

15 February 2017

Ms. Ewa Babiarczyk, Inspector Environmental Licensing Programme, Office of Environmental Sustainability, Environmental Protection Agency, PO Box 3000, Johnstown Castle Estate, Co. Wexford.

Our Ref : 501.00180.00152

Your Ref : W0277-02

ORIGINAL

Environmental Protection Agency 1 7 FEB 2017

Dear Ms Babiarczyk

Re: Increased Waste Intake to Huntstown Inert Soil Waste Recovery Facility North Road, Finglas, Dubin 11 (Waste Licence Ref. No. W0277-02)

Response to Article 12 Compliance Notice dated 20 January 2017

This submission is made in response to an Article 12 Compliance Notice dated 20 January 2017 issued by the Environmental Licensing section of the EPA Office of Sustainability in respect of the waste licence review application by Roadstone Ltd. (Ref. W0277-02) to increase intake at its existing soil waste recovery facility at Huntstown Quarry from 750,000 tonnes to 1,500,000 tonnes per annum. This response, prepared by SLR Consulting Ireland, addresses the issues raised in the order presented in the letter of 20 January last.

## RESPONSE TO ARTICLE 12 COMPLIANCE NOTICE

# 1. SURFACE WATER MONITORING DATA

Schedule C1.2 of the licence Reg. No. W0277-01 requires weekly monitoring of temperature, pH, BOD, suspended solids, ammonia and orthophosphate in the discharge W4. Please provide all available monitoring results at W4.

The discharges monitored at surface water monitoring location W4 are solely generated by activities within the North Quarry which, at the present time, predominantly comprise inert soil waste recovery activity. Monitoring at location W4 commenced in April 2016, some months following establishment of soil waste recovery activities at the North Quarry. Monitoring at W4 is the *de facto* control point for treated discharges arising at the licensed waste facility.

Prior to April 2016, the facility operator had sampled at surface water monitoring location W1, immediately upstream of the discharge from the quarry complex to the Ballystrahan Stream. However, it should be recognised that apart from from discharge from the recovery facility at the North Quarry, the discharge at W1 also includes discharge from the adjoining (non-licensed) concrete production facilities.

Surface water monitoring at W1 identifies the quality of cumulative (treated) discharges arising from a range of activities at Huntstown Quarry, not all of which are licensed by the EPA. The quality of discharge from location W1 (also identified as V-notch North) is controlled by way of a discharge licence from Fingal County Council (Ref. WPW/F/008-01).

SLR Consulting Ireland, 7 Dundrum Business Park, Windy Arbour, Dublin 14, Ireland
T: +353 1 296 4667 F: +353 1 296 4676 www.slrconsulting.com

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Ref: 501.00180.00152 15 February 2017

The results of weekly surface water monitoring (of combined discharges) undertaken at W1 between January and March 2016 are presented in Attachment A, together with the results of surface water monitoring undertaken at W4 between April and December 2016.

Note that no monitoring data is provided for W4 for certain weeks in the course of last summer (2016). This is on account of there being no flow past this location on the date of the survey (as no ponded water was being pumped from the quarry floor up to settlement ponds / treatment infrastructure at a higher level).

Notwithstanding the fact that discharges at W1 also include discharge from other (non-licensed) activities at Huntstown, they have been screened on the laboratory test sheets provided in Attachment A against the emission limits set by the current waste licence (W0277-01) rather than those set by the discharge licence from Fingal County Council.

#### 2. GROUNDWATER MONITORING WELL GW04

It is apparent from GIS plotting that GW04 will be outside of the proposed revised facility boundary. Please clarify. If outside, please state the arrangements to access the monitoring piint for sampling.

Further to your request above, we have reviewed the location of groundwater well GW04 and the grid co-ordinates advised in Attachment F5 of the waste licence review application.

On checking the grid co-ordinates on an ortho-rectified ITM grid-referenced aerial photograph obtained from a site (drone) survey, we find that the co-ordinates advised for GW04 in Attachment F5 (ie. 710395E and 741947N) are correct and lie within the application site boundary, as indicated on a screen grab provided in Attachment B.

We have also enclosed a photograph in Attachment B which clearly shows that monitoring well GW04 is located immediately inside the Readstone boundary, at a location consistent with that indicated on the aerial photograph / serein grab.

