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our quality your success

2019-20 ANNUAL ENVIRONMENTAL MANAGEMENT REPORT

Date: December 22, 2020

Purpose

Under the DA 05-00-173 issued by the Department of Planning and Environment, Wingham Beef Exports (WBE) is required to provide an Annual Environmental Management Report (AEMR). This report is designed to update the department of current environmental standards / regulatory requirements, performance including monitoring data, complaints, non-compliance issues and any actions / infrastructure implemented.

Background

The Annual Environmental Management Report submitted in July, 2015 included a summary of environmental performance since 2005. Since this time Environmental Management Reports were submitted for each year, on September 10, 2020 correspondence was received to add further detail to the 2018/19 report this was re-submitted on October 8, 2020. All following reports will contain this additional information that not only shows environmental performance for that year but data and graphs from previous years so trends can be reviewed also.

2019-2020 Production Summary

The start of the period 1 July 2019 to late February 2020 continued with the pattern of the previous reporting period with greater than average kill numbers. Typical five-day working weeks for the first part changed to regular six day working weeks for the late part of 2019 and early 2020. No traditional two-week maintenance closure was implemented for August 2019 although a two-week closure over Christmas went ahead as per normal. The last half of 2019 saw the drought affected area in NSW and southern QLD significantly worsen, increased cattle availability at lower cost this resulted in the plant implementing an additional 6 hour working day most weeks to meet production needs. This increase throughput was required to maximize returns on the endless cattle supply caused by the worst drought in living memory. The value of beef globally was at record levels mainly due to China demand, making this period profitable for export listed meat processors. WBE continue to operate while the surrounding area was severely affected by bush fires in the late part of 2019.

Then the drought broke for NSW and southern QLD in late February 2020 this saw an immediate cattle shortage to an extent where suppliers booked in with cattle not arriving, cattle in the markets were extremely scarce and production immediately reduced to two or three day's a week. This coupled with the global pandemic of Covid 19 impacted sales and worker availability.

During this 2019/20 period slaughter was undertaken on 220 days the lowest kill on a full production day was 330 caused by no shows after significant rain, Saturday production was generally around 300 head. The largest slaughter was 585 head, the average kill rate for this period was 487 head.

2019-2020 Environmental Management Plan/s Implementation

Document Management

This period saw the continued use of NH Foods Australia electronic system (I-Leader-ENV-MON 007). The system has been used to record data, monitor activities and create reports.

Approvals

WBE has operated with a range of approvals relevant for our operations the table below outlines these. No changes for made to these approvals for the 2019-20 period.

Table 1- Approval List

Institution	Certificate
NSW EPA	EPA Licence 1590
Planning Industry & Environment	DA 05-00-173
DAFF	Approved Arrangements
DAFF	Cerificate of Registration
DAFF	Licence To Export Meat
DAFF	Certificate of Animal By-Product Overseas Listing
NSW Food Authority	Licence - Food Regulation 2010
BRC	Global Standard for Food Safety
Meat & Livestock Australia	Meat Standards Australia Brand Licence
AUS-QUAL	Codex Alimentarius - HACCP (FS300225)
AUSMEAT	Slaughter and Dressing of Bovine Animals
AUSMEAT	Boning and Packaging of Bovine Carcases
AUSMEAT	Packaging of Bovine Variety Meats
MID COAST COUNCIL	Paunch disposal DA0225/2006D
MID COAST COUNCIL	Paunch disposal DA0226/2006D

Noise and Odour

WBE documented Noise and Odour Management Plan has continued to be implemented. No complaints for noise or odour were made to WBE for this 12-month period. A departmental noise monitoring program was developed during this period our first noise monitoring activity was undertaken and form completed on July 2, 2020, all results are compliant and attached. Odour management has been successful at both the abattoir site and at Glenyarra. The continued use of enzyme (4 Earth) treatment to the first aerobic treatment pond was undertaken to improve the effluent treatment and reduced sludge in this pond. Sludge build up is causes odours and this initiative has reduced the potential of offensive odour emissions at this location. Staff and company employee's are encouraged report any offensive noise and odour to management so immediate action can be undertaken if required.

