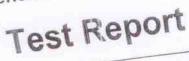
Independent Analytical Supplies



ABORATORIES

Analysis Number:

99AJ56906

Lab Report Number:

2229F01

Analysis Type:

Misc. Tests (99A)

Customer ID:

ENVI.C1

Contact Name:

JIM DOWDALL

Delivery By:

Customer 7665/3

Company Name:

ENVIROGUIDE CONSULTING

Sample Card Number:

93 UPPER GEORGES STREET

Sample Condition:

Acceptable

Address:

DUN LAOGHAIRE CO. DUBLIN

Sample Type:

Surface Water

Date Sample Received:

20/01/2012

Date Analysis Commenced:

20/01/2012

Sample Reference:

OTOOLE COMPOSTING

Date Certificate Issued:

27/01/2012

ple Description: 5991	Method	Result	mg/l
Parameter	Oxygen Meter SO 2006	21	mg/l
emical Oxygen Demand	Attendigestion and Colourinistry SOF 2005	se. <0.01	mg/l
nical Oxygen Demand	Colourimetry SOF 2010	7.7	pH units mg/l
onia	Gravimetric/Dry @ 105° & SQR0 2016	3	mga
	Gravimetric/Dry @ 105°@\$CA22010		

Consent of copyright outlet require

Signed:

) milall

Date:

Wendy McCall - Laboratory Manager * = not INAB Accredited

* = Subcontracted

This report must not be reproduced, except in full, without the prior written approval of IAS Laboratories. This report relates only to the sample submitted. Opinions and interpretations expressed herein are outside the scope of INAB accreditation. Uncertainty of Measurement has been calculated for all INAB accredited tests and is available upon request.



Appendix to Reports / Quotations

Parameter	Method Used	Range	Limit of Detection
pH of Soil / Water	Hydrogen ion selective electrode	pH 4 - 10	4 pH units
SMP pH of Soil	Hydrogen ion selective electrode	pH 4 - 10	4 pH units
Organic Matter – Soil	Furnace	0.1 - 99.9%	0.1%
Morgans Phosphorus - Soil	Extraction / Colourimetry	1 - 20 mg/l	1 mg/l
Morgans Potassium - Soil	Extraction / Flame Photometry	25 - 200 mg/l	25 mg/l
COD - Low Range	Digestion / Colourimetry	1 - 150 mg/l	1 mg/l
COD – High Range	Digestion / Colourimetry	50 - 5000 mg/l	50 mg/l
BOD	DO Probe	1 - 1000 mg/L	1 mg/l
Ammonia	Colourimetry	0.01 mg/l to 0.61 mg/l	0.01 mg/l
Total Suspended Solids	Gravimetric	1mg/l to 1000mg/l	1 mg/l
Alkalinity	Titration	10mg/l - 800 mg/l	10 mg/l
Chloride	Titration	2 mg/l - 100 mg/l	2 mg/l
Sulphate	Colourimetry	5mg/l to 70mg/l	5 mg/l
Ortho Phosphate	Spectrophotometry	0.05mg/l -1.00mg/l	0.05 mg/l
Conductivity	Electrometry	1µscm ⁻¹ -1999 µscm ⁻¹	1µS/cm
Calcium, Magnesium, Sodium, Potassium Potable Water)	ICP-MS	0.5 - 200mg/l	0.5 mg/l
Jn, Aluminium (Potable Water)	ICP-MS	20 - 500μg/l	20 µg/l
langanese, Chromium (Potable Water)	ICP-MS	5 - 500µg/l	5 µg/l
Copper, Zinc (Potable Water)	ICP-MS	10 - 500µg/l	10 µg/l
Lead (Potable Water)	ICP-MS	1 - 100µg/l	1 µg/l
Nickel (Potable Water)	ICP-MS	3 ² 2 - 100μg/l	2 µg/l
Cadmium (Potable Water)	ICP-MS the	0.5 - 100µg/l	0.5 µg/l
Calcium, Magnesium, Sodium, Potassium (Other Water*)	ICP-MS ON THE	2 – 200mg/l	2 mg/l
Cadmium (Potable Water) Cadmium (Potable Water) Calcium, Magnesium, Sodium, Potassium (Other Water*) Iron, Aluminium, Manganese, Copper, Zinc, Lead, Nickel, Chromium, Cadmium (Other Water*)	ICPON Seried 10	20 - 2000µg/l	20 µg/l

Other water – Surface Water, Ground Water, Borahole Water, Soluent and Trade Waters.

Uncertainty of Measurement is available upon request, for all Not accredited tests. The application of the Uncertainty of Measurement to your results may alter the pass/fail status of your results. You have any concerns with regards to the Uncertainty of Measurement, please contact IAS Laboratories to discuss.

LIMITATION OF LIABILITY

LIMITATION OF LIABILITY

- This report sets out the results of the analysis of samples specifically referred to in it. Independent Analytical Supplies Limited (I.A.S) warrants that the results as stated are accurate in so far as they relate to that sample as received in the I.A.S. Ltd Laboratory. I.A.S. Ltd accepts no other liability or responsibility to any party whatsoever. In particular, but without prejudice to the generality of the foregoing. I.A.S. Ltd shall have no liability or responsibility whatsoever in respect of or in any way by reference
 - The taking of the sample, the accuracy of the sample or its suitability for the purpose(s) for which it is taken or applied, the designation, handling, storage or transport of the sample prior to its delivery to I.A.S Ltd Laboratory or its condition upon such delivery.
 - b) the interpretation of the result of this test report and/or the application of the results as stated and/or the accuracy and the reliability of any veterinary, farm management or other advice based thereon; and
 - any (or any alleged) lack of competence, negligence, failure or breach of duty on the part of any person engaged in or responsible for any of the activities or functions referred to above, whether or not such agent is described as an Agent of I.A.S. Ltd or otherwise. All such persons shall be deemed to be agents of the person to whom the report is issued and not to be agents or representatives in any capacity is I.A.S. Ltd.
- 2. In the event of any claim arising around I.A.S. Ltd, I.A.S. Ltd expressly excludes liability for any consequential loss or damage or any loss of value, profit, business, revenue, goodwill, yields, production or anticipated savings which may arise in respect of or in any way by reference to any test report, analysis, advice or information given orally by any person or contained in any test report, leaflet, book, pamphlet, brochure or other document, whether prepared, published or issued by I.A.S. Ltd or otherwise.

Form 4079, Issue: 2

Proge 1 of 1











Independent Analytical Supplies

Test Report

Lab Report Number:

2229F02

Analysis Number:

99A/56907

Customer ID:

ENVI.C1

Analysis Type:

Misc. Tests (99A)

Contact Name:

JIM DOWDALL

Delivery By:

Customer

Company Name:

ENVIROGUIDE CONSULTING

Sample Card Number:

7665/3

Address:

93 UPPER GEORGES STREET

Sample Condition:

Acceptable

DUN LAOGHAIRE CO. DUBLIN

Date Sample Received:

20/01/2012

Sample Type:

Surface Water O'TOOLE COMPOSTING

Date Analysis Commenced:

20/01/2012

Sample Reference: Sample Description:

SW2

Date Certificate Issued:

27/01/2012

Oxygen Meter SOP 2006 Microdigestion and Colourimetry SOP 2005 Colourimetry SOP 2013 Electrometry SOP 2004	2 18 <0.01 7.9	mg/l mg/l mg/l
Microdigestion and Colourimetry SOP 2005	1700	mg/l
Colourimetry SOP 2013 Electrometry SOP 2004	<0.01 7.9	
Electrometry SOP 2004	15 ⁶ 7.9	
The state of the s		pH units
Gravimetric/Dry (@ 105°C 50°C 2010	<1	mg/l
For inspection med		
	For its pection purposes of for a	Consent of congriding of the Consent of Consent of Consent of Congriding of Consent of C

Signed:

a milall

Date:

Wendy McCall - Laboratory Manager

* = not INAB Accredited

A = Subcontracted

This report must not be reproduced, except in full, without the prior written approval of IAS Laboratories. This report relates only to the sample submitted. Opinions and interpretations expressed herein are outside the scope of INAB accreditation. Uncertainty of Measurement has been calculated for all INAB accredited tests and is available upon request.



Appendix to Reports / Quotations

Parameter	Method Used	Range	Limit of Detection
oH of Soil / Water	Hydrogen ion selective electrode	pH 4 - 10	4 pH units
SMP pH of Soil	Hydrogen ion selective electrode	pH 4 - 10	4 pH units
Organic Matter - Soil	Furnace	0.1 - 99.9%	0.1%
Morgans Phosphorus – Soil	Extraction / Colourimetry	1 - 20 mg/l	1 mg/l
Morgans Potassium - Soil	Extraction / Flame Photometry	25 - 200 mg/l	25 mg/l
COD - Low Range	Digestion / Colourimetry	1 – 150 mg/l	1 mg/l
COD - High Range	Digestion / Colourimetry	50 - 5000 mg/l	50 mg/l
BOD	DO Probe	1 - 1000 mg/L	1 mg/l
Ammonia	Colourimetry	0.01 mg/l to 0.61 mg/l	0.01 mg/l
Total Suspended Solids	Gravimetric	1mg/l to 1000mg/l	1 mg/l
Alkalinity	Titration	10mg/l - 800 mg/l	10 mg/l
Chloride	Titration	2 mg/l - 100 mg/l	2 mg/l
Sulphate	Colourimetry	5mg/l to 70mg/l	5 mg/l
Ortho Phosphate	Spectrophotometry	0.05mg/l -1.00mg/l	0.05 mg/l
Conductivity	Electrometry	1µscm ⁻¹ -1999 µscm ⁻¹	1µS/cm
Calcium, Magnesium, Sodium, Potassium	ICP-MS	0.5 - 200mg/l	0.5 mg/l
n, Aluminium (Potable Water)	ICP-MS	20 - 500µg/l	20 µg/l
Janganese, Chromium (Potable Water)	ICP-MS	5 - 500µg/l	5 µg/l
Copper, Zinc (Potable Water)	ICP-MS	10 - 500µg/l	10 µg/l
Lead (Potable Water)	ICP-MS	1 - 100µg/l	1 µg/l
Nickel (Potable Water)	ICP-MS	se. 2 - 100hg/l	2 µg/l
Cadmium (Potable Water)	ICP-MS ~	0.5 - 100μg/l	0.5 µg/l
Calcium, Magnesium, Sodium, Potassium (Other Water*)	ICP-MS ally ally of	2 – 200mg/l	2 mg/l
Iron, Aluminium, Manganese, Copper, Zinc, Lead, Nickel, Chromium, Cadmium (Other Water*)	ICP-MS IC	20 - 2000µg/l	20 µg/l

* - Other water – Surface Water, Ground Water, Borehole Water Struent and Trade Waters.

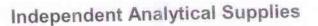
Uncertainty of Measurement is available upon request, for all the accredited tests. The application of the Uncertainty of Measurement to your results may alter the pass/fail status of your results. Kyou have any concerns with regards to the Uncertainty of Measurement, please contact IAS Laboratories to discuss.

