5
2.2.1 Northern Adelaide Irrigation Scheme (NAIS) .....	5
2.3 30 Year Plan for Greater Adelaide – 2017 Update .....	6
2.4 Planning Reform – Environment and Food Production Areas .....	6
2.5 Mallala Broadacre Farming Study .....	6
2.6 The Northern Food Bowl – A Framework for Future Action .....	7
<b>3.0 Challenges facing Primary Production on the Northern Adelaide Plains.....</b>	<b>9</b>
3.1 Protection and Use of Primary Production Areas .....	9
3.2 Interface between Primary Production Uses .....	9
3.3 Gawler River and Light River Flooding .....	11
3.4 Climate Change .....	11
<b>4.0 Allied Food Industries.....</b>	<b>13</b>
4.1 The changing Primary Industry Landscape.....	13
4.2 What are Allied Food Industries.....	13
<b>5.0 The Policy Landscape.....</b>	<b>15</b>
5.1 Current Development Plan Controls .....	15
5.1.1 General Provisions .....	15
5.1.2 Zone Provisions .....	16
5.2 What Development Plan Controls are needed?.....	18
5.2.1 Single Zone .....	18
5.2.2 On-Farm .....	19
5.2.3 Combination.....	19
<b>6.0 Land Supply Considerations.....</b>	<b>21</b>
6.1 Infrastructure .....	21
6.1.1 Electricity.....	21
6.1.2 Natural Gas.....	21
6.1.3 Transport.....	22
6.1.4 Water .....	22
6.1.5 Workers Accommodation .....	23



---

<b>7.0</b>	<b>Recommendations .....</b>	<b>24</b>
	<b>Appendix A – List of Stakeholder Workshop Attendees .....</b>	<b>26</b>
	<b>Appendix B – Map 1: Land Use, Dryland Farming &amp; Flooding .....</b>	<b>30</b>
	<b>Appendix C – Map 2: PIRSA Primary Production Priority Areas (PPPA) .....</b>	<b>32</b>
	<b>Appendix D – Map 3: Existing Development Plan Zones .....</b>	<b>34</b>
	<b>Appendix E – Map 4: Infrastructure Considerations.....</b>	<b>36</b>



# Executive Summary

The construction of the Northern Adelaide Irrigation Scheme (NAIS) and its delivery of reliable 'fit-for-purpose' recycled water will change the future farming landscape of the Northern Adelaide Plains.

To ensure that Adelaide Plains Council is adequately prepared for this change and in a position to support and advocate local businesses, URPS was engaged on behalf of Council to prepare two separate but related documents, namely:

- The Allied Food Industries Land Supply Study; and
- The Northern Food Bowl Protection Areas Development Plan Amendment.

Allied food industries is a term used to describe those activities that are undertaken in support of, or as a direct result of a primary industry. This study sought to define this term and in doing so recognised that there are those allied food industries which directly contribute to activities occurring on-site (e.g. packing and processing sheds) and those which provide an ancillary and supporting role (e.g. chemical resellers, tertiary value-adding businesses).

This study provides a snap-shot of the current policy climate and understanding of those challenges facing primary industry on the Northern Adelaide Plains before reviewing and proposing a pathway forward which maintains market desirability and will facilitate a mix of on-site and off-site allied food industries. Finally, the study provides a range of recommendations for further consideration both as part of the associated Northern Adelaide Plains Food Bowl Protection Areas DPA and independently of this.

# 1.0 Introduction

South Australia and in particular the Northern Adelaide Plains stand to gain considerable advantage from opportunities presented in the diversification of farming practices and the growth in reticulated recycled water supply. Most recently, these opportunities have been recognised by both the State Government and Adelaide Plains Council (APC) through the Northern Economic Plan (2016) and the Northern Food Bowl – Virginia and Northern Adelaide Horticultural Plains Study (2013) respectively.

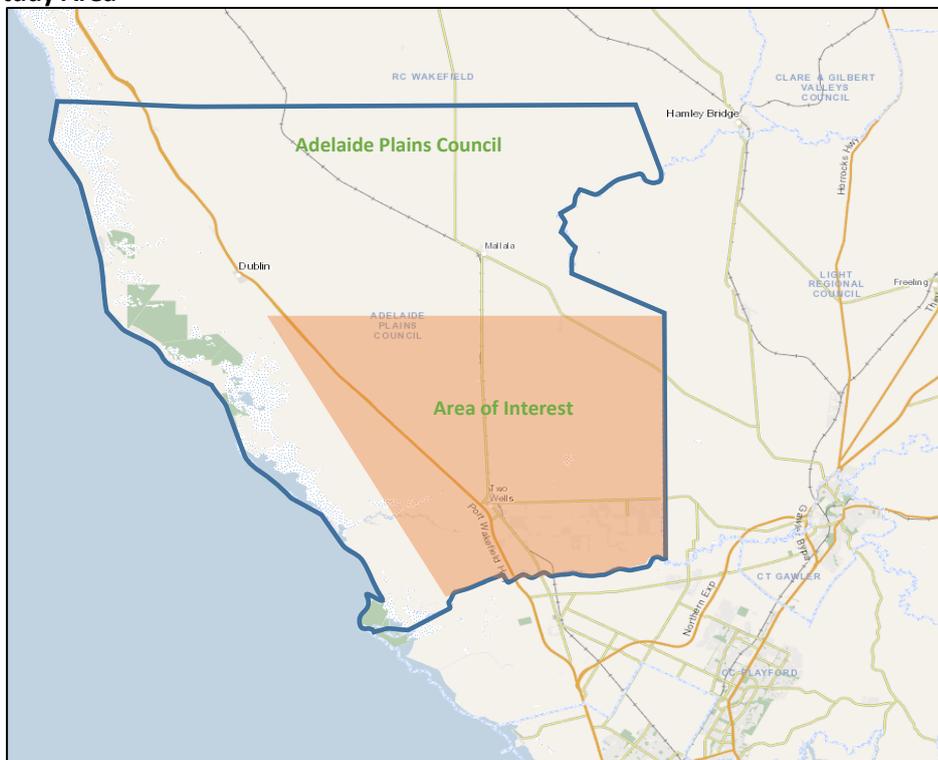
The diversification of farming practices, increase in high technology horticulture and sustained expansion of irrigated horticulture is supported by the proposed Northern Adelaide Irrigation Scheme (NAIS) which will deliver large volumes of secure and affordable recycled water to new areas north of the Gawler River.

Whilst many farmers consider the opportunities and challenges on-farm that may arise from the supply of recycled water, Council recognises that there is a need to understand and prepare for the expected growth of horticultural practices into areas traditionally utilised for other forms of primary production. In partnership with this growth will be an expected increase in associated allied activities, which are those that establish to provide support and services to these new enterprises.

As a consequence, Council is advancing the Allied Food Industries Land Supply Study and a supporting Northern Food Bowl Protection Areas Development Plan Amendment (DPA). This body of work has been informed by the outputs of a stakeholder workshop (refer to Appendix A for a list of attendees) which brought together a wide cross-section of representatives from local broadacre and horticulture farmers to grower, industry and government representatives. The feedback gathered through this process provided valuable information which has shaped this study and subsequent DPA.

The area subject to this study includes the entire APC area, however it is recognised that there is particular relevance around the area likely to be serviced by the proposed NAIS and subject to Council's Northern Food Bowl Protection Areas DPA.

