Namoi Regional Job Precinct

What is it?

Namoi Regional Job Precinct (RJP) seeks to boost the area's agriculture industry by streamlining the planning system, leveraging state and local government collaboration. Driven by intensive livestock, agriculture is key to the Namoi region's continued economic success. Adopting a collaborative and evidence-based approach, the vision for Namoi RJP is to support high-potential agriculture sectors, targeting intensive livestock, to further expand economic growth and attract new investments while protecting the amenity and productivity of existing uses.

Project outcomes

1 Economy and jobs
Support sustainable development of the intensive livestock agriculture as a significant contributor to NSW economy

2 Investment attraction
Create clarity within the planning framework that supports investment confidence

3 Liveability and resilience
Protect important environmental and cultural values, promotes efficient use of resources and supports liveability and resilience
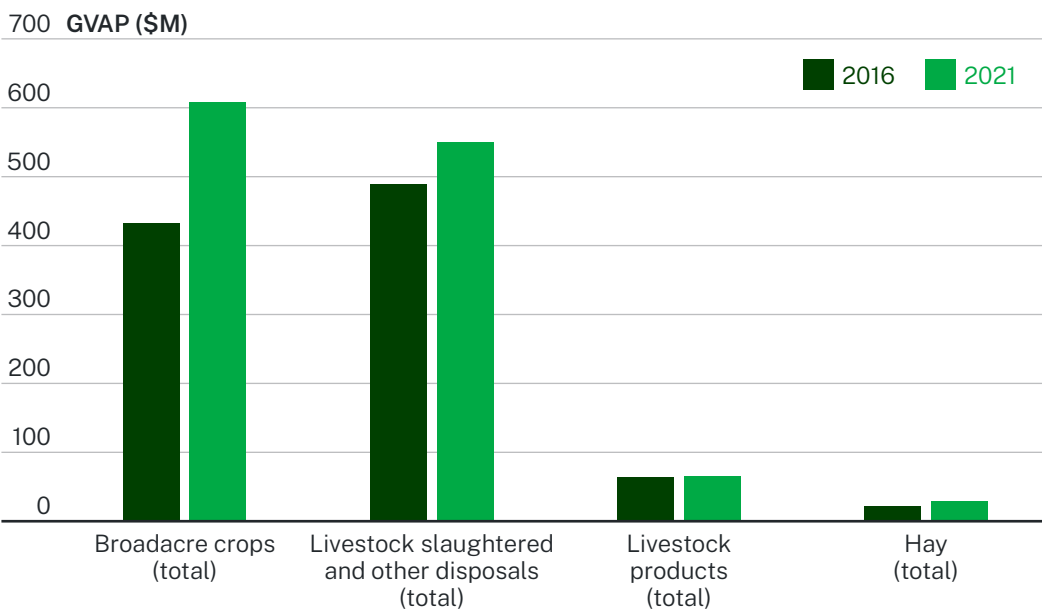
Planning framework

The new planning framework will achieve the vision for the Namoi Regional Job Precinct by:

→ providing investor certainty through upfront evidence based strategic planning aligned with engine industries (intensive livestock agriculture and processing)

→ identifying locations for production clusters where amended planning controls can be applied to minimise land use conflict

→ providing appropriate level of certainty and flexibility in the planning framework to enable maximising of regional value-adding and supporting efficient supply chains.

Importance of intensive livestock agriculture industry to Namoi region

The gross value of agricultural production for the Namoi region increased by $245 million (24%) from 2016 to 2021, reaching a total of $1.269 billion (Atlas Economics, 2022). The poultry sector is expanding with anticipated future growth in processing capacity and larger operations consolidating in Namoi, highlighting the need for strategic planning for site selection.

Gross value of agriculture production in Namoi

Gross value of agriculture production in Namoi. GVAP ($M). Bar chart comparing 2016 and 2021 for Broadacre crops (total), Livestock slaughtered and other disposals (total), Livestock products (total), and Hay (total).

Local government areas of the Namoi RJP

Map showing local government areas of the Namoi RJP including Moree Plains LGA, Gwydir LGA, Narrabri LGA, Inverell LGA, Glen Innes Severn LGA, Uralla LGA, Armidale Regional LGA, Tamworth Regional LGA, Gunnedah LGA, Walcha LGA, Kempsey LGA, Port Macquarie-Hastings LGA, Warrumbungle LGA, Liverpool Plains LGA, Upper Hunter LGA, Mid-Coast LGA. Inset map shows QLD, Brisbane, Sydney. Scale: 0, 2.5, 5 km.

Intensive livestock agriculture

means the keeping or breeding, for commercial purposes, of cattle, poultry, pigs, goats, horses, sheep or other livestock, and includes any of the following:

(a) dairies (restricted)

(b) feedlots

(c) pig farms

(d) poultry farms

but does not include extensive agriculture, aquaculture or the operation of facilities for drought or similar emergency relief.

Source: Standard Instrument — Principal Local Environmental Plan (2006 EPI 155a)
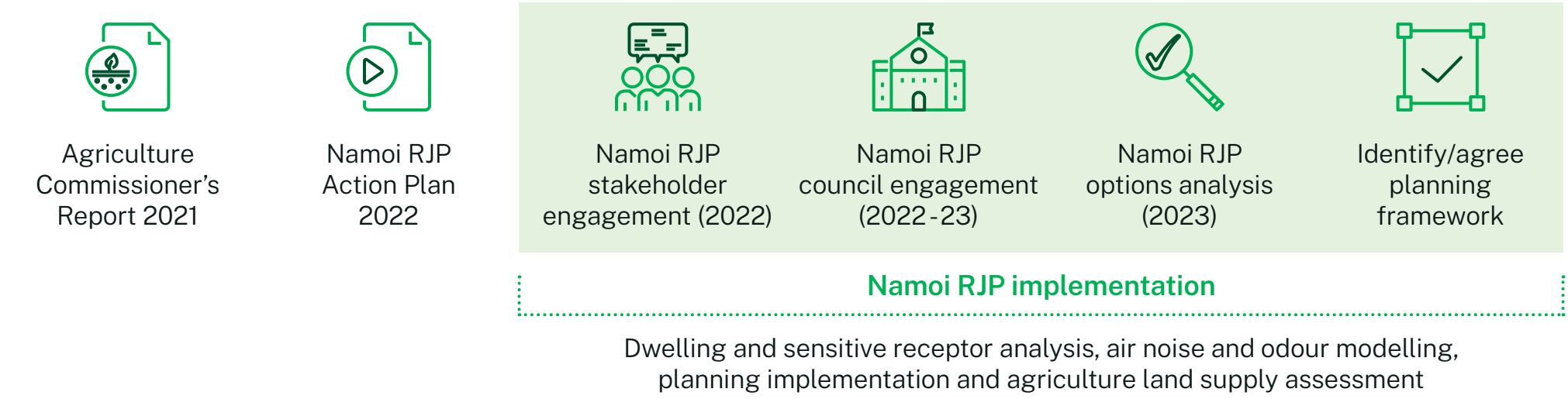
Namoi Regional Job Precinct

How it started

Namoi RJP builds upon the long-term strategic planning work already carried out at both the State and local levels, initiated through comprehensive review by the NSW Agriculture Commissioner.