LIMITATION OF LIABILITY

- 1. This report sets out the results of the analysis of samples specifically referred to in it. Independent Analytical Supplies Limited (I.A.S) warrants that the results as stated of accurate in so far as they relate to that sample as received in the I.A.S. Ltd Laboratory. I.A.S. Ltd accepts no other liability or responsibility to any party whatsoever. In particular, but without prejudice to the generality of the foregoing. I.A.S. Ltd shall have no liability or responsibility whatsoever in respect of or in any way by reference to:
 - The taking of the sample the accuracy of the sample or its suitability for the purpose(s) for which it is taken or applied, the designation, handling, storage or transport of the sample prior to its delivery to I.A.S Ltd Laboratory or its condition upon such delivery.
 - the interpretation of the result of this test report and/or the application of the results as stated and/or the accuracy and the reliability of any veterinary, farm management or other advice based thereon; and
 - c) any (or any alleged) lack of competence, negligence, failure or breach of duty on the part of any person engaged in or responsible for any of the activities or functions referred to above, whether or not such agent is described as an Agent of I.A.S. Ltd or otherwise. All such persons shall be deemed to be agents of the person to whom the report is issued and not to be agents or representatives in any capacity is I.A.S. Ltd.
- In the event of any claim arising around I.A.S. Ltd, I.A.S. Ltd expressly excludes liability for any consequential loss or damage or any loss of value, profit, business, revenue, goodwill, yields, production or anticipated savings which may arise in respect of or in any way by reference to any test report, analysis, advice or information given orally by any person or contained in any test report, leaflet, book, pamphlet, brochure or other document, whether prepared, published or issued by I.A.S. Ltd or otherwise.

Form 4079, Issue: 2





Test Report

Lab Report Number:

1900F01

Analysis Number:

99A/56253

Customer ID:

ENVI.C1

Analysis Type:

Misc. Tests (99A)

Contact Name:

JIM DOWDALL

Delivery By:

Customer

Company Name:

ENVIROGUIDE CONSULTING

Sample Card Number:

6930/1

93 UPPER GEORGES STREET

Address:

DUN LAOGHAIRE

Sample Condition:

Acceptable

Sample Type:

Ground Water

CO. DUBLIN

Date Sample Received:

05/01/2012

Sample Reference:

OTOOLE COMPOSTING

Date Analysis Commenced:

05/01/2012

Sample Description:

WELL WATER

Date Certificate Issued:

17/01/2012

Parameter	Method	Result	Unit
δ· mia*	Colourimetry SOP 2013	<0.01	mg/l
Cencium	ICP-MS	<2	mg/l
Chloride	Colourimetry SOP 2019	42	mg/l
Conductivity	Electrometry SOF 2003	15°. 686	µS/cm 20°C
Copper	ICP-MS	gt 27	ug/l
ron	ICP-MS ATT ATT	22	ug/l
Total Hardness	Ca & Mg Hardness 25 1601	13.2	mg/l CaCO3
Magnesium	ICP-MS TITTO TITLE	<2	mg/l
Manganese	ICP-MS ICP-MS ICP-MS Ca & Mg Hardness of ACT ICP-MS ICP-MS DIRECTION ICP-MSOLUTION Konelab Aquakem SOP 2059 Konelab Aquakem SOP 2060	<20	ug/I
Nitrite*	Konelab Aqua Em SOP 2059	< 0.01	mg/l
Nitrate*	Konelab Aduation SOP 2060	49.98	mg/l
Lead	c [®] P-MS	<20	ug/l
Turbidity*	Consett Ourbidimetric	<1	F.T.U.
Zinc	CORSE ICP-MS	42	ug/l
pH	Electrometry SOP 2004	7.3	pH units

Signed:

Micall

Wendy McCall - Laboratory Manager

* = not INAB Accredited

^ = Subcontracted

This report must not be reproduced, except in full, without the prior written approval of IAS Laboratories. This report relates only to the sample submitted. Opinions and interpretations expressed herein are outside the scope of INAB accreditation. Uncertainty of Measurement has been calculated for all INAB accredited tests and is available upon request.



IAS LABORATORIES, Unit 4 Bagenalstovin Bus. Park, Bagenalstown, Co. Carlow, Phone: 00353 59 9721022 Fax: 00353 59 9721897 Email: ias@iaslabs.ie Web: www.iaslabs.ie

Appendix to Reports / Quotations

Parameter	Method Used	Range	Limit of Detection
pH of Soil / Water	Hydrogen ion selective electrode	pH 4 - 10	4 pH units
SMP pH of Spil	Hydrogen ion selective electrode	pH 4 - 10	4 pH units
Organic Matter - Soil	Furnace	0.1 - 99.9%	0.1%
Morgans Phosphorus – Soil	Extraction / Colourimetry	1 - 20 mg/l	1 mg/l
Morgans Potassium - Soil	Extraction / Flarne Photometry	25 - 200 mg/l	25 mg/l
COD - Low Range	Digestion / Colourimetry	1 - 150 mg/l	1 mg/l
COD - High Range	Digestion / Colourimetry	50 - 5000 mg/l	50 mg/l
BOD	DO Probe	1 - 1000 mg/L	1 mg/l
Ammonia	Colourimetry	0.01 mg/l to 0.61 mg/l	0.01 mg/l
Total Suspended Solids	Gravimetric	1mg/l to 1000mg/l	1 mg/l
Alkalinity	Titration	10mg/l - 800 mg/l	10 mg/i
Chloride	Titration	2 mg/l - 100 mg/l	2 mg/l
Sulphate	Colourimetry	5mg/l to 70mg/l	5 mg/l
Ortho Phosphate	Spectrophotometry	0.05mg/l -1.00mg/l	0.05 mg/l
Conductivity	Electrometry	1µscm ⁻¹ -1999 µscm ⁻¹	1µS/cm
Calcium, Magnesium, Sodium, Potassium 'otable Water)	ICF-MS	0.5 - 200mg/l	0.5 mg/l
ron, Aluminium (Potable Water)	ICP-MS	20 - 500µg/l	20 µg/l
Manganese, Chromium (Potable Water)	ICP-MS	5 - 500µg/l	5 µg/l
Copper, Zinc (Potable Water)	ICP-MS	10 - 500µg/l	10 µg/l
Lead (Potable Water)	ICP-MS	e. 1 - 100µg/l	1 µg/l
Nickel (Potable Water)	ICP-MS	2 - 100µg/l	2 µg/l
Cadmium (Potable Water)	ICP-MS SING	0.5 - 100µg/l	0.5 µg/l
Calcium, Magnesium, Sodium, Potassium (Other Water*)	ICP-MS only and	2 – 200mg/l	2 mg/l
Iron, Aluminium, Manganese, Copper, Zinc, Lead, Nickel, Chromium, Cadmium (Other Water*)	ICP-MS IC	20 - 2000µg/l	20 µg/l

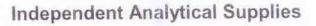
- Other water - Surface Water, Ground Water, Borehole Water, Effluent and Trade Waters. Uncertainty of Measurement is available upon request, for R NAB accredited tests. The application of the Uncertainty of Measurement to your results may alter the pass/fail status of your results. If you have any concerns with regards to the Uncertainty of Measurement, please contact IAS Laboratories to discuss.

LIMITATION OF LIABILITY

- TATION OF LIABILITY
 This report sets out the results of the analysis of samples specifically referred to in it. Independent Analytical Supplies Limited (I.A.S) warrants that the results as stated are accurate in so far as they relate to that sample as received in the I.A.S. Ltd Laboratory. I.A.S. Ltd accepts no other liability or responsibility to any party whatsoever. In particular, but without prejudice to the generality of the foregoing. I.A.S. Ltd shall have no liability or responsibility whatsoever in respect of or in any way by reference
 - The taking of the sample, the accuracy of the sample or its suitability for the purpose(s) for which it is taken or applied, the designation, handling, storage or transport of the sample prior to its delivery to I.A.S Ltd Laboratory or its condition upon such delivery
 - the interpretation of the result of this test report and/or the application of the results as stated and/or the accuracy and the reliability of any veterinary, farm management or other advice based thereon; and
 - any (or any alleged) lack of competence, negligence, failure or breach of duty on the part of any person engaged in or responsible for any of the activities or functions referred to above, whether or not such agent is described as an Agent of I.A.S. Ltd or otherwise. All such persons shall be deemed to be agents of the person to whom the report is issued and not to be agents or representatives in any capacity is I.A.S. Ltd.
- 2. In the event of any claim arising around I.A.S. Ltd, I.A.S. Ltd expressly excludes liability for any consequential loss or damage or any loss of value, profit, business, revenue, goodwill, yields, production or anticipated savings which may arise in respect of or in any way by reference to any test report, analysis, advice or information given orally by any person or contained in any test report, leaflet, book, pamphlet, brochure or other document, whether prepared, published or issued by I.A.S. Ltd or otherwise.

Form 4079, Issue, 2





Test Report

Lab Report Number:

2229F03

Analysis Number:

99A/56908

Customer ID:

ENVI.C1

Analysis Type:

Misc. Tests (99A)

Contact Name:

JIM DOWDALL

Delivery By:

Customer

Company Name:

ENVIROGUIDE CONSULTING

Sample Card Number:

7665/3

93 UPPER GEORGES STREET

Address:

DUN LAOGHAIRE

Sample Condition:

Acceptable

Sample Type:

Drinking Water

CO. DUBLIN

Date Sample Received:

20/01/2012

Sample Reference:

O'TOOLE COMPOSTING

Date Analysis Commenced:

20/01/2012

Sample Description:

WELL WATER

Date Certificate Issued:

31/01/2012

Parameter	Method	Result	Unit
F- 1 Coliforms	Membrane Filtration SQP 2038	0	cfu/100 ml
horal Coliforms	Membrane Filtration SOP 2037	0	cfu/100 ml

Consent of copyright owner reduited for any other use.

Signed:

McCall

Date:

Wendy McCall - Laboratory Manager

A = Subcontracted

This report must not be reproduced, except in full, without the prior written approval of IAS Labs. This report relates only to the sample submitted.

Opinions and interpretations expressed herein are outside the scope of INAB accreditation.

