C.3.4 Site Based Management Plan - Compost

SITE BASED MANAGEMENT PLAN

Compost

R81897 AU004672
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6 Feb 2023

rpsgroup.com

Document status

Version	Purpose of document	Authored by	Reviewed by	Approved by	Review date
0	Draft Site Based Management Plan for comment	G. Vinall M. Palmer	M. Davis	M. Davis	6 Feb 23

Approval for issue

Megan Davis		6 February 2023

As amended by Epic Environmental on 26 September 2023

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1 INTRODUCTION

RPS AAP Consulting Pty Ltd have been engaged to prepare a Site Based Management Plan (SBMP) for the proposed Environmentally Relevant Activity (ERA) 53(a) Organic Material Processing of more than 200 tonnes per annum by composting, for the Scenic Rim Agricultural Industrial Precinct (SRAIP) project located at 6200 – 6206 Cunningham Highway, Kalbar Queensland, properly described as Lot 3 and Lot 4 on SP192221, refer to **Appendix A.**

The proposed ERA is defined as:

- ERA 53 (a) – Organic Material Processing of more than 200 tonnes per annum by composting.

1.1 Purpose

The purpose of the EMP is to outline work practices which address the specified regulatory requirements under the *Environmental Protection Act 1994* to minimise the risk of potential environmental harm operations and comply with Environmental Authority (EA).

It is noted that requirements under the *Workplace Health and Safety Act 2011* are not included in this document and will be addressed by Kalfresh separately.

1.2 Objectives

The objectives of this SBMP are to:

- Identify environmental values of the project site and surrounds;
- Determine the potential risk of adverse environmental impacts associated with the operations
- Describe measures to minimise the risk of environmental harm;
- To ensure all environmental safeguards are implemented correctly;
- Provide a mechanism for review and continual improvement of environmental performance; and
- Provide a reporting, monitoring and training schedule.
- Describe details involving the handling and storage of hazardous chemicals and digestate.

1.3 Implementation

Kalfresh is responsible for implementing the SBMP for the project and ensuring compliance with the nominated requirements. Kalfresh is also responsible for ensuring appropriate corrective actions arising from a failure to meet stated performance requirements are implemented.

Where contracts are entered into for work associated with this project, Kalfresh shall:

- Induct the employees on the requirements of the SBMP and Kalfresh expectations;
- Ensure that all employees comply with the requirements of the SBMP;
- Require the employees and its contractors to report non-conformances with the SBMP; and
- Monitor and measure the performance of employees and its contractor against the requirements of the SBMP.

2 PROJECT DESCRIPTION

2.1 Background

Kalfresh propose to develop land surrounding its current vegetable processing facility located in Kalbar to create a rural enterprise precinct. The SRAIP will create a place where primary rural activities and secondary rural industry activities are located within proximity to each other and transport links to form a hub for the local food production industry. The current concept plan for the precinct is provided in **Appendix A,** including the location of the proposed composting activity.

The SRAIP will occupy a total of 40 hectares of land with the proposed composting activity utilising 15.4 ha (separate to the 40 hectare SRAIP) located in the northwest portions of Lot 3 and Lot 4 SP192221 (refer to **Appendix A** and **B**). The proposed composting facility lots are comprised as follows:

- Lot for windrow pad (A) – 3.92 hectares
- Lot for windrow pad (B) lot – 2.57 hectares
- Lot for feedstock holding bay – 2.08 hectares
- Lot for plant and equipment storage, parking, office amenities, waste storage and dam – 2.72 hectares
- Lot for finished product storage – 1.5 hectares
- Lot for unspecified activities – 1.66 hectares

It is noted the above areas total 14.45 hectares. Kalfresh currently undertakes a small-scale composting operation over part of the subject area.

The balance of the area is currently used for grazing which shall be developed to accommodate multiple compost pads, feedstock holding bays and other associated infrastructure across an area. Surrounding land to the north and east (i.e. topographically downgradient of the subject area) is owned and operated by Kalfresh for cropping and grazing. Land to the south and west is also used for grazing by Kalfresh (Lot 2 RP44024) and private landholders. A hard rock quarry is located ~ 100 m northwest of the subject area.

2.2 Operational Description

Production of up to 50,000 tonnes per annum (tpa) of total (finished) compost product is proposed as part of the overall SRAIP concept to provide high quality organic fertiliser for existing crop production within the precinct and other cropping by Kalfresh and independent local producers.

The activity will utilise typical open windrow composting methods from feedstocks including green waste, wood chip, vegetable waste, anaerobic digestion liquid and solid fraction, ~~chicken litter~~ and used mushroom substrate. All material that requires shredding or sorting to be suitable for composting shall be imported in pre-processed forms negating the need for onsite shredding or sorting. Chicken Manure was previously proposed as a feedstock to this Composting Activity. Since lodgement of the RDAIR, Kalfresh confirm this feedstock is no longer proposed to be utilised as solid digestate from the AD facility will be used instead. This report has been updated to reflect this change. Chicken Manure has been removed from Table 2 and Table 3 of this report. All other volumes of feedstocks remain unchanged.

The activity will not be utilising a GORE cover system which was a preliminary design option. Whilst a GORE cover can increase the rate of compost production, the organic composting methods described above will better suit Kalfresh's operational requirements.

2.3 Infrastructure, Plant and Equipment

Descriptions of the infrastructure, plant and equipment directly associated with the activity are summarised in **Table 1.** An indicative site layout showing fixed infrastructure is provided in **Appendix B.**

Table 1 Summary of Infrastructure, Plant and Equipment

Infrastructure, plant and equipment	Details
Compost pads	Windrow Pad (A) 3.92 ha and Pad (B) 2.57 ha constructed by expansions of existing southwest pad by cut-fill within the subject area. Pads shall be constructed with a ~~low permeability~~ impervious base and wearing layer (gravel / rock) with leachate collection system.
Feedstock holding bays	Open bays of 2.08 ha constructed as part of the windrow pads.
Finished product storage	Open storage area of 1.51 ha constructed by expansion of existing northeast windrow pad by cut-fill within the subject area.
Plant and equipment storage & maintenance	Onsite storage on constructed hardstand area. Existing maintenance facilities located at Kalfresh processing complex on Cunningham Highway.
Leachate containment system (LCS)	LCS incorporating: – leachate barrier system – 100 % separation of leachate and stormwater – minimum design capacity for one-in-ten ARI (24 hour) storm events plus additional desired storage for leachate reuse and/or evaporation.
Stormwater management system	Stormwater drainage and basin incorporating: – 100 % separation leachate and stormwater – minimum design capacity for one-in-ten ARI (24 hour) storm events – spillway design for 50 year ARI critical event.
Windrow turner	Task specific windrow turner as per below examples. Output capacity of each machine shall vary to produce windrow height and width based on pad area and target productivity rates. Start-up phase shall utilise trailer turner (~ 1 x 1.8 m H/W) driven by standard tractor (e.g. 70 – 150 hp). Expansion phase shall utilise self-propelled turner (~ 2.0 m x 5.5 m H/W) to achieve higher productivity rates.
	 Tractor-assisted trailer windrow turner.  Self-propelled windrow turner.
Front end loader	Standard front-end loader (e.g. small-wheel loader – 3 – 5 m^3 bucket)
Tanker truck(s)	Standard water tanker style truck(s) with two-way pumping system.
Body (tip) trucks	Standard body trucks (e.g. 13 – 25 t dual axle, truck & dog or semi tippers)
Ancillary equipment	Portable pumps and hoses (e.g. 2inch flex-drive)

2.4 Feedstock quantities and compost productivity rates

The maximum productivity rate for the activity shall be up to 50,000 tpa of total compost product based on approximately 65% conversion of the feedstocks to be utilised, as detailed in **Table 2**. Digestate liquid fertiliser shall be added as required for compost wetting to maintain optimum windrow moisture. At peak capacity the activity will produce 4 – 5 batches of 10,000 t – 12,500 t per annum based on a typical 12 week composting period per batch.