The project seeks to support economic growth for intensive livestock agriculture and is based on a strongly collaborative and evidence-based process.

Collaborative and evidence-based project process

Agriculture Commissioner's Report 2021	Namoi RJP Action Plan 2022	Namoi RJP stakeholder engagement (2022)	Namoi RJP council engagement (2022-23)	Namoi RJP options analysis (2023)	Identify/agree planning framework

Namoi RJP implementation

Dwelling and sensitive receptor analysis, air noise and odour modelling, planning implementation and agriculture land supply assessment
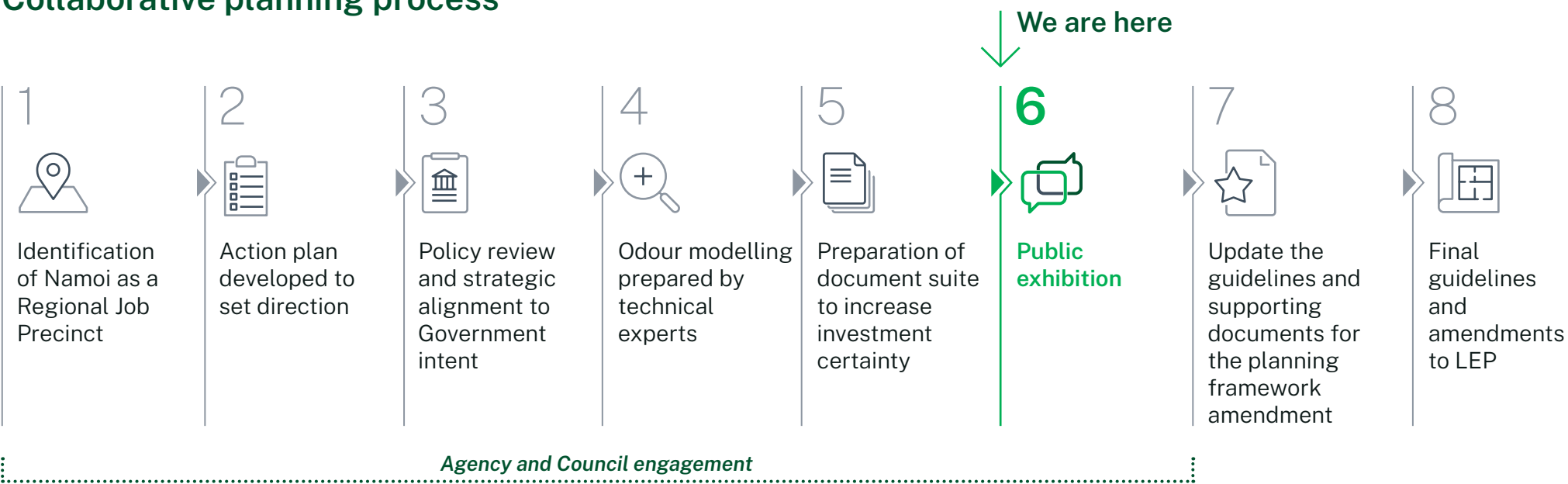
Agriculture Commissioner's recommendations directly influencing Namoi RJP

In 2021, the NSW Agriculture Commissioner made 13 recommendations to improve planning outcomes for agriculture producers, investors, and land regulators. Six of these directly influence the approach taken for the Namoi RJP.

Recommendation 2	Recommendation 4	Recommendation 5	Recommendation 7	Recommendation 10	Recommendation 11
Review objectives, permitted land uses and application of RU1, RU2 and RU4 zones	Identify and promote Identified Production Areas (IPAs)	Reduce red tape for agricultural development and investment	Development controls for inland NSW more accommodating of agricultural operations	Phase out concessional dwelling eligibilities and existing holdings clauses	Implement education programs for council planners, councillors and the wider public
↓	↓	↓	↓	↓	↓
Strategic Implementation Plan (SIP) supports productive use of land within Identified Production Areas	**Objective achieved through delivery of IPAs**	**Objective achieved by delivery of Odour Management Guideline**	**Enhanced clarity delivered through Odour Management Guideline**	**SIP supports this objective and provides guidance on implementation**	**Objective achieved through evidence-based documentation**

Collaborative planning process

We are here

1	2	3	4	5	6	7	8
Identification of Namoi as a Regional Job Precinct	Action plan developed to set direction	Policy review and strategic alignment to Government intent	Odour modelling prepared by technical experts	Preparation of document suite to increase investment certainty	**Public exhibition**	Update the guidelines and supporting documents for the planning framework amendment	Final guidelines and amendments to LEP

Agency and Council engagement

Namoi Regional Job Precinct

Challenges and opportunities

The Namoi RJP will generate a refinement to the local planning framework for Local Government Areas (LGAs) that seek to address current challenges and realise opportunities for intensive livestock agriculture as an important economic sector for long term growth and prosperity.

Intensive livestock agriculture in Namoi region

Challenges

Water
Biggest constraint to industry expansion, location driver, opportunity for circular technologies

Labour
Acute shortages in processing sectors and downstream activities, housing, location of farms in rural areas

Energy and utilities
Not a major inhibitor, investing into onsite infrastructure and renewables, opportunity for circulatory across business and sectors

Competitor regions
Streamlined approval pathways in south east Queensland

Planning framework
Uncertainty regarding assessment process and supportive decision makers, perceived complex/costly/onerous consent and approval pathways, odour modelling viewed as inaccurate and onerous

Council/community support
Different industries have different levels of support, Council/government role to demonstrate economic and social value to communities

Opportunities

Strong agriculture industry
A robust agricultural sector deeply integrated with strong community support and stable resources

Strong supply chain
Strong supply chain with potential growth

Competitive location
Strategic location in NSW with new intermodal rail hubs

Livestock critical mass
A significant livestock population to enhance feedlot and regional meat processing capabilities

Affordable land
Large areas of affordable land suitable for various climates

Strategic support
Local and state government support for intensive livestock agriculture

Namoi Regional Job Precinct

The Identified Production Areas

The refined Namoi RJP local planning framework is founded on the principle of evidence-based planning to support more efficient site selection and development assessment.