IAS LABORATORIES, Unit 4 Bagenalstown Bus. Park, Bagenalstown, Co. Carlow,

Phone: 00353 59 9721022 Fax: 00353 59 9721897 Email: las@iaslabs.le Web: www.iaslabs.le

Appendix to Reports / Quotations

Parameter	Method Used	Range	Limit of Detection
pH of Soil / Water	Hydrogen ion selective electrode	pH 4 - 10	4 pH units
SMP pH of Soil	Hydrogen ion selective electrode	pH 4 - 10	4 pH units
Organic Matter - Soil	Furnace	0.1 - 99.9%	0.1%
Morgans Phosphorus - Soil	Extraction / Colourimetry	1 - 20 mg/l	1 mg/l
Morgans Potassium - Soil	Extraction / Flame Photometry	25 - 200 mg/l	25 mg/l
COD – Low Range	Digestion / Colourimetry	1 - 150 mg/l	1 mg/l
COD - High Range	Digestion / Colourimetry	50 - 5000 mg/l	50 mg/l
BOD	DO Probe	1 - 1000 mg/L	1 mg/l
Ammonia	Colourimetry	0.01 mg/l to 0.61 mg/l	0.01 mg/l
Total Suspended Solids	Gravimetric	1mg/l to 1000mg/l	1 mg/l
Alkalinity	Titration	10mg/l - 800 mg/l	10 mg/l
Chloride	Titration	2 mg/l - 100 mg/l	2 mg/l
Sulphate	Colourimetry	5mg/l to 70mg/l	5 mg/l
Ortho Phosphate	Spectrophotometry	0.05mg/l -1.00mg/l	0.05 mg/l
Conductivity	Electrometry	1µscm ⁻¹ -1999 µscm ⁻¹	1µS/cm
Calcium, Magnesium, Sodium, Potassium ntable Water)	ICP-MS	0.5 - 200mg/l	0.5 mg/l
n, Aluminium (Potable Water)	ICP-MS	20 - 500µg/l	20 µg/l
Wanganese, Chromium (Potable Water)	ICP-MS	5 - 500µg/l	5 µg/l
Copper, Zinc (Potable Water)	ICP-MS	10 - 500µg/l	10 µg/l
Lead (Potable Water)	ICP-MS	1 - 100µg/l	1 µg/l
Nickel (Potable Water)	ICP-MS	2 - 100µg/l	2 µg/l
Cadmium (Potable Water)	ICP-MS	0.5 - 100μg/l	0.5 µg/l
Calcium, Magnesium, Sodium, Potassium (Other Water*)	ICP-MS only any	2 – 200mg/l	2 mg/l
Iron, Aluminium, Manganese, Copper, Zinc, Lead, Nickel, Chromium, Cadmium (Other Water")	ICP-MS IC	20 - 2000µg/l	20 µg/l

Other water – Surface Water, Ground Water, Borehole Water Surface Waters.

Uncertainty of Measurement is available upon request, for all the accredited tests. The application of the Uncertainty of Measurement to your results may alter the pass/fail status of your results. If you have any concerns with regards to the Uncertainty of Measurement, please contact AS Laboratories to discuss.

LIMITATION OF LIABILITY

LIMITATION OF LIABILITY

- This report sets out the results of the analysis of samples specifically referred to in it. Independent Analytical Supplies Limited (I.A.S) warrants that the results as stated on accurate in so far as they relate to that sample as received in the I.A.S. Ltd Laboratory. I.A.S. Ltd accepts no other liability or responsibility to any party whatsoever. In particular, but without prejudice to the generality of the foregoing. I.A.S. Ltd shall have no liability or responsibility whatsoever in respect of or in any way by reference to:
 - The taking of the sample, the accuracy of the sample or its suitability for the purpose(s) for which it is taken or applied, the designation, handling, storage or transport of the sample prior to its delivery to I.A.S Ltd Laboratory or its condition upon such delivery
 - the interpretation of the result of this test report and/or the application of the results as stated and/or the accuracy and the reliability of any veterinary, farm management or other advice based thereon: and
 - any (or any alleged) lack of competence, negligence, failure or breach of duty on the part of any person engaged in or responsible for any of the activities or functions referred to above, whether or not such agent is described as an Agent of I.A.S. Ltd or otherwise. All such persons shall be deemed to be agents of the person to whom the report is issued and not to be agents or representatives in any capacity is I.A S. Ltd.
- 2. In the event of any claim arising around I.A.S. Ltd, I.A.S. Ltd expressly excludes liability for any consequential loss or damage or any loss of value, profit, business, revenue, goodwill, yields, production or anticipated savings which may arise in respect of or in any way by reference to any test report, analysis, advice or information given orally by any person or contained in any test report, leaflet, book, pamphlet, brochure or other document, whether prepared, published or issued by I.A.S. Ltd or otherwise.

Form 4079, Issue 2



Independent Analytical Supplies

Supplementary Test Report

Lab Report Number:	8333E01	Analysis Number:	99A/52789
Customer ID:	OTOO.01	Analysis Type:	Misc. Tests (99A)
Contact Name:	LORRAINE MC ASSEY	Delivery By:	Customer
Company Name:	OTOOLE COMPOSTING LTD	Sample Card Number:	0279/1
Address:	BALLINTRANE FENAGH CO. CARLOW	Sample Condition:	Acceptable
Sample Type:	Compost	Date Sample Received:	20/12/2010
Sample Reference:	COMPOST SAMPLE	Date Analysis Commenced:	20/12/2010
Sample Description:	RED MEDIA	Date Certificate Issued:	24/03/2011

Parameter	Method	Result	Unit
Ammonia*	Steam Distillation & Titration	0.20	u/o.
T.V.C. @ 22°C*^	Pour Plate	1100000	clu/g
рН	Electrometry SOP 2001	, 3°°°°	pH units
Dry Matter*	Drying @ 105°C	the 27.9	%

Consent of copyright owner required for any

1000					
S	(and	Line 7	-	-3	
-		m.	\circ	$^{-}$	

Wendy McCall - Laboratory Manager

* = not INAB Accredited

^ = Subcontracted

Date:

This report must not be reproduced, except in full, without the prior written approval of IAS Laboratories. This report relates only to the sample submitted. Opinions and interpretations expressed herein are outside the scope of INAB accreditation. Uncertainty of Measurement has been calculated for all INAB accredited tests and is available upon request.



IAS LABORATORIES, Unit 4 Bagenalstown Bus. Park, Bagenalstown, Co. Carlow,

Phone: 00353 59 9721022 Fax: 00353 59 9721897 Email: las@laslabs.ie Web: www.laslabs.le

Page Lot I

AXIS	
Ambient Air Survey June 2011	O Toole Composting Ltd Ballintrane, Co Carlow Permit No: With Advance as a consequence of the consequence o
Report Number: 3190-11-02 Version 0	AXIS environmental services 40 Coolraine Heights, Old Cratloe Road, Limerick Phone 061 324587 (087)6367436 info@axisenv.ie www.axisenv.ie

Report for the Periodic Monitoring of Ambient Air

Part 1:

Executive Summary

Operator

O Toole Composting Limited

Installation

Ballintrane,

Co. Carlow.

Contact Name

Paddy o Toole

Contact No.

086 2647990

Contract Manager:

Mark Mc Garry

Monitoring Dates

02nd June 2011

Monitoring Organisation:

AXIS environmental services

Address:

40 Coolraine Heights,

Old Cratloe Road

Limerick.

Laboratory

Irish Equine Centre

Johnstown,

Naas.

Co Kildare ectione

Date of Report:

14th July 28th 15th

Report Approved By

Mark Mc Garry

Function

Environmental Manager

Signed:

1 Monitoring Results

1.1 Monitoring Objectives

Monitoring was carried out at O Toole Composting Limited to determine the concentrations of a range of parameters the surrounding environment is exposed to as result of composting activities on site Monitoring was carried out to permit requirements, fulfilling the requirements of Schedule 2, Part 4.3 Ambient Air Monitoring. There were three locations studied as part of this contract, one approximately 150m upwind of the facility, one immediately downwind of the facility and one sample point at the facility site office. The following parameters were complete for each site:

Table 1:

PM ₁₀ prEN12341 Aspergillus fumigatus UK Composting Associa Protocol Total Bacteria UK Composting at Associa Protocol Odour NIOSH Methods 2542, 6 2002 sociati Odour EPA Gardance Document AG Consent of Contribute of Particular and Contribute of Cont
Frotocol
Total Bacteria UK Composting USAssocia Frotocol Odour NIOSH Methods 2542, 6 2002 Societ Odour EPP Castance Document AG
Odour NIOSH Methods 2542, 6 2002, 60 fect Odour EPA Gradance Document AG
Odour ERACTION DOCUMENT AG
2 7 70
ar inspected the control of the cont

Table 2: Summary of Results

1.2 Special Monitoring Requirements

1.3 Summary of Equipment

Table 3: Equipment Summary

Item	ID Number	Calibration Status
Pump No 1	AX06	Calibrated On site Before and After Sampling
Pump No 2	AX07	Calibrated On site Before and After Sampling
Pump No 3	AX33	Calibrated On site Before and After Sampling
Defender 510 Calibrator	AX28	Calibration Certificate: 105163
Camera	-	-
PM ₁₀ Sample Heads	AX09	
PM ₁₀ Sample Heads	AX10	#
PM ₁₀ Sample Heads	AX11	
Biosampler 1	- AX39	Autoclaved and Sterile
Biosampler 2	AX40	Autoclaved and Sterile
Biosampler 3	AX41	Autoclaved and Sterile
Sample Solution	-	Sterile Deionised Water

Table 4: Ambient Gas Concentration Results

Parameter	Method		Result					
		Office	Jpwind	Downwind				
Mercaptans	NIOSH 2542	<0.5	<0.5	<0.5	mg/m³			
Hydrogen Sulphide	NIOSH 6013	<0.2	<0.2	<0.2	mg/m³			
Ammonia	NIOSH 2002	<0.25	<0.25	<0.25	mg/m³			
Amines	NIOSH 6016	<0.01	<0.01	<0.01	mg/m³			

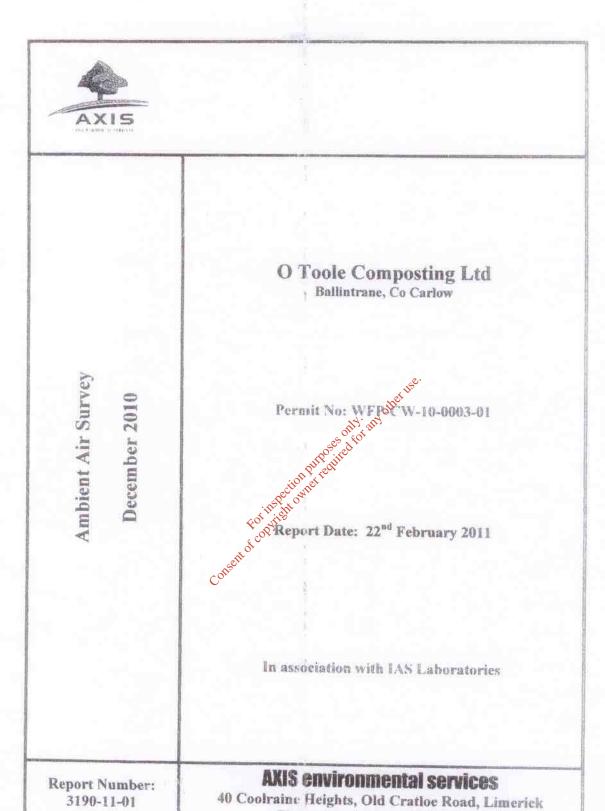
Consent of copyright owner required for any other use.

AXIS environmental services

Version, 6

Assessment		O Toole Composting		WFP-CW-10-003-01	33-01		Mark	Mark Mc Garry		
	Observer medical sore thros	conditions, sinus	free from ons (cold, s trouble)	Observer abstinence (30 min) from smoking, flavored drinks, scented tolletries, deodorisers	inence (3 orisers	abstinence (30 min) from flavored drinks, scented deodorisers	2250	on ssme catio	fo n, Ro	Reason for Odour Assessment – Complaint, Verification, Routine, Other
pre- massesam Preparati	Yes			Yes			Permit	Permit Requi	ω ·	Requirement on Bi- Basis
Source f	Start time	177	character rvey?	those recorded	ienced or	the off s	tch List A	List Areas Inspected:	-	sected:
ioil	0.51	ž	100	ent			All Are	sas		
Odour Investigat	Finish Time:	me: Cc	mposting ac	site odours foen ctivities areas ents	of inspects				1	
4	Observer location	ocation		Wind	Mar	Dair De	ime	Odour Rating	Sa	ting
Parameter	Location	Sensitivity	Direction from which ewold brink	Direction Orientation Orientation Orientation Observer vs facility) Start Time and Office of the orientation Start Time orientation Odour Odour Odour Odour Odour Odour Odour	Strength	drite amit hate	To borned notices and the content of	Odour Persistence		Valential
Suc	Facility Office	2	On site		2	00.60	70 mins	2	-	Compost Maturation Building
	Up wind	4	NIA	Up Wind	2	10:30	70 mins	0	0	None
oi4 vieed	Down Wind	4	SE	Down Wind	2	12:00	70 mins	0	0	None

Consent of copyright owner required for any other use.