Table 2 Feedstock Summary

Feedstock	Approx. quantity (tpa)	Primary source	Category – potential environmental impact
Green waste	Up to 46,000	Municipal green waste – tub ground Wood chip – local tree loppers	Low
Digestate solid fraction	Up to 25,000	SRAIP anaerobic digestor	Low ~~- medium~~
Vegetable ~~food~~ waste	Up to 9,000	SRAIP processing facilities	~~Low -~~ Medium
~~Chicken litter~~	~~Up to 5,500~~	~~Local producers~~	~~Low - medium~~
Mushroom substrate	Up to 5,500	Local producers	Low

Table notes

Feedstock category (potential environmental impact) derived from Guideline: Open windrow composting under environmentally relevant activity 53(a) - organic material processing by composting (DES 2018)

2.5 Feedstock and product handling

All feedstock and finished product shall be placed directly into open holding bays with leachate collection located in the southwest portion of the subject area (**Appendix C**). Basic construction details of the holding bays are provided below.

Under Schedule 1 of the Model operating conditions ERA 53(a)—Organic material processing by composting (ESR/2015/1665 Version 4.00) all proposed feedstock types have a Low or Medium Odour Rating, and do not require to be received and stored in an enclosed system. Weltec has assessed the odour risk of the solid digestate feedstock, and has determined that it has an Odour Risk Category of 'Low'. This assessment has been provided in Appendix C.3.5 Odour Potential of Solid Digestate for composting activity – odour risk rating assessment.

Feedstock materials shall be imported to the site by supplier operated trucks (i.e. green waste, ~~chicken litter,~~ mushroom substrate), or relocated internally by Kalfresh operated trucks from SRAIP processors and AD facility (i.e. digestate solid fraction, and vegetable waste). All feedstocks shall be subject to strict acceptance criteria including pre-processing (shredding and sorting) prior to receipt at the composting site.

Onsite storage of raw materials shall be necessary to acquire enough feedstock to supply the next batch of compost. Proposed storage quantities and timeframes for each feedstock at any given time are provided in **Table 3**, which take into consideration quantities required, availability, and leachate and odour risks associated with specific materials.

Table 3 Feedstock storage – maximum quantities and holding times

Feedstock	Approx. quantity (t)	Holding time (weeks)
Green waste	Up to 7,500	Cumulatively up to 14 weeks
Digestate solid fraction	Up to 2,500	1 - 2 days – imported from AD storage building as required
Vegetable ~~food~~ waste	Up to 1,500	Cumulatively up to 4 weeks
~~Chicken litter~~	~~Up to 1,000~~	~~Cumulatively up to 4 weeks~~
Mushroom substrate	Up to 1,000	Cumulatively up to 14 weeks

On commencing a new compost batch, a loader, or similar plant, shall be used to transfer feedstock

from the holding bays to the composting pads for mixing and windrow formation by a windrow turner. Finished product shall be transferred from the compost pad(s) into stockpile as soon as practicable following completion of the composting cycle. A loader, or similar plant, shall be used to load Kalfresh or customer operated trucks with the finished product for on-site or external use.

2.6 Windrow preparation and blending

All feedstocks will be tested for C:N ratio and the feedstock ratios will be calculated to ensure that the C:N ratio of the aggregate mixture is within the 25-30:1 target ration.

Green waste will be laid out in lines with front end loader (FEL) first. Feedstocks will be blended as per calculations by 'patting down' wood chips with the FEL and laying calculated quantities of additional feedstocks along the length of the windrow to achieve the target C:N ratio. The windrow turner will then pass over the feedstocks to blend and lay out windrow. Further blending will occur during subsequent windrow turns.

Blending ratios will be subject to change depending on feedstock availability however will abide by the following rules:

- C:N ratio between 25-30:1
- Digestate solid fraction to green waste/wood chips ratio between 1:3 and 1:4

Documented standard operating procedures (SOP) will be prepared for the operator which aligns with the methodologies specified above, and the conditions set within the environmental authority.

2.7 Windrow turning and pasteurisation

Windrow turning and pasteurisation shall follow the process detailed in AS 4454-2012: Composts, soil conditioners and mulches, as summarised below:

- Windrows will be turned at least four times to ensure all material is exposed to at least 55ºC for three consecutive days and for at least 15 days during the composting period:
- temperature will be monitored using a temperature gauge and data logged.
- when the internal windrow temperature has been maintained for three consecutive days above 55ºC the windrow will be turned.
- Water or liquid digestate is added, from both the facility runoff (onsite leachate and/or stormwater) and bulk water supply (if required), to ensure moisture content of between 40% and 60% is maintained.
- The compost is windrowed at the above temperature requirements and turned for a minimum of 12 weeks.
- Once the pasteurisation process is complete the material will be stockpiled for internal use, or sale.

2.8 Compost area design and construction

Operational areas for the compost pads, holding bays and finished product storage shall be constructed with ~~low permeability~~ impervious bases and walls as part of the overall leachate barrier and collection system. The concept layout of the site (**Appendix B**) has been designed to maintain separate leachate collection and stormwater management systems to the extent practicable.

Design and construction standards and principles of these and other key environmental aspects of the activity's establishment and operation such as site access, waste storages are discussed in Section 6.

3 ENVIRONMENTAL COMMITMENTS

Kalfresh is a business that has good farming techniques at its core. It's a business run by farmers, with a constant focus on the needs of our customers. The owners control all decisions, from seed selection, through to harvest, packing and distribution.

We're passionate about creating the freshest, tastiest, nutrient-rich produce possible. Our farming philosophy is driven by the belief that a happy plant is a healthy plant.

Over the years we've honed our farming system to ensure it is environmentally sustainable and that our soil health is excellent.

Our sustainable farming system ensures the health and viability of our soil and of our crops. Kalfresh commit to comply with the relevant environmental legislation and EA conditions.