What are Identified Production Areas?

The Agriculture Commissioner recommended the use of Identified Production Areas (IPAs) to identify suitable land and 'build on existing and potential comparative advantages of different regions to promote agricultural investment and growth'. IPAs are derived from two key technical inputs:

1 intensive livestock agriculture investigation area spatial analysis

2 strategic odour modelling for each investigation area

Identifying areas for investigation

Criteria and thresholds were developed to inform a first pass spatial analysis. Investigation areas were identified, and these became the focus for strategic odour modelling.

The application of thresholds in the study area resulted in no investigation areas identified for the Walcha LGA.

Land use zones

Land tenure

Flood hazard

Irrigation water access
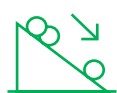
Slope

Property size

Power

Road capacity

Vegetation

Dwellings

Investigation area spatial criteria

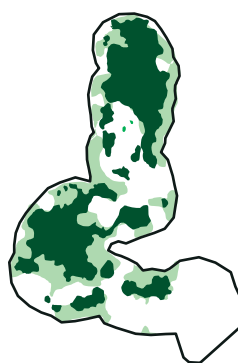## Namoi RJP investigation areas
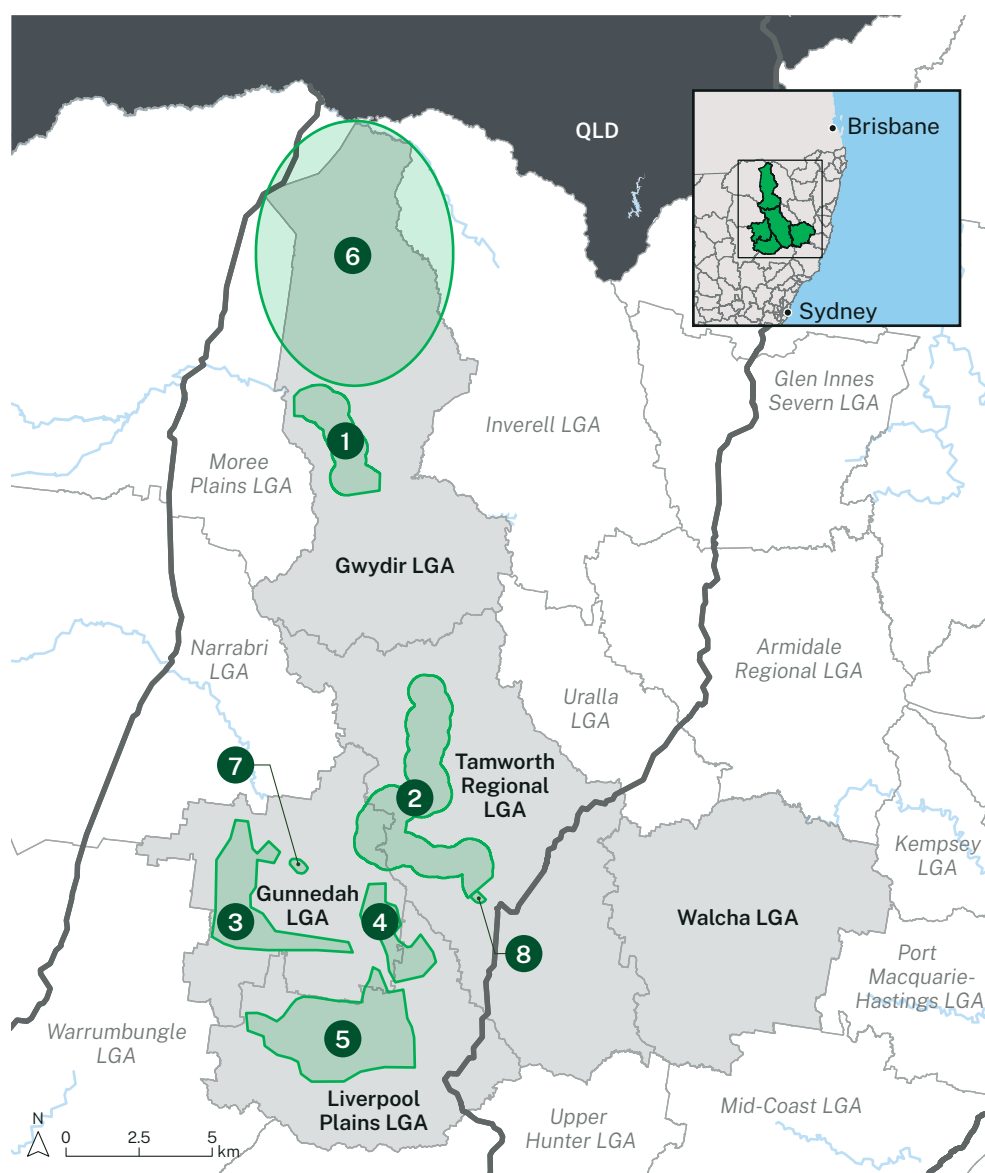
Establishing IPAs

1
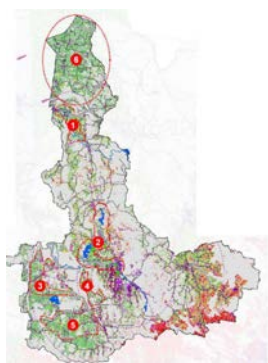
Investigation area analysis identifies priority areas for intensive livestock agriculture

2

Odour modelling of existing sensitive receptors to generate land suitability

3

Overlay of land suitability for scales and types of intensive livestock agriculture*

4

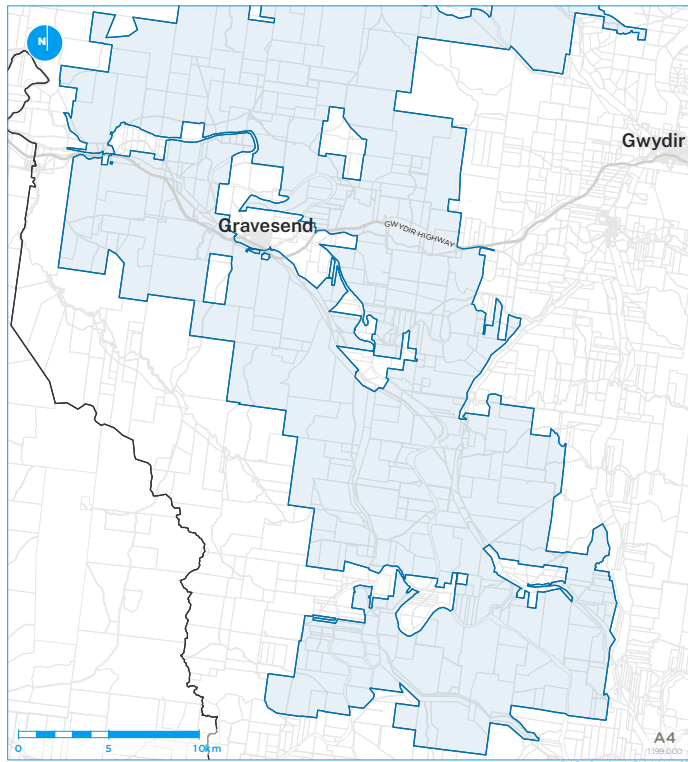Combined land suitability to generate single Identified Production Area