Phone 061 324587 (087)6367436

www.axisenv.ie

info@axisenv.ie

Version 0

Report for the Periodic Monitoring of Ambient Air

Part 1:

Executive Summary

Operator:

O Toole Composting Limited

Installation:

Ballintrane,

Co. Carlow.

Contact Name:

Paddy o Toole

Contact No.

086 2647990

Contract Manager:

Mark Mc Garry

Monitoring Dates:

20th December 2010

Monitoring Organisation:

AXIS environmental services

Address:

40 Coolraine Heights,

Old Cratioe Fload,

Limerick.

Laboratory:

Irish Equine Centre

Co Kildare Andrew Stand For any other tise.

22nd February 1199111

Mark Me Garry

Total Carry

The Control of the Control o

Date of Report:

Report Approved By:

Function:

Signed:

Environmental Manager

1 Monitoring Results

1.1 Monitoring Objectives

Monitoring was carried out at O Toole Composting Limited to determine the concentrations of a range of parameters the surrounding environment is exposed to as result of composting activities on site. Monitoring was carried out to permit requirements, fulfilling the requirements of Schedule 2, Part 4.3 Ambient Air Monitoring. There were three locations studied as part of this contract, one approximately 150m upwind of the facility, one immediately downwind of the facility and one sample point at the facility site office. The following parameters were complete for each site:

Table 1:

Parameter	Method
PM ₁₀	prEN12341
Aspergillus fumigatus	UK Composting Association
Total Bacteria	UK Composting Association Protocol
Odour	NIOSH Methods 2542, 6013, 2002, 6016
Odour	EPA Guidance Document AG5

Consent of copyright owner required

Table 2: Summary of Results

Monitoring Area	Substance	Units	Limits	Ambient Concentration	Status
Up Wind of the Installation	PM ₁₀ Aspergillus fumigatus Total Bacteria	ug/m³ CFU/m³ CFU/m³	50 500 1000	17	Complian
Down Wind of the Installation	PM ₁₀ Aspergillus fumigatus Total Bacteria	ug/m³ CFU/m³ CFU/m³	50 500 1000	26	Compliant
Facility Offices	PM ₁₀ Aspergillus fumigatus Total Bacteria	ug/m³ CFU/m³ CFU/m³	50 500 1000	22	Compliant

Notes: Bacterial monitoring could not be complete due to extreme weather conditions. The ambient There were no special requirements for sampling and analysis for this project. All sample locations were located within the boundary of the safe for worst case scenario results.

Summary of Equipment

Locations

Locations

Item

Locations temperature was -5 Degrees C, which froze the sample media and made it impossible to collect a

1.2 Special Monitoring Requirements

1.3 Summary of Equipment

Table 3: Equipment Summary

Item	ID Number	Calibration Status
Pump No 1	AX06	Calibrated On site Before and After Sampling
Pump No 2	AX07	Calibrated On site Before and After Sampling
Pump No 3	AX33	Calibrated On site Before and After Sampling
Defender 510 Calibrator	AX28	Calibration Certificate: 105163
Camera		Osmoratori Certificate. 100103
PM ₁₀ Sample Heads	AX09	
PM ₁₀ Sample Heads	AX10	
PM ₁₀ Sample Heads	AX11	17.
Biosampler 1	AX39	Auto de la companya d
Biosampler 2	AX40	Autoclaved and Sterile
Biosampler 3	AX41	Autoclaved and Sterile
Sample Solution	7/41	Autoclaved and Sterile
Sample Solution		Sterile Deionised Water

Report No: 3190-10-01

Page 4 of 7

Version: 0

Table 4: Ambient Gas Concentration Results

Parameter	Method		Result		Units
	1	Office	Upwind	Downwind	
Mercaptans	NIOSH 2542	<0.5	<0.5	<0.5	mg/m³
Hydrogen Sulphide	NIOSH 6013	<0.2	<0.2	<0.2	mg/m³
Ammonia	NIOSH 2002	<0.25	<0.25	<0.25	mg/m³
Amines	NIOSH 6016	<0.01	<0.01	<0.01	mg/m³

Consent of copyright owner required hor any other use.

AXIS environmental services

Fi Obser	eld vatio	ons	Parameter	à	Odour Investiga	atio	Source n	Pre- Assessin Preparat		Assessment	Table 5:	
Down Wind	Up wind	Facility Office	Location	Observer location	13:00	1	10.35	2	Observer medical sore thro		Reference	
-\$%	4	2	Sensitivity	ocation	me		e.		conditions cat, sinus tro	O Table Composting	90	
SE	WW	On site	Direction from which wind blows		Composting a Waste holding Traffic Movem	8	in character survey?		Observer is free from medical conditions (cold, sore throat, sinus trouble)	ng		
Down Wind	Up Wind		Orientation (Observer vs facility)	Wind	ite odours iden fivities areas ants		those records	Yes	Observer abstinence smoking, flavored d tolletries, deodorisen	WFP-CW-10-003-01	Site Permit No	
2	2	2	Strength	doner ome	ntified:		rienced o		vored dri dorisers	03-01	0	
12:30	11:40	10:35	Start Time		oses only an	A ON	the off		abstinence (30 mln) from flavored drinks, scented deodorisers			
45 mins	45 mins	45 mins	Period of Observation		Coding	All A	itch List site	Ann	rom Reason ited Assess Verifica	Vlar	Ass	
0	0	N	Odours of the Persistence	Odeur	e: Potential On-site odours identified: In On	reas	Areas Insi	nit Requir ual Basis	Reason for Odour Assessment - Complaint, Verification, Routins, Other	Mark Mc Garry	Assessment by	
0	0		Of Odour Intensity	Rating				pected:	ement c	for com		ĄK
None	None	Compo	D					n B	Odour plaint, Other		- CONTRACTOR	
		Compost Maturation Building	Description of Odours etc	Description	on site - there was no alterations or unusual activities on-going	Activities continued as normal	What relevant activities were occurring onsite during the off site odour assessment?	Freezing Day (-5 deg C) Light Air - Direction of wind shown by smoke drift, but not wind vanes	Weather Conditions	20-12-2010	Date of Assessment	

Notes:

1: Observation Point Sensitivity

- Remote (no housing, commercial/ industrial premises, or public area within 500 metres of the observation point);
- 2: Low Sensitivity (no housing, commercial/ industrial premises or public area within 100m of the observation point);
- 3: Moderate sensitivity (housing, commercial/ industrial premises or public area within 100m of the observation point);
- High Sensitivity: (housing, commercial/ industrial premises or public area within area 4: of the observation point);
- 5: Extra Sensitive: (complaints arising from residents, business and users of public areas within area of observation point).

2: Wind Strength

O:	Calm	Smoke rises vertically:
1:	Light Air	Direction of wind shown by smoke drift, but not wind vanes;
2:	Light Breeze	Wind fold on from Jacobs and Jaco
3:	Gentle Breeze	Wind felt on face; leaves rustle, ordinary vane moved by wind:
		Leaves and small twigs in constant motion;
4:	Moderate Breeze	Raises dust and loose paper, small branches are moved;
5:	Fresh Breeze	Small trees in leaf begin to sway:
6:	Strong Breeze	Large branches in motion, umbrellas used with difficulty:
7:	Near Gale	Whole trees in motion;
8:	Gale	Twigs break off trees:
9:	Strong Gale	Slight structural damage occurs

3: Weather Conditions

Dry, rained recently tired, raining, foggy; Cold, Cool. Warrs, 160; Precipitation 2: Temperature

4: Odour Persistence

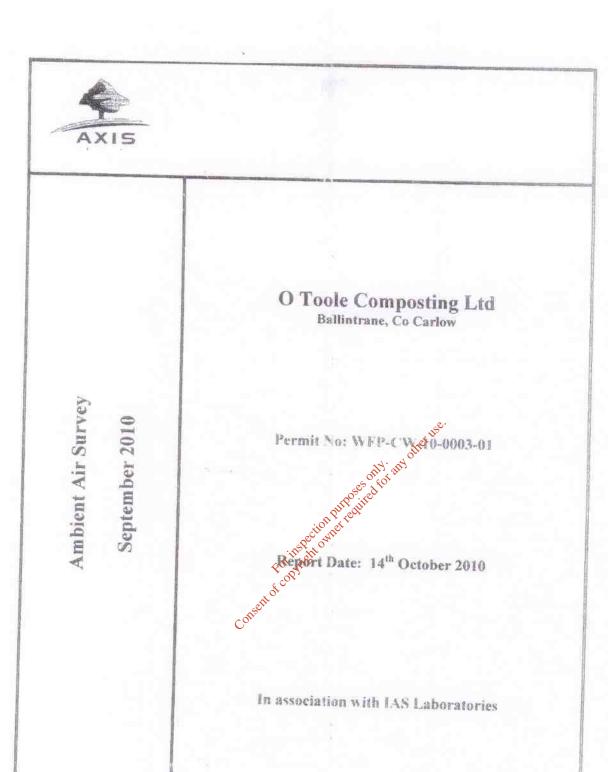
- 0: No Odour:
- Intermittent (detected intermittently Guring the period of assessment); Persistent (detected throughout the period of the assessment); 1
- 2

Odour Intensity

0 No detectable odour,

- Faint Odour (barely retectable, need to stand still and inhale facing into the wind); 2
- Moderate odour (easily detectable while walking and breathing normally, possibly offensive);
- 3: Strong Odour (bearable but offensive - might make clothes/ hair smell);
- 4 Very Strong Odour (unbearable, difficult to remain in area affected by odour).

Consent of convident owner required for any other use.



Report Number: 3190-10-01 Version 0

AXIS environmental services

40 Coolraine Heights, Old Cratloe Road, Limerick Phone 061 324587 (087)6367436 info@axisenv.ie www.axisenv.ie

Report for the Periodic Monitoring of Ambient Air

Part 1:

Executive Summary

Operator:

O Toole Composting Limited

Installation:

Ballintrane.

Co. Carlow.

Contact Name:

Paddy o Toole

Contact No.

086 2647990

Contract Manager;

Mark Mc Garry

Monitoring Dates:

30th September 2010

Monitoring Organisation:

AXIS environmental services

Address:

40 Coolraine Heights,

Old Cratloe Road,

Limerick.

Laboratory:

Irish Equine Centre

Date of Report.

Kildare

14th October 2018 Authorse out! Arry other use.

Mark Mc Ganger outlet to other required for any other use.

Invironmental outlet to other required for any other use.

