

INFORMATION SHEET

Ingham Turkey Processing Facility, Odour Impact Assessment September 2013

Synopsis

The purpose of this 'Information Sheet' is to inform those Landowner's who adjoin the Ingham Turkey Processing Facility at Tahmoor of some of the key findings detailed in the Odour Impact Assessment. The Assessment was undertaken by The Odour Unit ('TOU') on behalf of Ingham Property Development Pty Ltd ('Ingham's') and was completed on 16 September 2013.

The Purpose of the Odour Impact Assessment

TOU was originally commissioned by Ingham's back in August 2012 to carry out a Phase 3 Odour Impact Assessment ('the assessment') of the Ingham Turkey Processing Facility ('the site') at Tahmoor, NSW.

The primary intent for the assessment was to consider whether the rezoning of land to permit a higher density of residential development up to the site boundary, which is greater than that currently permitted under the RU2 'Rural Landscape' zone, would be acceptable under the relevant NSW Environmental Protection Authority ('EPA') guidelines and/or the Australian Standards for odorous impacts. In particular, the dispersion modelling considered whether a minimum buffer zone of 500 metres from the onsite Wastewater Treatment Ponds is acceptable for any future development around the sites periphery.

Site Inspections

Two key site visits were carried out by TOU during the undertaking of the assessment. The first site visit (1 August 2012) was a familiarisation exercise of the site whereby an investigation into all potential odour emissions sources was carried out and an inventory of these sources was compiled. A series of samples were collected and later used as input into the odour dispersion modelling. A second site visit was undertaken in March 2013 to collect additional odour emission samples at the site.

Sampling Program and Methodology

A total of nineteen (19) gas samples were collected from a series of identified odour emission sources on site. Subsequently, in light of the varying nature of the sampling sources the techniques of both '*Point Source*' and '*Area Source*' sampling were utilised by the assessment. The use of both techniques was done so in accordance with the relevant industry and Australian Standards.

Odour Concentration Measurement Methodology

The concentration of the gaseous odour samples were measured using a technique known as *dynamic olfactometry*. Dynamic olfactometry involves the repeated presentation of both a diluted gaseous odour sample and an odour-free air stream to a panel of qualified assessors through two adjacent ports on the olfactometer (known as the Odormat™). TOU utilises four to six trained assessors (or panellists) for sample analysis, with the results from four qualified panellists being the minimum allowed under the Australian Standard AS/NZS 4323.3:2001. TOU utilised up to six panellists for purposes of this assessment (TOU, 2013).

NSW Odour Criteria and Dispersion Model Guidelines

The assessment recognises that regulatory authority guidelines for odorous impacts of *gaseous process emissions* are not designed to satisfy a '*zero odour impact criteria*', but rather to minimise the nuisance effect to acceptable levels of odour emissions to a range of sensitive receptors within the local community. The assessment for this project has been carried out in accordance with the methods outlined by the following NSW EPA documents:

1. *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales (2005)*; and
2. *Technical Framework: Assessment and Management of Odour from Stationary Sources in NSW (2006)*.

Based on the NSW EPA classification of population densities, an *odour performance criterion* of '2 odour units' was adopted by the assessment for the dispersion modelling. This criterion was considered appropriate given the existing and proposed urban area character around the site.

The Odour Dispersion Modelling

The odour dispersion modelling for this study was carried out using AUSPLUME Version 6.0, a Gaussian, steady-state, plume dispersion model developed by the Victorian Environmental Protection Authority (EPA Victoria). AUSPLUME is the approved dispersion model recommended by the NSW EPA in their document - *Approved Methods and Guidance for the Modelling and Assessment of Air Pollutants in New South Wales (2005)* (TOU, 2013).

