# AORA QLD
# ACTION PLANS

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# INTRODUCTION

Queenslanders, governments at all levels and the organics recycling industry have a clearly stated goal for increased recycling; especially the organic byproducts of urban living, industrial production and primary industry activity. We all want to keep organic waste out of landfill and reuse it beneficially and sustainably. Fundamentally, there are two elements required to facilitate this outcome:

- establishment of commercially viable business models to manufacture and market reprocessed products that satisfy sustainable demand.
- Leadership to manage change from current to future practice.

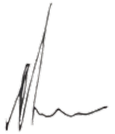
The market for recycled organics (RO) in the urban amenity and landscaping sectors has limited expansion potential beyond organic growth. Recycling more raw material will inevitably result in further downward price pressure and potentially stockpiling without development on alternative markets. While niche opportunities can be found for specific fractions of the organic byproduct stream in power generation, the major untapped market is in agriculture. Education of end users and a focus on product quality and consistency are critical to the development of this market.

Increasing the percentage of organic matter (especially soil organic carbon) in depleted and marginal agricultural soils can significantly improve they productive capacity. Healthy soils have increased water-holding capacity that is increasingly important in times of climatic extremes. Healthier soils are more efficient in nutrient use reducing demand for synthetic fertilisers and their impacts on waterways through runoff and greenhouse gas production form their manufacture and use. Many farmers have no experience of soil health management having spent their careers exclusively using synthetic fertilisers. Education and proof of performance are the keys to changing this approach.

The desired outcome of organic byproduct recycling also requires processing of raw materials at environmentally appropriate facilities and transporting it to end users in agricultural regions. This can only be achieved where the incentives for the byproduct producer, processor and end user are sufficient to make their involvement commercially attractive. It is also critical that all forms of organic byproduct are identified and regulated in a similar way to ensure a level playing field. Currently, there is limited data regarding the volumes of unregulated material that is being recycled. As this is unregulated, the cost structure is altered and the risks associated with contaminants and especially biosecurity are not visible or managed.

Low margins and uncertain markets challenge the capacity of organics recyclers to fund construction of high cost facilities that can mitigate the impact of their activities on local sensitive receptors and neighbors. Multi-million dollar buildings cannot be funded against contracts that terminate within contracted periods.

This policy document seeks to identify strategies which can overcome the obstacles to achieving the outcomes we are all striving for. Fundamental to all of these is the need for all stakeholders to work in partnership to achieve our common goals and open communication is the core of that relationship. As the industry peak body, AORA seeks to facilitate that communication and take a leading role in the development of the recycled organics sector.



Martin Tower
Director (Qld)
Australian Organics Recycling Association Limited

## INTRODUCTION

# AND OVERVIEW OF PROBLEM

The Australian Organics Recycling Association Queensland (AORA QLD) state division has developed this action plan in response to the Queensland Waste Avoidance and Resource Productivity Strategy 2014-2024 (the Queensland Waste Strategy). AORA QLD is responding on behalf of its members to the Governments' request for an industry-led approach to formulating action plans to address the Queensland Waste Strategy's Objectives and Priorities.

AORA QLD agrees with the Government that there has to be a strong focus on shared responsibility for improving Queensland's waste performance. AORA QLD's Action Plans highlight the need to develop:

1. a better understanding total waste resource availability,
2. new markets for products such as soil conditioners, and
3. consistent application of regulation and compliance requirements across all organic recyclers and businesses in the supply chain.



## THE QUEENSLAND WASTE AVOIDANCE AND RESOURCE PRODUCTIVITY STRATEGY (2014-2024)

### VISION

Queensland will become a national leader in avoiding unnecessary consumption and waste generation, adopting innovative resource recovery approaches, and managing all products and materials as valuable and finite resources.