3.1 Relevant environmental legislation

Key legislation relevant to the activity is detailed below:

- *Biosecurity Act 2015*
- *Environmental Protection Act 1994*
- *Environmental Protection Regulation 2019*
- *Environmental Protection (Water and Wetland Biodiversity) Policy 2019*
- *Bremer River environmental values and water quality objectives Basin No 143 (part) including all tributaries of the Bremer River 2010*
- *Environmental Protection (Air) Policy 2019*
- *Environmental Protection (Noise) Policy 2019*
- *Environmental Protection (Regulated Waste) Amendment Regulation 2018*
- *Land Protection (Pest and Stock Route Management) Act 2002*
- *Nature Conservation Act 1992*
- *Vegetation Management Act 1999*
- *Water Act 2000*
- *Waste Reduction and Recycling Act 2011.*

3.1.1 Relevant standards and guidelines

The following documents describe standard and guidelines applicable to the activity:

Erosion & Sediment Control

- Best Practice Erosion and Sediment Control (IECA 2008)
- Environmental Management Systems
- AS ISO 14001: 2016 – Environmental Management Systems
- AS/NZS ISO 31000:2009 Risk Management – Principles and Guidelines

Feedstock and end-product quality

- AS 4454-2012: Composts, soil conditioners and mulches
- Determination of Acceptable Levels of Preservative Treated Timber in Timber Reuse Applications (J. Hann et.al. 2010)

Hazardous materials

- AS 1940: 2004 – The storage and handling of flammable and combustible liquids
- Managing risks of hazardous chemicals in the workplace – Code of Practice (SWA 2018)

Noise

- Noise Measurement Manual (ESR/2016/2195, DEHP 2013a)

Water quality

- *Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZG 2018)*
- *AS/NZS 5667-1998: Water quality – Sampling*
- *Monitoring and Sampling Manual (DES 2018a)*
- *Queensland Water Quality Guidelines (DEHP 2013b)*
- *Guideline: Environmental Protection (Water and Wetland Biodiversity) Policy ~~2009~~ 2019 - Deciding aquatic ecosystem indicators and local water quality guidelines (DES ~~2018b~~2022)*

4 ROLES AND RESPONSIBILITIES

4.1 Site Manager

The Site Manager is responsible for promoting and maintaining good environmental management and ensures that this SBMP is effectively implemented. The Site Manager is required to support the Site Manager and hold them accountable for their specific responsibilities. The Site Manager is responsible for taking prompt remedial action to eliminate any non-compliance or environmentally risky conditions. The Site Manager must investigate and address complaints and incidents. The Site Manager is responsible for inducting all workers and subcontractors and directing site activities in accordance with this SBMP.

The Site Manager is responsible for taking all practical measures to ensure the site is operating according to this SBMP, and without risks to the environment. The Site Manager is responsible for detecting any non-compliance or environmentally risky conditions by undertaking regular inspections. If the Site Manager does not have the necessary authority to fix a problem, they are responsible for reporting the matter promptly and recommending remedial action to the Operations Manage.

4.2 All Workers

All workers are required to attend site inductions and follow this SBMP. All workers must undertake site works and comply with the general environmental duty as outlined within Section 319 of the *Environmental Protection Act 1994* and a duty to notify of environmental harm as outlined within Section 320 of the *Environmental Protection Act 1994*. Workers must undertake activities in accordance with this SBMP and report all incidents, spills or non-conformances.

4.3 Subcontractors

All subcontractors engaged to perform work for Kalfresh are required, as part of their contract, to comply with this SBMP and to comply with directions from the company's designated officers. Failure to comply will be considered a breach of the contract and sufficient grounds for termination of the contract.

4.4 Environmental Reporting Structure

The responsibilities and reporting structure for key environmental management roles at the site have been broadly described in **Table 1** below.

Table 4: Site Reporting Structure

Position	Responsibilities and authorities
Chief Executive Officer (CEO)	Primary person responsible for preparation and implementation of the SBMP. Compliance with environmental requirements of the operation, including all applicable legislation, and consent conditions. Development and maintenance of standard operating procedures (SOP) and environmental control procedures (ECP). Training, awareness and competency of activity personnel. Communicating and directing the above to operation staff including activity management, site workers, sub-contractors and suppliers as applicable. Allocation of resources. Corrective and preventative action including emergency preparedness and response.

	Reporting and investigating any environmental non-conformances, complaints, incidents/emergencies or breach of approval conditions to the appropriate authorities. Environmental record management and reporting. Monitoring and review of environmental performance, and improvement opportunities.
Composting Supervisor (DS)	On-the-ground implementation of the SBMP. Assisting the CEO and HR Manager in training, awareness and competency of operation personnel. Assisting the CEO in monitoring and review of environmental performance, and improvement opportunities. Supervision of feedstock acceptance – criteria and management. Waste and resource recovery management. Servicing and maintenance of plant and equipment. Inspection and monitoring. Site maintenance.
Human Resources (HR) Manager	Assisting the CEO and DS in training, awareness and competency of operation personnel.
Purchasing Manager	Communication and implementation of feedstock acceptance criteria for imported material.

5 ENVIRONMENTAL VALUES RISK ASSESSMENT

The following section describes risks to environmental values and likely magnitude of the impacts generated by the proposed development.

5.1 Risk Assessment Synopsis

The risk assessment adopted is a qualitative risk-based approach designed to assess risk based on the likelihood of an environmental impact or event occurring (refer to **Table 2** – Definitions of Likelihood), and the consequences of the occurrence on the surrounding environmental values (**Table 3** – Definitions of Consequence). The likelihood and consequences are scored between 1 and 5 for each potential impact or event. The risk assessment has been formulated considering potential for impact without control measures put in place to manage potential risk.

Table 5 Definitions of Likelihood

Rating	Descriptor	Score
Rare	May occur only in exceptional circumstances	1
Unlikely	Could occur but doubtful	2
Possible	Might occur at some point in the future	3
Likely	Will probably occur	4
Almost Certain	Is expected to occur in most circumstances	5

Table 6 Definitions of Consequences

Rating	Descriptor	Score
Negligible	Impacts not requiring any treatment or management action	1
Minor	Nuisance or insignificant environmental harm requiring minor management actions	2
Moderate	Serious environmental impacts, readily manageable at low cost	3
Major	Substantial environmental impacts, manageable but at considerable cost and some disruption	4
Catastrophic	Severe environmental impacts with major consequent disruption and heavy cost	5

Table 7 Risk Assessment Matrix

Likelihood of an Environmental Impact		Consequence of Said Impact				
		Negligible	Minor	Moderate	Major	Catastrophic
		1	2	3	4	5
Almost Certain	5	5 Medium	10 High	15 High	20 Extreme	25 Extreme
Likely	4	4 Low	8 Medium	12 High	16 High	20 Extreme
Possible	3	3 Low	6 Medium	9 Medium	12 High	15 High
Unlikely	2	2 Low	4 Low	6 Medium	8 Medium	10 High
Rare	1	1 Low	2 Low	3 Low	4 Low	5 Medium

The consequence and likelihood scores are then plotted on the risk assessment matrix, refer to **Table 4** above. The final risk level assigned is thus a product of the likelihood and consequence scores. The higher the risk score, the higher the priority is for management.

Table 5 describes the possible actions required for each risk assessment rating.

Table 8 Indicative Management Option for Risk Assessment Ratings

Risk Rating	Risk Rating Scores	Indicative Management Option
Extreme	16 - 25	Manage by implementing site management and emergency procedures, plant design controls and regular monitoring.
High	10 - 15	Manage by implementing site management procedures, specific monitoring, and may require some operation/plant design controls.
Medium	5 – 9	Manage by implementing specific monitoring or response procedures.
Low	1 - 4	Manage by routine procedures, unlikely to need specific application of resources.