Report Approved By:

Function:

Environmental Manager

Signed:

1 Monitoring Results

1.1 Monitoring Objectives

Monitoring was carried out at O Toole Composting Limited to determine the concentrations of a range of parameters the surrounding envirorment is exposed to as result of composting activities on site. Monitoring was carried out to permit requirements, fulfilling the requirements of Schedule 2, Part 4.3 Ambient Air Monitoring. There were three locations studied as part of this contract, one approximately 150m upwind of the facility, one immediately downwind of the facility and one sample point at the facility site office. The following parameters were complete for each site:

Table 1:

Parameter	Method
PM ₁₀	prEN12341
Aspergillus fumigatus	UK Composting Association Protocol
Total Bacteria	
Odour	UK Composting Association Protocol NIOSH Methods 2542, 6013, 2002, 6016 EPA Guidance Document AG5 EPA Guidance Document AG5 soft of the control of the c
Odour	EPA Guidance Document AG5
TOTAL HOUSE AND AND ADDRESS OF THE PARTY OF	the street of
	action pure redt
in in	ight of
् वे द्वार	
Consent	

Report No. 3190-10-01

Page 3 of 7

Table 2: Summary of Results

Monitoring Area	Substance	Units	Limits	Ambient Concentration	Status
Up Wind of the Installation	PM ₁₀ Aspergillus fumigatus Total Bacteria	ug/m ³ CFU/m ³ CFU/m ³	50 500 1000	32 0 20	Compliant Compliant
Down Wind of the Installation	PM ₁₀ Aspergillus fumigatus Total Bacteria	ug/m³ CFU/m³ CFU/m³	50 500 1000	36 0 100	Compliant Compliant
Facility Offices	PM ₁₀ Aspergillus fumigatus Total Bacteria	ug/m ³ CFU/m ³ CFU/m ³	50 500 1000	39 0 130	Compliant Compliant Compliant

1.2 Special Monitoring Requirements

There were no special requirements for sampling and singlysis for this project. All sample locations were located within the boundary of the site for worst sales scenario results.

Summary of Equipment

le 3: Equipment Summary

Item

ID Number

1.3 Summary of Equipment

Table 3: Equipment Summary

Item	ID Number	Calibration Status	
Pump No 1	Consent AX06	Calibrated On site Before and After Sampling	
Pump No 2	CONSE AXO7	Calibrated On site Before and After Sampling	
Fump No 3	AX33	Calibrated On site Before and After Sampling	
Defender 510 Calibrator	AX28	Calibration Certificate: 105163	
Camera	7	-	
PM ₁₀ Sample Heads	AX09	-	
PM ₁₀ Sample Heads	AX10		
PM ₁₀ Sample Heads	AX11		
Biosampler 1	AX39	Autoclaved and Sterile	
Biosampler 2	AX40	Autoclaved and Sterile	
Biosampler 3	AX41	Autoclaved and Sterile	
Sample Solution		Sterile Delonised Water	

Table 4: Ambient Gas Concentration Results

Parameter	Method		Result		Units
		Office	Upwind	Downwind	
Mercaptans	NIOSH 2542	<0.5	<0.5	<0.5	mg/m ³
Hydrogen Sulphide	NIOSH 6013	<0.2	<0.2	<0.2	mg/m³
Ammonia	NIOSH 2002	<0.25	<0.25	<0.25	mg/m³
Amines	NIOSH 6016	<0.01	<0.01	<0.01	mg/m³

Consent of copyright owner required for any other use.

O'Toole Compost Limited Ambient Air Survey Date September 2010

Reference	Odour Assessment	Observer medical sore thros	Prepard ∀es	Start time: Do an in cha 09:00 survey	Finish Time: Potent Compo 12:00 Waste	Observer location	Location	Facility 2 On Office	Up wind 4 NVV	Down Wind 4 SE
	from	from (cold, uble)		ny of the haracter t	ntial On-sposting act bolding a		nonseriu doirlw morī ewold briw	On site	W	E
Site Permit No	is free from Observer abstinence (30 min) from Reason for Od conditions (cold, amoking, flavored drinks, scented Assessment – Compta it, sinus trouble) Do any of the odours experienced on site match in character those recorded during the off site survey? No	Wind	Orientation (Observer vs facility)		Up Wind	Down Wind				
	03-01	inence (3 ored drin dorlsers	tinence (3 ored drin dorlsers	ienced on	ntifled: A	Constitution of the Consti	Strength	23	N	2
	Asses	0 min) fr ks, scen		site mat the off s	of inspection of	\$ \\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Start Time	00:60	10:00	11:00
Asse		om Reas ted Asset Verifi	Annus	ite List A	All An	1105es of	Period of notevneedO	45 mins	45 mins	45 mins
Assessment by	Mark Mc Garry	Reason for Odou Assessment - Complaint Verification, Routine, Other	Permit Requirement on Annual Basis	List Areas Inspected:	88	Odour	obobo established	64	0	0
A CONTRACTOR OF THE PARTY OF TH		Complaint,	ment on	ected:		Rating	Vienatri	-	0	0
Date of Assessment	30-09-2010	Odour Weather Conditions plaint, Other	Bi- Dry Day Light Air - Direction of wind shown by smoke drift, but not wind vanes.	What relevant activities were occurring onsite during the off site odour assessment?	Activities continued as normal on site – there was no alterations or unusual activities on-going	Description	Description of Odours etc	Compost Maturation Building	None	None

Notes:

1: Observation Point Sensitivity

- Remote (no housing, commercial/industrial premises, or public area within 500 metres of the observation point);
- 2: Low Sensitivity (no housing, commercial/ industrial premises or public area within 100m of the observation point):
- 3 Moderate sensitivity (housing, commercial/ industrial premises or public area within 100m of the observation point);
- High Sensitivity: (housing, commercial/ industrial premises or public area within area 4: of the observation point);
- Extra Sensitive: (complaints arising from residents, business and users of public areas 5 within area of observation point).

2: Wind Strength

0:	Calm	Smoke rises vertically:
1:	Light Air	
2	Light Breeze	Direction of wind shown by smoke drift, but not wind vanes,
3	Gentle Breeze	Wind felt on face; leaves rustle, ordinary vane moved by wind;
4	Moderate Breeze	Leaves and small twigs in constant motion;
		Raises dust and loose paper, small branches are moved:
5	Fresh Breeze	Small trees in leaf begin to sway:
6:	Strong Breeze	Large branches in motion, umbrellas used with difficulty:
7:	Near Gale	Whole trees in motion:
8	Gale	
9:	Strong Gale	Twigs break off trees;
	outong date	Slight structural damage occurs

3: Weather Conditions

Precipitation
Temperature

Dry, rained recently strizzle, raining, foggy;
Cold, Cool, Warm hot;

Persistence

No Odour;
Intermittent (detected intermittent) during the period of assessment);
Persistent (detected throughout the period of the assessment); 2:

4: Odour Persistence

0:

2

Persistent (detected throughout the period of the assessment):

5: Odour Intensity

No detectable odouget 0

- Faint Odour (barely detectable, need to stand still and inhale facing into the wind);
- Moderate odour (easily detectable while walking and breathing normally, possibly 2 offensive);
- 3. Strong Odour (bearable but offensive - might make clothes/ hair smell);
- 4 Very Strong Odour (unbearable, difficult to remain in area affected by odour).

O'Toole Composting, Fenagh, Co. Carlow

PROJECT:

Carlow Co. Co. Waste Permit Register No. 01/07 Compliance

DOCUMENT:

Consent of copyright owner required for a Report on Annual Noise Monitoring Survey

Client:

IAS Ltd. Kilcarrig St. Bagenalstown Co. Carlow



September 2011

DOCUMENT CONTROL SHEET

Client	IAS L	td., Ba	genalstown, Co	. Carlow		
Project Title	ОТос	le Con	nposting			
Document Title	Repoi	rt on A	nnual Noise Mor	nitoring Survey		
Document No.	BG10	16-00	3			
This Document Comprises	DCS	тос	List of Tables	List of Figures	Pages of Text	Figures
	1	1.			6 No.	1 No

Revision	Status	Author(s)	Checked By	Approved By	Issue Date
*	Final	ВН	BH Rection Burgoses only and control of the contro	BH	Sep 2011
				het use	
			यात्र. यात्रे		
Đ			ses diffiat		
			outpostitet		
			action let ro		
		· ins	per on		
		Foto	110		
		a of co			
		Onseit			
		C			
			1		

EPA Export 01-08-2012:23:59:39

TABLE OF CONTENTS

1.	Introduction	
2.	SURVEY DETAILS	
3.	TERMINOLOGY AND LIMITS	
4.	RESULTS AND OBSERVATIONS:	4
5.	CONCLUSION	6

Consent of copyright owner required for any other use.

1. INTRODUCTION

Bluegreen Environmental Consulting (BEC) was commissioned by IAS Ltd. to perform an annual noise survey for O'Toole Composting Ltd. at their premises at Ballintrane, Fenagh, Co. Carlow. This survey was conducted in compliance with the requirements of the Waste Permit for the Facility.

SURVEY DETAILS

2.1 Introduction

Measurements were conducted by BEC Staff on Saturday 24th of September 2010 a. All measurements were carried out in accordance with ISO 1996 and EPA Noise survey Guidelines, as specified in the waste licence for the facility.

A total of twelve measurements were undertaken, across 6 locations as specified in Schedule D of the Waste Permit Register for the site (Ref: 01/07)

2.2 Equipment and Calibration

Surveys were carried out using a Bruel and Mager Sound Level Meter Type 2268 investigator, and a calibrated by a Bruel and Klaer Calibrator 4231.

The instrument was calibrated before the start of measurements to 94dB and the calibration was verified at the end of both the day and night measurements. Both The sound level meter and calibrate there a calibration certificate.

2.3 Weather Conditions

The weather conditions during the survey were clear skies. Calm light winds from a Westerly / South Westerly direction. Occasional light breezes caused movement in trees and shrubs.

A without the section of consulting

Noise Locations: 2.4

The locations for the survey are consistent with historical surveys and reports, and as set out in Schedule D of the Waste Permit.

The table below provides a description, with locations illustrated in Figure on, at the end of this report.

Location	Description
N1	External side of North Western site boundary
N1A	External side of North Eastern site boundary
N2	External side of southern site boundary
N3	External boundary of residential property to South of Site
N4	Residential Property to east of site
N5	Residential Property to east of site Residential Property to east of sites
N6	Residential Property at Balliofrane Cross Roads

Methodology: 2.5

Methodology:

Surveys were undertake in accordance with ISO:1996 and EPA guidelines.

Values for LA₁₀, LA₉₀, and LA_{eq} were recorded for each location. These measurements were recorded for a duration of 30 mins for day time surveys, and 15 mins for night time surveys.

Explanations of these terms and the permitted noise limits are specified in Section 3of this report.

Succession to the environment.

3. TERMINOLOGY AND LIMITS

3.1 Terminology

In order to understand the assessment criteria and terms used, the following definitions are provided:

LAeq: In assessing noise, LAeq is often used (also written dBA Leq); this term is the 'equivalent continuous level', or the average sound level over a period of time. The formal definition is "when a noise varies over time, the Leg is the equivalent continuous sound which would contain the same sound energy as the time varying sound".

LA₁₀: The LA₁₀ value is that which is exceeded for 10 percent of the time during a sampling period. This means that for ten percent of the time, the noise level recorded was at the LA10 value or higher. It is used to provide an indication of the amount of intermittent and impulsive noises recorded during a survey.