In light of the information provided, it should hopefully be clear that there is no requirement for specific arrangements to be put in place to facilitate groundwater monitoring at well GW04.

\_\_\_\_\_

## Close

We consider that our response to the Article 12 Compliance Notice is not of such significance as to require revision of any information previously presented in the non-technical summary submitted in the EIS and/or the waste licence review application.

As requested, two copies of this submission are provided in hard copy format (an original plus one copy), together with 2 No. electronic copies in searchable PDF format on CD-ROM.

We trust that we have adequately addressed the issues raised in your Article 12 Compliance Notice dated 20 January last. Should you wish to discuss any of the points raised in this response in more detail, please contact the undersigned.

Yours sincerely,

For SLR Consulting (Ireland)

Derek Luby

Technical Director

cc. Shane Geraghty Roadstone Ltd.

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Ref: 501.00180.00152 15 February 2017

ATTACHMENT A other test.

SURFACE WATER MONTTORING DATA (W4)

Consent of contribution of the contribution

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# Huntstown Discharge Summary W4 Surface Water Discharge

MAC Values	0.5	5	6.0-9.0	1	15	25
Date	Ammoniacal Nitrogen	BOD	pH	Orthophosphate as P	Suspended Solids	Temperature °C
08/01/2016	<0.08	<2	8.00	<0.33	10	18
13/01/2016	<0.08	<2	8	<0.33	11	5
21/01/2016	<0.08	<2	7.7	<0.33	5	8
28/01/2016	<0.08	<2	7.70	<0.33	21	8
04/02/2016	<0.08	<2	7.90	<0.33	14	10
11/02/2016	<0.08	<2	7.70	<0.33	37	10
26/02/2016	<0.08	<2	7.9	<0.33	15	8
03/03/2016	<0.08	<2	7.90	<0.33	17	9
10/03/2016	<0.08	<2	8	<0.33	39	10
18/03/2016	<0.08	<2	8	<0.33	19	7
31/03/2016	<0.08	<2	7.9	<0.33	4	8
24/03/2016	<0.08	<2	N/A	<0.33	7.8	7
07/04/2016	<0.08	<2	7.9	<1	10	<0.33
14/04/2016	0.12	<2	7.7	<0.33	41	11
18/04/2016	<0.08	<2	7.6	<0.33	8	10
05/05/2016	<0.10	<2	7.6	<0.33	16	13
12/05/2016	<0.08	<2	7.7	<0.33	4	14
16/05/2016	<0.08	<2	7.9	<0.33	12	3
26/05/2016	<0.08	<2	8.0	<0.33	2	13
09/06/2016	<0.08	<2	7.9	<0.33	5	17
21/06/2016	<0.08	<2	8.0	<0.33	<1	14
30/06/2016	<0.08	<2	7.7	<0.33	<1	N/A
07/07/2016	<0.08	<2	7.9	<0.33	4	18
04/08/2016	<0.08	<2	8.1	37. 20/33	4	18
11/08/2016	<0.08	<2	8.1	چ <sup>0</sup> (0 < 0.33	<1	17
18/08/2016	<0.08	<2	8	05. xeb <0.33	1	19
29/08/2016	<0.08	<2	7.6	<0.33	<1	19
08/09/2016	<0.08	<2	7,60 00	<0.33	<1	17
15/09/2016	<0.08	<2	7.60° gi	<0.33	5	17
22/09/2016	<0.08	<2		<0.33	2	12
29/09/2016	<0.08	<2	7.8	<0.33	3	14
13/10/2016	<0.08	<2	7.9	<0.01	8	11
19/10/2016	<0.08	<2 chi	7.8	<0.01	2	10
24/10/2016	<0.08	<20th	7.8	0.03	3	12
03/11/2016	<0.08	<2	8.0	<0.33	7	11
10/11/2016	<0.08	<2	7.9	<0.33	7	8
17/11/2016	0.08	<2	7.6	<0.33	27	7
24/11/2016	<0.08	<2	7.7	<0.33	3	N/A
29/11/2016	<0.08	<2	7.7	<0.33	2	5
07/12/2016	<0.08	<2	8.0	<0.01	5	10
15/12/2016	<0.08	<2	8.0	<0.01	10	7
20/12/2016	<0.08	<2	8.0	<0.01	9	5

