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PLANNING AND REGULATORY APPROACHES TO ON-FARM COMPOSTING IN QUEENSLAND

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ABSTRACT

On-farm composting is a current and expanding practice that utilises agricultural organic wastes and by products to produce soil conditioners, to minimize waste and reduce greenhouse gas emissions. On-farm composting activities have, until November 2018, been regulated by two pieces of legislation in Queensland. One is through the environment impact provisions of the Environment Protection Act 1994; the other is through local government planning provisions of the Planning Act 2016.

An analysis of 78 local planning schemes in Queensland shows that there is an inconsistent approach to the regulation of on-farm composting by local governments and that regulation by planning schemes generally applies equally to all forms of composting regardless of size or scale. It is important that local governments retain the ability to regulate operations that may impact on the community, but there is a strong case for a more consistent approach that includes providing exemptions for small-scale composting activities that complement and enhance agricultural production, utilise agricultural resources and minimize greenhouse gas emissions.

Recommendations are made to amend the definition of terms in the Planning Regulation 2017 to exempt the making and use of organic compost on farms from development approval processes by local government where they are ancillary to crop and animal production practices and do not result in the supply for sale of composting products off the farm; and to amend the threshold for 'manufacturing soil conditioners' to limit the application of the high impact industry definition to operations producing more than 200 tonnes of compost per year or occupying more than 2000 m².

PLANNING AND REGULATORY APPROACHES TO ON-FARM COMPOSTING IN QUEENSLAND SECTOR

What is On-farm Composting

Composting is the process of combining a range of organic materials into nutrient-rich organic matter suitable for a wide range of uses in agriculture and horticulture. On Queensland farms there is an abundant supply of materials that are the source ingredients of a composting process. These include crop residues, animal manures, unmarketable fruit and vegetables, and green waste. It is estimated that the organic residues from agriculture constitute the largest component of organic wastes produced in society. For example, agricultural waste in the European Union exceeds one billion tonnes per annum - three times greater than sewage sludge output and six times greater than that produced in the urban domestic sector¹. A more recent survey of on-farm food loss on 123 Californian farms found that average food loss was 31.3% of the marketed yield². Composting is an important means of utilizing and recycling these materials that can be reused on the farm to improve soil fertility and structure, soil organic matter and replace expensive artificial fertilisers. Composting is also an important component of strategies to minimize waste and reduce greenhouse gas emissions.

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Composting is the breakdown of any organic material (ingredients) into a crumbly, dark, soil-like product in which none of the original material can be easily identified. Various organic waste materials and by products produced by farming, such as husk, effluent, vegetable waste, stubble and so on, can be used to produce compost. The types of composting include:

- Vermicomposting—use of composting worms
- Passive composting—slow degradation of plant wastes—such as adding mulch to soil
- Thermophilic composting—rapid breakdown of organic material where the heat generated in the compost pile sterilises seed and pathogens³.

¹ Ferrero & L'Hermite, (1985).

² Baker et al (2019)

³ Jenkins and Van Zwieten (2003)

QLD Waste Management and Resource Recovery Strategy

The Queensland Waste Management and Resource Recovery Strategy sets out three strategic priorities to help drive a fundamental shift in the way waste is managed in Queensland and support the transition to a zero-waste society.

- Reducing the impact of waste on the environment and communities.
- Transitioning towards a circular economy for waste.
- Building economic opportunity.⁴

One of the many actions in the strategy for local government is to 'give special consideration to alternative local uses for recycled materials—particularly where organic waste can be collected and processed to produce high value bio-extracts or high-quality compost, to be used in agriculture'⁵.



⁴ Queensland Government (2019) p 11

⁵ Queensland Government (2019) p 22

Typical on-farm composting operation

The most common form of composting is the aerobic windrow system. Organic materials are placed in windrows of varying dimensions depending on the waste being composted, space available and equipment used. For manure-based operations, the recommended size is around 1.5 m high and up to 2.5 m at the base. The length of windrows can vary between 20 and 100 m. Windrows are turned by either front-end loader or specialised windrow turners. Turning is used to mix the compost, control temperatures and moisture and provide the aeration needed for composting⁶.

On-farm composting typically produces organic matter for spreading on cultivation or pasture land. The following example is based on the production of 200 tonnes material for application on up to 40 hectares of land at a rate of 5 tonnes per ha. Application rates vary from 5t/ha up to 20t/ha so that 200 tonnes of organic matter will cover between 10 ha and 40 ha.

An on-farm composting operation typically comprises three areas of operation - composting, curing and storage. The production of 200 tonnes of organic matter would normally occur in three cycles per year producing up to 70 tonnes of material from each cycle. An area of approximately 1,500 m² is required for the composting piles, with an area of approximately 250 m² for curing and a further 250m² for storage. These areas include sufficient area for machinery turning and operation. Thus, a total area of approximately 2000m² would be required to produce up to 200 tonnes per year of material per year⁷.



⁶ Department of Environment and Primary Industries Victoria (2009)

⁷ Technical data on area requirements for composting are derived from Rynk (1992)

Regulatory approaches

On-farm composting was until recently regulated by two pieces of legislation in Queensland. One was through the environment impact provisions of the Environment Protection Act 1994; the other is through local government planning provisions of the Planning Act 2016. Both have given the state and relevant local government powers to require development and impact assessment of proposed activities determined to have potential serious impact on the environment or adjacent communities.

Environment Protection Act

In Queensland the Environmental Protection Act 1994 (EP Act) and its subordinate legislation, the Environmental Protection Regulation 2019 (EP Regulation), provides a framework for regulating activities that have the potential to cause environmental harm. These activities are called 'environmentally relevant activities' (ERA) and are prescribed within Schedule 2 of the EP Regulation. Schedule 2 of the EP Regulation contains 7 ERAs that relate to waste management. The overall risk of an activity is generally determined by a combination of factors, including the risk associated with the waste type(s) being managed, the amount of waste being managed and the type of process being undertaken⁸.