Wastewater Management

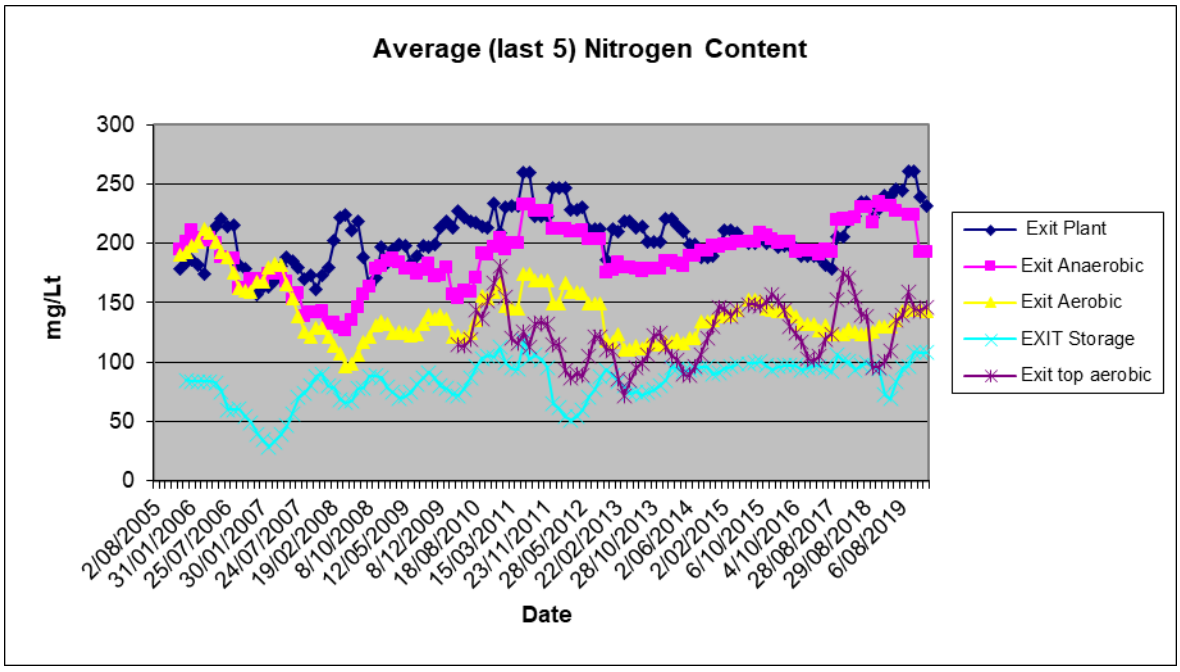
Wastewater was continued to be managed as outlined in the companies Irrigation Management Plan validation of our sustainable effluent management is detailed below in the environmental performance monitoring summary.

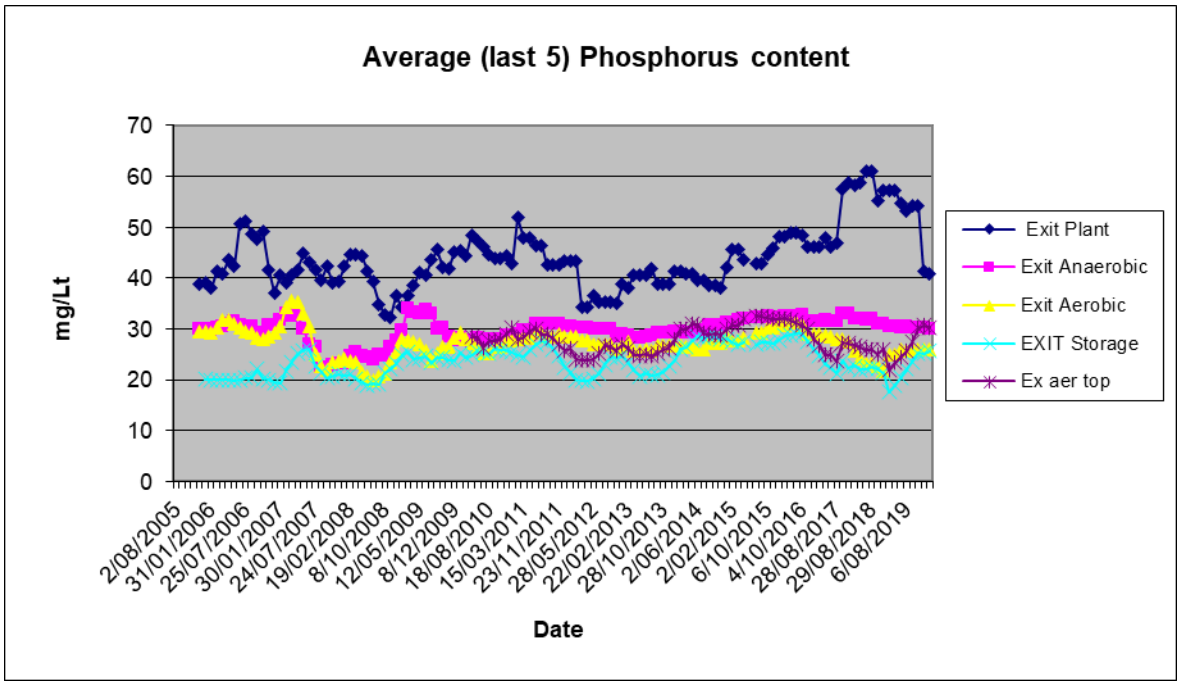
For the period 1 July 2019 to 30 June 2020 WBE transferred 330.9ML of water from the plant for treatment at Glennyarra. The total volume of water used equated to 10.8 kL/t of hot standard carcass weight (HSCW) this is equivalent to the industry standard of < 10.6 kL/t of hot standard carcass weight (HSCW) (note this calculation was made from effluent volume exit plant which includes stormwater runoff). It should also be noted that when the kill rate is reduced the rate of water use per Kg of HSCW increases, this has directly attributed to the marginal increase from the previous reporting period. Result from effluent quality monitored at the irrigation outlet are detailed in Table 2 below. (note all annual test results are not included)