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# TelLab &

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

CERTIFICATE OF ANALYSIS Page 1 of 2 Analysis of Aqueous Samples (Huntstown) Analysis of Aqueous Samples (Huntstown) Laber Bolly and Project Description: For ingelion Burgen Bate Sampled: Mr. Colin Doyle 126433 Attention: Company: Roadstone Belgard, 08/01/2016 Address: Fortunestown Road, Belgard, Tallaght, Dublin 24. Certificate No: L/16/0132 Date Rec'd: 11/01/2016 01/02/2016 Our Ref: WS-40151 Issue Date:

**Project Summary:** 

One sample was 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

Peter O'Byrne Quality Manager



Date Sampled: 08/01/2016 Date Rec'd: 11/01/2016

Date Analysis Commenced: 11/01/2016

Our Ref. :WS-40151 Certificate No. L/16/0132

Determinand	Sample ID Lab ID	V Notch North of 19 126433 101	MAC Values
Ammoniacal Nitrogen BOD Orthophosphate as P pH Suspended Solids Temperature °C	n/a n/a ** ** ** ** n/a on-site	ecton received (2008)  set on received (2008)  40	<0.5 5 0.5 6.0-9.0 15 25

Concentrations expressed in mg/l (ppm) unless otherwise stated. #: Analysis of metals are performed on the filtered sample.

The above results relate only to the sample tested

This report should not be regenerated except in full and with the consent of T.E. Laboratories Ltd.

Exceedances are highlighted in bold.

MAC = Maximum Admissable Concentration.

MRC = Minimum Required Concentration.

<sup>\*\* =</sup> INAB Accredited Tests ++ = Subcontracted Tests n/a = Non-INAB Accredited Tests



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# elLab

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CERTIFICATE OF ANALYSIS

Page 1 of 6

Project Description:

Analysis of Aqueous Samples (Huntstown) Lab Toolf and

Attention:

Mr. Colin Doyle

126545 - 126554

Company:

Roadstone Belgard,

Address:

Fortunestown Road, Belgard,

For its ged on Date Sampled:

Tallaght,

Dublin 24.

L/16/0213

Date Rec'd:

13/01/2016

Certificate No: Issue Date:

16/02/2016

Our Ref:

WS-40179, 16-55508 &

16-57394

**Project Summary:** 

Ten samples were analysed for a range of determinands.

Please see page 2-6 for results. Terms & Conditions and methods

used are outlined in the attached appendix.

No. of Pages:

Results page 2-6 plus 4 page appendix

Peter O'Byrne Quality Manager



Date Sampled: 13/01/2016 Date Rec'd: 13/01/2016

Date Analysis Commenced: 13/01/2016 Our Ref. :WS-40179 , 16-55508 & 16-57394

Certificate No. L/16/0213

	Sample ID	V Notch North	MAC Values
Determinand	Lab ID	126545	
200000		32.1275	
Ammonia as NH4	n/a	<0.10	1
Ammoniacal Nitrogen	n/a	<0.08	<0.5
BOD	n/a	<2	5
COD	n/a	8	30
Cadmium #	**	< 0.03	notive
Copper #	**	< 0.05	1 oth
Detergents as MBAS	n/a	< 0.05	10
Dissolved Oxygen	n/a	9.65 350	6
Dissolved Solids	n/a	468,500	-
Iron#	**	₹0,95	-
Lead #	**	ito11 60.20	
Magnesium	++	(note 1)	-
Manganese #	**	<0.03	-
Mineral Oil ##	++\$0,5	<0.010	10
Nickel #	** 5001	< 0.10	-
Orthophosphate as P	#4°	<0.33 (note 1)	0.5
pН	0115**	8.0	6.0-9.0
Phosphate	++	<1 (note 1)	1
Sulphate	++	280 (note 1)	300
Suspended Solids	n/a	<0.10 <0.08 <2 8 <0.03 <0.05 <0.05 <0.05 <0.05  9.6 0.20 468 468 400 <0.20 <0.10 <0.33 (note 1) 8.0 <1 (note 1) 280 (note 1) 11 5	15
Temperature °C	on-site	5	25
Zinc#	**	<0.01	- <u> </u>

Concentrations expressed in mg/l (ppm) unless otherwise stated.

