E.3.1 Air Quality Assessment

E.3.1 Addendum to Air Quality Impact Assessment

Ref: L27822/BH/19-143

9 December 2022

Kalfresh Pty Ltd
c/- RPS Group
Level 4, HQ South
520 Wickham Street
Fortitude Valley QLD 4006

Attention: Ms Nicole Hartney

Dear Nicole

Re: Addendum to Appendix Q Air Quality Impact Assessment in Response to Submissions and Further Queries – Scenic Rim Agricultural Industrial Precinct – 6200 Cunningham Highway, Kalbar

Further to your request MWA Environmental has reviewed the various air quality matters raised by the Department of Environment and Science ("**DES**") and public submitters in relation to the proposed Scenic Rim Agricultural Industrial Precinct ("**SRAIP**") at Kalbar.

MWA Environmental has previously prepared the report *Air Quality Impact Assessment – Scenic Rim Agricultural Industrial Precinct – 6200 Cunningham Highway, Kalbar* (MWA Environmental, 8 April 2020) ("**the Air Quality Impact Assessment report**").

The Air Quality Impact Assessment report concluded that that compliance with the relevant air quality guidelines can be achieved at sensitive receptors with the implementation of appropriate controls and management measures.

It was further noted in the Air Quality Impact Assessment report that the assessment had been based upon the current design for the composting facility and anaerobic digester / biogas plant. If any modifications to these facilities are required through the detailed design phase of the project, which is likely, then it will be necessary to ensure that air pollutant and odour emissions are managed to maintain compliance with the relevant air quality and odour amenity criteria at surrounding sensitive land uses.

The comments received from DES are summarised in **Table 1** below.

Max Winders & Associates Pty Ltd tas MWA Environmental
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Table 1: Comments from DES in Relation to Appendix Q – Air Quality Impact Assessment

Comment ID	Issue - Details	Submitter Recommendations / Suggested Mitigation
25.12	From the draft IAR, it is not clear how the odour emission rates from the Waste Processing Building (Fugitive Losses) and Digestate Storage & Separation & Pasteurisation Building (BioAir Stack) were estimated in Table 4. There seems to be some discrepancy in the calculations.	Clarify how the odour emission rates from Waste Processing Building (Fugitive Losses) and Digestate Storage & Separation & Pasteurisation Building (BioAir Stack) were estimated in Table 4. Also discuss the basis for the selection of 1% odour leakage from the building as fugitive emissions.
25.13	The draft IAR did not include estimated cumulative impacts of air contaminants such as PM10, PM2.5, TSP, NO2, SO2 and CO.	Provide an assessment of cumulative impacts of air contaminants such as PM10, PM2.5, TSP, NO2, SO2 and CO.
25.14	The draft IAR mentions that composting raw material such as mushroom substrate and chicken litter will be stored on the western portion of the site. These material (mushroom substrate and chicken litter) are highly odourous and must be stored in the Waste Receival Building. It is not clear that the odour generated from these sources are included in the impact assessment.	Clarify that highly odorous composting raw material such as mushroom substrate and chicken litter will be stored in the Waste Receival Building. If these material are not stored in the building then explain how the odour will be managed. Also clarify that the odour generated from the storage of these material are included in the impact assessment.
25.15	In Attachment 9 of the draft IAR, the windrows area per day turned (4.1 x 750 = 3107 m2/day) was estimated assuming that the windrows will be turned 7 days a week (number of windrows turned per day = 29/7 = 4.1). It is assumed, by the reader, and not stated that the windrows will be turned 7 days a week.	Confirm that the windrows turning activity will take place 7 days per week.
25.16	DES acknowledges that the air quality impact assessment is based on the preliminary design and emission specifications as available at the time of this report. There is a possibility that some of the emission rates may change once the design is finalised. The draft IAR does not provide any warranty that the final design will be able to meet the same environmental outcomes.	Discuss how the design will be finalised and verified by ensuring that all the best practice ambient air quality objectives and emission source standards will be complied with. The design must also be finalised prior to the development approval application phase.
25.17	Odour mitigation measures for the leachate pond and open windrows were not discussed. Odour emission from the leachate pond was estimated as 0.3 OU/m2/s based on the Source Odour Emission Rate (SOER) applied in ERM report (2013). DES acknowledges that this odour emission rate is applicable for a well maintained leachate pond, including implementation of measures to avoid anaerobic conditions. Based on the adopted odour emission rates, it was assumed that these mitigation measures may not be required. However, after the commissioning of the project, if the impact from the project demonstrates non-compliance with the odour criterion or licence conditions then the following odour mitigation measures will be required: •Treatment of leachate for odour control •Controlling odour from windrows using techniques such as Gore Cover System or Tunnel Composting System.	Include odour mitigation measures for leachate pond and open windrows. Provide a commitment to implement such odour mitigation measures in the event of non-compliance with the odour criterion or licence conditions.