LA₉₀: The LA₉₀ value is that which is exceeded for 90 percent of the time during a sampling period. This means that for ten percent of the time, the noise level recorded was at the LA90 value or higher. It is used to provide an indication of the background noise level.

By analysing the relative spread between these three values, it is possible to examine the level of extent of intermitteen and impulsive noise on the background levels.

Permitted Limits

The acceptable level of noise generated by the site and site activities is specified in School 2. Table 2. of the acceptable level of noise generated by the site and site activities is specified in School 2. Table 2. of the acceptable level of noise generated by the site and site activities is specified in School 2. Table 2. of the acceptable level of noise generated by the site and site activities is specified in School 2. Table 2. of the acceptable level of noise generated by the site and site activities is specified in School 2. Table 3.

3.2

Schedule 3, Table 3 of the waste permit for the facility, and included in the table below:

Daytime:	55dB L _{Aeq, 30mins}
Night-time:	45dB L _{Aeq, 15min}

4. RESULTS AND OBSERVATIONS:

4.1 Results

The results for each location are presented in the table below:

Day Time:

Location	Time and Date	Notes	Noise Levels dB(A)		
			LAeq	LA ₉₀	LA10
N1	24/09/2011 13:28-13:58	N80 Road Traffic Noise Dominant. Occasional truck entering / exiting premises	46.7	44.0	62.0
N1A	24/09/2011 12:21-12:51	N80 Road Traffic Noise dominant throughout	57.0	45.5	64.8
N2	24/09/2011 12:56-13:26	Quiet environment. Continuous fan noise broadband in characteristic.	47.5	49.0	53.0
N3	24/09/2011 14:00-14:30	Distance Traffic Noise, Occasional Passing vehicle.	49.6	41.0	55.6
N4	24/09/2011	N80 Road Traffic Noise dominant Trucks passing (>90dB recorded)	62.5	44.8	70.4
N5	24/09/2011 07:57-08:27	Almost continuous Traffic Noise. Passing Conversation.	60.0	37.5	68.5
N6	24/09/2011 07:20 - 07:50	Occasional passing vehicle. Distant traffic noise	49.4	46.8	56.2

Night Time:

Blackroom a same

Location	Time and Date	on Piged Notes	Noise Levels dB(A)		
		ectivine	LA _{eq}	LAgo	LA
N1	24/09/2011 05:00-05:15	Occasional traffic from N80.	40.1	37.6	51.5
N1A	24/09/2011 06:00-06:15	Occasional traffic from N80.	39.1	37.8	44.0
N2	06:00-06:15 24/09/2011 05:41-05:56	Low noise environment. Extractor fans audible. Occasional rustle in trees.	38,7	37.0	41.3
N3	24/09/2011 05:17-05:33	Low noise environment. Distance Traffic Noise. Rustle in trees.	38.0	35.4	40.5
N4	24/09/2011 06:23-06:37	N80 Road Traffic Noise dominant.	51.0	37.5	56.7
N5	24/09/2011 06:57-07:13	N80 Traffic Noise Dominant. Passing trucks and tractors (>90dB Recorded)	60.0	37.5	68.5
N6	24/09/2011 06:40-06:55	Quiet overall, No site noise audible	42	40	48

4.2 Observations

The following observations were noted during the survey that provides further detail to the characteristics and nature of the noise environment during the survey:

- During the day time, the characteristic of site generated noise consists of extractor fans, operation of machinery inside the buildings, occasional reversing alarms machinery and trucks entering / exiting the premises.
- During the night time, the characteristic of site generated noise consists of extractor fans. There is no tonal element to the noise source.
- During both periods, noise levels at N1, N1A, N3, N4, N5 and N6 are dominated by passing traffic. No significant site noise emanating from the facility was observed.
- Site noise from the facility was audible at N2 during the day time and night time, and is the dominant noise source. Noise levels are well within the threshold limits at that location.
- Site noise from the facility was observed at N1, N1A, N3, and N6 during the night time survey, in the form of extractore fans. However, the noise environment at these locations is dominated by traffic noise. Site generated sources significant do not significantly attraction but to background noise levels.

 For inspection purpose and the facility was observed at N1, N1A, N3, and N6 during the night time. However, the noise environment at these locations is dominated by traffic noise. Site generated sources significant do not significantly attraction to background noise levels.

Blace processor, the species and a compa

CONCLUSION

Noise levels in the immediate vicinity of the site and at nearby sensitive receptors are mainly dominated by traffic noise from the adjacent N80 National Road. High LA_{10} values from passing traffic raised the overall equivalent or average noise level (LA_{eq}). Background values (LA_{90}) provide a general indication of the noise environment with the traffic source removed.

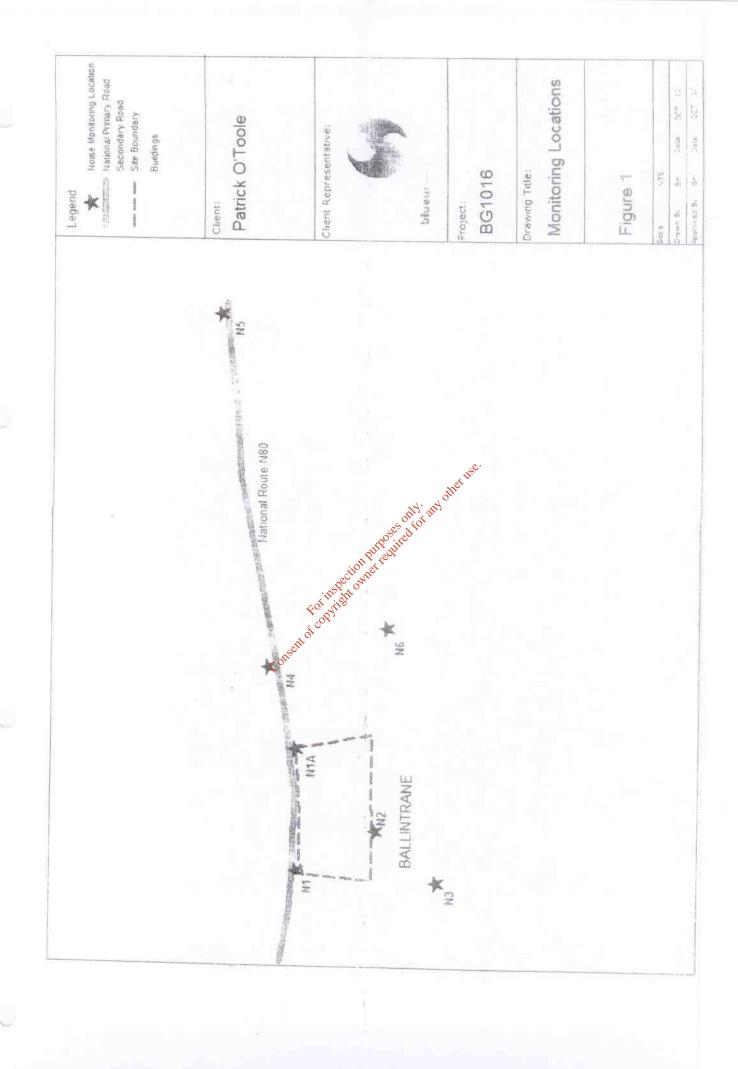
The noise environment at the site boundaries are considered to be best represented at the N2 location, which is less influenced by passing traffic. The LA_{eq} measurements at this location were 47.5dB(A) and 38.7dB(A) for day time and night time periods respectively.

The nearest noise sensitive location is N3, located to the south of the site. This residential location is also the set back from the N80, so is less influenced by passing traffic. The LA_{eq} values recorded at this location were 49.6dB(A) and 38.0dB(A) for day time and night time periods respectively .

The results indicate that plant machinery and operation practices within the facility do not significantly contribute to the local noise environment and or cause undue disturbance to nearby sensitive locations. The results also indicate that the plant is operating within its permitted noise limits as set out in its waste licence.

nsent of copyright owner required for any other use

Buegreen and or many Communication



O'Toole Composting, Fenagh, Co. Carlow

PROJECT:

Carlow Co. Co. Waste Permit Register No. 01/07 Compliance

DOCUMENT:

Client:

IAS Ltd.

Consent of Con

Kilcarrig St. Bagenalstown Co. Carlow

bluegreen "

September 2011

DOCUMENT CONTROL SHEET

Client	IAS L	td., Ba	genalstown, Co	. Carlow		
Project Title	ОТос	le Con	nposting			
Document Title	Repor	t on A	nnual Noise Mor	nitor ng Survey		
Document No.	BG10	16-003	3			
This Document	DCS	тос	List of Tables	List of Figures	Pages of Text	Figures
Comprises	1	1			6 No.	1 No.

Revision	Status	Author(s)	Checked By	Approved By	Issue Date
-	Final	ВН	ВН	Aller IIS BH	Sep 2011
			विशिष्ट वर्ष	30	

TABLE OF CONTENTS

1.	Introduction	1
2,	SURVEY DETAILS	1
3.	TERMINOLOGY AND LIMITS	3
4.	RESULTS AND OBSERVATIONS:	4
5.	CONCLUSION	6

Consent of copyright owner required for any other use.

INTRODUCTION 1.

Bluegreen Environmental Consulting (BEC) was commissioned by IAS Ltd. to perform an annual noise survey for O'Toole Composting Ltd. at their premises at Ballintrane, Fenagh, Co. Carlow. This survey was conducted in compliance with the requirements of the Waste Permit for the Facility.

2. SURVEY DETAILS

2.1 Introduction

Measurements were conducted by BEC Staff on Saturday 24th of September 2010 a. All measurements were carried out in accordance with ISO 1996 and EPA Noise survey Guidelines, as specified in the waste licence for the facility.

A total of twelve measurements were undertaken, across 6 locations as specified in Schedule D of the Waste Permit Register for the site (Ref: 01/07)

2.2 Equipment and Calibration

Surveys were carried out using a Bruel and Kaler Sound Level Meter Type 2268 investigator, and a calibrated by a Bruel and Garage Calibrator 4231.

The instrument was calibrated before the start of measurements to 94dB and the calibration was verified at the end of both the day and night measurements. Both The sound level meter and calibration have a calibration certificate.

2.3 Weather Conditions

The weather conditions during the survey were clear skies. Calm light winds from a Westerly / South Westerly direction. Occasional light breezes caused movement in trees and shrubs.

Bhagteen Engreen autosassinen

2.4 Noise Locations:

The locations for the survey are consistent with historical surveys and reports, and as set out in Schedule D of the Waste Permit.

The table below provides a description, with locations illustrated in Figure on, at the end of this report.

Location	Description
N1	External side of North Western si,e boundary
NIA	External side of North Eastern site boundary
N2	External side of southern site boundary
N3	External boundary of residential property to South of Site
N4	Residential Property to east of sita
N5	Residential Property to east of site Residential Property to east of site Residential Property to east of site Residential Property at Ballindrane Cross Roads
N6	Residential Property at Ballestrane Cross Roads

2.5 Methodology:

Surveys were undertaken in accordance with ISO:1996 and EPA guidelines.

Values for LA $_{10}$, LA $_{90}$, and LA $_{eq}$ were recorded for each location. These measurements were recorded for a duration of 30 mins for day time surveys, and 15 mins for night time surveys.