**Figure 1-1 Study Area**





## 2.0 Strategic Context

### 2.1 Northern Economic Plan

The Northern Economic Plan 'Look North' is a collaborative document prepared between State and Local Government which seeks to foster jobs and empower local communities in Northern Adelaide. The plan focuses on three strategic areas namely industry growth, thriving communities and responsive governments.

Whilst not having a direct relationship with the preparation of the plan, APC stands to benefit from actions to be delivered through the plan. Of particular relevance to this study is the focus area of agriculture, food and beverage which notes that for the past 17 years the state's horticultural sector has increased in value and currently contributes some \$250 million to the total state economy. To continue supporting this growth and provide for new opportunities, the plan identifies a key project in the Northern Adelaide Plains Agribusiness Initiative.

This initiative sees the development of the NAIS which will provide an additional 20 gigalitres of recycled water from the Bolivar Waste Water Treatment Plant to support the expansion of irrigated horticulture and the development of new irrigation areas, including those areas north of the Gawler River.

This initiative is a key driving force in the preparation of this Allied Food Industries Land Supply Study which seeks to ensure Council has a supportive environment to take advantage of the opportunities that will arise.

### 2.2 Northern Adelaide Plains Agribusiness Initiative

#### 2.2.1 Northern Adelaide Irrigation Scheme (NAIS)

The State Government is committed to the delivery of the Northern Adelaide Plains Agribusiness Initiative. A flagship project of this initiative is the expansion of the supply of recycled water to the Northern Adelaide Plains and north of the Gawler River, which has advanced considerably and included an application to the Australian Government's National Water Infrastructure Development Fund to secure \$45.6 million to support the development and construction of the NAIS. If successful, this grant funding will be supported by a \$110 million investment from the State Government.

Key elements of this project include:

- Upgrading infrastructure at the Bolivar Waste Water Treatment Plant to produce additional recycled water suitable for irrigation;
- Constructing recycled water distribution infrastructure to the area north of the Gawler River; and
- Enabling a major new irrigation area to be constructed, including high-tech, high-value intensive food production.

Development of the NAIS compliments the existing Virginia Pipeline Scheme (VPS) which provides 20 gigalitres of recycled water per year to that area of the Northern Adelaide Plains south of the Gawler River.

## 2.3 30 Year Plan for Greater Adelaide – 2017 Update

In late May 2017, the State Government released the *30-Year Plan for Greater Adelaide – 2017 Update* (the 'update') which sets directions for how Adelaide should grow to become more liveable, competitive and sustainable. The update builds upon the original Plan released in 2010 and refocusses key principles, policies and actions for the region based on the knowledge acquired over the last seven years.

Whilst the update is largely silent on specific priorities for the Northern Adelaide Plains, it does include policies which address primary production broadly across the Greater Adelaide region. In this, the update notes the following policies:

- P57 – Maintain and protect primary production...whilst allowing for appropriate value-adding activities to increase investment opportunities;
- P59 – Enable major new primary production and agri-business development across the Northern Adelaide and Barossa regions...and prevent ad hoc land use changes that may compromise those investments;
- P60 – Ensure land use planning in and around the Virginia horticulture district aligns with projects for industry growth and revitalisation anticipated by the Northern Economic Plan;
- P62 – Manage the interface between townships and adjacent primary production activities and areas of nature protection.

The above policies support the diversification of primary production activities across the Northern Adelaide Plains, whilst encouraging value-adding activities (such as allied food industries) where located appropriately.

## 2.4 Planning Reform – Environment and Food Production Areas

The State Government has, through the Planning Reform process, introduced the Environment and Food Production Areas (EFPA). The EFPA are described in the *Planning, Development and Infrastructure Act, 2016* and were introduced to protect food and agricultural lands from urban encroachment. The EFPA affects the entire Adelaide Plains Council area.

At its core, the EFPA limits the availability for land owners to divide land for residential purposes to ensure protection is afforded for food producing areas. The implementation and operation of the EFPA is not anticipated to impact upon the land available to accommodate the development of allied food industries, nor that land to accommodate horticultural activities.

## 2.5 Mallala Broadacre Farming Study

In 2015, APC undertook a detailed study to assist in identifying the potential boundary between broadacre farming and irrigated horticulture to facilitate the creation of a well-planned food bowl. In making its recommendations, this study utilised a Multi Criteria Assessment (MCA) approach which considered a range of elements including natural resources, economic value, environmental integrity and community values.

The findings and recommendations of this study identify approximately 16,350 hectares of land that could be made available and dedicated to irrigated horticulture activity with the provision of adequate water



supply. The area in question generally aligns with that nominated for the NAIS and is geographically located to the southern portion of the Council in and around Lewiston, Two Wells and the Gawler River.

The content of this study is useful background to the current Allied Food Industries Land Supply Study and associated Northern Food Bowl Protection Areas DPA. Appendix B contains a map which illustrates the extent of land identified as “suitable for dryland farming”.

## 2.6 The Northern Food Bowl – A Framework for Future Action

The 2013 Northern Food Bowl – A Framework for Future Action report was a collaboration between Adelaide Plains Council, City of Playford, Natural Resources Adelaide Mount Lofty Ranges, Department of Primary Industries Regions SA (PIRSA), Regional Development Australia – Barossa and Hortex.

This report sought to provide guidance to all parties on potential actions required to secure the long-term sustainability of the horticultural industry in the region. In doing so, a range of Goals and Actions were identified which addressed specific areas of potential reform, including Land Use Planning and Building Policy which have a direct relationship with this study, as described below:

**Table 2-1 Goals and Actions**

Goal	Actions
<b>A clear and consistent vision for horticulture supported by planning policy</b>	<ul style="list-style-type: none"> <li>That the vision for the area be described through a strong Desired Character Statement that...sets a vision of the area being ‘Adelaide’s Northern Food Bowl’;</li> <li>Existing zoning be reviewed to ensure expansion of horticultural pursuits when water is available.</li> </ul>
<b>Horticultural uses appropriately located and zoned</b>	<ul style="list-style-type: none"> <li>All forms of horticultural uses should be supported;</li> <li>Greenhouse clustering should be encouraged where there are industry benefits in accordance with the guiding principles of clustering through a DPA.</li> </ul>
<b>Planning policy that strongly discourages further land division (except in greenhouse cluster precincts) or housing on productive land</b>	<ul style="list-style-type: none"> <li>A greenhouse cluster should allow limited subdivision to 2.5 hectares. This is seen as a viable unit size for small-to-medium scale greenhouses.</li> </ul>
<b>Planning policy that supports industry requirements for a diverse range of allotment sizes</b>	<ul style="list-style-type: none"> <li>With the exception of greenhouse cluster precincts, policy should not specify uniform or minimum allotment sizes.</li> </ul>
<b>Planning policy that supports allied horticultural land uses</b>	<ul style="list-style-type: none"> <li>Through planning policy, enable and support the development of allied and value-adding horticultural uses.</li> </ul>

**Shared responsibility for managing interface**

- Ensure future Development Plan policy requires a shared responsibility for managing the interface between *horticultural* and *residential land uses* rather than relying on the industry to provide buffers and limit activities in close proximity to residential development;
- Support Development Plan policy that encourages a shared responsibility for managing the interface between *horticulture* and other *agricultural uses*, supported by a collaborative approach between adjoining growers/farmers and their respective representative bodies.