#: Analysis of metals are performed on the filtered sample.

## TPH, DRO and Mineral Oil result is based on analysis of cold extract with DCM as solvent. Note 1: Subcontracted due to instrument breakdown.

\*\* = INAB Accredited Tests ++ = Subcontracted Tests n/a = Non-INAB Accredited Tests

The above results relate only to the sample tested

This report should not be regenerated except in full and with the consent of T.E. Laboratories Ltd.

Exceedances are highlighted in bold.

MAC = Maximum Admissable Concentration.



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CERTIFICATE OF ANALYSIS

Page 1 of 3

Project Description:

Analysis of Aqueous Samples (Huntstown)

Attention:

Mr. Colin Doyle

Lab Toolf and 126726 - 12.

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126726 - 126727

Company: Address:

Roadstone Belgard,

Fortunestown Road,

Belgard, Tallaght,

Dublin 24.

L/16/0225

Date Rec'd:

22/01/2016

Certificate No: Issue Date:

17/02/2016

Our Ref:

WS-40237, 16-56355 & 16-57394

**Project Summary:** 

Two samples were analysed for a range of determinands.

Please see page 2-3 for results. Terms & Conditions and methods

used are outlined in the attached appendix.

No. of Pages:

Results page 2-3 plus 4 page appendix

Peter O'Byrne Quality Manager



Date Sampled: 21/01/2016 Date Rec'd: 22/01/2016

Date Analysis Commenced: 22/01/2016 Our Ref. :WS-40237, 16-56355 & 16-57394

Certificate No. L/16/0225

Determinand	Sample ID Lab ID	V Notch North 126727	MAC  Values
Ammoniacal Nitrogen	n/a	ilot ret 2	<0.5
BOD	n/a		5
Orthophosphate as P	++	7.7	0.5
pH	** :18		6.0-9.0
Suspended Solids	n/a for on-site	5	15
Temperature °C		8	25

Concentrations expressed in mg/l (ppm) unless otherwise stated.

Note 1: Subcontracted due to instrument breakdown.

\*\* = INAB Accredited Tests ++ = Subcontracted Tests n/a = Non-INAB Accredited Tests

The above results relate only to the sample tested

This report should not be regenerated except in full and with the consent of T.E. Laboratories Ltd.

Exceedances are highlighted in bold.

MAC = Maximum Admissable Concentration.



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

CERTIFICATE OF ANALYSIS

Page 1 of 3

Analysis of Aqueous Samples (Huntstown) Project Description:

Mr. Colin Doyle 126938 - 126939 Attention:

Roadstone Belgard, Company: Address: Fortunestown Road,

126938 - 1.

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126938 - 1.

126938 - 1. Belgard, Tallaght, Dublin 24.

Certificate No: L/16/0290 Date Rec'd: 29/01/2016 24/02/2016 Our Ref: WS-40293, 16-57982 & 16-56919 Issue Date:

Project Summary: Two samples were analysed for a range of determinands.

Please see page 2-3 for results. Terms & Conditions and methods

used are outlined in the attached appendix.

No. of Pages: Results page 2-3 plus 4 page appendix

Ms Breda Moore Peter O'Byrne Quality Manager Technical Manager



Date Sampled: 28/01/2016 Date Rec'd: 29/01/2016

Date Analysis Commenced: 29/01/2016 Our Ref. :WS-40293, 16-57982 & 16-56919

Certificate No. L/16/0290

Determinand	Sample ID Lab ID	V Notch North 126938	MAC Values
Ammoniacal Nitrogen BOD Orthophosphate as P pH Suspended Solids Temperature °C	n/a n/a ++ ** n/a to the on-site	7.7 21 8	<0.5 5 0.5 6.0-9.0 15 25

Concentrations expressed in mg/l (ppm) unless otherwise stated.

Note 1: Subcontracted due to instrument breakdown.

\*\* = INAB Accredited Tests ++ = Subcontracted Tests n/a = Non-INAB Accredited Tests

The above results relate only to the sample tested

This report should not be regenerated except in full and with the consent of T.E. Laboratories Ltd.