Environmentally Relevant Activities

Composting activities are included in the definition of prescribed ERA 53. Under the previous ERA definition, all composting activities producing in excess of 200t/yr of material was required to obtain an environmental authority. This involves extensive assessment of environmental impact and ongoing annual fees. On 21 November 2018, ERA 53 was amended and the new prescribed ERA 53 (organic material processing) has been the subject of several subsequent amendments. Following extensive negotiation by QFF, the previous threshold for this ERA was not changed, and a facility that receives 200t or more of organic material in a year will be required to obtain an environmental authority (unless on-farm). As a result of the amendments, an environmental authority (EA) under the EP Act is no longer required if the organic material is generated on and subsequently composted or anaerobically digested on a site where agricultural or livestock production activities are carried out regardless of the scale of the activity⁹. An EA is also not required if the composting of organic material is carried out at a site where intensive animal feedlotting, pig farming or poultry farming is carried out. Organic material is able to be imported from another agricultural or livestock production activity.

⁸ Queensland Government (2018) Explanatory Notes p 1

⁹ Queensland Government (2018) Explanatory Notes p 7

However, an EA is still required if organic material is received from a source other than an agricultural or livestock production activity.

General Environmental Duty

Regardless of the provisions of ERA 53, a person must not carry out any activity that causes, or is likely to cause, environmental harm unless the person takes all reasonable and practicable measures to prevent or minimise the harm. This is a person's general environmental duty. Failure to comply with the general environmental duty is not, itself, an offence. However, causing an environmental nuisance or causing serious or material environmental harm is an offence unless it can be proved:

- that the environmental harm was not unlawful; and
- there is compliance with the general environmental duty

Planning Act 2016

The Plan Act and its subordinate legislation, the Planning Regulation 2017 (Plan Reg), aims to establish an integrated and coordinated system of land use planning and development assessment that facilitates the achievement of ecological sustainability. Responsibility for implementing the Plan Act is shared between the State and local governments. Broadly, the Plan Act is structured around three main elements: plan making, development assessment and dispute resolution. The Plan Act provides for a hierarchy of planning instruments including State planning instruments (the State Planning Policy and Regional Plans); local planning instruments (planning schemes, temporary local planning instruments and local planning scheme policies) and other statutory instruments, including the new Development Assessment Rules (DA Rules) and the Minister's Guidelines and Rules.

Planning and development provisions for on-form composting are found in individual planning schemes but are also determined by standard definitions in the Plan Reg.

Planning Regulation 2017

Among a wide range of provisions, the Plan Reg includes a set of standard land use definitions in Schedule 24 that must be used by local governments in the preparation of local planning schemes and in development assessment processes.

There is no specific land use definition of composting. However, activities involving the processing and recycling of products are included in the definition of 'high impact industry' due to the potential for the emission of odours and dust from the composting process.

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In Schedule 24 of the Plan Reg 'high impact industry' means:

'the use of premises for an industrial activity— (a) that is the manufacturing, producing, processing, repairing, altering, recycling, storing, distributing, transferring or treating of products; and (b) that a local planning instrument applying to the premises states is a high impact industry; and (c) that complies with any thresholds for the activity stated in a local planning instrument applying to the premises, including, for example, thresholds relating to the number of products manufactured or the level of emissions produced by the activity'¹⁰.

This means that a local government must include provisions in its planning scheme for the appropriate location and development assessment of 'high impact industry', however the local government may also set thresholds for the scale of such industry that is subject to the scheme provisions. In guidance provided to local governments by the Department of Infrastructure, Local Government and Planning in July 2017, advice is provided that local government may use the text in the threshold table provided in Table 6 of the guidance document, modify the table provided or use its own threshold table to provide further information in relation to an industry use term¹¹.



¹⁰ Queensland Government (2017) Schedule 24

¹¹ Queensland Government (2017b) Guidance for applying the regulated requirements to local planning schemes page 64

The suggested threshold in the guidance document for ‘manufacturing soil conditioners’ does not include a minimum size of operation:

‘(19) Manufacturing soil conditioners by receiving, blending, storing, processing, drying or composting organic material or organic waste, including animal manures, sewage, septic sludges and domestic waste’.

Few local planning schemes include such a threshold that includes a minimum size or scale of operations. The result is that any on-farm composting activity in those local government areas without a stated threshold falls under the definition of ‘high impact industry’ and is subject to the local planning scheme.

Few local planning schemes include such a threshold that includes a minimum size or scale of operations. The result is that any on-farm composting activity in those local government areas without a stated threshold falls under the definition of ‘high impact’ and is subject to the local planning scheme

Schedule 24 of the Plan Reg also includes definitions for ‘cropping’ and ‘animal husbandry’ but neither definition includes a reference to on-farm composting as an ancillary activity.

State Planning Instruments

State Planning Policy

The State Planning Policy (2017), is a State Planning Instrument that sets out a broad range of planning principles that must be integrated into the planning and development outcomes in regional plans and local planning schemes. The principles relevant to on-farm composting are included in the Agriculture State interest and the Emissions and Hazardous Activities State Interest.

The Agriculture State interest aims to protect the resources on which agricultural production depends and to facilitate complementary activities that support agriculture. Policy 4 states that ‘Growth in agricultural production and a strong agriculture industry is facilitated by: (d) facilitating opportunities for co-existence with development that is complementary to agricultural uses that do not reduce agricultural productivity’¹². This policy supports conducting compost making as a complementary activity that enhances agricultural activity by providing a source of nutrients and organic matter to the soil resource on which agriculture depends.

Under the Emissions and Hazardous Activities State Interest it is

¹² Queensland Government (2017) State Planning Policy p 30



required that ‘community health and safety, and the natural and built environment, are protected from potential adverse impacts of emissions and hazardous activities’. Policy (2) states that: ‘Activities involving the use, storage and disposal of hazardous materials and prescribed hazardous chemicals, dangerous goods, and flammable or combustible substances are located and managed to minimise the health and safety risks to communities and individuals’¹³.

The overall effect of these policies in the SPP is that local planning schemes are required to facilitate complementary activities that support agriculture in rural areas while protecting the community and the environment from potential adverse impacts of emissions.