Department of Environment and Science Comments

Responses to each of the DES comments are provided in the following sections.

Comment ID 25.12

From the draft IAR, it is not clear how the odour emission rates from the Waste Processing Building (Fugitive Losses) and Digestate Storage & Separation & Pasteurisation Building (BioAir Stack) were estimated in Table 4. There seems to be some discrepancy in the calculations.

RESPONSE

The calculations below Table 4 in the Air Quality Impact Assessment report were correct based upon the latest design specifications from Aquatec Maxcon prior to issue of the report. However, it is apparent that the stated odour emission rates in Table 4 of the Air Quality Impact Assessment report were incorrect, having been based upon an earlier design specification. The noted discrepancies were specifically related to:

- The Waste Processing Building fugitive losses were reduced from the preliminary 5% loss per hour (as per incorrect Table 4 value) to a 1% loss per hour (as per correct calculation value) by allowance for fast-acting roller doors to entry and exit points as appropriate given the land use context of the site; and
- The Digestate Storage & Separation & Pasteurisation Building preliminary design flow rate for the BioAir unit was ultimately estimated as 10,000 m^3/hour based upon the final building volume i.e. conservatively a similar extraction rate as the Waste Processing Building even though the room volume is lower.

MWA Environmental has checked and confirmed that the modelled emissions and associated tabulated and plotted predictions at sensitive receptors are correct as per the calculations below the table.

A corrected version of Table 4 of the Air Quality Impact Assessment report is provided below for reference:

Corrected

Table 4: Odour sources from anaerobic digester / biogas plant on Lot 11

Description	Source Type	Dimensions (m)	Area (m^2)	Emission Rate Calculations	Odour Emission Rate (ou/s)
Waste Processing Building 'BioAir' Stack	Point (stack)	12m High 600mm diameter	n/a	See calculation below	2,800
Waste Processing Building Fugitive Losses	Volume	2m height, Sigma-y 7.91, Sigma-z 3.72	n/a	See calculation below	~~11,900~~ 2,380
Digestate Storage & Seperation & Pasteurisation Building 'BioAir' Stack	Point (stack)	12m High 600mm diameter	n/a	See calculation below	~~5,667~~ 2,800
External Corn Silage Bunks (x4)	Area	4x60m x 25m	4x 1500	See calculation below	3,150

Comment ID 25.13

The draft IAR did not include estimated cumulative impacts of air contaminants such as PM10, PM2.5, TSP, NO2, SO2 and CO.

RESPONSE

Further clarification if this comment was provided by the Department of State Development, Tourism and Innovation via email. The clarification identified that:

- There should be cumulative air quality impact assessment from all proposed environmentally relevant activities (biodigester, compost facility and the sewage treatment plant) and ambient air quality; and
- For Table 9 of the Air Quality Impact Assessment report, separating the cumulative impact into another table will better present the information

In relation to the cumulative assessment issue, the main atmospheric emission associated with the proposed environmentally relevant activities with the potential to generate cumulative impacts is odour. Odour emissions associated with the small scale (approximately 200 equivalent person) on-site sewage treatment plant will be minor with no potential for off-site nuisance impacts. The major odour emission activities are biogas plant, digestate irrigation and the composting facility. As discussed in Section 8.0 of the Air Quality Impact Assessment report, odour emissions from sources with different odorant compositions are not necessarily 'additive' in terms of assessment of potential cumulative impacts. Notwithstanding, Section 8.1 and Attachment 13 of the Air Quality Impact Assessment report document the theoretical cumulative odour impacts from the biogas plant, digestate irrigation and the composting facility.