The above goals and actions provide clear deliverables for the area north of the Gawler River which link closely with the current Allied Food Industries Land Supply Study and associated Northern Food Bowl Protection Areas DPA.



## 3.0 Challenges facing Primary Production on the Northern Adelaide Plains

The Northern Adelaide Plains and in particular that area north of the Gawler River, supports the accommodation of a variety of primary production activities which are ideally located close to market and have access to a ready labour supply. However, these opportunities are not without their challenges and it is important to consider these in the context of an expanded water supply and associated allied food industries growth.

### 3.1 Protection and Use of Primary Production Areas

The *30 Year Plan for Greater Adelaide 2010* identified the need to designate areas of primary production significance and seek the protection of these areas. Subsequently, Primary Industries and Regions SA (PIRSA) worked with Local Government and other State Government Departments to identify and map areas of primary production significance (known as Primary Production Priority Areas (PPPA)) across Greater Adelaide. Information used to determine PPPA include land capability, investment and land use, access to water, climatic conditions (including anticipated climate change) and other local conditions.

The above criteria were used to map these areas across APC, with the vast majority identified as PPPA and only a small portion in and around Dublin and to the immediate west and north-east of Two Wells identified as non-PPPA (refer to Appendix C for identified PPPA). A subsequent 2012 PIRSA study titled *'Planning for the Future of Primary Industry in South Australia'* recognised the need to protect PPPA through the introduction of additional planning controls for identified areas which:

- Minimise land division;
- Control minimum allotment sizes;
- Minimise dwellings;
- Manage interface; and
- Allow complementary value adding activities.

In April 2017, the State Government advanced separate measures to address potential loss of agricultural land through the Environment and Food Production Areas (EFPA) discussed under Section 2.4 above.

It is important to note that the PPPA do not seek to preference one primary production use over another and the mapping is considered useful in determining the appropriateness of the area for different primary industries.

### 3.2 Interface between Primary Production Uses

Management techniques to address potential interface conflict between primary production and residential activities are well documented. However, there is growing recognition and appreciation of the important role that interface management between different primary production uses plays in protecting each activity.



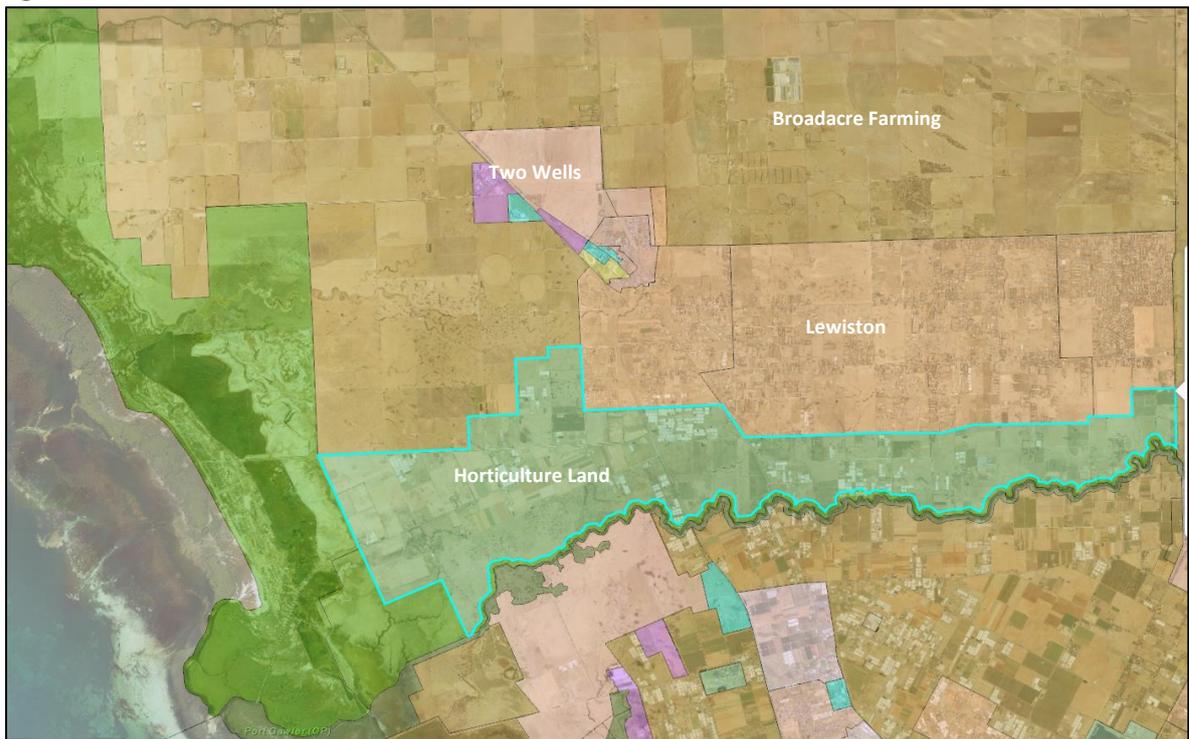
There are a range of conflicts which may arise when undertaking competing primary industries in close proximity to each other with one of the most significant recognised as spray drift. The potential for conflict on the Northern Adelaide Plains is heightened as new 'chemical-sensitive' land uses such as horticulture and viticulture are introduced into a landscape traditionally characterised by broadacre farming activities with generally consistent chemical regimes. The matter of spray drift and their associated buffers was the basis for the formation of a PIRSA Buffers Working Group which comprised representatives from local government, industry and grower bodies (Primary Producers SA, Grain Producers SA) and State Government (Environment Protection Authority, Department of Planning, Transport and Infrastructure and PIRSA).

Central to the working group's investigations was an understanding that the use of chemicals in agriculture has changed considerably over recent years, particularly in the broadacre production system where many farmers have substituted traditional cultivation and ploughing practices for an herbicide regime and in some cases 'no-till' approach. It was clear from the work completed by the working group that buffer and separation management between primary production systems is complex and subject to both Federal and State controls. Although it was noted that the establishment of viticulture adjacent to cropping land can be a significant inconvenience for farmers and spray contractors that may result in significant operational and business effects, the land use planning system was not considered to be an appropriate tool to 'lead' the management of these complex issues. Having said that, the planning system does have a role to play in minimising interface issues.

Current Council Development Plan controls largely negate interface conflict. As shown in Figure 3-1, that area comprising horticultural activities in and around the Gawler River is spatially separated and buffered from broadacre farming to the north by that land zoned Rural Living and Animal Husbandry (Lewiston and Two Wells). Horticultural activities are predominantly contained within a Horticulture Policy Area which largely coincides with available water supply.

The potential for future conflict resulting from an increase in fit-for-purpose water and the associated growth of alternative primary industries and allied food industries across the Northern Adelaide Plains is a matter which will be considered as part of the associated Northern Food Bowl Protection Areas DPA.

**Figure 3-1 Horticultural Land North of the Gawler River**



### 3.3 Gawler River and Light River Flooding

Flooding and its associated impacts from both the Gawler River and Light River present significant development constraints across the study area which need to be understood when considering the appropriateness of land to accommodate primary production development, where to site allied food industries, or when seeking to rezone land for this purpose.

The associated Northern Food Bowl Protection Areas DPA includes the insertion of amended flood mapping for the Gawler River and the introduction of flood mapping for the Light River (Map 1 in Appendix B conceptually illustrates flood prone land). Current Development Plan controls will be reviewed as part of the DPA.

