



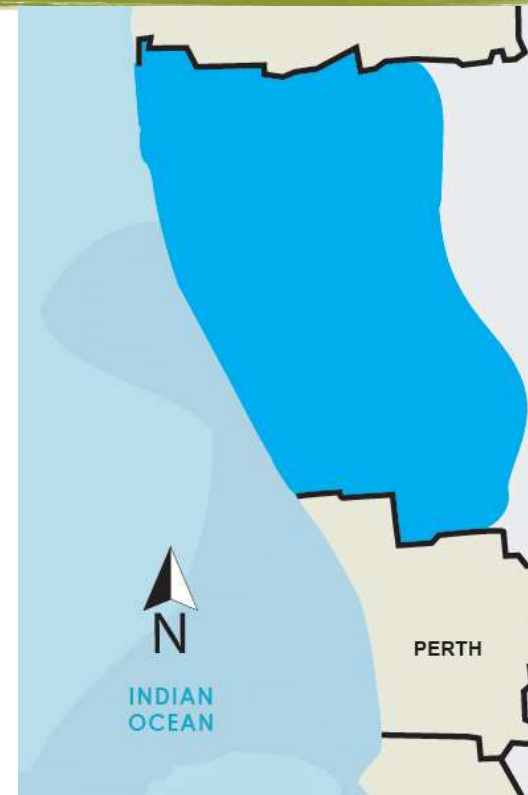
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# **Growth in the Northern Valleys and Agri-Processing and Production Trends**

**Planning for Development in the Northern Valleys**

## Growth in the Northern Valleys

- Region to the north of Perth experiencing high growth
- Population growth
- Economic growth
- Growth of industries
- As Perth grows constraints push and opportunities pull
- Different from other Wheatbelt regions – although growth overall

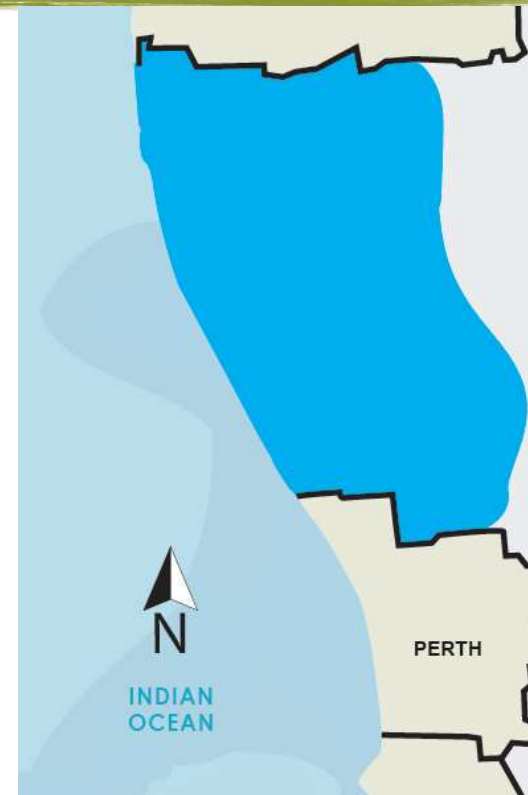


## The Northern Growth Alliance

The Northern Growth Alliance

LGA's of Chittering, Gingin and Dandaragan – formalised partnership

Collaborating to better manage growth and capitalise on opportunities in the Northern Growth Corridor



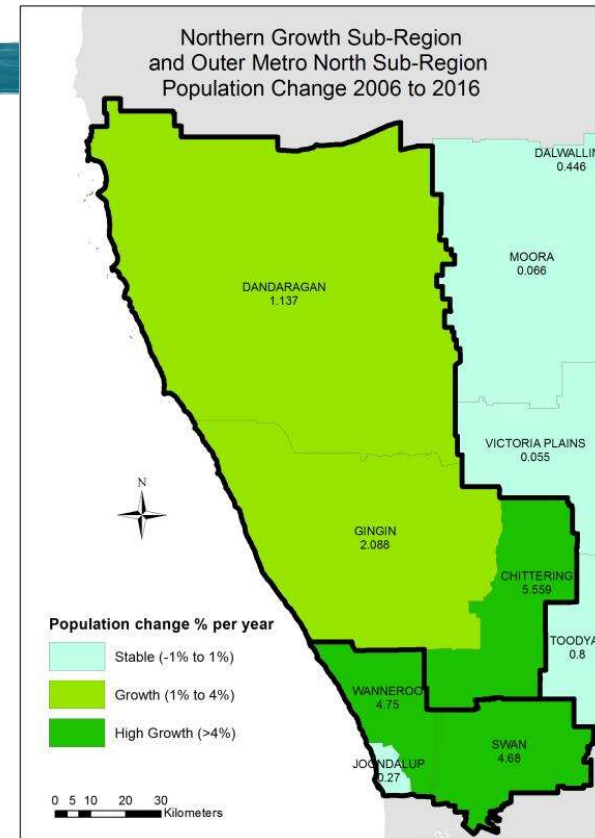
# ‘North of Perth Food Zone’

- Partnership with City of Wanneroo
- Cost effective way to increase access exposure to markets/players
- Leveraging off a significant player – particularly through events
- Mutual benefits to cooperation
- Over 60 different agricultural products grown in study area