### KEY PRINCIPLES

1. Protecting human health and the environment to secure our future prosperity
2. Sharing responsibility for avoiding unnecessary consumption and improving resource management
3. Recognising the economic, environmental and social costs of waste generation and disposal
4. Recognising regional differences and opportunities
5. Full lifecycle management of resources

### OBJECTIVES

| Driving cultural change | Avoidance and minimisation | Reuse, recovery and recycling | Management, treatment and disposal |
|---|---|---|---|

### PRIORITIES

| | | | |
|---|---|---|---|
| • Awareness and communication<br>• Avoidable consumption<br>• Partnerships, networks and programs<br>• Roles and responsibilities for driving change | • Education and training<br>• Sustainable design<br>• Production efficiency and cost savings to business<br>• Avoidable consumption | • Industrial ecology and infrastructure planning<br>• Green procurement<br>• R&D<br>• Improved data to highlight business opportunities<br>• Regional collaboration and partnerships<br>• Product stewardship<br>• Market development and appropriate incentives | • Infrastructure and planning<br>• Appropriate regulation and enforcement<br>• Full cost accounting of all disposal<br>• Disaster waste management<br>• Litter and illegal dumping<br>• Technology and innovation |

### IMPLEMENTATION

| Queensland Government Action Plan | Action Plan | Action Plan | Action Plan | Action Plan | Action Plan |
|---|---|---|---|---|---|

*Figure 1: The Queensland Waste Avoidance and Resource Productivity Strategy Framework*

# PRIORITY WASTES

The Queensland Waste Strategy identifies a range of priority wastes. Priority wastes are those with high disposal impacts (such as toxicity or greenhouse gas emissions), social impacts, or whose recovery would present resource savings or business opportunities.

Organic waste has been identified in the strategy as priority waste for Queensland. This includes;

- Household:
  - o green waste, and
  - o food waste
- Commercial premises:
  - o hospitality waste, and
  - o food processing waste

Commercial green waste should also be considered a priority waste for Queensland.

AORA QLD members would like to work with the Queensland Government to address their concerns over the identified priority wastes. The intent would be to address future demands for organics recycling and the commercially sustainable disposal of its outputs.

## WHO IS
# AORA QLD

The Australian Organics Recycling Association Queensland (AORA QLD) state division works on behalf of its members to raise awareness of the benefits of recycling organic resources. It aims to act as an advocate for the wider organics resource recovery and reuse industries and to represent their views in a constructive dialogue with policy makers. The Association envisages an industry in which best practice is shared, standards are maintained and surpassed, and makes a positive contribution to safeguarding the environment.

**AORA nationally represents over 150 businesses involved in organics recycling and composting with:**

- an estimated industry turnover of $1 billion,
- capital investment in excess of $2 billion, and
- directly employ over 3,500 people (FTE) in addition to indirectly creating several thousand jobs in infrastructure and collection, transport, distribution and application of products.

## AORA QLD
# VISION

Recycling and reuse is the accepted management practice for surplus organic material and by-products of human activity.

## AORA QLD
# MISSION

AORA QLD works with stakeholders to facilitate the conditions through which surplus organic material can be sustainably and cost effectively recycled for beneficial reuse.

## AORA QLD'S
# PRINCIPLES

- Improve Queensland's response to issues of soil health, food security and human health
- Support for a diverse, competitive, innovative, and profitable industry
- Promotion of good practice and sound environmental management
- Assist in promoting a sustainable, financially viable marketplace
- The recovery and beneficial reuse of organic resources
- AORA QLD will operate to support its members, helping them to achieve their objectives through the development and promotion of good practice and the creation of a sustainable regulatory framework.



## AORA QLD
# OBJECTIVES AND AIMS

AORA QLD members desire to continue to provide an essential service to the community, the organics industry and local government authorities by continuing to recycle organics for optimal reuse.

### OBJECTIVES

AORA QLD's objectives in developing this document in response to the Queensland Waste Strategy are as follows:

1. Highlight the current challenges within the Queensland recycled organics industry which, if not addressed, the industry will be unable to achieve the required increase in processing capacity and meet the Queensland Waste Strategy's targets for landfill diversion rates and projected increases of recycled waste volumes.
2. Have the Queensland Government recognise that AORA QLD members' contributions are an essential service, delivering economic and environmental benefits in line with community expectations.
3. Provide practical input and engagement with all stakeholders including all levels of government to deliver a sustainable industry through, or investment in, best practice processing for optimal organics reuse – thus delivering benefits across the supply chain.

### AIMS

AORA QLD members strives to address the Queensland Waste Strategy Objectives by endorsing the following sector-wide aims;

1. To continue to supply management capacity and services for organics recycling in a sustainable manner as required by current and future Queensland Government Regulation and Policy.
2. To operate in a competitive environment where all participants in the organic recycling supply chain meet the same compliance and regulatory demands.
3. To adopt new innovations, develop new products and seek new markets in energy and agriculture as part of our contribution to climate change mitigation and food security.
4. To continue to be a significant innovator, employer and contributor to Queensland economic output.