### 3.4 Climate Change

The Northern Adelaide Plains is recognised as one of South Australia's prime farming areas, characterised by a maturing intensive food production industry and excellent proximity to market. However this area is not immune to the effects of climate change and its impacts may prompt an evolution of primary industries occurring on the plains.

Key challenges presented by climate change for this region include:

- Impacts of sea level rise;
- Lower rainfall;
- Increased mean temperature and extreme heat days;
- Increased frost severity;



- Reduced groundwater availability.

The above scenarios pose a considerable threat to the viability of future primary industries. In a 2012 report titled *'Climate Change in the Northern Adelaide Plains and implications for horticulture'* the Department of Environment, Water and Natural Resources recognised the importance of an adequate and reliable water supply in assisting to ameliorate many of the negative impacts posed by the above climate change challenges.



## 4.0 Allied Food Industries

### 4.1 The changing Primary Industry Landscape

Council recognises that availability of high quality, fit for purpose recycled water offered through the proposed NAIS will likely lead to a diversification of primary industry activities occurring across southern and central regions and a shift in the manner in which farms operate and the land area required to accommodate new enterprises.

New entrants that may look to establish in this area include:

- Intensive horticulture – high value field and enclosed environments (both covered and high-tech);
- Tree crops (i.e. nuts, olives);
- Intensive animal keeping (e.g. feedlots, intensive poultry and pork);
- Viticulture;
- Organic produce; and
- Speciality crops (e.g. medical cannabis or hemp for fibre).

The above new entrants build upon the existing horticultural and broadacre farming activities occurring within this region, which stand to benefit from opportunities presented by consistent water supply.

### 4.2 What are Allied Food Industries

This study seeks to provide a clear definition of allied food industries and understand the link that these have in supporting new and existing activities occurring on-farm. It became clear through stakeholder engagement that allied food industries describe those activities that are the direct result of primary production activities and those that provide ancillary services (including those businesses that value-add to raw product).

#### Direct

Direct allied food industries can be best described as **‘those activities which occur predominantly as a result of, and in direct connection with, a primary production activity’**. This proposed definition recognises the direct supporting role the allied food industry plays to the success of the primary production activity and the typically industrial nature of these allied industries.

Some examples of direct allied food industries include:

- Washing/processing/packing of produce (e.g. packing shed);
- Winery;
- Bulk commodity storage; and
- Feed/hay processing mill.

Direct allied food industries are of an industrial nature and play a key role in the lower end processing of raw products. Whilst generally industrial in nature, these activities have a direct link to primary industries and may be considered appropriate when developed in association with primary production activities.



## Ancillary

For the purpose of this study, ancillary allied food industries are defined as **‘those activities which provide an ancillary service in support of primary production uses’**. This definition separates those activities which are established to either provide a supporting function to primary production uses or those activities which value-add to primary produce.

Ancillary food industries include:

- Chemical resellers;
- Cold storage;
- Transport and logistics<sup>1</sup>;
- Equipment sales and service;
- Nurseries;
- Value-adding industries (e.g. food manufacturers)

The above definitions will be used as the basis for investigations undertaken to inform the associated Northern Food Bowl Protection Areas DPA.

---

<sup>1</sup> It is acknowledged that processing, packing sheds and bulk commodity storage may incorporate a transport and logistics land use component.



## 5.0 The Policy Landscape

### 5.1 Current Development Plan Controls

A detailed review of Council's Development Plan controls was undertaken to determine what level of support (or otherwise) is currently provided for allied food industries both generally and within specific zones.

#### 5.1.1 General Provisions

At a broad level, the general provisions contained within Council's Development Plan do not preclude the development of allied food industries, however there are a range of controls for consideration:

##### **Hazards**

The impacts presented by potential hazards need to be understood when considering what may be an appropriate location/area for allied food industries. The Development Plan refers to excluding development from areas which are vulnerable to, and cannot be adequately and effectively protected from, the risk of hazards, whilst ensuring that protection works that may be undertaken do not significantly interfere with natural processes.

The southern portion of the study area between the Gawler River and Mallala is subject to the impact of 1:100 year Average Recurrence Interval (ARI) flooding from both the Gawler River and the Light River. A core component of the associated Northern Food Bowl Protection Areas DPA is the insertion of updated and new constraint mapping which provides a visual depiction of the extent and depth of flooding. The Hazards module includes the addition of local content to provide broad controls to manage finished floor level and filling on the flood plains.

The location of allied food industries (and greenhouses) need to give consideration to flooding constraints to provide protection to future development and to ensure impacts to the flood plain are minimal.

##### **Infrastructure**

Current policy calls for the provision of adequate infrastructure to support development, including (but not limited to) electricity supply, water supply, road access and gas services.

Consideration of the additional infrastructure specifically required to support allied food industries is discussed in Section 6.

##### **Interface between Land Uses**

When investigating appropriate land to accommodate future allied food industries, consideration must be given to the potential for interface conflict to arise between existing and new activities.

Council's Development Plan contains comprehensive controls which address those items most likely to cause interference including noise, odour, fumes, dust or other airborne pollutants, light spill, hours of operation and traffic impacts, along with providing suitable rural interface controls. Those policies should



be reviewed against the Environment Protection Authority's 'Evaluation distances for effective air quality and noise management (August 2016)'.

### **Transportation and Access**

Council's Development Plan recognises the role that a sound and efficient transport network plays in supporting land use development. Current controls act to facilitate a comprehensive and integrated transport system with safe and convenient freight movement.

Future allied food industries will play a key role in supporting horticultural activities and will require access arrangements which support a range of vehicle characteristics.

### **5.1.2 Zone Provisions**

In addition to the broad policy controls discussed above under part 5.1.1, the facilitation of allied food industries will be influenced by specific zone provisions. The following provides a review of zone policies affecting the southern portion of the study area (i.e. that likely to be capable of connection to the NAIS) and their relationship to future land supply:

#### **Animal Husbandry Zone**

Land use information confirms that in some locations, horticultural activities are occurring within the Animal Husbandry Zone. These activities are of varying scale and are generally consistent with the zone's primary intent to support rural living with associated small-scale farming, horse keeping and dog kennelling. Furthermore, additional local content is included which seeks to manage horticulture within structures (e.g. shade houses/glass houses) where they are not located on the flood plain.

The expansion of allied food industries in this zone is considered inappropriate and out of character with the zone's rural living intent. As such this zone was excluded from consideration.

#### **Bulk Handling Zone**

The Bulk Handling Zone is intended to support activities relating to the receiving, storage and dispatch of bulk commodities. This zone encourages value-adding activities associated with bulk handling, and whilst not identifying land uses associated with horticulture as non-complying, the zone's Desired Character does not generally support these activities.

Given the abovementioned, the zone would support limited expansion of some allied food industries, but the expansion of these should not compromise the underlying intent of the zone for bulk commodity receipt, storage and distribution.

#### **Industry Zone**

The Industry Zone supports the development of a range of land uses that contribute to the rural economy with a focus on bulk handling, warehousing, servicing, storage and distribution.

Current policies would support a limited range of allied food industries which focus on servicing the sector more broadly. These include activities such as tractor and equipment sales, manufacturing, servicing



and/or repair (service trade premise/industry). It is however noted that businesses of a more general nature, such as chemical resellers (shop) would not be supported.

It is noted that horticulture is identified as a non-complying land use.