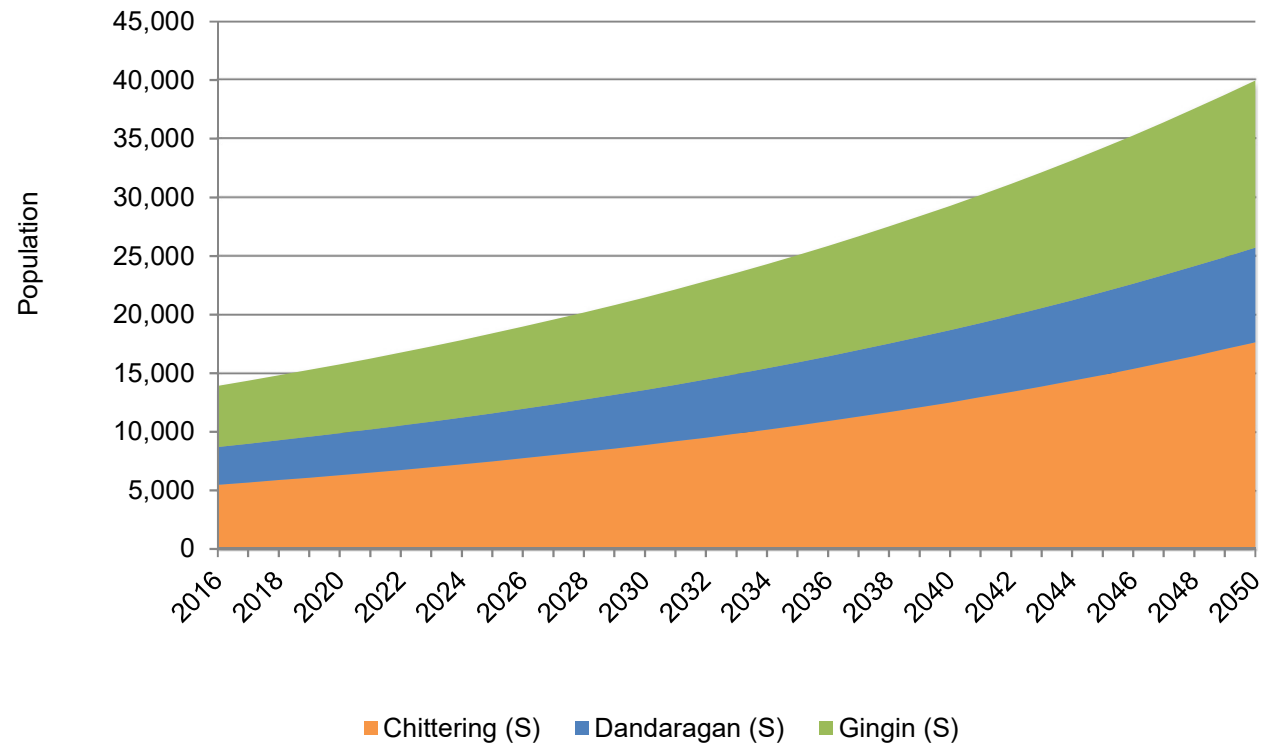


## Growth in the Northern Valleys

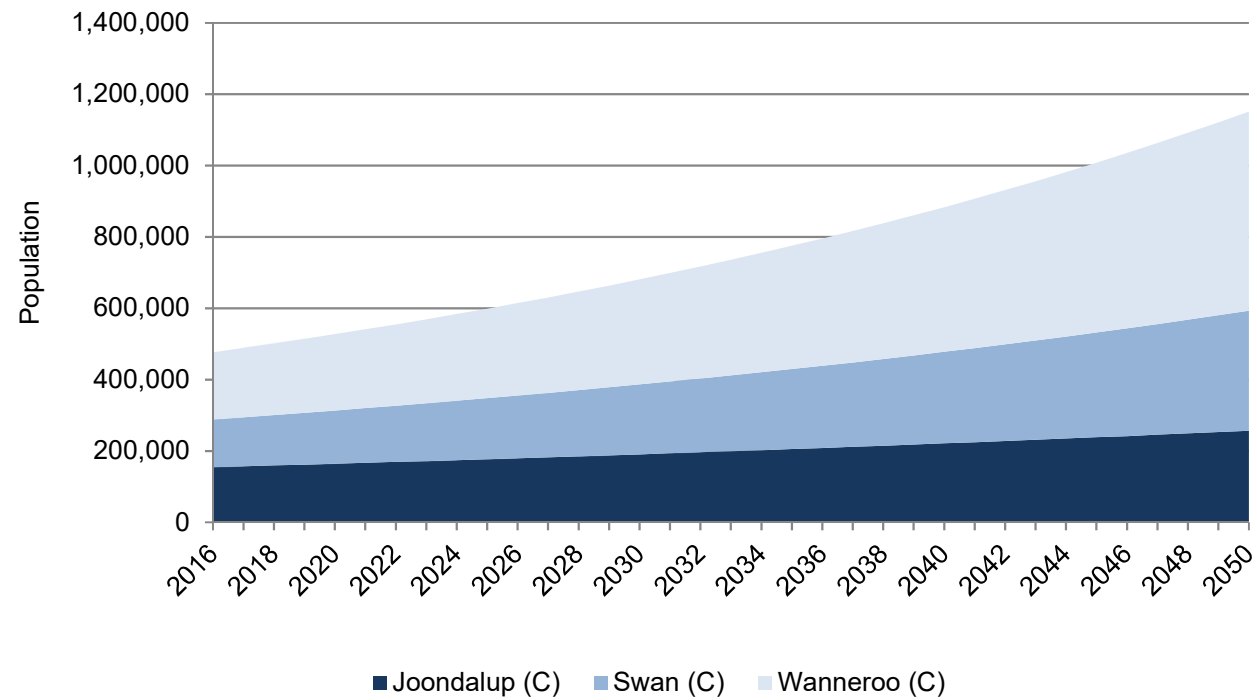
- Population growth in all LGA's around the NV's
- Significant growth on Perth's northern growth corridor
- Some 'sub-regions within the NV's experiencing localised high growth
- Some area's of little/no growth – creates opportunities



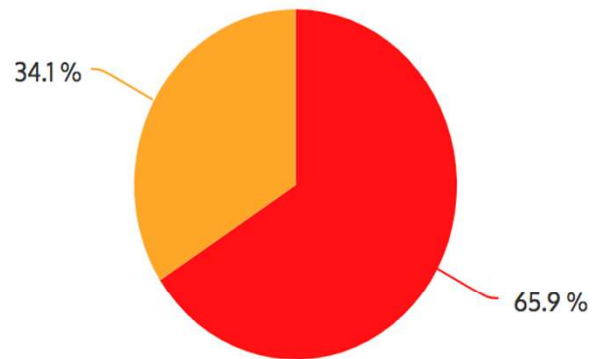
## Growth in the Northern Valleys



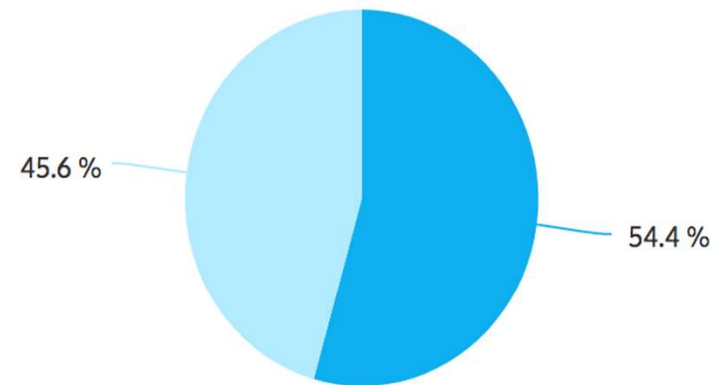
## Growth in the Northern Valleys



## Growth in the Northern Valleys



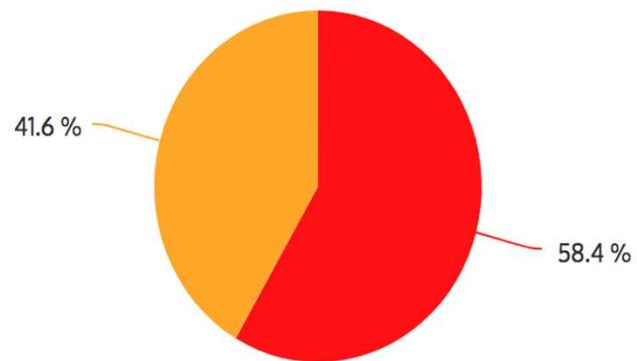
■ Live and work in Gingin  
■ Work in Gingin, but live outside



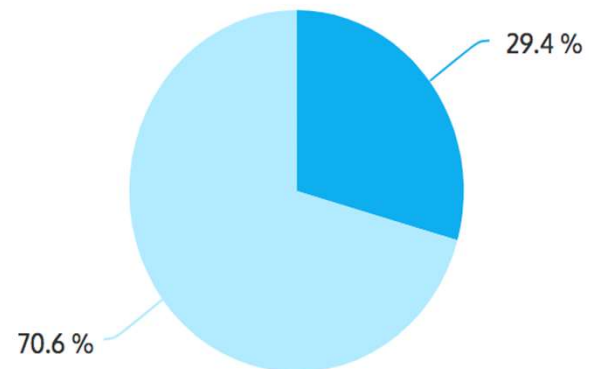
■ Live and work in Chittering  
■ Work in Chittering, but live outside