Local Planning Schemes

Planning schemes regulate land use and other activities by dividing the area of a local government into a series of areas (zones) and categorizing whether development in each zone falls into one of three categories: prohibited, accepted or assessable. **Prohibited** development may not be carried out in an area and neither can an application be made to conduct a prohibited development.

Accepted development does not require a development permit; however, it must meet any requirements set by the local government or the state. Development that is not otherwise categorised as prohibited or assessable is accepted development. For example, in most local planning schemes, cropping and animal husbandry are accepted development in the Rural Zone. **Assessable** development requires a development permit before it can occur. There are two categories of assessable development: code assessable or impact assessable.

¹³ Queensland Government (2017) State Planning Policy p 49

In the analysis of local planning scheme provisions affecting on-farm composting for this report, the focus is on three aspects of development assessment. The first is the land use definition that applies to on-farm composting and thresholds of activity (if any); the second is the category of development applicable to the rural zone; and the third is the assessment criteria that is applied to development assessment.

Table 1

Categories of definition of composting in Queensland planning schemes


Definition	Type	Number (%)	Year of scheme	Comment
High Impact Industry	1	48 (62)	2006-2007, 2012-	35 with threshold table; 3 without Rural zone
Noxious Industry	2	16 (21)	2003-2008, 2011-2016	9 with 150m ² area threshold
Industry	3	6 (8)	2005-2008, 2013	Burke, Carpentaria, Etheridge, Mt Isa, Torres, Broadsound,
High Impact Industry (ERA 53)	4	4 (5)	2005-2007	Boonah, Gatton, Ballone, Banana
Industry – High Impact	5	1 (1)	2006	Beaudesert
Low Impact Industry	6	1 (1)	2006	Dalrymple
Special Industry	7	1 (1)	2006	Ipswich
Industrial Business	8	1 (1)	2006	Noosa
Not online		4		
Total		82		

Overall

In Queensland, there are 77 local governments, however there are 82 local planning schemes in operation as a result of council amalgamations. Some local governments are still using the previous administrations' schemes, for example, Isaac Shire Council still uses the schemes for Nebo, Broadsound and Belyando that apply to these previous local government areas. Of the 82 planning schemes, four are not online and were not available for analysis, with the result that 78 planning schemes were analysed.

Definitions

Of the 78 planning schemes available for analysis, eight different types of definition have been identified to describe composting operations. Sixty-four (83%) of planning schemes fall into categories 1 and 2. (Table 1)



The most common definition, used in 48 planning schemes, defines composting as a form of 'High Impact Industry'.

Type 1: High Impact Industry

The most common definition, used in 48 planning schemes, defines composting as a form of 'High Impact Industry'. In general, this approach is typical of more recent planning schemes approved since 2012. A typical definition from the Sunshine Coast Regional Council planning scheme (2014) is as follows:

High Impact Industry: Premises used for industrial activities that include the manufacturing, producing, processing, repairing, altering, recycling, storing, distributing, transferring or treating of products and have one or more of the following attributes:-

- potential for significant impacts on sensitive land uses due to offsite emissions including aerosol, fume, particle, smoke, odour and noise;
- potential for significant offsite impacts in the event of fire, explosion or toxic release;
- generates high traffic flows in the context of the locality or the road network;
- generates a significant demand on the local infrastructure network;
- the use may involve night time and outdoor activities;
- on-site controls are required for emissions and dangerous goods risks.¹⁴

Thirty-five of these schemes typically include a table of thresholds for specific types of 'high impact industry'. All 35 schemes define 'manufacturing soil conditioners' as:

Manufacturing soil conditioners by receiving, blending, storing, processing, drying or composting organic material or organic waste, including animal manures, sewage, septic sludges and domestic waste.

Where this threshold description is used, there is no reference to the size or scale of operation with the result that the threshold

¹⁴ Sunshine Coast Regional Council (2014)

merely adds detail to the definition and does not exclude any small-scale operations. Thus, even small scale on-farm composting for on-farm use would be captured as assessable development by these schemes. In almost all the schemes using this definition, except three Indigenous councils that do not have a Rural Zone, a composting proposal, regardless of size, in a Rural Zone would be treated as other high impact industry and be subject to a full impact assessment against the provisions of the entire planning scheme. The exception is the Flinders Planning Scheme that states that if composting is a 'Low impact industry and is ancillary to rural activities', it is subject to code assessment.

The second most common definition, used in 16 planning schemes, defines composting as a form of noxious industry.

Type 2: Noxious Industry

The second most common definition, used in 16 planning schemes, defines composting as a form of noxious industry. Most of these schemes were approved between 2003 and 2008 under previous planning legislation and are some of the oldest planning schemes still operating. For example, the Charters Towers Planning Scheme (2006) includes composting in the following definition:

Noxious, Offensive or Hazardous Industry means the use of premises for the purpose of the handling, manufacturing, processing, open abrasive blasting, treatment, or storage of any material, whether or not such materials are considered to be hazardous. Such activity typically gives rise to such noxious, offensive or hazardous effects as excessive smoke, fumes odours, liquid or solid wastes and the like, all of which require special management. Many such uses are by their nature offensive to the general public and may involve an element of public risk in their conduct, or, when not adequately managed, involve detrimental effects to land beyond the site. The term includes such uses as abattoirs, fibre-board or pulp mills, rendering works, and the like¹⁵.

Nine of these schemes separate industrial uses on the basis of area for the purpose of development assessment. Typically, a threshold of 150m² of total affected area is used to distinguish those industrial activities subject to code assessment (<150m²) from those subject to impact assessment (>150m²). As a result, all proposed composting activities in the 16 planning scheme areas are subject to either code or impact assessment depending on the area of operations.

¹⁵Charters Towers Regional Council (2006)

Type 3: Industry

Six planning schemes implicitly include composting in the definition of 'Industry'. For example, both the Carpentaria Planning Scheme (2008) and the Etheridge Planning Scheme (2005) use the following definition:

Industry means the use of premises for making, assembling, breaking up, servicing, storing or repairing goods or treating of wastes including the use of premises for:-

- *mechanical repair garage, including panel beating where not ancillary to a Service Station;*
- *boat building and repairing;*
- *bulk store;*
- *seafood processing and storage;*
- *slipway, wharf and marine engineering;*
- *storage yard;*
- *transport depot; and*
- *warehouse* ¹⁶.