The biogas plant air toxics emissions assessment considered a range of combustion gas, VOC and minor particulate emissions associated with the CHP units (gas engines) and the flare. The predicted concentrations were presented in Table 9 of the Air Quality Impact Assessment report for the various pollutant in isolation (no ambient) and with ambient concentrations as per Table 2.3. As requested, **Table 1** below is a separate table presenting the result for the biogas plant air toxics emissions assessment with ambient for the relevant pollutants.

Table 1: Predicted Air Toxics Concentrations from Biogas Plant With Ambient

Air Pollutant	Averaging Period	Highest Concentration at Surrounding Sensitive Receptor (Refer Figure 3) (µg/m^3)	Air Quality Objective (µg/m^3)	Highest % of Guideline at Any Receptor
Carbon monoxide (including ambient as per Table 3)	8-hours	254.4	11000	2.23
Nitrogen Dioxide (30%) (including ambient as per Table 3)	1-hour	30.35	250	12.14
	Annual	14.15	62	22.83
$PM_{2.5}$ (including ambient as per Table 3)	24-hour	6.40E+00	25	25.61
	Annual	5.70E+00	8	71.25
PM_{10} (including ambient as per Table 3)	24-hour	1.83E+01	50	36.61
	Annual	1.64E+01	25	65.60
Sulphur Dioxide (including ambient as per Table 3)	1-hour	33.1	570	5.80
	24-hour	9.4	230	4.09
	Annual	2.2	57	3.83

Combustion gas and VOC emissions associated with the other proposed environmentally relevant activities (e.g. diesel engine mobile plant and trucks) will be minor and insignificant in the context of the modelled biogas plant emissions, particularly that the predicted impacts as sensitive receptors were a small fraction of the relevant air quality objectives.

Similarly, the predicted particulate (PM_{10}, $PM_{2.5}$) concentrations (without ambient) associated with the CHP units and flare at the biogas plant, as per Table 9 of the Air Quality Impact Assessment report, are less than 0.01 percent of the relevant air quality objective. Addition of these minor biogas plant contributions to the dominant predicted particulate concentrations associated with the composting facility, as per Table 16 of the Air Quality Impact Assessment report, does not increase the overall PM_{10} and $PM_{2.5}$ concentrations by even 0.1 ug/m^3.

Overall, our review indicates that:

- The key cumulative emission issue, being odour, has been assessed in the Air Quality Impact Assessment report;
- Ambient concentrations as per Table 8 of the Air Quality Impact Assessment report have been considered for the biogas plant air toxics assessment and the composting facility dust assessment; and
- There is not potential for cumulative impacts associated with particulate, combustion gas or VOC emissions for all proposed environmentally relevant activities to change the outcomes of the assessment.

Comment ID 25.14

The draft IAR mentions that composting raw material such as mushroom substrate and chicken litter will be stored on the western portion of the site. These material (mushroom substrate and chicken litter) are highly odourous and must be stored in the Waste Receival Building. It is not clear that the odour generated from these sources are included in the impact assessment.

RESPONSE

With the exception of the external silage stockpiles, all raw material feedstocks to the biogas plant will be stored within the Waste Processing Building with odour emissions managed using a suitably designed 'BioAir' odour control system and fast-acting roller doors to vehicle entry points to minimise fugitive losses. The corn silage stockpiles are to be covered when not being actively stocked or reclaimed.

The composting facility will receive inputs including the expected feedstocks stated in Section 6.0 of the Air Quality Impact Assessment report. Section 3.5 of *Appendix F - ERA 53(a) (Composting) Report* of the draft IAR addresses composting feedstock handling procedures including reference to strict acceptance criteria in Section 5.2 of *Appendix F*.

Section 6.1 of the Air Quality Impact Assessment report recommends that liquid wastes received at the site with the potential to generate significant odour emissions should be blended with green waste within one hour of receival. The same procedures would reasonably be applied to any feedstocks assessed as highly odorous upon receival at the site, potentially including mushroom substrate and chicken litter.