Table 2. Effluent Quality Monitoring

Exit Storage Dam	06/08/2019	30/09/2019	14/01/2020	20/05/2020	10/06/2020
Ph	8.1	7.8			7.9
Conductivity (mS/cm)	2020	187			138.5
BOD	240	230			110
Total S/S(mg/L)	19	57			46
Total D/S (mg/L)	820	860			690
TP (mg/L)	25.5	28.2	33.8	21.4	20.9
TN (mg/L)	143	123	180	78.0	74.1
Oil & Grease (mg/L)	<5	25			

Results were evaluated to access the performance of the treatment system during this period. This data set was typical when compared to previous data a general improvement in total phosphorus (TP) concentrations exit the plant, improved screening of the green waste water stream attributed to this improved result. The effluent treatment system is stable and working well at reducing solids, oil and grease and nutrient content in the wastewater.
This data set when evaluated against water quality guidelines outlined in Use of Effluent by Irrigation (Dept Env. And Conservation 2004) and the following classification is allocated:
Total dissolved solids, BOD, TN, and electrical conductivity as medium strength.
Total phosphorus (TP) as high strength but only just into this category with 26.0mg/L where >20mg/L considered high. Reference should be made that TP from intensive animal industries typical range is 10-500mg/L.
Metals, pH, pesticide and oil and grease results were all acceptable.





Irrigation Management
Effluent volumes continue to be monitored daily at both exit the plant and at points of discharge. The method of recording data has remained unchanged (Appendix 2A) and the data entry and tabulation in I Leader was conducted for the whole of this reporting period. Effluent sampling was not undertaken at the correct frequency with some sampling events missed this was partly attributed to reduced sampling of Dingo Creek (details provided below) and these collections are usually coupled. Effluent quality analysis on samples collected has also been conducted in accordance with the Irrigation Management Plan and results are similar to previous years (with one exception oil and grease was not tested on 10/6 as a specific sample bottle was not supplied from the laboratory.

Soil Monitoring
Soils samples were collected on August 15, 2019 from 3 locations at a series of depths, analysis parameters exceeded those detailed in the Irrigation Management Plan. Results were nearly equivalent to previous years with recommendations by our consulting agronomist implemented to continue sustainability and profit generation from farming activities. Please refer to the attached historical soil test comparison 2010-2019 for trends and recommendations made by MNC Agronomy for soil health at the effluent irrigation site.