5.2 Potential Environmental Impacts

Activities associated with the proposed development which have the potential to cause environmental harm and/or nuisance have been outlined in **Table 6**.

This risk assessment is limited to the potential for the activity to impact upon the existing environmental values and does not consider any pre-existing approved impacts taking place on the site.

The identification of potential environmental impacts and associated risk matrix above has informed the control measures set out in Section 6.0 below. Where impacts are identified on an environmental value, mitigation measures have been implemented to reduce the potential impacts.

Table 9 Identification of Potential Impacts on Environmental Values

Element	PCCoC	Potential exposure pathways	PSR potentially exposed to adverse impacts	Risk ratings	
				Unmitigated	Mitigated
Feedstock	Chemical contaminants from green waste - timber preservatives, other heavy metals and residual (modern) pesticides, and tannins Chemical contaminants from digestate Chemical contaminants from mushroom substrate - heavy metals Pathogens – all feedstocks Nutrients (leachable)	Onsite leaching to: – soil – surface water – groundwater	Water quality, soil quality and groundwater quality.	Medium	Low
	Air emissions (particulates / dust)	Airborne release	Sensitive receptors	Medium	Low
	Offensive odour emissions	Airborne release	Sensitive receptors	High	Medium
	Weed seed / propagules	Wind	Viability of adjacent agricultural land	High	Medium
			Surrounding ecological EVs (MSES essential habitat)	High	Medium
		Leachate releases to land / waters	*Refer 'Leachate'*		
		Compost use	*Refer 'Compost'*		
	Fire ants	Spreading (onsite)	Surrounding land / crop (value / viability)	High	Low
			Surrounding ecological EVs (MSES essential habitat)	High	Low
		Compost use	*Refer 'Compost'*		
	Foreign matter (e.g. metal, plastics)	Compost use	*Refer 'Compost'*		
	Fire (spontaneous combustion)	Spreading	Neighbouring properties	High	Low
			Surrounding ecological EVs (MSES essential habitat)	High	Low

Element	PCCoC	Potential exposure pathways	PSR potentially exposed to adverse impacts	Risk ratings	
				Unmitigated	Mitigated
Compost	Feedstock chemical contaminants and pathogens	Land application of end-product (Compost use)	Land / crop (value / viability)	High	Low
			Food consumer (health)	Medium	Medium
			Downstream surface water users (water quality)	High	Low
			Downgradient groundwater users (water quality)	Medium	Low
			Downstream ecological EVs	High	Low
	Feedstock chemical contaminants and pathogens, and leachable nutrients	Leaching (onsite stored product)	*Refer 'Leachate'*		
	Air emissions (particulates / dust)	Airborne release	Sensitive receptors	Medium	Low
	Offensive odour emissions	Airborne release	Sensitive receptors	Medium	Low
	Weed seed / propagules	Wind	Viability of adjacent agricultural land	High	Low
			Surrounding ecological EVs (MSES essential habitat)	High	Low
		Leachate releases to land / waters	*Refer 'Leachate'*		
		Compost use	Applied land / crop (value / viability)	High	Low
			Potential ecological EVs surrounding applied land	High	Low
	Fire ants	Spreading (onsite)	Surrounding land / crop (value / viability)	High	Low
			Surrounding ecological EVs (MSES essential habitat)	High	Low
		Compost use	Land / crop (value / viability / amenity)	High	Low

Element	PCCoC	Potential exposure pathways	PSR potentially exposed to adverse impacts	Risk ratings	
				Unmitigated	Mitigated
			Surrounding ecological EVs (MSES essential habitat)	High	Low
	Foreign matter (e.g. metal, plastics)	Compost use	Land / crop (value / viability)	Medium	Low
			Food consumer (health)	Low	Low
Compost	Fire (spontaneous combustion)	Spreading	Neighbouring properties	High	Low
			Surrounding ecological EVs (MSES essential habitat)	High	Low
Leachate	Feedstock chemical contaminants and pathogens Nutrients Biological oxygen demand (BOD) Chemical oxygen demand (COD)	Leachate releases to land / waters	Surrounding land / crop (value / viability)	Medium	Low
			Downstream surface water users (water quality)	High	Low
			Downgradient groundwater users (water quality)	Medium	Low
			Downstream ecological surface water EVs	High	Low
			Downgradient ecological groundwater EVs	Medium	Low
	Offensive odour emissions	Airborne release	Refer MWA 2020a	High	Medium
Stormwater	Suspended sediment, sheens / films, litter	Runoff	Downstream ecological surface water EVs	High	Low
Compost mixing / turning	Air emissions (particulates / dust)	Airborne release	Sensitive receptors	Low	Low
	Offensive odour emissions	Airborne release	Sensitive receptors	Medium	Medium
Plant & Equipment	Air emissions (particulates / dust)	Airborne release	Sensitive receptors	Low	Low
	Offensive noise emissions	Airborne release	Sensitive receptors	Low	Low
	Nuisance noise	Air vibration	Sensitive receptors	Low	Low
	Leaks and spills (fuels and oils)	Releases to land / waters	Adjacent land and downstream waters	Medium	Low

6 RISK MITIGATION AND CONTROL MEASURES

Kalfresh will employ:

- training,
- standard operating procedures and control procedures,
- incident and corrective action reporting;
- record management; and
- complaint investigation

to manage potential environmental risks. Further detail on each of these are provided below.

6.1.1 Training and Inductions

All operation personnel, including sub-contractors, shall receive awareness training (induction) in the environmental risks, and specific environmental requirements, of the activity relevant to the persons activities and responsibilities. Records of induction shall be maintained.

Information about the environmental aspects of the activity is to be communicated by:

- discussing the SBMP during induction and at refresher sessions
- initiating monthly toolbox discussions on environmental performance.

After the induction the person shall be aware of the following with respect to their involvement in the project:

- understanding the requirements of the SBMP and the individual's role
- site operating and environmental procedures
- environmental incident emergency response procedures
- an outline of the potential consequences of not meeting their environmental responsibilities.

The selection of persons for specific roles shall ensure competency levels are well matched to the employee responsibilities. Supplementary training shall be provided as required to ensure competency levels are established and maintained at appropriate levels for a person's designated responsibilities.

Where technical expertise beyond that of existing operation personnel is required the operator shall engage persons suitably qualified and experience in the relevant field.

6.1.2 Standard operating and environmental control procedures

The SBMP to be prepared for the activity shall include SOPs and/or ECPs addressing, yet not limited to, the following aspects of the activity:

- Pad inspection and maintenance
- Plant and equipment inspection and maintenance
- Feedstock management (including acceptance criteria)

The documented procedures shall detail control measures, monitoring program/s and performance objectives for environmental and public health elements including, yet not limited to:

- Air emissions
- Noise emissions

- Odour emissions
- Spontaneous combustion
- Surface water quality
- Weed and pest management
- Waste and resource recovery
- Finished product – quality / contaminant levels.

6.1.3 Incidents and corrective action

Corrective action shall be undertaken where a site or operational condition that does not comply with the performance indicators stated in the SBMP (i.e. an incident) is identified.