5

Identified Production Area boundary aligned with lot boundaries

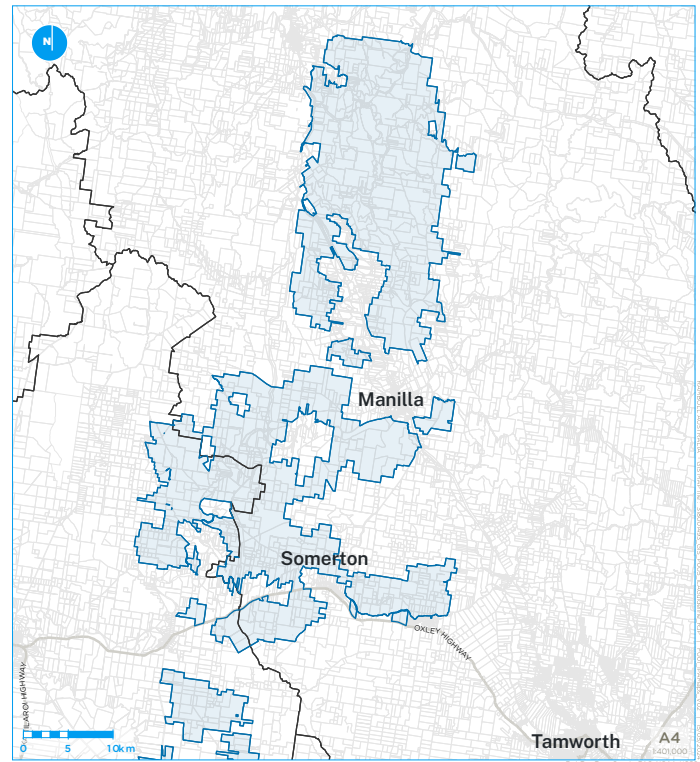* where odour models shows land encumbered by 3 dwellings or less

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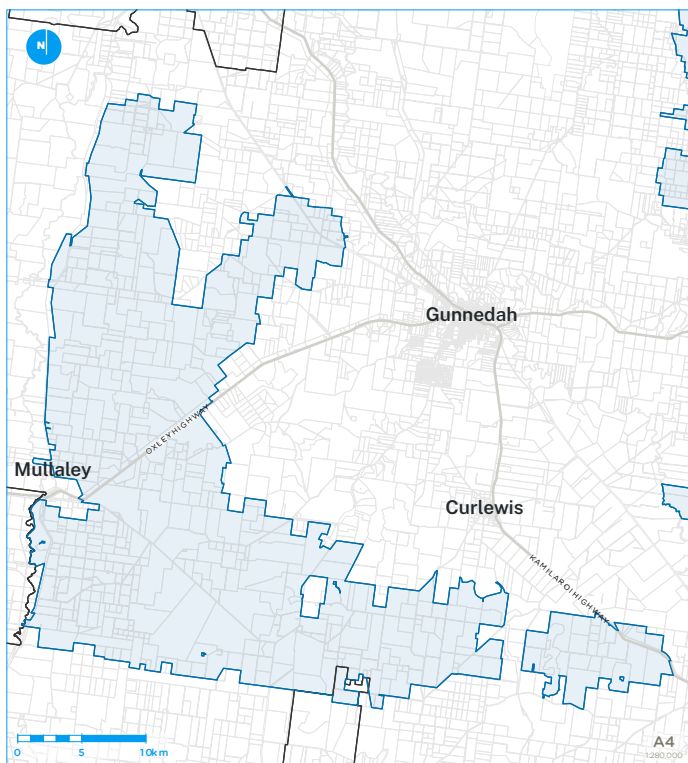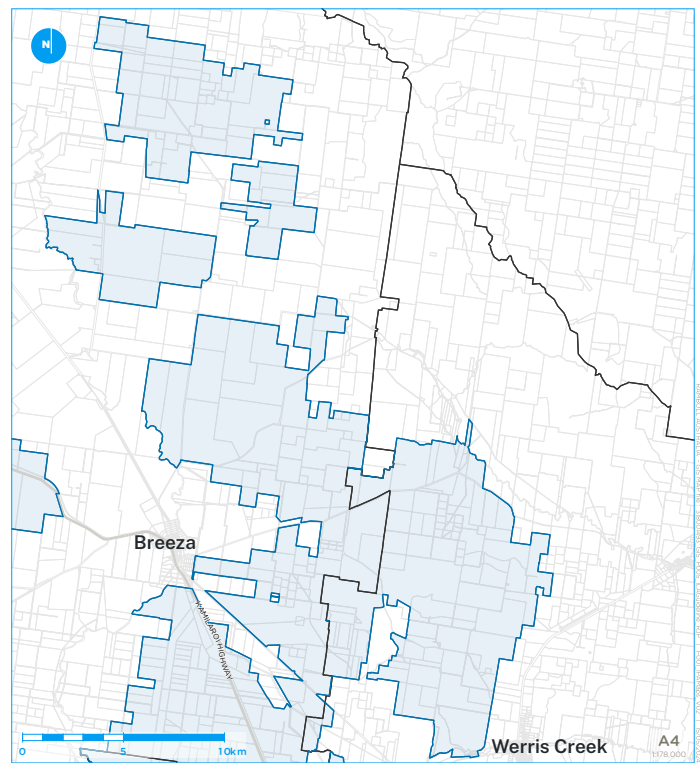
Identified Production Areas maps