Paunch Management-
Paunch management has been conducted in accordance with the companies Paunch Management Plan this plan remains the updated version (changes made 2018). With the requirements of the NSW Government Biosecurity Tropical Soda Apple Control Order 2017, WBE continues to work closely with MidCoast Council to ensure compliance with the order. The company is determined to take all actions required to assist in the management and eradication of this invasive weed.
The application of paunch to land for agricultural purposes is currently approved at

* ‘Wallaby Joe’ Bulga Road (DP 754454).
* ‘Maryville’ and ‘Coolangoola’ access is from Nowendoc and Archinal Roads. It is proposed that paunch disposal will occur near the western boundary of ‘Maryville’ (DP 179568).
* 66 Teatree Lane Oxley Island, DP 580324.
* Glenyarra 285 Bungay Road, Wingham, Lot 102 DP 812008 Lot 1 DP

WBE has ceased disposal of paunch at 201 Wherrol Flat Road Wingham, Lot 10 DP 107089 in a preventative measure regarding tropical soda apple as advised by MidCoast Council.

Our primary paunch disposal site during this period was Wallaby Joe (DP 754454) the lowest and largest daily disposal was 3 and 6 metric tonne respectively; the average daily disposal was 4.5 metric tonne.

Table 3. Environmental Complaints Summary

	Year												
	2007 /08	**2008 / 09**	**2009 / 10**	**2010 / 11**	**2011 / 12**	**2012 / 13**	**2013 / 14**	**2014 / 15**	**2015 / 16**	**2016 / 17**	**2017 / 18**	**2018 / 19**	**2019 / 20**
Air	3	3		3			1		**2**	**2**			
Water													
Noise					1	1		2		1			
Waste													
Other		2											
Total	**3**	**5**	**0**	**3**	**1**	**1**	**1**	**2**	**2**	**3**	**0**	**0**	**0**

Any complaints would have been acted on in accordance with our documented procedure see section 9, Environmental Management System. Nil complaints is validation WBE is conducting activities to a standard deemed acceptable by the surrounding community.

- WBE environmental standard is to ensure compliance with parameters detailed under our environmental protection licence (EPA) 1590, relevant conditions in current development approvals (DA) (including DA 05-00-173) and current environmental laws.

- WBE environmental performance for this period has been in accordance with the conditions set in EPA licence 1590, current DA and current environmental laws. Our performance under conditions set in DA 05-00-173 has been verified as part of the company's annual return to the EPA.

- No complaints have been received for this period reported directly WBE or to the EPA.

2019-20 Environmental Performance Monitoring Summary

- A summary of monitoring results listed in Tables 2 and 4. Effluent monitoring and soil analysis data are consistent with previous year's results and can be forwarded if required.
- Mid- Coast council area enforced water restrictions were active for this period until approximately the end of February. The Manning River and tributaries had significantly less flow than normal, Dingo Creek (the creek that runs past the property that environmental samples are collected from) flow actually ceased. The upstream sample site has a solid shelf like rock base and has very lengthy sections of continuous ponds with no rapids. The downstream site is pebble based and much shallower with more small ponds joined by shallow rapids when the creek has reduced flow. Samples collected in August 2019 (see Table 4) were erroneous because the downstream site pools had formed and little to no flow was occurring between these pools (I assume the water flow if any went underground). The ponds were full of algae and the high total nitrogen result would have been directly attributed to this. These results were added to this report but this data was not included in the graphs, also a photo of the downstream site (note this site only became drier until rain in February). Further photographic and video evidence was

collected to show the graphic of this situation as sampling Dingo Creek is also part of our EPA licence reporting requirements.

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Table 4. Dingo Creek sampling