Exceedances are highlighted in bold.

MAC = Maximum Admissable Concentration.



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# elLab

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

CERTIFICATE OF ANALYSIS

Page 1 of 3

Project Description:

Analysis of Aqueous Samples (Huntstown)

Attention:

Mr. Colin Doyle

For its ection by Leading Sampled:

127094 - 127095

Company:

Roadstone Belgard,

Address:

Fortunestown Road,

Belgard, Tallaght,

Dublin 24.

Certificate No:

L/16/0347

Date Rec'd:

05/02/2016

04/02/2016

Issue Date:

29/02/2016

Our Ref:

WS-40351 & 16-57515

**Project Summary:** 

Two samples were analysed for a range of determinands.

Please see page 2-3 for results. Terms & Conditions and methods

used are outlined in the attached appendix.

No. of Pages:

Results page 2-3 plus 4 page appendix

Peter O'Byrne Quality Manager



Date Sampled: 04/02/2016 Date Rec'd: 05/02/2016

Date Analysis Commenced: 05/02/2016 Our Ref. :WS-40351 & 16-57515 Certificate No. L/16/0347

Determinand	Sample ID Lab ID	V Notchall a North 1101 127094	MAC Values
Ammoniacal Nitrogen BOD Orthophosphate as P pH Suspended Solids Temperature °C	n/a n/a **  **  **  r/as con your  one site	edicon per 10.08  20	<0.5 5 0.5 6.0-9.0 15 25

Concentrations expressed in mg/l (ppm) unless otherwise stated.

\*\* = INAB Accredited Tests ++ = Subcontracted Tests n/a = Non-INAB Accredited Tests

The above results relate only to the sample tested

This report should not be regenerated except in full and with the consent of T.E. Laboratories Ltd.

Exceedances are highlighted in bold.

MAC = Maximum Admissable Concentration.



Trading as

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

CERTIFICATE OF ANALYSIS

Page 1 of 2

Analysis of Aqueous Samples (Huntstown) Project Description:

Mr. Colin Doyle Attention:

127225

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127225 Roadstone Belgard, Company: Fortunestown Road, Address:

Belgard, Tallaght, Dublin 24.

Certificate No: L/16/0281 Date Rec'd: 12/02/2016

Issue Date: 22/02/2016 Our Ref: WS-40395

One sample was analysed for a range of determinands. **Project Summary:** 

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

Ms Breda Moore Peter O'Byrne Quality Manager **Technical Manager** 



Date Sampled: 11/02/2016 Date Rec'd: 12/02/2016

Date Analysis Commenced: 12/02/2016

Our Ref. :WS-40395 Certificate No. L/16/0281

Determinand	Sample ID Lab ID	V Notch	MAC Values
Ammoniacal Nitrogen BOD Orthophosphate as P pH Suspended Solids Temperature °C	n/a n/a ** For its ** For its n/as consite	citon for co.08 citon <2 <2 <0.33 7.7 37 10	<0.5 5 0.5 6.0-9.0 15 25

Concentrations expressed in mg/l (ppm) unless otherwise stated.

\*\* = INAB Accredited Tests ++ = Subcontracted Tests n/a = Non-INAB Accredited Tests

The above results relate only to the sample tested

This report should not be regenerated except in full and with the consent of T.E. Laboratories Ltd.

Exceedances are highlighted in bold.

MAC = Maximum Admissable Concentration.



Trading as

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CERTIFICATE OF ANALYSIS

Page 1 of 3

Project Description:

Analysis of Aqueous Samples (Huntstown) (Huntstown)

Attention:

Mr. Colin Doyle

127597 - 1:

For Higher W Date Sampled: 26/02/2016

127597 - 127599

Company: Address:

Roadstone Belgard,

Fortunestown Road,

Belgard, Tallaght,

Dublin 24.

Certificate No: L/16/0464 Date Rec'd:

29/02/2016

Issue Date:

18/03/2016

Our Ref:

WS-40508 & 16-59686

**Project Summary:** 

Three samples were analysed for a range of determinands.

Please see page 2-3 for results. Terms & Conditions and methods

used are outlined in the attached appendix.