IA1: Gwydir

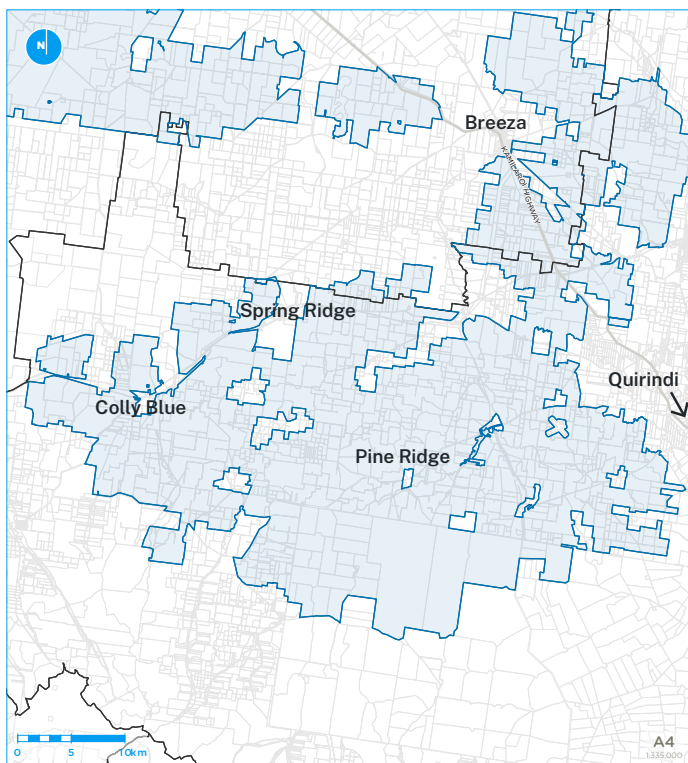

Gwydir

Gravesend

GWYDIR HIGHWAY

IA2: Tamworth

Manilla

Somerton

OXLEY HIGHWAY

Tamworth

IA3: Gunnedah

Gunnedah

Mullaley

OXLEY HIGHWAY

Curlewis

KAMILAROI HIGHWAY

IA4: Gunnedah and Liverpool Plains

Breeza

Werris Creek

IA5: Liverpool Plains

Breeza

Spring Ridge

Quirindi

Colly Blue

Pine Ridge

IA6: Gwydir North

Goondiwindi

Boonal

BRUXNER WAY

North Star

Yallaroi

Croppa Creek

Warialda

Namoi Regional Job Precinct
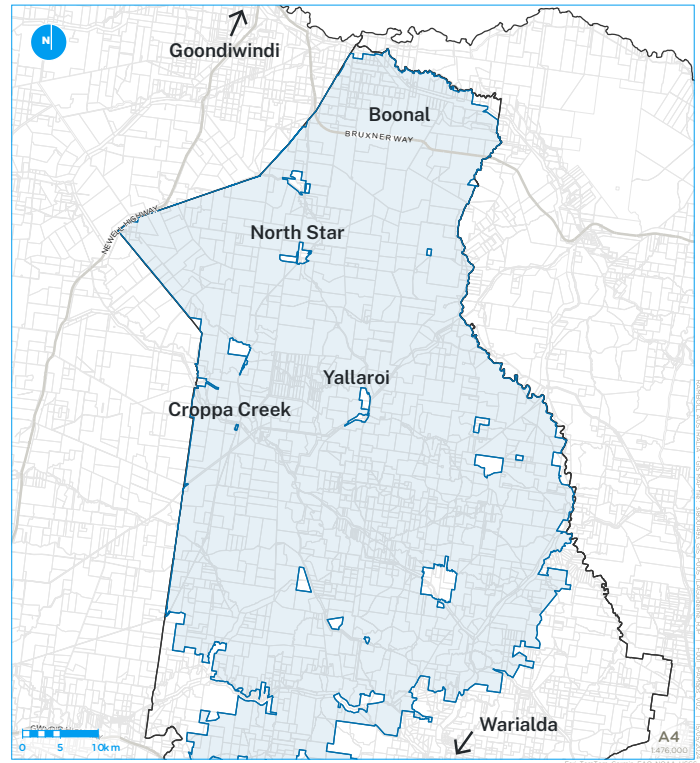
Backed by technical studies

Benefits of strategic odour modelling

The benefits of using strategic odour modelling includes:

→ identifying land where there is reduced risk of intensive livestock agriculture causing odour-related amenity impacts on residents

→ increased certainty for farmers, local communities, and government regarding future land uses

→ provide confidence for farmers, local communities, and government that production facilities of certain types and scales are suitable (such locations are also likely to avoid amenity impact associated with air quality and noise).

What is odour modelling?

Odour modelling is used to predict the optimal distance between dwellings and intensive livestock agriculture farms to minimise land use conflict.

The modelling process used a technique known as 'reverse amenity' modelling to identify appropriate buffers around existing dwellings to minimise the risk of odour impacts.

Beef and poultry comprise a significant portion of the sector in the Namoi region, and based on this, the strategic odour modelling has been completed for these uses at specific farm sizes. Results of strategic odour modelling demonstrate there are large areas of generally unconstrained land (encumbered by zero dwellings) upon which significant chicken or beef cattle farming operations could be approved without undue impact on existing receptors in the surrounding area. Opportunities may exist for farms proposed on land that the modelling shows is encumbered by 1, 2 or 3+ dwellings to acquire the impacted dwelling as part of the farm landholding. If this is the case, such land could also be developed.

Odour modelling was carried out at the following farm sizes

Beef cattle feedlot farm
999 head and 2,000 head

using conservative 'level 1' impact assessment modelling

Meat chicken farm
400,000, one million and two million birds

using both 'level 1' and more detailed 'level 2' impact assessment modelling

Layer chicken farm
One million birds

using both 'level 1' and more detailed 'level 2' impact assessment modelling

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1 **'Level 1' modelling**

'Level 1' modelling assessed six intensive agricultural areas for:
- beef cattle feedlots and
- chicken (layer and meat) farms

→ 'Level 1' modelling utilises simple calculations to conservatively estimate the potential radius of acceptable odour levels and to minimise the likelihood of complaints during operation

→ 'Level 1' modelling (screening assessment) proved sufficient to demonstrate that large areas of land is available for beef cattle feedlots with adequate buffers to existing dwellings

→ 'Level 1' modelling indicated the need for 'Level 2' modelling to provide more accurate identification of land for meat chicken farms

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2 **'Level 2' modelling**

'Level 2' modelling assessed six intensive agricultural areas for:
- chicken (layer and meat) farms

→ 'Level 2' modelling provides a more realistic prediction of the extent of odour, compared to the 'Level 1' assessment, and is typically applied for specific projects requiring odour impact assessment

→ Key elements of the 'Level 2' model are the dispersion model (including meteorology) and the emission estimation for the sources

→ Applied to the vast Namoi region, farms are modelled as points on a grid for uniform odour impact evaluation. The model is validated against known modelling predictions for operating farms in the region.