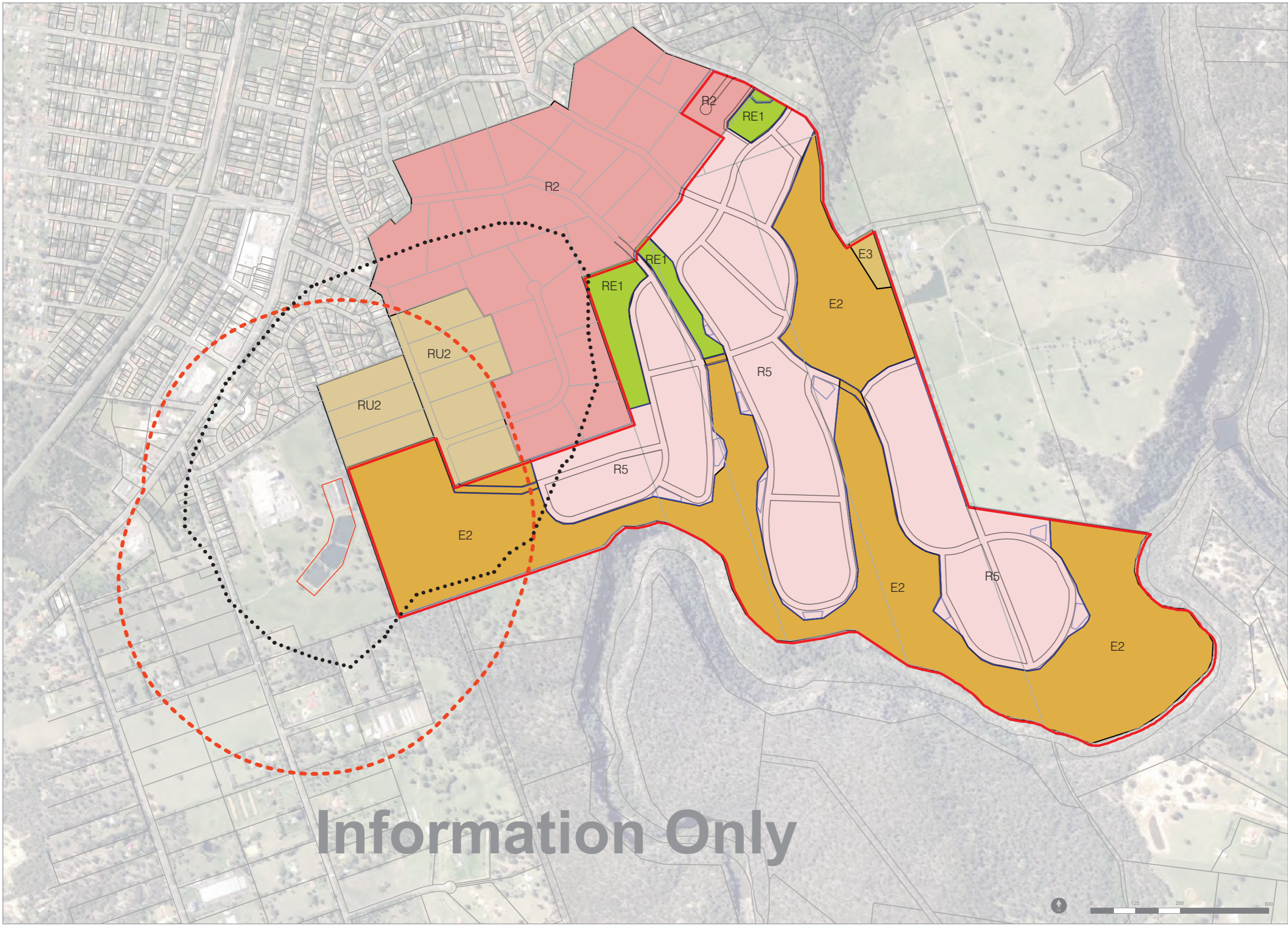
The Findings

The dispersion modelling results indicated that the NSW EPA's 2 odour unit performance criterion does exceed beyond the site boundary, as illustrated on the Attached *Issues and Opportunities Map* prepared by AE Design Partnership dated 17 September 2013. Marked by the *dotted black outline* is the cumulative impact from the key emission sources, which include the killing/evisceration room vents, bird receival area vents, bird holding area, and the wastewater treatment pond system.

What do the findings mean?

1. There may be some level of impact at existing residences, under certain meteorological conditions.
2. The bulk projection of the 2 odour unit performance criterion beyond the site boundary is largely due to the wastewater treatment pond system.
3. The 'inherent conservatism' factored into the NSW EPA criterion means that odour receptors insider the 2 odour unit contour will not 'automatically' be inconvenienced by odour.
4. As illustrated on the attached map, sections of East Tahmoor lie within the 2 odour unit performance criterion, and therefore are potentially susceptible to odour impact from the Ingham Turkey Processing Facility at Tahmoor.
5. TOU found that the proposed implementation of a 500 metre buffer zone, for future residential development to the east of the primary odour emission source (i.e. the wastewater treatment ponds system), was considered acceptable. Note: the 500 metre buffer zone is marked by the *dotted red outline* on the Attached *Issues and Opportunities Map*.
6. The AUSPLUME modelling however did not find any justification for a buffer distance of less than 500 metres.

Disclaimer: this Information Sheet serves to provide a brief outline **only** of the key methodologies and findings contained within the *Ingham Turkey Processing Facility, Odour Impact Assessment* (dated September 2013) prepared for the Ingham Turkey Processing Facility at Tahmoor NSW. A complete copy of the assessment will accompany the imminent Planning Proposal Report currently being prepared. The Odour Impact Assessment is the overarching document in any instance, however for the purposes of continuity and correct planning protocol a copy of the final assessment has not been provided at this point in time.



- Legend**
- Site Boundary
 - Development Footprint
 - Odour All Sources
200 g/c 99th percentile P/M 60
(The Odour Unit)
 - - - - - 500m Odour Buffer
from Ponds
 - Waste Water Ponds
 - E2 Environmental Conservation
 - E3 Environmental Conservation
 - R2 Low Density Residential
 - R5 Large Lot Residential
 - RU2 Rural Landscape
 - RE1 Public Recreation

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prepared for Inghams Tahmoor	
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Information Only