The Air Quality Impact Assessment report and associated modelling did include assessment of odour emissions from an indicative 500m^2 mixing bay odour source based upon a grease trap waste odour emission rate to address emissions from the initial receival of odorous feedstocks.

It is recommended that a condition be imposed in the development consent and/or the environmental authority requiring that an Operational Odour Management Plan be prepared prior to commencement of the composting use to ensure that odour minimisation protocols, including for management of odorous feedstocks, are implemented.

Comment ID 25.15

In Attachment 9 of the draft IAR, the windrows area per day turned (4.1 x 750 = 3107 m2/day) was estimated assuming that the windrows will be turned 7 days a week (number of windrows turned per day = 29/7 = 4.1). It is assumed, by the reader, and not stated that the windrows will be turned 7 days a week.

RESPONSE

Depending upon meteorological conditions and windrow composition / conditions windrow turning is typically required on a weekly basis.

The odour modelling has been based upon representation of the 29 windrows being turned one per week across the 7 days. The modelling representation is an indicative profile of windrow turning operations.

Depending upon operational circumstances the windrows may be turned on a difference schedule.

If the modelling were to consider a 7 day profile based upon each windrow being turned three (3) times, which is very unlikely to occur, then the peak odour emission rate from the composting facility (windrows, leachate ponds and mixing bay) during the day period could potentially increase by 46%[1]. As per Table 15 of the Air Quality Impact Assessment report, the highest predicted 99.5th percentile 1-hour average odour concentrations from the composting facility at a sensitive receptor was 1.14 Odour Units. If you were to scale up the odour predictions by 46% then the highest predicted concentration would be 1.66 Odour Units, well below the 2.5 Odour Unit criterion.

As such, the outcomes of the composting odour assessment are not expected to be sensitive to reasonable assumptions in relation to the windrow turning rates.

[1] Based upon 9321m^2 surface area turned per hour 6am to 6pm

Comment ID 25.16

DES acknowledges that the air quality impact assessment is based on the preliminary design and emission specifications as available at the time of this report. There is a possibility that some of the emission rates may change once the design is finalised.

The draft IAR does not provide any warranty that the final design will be able to meet the same environmental outcomes.

RESPONSE

As noted, it is anticipated that, as the biogas plant detailed design process progresses, there will be refinements that will result in some variations to emission rates and emission parameters.

It is acknowledged that any changes to the design that materially affect air pollutant and/or odour emissions will need to be reviewed to ensure that the relevant environmental outcomes (air quality criteria and odour criteria) will be satisfied at sensitive receptors.

It would be reasonable for a condition to be imposed in the development consent and/or the environmental authority requiring that certification be submitted prior to commencement of the various environmentally relevant activities to confirm that the final design(s) achieves the relevant air quality and odour criteria at sensitive receptors.

Comment ID 25.17

Odour mitigation measures for the leachate pond and open windrows were not discussed. Odour emission from the leachate pond was estimated as 0.3 OU/m2/s based on the Source Odour Emission Rate (SOER) applied in ERM report (2013). DES acknowledges that this odour emission rate is applicable for a well maintained leachate pond, including implementation of measures to avoid anaerobic conditions. Based on the adopted odour emission rates, it was assumed that these mitigation measures may not be required. However, after the commissioning of the project, if the impact from the project demonstrates non-compliance with the odour criterion or licence conditions then the following odour mitigation measures will be required:

- *Treatment of leachate for odour control*
- *Controlling odour from windrows using techniques such as Gore Cover System or Tunnel Composting System.*

RESPONSE

Kalfresh Pty Ltd has confirmed that aeration systems will be implemented for the leachate ponds at the composting facility to avoid anaerobic conditions.

It is recommended that a condition be imposed in the development consent and/or the environmental authority requiring that an Operational Odour Management Plan be prepared prior to commencement of the composting use to ensure that odour management protocols, including for monitoring and management of the leachate ponds, are implemented.

In relation to the compost windrows, Kalfresh Pty Ltd has advised that a traditional open windrow system is proposed at the site. The odour modelling and assessment in the Air Quality Impact Assessment report has been based upon an open windrow system.