## Growth in the Northern Valleys



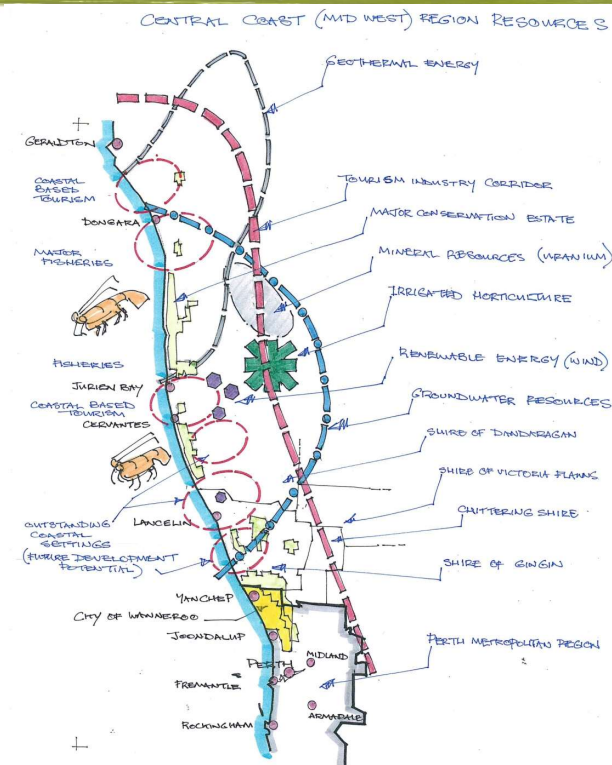
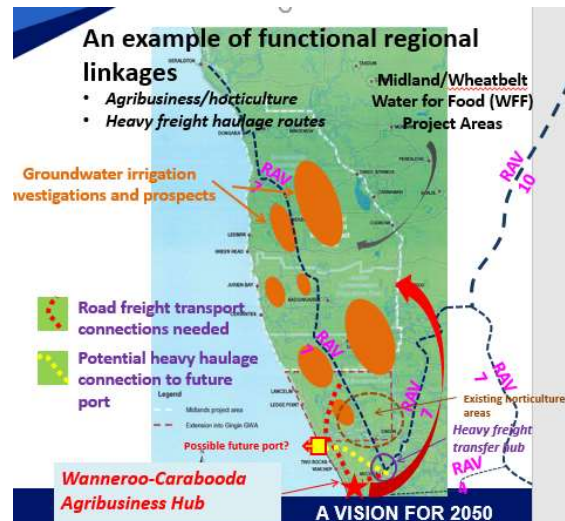
■ Live and work in Gingin  
■ Live in Gingin, but work outside



■ Live and work in Chittering  
■ Live in Chittering, but work outside

## Growth in the Northern Valleys

- Metro Links very strong
- Not passive
- City of Wanneroo very engaged with the region



## Growth in the Northern Valleys

- Transport Links significant
- Current infrastructure includes;
  - Brand Highway
  - Great Northern Highway
  - Indian Ocean Drive
  - Rail infrastructure
- Northlink Project
- Tonkin Highway Upgrades
- Not just domestic links – better links to port/airport



## Growth in the Northern Valleys

- Northern urban connectivity
- Upgrades to Neaves Road from Northlink – connection to Neerabup Industrial Zone
- Northlink connection to Tonkin Highway – Ellenbrook, airport and port
- Freeway connection to IOD
- Direct haulage connection to south of State



## Growth in the Northern Valleys – Opportunities *and* Challenges



- Growth of a number of industries including;
  - Tourism
  - Mining – sand mining, silica
  - Huge potential growth in service industries
  - Fisheries/aquaculture
  - Agriculture
- BUT... for these to flourish some challenges need to be addressed;
  - Education, health and aged care
  - Water
  - Land use planning

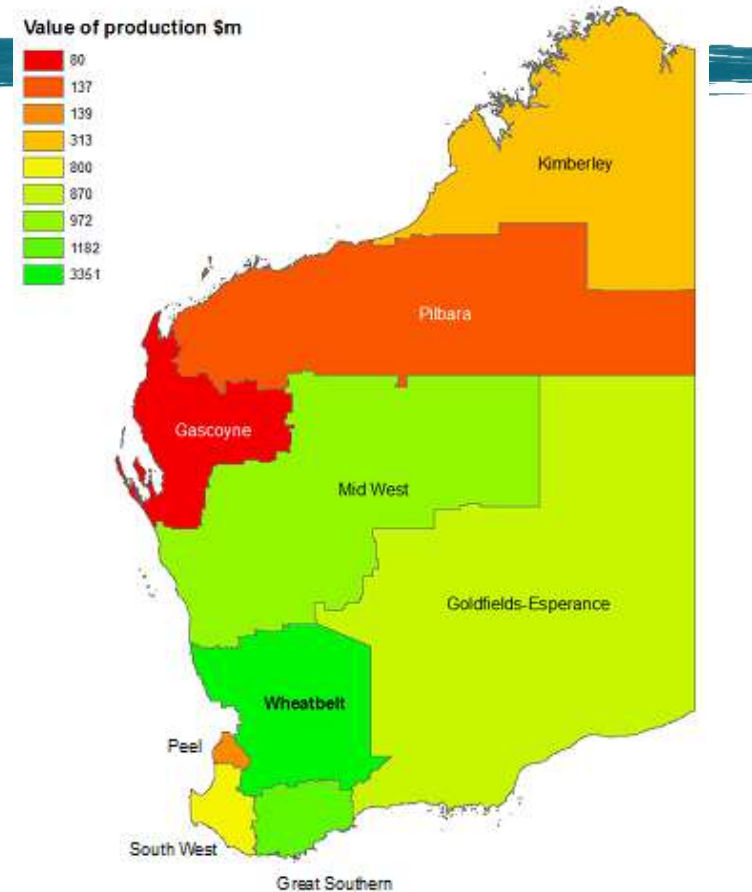
## Growth in the Northern Valleys – Opportunities in Agriculture

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- Focus on agriculture initially as currently a significant industry but also high potential for growth
- Global/domestic demand for food
- High quality/niche/organic etc. markets
- Growing state population, BUT...
- Water and land use issues also particularly important for agriculture

## Agriculture in the Northern Valleys

- First we looked at Agricultural production across the State and Regions
- Wheatbelt by far biggest Agricultural Producer – 41% of total state production
- 3 times the production of next biggest producing region
- Perth's hinterland