A Corrective Action Request (CAR) shall be logged in a CAR register to ensure the matter is properly addressed in a timely manner. The status of CARs shall be routinely reviewed by the CEO and updated on a weekly basis, or shorter timeframe where required by the CAR.

Where necessary, investigation of the root cause and subsequent impacts of significant incidents shall be initiated by the CEO. This shall involve a review of operational procedures and control measures, and environmental monitoring (if required). Environmental monitoring shall be undertaken where necessary to assess potential impacts, address complaints which cannot be amicably resolved in an efficient manner, or where requested by regulatory authorities.

Where requested, any CAR registered in accordance with this SBMP shall be provided to a regulatory authority or other person, consensually or as lawfully required.

6.1.3.1 Complaints

Complaints received in relation to operational activities shall be logged in the CAR register and managed in general accordance with the corrective action requirements described above, as appropriate to the nature of the complaint.

All public complaints shall be validated and appropriately responded to in a timely manner. The complainant shall be notified of completed corrective actions.

All records of complaints and associated investigations shall be available for inspection by relevant authorities upon request.

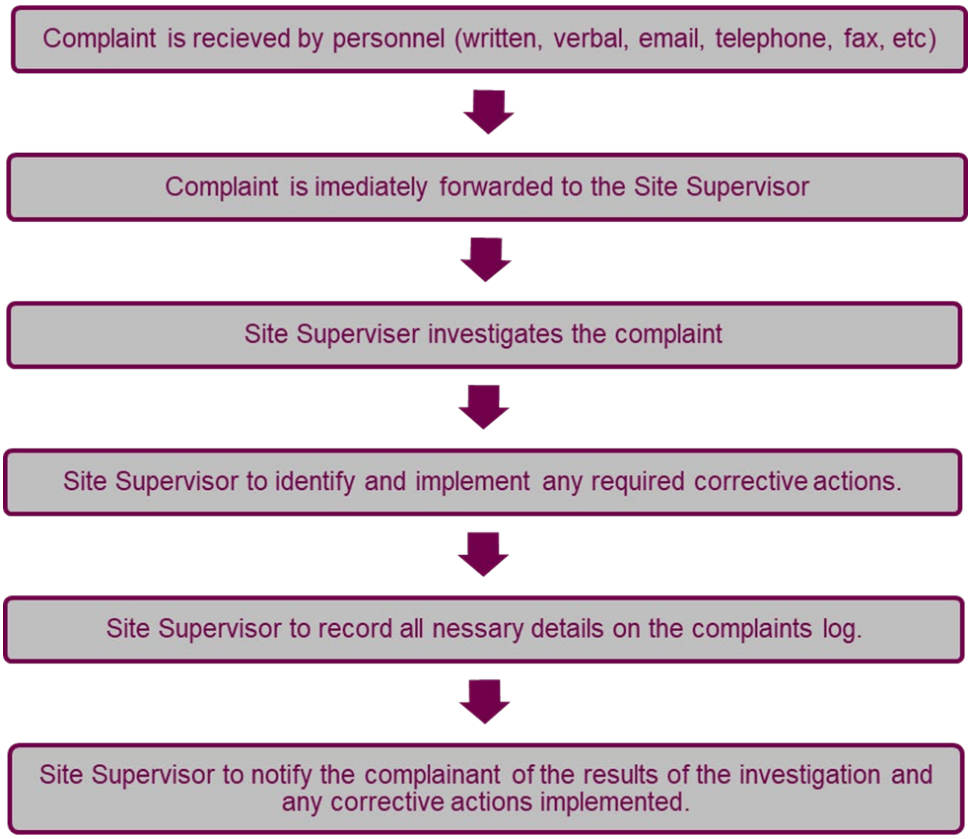

Figure 1 Complaints Procedure

6.1.3.2 Reporting and notification of incidents and complaints

All staff and sub-contractors are responsible for immediately notifying their direct supervisor of an environmental incident, who will in turn notify the CEO.

Records of incidents and complaints (i.e. other than trivial matters) shall be detailed in a Corrective Action Report form and logged in the CAR Register. The CAR will include, as a minimum:

- date and time of incident / non-compliance / complaint
- contact details of the person(s) who detected or notified the matter
- nature of the matter and potential impacts
- outcomes of any investigation of the matter
- details of the corrective actions undertaken.

6.1.3.3 Reporting environmental harm to regulatory authorities

DES shall be notified of any incident which has caused, or may cause, material or serious environmental harm (refer Terms & Abbreviations). The CEO is responsible for notifying DES of the nature and circumstance in which the event happened and potential environmental impacts.

Notification shall be made to DES immediately via the Pollution Hotline, and subsequently in writing via email as soon as practical but within 24 hours of becoming aware of a breach.

The following information must be obtained for notification purposes:

- name of person who identified the incident and person responsible for completing the notification

- name and telephone number of a designated contact person
- quantity and substance released
- person(s) involved
- the location and time of the release
- the suspected cause of the release
- a description of the effects of the release
- the results of any monitoring performed in relation to the release
- conclusions formed and actions taken to mitigate any environmental harm caused by the release
- proposed actions to prevent a recurrence of the release.

6.1.4 Record management

Records must be stored in a safe and secure manner which limits the potential for deterioration, damage or loss for a minimum of 5 years. Records to be maintained shall include:

- induction register including persons trained, date of training, trainer and summary of training delivered
- daily / weekly inspection reports, checklists, diary entries
- material origin, inspection and testing records demonstrating conformance with feedstock acceptance criteria, and compost quality objectives
- leachate and water quality monitoring results
- correspondence relating to environmental management matters
- incident and corrective action register
- non-conformance reports and / or correspondence regarding environmental incidents
- results, analysis and corrective actions
- waste tracking records
- records of compliance with relevant approvals
- other records identified in the environmental sub-plans and control procedures.

The above project records shall be made available to relevant authorities on request.

6.1.5 Environmental monitoring and review

Monitoring of compliance and general performance will be achieved through a program of inspection, sampling and analysis detailed in the SBMP. All monitoring shall be recorded and maintained in accordance with Section 5.1.6. Results of the environmental monitoring program shall be reviewed at least monthly.

The compost quality monitoring program shall comply with AS 4454-2012: Composts, soil conditioners and mulches.

Due to the low environmental risk that the proposed composting system poses to surface water and ground water, a routine monitoring program is not required. However, if a complaint is received regarding potential surface water or groundwater issues, or where releases of leachate to the environment occur, a reactive surface water and/or groundwater monitoring program shall be implemented. The reactive ~~surface water~~

monitoring shall incorporate the following elements:

- Methodologies based on Monitoring and Sampling Manual (DES 2018a) and AS/NZS 5667-1998: Water quality – Sampling

- ~~Development of site-derived WQOs based on select locations immediately upstream and downstream compost activity area with reference to Guideline: Environmental Protection (Water and Wetland Biodiversity) Policy 2009 2019 - Deciding aquatic ecosystem indicators and local water quality guidelines (DES 2018b 2022)~~

- ~~Routine and event based m~~ Monitoring at ~~select~~ upstream (background) and downstream (impact) locations to monitor potential adverse impacts on downstream waters

- Assessment of water quality results against relevant WQOs for Warril Creek and 'other freshwater tributaries' as specified in the Bremer River environmental values and water quality objectives as per ~~until such time as site-derived WQOs have been established Adoption of Guideline~~ the Environmental Protection (Water and Wetland Biodiversity) Policy 2019~~ Deciding aquatic ecosystem indicators and local water quality guidelines (DES 2018b 2022) for the assessment of potential water quality impacts, and guidance from~~ and Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZG 2018) ~~where further investigation of potential water quality impacts is identified~~.