Key odour management considerations for management of emissions from traditional composting operations include:

- Monitor the quality and characteristics of feedstock materials received at the site to ensure that excessively odorous materials are not accepted. If particular types/sources of green wastes are identified as generating offensive odours through the composting process then implement a policy not to accept such wastes.
- Maintain appropriate windrow moisture content (<60%[2][3] but monitor and reduce moisture content by adding dry material as required to control odour emissions) to avoid the generation of odorous compounds associated with anaerobic decomposition.
- Maintain appropriate windrow temperature (<80^{o}C[2] but monitor and reduce moisture content by adding dry material as required to control odour emissions) to avoid the generation of odorous compounds associated with anaerobic decomposition.
- Maintain compost windrow pH less than 7.5 to avoid hydrogen sulphide and mercaptan generation[2].
- Turn/aerate windrows using effective techniques/equipment and at appropriate frequency to avoid anaerobic conditions developing.
- Do not use excessive amounts of liquid wastes, manures etc. in the composting process to minimise odour emission potential.
- Appropriately manage wastewater treatment in the leachate pond and aerate the pond as necessary to maintain aerobic conditions.
- Ensure appropriate drainage of leachate from windrows through the design of leachate collection system and provision of an appropriate low-permeability surface in order to minimise the likelihood of ponding and anaerobic conditions developing.
- Ensure that any ponded leachate is dispersed to evaporate.

[2] Netherlands Emission Guidelines for Air, *G2 – Composting installations for vegetable waste*, InfoMil, The Hague, 2004
[3] *Environmental Guidelines: Composting and related organics processing facilities* (NSW Department of Environment and Conservation, 2003)

- Ensure that any wet compost patches are turned/aerated to avoid anaerobic conditions developing.
- If particularly odorous compost windrows and/or feedstock materials are detected then do not disturb material or turn windrows when winds would direct odours towards nearest sensitive receptors.

It is recommended that a condition be imposed in the development consent and/or the environmental authority requiring that an Operational Odour Management Plan be prepared prior to commencement of the composting use to ensure that odour minimisation protocols are implemented.

The environmental authority and the Operational Odour Management Plan will require rectification actions in the event of odour emissions causing environmental nuisance. An investigation would consider a range of potential ameliorative strategies including, if appropriate, alternative composting techniques.

Public Submissions

In addition to the specific comments from DES, a range of public submissions were reviewed by MWA Environmental.

Responses to each of the issues raised in public submissions are provided in the following sections.

Comment A

Odour, how we are going to be protected

RESPONSE

Detailed odour assessment has been undertaken in the Air Quality Impact Assessment report. Ultimately, Environmental Authority conditions will regulate odour emissions as per standard protocols to ensure that the use does not cause environmental nuisance as a result of odour emissions.

It is recommended that a condition be imposed in the development consent and/or the environmental authority requiring that an Operational Odour Management Plan be prepared prior to commencement of the uses to ensure that odour minimisation protocols are implemented.

The environmental authority and the Operational Odour Management Plan will require rectification actions in the event of odour emissions causing environmental nuisance.

Comment B

Various submissions from Grow Green (landowner to north) related to 'Dust and other emissions', including:

- *General impact of emissions from SRAIP*

RESPONSE

The Air Quality Impact Assessment report provides a detailed assessment of key atmospheric emissions from the various environmentally relevant activities.

It would be reasonable for a condition to be imposed in the development consent and/or the environmental authority requiring that certification be submitted prior to commencement of the various environmentally relevant activities to confirm that the final design(s) achieves the relevant air quality and odour criteria at sensitive receptors.

- *Dust impact at the Grow Green including from unsealed section of access road to the composting facility*

RESPONSE

The Air Quality Impact Assessment report (refer Section 7) includes detailed assessment of dust emissions from the composting facility including the unsealed access road section from the sealed SRAIP precinct road to the composting area. The assessment (refer Attachment 12 of the Air Quality Impact Assessment report) demonstrates that the relevant air quality criteria will be satisfied at the site boundary.