Two of these schemes (Burke and Broadsound) assess industry proposals against a code, the other four schemes require impact assessment against the entire planning scheme.



¹⁶ Carpentaria Shire Council (2008)

Type 4: High Impact Industry with reference to ERA 53

Four planning schemes make reference to Environmentally Relevant Activities from the EP Regulation in their definition of 'High Impact Industry'. For example, the Banana Planning Scheme (2005) has the following definition:

High Impact Industry means use of any premises for the purpose of:

- (a) any of the industrial activities listed below that correspond to the group and class listed within the Australian and New Zealand Standard Industrial Classification system; and
- (b) for Groups 217, 221, 222, 226, 262 and 274 only where the use is an Environmentally Relevant Activity under the Environmental Protection Act; or
- (c) using, storing, handling or disposing of any radioactive substance or material; or
- (d) storing chemicals, including ozone depleting substances, gases or dangerous goods under the dangerous goods code, or
- (e) The following Environmentally Relevant Activities under the Environmental Protection Act:
 - i. Number 7 - Chemical Storage
 - ii. Number 53 - Soil Conditioner Manufacturing;
 - iii. Number 78 - Chemical or Oil Recycling.¹⁷

All four schemes require impact assessment of proposals for 'soil conditioner manufacturing' regardless of the size of the activity.

Types 5-8: Various definitions

Four other definitions are used in individual planning schemes to define industry that encompasses composting. The Beaudesert Planning Scheme (2007) (Scenic Rim Regional Council) includes soil conditioner manufacturing in 'Industry - High Impact'. Development applications are code assessable against the Industry Code.

Industry - High Impact means the use of premises or land for the purpose of carrying out any industry or industrial activity that has the potential to cause significant off-site environmental effects.

The term includes any industry or industrial activity that—

- (a) is likely to present a significant hazard to the general public or the occupiers of sites other than the subject site; or
- (b) involves any activity or the manufacture of any product by the following means—
 - xv. manufacturing soil conditioners¹⁸

¹⁷ Banana Shire Council (2005)

¹⁸ Scenic Rim Regional Council (2007)



The Ipswich Planning Scheme (2006) includes soil conditioner manufacturing in the 'Special Industry' definition. The definition includes a production threshold of 200t/year meaning that smaller scale activities are exempt from assessment. This is the only planning scheme in Queensland that has adopted this approach. The scheme also stipulates that 'soil conditioner manufacturing' above the production threshold are unlikely to be approved in the Rural Zones (Agriculture and Pastoral).

Special Industry means the use of premises for—

Animal and plant products processing, food processing and beverage production activities, including—

- ix. soil conditioner manufacturing: commercially manufacturing soil conditioners by receiving and blending, storing, processing, drying or composting organic material or organic waste including animal manures, sewage, septic sludges and domestic waste, in works producing more than 200 tonnes per year;¹⁹

In all these types of schemes, composting above the threshold production size is impact assessable against the entire planning scheme.

Assessment categories

Of the 78 planning schemes analysed, 60 schemes require impact assessment of composting activities, regardless of size or scale. (Table 2) Four schemes (Bundaberg, Burke, Taroom and Broadsound) require code assessment of composting activities, regardless of size or scale. Nine planning schemes utilize an area

¹⁹ Ipswich City Council (2006)

threshold of 150m² to separate small scale activities subject to code assessment from large scale activities subject to impact assessment. One scheme (Flinders) allows for code assessment if composting is ancillary to rural activities and only one scheme (Ipswich) includes a threshold that excludes activities producing less than 200 t/year from assessment. The remaining three schemes cover small indigenous local governments that do not have a Rural Zone.

Table 2

Categories of development and assessment criteria for composting in Queensland planning schemes

Size threshold	Assessment category	Assessment criteria	Number (%)	Comment
None	Impact	Planning Scheme	60 (77)	
None	Code	Rural Zone Code	4 (05)	Broadsound, Bundaberg, Burke, Taroom
>150m ²	Impact	Planning Scheme	9 (12)	
<150m ²	Code	Rural Zone Code		
>200 t/yr	Impact	Planning Scheme	1 (01)	Ipswich
Ancillary rural activity	Code	Rural Zone Code	1 (01)	Flinders
No Rural Zone	-	-	3 (03)	
Total			78	

Assessment criteria

Of the 78 planning schemes analysed, 60 schemes require assessment of assessable composting activities against the entire planning scheme and five schemes require assessment against a code. Ten schemes subject composting operations to assessment against the entire planning scheme or against a code depending on the size operations.

Trends in regulation of on-farm composting

As can be seen from the above analysis, there is no consistent approach to the regulation of on-farm composting and regulation generally applies equally to all forms of composting regardless of size or scale.

The most common approach includes composting in the 'High Impact Industry' definition and requires impact assessment of any activity regardless of size.

In the period prior to amendment in 2018 of the EP Reg to exempt on-farm operations from State Government administration of the ERA 53 provisions, local governments may have relied upon the State Government to regulate on-farm composting activities.

There is no consistent approach to the regulation of on-farm composting and regulation generally applies equally to all forms of composting regardless of size or scale.



However, since the amendment of ERA 53, local governments may choose to address any issues that arise from on-farm composting using their planning schemes.

There is no evidence that local governments are implementing the controls that their planning schemes provide to require development approvals of composting activities. Given other priorities, they may only act in response to complaints or objections from neighbours. Whilst it is important that local governments retain the ability to regulate poorly performing or large-scale operations that may impact on the community, there is a strong case for a more consistent approach that includes providing exemptions for small-scale composting activities that complement and enhance agricultural production, reduce waste and reduce greenhouse gas emissions.