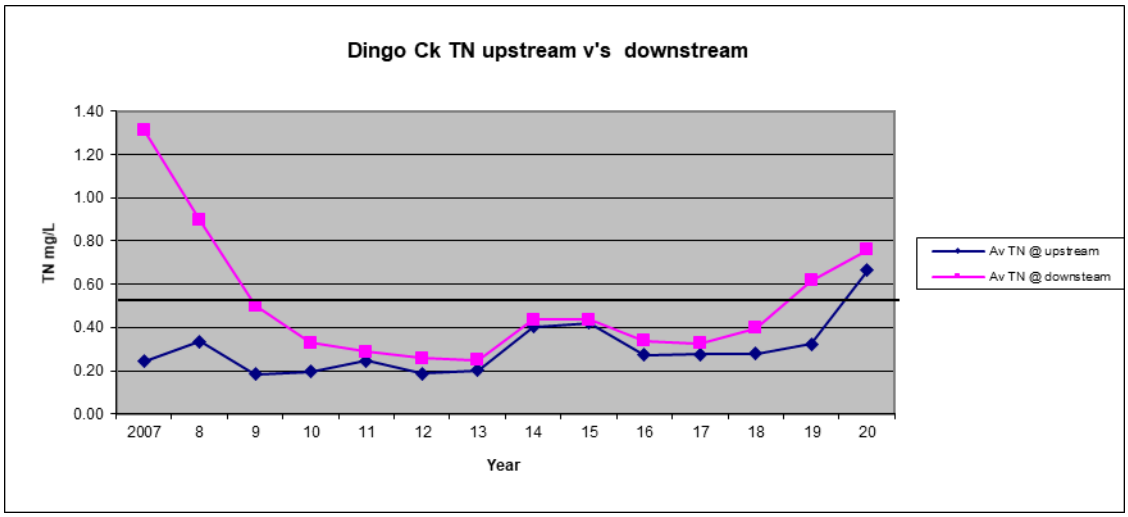
site	parameter	06/08/2019	29/01/2020	16/03/2020	10/06/2020
upstream	FC	56	400	380	520
downstream	FC	8	75	200	490
upstream	Total P	0.02	0.11	0.033	0.013
downstream	Total P	0.011	0.11	0.026	0.013
upstream	Total N	0.32	0.73	1.14	0.12
downstream	Total N	6.87	0.76	1.21	0.31

For all samples collected results were compliant with the exception of sample date 6/8/2019 see above.

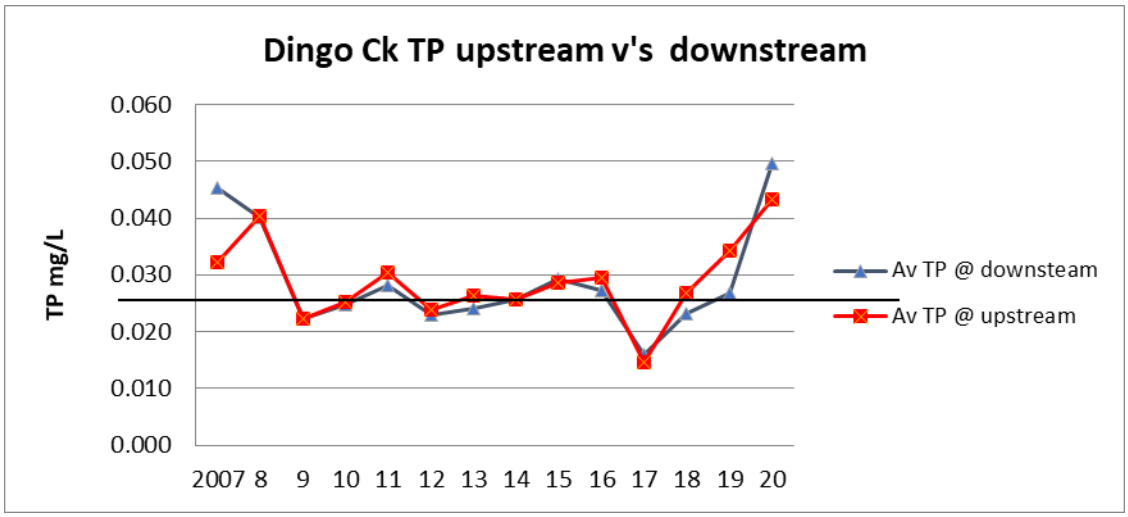
Photo 1. Dingo Creek Downstream sampling site.

Dingo Creek downstream boundary September 2019.

Graph 1 Dingo Creek Total Nitrogen Yearly Averages



Graph 2 Dingo Creek Total Phosphorus Yearly Averages



Environmental monitoring has indicated a slight change in the parameters being monitored at the upstream and downstream sites in comparison to the previous years. This could be directly attributed to the low to no flow rate in Dingo Creek so sampling was ceased then in the period available to be sampled the creek had high flows after significant rain and elevated nitrogen and phosphorus levels directly attributed to turbidity.