The Air Quality Impact Assessment report (refer Section 7.3) proposed the following measures to minimise dust emissions from the composting activities:

- Access to the composting area will be via the 'Future Road Connection to Composter Lot', which will be unsealed west of the SRAIP industrial precinct. Regular watering of the unsealed compost access road at a rate of 2 litres/m^2/hour (Level 1) will be undertaken as required to minimise dust emissions.
- Regular watering of the trafficable areas within the compost facility at a rate of 2 litres/m^2/hour (Level 1) will be undertaken as required to minimise dust emissions.
- A wheel wash or alternative measure will be operated at the site as required to minimise silt track out on to the external road network.

- *Construction phase dust impacts*

RESPONSE

Dust during construction phase will be managed in accordance with a construction phase dust management plan. This is standard procedure for civil earthworks and major construction activities. Often approvals include a condition or advice note acknowledging that a construction dust management plan is to be prepared prior to commencement of works.

- *Risk of contamination of the Grow Green products*

RESPONSE

The proposed composting facility, the biogas plant and the digestate irrigation area are setback 600 metres, 730 metres and 700 metres from the boundary of the Grow Green land, respectively.

With the exception of silage, the biogas plant feedstocks are to be stored and handled within a specially designed building to minimise potential for off-site impacts or potential contamination risks.

All digestate will be pasteurised prior to irrigation of approximately 10 percent of the digestate liquid fraction over an 18 hectare cropping area on-site. The irrigation will utilise low-pressure, low elevation spray or drip line technologies which minimises potential for spray drift off-site.

Dust emissions from the composting facility will be managed through the procedures outlined in Section 7.3 of the Air Quality Impact Assessment report and an operational management plan in accordance with anticipated environmental authority requirements. The management of dust emissions will also minimise potential off-site contamination risks.

It is assumed that Grow Green operational procedures minimise risks of contamination of their products.

- *Health concerns associated with dust and other emissions including fungal and bacterial infections*

RESPONSE

It is understood that Grow Green manufacture fertiliser products containing biological and conventional NPK fertilisers for soil improvement, including products that contain comprehensive suites of bacteria and fungi.

The proposed activities including the produced compost and the digestate from the biogas plant are organic fertilizers / soil conditioning products.

The assessment (refer Attachment 12 of the Air Quality Impact Assessment report) demonstrates that the relevant air quality criteria will be satisfied at the site boundary considering dust emissions from the composting facility.

The composting facility, biogas plant and the digestate storage and irrigation will be managed in accordance with regulatory requirements from DES and any other relevant regulatory bodies to ensure that risks of health impacts are minimised.

- *Cumulative impacts*

RESPONSE

The Air Quality Impact Assessment report and earlier sections of this Addendum provide assessment of the potential cumulative impacts of the proposed environmentally relevant activities.

Review of Project Amendments

RPS Group has advised that changes have been made to the SRAIP project since issue of the Air Quality Impact Assessment report (8 April 2020). A summary of the changes was provided by RPS Group and reviewed by MWA Environmental.

The following is our summary of changes potentially relevant to the Air Quality Impact Assessment report:

- End of Waste Code – An End of Waste Code has been approved to enable digestate to be used as a resource as a compost or soil conditioner. In approving the End of Waste Code for Digestate, the Department of Environment and Science has confirmed that the resource has been demonstrated to have benefits through sustainable use with negligible environmental risks –
    - This removed the need to regulate digestate application to land
    - As part of the End of Waste Code process the digestate irrigation and dam area has been removed and storage of the digestate will now be located within tanks on the AD site.
- Variation approval amendments have occurred to align the proposed SRAIP Strategic Intent, Development Code, and Level of Assessment with the Scenic Rim Planning Scheme, examples of this are:
    - Removal of non-agri industrial related uses from the proposed activity groups as part of the variation approval, the following uses were removed:
        - Tourism
        - Agricultural supplies store
        - Office
        - Vehicle repair – trucks
        - Vehicle repair – agricultural equipment
- The two proposed dams were removed and one turkey nest dam is now proposed of a smaller scale at 192m x 159m and is located outside of the KRA.
- The proposed boundary of the SRAIP was reduced to remove the proposal from any KRA - resource / processing area.
- Finally, the subdivision layout has changed to accommodate single infrastructure uses on single lots.