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The odour model

Example of Level 2 odour modelling for meat chicken farm (Investigation Area 2 – Tamworth)

The model generates the following categories of land suitability for intensive livestock agriculture:

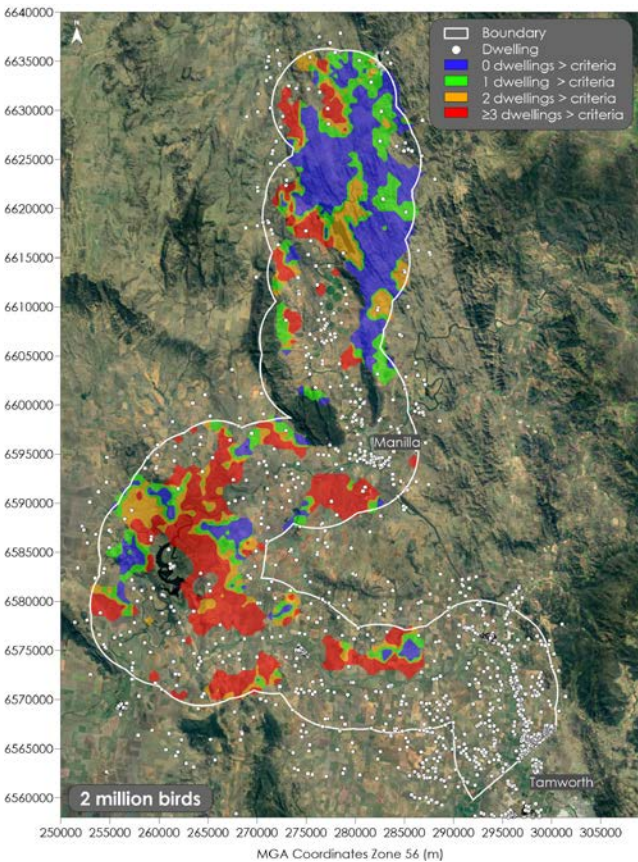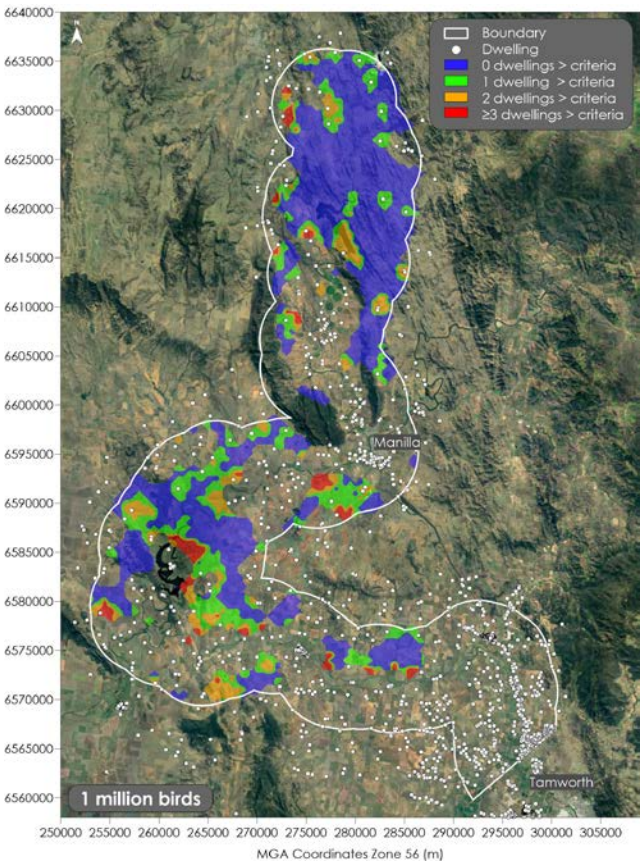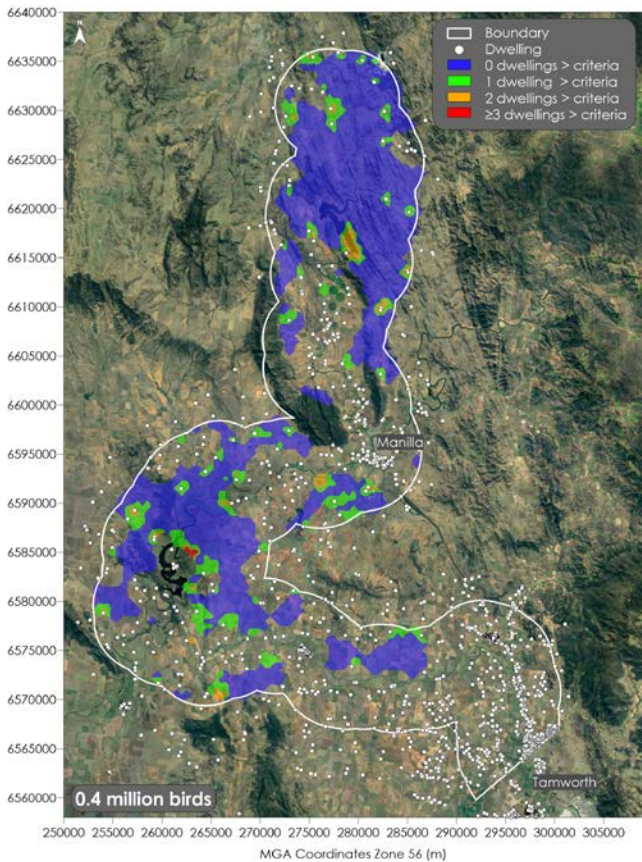| ■ (blue)	■ (green)	■ (orange)	■ (red)
Land affected by **no** existing dwellings	Land affected by **one** existing dwelling	Land affected by **two** existing dwellings	Land affected by **three or more** existing dwellings