PROPOSALS FOR MODIFICATIONS TO PLANNING REGULATIONS AND LOCAL SCHEMES

QFF's Recommendations

QFF recommends to exempt the making and use of organic compost on farms from development approval processes by local government so that they are consistent with the provisions of the EP Regulation. This would mean that on-farm composting for the manufacture of soil conditioners for use on the same farm would be treated in the same way as other crop production and animal husbandry activities.

Options

There are three options for achieving this outcome. One is to propose a new definition for 'on-farm composting' to distinguish this activity from 'High Impact Industry'. A second option is to include on-farm composting as an ancillary activity in the definitions of 'cropping' and 'animal husbandry'. A third option is to modify the standard threshold for 'manufacturing soil conditioners' within the definition of 'High Impact Industry'.

The creation of a new definition for 'on-farm composting' would be a complex approach for what is a relatively minor land use, whereas the inclusion of on-farm composting as an ancillary activity to normal farming operations (cropping and animal husbandry) is a simpler and more logical option. This approach would limit the scale of operations exempt from assessment to that necessary to satisfy the requirements of the farming enterprise.

The third option is necessary to address those activities that wish to produce compost for use both on the farm and for external supply. The inclusion of a threshold for manufacturing soil conditioners in the definition of 'High Impact Industry' in State guidance material would exempt small-scale operations from code or impact assessment. In cases where soil conditioners are produced for supply or sale off the farm, operations above the threshold would potentially be subject to development assessment, depending on the individual planning scheme provisions.

The recommendations include options two and three with the result that, following planning scheme amendment, small-scale, on-farm composting would become Accepted development in a Rural Zone. Local governments would have the option of making these activities

subject to requirements set out in a specific code but operators would not be required to make a development application. Larger scale operations above the recommended threshold that produce material for external sale would be subject to development assessment.

These recommendations require the amendment of State-level regulations and guidance material which will take some time. In the interim, Local Governments should amend the threshold for ‘manufacturing soil conditioners’ in their planning schemes consistent with option 3.

Recommendations

1. The standard definitions in the Planning Regulation 2017 Schedule 24 Dictionary for ‘cropping’ and ‘animal husbandry’ should be amended as follows:

cropping means the use of premises for— (a) growing and harvesting plants, or plant material, that are cultivated in soil, for commercial purposes; or (b) harvesting, storing or packing plants or plant material grown on the premises or *making soil conditioners for use on the premises by compost making*, if the use is ancillary to the use in paragraph (a); or (c) repairing and servicing machinery used on the premises, if the use is ancillary to the use in paragraph (a).

animal husbandry means the use of premises for— (a) producing animals or animal products on native or improved pastures or vegetation; or (b) a yard, stable, temporary holding facility or machinery repairs and servicing, or *making soil conditioners for use on the premises by compost making*, if the use is ancillary to the use in paragraph (a).

2. The threshold for ‘manufacturing soil conditioners’ in Table 6 of Guidance for applying the regulated requirements to local planning schemes²⁰ should be amended as follows:

‘Manufacturing soil conditioners by receiving, blending, storing, processing, drying or composting organic material or organic waste, including animal manures, sewage, septic sludges and domestic waste that exceeds the production of more than 200 tonnes of material per year or where the area used for the making, curing and storage of material exceeds 2,000m².

3. Local Governments should amend the threshold for ‘manufacturing soil conditioners’ in their planning schemes consistent with recommendation 2.

²⁰ Queensland Government (2017b) p 64

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APPENDIX 1

Land Use Definitions in local planning schemes that include on-farm composting

Type 1: High Impact Industry

Southern Downs Planning Scheme (2012), Sunshine Coast Planning Scheme (2014), Moreton Bay Planning Scheme (2016):

High Impact Industry: Premises used for industrial activities that include the manufacturing, producing, processing, repairing, altering, recycling, storing, distributing, transferring or treating of products and have one or more of the following attributes:

- potential for significant impacts on sensitive land uses due to offsite emissions including aerosol, fume, particle, smoke, odour and noise;
- potential for significant offsite impacts in the event of fire, explosion or toxic release;
- generates high traffic flows in the context of the locality or the road network;
- generates a significant demand on the local infrastructure network;
- the use may involve night time and outdoor activities;
- on-site controls are required for emissions and dangerous goods risks.

Industry Thresholds

- Manufacturing soil conditioners by receiving, blending, storing, processing, drying or composting organic material or organic waste, including animal manures, sewage, septic sludges and domestic waste;

Development Category in Rural Zone

Impact Assessable

Murweh Planning Scheme (2007):

High impact industry means the use of premises for an industrial activity that is the manufacturing, producing, processing, repairing, altering, recycling, storing, distributing, transferring or treating of products, if—

(a) either of the following apply—

- i. the use involves outdoor activities carried out between 6p.m. and 7a.m.;
- ii. measures are required on the premises to control the risk of emissions and impacts from dangerous goods stored as part of the use; and

(b) the impacts of the use on other premises, or road or infrastructure networks, are within the upper and lower limits for the use stated in a local planning instrument applying to the premises.

Type 2: Noxious Industry

Banana Shire Council - Taroom Planning Scheme (2005):

Noxious industry - means an industry where: (1) the use of "Premises" causes detriment to the amenity of the area by reason of the emission of noise or vibration; and (2) the process involved; or the method of manufacture; or the nature of the materials or goods which are used, produced or stored: (a) causes fumes, vapours or gases, or discharges dust, foul liquid, blood or other impurities; or (b) constitutes a danger to persons or "Premises".

Burdekin Planning Scheme (2011):

Noxious, Offensive or Hazardous Industry Premises used for the handling, processing, treatment, or storage of any materials, whether or not such materials are considered to be hazardous.

Such activity typically gives rise to such noxious, offensive or hazardous effects as excessive smoke, fumes odours, liquid or solid wastes and the like, all of which require special management.

Many such uses are by their nature, offensive to the general public, and may involve an element of public risk in their conduct or, when not adequately managed, involve detrimental effects to land beyond the site.

The term includes such uses as for example abattoirs, fibre-board or pulp mills, rendering works or sugar mills.