Explanations of these terms and the permitted noise limits are specified in Section 3 of this report.

3. TERMINOLOGY AND LIMITS

3.1 Terminology

In order to understand the assessment criteria and terms used, the following definitions are provided:

LA_{eq}: In assessing noise, LAeq is often used (also written dBA Leq); this term is the 'equivalent continuous level', or the average sound level over a period of time. The formal definition is "when a noise varies over time, the Leq is the equivalent continuous sound which would contain the same sound energy as the time varying sound".

LA₁₀: The LA₁₀ value is that which is exceeded for 10 percent of the time during a sampling period. This means that for ten percent of the time, the noise level recorded was at the LA₁₀ value or higher. It is used to provide an indication of the amount of intermittent and impulsive noises recorded during a survey.

LA₉₀: The LA₉₀ value is that which is exceeded for 90 percent of the time during a sampling period. This means that for ten percent of the time, the noise level recorded was at the LA₉₀ value or higher. It is used to provide an indication of the background noise level.

By analysing the relative spread between these three values, it is possible to examine the level of extent of intermitteet and impulsive noise on the background levels.

Permitted Limits

3.2

The acceptable level of noise generated by the site and site activities is specified in Schedule 3, Table 3 of the waste permit for the facility, and included in the table below:

Daytime:	55dB Laeq, 30mins
Night-time:	45dB Laeq, 15min

4. RESULTS AND OBSERVATIONS:

4.1 Results

The results for each location are presented in the table below:

Day Time:

Location	Time and Date	Notes	Noise Levels dB(A)			
			LAeq	LA ₉₀	LAzo	
N1	24/09/2011 13:28-13:58	N80 Road Traffic Noise Dominant. Occasional truck entering / exiting premises	46.7	44.0	62.0	
NIA	24/09/2011 12:21-12:51	N80 Road Traffic Noise dominant throughout.	57.0	45.5	64.8	
N2	24/09/2011 12:56-13:26	Quiet environment. Continuous fan noise broadband in characteristic.	47.5	49.0	53.0	
N3	24/09/2011 14:00-14:30	Distance Traffic Noise. Occasional Passing vehicle.	49.6	41.0	55.6	
N4	24/09/2011	N80 Road Traffic Noise dominant Trucks passing (>90dB recorded)	62.5	44.8	70.4	
N5	24/09/2011 07:57-08:27	Almost continuous Traffic Noise e.	60.0	37.5	68.5	
N6	24/09/2011 07:20 - 07:50	Occasional passing vehicles of an Occasional passing vehicles of an Occasional passing vehicles of the Occasional passing	49.4	46.8	56.2	

Night Time:

Location	Time and Date	Notes Fol project Owner Occasional traffic from N80.		Noise Levels dB(A)		
1970		tion with	LAea	LA ₉₀	LA ₁₀	
N1	24/09/2011 05:00-05:15	Occasional traffic from N80.	40.1	37.6	51.5	
N1A	24/09/2011 06:00-06:15	obccasional traffic from N80.	39.1	37.8	44.0	
N2	24/09/2011 05:41-05:56	Low noise environment. Extractor fans audible. Occasional rustle in trees.	38.7	37.0	41.3	
И3	24/09/2011 05:17-05:33	Low noise environment. Distance Traffic Noise. Rustle in trees.	38.0	35.4	40.5	
N4	24/09/2011 06:23-06:37	N80 Road Traffic Noise dominant.	51.0	37.5	56.7	
N5	24/09/2011 06:57-07:13	N80 Traffic Noise Dominant. Passing trucks and tractors (>90dB Recorded)	60.0	37.5	68.5	
N6	24/09/2011 06:40-06:55	Quiet overall. No site noise audible	42	40	48	

4.2 Observations

The following observations were noted during the survey that provides further detail to the characteristics and nature of the no se environment during the survey:

- During the day time, the characteristic of site generated noise consists of extractor fans, operation of machinery inside the buildings, occasional reversing alarms machinery and trucks entering / exiting the premises.
- During the night time, the characteristic of site generated noise consists of extractor facs. There is no tonal element to the noise source.
- During both periods, noise levels at N1, N1A, N3, N4, N5 and N6 are dominated by passing traffic. No significant site noise emanating from the facility was observed.
- Site noise from the facility was audible at N2 during the day time and night time, and is the dominant noise source. Noise levels are well within the threshold limits at that location.
- Site noise from the facility was observed at N1, N1A, N3, and N6 during the
 night time survey, in the form of extracter fans. However, the noise
 environment at these locations is dominated by traffic noise. Site generated
 sources significant do not significantly contribute to background noise levels.

The providence by piece of the large

CONCLUSION

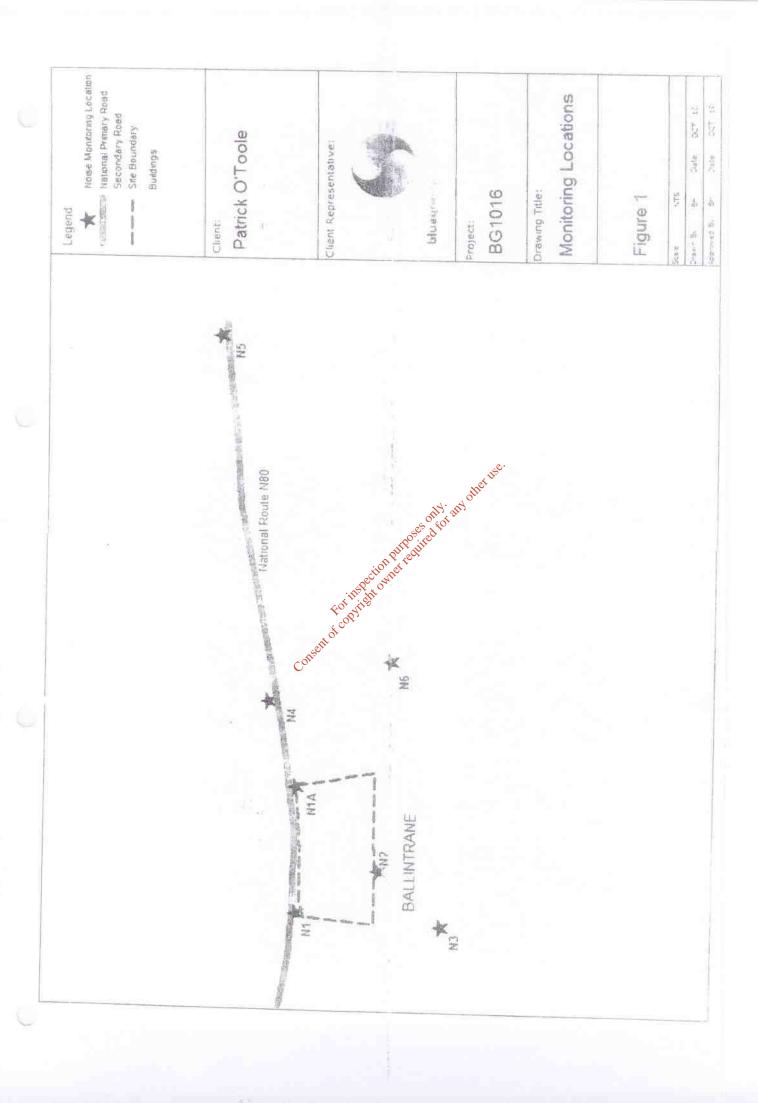
Noise levels in the immediate vicinity of the site and at nearby sensitive receptors are mainly dominated by traffic noise from the adjacent N80 National Road. High LA_{10} values from passing traffic raised the overall equivalent or average noise level (LA_{eq}). Background values (LA_{90}) provide a general indication of the noise environment with the traffic source removed.

The noise environment at the site boundaries are considered to be best represented at the N2 location, which is less influenced by passing traffic. The LA_{eq} measurements at this location were 47.5dB(A) and 38.7dB(A) for day time and night time periods respectively.

The nearest noise sensitive location is N3, located to the south of the site. This residential location is also the set back from the N80, so is less influenced by passing traffic. The LA_{eq} values recorded at this location were 49.6dB(A) and 38.0dB(A) for day time and night time periods respectively .

The results indicate that plant machinery and operation practices within the facility do not significantly contribute to the local noise environment and or cause undue disturbance to nearby sensitive locations. The results also indicate that the plant is operating within its permitted noise limits as set out in its waste licence.

3 pegreen environment. Carola or



O'Toole Composting, Fenagh, Co. Carlow

PROJECT:

Carlow Co. Co. Waste Permit Register No. 01/07 Compliance

Report on Annual Noise Monitoring Survey

Client:

IAS Ltd.

Kilcarrig St.

Bagenalstown

Bagenalstown Co. Carlow



October 2010

TABLE OF CONTENTS

1.	Introduction	1
2.	SURVEY DETAILS	1
3.	TERMINOLOGY AND LIMITS	3
4.	RESULTS AND OBSERVATIONS:	2
5.	CONCLUSION	6

Consent of copyright owner required for any other use.

2.4 Noise Locations:

The locations for the survey are consistent with historical surveys and reports, and as set out in Schedule D of the Waste Permit.

The table below provides a description, with locations illustrated in Figure on, at the end of this report.

Location	Description
N1	External side of North Western site boundary
N1A	External side of North Eastern site boundary
N2	External side of southern site boundary
N3	External boundary of residential property to Stuff of Site
N4	Residential Property to east of site hit guilded in the second of the se
N5	Residential Property to east of site purchase and the Residential Property to east of site Residential Property to east of site purchase and the Residential Property at Baltimirane Cross Roads.
N6	Residential Property at Ballintrane Cross Roads

2.5 Methodology:

Surveys were undertaken in accordance with ISO:1996 and EPA guidelines.

Values for LA $_{10}$, LA $_{90}$, and LA $_{eq}$ were recorded for each location. These measurements were recorded for a duration of 30 mins for day time surveys, and 15 mins for night time surveys.

Explanations of these terms and the permitted noise limits are specified in Section 3 of this report.

4. RESULTS AND OBSERVATIONS:

4.1 Results

The measurement readings from the Noise survey have been rounded to the nearest decibel. The results for each location are presented in the table below:

Day Time:

l.ocation	Time and Date	Notes	Noise Levels dB(A)		
			LA _{eq}	LA ₉₀	LA
N1	30/09/2010 12:35-1:05	N80 Road Traffic Noise Dominant. Occasional truck entering / exiting premises	57	44	62
NIA	30/09/2010 13:11-13:41	N80 Road Traffic Noise dominant throughout.	57	45	64
N2	30/09/2010 13:59-14:29	Fan Noise and Machinery inside sheds.	52	48	58
N3	30/09/2010 14:44-15:14	Distance Traffic Noise. Occasional rustle in vegetation.	51	42	53
N4	30/09/2010 15:20-15:50	N80 Road Traffic Noise dominant of the contract of the contrac	66	44	70
N5	30/09/2010 16:30-17:00	vegetation. N80 Road Traffic Noise dominant of the continuous Traffic Noise. Almost continuous Traffic Noise. Occasional passing vehicle. Wind beginning	67	55	73
N6	30/09/2010 17:10-17:40	Occasional passing vehicle. Wind beginning to strengther with rain at end	56	46	59

Night Time:

Location	Time and Date	Conser	Noise Levels dB(A)		
6.84			LA _{eq}	LAgo	LA ₁₀
N1	20/10/2010	Occasional traffic from N80	42	38	44
	22:03-22:18				
N1A	20/10/2010	Occasional traffic from N80	44	40	49
	22:22 -22:37				Lad
N2	20/10/2010	Low noise environment. Extractor fans	39	36	41
22:45-23:00	dominant.	1 22	30	14.7	
	10/10/2010	Low noise environment. Distance Traffic	37	36	39
	23:16-23:31	Noise.	37	30	33
N4	20/10/2010	N80 Road Traffic Noise dominant.	48	40	E //
23:40-23:55	23:40-23:55	Occasional conversation	40	40	54
N5	20/10/2010	N80 Traffic Noise Dominant.	50	41	56
	23:59-00:14		50	91	30
N6	21/10/2010	Occasional vehicle.	42	40	40
	00:20-11:35	4-newsylvania Milanto	42	40	48

CONCLUSION

Noise levels in the immediate vicinity of the site and at nearby sensitive receptors are mainly dominated by traffic noise from the adjacent V80 National Road. High LA_{10} values from passing traffic raised the overall equivalent or average noise level (LA_{eq}). Background values (LA_{90}) provide a general indication of the noise environment with the traffic source removed.