400,000 bird farm   **1 million bird farm**   **2 million bird farm**

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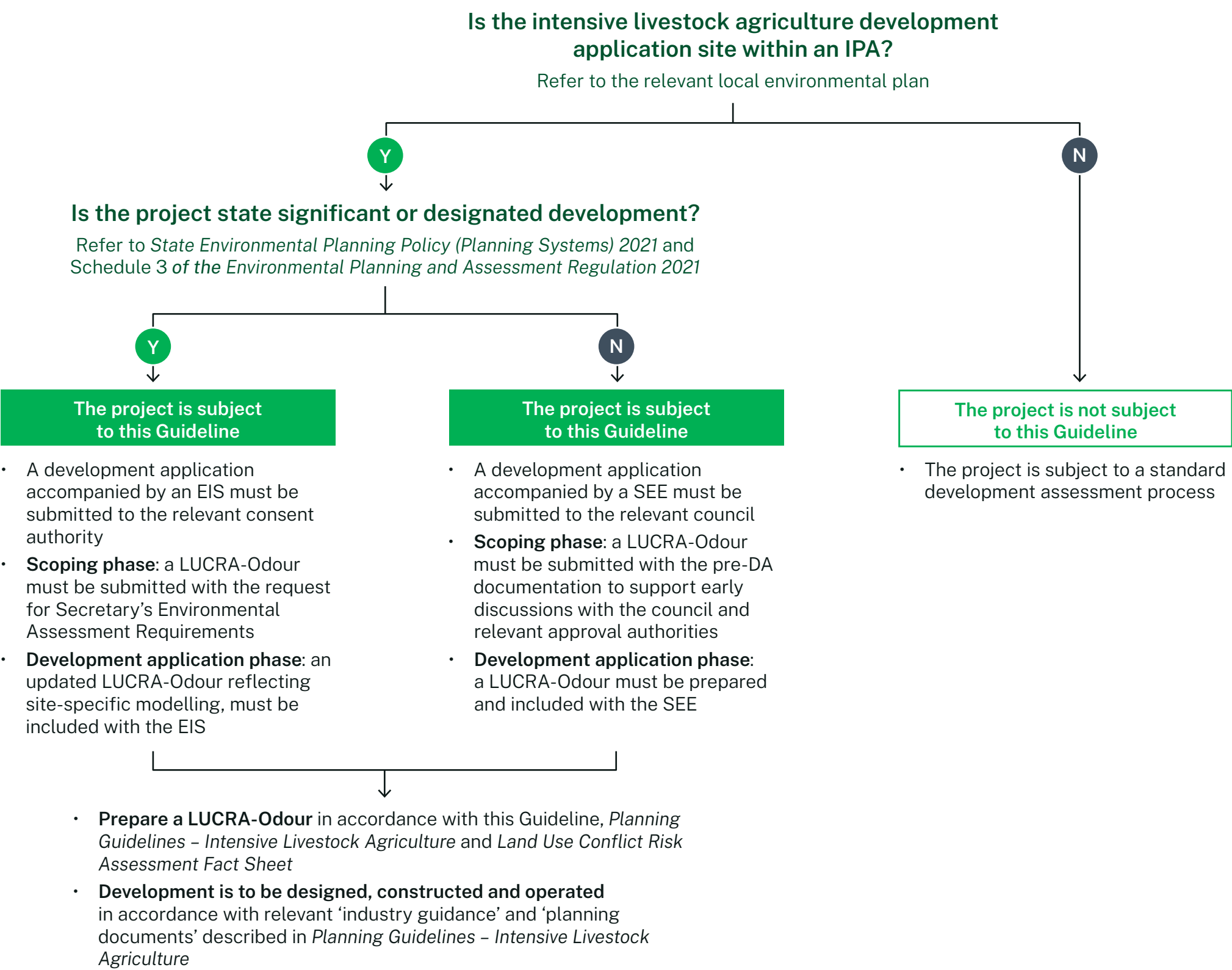
Implementing the program

The Namoi RJP delivers greater clarity in the planning framework, addressing the key causes of odour related amenity impacts associated with intensive livestock agriculture development. Amendments to relevant local environmental plans, supported by the *Intensive Livestock Agriculture Guideline – Management of Odour*, aim to make Namoi an appealing investment destination, safeguard key environmental and cultural assets, foster resource efficiency, and enhance regional liveability and resilience.

The figure below illustrates how the planning framework targets factors relating to odour related amenity impacts to encourage orderly and productive intensive livestock agriculture development.

Is the intensive livestock agriculture development application site within an IPA?
Refer to the relevant local environmental plan

(Y)

Is the project state significant or designated development?
Refer to *State Environmental Planning Policy (Planning Systems) 2021* and Schedule 3 *of the Environmental Planning and Assessment Regulation 2021*

(Y)

The project is subject to this Guideline

- A development application accompanied by an EIS must be submitted to the relevant consent authority
- **Scoping phase**: a LUCRA-Odour must be submitted with the request for Secretary's Environmental Assessment Requirements
- **Development application phase**: an updated LUCRA-Odour reflecting site-specific modelling, must be included with the EIS

(N)

The project is subject to this Guideline

- A development application accompanied by a SEE must be submitted to the relevant council
- **Scoping phase**: a LUCRA-Odour must be submitted with the pre-DA documentation to support early discussions with the council and relevant approval authorities
- **Development application phase**: a LUCRA-Odour must be prepared and included with the SEE

(N)

The project is not subject to this Guideline

- The project is subject to a standard development assessment process

- **Prepare a LUCRA-Odour** in accordance with this Guideline, *Planning Guidelines – Intensive Livestock Agriculture* and *Land Use Conflict Risk Assessment Fact Sheet*
- **Development is to be designed, constructed and operated** in accordance with relevant 'industry guidance' and 'planning documents' described in *Planning Guidelines – Intensive Livestock Agriculture*

Intensive Livestock Agriculture Guideline – Management of Odour

The Guideline must be considered by all proponents intending to establish, expand, or modify development of a chicken farm (meat or layer) or beef cattle feedlot on land within a mapped IPA.

The Guideline requires development applications to include a Land Use Conflict Risk Assessment for odour related matters (LUCRA-Odour) to assess risks of impact on existing dwellings. The Guideline provides a series of odour contour maps, based on strategic odour modelling, for each IPA that guide preparation of LUCRA-Odour for various scales and types of farms.

The LUCRA-Odour provides a standardised risk assessment framework to help proponents manage land use conflicts by selecting sites that have less risk of odour impacts.