### **Light Industry Zone**

The desired character statement for the Light Industry Zone specifically identifies and supports the provision of a range of uses, including those associated with the servicing of plant or equipment used for agriculture and value-adding industries associated with the local agricultural and horticultural industries such as processing, packaging and cold storage.

Given the location, size and proximity of land zoned Light Industry to residential forms of development, it is anticipated that this zone will only support smaller value-add activities.

### **Primary Production Zone**

The Primary Production Zone covers the majority of the Council area and provides the greatest level of support for horticultural and allied food industry activities, recognising the value of horticulture production, greenhouse development and rural value adding, including processing and manufacturing to complement and expand upon rural activities.

It is noted that the desired character statement specifically references the potential for the proliferation of intensive development which may threaten the proper functioning of the rural landscape and result in competing demands which may be less productive. To address this, the zone recognises the need to control the size of land holdings and manage the conversion of agricultural land to other uses.

### Zone Principles

Zone principles encourage industry uses which are developed to support primary production, processing, storage and distribution of local primary produce or products produced on the same site where it retains a direct relationship with primary production and does not impede or limit the use of adjoining land. This has limitations on the development of allied food industries within the zone, which seek to provide a processing, packaging or transport solution for broader primary producers.

It is noted that the zone supports the accommodation of a shop where ancillary to primary production or processing uses, where it is located on the same site as the primary use. This provision is intended to provide for small shop fronts for the sale of goods produced on the land and is common within horticultural areas. The provision facilitated through the plan would not support the accommodation of ancillary allied food industries such as chemical resellers.

### Horticulture Policy Area 3

Horticulture Policy Area 3 is located to the southern portion of the study area, extending from the eastern boundary to the western coastal boundary and abuts the Gawler River to the south.

The policy area is intended to comprise horticulture and associated industry activities for the washing, processing and packaging of primary produce, along with development which services and supports horticulture such as the repair and maintenance of farm equipment.

## 5.2 What Development Plan Controls are needed?

This study seeks to identify areas capable of supporting allied food industries. It is clear from the above review of current Development Plan policy that there are opportunities for these forms of development to occur at different scales and with different characteristics in a range of locations.

The future opportunities for growth in allied food industries will depend on the supporting planning policy landscape. In this, Council has sought to expand on current policy approaches and in doing so, investigate three alternative approaches, namely:

1. Accommodation of all allied food industries in a single zone;
2. Accommodation of all allied food industries on-farm; or
3. A combination approach which provides for both on-farm and off-farm allied food industries.

### 5.2.1 Single Zone

A single zone approach would seek to accommodate all future allied food industries (both direct and ancillary) within a single ‘industry’ type zone and restrict these types of activities outside of this zone. Whilst providing a high level of protection for agricultural land and seeking its use predominantly for primary industry; this approach is a variation on current planning practice and at odds with the directions of PIRSA and more broadly the State Government which advocates for a stronger agribusiness and value-add sector in support of the State’s Economic Priority of ‘Premium Food and Wine Produced in our Clean Environment and Exported to the World’.

Table 5.1 below summarises both the opportunities and constraints presented by the single zone approach.

**Table 5-1 Single Zone**

Opportunities	Constraints
Retention of primary production land and prevention of potentially incompatible land uses	Potential for high capital costs associated with establishing an off-site allied food industry
Concentration of infrastructure in a single location/s	Processing etc. remote from primary production activity and associated potential for damage to raw products in transit
Appropriate management of interface conflict	Not necessarily attractive to investors
Opportunity to co-locate allied food industries to gain efficiencies	Reduced efficiencies – additional transport requirement to processing facility
	Potentially high transport costs from farm to processing facility
	Has the potential to pre-judge what activities might occur within the zone

### 5.2.2 On-Farm

This approach would see planning policy amended to allow all allied food industries to be accommodated within the primary production zone, both on-farm and off-farm. Whilst on face value this approach may be seen to facilitate a market approach and provide the greatest equity, the concept of uncontrolled development across the primary production zone would see the conversion of agricultural land to non-agricultural land uses, therefore undermining the zone’s intent and constraining those land uses which are intended within the zone. In addition, there is potential for higher levels of interface conflict resulting from the day-to-day operation of incompatible land uses.

The allowance for all allied food industries, and in particular those defined as ancillary, to be accommodated on-farm is a departure from current planning practice.

**Table 5-2 On-Farm**

Opportunities	Constraints
Dispersed allied food industries – potential biosecurity and interface management benefits	Dispersed allied food industries – fragmented infrastructure provision, loss of co-location potential and proliferation of incompatible land uses throughout the primary production zone
Consolidation of activities on a single site and potential cost savings to producers	Loss of valuable agricultural land from production
	Loss of potential co-location benefits
	Not necessarily attractive to investors – require large sites

### 5.2.3 Combination

A combination policy approach builds upon current planning practice by allowing certain allied food industries which have a direct association with a primary production activity to occur in unison with the activities on-site, whilst recognising the benefits that may be forthcoming by providing a dedicated industry type zone for those uses which do not rely on, or have a direct relationship with on-site primary production activities and therefore builds upon the concepts introduced in Section 5 above.

Given the more dispersed nature of this approach, an important consideration is the need to ensure that a new entrant seeking to establish within a dedicated industry zone is not penalised through high infrastructure costs.

**Table 5-3 Combination**

Opportunities	Constraints
Co-location of ancillary allied food industries to gain efficiencies	Both concentrated and dispersed infrastructure provision – potentially high costs
Management of potential interface conflict between allied food industries and residential/township activities	Some loss of agricultural land from production



Continues current best practice planning

Potential to penalise those entrants located within a dedicated zone if planning policy does not provide certainty

Maintenance of primary production zoned land for primary industries and avoids proliferation of incompatible land uses

Availability of suitably zoned land for 'primary' value adding practices which facilitates larger scale activities which are out of character with the primary production zone

Allows for market flexibility



## 6.0 Land Supply Considerations

### 6.1 Infrastructure

In understanding what potential Adelaide Plains Council has to support allied food industries, and in proposing a revised policy framework as discussed in Section 5 above, it is important to consider what opportunities or limitations are posed by existing infrastructure provision. Both the previous studies discussed under Section 2 above and current policy contained within the Primary Production Zone (Horticulture Policy Area 3) provide an insight into the current limitations for the growth of both horticulture and allied food industries, noting the importance of adequate water supply, east-west sealed road linkages, power supply and the possible provision of natural gas.

The information contained herein is depicted geographically in Appendix E.

#### 6.1.1 Electricity

Delivery of electricity to the home and business across South Australia is via a distribution network owned and managed by SA Power Networks (SAPN), whilst the transmission of high voltage electricity is via the network managed by ElectraNet.

It is noted that existing ElectraNet 275kV overhead transmission infrastructure runs through the south-eastern portion of the APC area, whilst SAPN has an extensive network of existing overhead powerlines throughout the study area along with a number of substations, including a new substation to the immediate north of Two Wells.

In order to understand the potential for growth in allied food industries, both dispersed throughout the study area and concentrated in a single zone, network capacity must be understood. Correspondence from SAPN has confirmed that there is some existing capacity within the existing substation system, particularly with that substation located north of Two Wells, however, augmentation of existing substations would be required should load demands exceed this capacity.

Any future augmentation of the SAPN system is the responsibility of the developer and SAPN, and advanced separately of Council.