The noise environment at the site boundaries are considered to be best represented at the N2 location, which is less influenced by passing traffic. The LA_{eq} measurements at this location were 52dB(A) and 39dB(A) for day time and night time periods respectively.

The nearest noise sensitive location is N3, located to the south of the site. This residential location is also the set back from the N80, so is less influenced by passing traffic. The LA_{eq} values recorded at this location were 51dB(A) and 37dB(A) for day time and night time periods respectively.

The results indicate that plant machinery and operation practices within the facility do not significantly contribute to the local noise environment and or cause undue disturbance to nearby sensitive locations. The results also indicate that the plant is generating within its permitted noise limits as set out in its waste licence.

The results also indicate that the plant is generating within its permitted noise limits as set out in its waste licence.

The results also indicate that the plant is generating within its permitted noise limits as set out in its waste licence.

The results also indicate that the plant is generating within its permitted noise limits as set out in its waste licence.

Bluegreen Environmental Consulting

T.E. LABORATORIES LIMITED

Trading as

Loughmartin Business Pak, Tullow, Co. Carlow Phone: 059-9152881 Fax: 059-9152886

CERTIFICATE OF ANALYSIS

Page 1 of 2

Analysis of Dust Samples

Attention:

Mr. Patrick O'Toole

Date Samples On the history of the h

Company: Address:

O'Toole Composting

Ballintrane Fenagh

Co. Carlow

Certificate No:

L/10/1291

Date Rec'd:

Issue Date:

30.06.2010

COOOur Ref:

WS-27412

Three samples were analysed for a range of determinands.

Please see page 2 for results. Terms & Conditions and methods used are outlined in the attached appendix.

No. of Pages:

Results page 2 plus 4 page appendix

Mr. Mark Bowkett Chief Executive

Ms Breda Moore Technical Manager



Sample Description:

D1

Independent Analytical Supplies

Test Report

Lab Report Number: 9382E01 Analysis Number: 99A/54102 Customer ID: OTOO C1 Analysis Type: Misc. Tests (99A) Contact Name: PATRICK OTOOLE Delivery By: Customer Company Name: O'TOOLE COMPOSTING LTD Sample Card Number: 3657/3 Address: BALLINTRANE Sample Condition: Acceptable FENAGH CO CARLOW Sample Type: Dust Date Sample Received: 08/07/2011 Sample Reference: DUST

等。在1912年12日,第二年12日 12日 12日	Service Control of the Control of th		
Parameter	Method	Result	Unit
'eight increase	Deline ID 10550		是一种一种一种一种一种
	Drying @ 105°C	0,5	g/m2

Date Analysis Commenced:

Date Certificate Issued:

08/07/2011

20/07/2011

Consent of copyright owner required for any other use.

Signed:

Wendy McCall - Laboratory Wanager

A = Subcontracted

Date:

20/7/201

This report must not be reproduced, except in full, without the prior written approval of IAS Labs. This report relates only to the sample submitted.

Opinions and interpretations expressed herein are outside the scope of INAB accreditation

IAS LABORATORIES, Unit 4 Bagenalstown Bus. Park, Bagenalstown, Co. Carlow, Phone: 00353 59 9721022 Fax: 00353 59 9721897 Email: ias@laslabs.ie Web: www.laslabs.ie

Page 1 of 1



Sample Description:

D2

Independent Analytical Supplies

Test Report

Lab Report Number:	9382E02	1000	Analysis Number:	99A/54103
Customer ID:	O'TOO.C1		Analysis Type:	Misc. Tests (99A)
Contact Name:	PATRICK O'TOOLE		Delivery By:	Customer
Company Name:	O'TOOLE COMPOSTING LTD	4	Sample Card Number:	3657/3
Address:	BALLINTRANE FENAGH CO. CARLOW		Sample Condition:	Acceptable
Sample Type:	Dust		Date Sample Received:	08/07/2011
Sample Reference:	DUST		Date Analysis Commenced:	08/07/2011

Parameter Parameter	Method	Result 1	Unit 3
Weight increase	Drying @ 105°C	0.3	g/m2

Date Certificate Issued:

20/07/2011

Consent of copyright owner required for any other use.

Signed:

Wendy McCall - Laboratory Manager

" = Subcontracted

Date: 20/7/2011

This report must not be reproduced, except in full, without the prior written approval of IAS Labs. This report relates only to the sample submitted.

Opinions and interpretations expressed herein are outside the scope of INAB accreditation

IAS LABORATORIES, Unit 4 Bagenalstown Bus. Park, Bagenalstown, Co. Carlow,

4070 Issue 3

Phone: 00353 59 9721022 Fax: 00353 59 9721897 Email: ias@iaslabs.ie Web: www.iaslabs.ie

Page Int 1



Test Report

Lab Report Number:

9382E03

Analysis Number:

99A/54104

Customer ID:

0'T00.C1

Analysis Type:

Misc. Tests (99A)

Contact Name:

PATRICK O'TOOLE

Delivery By:

Customer

Company Name:

O'TOOLE COMPOSTING LTD BALLINTRANE

Sample Card Number:

3857/3

Address:

Acceptable

FENAGH CO CARLOW Sample Condition:

Sample Type:

Dust

Date Sample Received:

08/07/2011

Sample Reference:

DUST

Date Analysis Commenced:

08/07/2011

Sample Description:

Date Certificate Issued:

20/07/2011

Parameter	Method	Result.	e Unit
aight increase	Drying @ 105°C	1.4	g/m2

Consent of copyright owner required for any other use.

Signed:

4070 issue 3

Wendy McCall - Laboratory Manager

A = Subcontracted

20 /7/2011

This report must not be reproduced, except in full, without the prior written approval of IAS Labs. This report relates only to the sample submitted.

Opinions and interpretations expressed herein are outside the scope of INAB accreditation

IAS LABORATORIES, Unit 4 Bagenalstown Bus. Park, Bagenalstown, Co. Carlow,

Phone: 00353 59 9721022 Fax: 00353 59 9721897 Email: las@iaslabs.ie Web: www.iaslabs.ie

Page 1 or 1



Test Report

Lab Report Number:

9382E01

Analysis Number:

99A/54102

Customer ID:

O'TOO C1

PATRICK O'TOOLE

Contact Name: Company Name:

OTOOLE COMPOSTING LTD

Address:

BALLINTRANE

FENAGH

CO. CARLOW

Sample Type:

Dust

Sample Reference: Sample Description:

DUST

D1

Analysis Type:

Misc. Tests (99A)

Delivery By:

Sample Card Number:

Customer

Sample Condition:

Acceptable

Date Sample Received:

08/07/2011

Date Analysis Commenced:

08/07/2011

Date Certificate Issued:

20/07/2011

ht increase	Drying @ 105"C	0.5	G/m2
		_ق.	
	Consent of copyright owner	ay any ather to	
		Post differ to	
	age tion to	Kerr	
	For it is the copyright		
	a sert of		

Signed:

Wendy McCall - Laboratory Wanager

^ = Subcontracted

Date:

20/7/2011

This report must not be reproduced, except in full, without the prior written approval of IAS Labs. This report relates only to the

Opinions and interpretations expressed herein are outside the scope of INAB accreditation

IAS LABORATORIES, Unit 4 Bagenalstown Bus, Park, Bagenalstown, Co. Carlow, Phone: 00353 59 9721022 Fax: 00353 59 9721897 Email: ias@iaslabs.ie Web: www.iaslabs.ie

Page 1 of 1



Test Report

Lab Report Number: 9382E02 Analysis Number:

99A/54103

Customer ID:

O'TOO C1

Analysis Type:

Misc. Tests (99A)

Contact Name:

PATRICK O'TOOLE

Delivery By:

Customer

Company Name:

O'TOOLE COMPOSTING LTD

Sample Card Number:

3657/3

Address:

BALLINTRANE

Sample Condition:

Acceptable

FENAGH CO CARLOW

Sample Type:

Dust

Date Sample Received:

08/07/2011

Sample Reference:

DUST

Date Analysis Commenced:

08/07/2011

Sample Description:

D2

Date Certificate Issued:

20/07/2011

Parameter	Method	Result	Unit
1111 sight increase	Drying @ 105°C	0.3	g/m2

Consent of copyright owner required for any other use.

Signed:

Wendy McCall - Laboratory Manager

^ = Subcontracted

20 /7 kg

This report must not be reproduced, except in full, without the prior written approval of IAS Labs. This report relates only to the sample submitted.

Opinions and interpretations expressed herein are outside the scope of INAB accreditation.

IAS LABORATORIES, Unit 4 Bagenalstown Bus. Park, Bagenalstown, Co. Carlow,

Phone: 00353 59 9721022 Fax: 00353 59 9721897 Email: ias@iaslabs.ie Web: www.iaslabs.ie

Page I of I



Test Report

Lab Report Number:

9382E03

Analysis Number:

99A/54104

Customer ID:

O'TOO.C1

Analysis Type:

Misc. Tests (99A)

Contact Name:

PATRICK O'TOOLE

Company Name:

O'TOOLE COMPOSTING LTD

Delivery By:

Customer

BALLINTRANE

Sample Card Number:

3657/3

Address:

Sample Condition:

Acceptable

FENAGH CO CARLOW

Sample Type:

Dust

Date Sample Received:

08/07/2011

Sample Reference:

DUST

Date Analysis Commenced:

08/07/2011

Sample Description:

Date Certificate Issued:

20/07/2011

Parameter ***	Method	Result	Unit
agnt increase	Drying @ 105°C	1.4	g/m2

Consent of copyright owner required for any other use.

Signed:

Wendy McCall - Laboratory Manager

" = Subcontracted

20 /4/2011

This report must not be reproduced, except in full, without the prior written approval of IAS Labs. This report relates only to the sample submitted.

Opinions and interpretations expressed herein are outside the scope of INAB accreditation

IAS LABORATORIES, Unit 4 Bagenalstown Bus, Park, Bagenalstown, Co. Carlow, Phone: 00353 59 9721022 Fax: 00353 59 9721897 Email: las@iaslabs.ie Web: www.iaslabs.ie

Page Tof 1