## QUEENSLAND WASTE STRATEGY OBJECTIVES AND PRIORITIES

AORA QLD action plans will primarily address the following Queensland Waste Strategy Objectives and Priorities (see Appendix for the complete listing of principles, objectives and priorities).

### THE QUEENSLAND WASTE STRATEGY OBJECTIVES

- Driving cultural change, and
- Reuse, recovery and recycling

### DRIVING CULTURAL CHANGE – PRIORITIES

- Awareness and communication
- Partnerships, networks and programs
- Roles and responsibilities for driving change

### REUSE, RECOVERY AND RECYCLING – PRIORITIES

- Industrial ecology and infrastructure planning
- Green procurement
- Improved data to highlight business opportunities
- Regional collaboration and partnerships
- Product stewardship
- Market development and appropriate incentives

Each Action Plan identifies which of the Queensland Waste Strategy Objectives and AORA QLD Aim that action is designed to address.

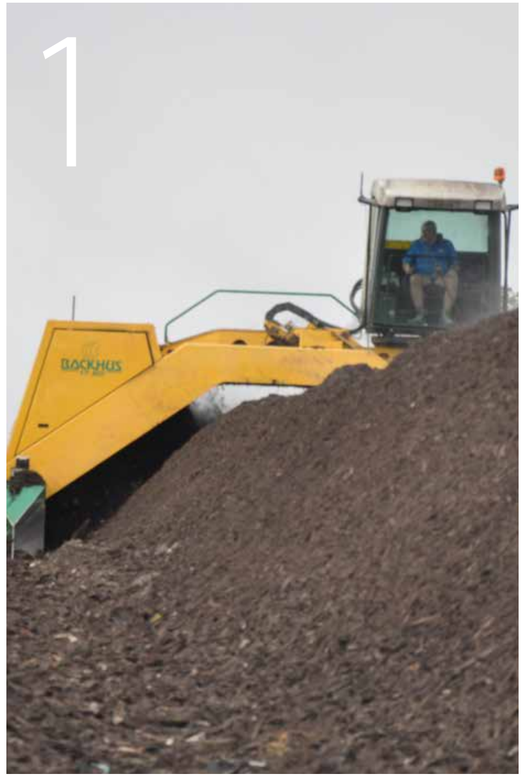
# AORA QLD ACTION PLANS

## Theses AORA QLD plans aim to ensure:

1 Member businesses are able to meet future demands for organic recycling services in the manner outlined in the Strategy's key principles. These principles are:

- Protecting human health and the environment to secure our future prosperity.
- Sharing responsibility for avoiding unnecessary consumption and improving resource management.
- Recognising the economic, environmental and social costs of waste generation and disposal.
- Recognising regional differences and opportunities.
- Full lifecycle management of resources

2 The recycled outputs re-enter the Queensland economy in a productive and commercially sustainable manner.




# ACTION PLAN 1
# UNDERSTANDING THE OPPORTUNITY AND THE CHALLENGE

## LINK TO QUEENSLAND WASTE STRATEGY OBJECTIVES

- *Driving cultural change*
- *Reuse, recovery and recycling*

## AORA QLD AIMS

1. *To continue to supply processing capacity and services for organics recycling in a sustainable manner as required by current and future Queensland Government Regulation and Policy.*
2. *To operate in a competitive en vironment where all organic recyclers (including primary producers) meet the same compliance and regulatory demands.*
3. *We advocate pasteurisation of organic material re-entering the food chain.*



## SITUATION

**Currently there is an incomplete understanding of the organics recycling opportunity in Queensland. This is predominantly due to three issues:**

1. Some organic materials are being recycled via Beneficial Use Approvals, where the generator and/or supplier does not conduct a prescribed Environmentally Relevant Activity (ERA) as defined by the Queensland Department of Environment and Heritage Protection's Environmental Protection Regulation 2008. The pertinent information on these activities are handled separately from regulated wastes.
2. Some wastes such as manures, agricultural animal mortality carcasses, and chipped trees do not enter the regulated or beneficial use value chains at all, making it difficult to account for and creating potential biosecurity concerns through the spread of pathogens and pests in the unpasteurised wastes.
3. Government data collected only considered materials received from licenced ERA facilities. There is no information available on the quantity, provenance or end destination.