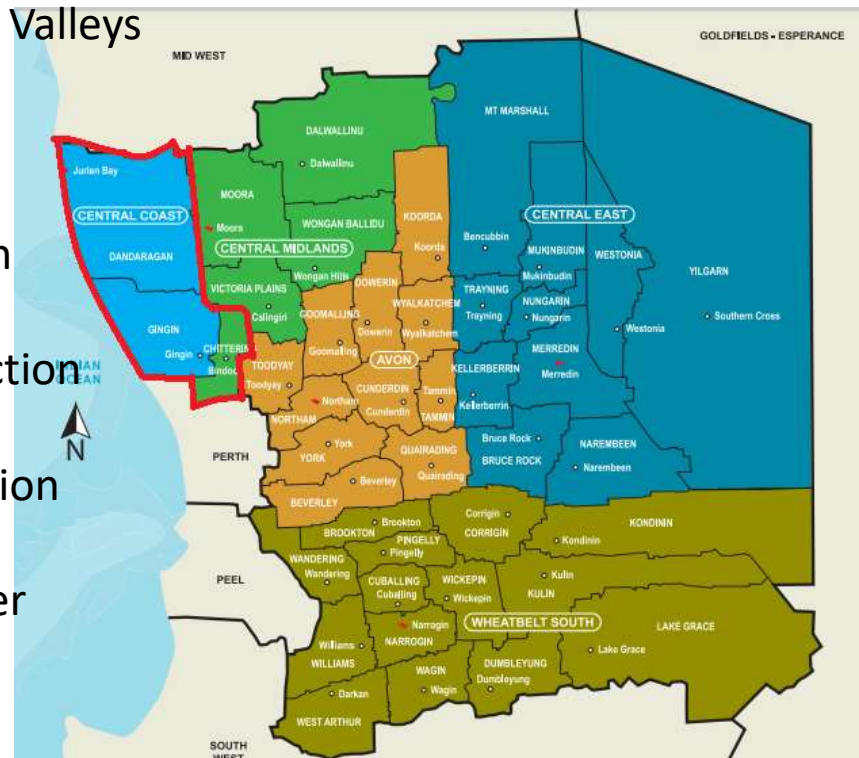


## Production in the Northern Valleys

- Looked at the Northern Valleys

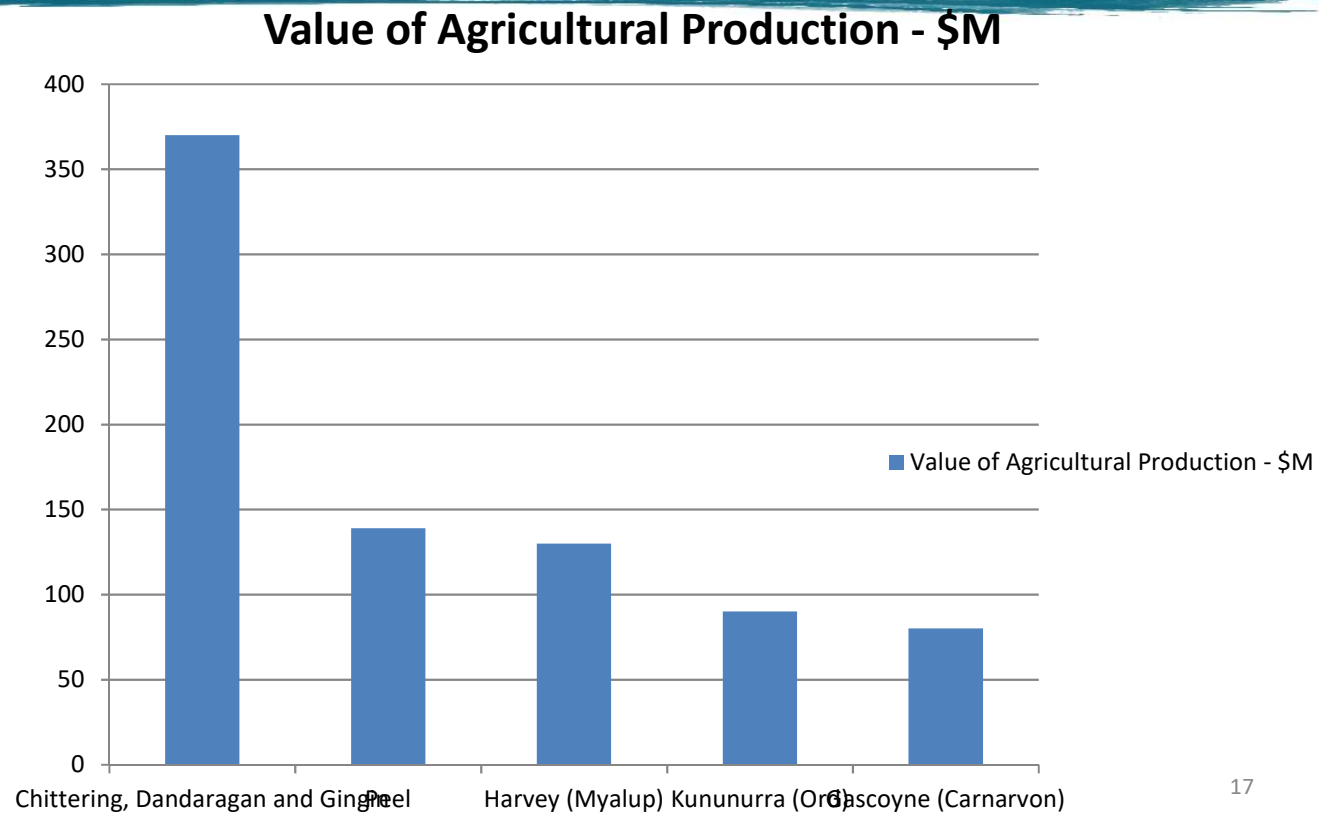
- Looking at;

- Scale of production
- Diversity of production
- Growth of production
- Potential for further production