In addition to the above, feedback gathered throughout stakeholder engagement highlighted the value placed by existing allied food industries on the ability to undertake independent power generation as a means of providing surety and consistency of supply.

#### 6.1.2 Natural Gas

The supply of natural gas to South Australia is achieved via transmission infrastructure owned and managed by a number of separate parties (such as Epic Energy), whilst the natural gas distribution network is owned by Australian Gas Networks.



However, it is recognised that in some circumstances business users with a large demand are supplied directly by the natural gas transmission providers (e.g. the Orora glass factory at Kingsford is supplied directly by Epic Energy).

Representatives of Epic Energy have confirmed that transmission infrastructure in the form of the Moomba to Adelaide Pipeline and the Wasleys to Adelaide Loop are located within the study area and noted that the capacity of this infrastructure is fully contracted. However, representatives highlighted that there may be options for addressing capacity depending on projected gas demand (both overall volume and daily use profile).

Separately, Australian Gas Networks (AGN) has recently installed a high pressure natural gas distribution main from Virginia to Two Wells. Representatives of APA Group (operators for AGN) confirm that the trunk main has been sized to accommodate future growth in the region, subject to individual assessment of location pressure and quantity requirements.

### 6.1.3 Transport

Transport and access to the wider road network plays an important role in attracting new allied food industries and the future success of new businesses. Excluding General Access Vehicles (GAV) which are those that comply with mass and dimension requirements and have general access to the road network unless sign-posted otherwise (e.g. standard semi-trailer), there are limitations placed on the use of the road network by larger vehicles (e.g. B-Doubles). Larger vehicles includes those of a higher mass, length, height or width which must comply with the requirements of the National Heavy Vehicle Regulator and in doing so, limit movements to specific routes which are designated for these types of vehicles.

Whilst a number of these specific routes traverse the study area, feedback gathered throughout stakeholder engagement and current planning policy recognise the current freight network shortcomings, in particular in providing for east-west freight movement. Further, stakeholders noted the implications of a largely unsealed road network on the consistent management of product quality and the risk of impurities in higher end value-add products as a result of dust.

A further consideration for future freight network planning is described in the 2015 South Australian Freight Council paper titled *'Moving Freight – The First and Last Mile'* in which the concept of the 'First and Last Mile' is discussed. This term describes the short distance required to connect a business or farm to an existing restricted access route and/or to connect this route to its destination (e.g. processor, port, mill, etc.). It is recognised that there is often a mismatch between the freight vehicles allowed on the main freight network and those roads connecting a business to the freight network. In turn, this mismatch can lead to less than optimal vehicle use for the task and result in productivity reductions.

The future location of allied food industries, both on-farm and within a dedicated industry zone will need to take into account road network capabilities.

### 6.1.4 Water

As noted previously, a key driver for growth in both primary industries and allied food industries is the reliable supply of fit-for-purpose water. The future availability of Class 'A' Recycled Water for allied food industry growth via the NAIS is discussed in Section 2.2 above.



### 6.1.5 Workers Accommodation

The diversification of primary industries and allied food industries will result in a demand for skilled labour. In many cases, this skilled labour is seasonal and therefore not readily available locally, resulting in a demand for the services of a labour hire company. Previous consideration of workers accommodation has been focussed around the re-use of the Mallala Hospital, which remains fully occupied.

The adequate provision of additional services and availability of land for workers accommodation is a matter which needs to be considered in partnership with the introduction of new primary industry activities and allied food industries.



## 7.0 Recommendations

The following recommendations have been prepared on the basis of investigations undertaken to inform this study and valuable feedback gathered from attendees at the key stakeholder workshop held in early June 2017.

The recommendations provide a clear path forward to support not only the provision of allied food industries but the growth of primary production more broadly across the study area.

1. Undertake investigations as part of the Northern Food Bowl Protection Areas DPA with the intent to rezone land which is, or is capable of, being adequately serviced by infrastructure and sited accordingly for ancillary allied food services. Activities envisaged within a future 'industry' type zone would include those that are not dependent on activities occurring on-site.
2. Remove Horticulture Policy Area 3. This recommendation seeks to encourage and facilitate diversification of primary production activities whilst enabling primary producers to be adaptable and flexible to market influences.
3. Consider policy amendments which facilitate greenhouse development as a complying development, within the Primary Production Zone, subject to certain provisions being met (e.g. minimum setbacks, located outside or within the low flood risk area, achievement of buffer/interface controls on the new entrant).
4. Consider policy additions which allow direct allied food industries to occur throughout the Primary Production Zone and not depend on primary industry occurring on-site.
5. Explore land division policy approaches, including leases and/or licence as per Schedule 3 of the *Development Regulations, 2008* to facilitate expansion of primary industries and allied food industries. Issues for consideration include (but are not limited to) the listing of land division as non-complying, the provision of land division subsequent to the establishment of an allied food industry.
6. Review current dwelling controls within the primary production zone to ensure priority is placed on protecting primary production and allied food industry uses.
7. Consider the availability and demand for workers accommodation and the most appropriate location for this form of development.
8. Investigate current planning controls and make recommendations to ensure energy generation can take place on-site when occurring in association with primary industries and allied food industries.



9. Update policies to ensure 'Industry' is merit within the Primary Production Zone where ancillary to activities on-site or for the purpose of processing primary production products.
  
10. Lobby the Department of Planning, Transport & Infrastructure for amendments and upgrades to the State road network to support higher productivity vehicles (e.g. B-Doubles) throughout the study area.
  