In addition, the cost of compliance and of a facility conducting a prescribed ERA is significant. Organic recycling under a Beneficial Use Approval (or without any approval) is cheaper and less controlled. As a result, unregulated operators are able to charge less for their products, which significantly impacts the whole recycled organics market.

Both types of activity are attempting to meet the same goals of selling product into an established, and quite often the same, market. This creates pressure on regulated businesses to somehow compete with businesses not operating under the same conditions (cost, structure and regulation).

Finally, inferior quality products created by unregulated business and marketed under the generic term 'compost' adversely impact on market acceptance of all products termed composts. Indiscriminate use of the word compost means consumers are not getting what they pay for. The damage to consumer confidence in the industry's products is the result of inconsistent application of Quality Assurance measures – which impacts the whole industry. Setting the minimum bar for use of the term compost as safe (i.e. meeting AS4454) and compliant (produced at a ERA licensed facility) goes some way to regaining that confidence and levelling the 'playing field' for businesses. This is a low-cost initiative and defines the whole industry's operating conditions.

## AORA QLD ACTION PLAN

- An audit be conducted of all organic materials within Queensland. The scope of audit should include materials currently going to landfill and that being reused or recycled through Beneficial Use Approval and, where possible, unregulated activities.
- The Queensland Government consult with AORA QLD and other stakeholders to determine the most equitable manner in which to transition to a competitive market for recycled organics where all suppliers are operating on the same level playing field; then facilitate its implementation.
- There be a high level of traceability and responsibility for recycled organics product suppliers to minimise biosecurity risks described in issue 2 above.
- A minimum standard of pasteurisation (as described in AS 4454 Composts and Soil Conditioners) to be applied to products (re)-entering the food chain.

## THE ACTION'S OUTCOMES

1. Assist the industry to better understand the entire scope of the potential organic resource and subsequent opportunities within Queensland; and,
2. Develop and resource an action plan to facilitate a competitive, level playing field ensuring organic resource are put to best economic use, using compliant processes and practices.


# ACTION PLAN 2
# MARKET DEVELOPMENT

## LINK TO QUEENSLAND WASTE STRATEGY OBJECTIVES

*Reuse, recovery and recycling*

## AORA QLD AIM

*To adopt new innovations, develop new products and seek new markets in energy and agriculture as part of our contribution to climate change mitigation and food security.*

## SITUATION

**The Queensland Waste Strategy calls for increased diversion of organics from landfill so that the resource value is more readily recognised and realised. If finished product markets recognise the value of recycled organics then these materials will 'by-pass' landfill removing the need for prescriptive diversion. Current markets for recycled organics such as soil amendment are near saturation in Queensland urban areas. It is vital that new products and new markets be developed to accommodate the increase in recycled organics processed. Otherwise they will saturate or flood local markets, causing unsustainable commercial conditions and potentially adverse environmental outcomes. Alternatively, gate fees will have to increase significantly, as they did in NSW, to cover the economic burden of processing and disposing of these organic wastes.**

Agriculture markets are relatively conservative when it comes to practice change and adopting new products without proof of performance and financial returns. Past experience suggests the most effective method for driving adoption in these markets is by generating demand 'pull' for recycled organics through short-term programs including;

- Demonstration of recycled organics' efficacy in the relevant market sectors, and
- End-user incentives or demand stimulation for recycled organics.

These short-term programs will overcome the initial barriers for adoption and enable a new economically viable market for recycled organics. AORA QLD is confident that, with the right assistance and encouragement, future agricultural markets' demand will outstrip all available supply.

Recycled organics also have a significant role to play in Queensland's food security and climate change mitigation strategies. Soil amendments and other recycled organic products from AORA QLD industry members are renewable, high in fixable carbon and beneficial to soils. A fundamental benefit of improving soil health through addition of organic material is its ability to increase the water holding capacity of the soil. This factor alone offers substantial crop yield benefits in times of climatic extremes. These new products can also reduce farmer reliance on non-renewable fertilisers and potentially generate positive climate change mitigation outcomes and reduce the impact of agriculture on stressed and depleted land, river and reef systems.

By-products of organic recycling could also enter the renewable energy value chain. Although this is not core business for most AORA QLD members, some members are collaborating with businesses that value this product and are interested in trialling it as a fuel source.