Charters Towers Planning Scheme (2006):

Noxious, Offensive or Hazardous Industry Means the use of premises for the purpose of the handling, manufacturing, processing, open abrasive blasting, treatment, or storage of any material, whether or not such materials are considered to be hazardous. Such activity typically gives rise to such noxious, offensive or hazardous effects as excessive smoke, fumes odours, liquid or solid wastes and the like, all of which require special management. Many such uses are by their nature offensive to the general public and may involve an element

of public risk in their conduct, or, when not adequately managed, involve detrimental effects to land beyond the site. The term includes such uses as abattoirs, fibre-board or pulp mills, rendering works, and the like;

Dalrymple Planning Scheme (2006):

Noxious or Hazardous Industry Premises used for any industry activity which principally involves animal products, processing, food processing or beverage production and other industry involving the use, storage, handling or exposal of any radio-active substance or material or which involves dangerous goods in quantities that are not minor.

Laidley Planning Scheme (2003):

Noxious, Offensive and Hazardous Industry – means the use of premises for the carrying on of an industry, which by reasons of the processes or materials involved, or the method of manufacture, or the nature of the processes or materials used or produced, requires isolation from other buildings or areas of human activity or occupation because of the detrimental effect which such processes or materials might have on the amenity of such areas, or the health of its occupants.

Richmond Planning Scheme (2005):

Noxious or Hazardous Industry Premises used for Industry which causes: (a) Adverse environmental impacts on adjoining premises; (b) Impose a load in public utility greater than that which is required for the normal development of the locality in which the premises are located; and (c) Adverse traffic impacts on the road network in the locality of the premises.

Type 3: Industry

Burke Planning Scheme (2013):

1. Industry means the use of premises for making, assembling, breaking up, servicing, storing or repairing goods, or treating wastes if at a scale and of a nature not included in “Business”.

2. The term includes the use of premises for the following - (a) contractor’s yard; (b) mechanical repair garage, including panel beating; (c) salvage yard; (d) storage yard; (e) toxic or dangerous goods store; (f) transport depot; (g) warehouse.

Carpentaria Planning Scheme (2008); Etheridge Planning Scheme (2005):

Industry means the use of premises for making, assembling,

breaking up, servicing, storing or repairing goods or treating of wastes including the use of premises for:-

- mechanical repair garage, including panel beating where not ancillary to a Service Station;
- boat building and repairing;
- bulk store;
- seafood processing and storage;
- slipway, wharf and marine engineering;
- storage yard;
- transport depot; and
- warehouse.

Broadsound Planning Scheme (2005):

Industry means making or extracting goods or materials, altering, repairing, cleaning, packing, storing, and processing them. It includes the sale of goods resulting from the industry, associated administration and staff amenities, when these activities are carried out on the same premises.

Industry (General) means using premises for industry that is not Industry (Light) or Industry (Extractive).

Industry (Light) and Industry (General) are Code assessable against the Broadsound Development Code in all preferred use areas.

Mount Isa Planning Scheme (2006):

Industry – Premises used for the handling, processing, treatment, or storage of any materials, whether or not such materials are considered to be hazardous. Such activity can include noxious, offensive or hazardous effects as excessive smoke, fumes, odours, liquid or solid wastes and the like, all of which require special management.

Type 4: High Impact Industry definition refers to ERA 53

Banana Planning Scheme (2005):

High impact industry means use of any premises for the purpose of:

(a) any of the industrial activities listed below that correspond to the group and class listed within the Australian and New Zealand Standard Industrial Classification system; and

(b) for Groups 217, 221, 222, 226, 262 and 274 only where the use is an Environmentally Relevant Activity under the Environmental Protection Act; or

(c) using, storing, handling or disposing of any radioactive substance or material; or

(d) storing chemicals, including ozone depleting substances, gases or dangerous goods under the dangerous goods code, or

(e) The following Environmentally Relevant Activities under the Environmental Protection Act;

- i. Number 7 – Chemical Storage
- ii. Number 53 – Soil Conditioner Manufacturing;
- iii. Number 78 – Chemical or Oil recycling.

Boonah Planning Scheme (2006); Balonne Planning Scheme (2006):

High Impact Industry: any industry classified by the Environmental Protection Act 1994 as a level 1 Environmentally Relevant Activity that has not been devolved to local government, or any industry which is not classified as level 1 Environmentally Relevant Activity but which:

(a) has the potential to cause environmental harm (as defined in the Environmental Protection Act), due to the materials or processes involved or the products or wastes produced; or

(b) requires a licence under the Dangerous Goods Safety Management or other relevant legislation.

The term includes activities commonly referred to as noxious, hazardous, or offensive industries and salvage or junk yards.

Gatton Planning Scheme (2007):

Industry means any premises used for any of the following operations:-

(a) any manufacturing process whether or not such process results in the production of a finished article; or

(b) the breaking up or dismantling of any goods or any goods or any articles for trade, sale or gain, as ancillary to any business; or

(c) repairing and servicing of articles including vehicles, machinery, buildings or other structures, laundering of articles but not including on-site work on buildings or other structures; or

(d) any operation connected with the installation of equipment and services and the extermination of pests but not including on site work on buildings or other structures or land; or

(e) treating waste material; or

(f) the storage or sale of any solid, liquid or gaseous fuel where such storage is not for a purpose separately defined herein; or

(g) any process of testing and analysis;

Includes High Impact Industry - means any activity which is classified by the Environmental Protection Act 1994 as a level 1 environmentally relevant activity that has not been devolved to local government, or any activity which is not classified as level 1 environmentally relevant activity but which: a) are likely to result in material environmental harm (as defined in the Environmental Protection Act), due to the materials or processes involved or the products or wastes produced; b) are likely to generate noise greater than Labg.T +5db(A) at any boundary of the site; or c) require a licence under the Building (Flammable and Combustible Liquids) Regulation and are within 200m of land zoned Residential, Rural Residential or Village. The term includes activities commonly referred to as noxious, hazardous, or offensive industries and salvage yards;

Type 5 Industry – High Impact

Beaudesert Planning Scheme (2007):

Industry – High Impact means the use of premises or land for the purpose of carrying out any industry or industrial activity that has the potential to cause significant off-site environmental effects.