The current Concept Layout (RPS Group Plan Ref. 142489 - 05X, 6 December 2022) is included as **Attachment 1**.

Based upon our review of the SRAIP project changes and amendments to the Concept Layout it is evident that:

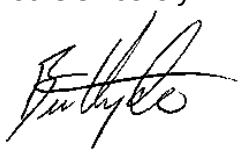
1. The minor layout changes to the SRAIP Concept Plan will have a negligible impact on off-site odour, air pollutant or dust impacts and the outcomes and recommendations of the Air Quality Impact Assessment report remain relevant.
2. The removal of the proposed on-site digestate irrigation will result in a reduction in overall odour emissions from the SRAIP project. An updated cumulative odour plot[4] is included at **Attachment 2** which shows a minor reduction in the odour impact footprint when on-site digestate irrigation is removed.

Whilst various aspects of the Air Quality Impact Assessment report may need to be reviewed at the detailed design phase of the project, the current changes are not considered to warrant amendment of reporting at this time as the outcomes remain relevant to the current proposal.

The Air Quality Impact Assessment report conclusion that that compliance with the relevant odour amenity guideline and air quality objectives can be achieved at sensitive receptors with the implementation of appropriate controls and management measures remain relevant for the amended SRAIP project.

I trust the above is suitable for your present requirements and if you require any further information please contact the undersigned.

Yours sincerely



Ben Hyde
Senior Environmental Engineer

[4] Originally included as Attachment 13 of the Air Quality Impact Assessment report

ATTACHMENT 1

0 10 20 40 60 80 1 : 2,500 @ A1

SCENIC RIM AGRICULTURAL INDUSTRIAL PRECINCT

6200 CUNNINGHAM HWY KALBAR CONCEPT LAYOUT

PLAN REF:	**142489 - 05X**
DATE:	6 DECEMBER 2022
CLIENT:	KALFRESH
DRAWN BY:	NV
CHECKED BY:	JC

Legend

- Site Boundary
- SRAIP Boundary
- Existing Contours (1 metre)
- Existing Boundaries
- Existing Easement
- Proposed Detention Basin (Common Property
- Proposed Overland Flow (Common Property
- Proposed Bio Basin
- Proposed Dam
- Proposed Effluent Irrigation
- Proposed Composting Lot
- Lechate Pond
- Proposed Composter Lot Road Access
- Proposed Plant & Equipment
- Proposed Windrow & Finished Product
- Proposed Stormwater Basin
- Proposed Wagner Quarry Access - *(not part of the SRAIP proposal and subject to separate development approval)*
- Environmental Protection Area *(clearing within the Environmental Protection Area is subject to future investigation/approvals)*
- Road Connection to Composter Area
- Access Easement for Wagners Road Alignment

Yield Breakdown - SRAIP	
Industry Allotments	**Overall**
4000m² -1HA	2
1HA- 2.99HA	10
3HA +	2
Total Industry Allotments	**14**
Infrastructure	
Digester and Energy Site	1
Sewer Treatment Plant	1
Total Infrastructure Allotments	**2**

Land Budget - SRAIP		
	Overall	
	Area	**%**
Area of SRAIP	**59.309 ha**	**100.0%**
Saleable Area		
Industry Allotments	**29.503 ha**	**49.7%**
Road		
Private Road	**3.847 ha**	**6.5%**
Common Property		
Overland Flow	**19.138 ha**	**32.3%**
Detention Basin	**1.001 ha**	**1.7%**
Infrastucture		
Digester and Energy Site	**5.120 ha**	**8.6%**
Sewer Treatment Plant, Water Treatment and Fire Fighting	**0.700 ha**	**1.2%**

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.