Existing urban amenities markets (landscape yards, commercial projects, development etc) remain immature, undervaluing existing products and services through a lack of product knowledge, differentiation and non-compliant operators. As the largest existing market it cannot be ignored, as it is the bedrock of the industry. AORA QLD notes that other mature markets can appear saturated but continue to grow through innovation and investment.

## AORA QLD ACTION PLAN

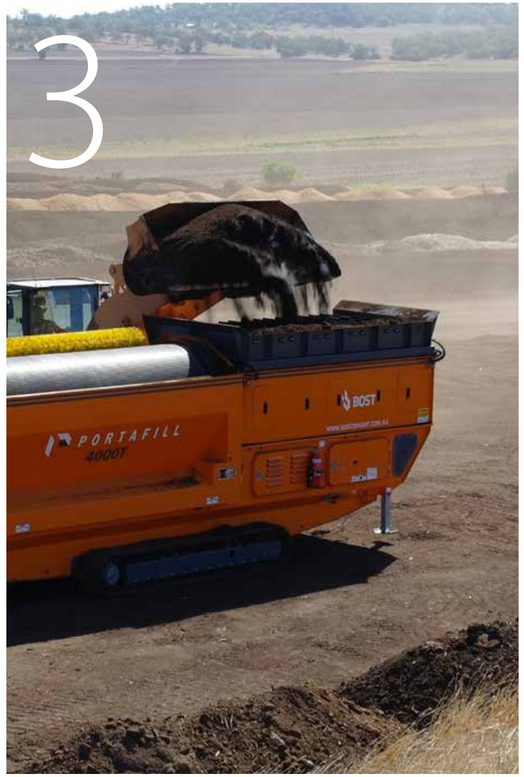
AORA QLD suggests these opportunities will require a significant attention and facilitated development in order to realise benefits to Queensland. Some of the critical areas to address are;

- Better understanding of the likely increase of quality and customer/end-user product specification, so as to address new market specific demands.
- Innovations in processing methodologies and technology for enhanced product quality assurance and consistency demanded by these new market sectors.
- Perceived and real risk and rate of uptake/adoption of new products by businesses in these new markets. There needs to be significant focus on collaboration, agri-extension assistance and methods for incentivising and supporting early adopters of these products in sectors such as agriculture and broadacre cropping.
- Encouraging source separation of raw material/waste to ensure a clean, contaminant free, recycled organic finished product.

## THE ACTION'S OUTCOMES

As the value and volume of finished product sales increases through the development of new products and markets it will:

- Decrease processors' reliance on gate fees as a source of income.
- Accelerate the update and adoption of best practice processing.
- Encourage the development of a circular economy returning nutrients and soil health to areas where they can achieve maximum benefit for agriculture.
- Reduce the use of synthetic fertilisers and nutrient run off.

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# ACTION PLAN 3
# GEARING UP FOR CHANGE

## LINK TO QUEENSLAND WASTE STRATEGY OBJECTIVES

*Reuse, recovery and recycling*

## AORA QLD AIMS

1. *To continue to supply processing capacity and services for organics recycling in a sustainable manner as required by current and future Queensland Government Regulation and Policy.*
4. *To continue to be a significant innovator, employer and contributor to Queensland economic output.*



## SITUATION

**The Queensland Waste Strategy sets out many challenges and opportunities for Queensland, one of which is increased recycling targets where landfill disposal bans could be used to complement the strategy.**

Increased recycling targets and banning materials from landfill alone will not address the disposal of recyclable material in landfill. A key challenge will be the development of necessary infrastructure to meet the additional demand for organics processing generated by any legislation designed to divert organic wastes from landfill. For example, if 90-95% of all MSW green waste is diverted from landfill there will be a 160 000 tonnes increase in demand for organics processing in South East Queensland . AORA QLD considers this to be a very conservative number.

Currently there is no capacity to receive Food Organics in the Queensland South East. At the moment one local government authority in the SE corner is preparing to tender for 75 000 tonnes per annum of Food Organics. There are seven large local government authorities in this region. If all were to require similar volumes of Food Organics recycling this would amount to over 550,000 tonnes of new 'greenfields' capacity to be developed within this highly urbanised region. (Note - these tonnages do not account for the proper processing of unregulated wastes.) The implementation of the Queensland Waste Strategy without these considerations will place extreme strain in the existing system and put current and new participants in the organic waste recycling supply chain at risk.