The term includes any industry or industrial activity that—

(a) is likely to present a significant hazard to the general public or the occupiers of sites other than the subject site; or

(b) involves any activity or the manufacture of any product by the following means—

xv. manufacturing soil conditioners

The Planning scheme includes an Industry Code:

Division 13 Industry Code

5.2.38 Purpose of the Industry Code

The Overall Outcomes for an Industry are the purpose of the Industry Code.

5.2.39 Overall Outcomes for Industry

An Industry— (a) is compatible with the scale and character of the surrounding area; and (b) achieves a high quality in Building design;

and (c) operates in a manner that minimises off site impacts.

Type 6: Low Impact Industry

Dalrymple Planning Scheme (2006):

Low Impact industry Means any business and industry activity such as the manufacturing, processing, fabrication, packaging, repair, storage or maintenance of any item, machinery or product, where:

- (a) All impacts, from traffic, operational noise, vibration, odour, lighting, or other interference with amenity, can reasonably be expected to be wholly contained on-site and the activity does not adversely impact upon the amenity of surrounding areas or adjacent properties; and
- (b) An undue load, in excess of that expected for development in the area, is not placed on public utilities; Such an activity does not give rise to any noxious, offensive or hazardous effects as excessive smoke, fumes, odours, liquid or solid wastes and the like, all of which require special management.

Type 7: Special Industry

Ipswich City Council (2006):

Special Industry means the use of premises for—

- (a) Animal and plant products processing, food processing and beverage production activities, including—
 - (ix) soil conditioner manufacturing: commercially manufacturing soil conditioners by receiving and blending, storing, processing, drying or composting organic material or organic waste including animal manures, sewage, septic sludges and domestic waste, in works producing more than 200 tonnes per year;

Development assessment

Rural A Agriculture Zone and Rural B Pastoral Zone

The following uses, use classes and other development categories are inconsistent with the outcomes sought and are not located within the Rural A (Agricultural) Zone or Rural B (Pastoral) Zone; and constitute undesirable development which is unlikely to be approved—

- (u) or (r) Special industry

Type 8: Industrial Business

Noosa Planning Scheme (2006):

Industrial business means the conduct of an industrial business activity, where goods or products are produced, manufactured, dismantled, altered, repackaged, repaired or stored at a scale of greater than that defined by retail business. The use includes the sale of goods, resulting from such operations, provided that sales space does not exceed 20% of the use area. Any space dedicated for administration or accounting work in connection with such operations does not exceed 20% of the use area. The term includes the following types :

Type 2 Production, alteration, repackaging & repairing

The use of premises for the production, manufacturing, dismantling, altering, cleaning, re-packaging, freezing or repairing of goods. The use includes food industries, textiles, mechanical, boat repair, sandblasting.

APPENDIX 2

Approaches to On-farm Composting in Queensland Planning Schemes

Local Government	Scheme	Year	Category	Definition of Composting	Assessable Devt in Rural Zone	Assessment criteria	Comment
Aurukun	Aurukun	2017	1	High Impact Industry	No Rural Zone		No threshold table
Balonne	Balonne	2006	4	High Impact Industry	Impact	Planning Scheme	
Banana	Banana	2005	4	High Impact Industry	Impact	Planning Scheme	
Banana	Taroom	2005	2	Noxious Industry	Code		
Barcaldine	Aramac	2006	2	Noxious Industry	If less than 150m ² : Code; Otherwise: Impact	Rural zone code	
Barcaldine	Jericho	2006	2	Noxious Industry	If less than 150m ² : Code; Otherwise: Impact	Rural zone code	
Barcaldine	Barcaldine	2006	2	Noxious Industry	If less than 150m ² : Code; Otherwise: Impact	Rural zone code	
Barcoo	Barcoo	2006	2	Noxious Industry	If less than 150m ² : Code; Otherwise: Impact	Rural zone code	
Blackall Tambo	Tambo; Blackall	2006	2	Noxious Industry	If less than 150m ² : Code; Otherwise: Impact	Rural zone code	

Local Government	Scheme	Year	Category	Definition of Composting	Assessable Devt in Rural Zone	Assessment criteria	Comment
Boullia	Boullia	2006	2	Noxious Industry	If less than 150m2: Code; Otherwise: Impact	Rural zone code	
Brisbane	Brisbane	2014	1	High Impact Industry	Impact	Planning Scheme	
Bulloo	Bulloo	2019	1	High Impact Industry	Impact	No threshold table	
Bundaberg	Bundaberg	2015	1	High Impact Industry	Code		
Burdekin	Burdekin	2011	2	Noxious Industry	Impact	Planning Scheme	IPA scheme
Burke	Burke	2013	3	Industry	Code	Rural zone code, advertising devices code	
Cassowary Coast	Cassowary Coast	2015	1	High Impact Industry	Impact	Planning Scheme	
Central Highlands	Central Highlands	2016	1	High Impact Industry	Impact	Planning Scheme	
Cairns	Cairns	2016	1	High Impact Industry	Impact	Planning Scheme	
Cherbourg	Cherbourg	2013	1	High Impact Industry	Impact	No threshold table	
Carpentaria	Carpentaria	2008	3	Industry	Impact	Planning Scheme	
Charters Towers	Charters Towers	2006	2	Noxious, offensive or hazardous industry	Impact	Planning Scheme	
Charters Towers	Dalrymple	2006	6	Noxious or hazardous industry or Low impact industry	Impact	Planning Scheme	