No. of Pages:

Results page 2-3 plus 4 page appendix

Peter O'Byrne Quality Manager



Date Sampled: 26/02/2016 Date Rec'd: 29/02/2016

Date Analysis Commenced: 29/02/2016

Our Ref. :WS-40508 & 16-59686

Certificate No. L/16/0464

Determinand	Sample ID Lab ID	V Notch North 127597	MAC Values
Anamania and Alitenana		10.00 14.	7 off.
Ammoniacal Nitrogen	11/a	<0.08 0117	<0.5
BOD	n/a	<200 ,50	5
COD	n/a	TO HEL	30
Detergents as MBAS	n/a	₹0,05	10
Dissolved Oxygen	n/a	tion eig.9	6
Mineral Oil ##	++	0.017	10
Phosphate as P	**	dil <0.33	0.5
рН	** \$0	7.9	6.0-9.0
Sulphate	** 500	254	300
Suspended Solids	n/a	15	15
Temperature °C	en-site	<0.08 ohly complete the control of t	25

Concentrations expressed in mg/l (ppm) unless otherwise stated.

#: Analysis of metals are performed on the filtered sample.

## TPH, DRO and Mineral Oil result is based on analysis of cold extract with DCM as solvent.

\*\* = INAB Accredited Tests ++ = Subcontracted Tests n/a = Non-INAB Accredited Tests

The above results relate only to the sample tested

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Exceedances are highlighted in bold.

MAC ■ Maximum Admissable Concentration.



Trading as

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CERTIFICATE OF ANALYSIS

Page 1 of 2

Analysis of Aqueous Sample (Huntstown 1128) Project Description:

127761 Mr. Colin Doyle Attention:

For its pection by League. 03/03/2016 Roadstone Belgard, Company:

Fortunestown Road, Belgard, Tallaght,

Dublin 24.

Address:

Date Rec'd: 04/03/2016 L/16/0482 Certificate No:

Issue Date: 22/03/2016 Our Ref: WS-40536

Project Summary: One sample was analysed for a range of determinands.

Please see page 2 for results. Terms & Conditions and methods

used are outlined in the attached appendix.

Results page 2 plus 4 page appendix No. of Pages:

Ms Breda Moore Peter O'Byrne Technical Manager Quality Manager



Date Sampled: 03/03/2016 Date Rec'd: 04/03/2016

Date Analysis Commenced: 04/03/2016

Our Ref. :WS-40536 Certificate No. L/16/0482

Determinand	Sample ID Lab ID	V Notchard North 127764	MAC Values
Ammoniacal Nitrogen	n/a	cition of the control	<0.5
BOD	n/a		5
Orthophosphate as P	**		0.5
pH	** For y		6.0-9.0
Suspended Solids	n/a { cony		15
Temperature °C	one atte		25

Concentrations expressed in mg/l (ppm) unless otherwise stated.

The above results relate only to the sample tested

This report should not be regenerated except in full and with the consent of T.E. Laboratories Ltd.

Exceedances are highlighted in bold.

MAC = Maximum Admissable Concentration.

<sup>\*\* =</sup> INAB Accredited Tests ++ = Subcontracted Tests n/a = Non-INAB Accredited Tests



Trading as

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CERTIFICATE OF ANALYSIS

Page 1 of 2

Analysis of Aqueous Sample (Huntstownshet use) Project Description:

Attention: Mr. Colin Doyle

Roadstone Belgard, Company:

128013

For inglestion Virgedy

A convinge to the Sampled: 10/03/2016 Fortunestown Road, Address:

Belgard, Tallaght, Dublin 24.

Date Rec'd: 11/03/2016 Certificate No: L/16/0496

Our Ref: WS-40592 Issue Date: 23/03/2016

One sample was analysed for a range of determinands. **Project Summary:** 

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

Ms Breda Moore Peter O'Byrne **Technical Manager** Quality Manager



Date Sampled: 10/03/2016 Date Rec'd: 11/03/2016

Date Analysis Commenced: 11/03/2016

Our Ref. :WS-40592 Certificate No. L/16/0496

Determinand	Sample ID Lab ID	V Notch North 128013	MAC Values
Ammoniacal Nitrogen BOD Orthophosphate as P pH Suspended Solids Temperature °C	n/a n/a ** ** ** ** ** ** ** ** ** ** ** ** **	edion (10 colors) edit (10 colors) <2 colors (20 colors) < <2 colors (10 colors) <2 colors (10 colors) < <2 colors (10 colors) </td <td>&lt;0.5 5 0.5 6.0-9.0 15 25</td>	<0.5 5 0.5 6.0-9.0 15 25

Concentrations expressed in mg/l (ppm) unless otherwise stated.