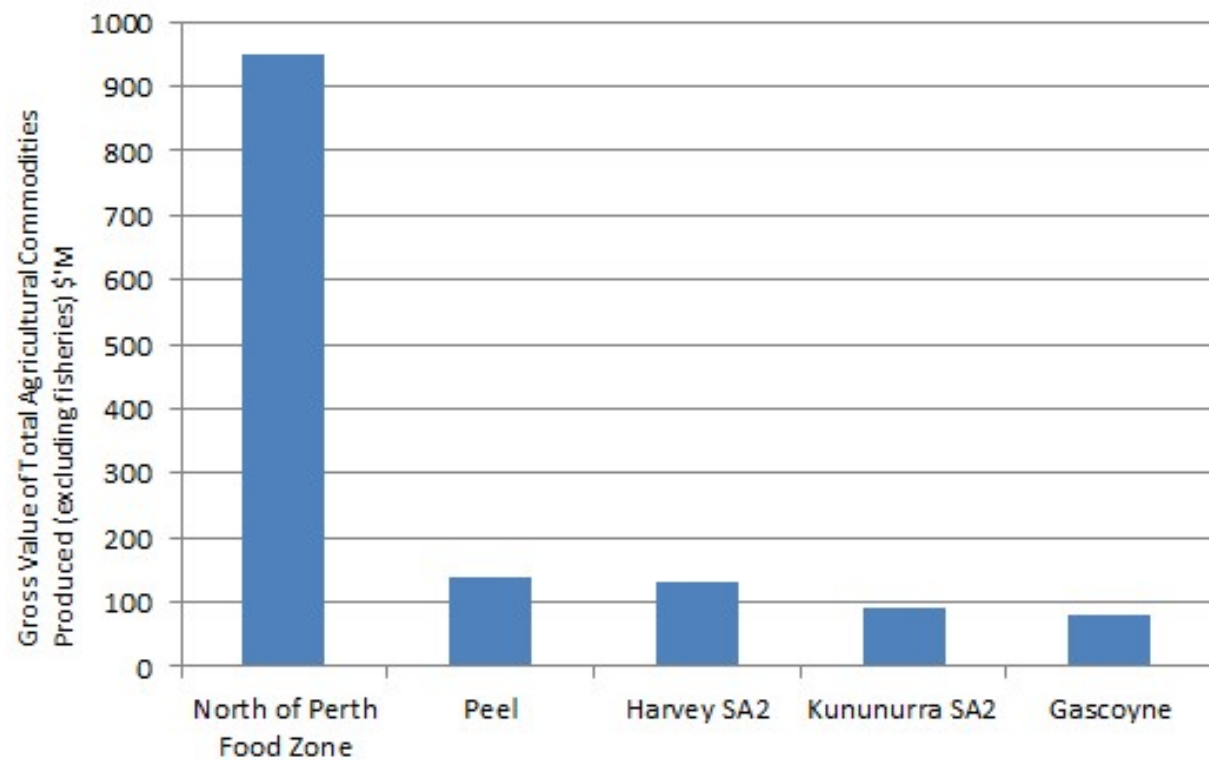




## Production in the Northern Valleys

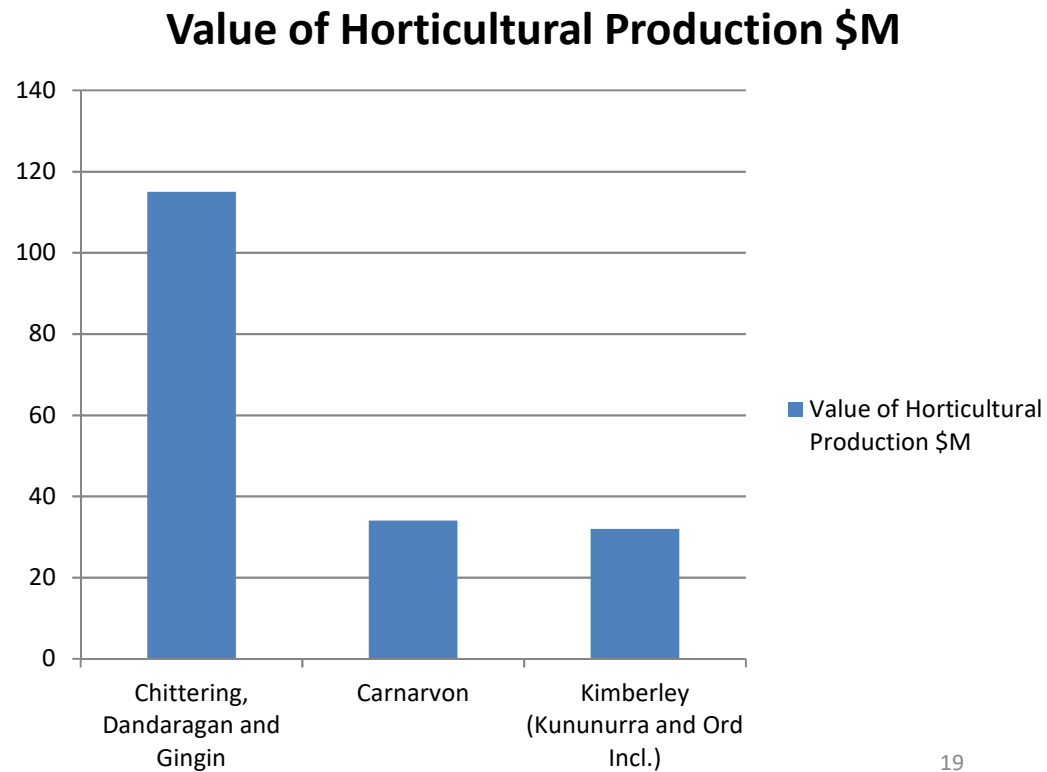


## Agri-Processing and Production Precincts



## Growth in the Northern Valleys

Not just  
wheat and  
Sheep –  
Horticulture



## Growth in the Northern Valleys

Significant producer of a range of products;

- 83% of WA's oranges
- 80% lemons
- 60% lettuce
- 52% eggs
- 52% blueberries
- 51% cauliflowers
- 49% mandarins
- 41% mangoes
- 39% cabbages
- 38% carrots



## Growth in the Northern Valleys

Significant range of products – over 60 different products grown in the region including high value/value added/niche;

- Saffron
- Camels milk
- Goats cheese
- Specialised honey (e.g. jarrah)
- Water chestnuts
- Olive oil
- Wine
- Asparagus
- Garlic
- Fruit pops
- Sandalwood dark chocolate
- Various berries...



## Growth in the Northern Valleys



**Australian Agricultural Exports worth \$0.88/kg**

**New Zealand Agricultural Exports worth \$3.72/kg**

Australian agriculture more geared around export of agriculture products as commodities – high volume, low value and little to no value add

Opportunities to grow value of agriculture not through increased volume of existing products – through production of higher value products and increased value add

Northern Valleys leading the way?

## Growth in the Northern Valleys



Significant growth in production over the period 2011-12 to 2015-16 from \$93M to \$114M (just horticulture)

23% increase in production value over 4 year period

This growth is continuing on a strong trajectory even with 'business as usual' scenario

Likely to be stronger depending on ability to manage changing land uses, water, environmental concerns, market access etc.

## Growth in the Northern Valleys – Agri-Processing and Production Precincts



- In order to help facilitate and grow the industry better and more appropriate land use essential
- The Wheatbelt Development Commission undertook a process to better identify land for appropriate uses
- Utilised GIS data existing within State Government
- Generalised site identification vs. specific uses at business level
- Original scope to only identify multi-use, co-located production precincts didn't make sense in the real world