Local Government	Scheme	Year	Category	Definition of Composting	Assessable Devt in Rural Zone	Assessment criteria	Comment
Cloncurry	Cloncurry	2016	1	High Impact Industry	Impact	Planning Scheme	
Cook	Cook	2017	1	High Impact Industry	Impact	Planning Scheme	
Croyden	Croyden	2019	1	High Impact Industry	Impact	Planning Scheme	
Diamantina	Diamantina	2016	2	Noxious Industry	If less than 150m2: Code; Otherwise: Impact	Rural zone code	
Doomadgee			No scheme				
Douglas	Douglas	2018	1	High Impact Industry	Impact	Planning Scheme	
Etheridge	Etheridge	2005	3	Industry	Impact	Planning Scheme	
Flinders	Flinders	2018	1	Low impact industry or High Impact Industry	If Low Impact Industry and ancillary to rural activities: Code; if High Impact Industry: Impact	Rural Zone Code Planning Scheme	
Fraser Coast	Fraser Coast	2014	1	High Impact Industry	Impact	Planning Scheme	
Gladstone	Gladstone	2015	1	High Impact Industry	Impact	Planning Scheme	
Gold Coast	Gold Coast	2016	1	High Impact Industry	Impact	Planning Scheme	
Goondiwindi	Goondiwindi	2016	1	High Impact Industry	Impact	Planning Scheme	

Local Government	Scheme	Year	Category	Definition of Composting	Assessable Devt in Rural Zone	Assessment criteria	Comment
Gympie	Gympie	2013	1	High Impact Industry	Impact	Planning Scheme	No threshold table
Hinchinbrook	Hinchinbrook	2017	1	High Impact Industry	Impact	Planning Scheme	No threshold table
Hopevale	Hopevale	2014	Not online				Scheme not online
Ipswich	Ipswich	2006	7	Special Industry/ General industry	If more that 200t pa: Impact	Planning Scheme	
Isaac	Nebo	2008	2	Noxious or Hazardous Industry	Impact	Planning Scheme	
Isaac	Broadsound	2005	3	Industry (General)	Code	Broadsound Development Code	
Isaac	Belyando	2008	2	Noxious Industry	Impact	Planning Scheme	
Kowanyama	Kowanyama	2013	1	High Impact Industry	Impact	Planning Scheme	No threshold table
Livingstone	Livingstone	2018	1	High Impact Industry	Impact	Planning Scheme	
Lockhart River	Lockhart River	2015	1	High Impact Industry	Impact	Planning Scheme	
Lockyer Valley	Gatton	2007	4	High Impact Industry	Impact	Planning Scheme	
Lockyer Valley	Laidley	2003	2	Noxious, offensive and hazardous industry	Impact	Planning Scheme	
Logan	Logan	2015	1	High Impact Industry	Impact	Planning Scheme	

Local Government	Scheme	Year	Category	Definition of Composting	Assessable Devt in Rural Zone	Assessment criteria	Comment
Longreach	Longreach	2015	1	High Impact Industry	Impact	Planning Scheme	
Mackay	Mackay	2017	1	High Impact Industry	Impact	Planning Scheme	
Mapoon	Mapoon	2015	Not online				Scheme not online
Maranoa	Maranoa	2017	1	High Impact Industry	Impact	Planning Scheme	No threshold table
Mareeba	Mareeba	2016	1	High Impact Industry	Impact	Planning Scheme	
McKinlay	McKinlay	2019	1	High Impact Industry	Impact	Planning Scheme	
Moreton Bay	Moreton Bay	2016	1	High Impact Industry	Impact	Planning Scheme	
Mornington	Mornington	2014	Not online				Scheme not online
Mount Isa	Mount Isa	2006	3	Industry	Impact	Planning Scheme	
Murweh	Murweh	2007	1	High Impact Industry	Impact	Planning Scheme	No threshold table
Napranum	Napranum	2015	1	High Impact Industry	Impact	Planning Scheme	
Noosa	Noosa	2006	8	Industrial Business Type 2	Impact	Planning Scheme	
North Burnett	North Burnett	2014	1	High Impact Industry	Impact	Planning Scheme	No threshold table
Northern Peninsular			No scheme				Draft scheme
Palm Island	Palm Island	2016	Not online				Scheme not online

Local Government	Scheme	Year	Category	Definition of Composting	Assessable Devt in Rural Zone	Assessment criteria	Comment
Paroo	Paroo	2019	1	High Impact Industry	Impact	Planning Scheme	No threshold table
Porpuraaw	Porpuraaw	2015	1	High Impact Industry	Impact	Planning Scheme	
Quilpie	Quilpie	2018	1	High Impact Industry	Impact	Planning Scheme	No threshold table
Redland	Redland	2006	1	High Impact Industry	Impact	Planning Scheme	
Richmond	Richmond	2005	2	Noxious or Hazardous	Impact	Planning Scheme	
Rockhampton	Rockhampton	2015	1	High Impact Industry	Impact	Planning Scheme	
Scenic Rim	Beaudesert	2007	5	Industry High Impact	Impact	Planning Scheme	
Scenic Rim	Boonah	2006	4	High Impact Industry	Impact	Planning Scheme	
Somerset	Somerset	2016	1	High Impact Industry	Impact	Planning Scheme	
South Burnett	South Burnett	2017	1	High Impact Industry	Impact	Planning Scheme	
Southern Downs	Southern Downs	2012	1	High Impact Industry	Impact	Planning Scheme	
Sunshine Coast	Sunshine Coast	2014	1	High Impact Industry	Impact	Planning Scheme	
Tablelands	Tablelands	2017	1	High Impact Industry	Impact	Planning Scheme	
Toowoomba	Toowoomba	2012	1	High Impact Industry	Impact	Planning Scheme	
Torres	Torres	2007	3	General Industry	Impact	Planning Scheme	

Local Government	Scheme	Year	Category	Definition of Composting	Assessable Devt in Rural Zone	Assessment criteria	Comment
Torres Strait	Torres Strait	2016	1	High Impact Industry	No Rural Zone		No threshold table
Townsville	Townsville	2014	1	High Impact Industry	Impact	Planning Scheme	
Western Downs	Western Downs	2017	1	High Impact Industry	Impact	Planning Scheme	
Whitsunday	Whitsunday	2017	1	High Impact Industry	Impact	Planning Scheme	
Winton	Winton	2006	2	Noxious Industry	If less than 150m ² : Code; Otherwise: Impact	Rural zone code	
Wooribinda	Wooribinda	2014	1	High Impact Industry	No rural Zone		No threshold table
Wujal Wujal			No scheme				
Yarrabah			No scheme				