The proceeds of the sale of outputs of organics processing is a significant contributor to business viability. If there is no support for efforts to develop new products and seek new markets (as discussed in Action Plan 2) gate fees will have to increase significantly to cover the economic burden of processing and disposing of these organic wastes; in addition the increase in organics processed will potentially saturate or flood local markets, causing unsustainable commercial conditions and potentially adverse environmental outcomes.

The high level of urbanisation within South East Queensland makes establishment of economically viable, greenfield processing sites virtually impossible – particularly in the anticipated timeframe for practice change. The current organic recycling operators will be required to adsorb the additional load. This has the potential to bring significant operational/environmental risk to these businesses which, if not addressed, could cause perverse environmental outcomes through business closures.

There are technological solutions to this problem which can be adapted to the local operating environment. AORA QLD members have been actively pursuing such options. But, as noted in the Strategy (page 4, para. 3) – investment and access to capital in the industry remains a challenge due to:

- the difficulty of locating appropriate sites and associated risks and time delay in gaining approval for the infrastructure (both greenfield and expansion),
- policy uncertainty with respect to recent Landfill Levy and Carbon Tax changes,
- certainty of tenure in a business reliant on local government and their cycle of tenders and contracts, and
- low level of acceptance of recycled materials in the end-user (e.g. agricultural) market place.

## AORA QLD ACTION PLAN

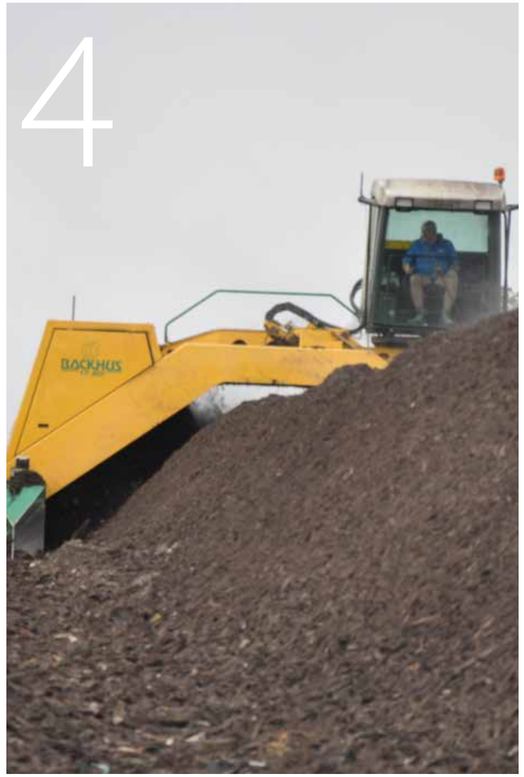
Assistance is required for investment in new processing technology and its adaptation to local conditions in the form of demonstration projects. This will reduce technological and project risk for the next wave of businesses, which will enable them to secure project finance more easily.

The AORA QLD and member organic recyclers within the south east corner are keen to work with the Queensland Government and relevant local government authorities to ensure a smooth and operationally sustainable transition to maximum recovery of organics.

## THE ACTION'S OUTCOMES

Enable processors to adopt best practice operations, which will

- operate in a cost effective manner
- provide higher quality finished product to meet demands of new and current markets
- Significantly reduce the impact of processors on the surrounding community (noise, odour, run off etc.) increasing our compatibility with an urban encroachment.

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# ACTION PLAN 4
# DISASTER RELIEF PLANNING FRAMEWORK

## LINK TO QUEENSLAND WASTE STRATEGY OBJECTIVES

- *Driving cultural change*
- *Reuse, recovery and recycling*

## AORA QLD AIMS

1. *To continue to supply processing capacity and services for organics recycling in a sustainable manner as required by current and future Queensland Government Regulation and Policy.*
2. *To operate in a competitive environment where all organic recyclers meet the same compliance and regulatory demands.*

## SITUATION

**Major natural events such as severe storms, cyclones and flooding regularly encountered in Queensland produce significant amounts of green waste and organics to be processed in a very short period of time. Material generated in the aftermath of these events has been largely seen as being too hard to manage or process lawfully.**

Waste Recycling Industry Queensland (WRIQ) developed action plans in response to the Queensland Government's Waste Avoidance and Resource Productivity Strategy (2014-2024). WRIQ Action Plan 5, 'Recycled Organic Waste Disaster Relief Planning framework' addresses the safe and lawful processing of food and green waste in the aftermath of a natural disaster.