The Environmental Risk Assessment Register and SBMP (where appropriate) shall be reviewed on an as required basis guided by the environmental monitoring and CAR processes, yet no greater than every two years, to ensure the SBMP remains effective in achieving environmental objectives and performance targets.

6.2 Flooding and Stormwater Management

If heavy rainfall or flooding is forecast for the area, the Site Manager shall prepare the site by:

- Relocating any mobile plant or equipment to higher parts of the site;
- Removing potential contaminants from site ensuring that potential contaminants are protected from rainfall or stormwater flows; and
- Ensuring all erosion and sediment control measures have been maintained and are in place.

6.3 Fire Management

6.3.1 Potential Sources

Fire scenarios on the site could potentially arise from:

- Electrical failures;
- Refuelling incidents; and
- Waste combustion.

6.3.2 Risk Management

To minimise these risks the following measures have been adopted for the site:

- Fire Extinguishers must be installed beside refuelling areas;
- Maintaining accessible Fire Extinguishers at all times;
- Regular slashing of grassed or vegetated areas around the site;
- No unauthorised burning on the site;
- No stockpiling of vegetation on the site;
- The water truck used for dust prevention may also be used as an initial firefighting resource;
- Risk assessment on the co-storage of chemicals; and

- Clear access for fire-fighting vehicles.

Specific recommendations can be obtained by requesting an inspection by the local fire service.

6.3.3 Fire Response

In the event of a small fire at the site, a portable fire extinguisher or water truck may be used to attempt to extinguish the fire. If this is unsuccessful or the fire is large, Queensland Fire and Rescue Service shall be contacted immediately. An emergency should be declared on site and all personnel should directly assemble at the site evacuation point for roll call.

6.4 Cyclone Management

It is recommended that staff remain in contact with each other during times of extreme weather events and plan accordingly, eliminating the possibility of staff being caught out in extreme weather events.

6.4.1 Minimising Cyclone Damage

To minimise the potential damage caused by cyclones the following measures are to be adopted:

- Ensure buildings are built to cyclone standards of local council.
- Eliminate loose objects on site that can act as projectiles during cyclones.

6.4.2 Cyclone Issued Warnings

When a cyclone warning is issued the progress of the cyclone is to be monitored and if requested by local authorities or Site Manager the site is to be evacuated.

All work is to cease, and erosion and sediment controls to be implemented to prevent loss of any stockpiled material. Cover materials must consist of soils that have been assessed as having low erodibility and are able to withstand water velocity up to 0.7m/s without any significant erosion.

Waste temporarily stored onsite must be removed from the site to a facility licensed to accept such wastes.

Under the circumstances, if the site is unable to be evacuated the following measures are to be undertaken:

- Park vehicles under shelter;
- All loose items to be secured;
- Tape or board up windows;
- Remain indoors until advised it’s safe;
- Disconnect electrical appliances; and
- Be aware of radio updates.

Any injuries obtained should be noted and treated. If injuries are outside the scope of medical expertise of personnel present, contact 000 or the local hospital directly.

6.5 Emergency Contact Numbers

Project Contact Details	
Emergency Services	
Ambulance, Fire or Police	**000**
Poisons Information	13 11 26
Utilities	
Water	132 203
Electricity	132 090
Gas	131 388
Telephone	131 909
Dial Before You Dig	1100
DES *(24-hour pollution line)*	1300 130 372 or email: pollutionhotline@des.qld.gov.au
Site Manager	
	Office:
	Mobile:
Other Contacts	
	Office:

7 ENVIRONMENTAL MANAGEMENT MEASURES

The identification of potential environmental impacts and associated risk matrix has informed the management measures set out below.

7.1.1 Feedstock

Implementation of strict feedstock acceptance criteria and management (Section 5.2.2) shall provide a line of preventive measures against chemical and biological (i.e. pathogens and pests) contamination of the feedstock and finished product.

Non-conforming product shall be either treated to ameliorate parameters not complying with the adopted performance criteria, restricted for use under conditions that do not present a significant risk to the environment or public health, or lawfully disposed of offsite.

7.1.2 Feedstock acceptance - criteria and management

Quality management procedures for feedstock acceptance shall be developed as part of the SBMP incorporating, yet not limited to, the quality control strategies summarised in **Table 16**.

Table 10 Feedstock Acceptance Criteria

Feedstock	Control / acceptance criteria
All feedstocks	– The operator shall inspect the load and visually determine the contamination level within the load. – Manual removal shall be conducted on loads deemed to contain less than 10% contamination. If the load is deemed to have a percentage contamination greater than 10% the Operations Manager / Site Engineer / Quality Officer must be contacted and the load may be rejected. This decision is at the discretion of the Operations Manager / Site Engineer / Quality Officer. – Where possible, the truck delivering the substrate does not unload and is turned away (>10% contamination) – The operator shall sift through the load, removing all inorganic material by hand and place the material in the 60 litre bins provided. (<10% contamination) – Each bin filled shall be counted and recorded. – The percentage contamination shall then be calculated for the load. – Removal of contaminants through macerator screening unit during solid handling process

7.2 Air and odour emissions

Aim
No environmental nuisance is caused by the release of noxious or offensive airborne odours or contaminants resulting from site activity.
Success Criteria

- No dust and/or odour complaints received from adjoining operations, nearby sensitive places or from statutory authorities.

Management Actions	Responsibility	Frequency
Report any dusty or odorous conditions to Site Manager.	All staff	As Required
Keep windrows wetted during turning to prevent dust.	All Staff	As Required
Purchase and utilise vehicles which offer value of money air emission reduction technology where feasible.	All Staff	As Required
Visually monitor ~~stack~~ emissions ~~to meet EA limits.~~	Site Manager	As Required
Routine Monitoring Program	**Responsibility**	**Frequency**
Visually inspect site, operations and effectiveness of dust controls.	Site Manager	Daily
Proactive odour monitoring during operations.	Site Manager	Monthly
Inspect all filter systems and maintain in accordance with the manufacturer's specifications.	Site Manager	Monthly

Complaint Response Monitoring

When requested by the administrating authority, odour and air quality monitoring must be undertaken to investigate any complaints of environmental nuisance caused by dust and/or particulate matter. The results of monitoring are to be passed to Department of Environment and Science (DES) within 14 days of completing the monitoring. Monitoring must be carried out at a place(s) relevant to the potentially affected dust sensitive place and at upwind control sites and must include:

1. For a complaint alleging dust nuisance, dust deposition monitoring shall be in accordance with AS3580.10.1 2003 (or more recent editions).
2. For a complaint alleging adverse health effects caused by dust, the PM_{10} concentration suspended in the atmosphere over a 24hr averaging time shall be monitored in accordance with AS3580.9.6 2003 (or more recent editions).