## Agri-Processing and Production Precincts



Basic approach was to identify opportunities in markets

Identify what products in high demand can be grown in the Northern Valleys

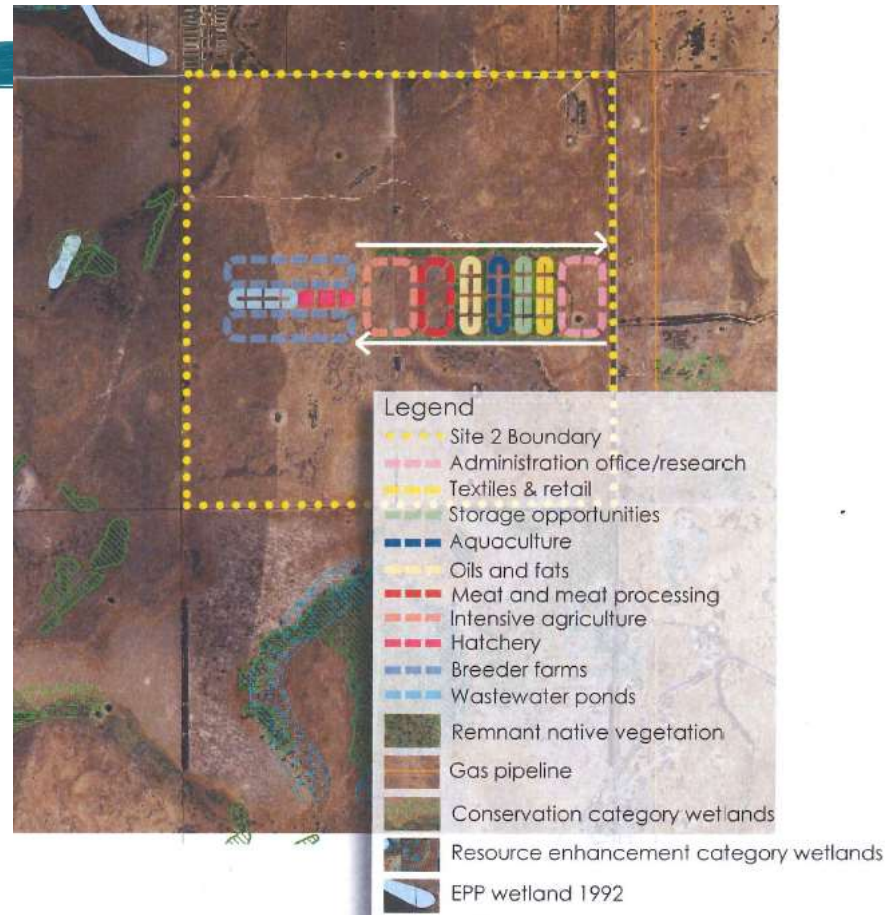
Assess the criteria needed for the production of the product, i.e. water requirements, power, soil type, buffer zones etc.

Overlay that with existing datasets to identify land parcels across the Northern Valleys suitable for the production of those products through GIS process

## Agri-Processing and Production Precincts

Originally about strict  
'PRECINCTS'  
Why co-locate and  
manage buffer zones  
and land use conflicts in  
an area the size of the  
Northern Valleys – over  
1.3 million hectares

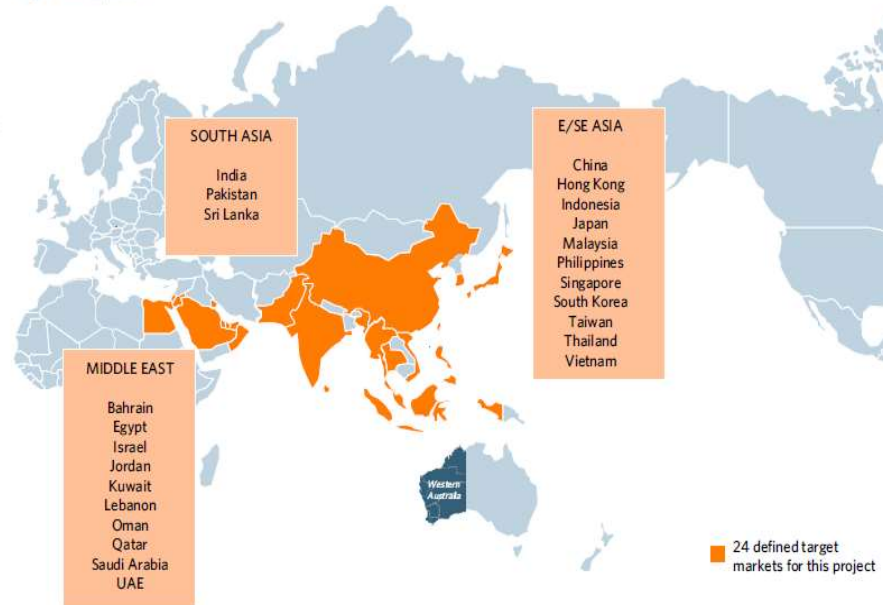
Examples of precincts in  
other areas of the state  
make sense – squeezing  
ag-industries into 50  
hectares



## Growth in the Northern Valleys

- High value products important
- Domestic appetite for quality food products including restaurants/chefs
- Gifting culture in Asian markets
- Niche export markets important for West Australia

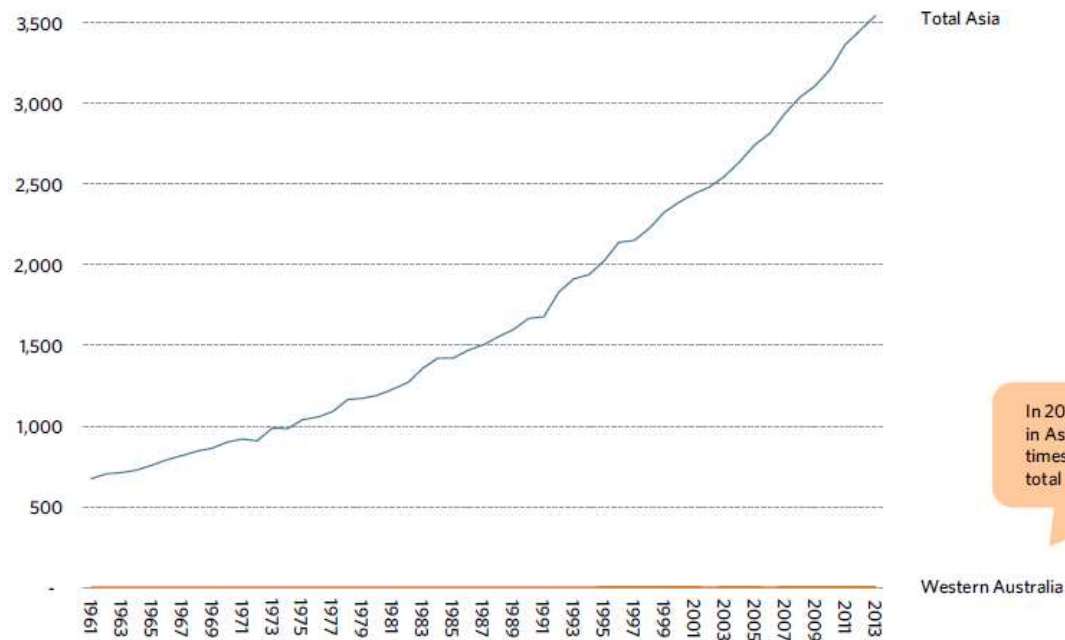
24 COUNTRIES DEFINED AS HIGH POTENTIAL TARGET MARKETS FOR WESTERN AUSTRALIA  
*Target markets, 2016*



# Growth in the Northern Valleys

## AGGREGATE TOTAL CROP, ANIMAL PRODUCTS AND SEAFOOD PRODUCTION

T; m; 1961-2013



In 2013 alone, the incremental increase in Asia's food production was thirteen times more than Western Australia's total production

## Agri-Processing and Production Precincts

Products for high demand in Asia with significant opportunities

Domestic demand for fresh produce with growth in 'super foods', organic and products with a story

Type of Export	Tier 1 opportunities
Beverages	Bottled wine Beer
Processed	Chocolate Honey Sausages Processed ham
Dairy	Yoghurt Regular/ low fat fluid milk
Produce	Avocados Oranges Mandarins Carrots Apples
Seafood	Rock lobster, fresh Prawns, chilled and frozen
Meat	Lamb/sheep Beef Pork
Oilseeds, oils and fats	Virgin olive oil
Animal foods	Animal pellets
Grains	Rollled oats

## Agri-Processing and Production Precincts



Most products identified already produced in study area

- Of the 20 'high potential' products outlined by Coriolis, 12 are already produced in relatively high volumes
- 18 are either already produced or can be produced in the study area
- Grouped into 4 main categories;
  - Annual horticulture/Perennial horticulture
  - Dairy
  - Intensive livestock
  - Aquaculture zones already defined

## Agri-Processing and Production Precincts



Gathering information and criteria;

- Impediments to development
  - Buffers from sensitive land uses (schools, residential etc.)
  - Sensitive environments (wetlands, national parks)
  - High water table
- High demand attributes
  - Good quality water
  - Soil types
  - Access to power grid
  - Near a population centre (Gingin, Moora, Bindoon, Jurien Bay etc.)