By encouraging proponents to select sites that are less likely to generate amenity impacts, the Guideline streamlines the development application process and supports protection of sensitive receptors.
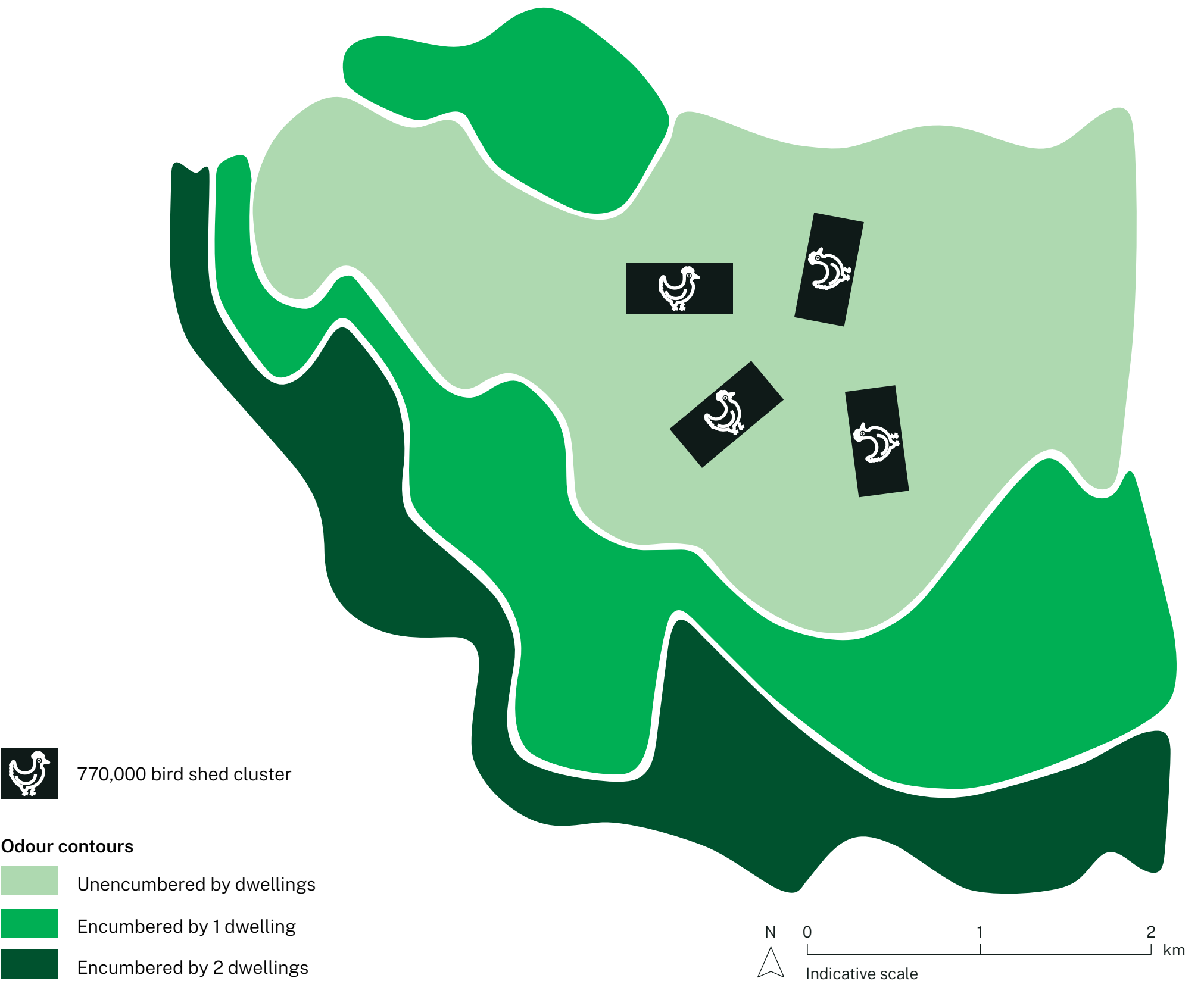
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A practical example

The illustrated example shown is representative of an indicative chicken meat farm. The layout comprises four shed clusters with a separation distance of 500m, combining to a total capacity of 3.08 million birds. This indicative farm layout and capacity is arranged to reduce odour impact on nearby dwellings and to manage environmental impacts.

The four shed clusters are shown within the Guideline's odour contours corresponding to a farm of up to 1 million birds. Shed clusters are sited on land that odour modelling demonstrates is not encumbered by dwellings, indicating that proposal has a minor likelihood and severity of odour impact. The LUCRA-Odour would reflect that the risk of odour impacts on the amenity of existing dwellings would be low.

Accordingly, the site selected provides the applicant, assessment authority and the community confidence that the site selected minimises the potential for odour-related land use conflict. Note that site-specific operating models and innovative technologies will be addressed on a case-by-case basis.

Example meat chicken farm layout

770,000 bird shed cluster

Odour contours

Unencumbered by dwellings

Encumbered by 1 dwelling

Encumbered by 2 dwellings

N

0   1   2 km

Indicative scale

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NSW GOVERNMENT

Engaging the community

Key documents currently on exhibition

Intensive Livestock Agriculture in the Namoi: Policy Review

For consumption by all interested parties

This report provides a technical analysis of the industry and describes strategic opportunities to create more clarity within the planning framework

Intensive Agriculture Guideline: Management of Odour

Primarily for use by industry, state and local governments

This document gives industry specific assessment guidance that aims to reduce conflict between land uses, allowing industry to grow and the amenity of homes to be protected

Strategic Implementation Plan

Primarily for use by state and local governments

This is a roadmap for implementing various recommendations from the Policy Review

Namoi RJP Discussion Paper

For consumption by all interested parties

A legal document which outlines the 'Explanation of Intended Effect' of changes to planning legislation, for the purpose of consultation

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Frequently asked questions

My property is located within the IPA, what does it mean for me?

- The existence of IPAs do not dictate that an increase in intensive livestock agriculture operations will happen in these areas, they indicate land that is most suitable based on odour modelling studies.
- After finalisation of this project, land within the IPAs may be more attractive for the purposes of cattle feedlots and chicken meat and layer farms.
- Mapping to inform the odour contour modelling was based on existing dwelling locations, aiming to avoid areas with more than a few homes.
- Standard Development Approval (DA) processes are still required for intensive livestock agriculture proposals.

I am an investor or operator looking to expand. What does this mean for me?

- The IPAs have been strategically identified through reverse methodology odour modelling and result in areas more suitable for intensive livestock agriculture when compared to that outside of the IPA.
- If your proposal includes intensive livestock agriculture, you will need to consider the Intensive Agriculture Guideline: Management of Odour.
- The odour modelling undertaken has been done in accordance with EPA's Assessment and management of odour from stationary sources in NSW Framework and Technical Notes (2006).
- Standard DA application processes are still required for intensive livestock agriculture proposals and you will need to prepare site-specific odour modelling as part of a DA application.

Have your say

Community and stakeholder feedback is an important part of this work and we welcome your feedback and comments and encourage you to get involved.

→ Drop in session times can be accessed on the **website**

→ Exhibition documents can be accessed on the **website**

→ Please submit your feedback to the **email** below

For further information on the RJP program, please contact us through:

@ regionaljobprecincts@dpird.nsw.gov.au

≡ www.nsw.gov.au/regionaljobprecincts