When requested by the administrating authority, monitoring must be undertaken to investigate any complaint of environmental nuisance caused by a release to the atmosphere from release point and comply with AS4323.1 1995 (or more recent editions). The results of monitoring are to be passed to DES within 14 days of completing the monitoring. Monitoring must occur when emissions are expected to be at maximum rates and include:

1. Gas velocity and volume flow rate;
2. Temperature;
3. Water vapour concentration (moisture content);
4. Production rate at time of sampling;
5. Raw materials used;
6. Number of equipment and mixing vessels operating;
7. Operating or mixing temperature;
8. Product made; and
9. Reference to the actual test methods and accuracy of the methods.

Kalfresh is responsible for engaging a suitably qualified and experienced air quality consultant to undertake monitoring.

All monitoring equipment used must be calibrated and appropriately operated and maintained.

In the event of an odour complaint being submitted, measures must be undertaken as soon as practicable to minimise the release of the odour beyond the boundaries of the licensed place.

Corrective Actions

If success criteria are not met, examples of corrective actions may include:

1. Ensure tracks and stockpile area is dust suppressed (water cart) every morning and as required throughout the day.
2. Cease operating air polluting machinery and undertake maintenance.

Reporting	Responsibility	Frequency

Record inspection notes, observations, actions and notifications from staff in diary.	Site Manager	As Required
Release of contaminants at release point not in compliance with the site's EA conditions are to be reported to the Pollution Hotline on 1300 130 372 or local office as soon as practicable after becoming aware.	Site Manager	Within 14 days of the completion of monitoring.
Results from complaint monitoring shall be forwarded to the administering authority.	Site Manager	As Required

7.3 Noise emissions

Aim

No environmental nuisance is caused by noise from site activity at a noise sensitive or commercial place.

Success Criteria

- Noise emissions do not cause nuisance at any sensitive receptors.
- Noise emissions comply with the environmental authority noise limits.
- The generation of substantial low frequency noise is not permitted.

Management Actions	Responsibility	Frequency
No unnecessary use of horns or other audible signals on mobile plant or equipment. Use of directional low frequency reversing beepers.	All staff	At all Times
Plant and equipment will be maintained in good working order and maintained as required. Where required, noise suppressors will be installed.	Site Manager to schedule equipment maintenance.	As per manufacturers specifications
Operators to report faulty equipment.	As per manufacturers specifications	At all Times
Routine Monitoring Program	**Responsibility**	**Frequency**
Inspect site in relation to noise emissions, noise controls and operations.	Site Manager	Daily

Complaint Response Monitoring

When requested by the administering authority noise monitoring must be undertaken to investigate any complaint of noise nuisance and must include:

3. ~~LA 10, adj, 10 mins~~ LAeq,adj,T
4. ~~LA 1, adj, 10 mins~~ Background noise as LA90 adj,T
5. maxLpA,T
6. The level and frequency of occurrence of impulsive or tonal noises
7. An assessment of **substantial low frequency noise,** which means a noise emission that has an unbalanced frequency spectrum shown in a one-third octave band measurement, with a predominant component within the frequency range 10 to 200 Hz. It includes any noise emission likely to cause an overall sound pressure level at a sensitive place exceeding 55 dB(Z).
8. Atmospheric condition including wind speed and direction.
9. Effects due to extraneous factors such as traffic noise.
10. Location, date and time of recording.

Results of the monitoring are to be submitted to DES within 14 days of the complaint being submitted.

Kalfresh are responsible for engaging a suitably qualified and experienced acoustic consultant to undertake the monitoring as required. The method of measurement and reporting of noise levels must comply with the latest edition of the DES Noise Measurement Manual. All monitoring equipment used must be calibrated and appropriately operated and maintained.

Corrective Actions

If success criteria are not met, examples of corrective actions may include:

11. Review the use of any audible signals.
12. Investigate feasible additional noise attenuation devices for plant or equipment.

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Reporting	Responsibility	Frequency
Record inspection notes, observations, actions and notifications from staff in diary.	Site Manager	As Required
Results from complaint monitoring shall be forwarded to the administering authority.	Site Manager	Within 14 days of the completion of monitoring.
Results from complaint monitoring shall be forwarded to the administering authority.	Site Manager	Within 14 days of the completion of monitoring.

7.4 Hazardous materials

Storage of hazardous materials (HAZMAT) within the subject area is not intended. Should HAZMAT storage be required appropriate control measures based on applicable standards and codes of practice including AS1940.

7.5 Waste and resource recovery

Aim
All solid and liquid wastes are handled and transferred in a proper and efficient manner to minimise the risk of release to the environment.

Success Criteria
• No improper storage, transport or disposal of wastes. • All reasonable and practical measures are taken to contain litter.

Management Actions	Responsibility	Frequency
All waste oils/fuels or other liquid waste will be stored in a sealed bunded area according to AS 1940 – Storage and Handling of Flammable and Combustible Liquids (bund volume to exceed volume of largest container plus 10%).	Site Operators	At all Times
Appropriate space will be provided for the temporary storage of general refuse, recyclable and compostable waste to ensure separation of waste products.	Site Operators	At all Times
Waste will be managed in the preferred order of avoid, re-use, recycle, recover, treat and dispose within the *Waste Reduction and Recycling Act 2011* (Qld).	Site Operators	At all Times
If litter is blown or washed off site, it is to be retrieved and ensure it is disposed of in the appropriate manner and additional measures to prevent a recurrence (e.g. litter screens) are to be undertaken.	All Staff	At all Times
Maintain spill kits and ensure clean up equipment is available at site office (240L wheelie bin with mobile kits in each vehicle) with annual inspection of spill kits.	Site Manager	Replenish as required following use.
Burning of waste is not to occur on site.	Site Manager	As Required
Routine Monitoring Program	**Responsibility**	**Frequency**
Monitor waste storage, handling and disposal practices.	Site Manager	Daily
Daily inspections to ensure the site is free of uncontrolled rubbish, tidy and all wastes are appropriately stored and managed.	Site Manager	At all Times

Corrective Actions

If success criteria are not met, examples of corrective actions may include:

13. Retrain staff in correct waste management and disposal procedures.
14. Ensure appropriate storage facilities are available for regulated and general waste.

15. Investigate incidents and incorporate findings into training and management resources to achieve continual improvement.

Reporting	Responsibility	Frequency
Record site observations, actions and notifications in daily diary.	Site Manager	As Required

Waste and recoverable resources associated with the activity are limited to non-conforming product, reject feedstock (where not returnable to the supplier), leachate, general solid waste associated with plant and equipment and personnel, and liquid waste from the site amenities.

The on site management procedures shall incorporate procedures for waste management and resource recovery based on the avoid, reduce, reuse, recycle, recover, dispose hierarchy. Previous sections outline control measures for avoiding management of reject feedstock, and managing potential bulk waste including non-conforming product.