11. Consider Council's road sealing program and its relationship to location and needs of future allied food industries.



# Appendix A

## List of Stakeholder Workshop Attendees

# APC – Allied Food Industries Land Supply Study



## Stakeholder Workshop Attendee List

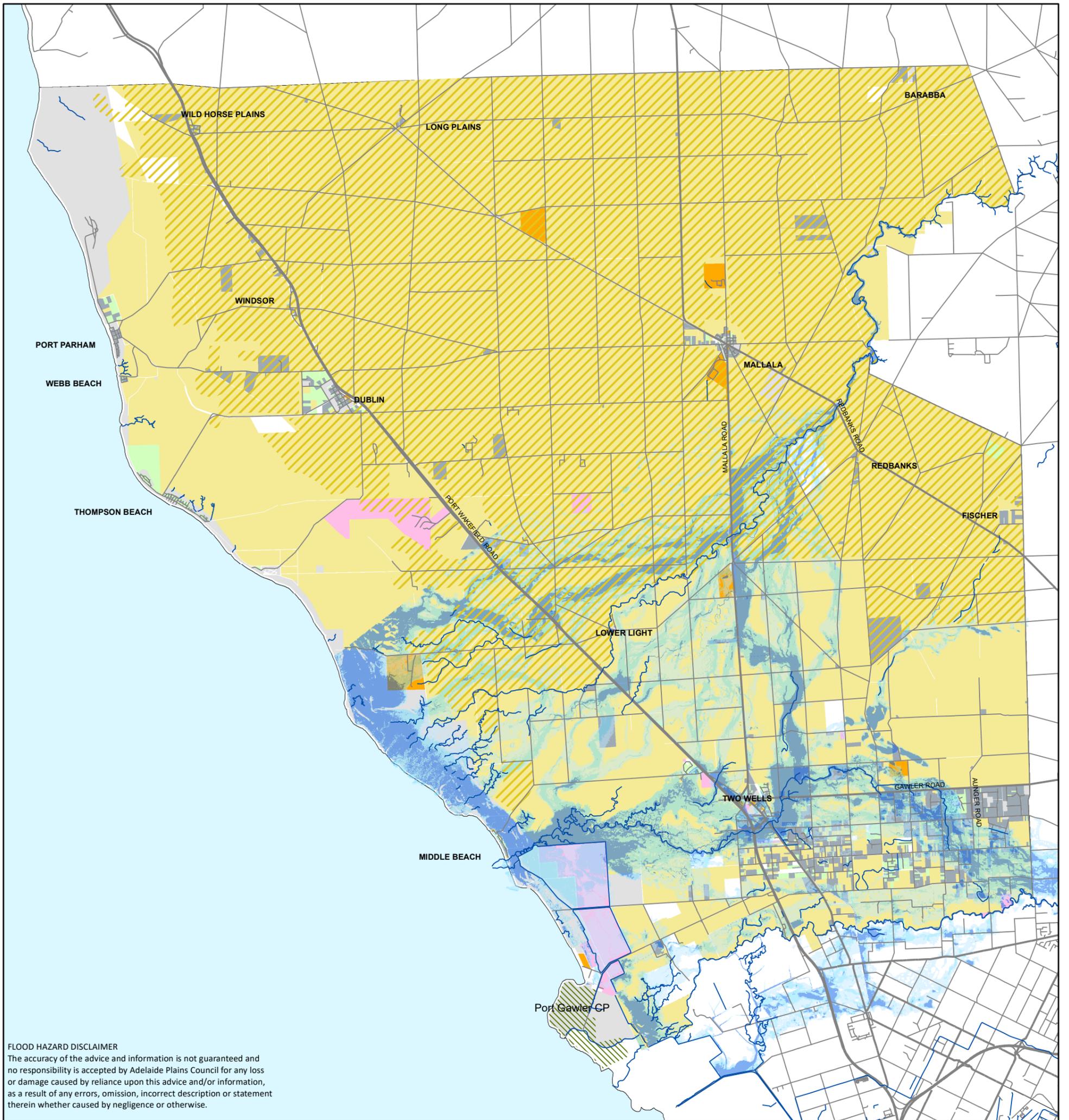
Date of Workshop – Wednesday 7 June 2017

<b>Name</b>	<b>Organisation/Group</b>
David Barone	Jensen Plus
Tony Lutfi	Greenwheat Freekeh
Peter Houston	Primary Industries and Regions SA (PIRSA)
Ly Luan Le	Vietnamese Farmers Association
John Lush	Adelaide Plains Council Rate Payers Association
Anne Maroney	Barossa RDA
Nadia Gencarelli	Department of Planning, Transport and Infrastructure
Mark Wison	SA Water
Nicolle Sincock	Investment Attraction SA
Gerey Davis	PIRSA (Major Projects)
Angelo Demasi	SA Produce Market Limited
Jordan Brooke-Barnett	AusVeg
Liam Stewart	Mallala Seasonal Workers Accommodation
Robert Veitch	Adelaide Plains Council
Grazio Maiorano	URPS
Zoe Hambour	URPS
Andrew Chown	URPS

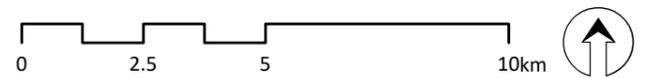


# Appendix B

Map 1 – Land Use, Dryland Farming and Flooding



**MAP 1: LANDUSE, DRYLAND FARMING AND FLOODING**  
 ADELAIDE PLAINS COUNCIL



- |  |                              |
|--|------------------------------|
| — Watercourses   | <b>Landuse (generalised)</b> |
| — Main road  | Commercial                   |
| — Other road   | Industry                     |
| ▨ Conservation Park  | Agriculture                  |
| ▨ Area suitable for dryland farming (Mallala Broadacre Farming Study 2015) | Residential                  |
| <b>Flood Hazard</b>  | Vacant Land                  |
| Low  | Other                        |
| Medium   |                              |
| High   |                              |

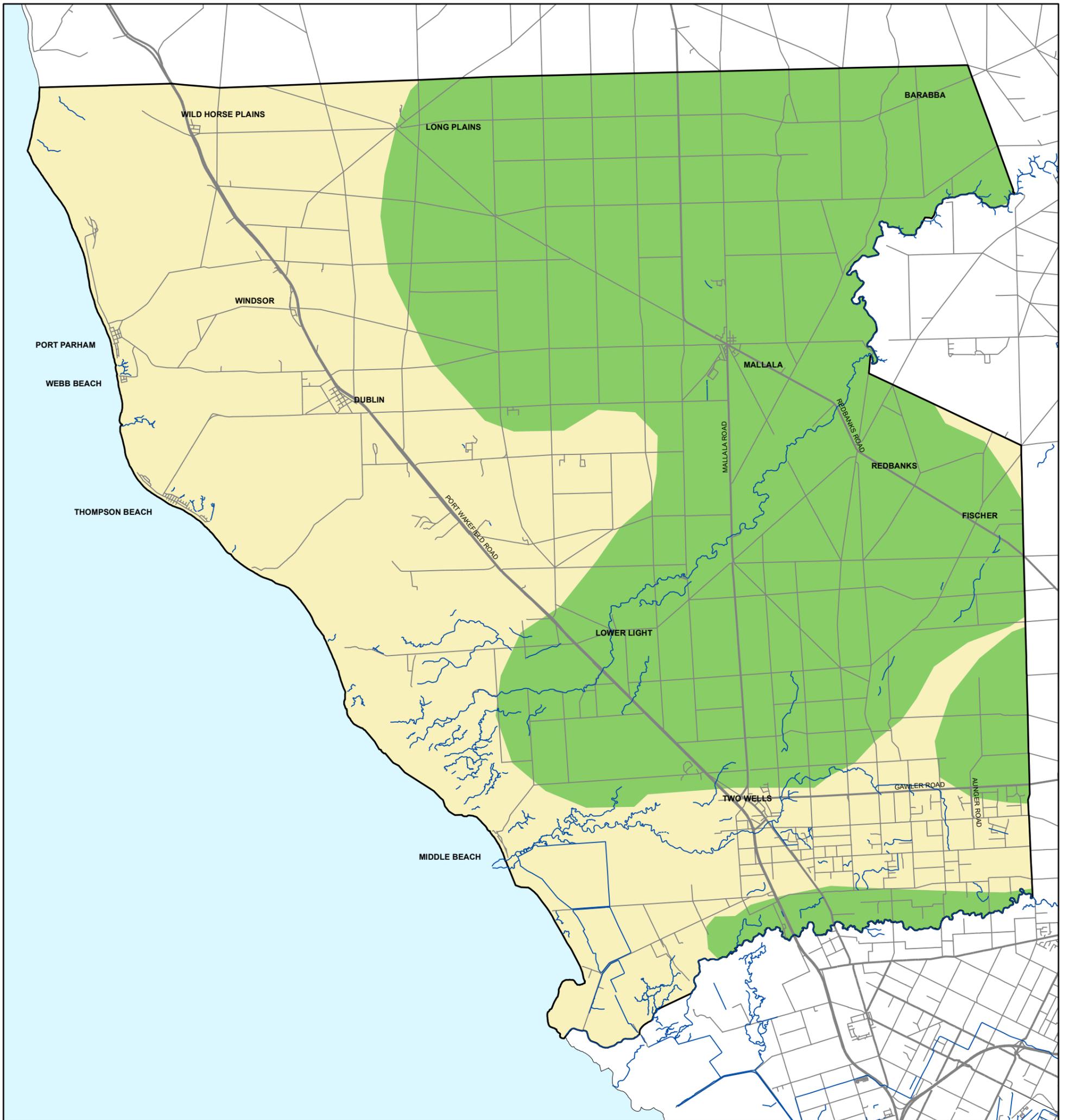


JOB REF.	17ADL-0158
PREPARED BY	AP
DATE	05.07.2017
REVISION	2
DATA SOURCE	DPTI, DEWNR, SA Water, Mallala Broadacre Farming Study 2015 (Planning Aspects), Gawler River Floodplain Mapping 2015 (AWE)