# Agri-Processing and Production Precincts

The criteria considered for sites are listed below;

## **INITIAL LANDSCAPE CRITERIA**

- The LGA boundaries of Dandaragan, Gingin, Moora, Victoria Plains and Chittering.

## **HIGH ORDER CRITERIA**

- Exclusion from National Parks and Nature reserves.
- Access to water supply of approximately 85,000L/day per hectare in summer.
- Minimum of 300m buffer from sensitive land uses (includes all residential, recreational, education, health services, etc.) – unless using vegetative buffer.
- Minimum of 5000m from towns (to allow for future growth of towns).
- Depth to water table no less than 2 meters.

## **LOW ORDER CRITERIA**

- Within 20km of roads rated to a minimum RAV4 – Main Roads Information
- Slope of land is less than 1 in 20.
- 200m from any RAMSAR waterway/wetlands (including waterlogged soil, natural drainage lines, wetlands and waterways).
- Within 5km of 3 phase distribution or HV transmission power or ability to generate own electricity.
- Minimum 25 hectare site/land parcel size.
- Within 30-50 minute travel time/70km max travel distance to labour markets (Jurien Bay, Moora, Cervantes etc.).
- Exclude flood plains and salt flats (including Moora flood plain).
- Excluded from public drinking water source areas priority 1 and 2.

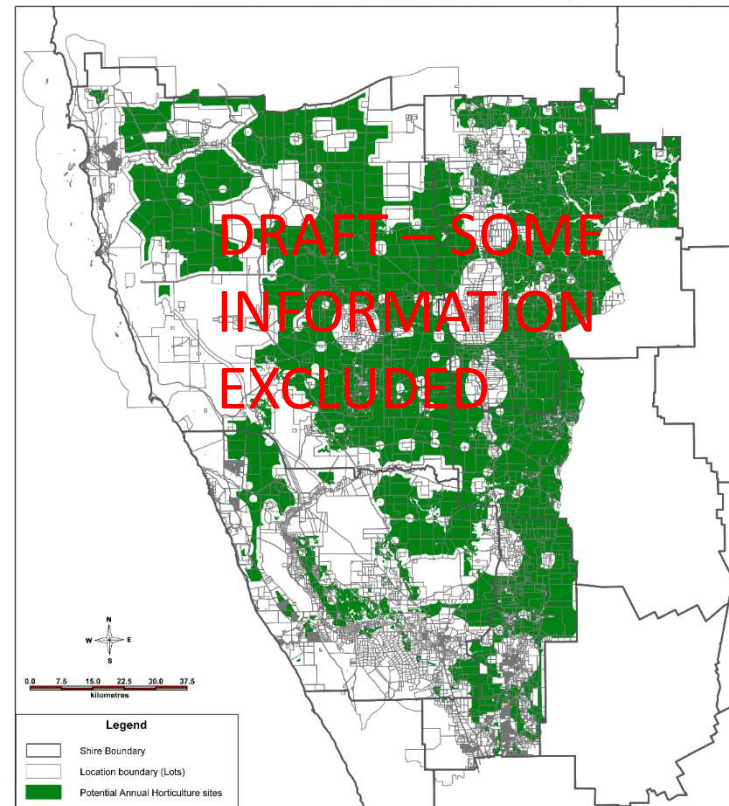
With the above criteria applied, the areas below were identified as highly prospective for the establishment of perennial and annual horticulture;



## Agri-Processing and Production Precincts

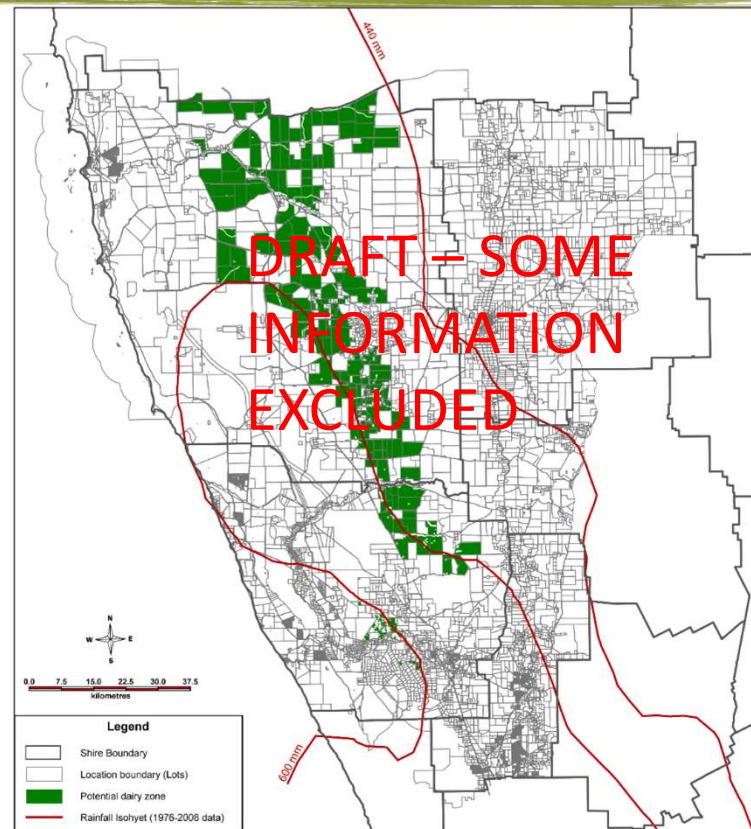
Put these criteria and datasets into the machine and out come the sites...