Table 5. Nutrient Balances for the total field areas

PERIOD	ACTIVITY	Days Worked	Daily Av Head Killed	Vol. Applied (ML)	Av Vol. ML/day	Av TN (mg/L)	Av TP (mg/L)	N Balance / Hec	P Balance / Hec
2005	Cropping / Grazing	229	734	311	1.35	191	30	+199Kg	+41Kg
2006	Cropping / Grazing	226	731	367	1.62	179	30	+235Kg	+55Kg
2007	Cropping / Grazing	217	759	328	1.51	118	23	+61Kg	+33Kg
2008	Cropping / Grazing	211	680	238	1.12	77	21	+17Kg	+19Kg
2009	Cropping / Grazing	201	668	222	1.1	77	24	-11Kg	+11Kg
2010	Cropping / Grazing	202	656	278	1.37	99	25	+6Kg	+26Kg
2011	Cropping / Grazing	217	654	287	1.32	86	25	+5Kg	+14Kg
2012	Cropping / Grazing	214	550	212	0.99	75	22	+11Kg	+28Kg
2013	Cropping / Grazing	237	574	300	1.26	80	23	+8Kg	+27Kg
2014	Cropping / Grazing	245	645	309	1.26	95	28	+56Kg	+30Kg
2015/16	Cropping / Grazing	220	595	306	1.39	95	29	+25Kg	+68Kg
2016/17	Cropping / Grazing	215	488	205	0.95	93	22	-49Kg	+24Kg
2017/18	Cropping / Grazing	235	543	281	1.2	102	23	-5Kg	+3Kg
2018/19	Cropping / Grazing	215	449	338	1.8	75	24	-1Kg	+4Kg
2019/20	Cropping / Grazing	220	487	199	1.1	120	26	-44Kg	+25Kg

Nutrient balance results are varied from the previous two years, the main reason being the volume of effluent applied, note the similar result for 2016/17 where a similar volume was applied. Our farming activities has had no significant change compared to previous years with the exception of different crop types being grown as directed by our agronomist. The reduced effluent volume applied is a result of the drought (less stormwater to the wastewater and greater evaporation) and then reduced production days for the later part of this reporting period. These nutrient balance quantity variations have minimal impact to the soil overall nutrient quantities. Continually changing the cropping practices and review land management recommended by our agronomist will see fluctuations in yearly nitrogen and phosphorus balances going forward. As per the yearly comparison soil report attached other soil properties can be more significant for long term sustainability. The significant focus has been more consideration given to resting crop areas and returning humus (organic) matter back to the soil to improve soil profile. WBE is very satisfied that more sustainable cropping program was undertaken under advice from our consulting agronomist and the nutrient balance results had not adverse impact on our surrounding environment. The continuation of the deep rooted lucerne crops that requires less water also improved the overall soil and farm activity management.

Environmental Management

WBE invested in numerous infrastructure capital projects directly related to environmental and social health for this period they include,

- New dissolved air floatation unit was installed to aid removal of suspended solids and fat from entering the tertiary waste water treatment system.
- Rapid doors applied in the freezer complex to reduce the influx of warm air into these refrigerated rooms.
- Automation of the cooling and condenser towers, this includes all fans put on variable speed drives resulting in less noise omissions and increased efficiency hence less power usage.
- Introduction of facial recognition technology for fever scanning in response the Covid 19 pandemic, a public health benefit.

WBE is confident in the management of effluent used for irrigation and believe continual changes to management practices will further improve our environmental performance to ensure a sustainable future for WBE. WBE will continue to monitor environmental data results to ensure our activities do not have an adverse impact on the surrounding environment.

- Compliance with Project Approval DA05-00-173, condition 23-

The standards, performance measurements and statutory requirements have been met and complied with, this is validated by the above data. Wingham Beef exports will continue to review management practices to ensure the development complies with the conditions of its approval.

- Conclusion for period - July 1, 2019 to June 30, 2020

Similar to the end of 2017-2018 of this period was a very busy period with abundant cattle supply and full production directly attributed to the ongoing drought. Then the drought breaks Covid 19 impacts our workforce, the availability of cattle and our markets and production reduced to minimal days per week, we are in a year like no other ever experienced. Throughout this, WBE are pleased to issue an environmental report showing performance with environmental monitoring data reflecting our activities having no adverse impact on our surrounding environment. WBE is proud to continue its sustainable operation that does not adversely impact on the local community.

Yours sincerely:

Glenn Darcy