## AORA QLD ACTION PLAN

AORA QLD agrees with and endorses this WRIQ action plan.

## THE ACTION'S OUTCOMES

Safe and compliant management and optimal reuse of a resource that would otherwise be lost to the system.

# CONCLUSION

AORA QLD understands the need to develop measures, KPIs and reporting processes designed to determine the efficacy relevant action plans. It is keen to engage with the Queensland Government through the relevant departments to determine the best approach to address this need and to ensure the reporting and its contents and timing suits both parties.


# APPENDIX
# QUEENSLAND WASTE AVOIDANCE AND RESOURCE PRODUCTIVITY STRATEGY (2014-2024) PRINCIPLES AND OBJECTIVES

The Principles and Objectives from the Queensland Waste Strategy are reproduced here for reference and completeness.

## PRINCIPLE 1

### PROTECTING HUMAN HEALTH AND THE ENVIRONMENT TO SECURE OUR FUTURE PROSPERITY

Good management of resources is a benefit to our society, economy and environment.

## PRINCIPLE 2

### SHARING RESPONSIBILITY FOR AVOIDING UNNECESSARY CONSUMPTION AND IMPROVING RESOURCE MANAGEMENT

Shared responsibility and commitment from those involved in selling, buying, using and disposing of products and material streams. This principle requires all parties to account for the environmental costs and impacts associated with goods and materials throughout their lifecycles. This principle aligns with Queensland's Waste Reduction and Recycling Act 2011 which states those who generate waste should retain responsibility for its management.

## PRINCIPLE 3

### RECOGNISING THE ECONOMIC, ENVIRONMENTAL AND SOCIAL COSTS OF WASTE GENERATION AND DISPOSAL

The true cost of waste must take into account the negative economic, environmental and social costs to government, business and the community. Costs include the impact of waste on the environment and human health, declining landfill space close to major population centres, the rising costs of virgin materials and the loss of valuable resources, increasing transport costs, and the large number of landfills that will require remediation at great cost to the community and governments.

## PRINCIPLE 4

### RECOGNISING REGIONAL DIFFERENCES AND OPPORTUNITIES

Queensland's geographic, demographic, socioeconomic, and environmental and health differences all require consideration. This principle recognises that a 'one size fits all' approach is impractical, given the divergence of circumstances around the state, and that local solutions are best fit.

Strategic regional collaboration can effectively maximise the benefits from shared services, infrastructure and expertise to deliver viable, accessible and sustainable local resource recovery solutions. This principle also recognises that local solutions create local jobs and minimise the impact of transport of waste and resources.

## PRINCIPLE 5

### FULL LIFECYCLE MANAGEMENT OF RESOURCES

We reach our goal when we draw the most sustainable benefit from the wastes that are generated and keep the material circulating in the economy for as long as possible. This principle aims to preserve the on-going value of material streams by ensuring the waste by-products from one process are channelled into another.

## OBJECTIVES

### DRIVING CULTURAL CHANGE

**All stakeholders recognise their role in meeting the vision of the waste strategy, and are informed and empowered to participate in achieving its goals and objectives**

**Priorities**

1. Awareness and communication
2. Avoidable consumption
3. Partnerships, network and programs
4. Roles and responsibilities for driving change

### AVOIDANCE AND MINIMISATION

**Queensland will realise all opportunities (environmental, economic and social) from maximising sustainable consumption and production**

**Priorities**

1. Education and training
2. Sustainable design
3. Production efficiency and cost savings to business
4. Avoidable consumption

### REUSE, RECOVERY AND RECYCLING

**Queensland will optimise economic benefits from reuse, recovery and recycling**

**Priorities**

1. Industrial ecology and infrastructure planning
2. Green procurement
3. R&D
4. Improved data to highlight business opportunities
5. Regional collaboration and partnerships
6. Product stewardship
7. Market development and appropriate incentives

### MANAGEMENT, TREATMENT AND DISPOSAL

**Queensland will reduce the impact of waste on human health and the environment through improved waste practices**

**Priorities**

1. Infrastructure and planning
2. Appropriate regulation and enforcement
3. Full cost accounting of all disposal
4. Disaster waste management
5. Litter and illegal dumping
6. Technology and innovation

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