- Numerous areas suitable for large scale horticulture
- Smaller parcels and those in proximity to GDE's, wetlands, sensitive land uses etc. excluded
- Proactive exclusion from potential growth areas



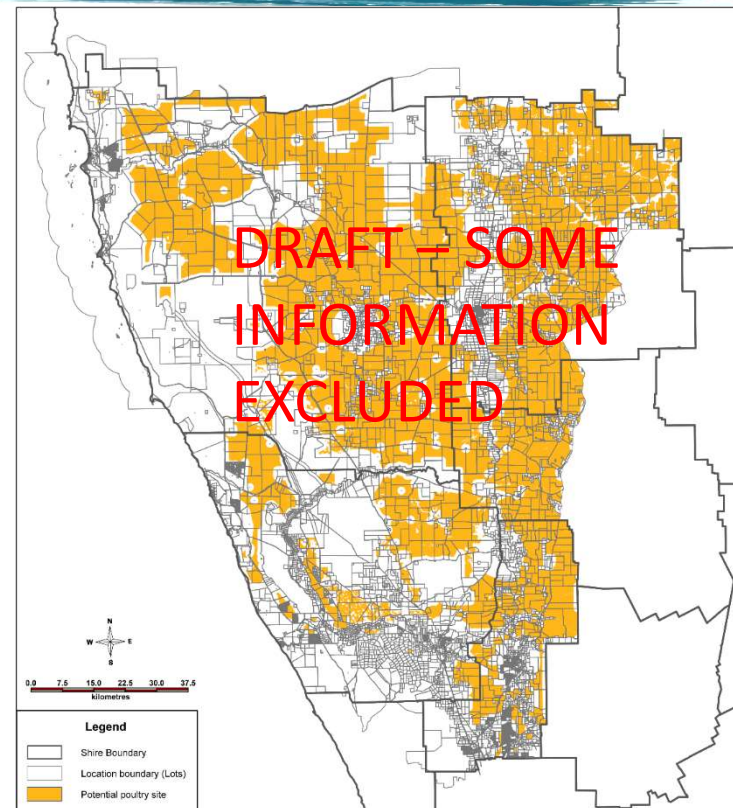
## Agri-Processing and Production Precincts

- Dairy sites with access to gas pipeline for processing also
- Rainfall and grazing potential more significant criteria



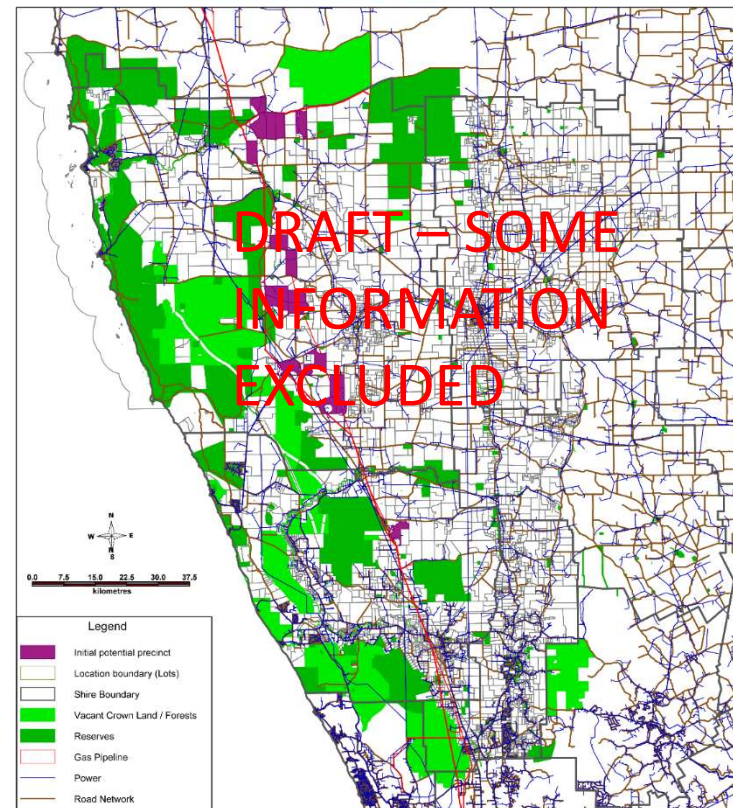
## Agri-Processing and Production Precincts

- Intensive poultry production
- Compared to where development is occurring consistent
- Similar to horticulture – soils and water datasets will better differentiate
- 'Free-range' or 'organic' production will be different sites – different criteria required



## Agri-Processing and Production Precincts

- Processing precinct sites
- Where the sites do not align with existing industrial areas – tronox site for example – tool can identify criteria. E.g. No power or access to gas...



## Agri-Processing and Production Precincts



Work closer with individual businesses, LGA's, planning authorities etc. to utilise this method, WHICH IS NOT NEW, to better utilise appropriate land for appropriate uses

Aim is to streamline the process and remove the burden involved in the GIS process – currently takes expertise, computer power and time, accessing a range of datasets etc.



## Agri-Processing and Production Precincts

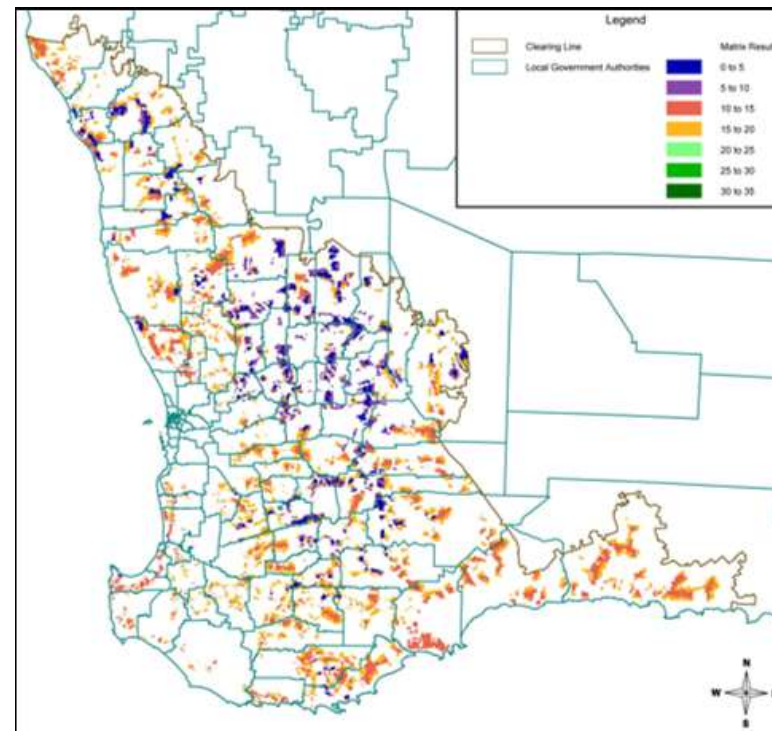
### The 'Tool'

- Builds on the State land parcel dataset
- Land parcel is smallest unit of land that an investor can purchase
- Does not require computer power and time
- Basically an excel spreadsheet
- The requirements of the investor are entered into the excel spreadsheet – easily changed, maps produced automatically

Parcel default information				Environmental Restrictions	Access to Infrastructure		Access to Markets		Results from the IF statements			Total
Parcel ID	LGA	Owner	Parcel Area Total	Parcel Area after exclusion buffers	Distance to scheme water	Distance to high voltage power	Distance to town	Distance to port	Parcel Area after exclusion buffers	Distance to scheme water	Distance to high voltage power	
20291430	KE LL	A. Farmer	400	320	2	4	25	325	1	1	2	4
20291450	KE LL	A. Farmer	156	140	2.5	2.5	12	312	1	1	1	3
20291470	KE LL	A. Farmer	55	0	0	0	0	300	1000	1	1	1002

## Agri-Processing and Production Precincts

- Relevant datasets sit behind 'queries' such as power distribution, water, soils, environmental factors
- Datasets all in the one place, user-friendly
- Colours distinguish best matching sites



## Growth in the Northern Valleys

Collaborative approach  
utilising expertise and  
knowledge within  
Government. Also working  
with UWA, Landcorp, WMG  
and other Government  
agencies



Department of  
Primary Industries and  
Regional Development



Department of  
Water and Environmental  
Regulation