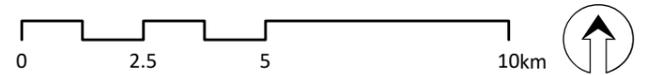


# Appendix C

Map 2 – PIRSA Primary Production Priority Areas (PPPA)



**MAP 2: PIRSA PRIMARY PRODUCTION PRIORITY AREAS (PPPA)**  
**ADELAIDE PLAINS COUNCIL**



- Primary Production Priority Area (PPPA) (PIRSA)
- Non-Primary Production Priority Area
- Council Boundary
- Watercourses
- Main road
- Other road

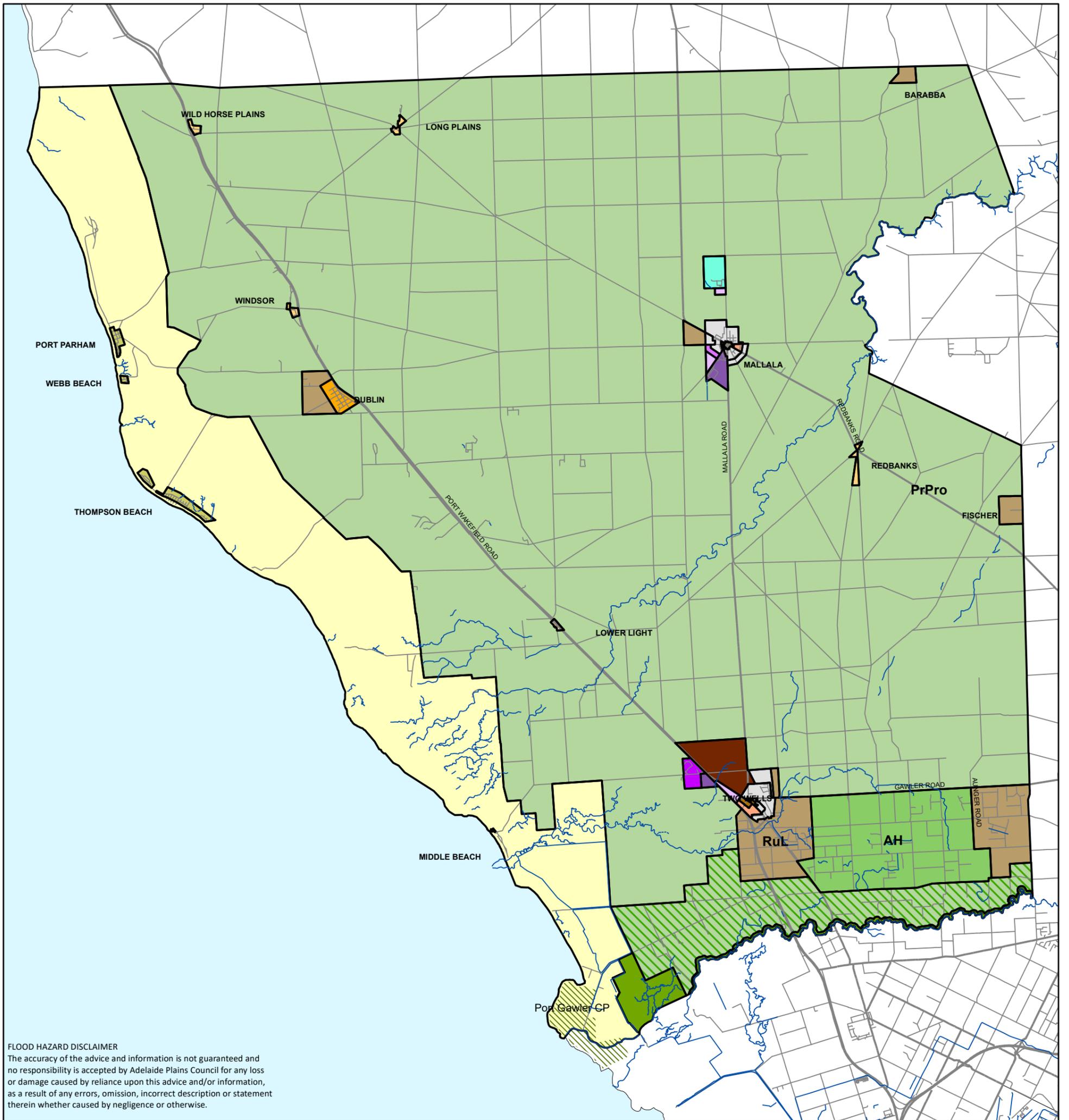


JOB REF.	17ADL-0158
PREPARED BY	AP
DATE	05.7.2017
REVISION	1
DATA SOURCE	DPTI, DEWNR, SA Water, PIRSA



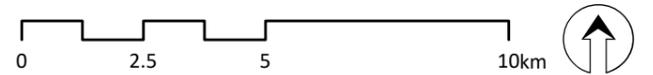
# Appendix D

## Map 3 – Existing Development Plan Zones



**MAP 3: EXISTING DEVELOPMENT PLAN ZONES**  
 ADELAIDE PLAINS COUNCIL

- |                            |                          |                            |
|----------------------------|--------------------------|----------------------------|
| Watercourses               | <b>Development Zones</b> | Light Industry             |
| Main road                  | Animal Husbandry         | Murrumbidgee Racecourse    |
| Other road                 | Bulk Handling            | Primary Production         |
| Conservation Park          | Coastal Conservation     | Residential                |
| Horticulture Policy Area 3 | Coastal Settlement       | Residential Park (Coastal) |
|                            | Commercial               | Rural Living               |
|                            | Community                | Settlement                 |
|                            | Conservation             | Suburban Neighbourhood     |
|                            | Deferred Urban           | Town Centre                |
|                            | Industry                 | Township                   |



JOB REF. 17ADL-0158  
 PREPARED BY AP  
 DATE 05.7.2017  
 REVISION 2  
 DATA SOURCE DPTI, DEWNR, SA Water

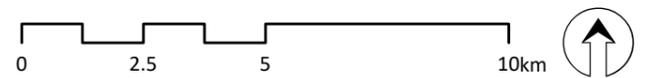


# Appendix E

## Map 4 – Infrastructure Considerations



**MAP 4: INFRASTRUCTURE CONSIDERATIONS**  
ADELAIDE PLAINS COUNCIL



- GML Route - 23m B Double
- ElectraNet Transmission Line
- Gas Pipeline
- Virginia recycled water pipe
- Adelaide Plains Council
- Main road
- Other road



JOB REF.	17ADL-0158
PREPARED BY	AP
DATE	05.7.2017
REVISION	1
DATA SOURCE	DPTI, DEWNR, SA Water, PIRSA