The following outlines key control measures on which the procedures shall be based:

- Waste storage and management shall be limited to designated areas.
- All solid waste material will be transported from the site via a waste contractor on a weekly basis as part of the Kalfresh processing facility contract.
- All regulated waste materials shall be collected and disposed of by a DES licensed operator.
- Reusable or recyclable materials will be separated onsite into dedicated bins/areas, where practicable, for either reuse onsite or collection by a contractor and transport to off-site facilities.
- Where practicable, and where materials cannot be separated on-site, they will be sorted off-site by a contractor.
- Materials packaging waste will be returned to suppliers where possible.
- All waste and recyclables will be stored in appropriate covered receptacles secure from wildlife or vermin. Receptacles shall be of sufficient capacity for site activities and visitor numbers, and situated at appropriate locations onsite.

7.6 Land rehabilitation

A land rehabilitation plan shall be developed as part of the SBMP. At this stage the most likely land use following cessation of the activity is a return to grazing pasture, or cropping.

Aim
To return the site to a stable landform once ERA's have ceased.

Success Criteria
• Stable non-polluting landform is achieved.

Management Actions	Responsibility	Frequency
Earthen surfaces must be established with suitable species of vegetation for the location (ie cropping grass if required).	Site Manager	As Required
The quality of water released from the site must not cause environmental harm.	Consultant/Site Manager	Monthly
Water quality of any residual water body must not have the potential to cause environmental harm.	Consultant/Site Manager	Monthly
The final landform of the site overall must be stable to ensure the protection of the public's safety.	Site Manager	As Required
Routine Monitoring Program	**Responsibility**	**Frequency**
Monitor the quality of water released from the site.	Consultant/Site Manager	Monthly

Monitor residual water bodies.	Consultant/Site Manager	Monthly
Reporting	**Responsibility**	**Frequency**
Record site observations, actions and notifications in diary.	Site Manager	Daily as Required
Retain records of progressive rehabilitation and actions performed.	Site Manager	As Required
Include a site development plan and documentation of progressive rehabilitation in the annual return.	Site Manager	Annually

7.7 Water Management

Aim

To minimise the risk of adverse impacts to surface or groundwater quality by implementing appropriate water pollution controls at the site.

Success Criteria

- No adverse impacts to existing surface water quality from site operations.
- Oil spills and product spills are contained within 1 hour of the event and cleaned within 24 hours.
- Spill kits are available and maintained.
- No visual signs of erosion occurring onsite.
- No wastewater discharge to the environment.

Management Actions	Responsibility	Frequency
• ***Bunds/Berms*** – Temporary bunds or berms will be constructed of clean material only and comply with the Spill Procedure in **Appendix C**. • ***Equipment*** – Equipment will be relocated above flood levels and checked for oil and hydraulic leaks – complete urgent & minor repairs using temporary bunding as required to prevent potential stormwater contamination. • ***Internal Haul Roads*** – Minimise vehicle activity through stormwaters. • ***Waste*** - all generates waste into skip bins and ensure regularly emptied. • ***Fuel Storage*** – install and maintain bunded storage area to AS1940 above flood levels. • ***Offices/minor services*** – locate above flood levels.	Site Manager	At all Times
Water management structures (i.e. dam) maintained at all times during operation and checked, repaired or replaced as required after each rain event.	Site Manager	As Required
Diversion drains are installed to divert surface water from disturbed areas and stockpiles to sedimentation ponds.	Site Manager	As Required
Sedimentation ponds are managed to meet storage and aerobic condition requirements of the EA.	Site Manager	As Required
Reactive surface water quality monitoring will be undertaken ~~in accordance with the EA~~ following receipt of complaints or where releases of leachate to the environment occur.	Consultant/Site Manager	As Required
Machinery maintenance activities on site include limited/small repairs of light vehicles; regular servicing and major repairs of heavy vehicles/rebuild on a sealed bunded pad in the machinery shed.	Site Manager	At all Times
Spill kits, oil collection trolley or containers, mobile drip trays shall be available and in place during servicing to contain any leaks or spills.	All staff	As Required
Chemicals and fuels in containers greater than 15L to be stored within a secondary containment system.	All Staff	At all Times

All spills shall be reported and cleaned up to minimise land or water contamination. Preference to dry methods of cleaning up spills to be given where possible.	All Staff	At all Times
Long term cover and capping soil stockpiles to be seeded and stabilised. Silt fencing and/or bunding to be placed below short-term stockpiles to minimise sediment run off to the environment.	Site Manager	At all Times
Routine Monitoring Program	**Responsibility**	**Frequency**
~~Surface water monitoring at release points, during overflow period.~~	~~Site Manager~~	~~Monthly as required~~
Visually inspect site, operations and effectiveness of erosion and sediment controls.	Site Manager	Daily

Corrective Actions

If success criteria are not met, examples of corrective actions may include:

1. Ensure wash down and maintenance activities are undertaken in contained areas to minimise the risk of water or land contamination.

Reporting	Responsibility	Frequency
Record inspection notes, observations, actions and notifications in diary.	Site Manager	Daily as Required
Record all uncontrolled spills and water quality sampling results.	Site Manager	As Required
Include a plan of surface water monitoring locations and results in the annual return.	Site Manager	Annually
Keep site vehicle maintenance records.	Site Operators	As Required
Surface water quality monitoring report.	Consultant	As Required

7.8 Emergency preparedness and response

An emergency preparedness and response procedure addressing the following potential events shall be developed as part of the SBMP:

- Chemical spills on land
- Chemical spills on water
- Fire
- Heavy or prolonged rainfall.

8 CONCLUSION

This Site Based Management Plan has been prepared to support the application for the proposed Environmentally Relevant Activity (ERA) ERA 53 (a) – Organic Material Processing of more than 200 tonnes per annum by composting, located at 6200 – 6206 Cunningham Highway, Kalbar Queensland, properly described as Lot 3 and Lot 4 on SP192221.

The risk assessment has determined that the potential environmental risks resulting from the proposed operations will be effectively regulated through the effective implementation of environmental monitoring and management practices to avoid potential environmental impacts as detailed in this report.

Appendix A Site Layout Plan

0 10 20 30 40 60 1 : 2,000 @ A2

KALFRESH

SCENIC RIM AGRICULTURAL INDUSTRIAL PRECINCT

6206 CUNNINGHAM HWY, KALBAR 4309 QLD

PROPOSED COMPOSTER CONCEPT LAYOUT

PLAN REF:	**142489 – 08**
Rev No:	**F**
DATE:	31 JANUARY 2023
CLIENT:	KALFRESH
DRAWN BY:	NV
CHECKED BY:	JC / PHE

Legend

- Site Boundary
- SRAIP Precinct Boundary
- Existing Contours (2.5m)
- Existing Boundaries
- Existing Easement
- Proposed Overland Flow (Easement, Part of Lot 18)
- Proposed Composting Area
- Lechate Pond
- Proposed Composter Lot Access Track
- Proposed Plant & Equipment
- Proposed Windrow & Finished Product
- Proposed Stormwater Basin
- Access Track Connection to Composter Lot

Note:

All Lot Numbers, Dimensions and Areas are approximate only, and are subject to survey and Council approval.

Dimensions have been rounded to the nearest 0.1 metres.

Areas have been rounded down to the nearest 5m².

The boundaries shown on this plan should not be used for final detailed engineers design.

Source Information:

Site boundaries: DCDB
Adjoining information: DCDB.
Contours: RPS Survey
Aerial photography: RPS Survey
Overland Flow Path: Aurecon

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