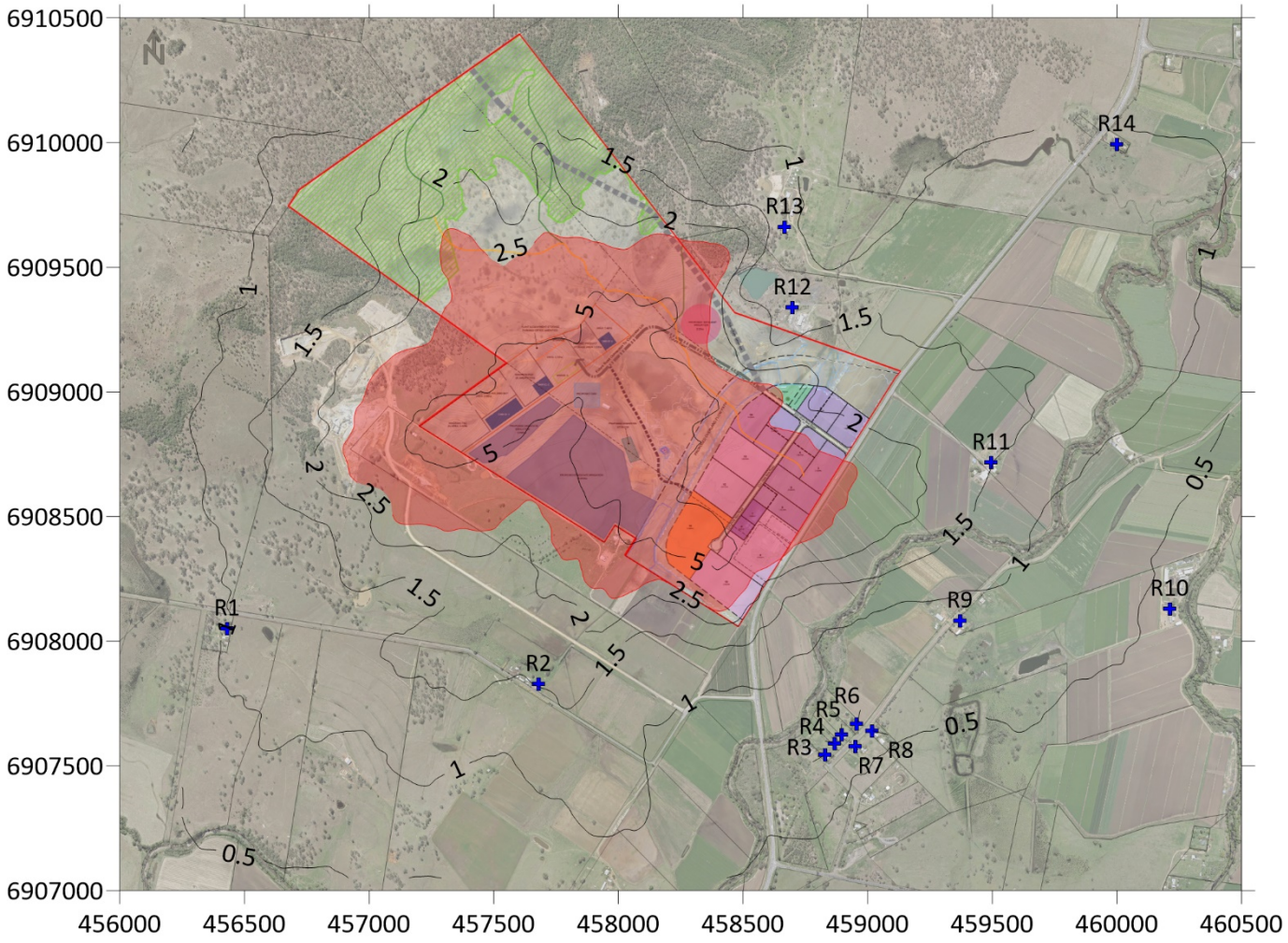
Areas have been rounded down to the nearest 5m².

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.

URBAN DESIGN
Level 4 HQ South
520 Wickham Street
PO Box 1559
Fortitude Valley QLD 4006
T +61 7 3539 9500
W rpsgroup.com

ATTACHMENT 2



Kalbar 19-143

1-hour average 99.5th percentile ground level concentrations of Odour from;
Overall Cumulative Site Emissions
Note: Conservative Assessment Assuming Directly Additive Odour Concentrations from All Sources

Figure A13	Pollutant	Averaging Period	Guideline	Units	Date
mwa ENVIRONMENTAL	Odour	1-hour average 99.5th percentile	2.5	Odour Units	9-Dec-2022