\*\* = INAB Accredited Tests ++ = Subcontracted Tests n/a = Non-INAB Accredited Tests

The above results relate only to the sample tested

This report should not be regenerated except in full and with the consent of T.E. Laboratories Ltd.

Exceedances are highlighted in bold.

MAC = Maximum Admissable Concentration.



Trading as

# **TelLab**

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CERTIFICATE OF ANALYSIS

Page 1 of 2

Analysis of Aqueous Sample (Huntstownsket 1986) Project Description:

Attention: Mr. Colin Doyle 128188

Roadstone Belgard, Company: 18/03/2016 Address: Fortunestown Road,

For High on Date Sampled: Tallaght, Dublin 24. L/16/0569 Date Rec'd: 21/03/2016

Issue Date: 07/04/2016 Our Ref: WS-40644

**Project Summary:** One sample was 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

Belgard,

Certificate No:

Peter O'Byrne Ms Breda Moore **Quality Manager Technical Manager** 



Date Sampled: 18/03/2016 Date Rec'd: 21/03/2016

Date Analysis Commenced: 21/03/2016

Our Ref. :WS-40644 Certificate No. L/16/0569

Determinand	Sample ID Lab ID	V Notchall of North 1901	MAC Values
Ammoniacal Nitrogen BOD Orthophosphate as P pH Suspended Solids Temperature °C	n/a n/a ** For in ** n/as consite	ection of 1000 ection (0.08 <2 <0.33 7.7 19 7	<0.5 5 0.5 6.0-9.0 15 25

Concentrations expressed in mg/l (ppm) unless otherwise stated.

\*\* = INAB Accredited Tests ++ = Subcontracted Tests n/a = Non-INAB Accredited Tests

The above results relate only to the sample tested

This report should not be regenerated except in full and with the consent of T.E. Laboratories Ltd.

Exceedances are highlighted in bold.

MAC = Maximum Admissable Concentration.



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CERTIFICATE OF ANALYSIS

Page 1 of 5

Project Description:

Analysis of Aqueous Sample (Huntstown) Tet 1980

Attention:

Mr. Colin Doyle

128392 - 12
For inspection Date Sampled: 31/03/2016

128392 - 128400

Company:

Roadstone Belgard,

Fortunestown Road,

Address:

Belgard,

Tallaght,

Dublin 24.

L/16/0627

Date Rec'd:

31/03/2016

Certificate No: Issue Date:

14/04/2016

Our Ref:

WS-40713 & 16-62839

**Project Summary:** 

Nine samples were analysed for a range of determinands.

Please see page 2-5 for results. Terms & Conditions and methods

used are outlined in the attached appendix.

No. of Pages:

Results page 2-5 plus 4 page appendix

Peter O'Byrne Quality Manager



Date Sampled: 31/03/2016 Date Rec'd: 31/03/2016

Date Analysis Commenced: 31/03/2016 Our Ref. :WS-40713 & 16-62839 Certificate No. L/16/0627

Determinand	Sample ID Lab ID	V Notch North 128392	MAC Vafues
Ammoniacal Nitrogen	n/a	<0.08 only o	<0.5
BOD	n/a	<2e5 2501	5
COD	n/a		30
Detergents as MBAS	n/a	0.05	10
Dissolved Oxygen	n/a	ctione 9.4	6
Mineral Oil ##	++ .	<0.010	10
Phosphate as P	** 00,10	<0.33	0.5
рН	** **	7.9	6.0-9.0
Sulphate	n/a n/a ++ ** ** Folian	237	300
Suspended Solids	n/a	4	15
Temperature °C	©n-site	8	25

Concentrations expressed in mg/l (ppm) unless otherwise stated.

#: Analysis of metals are performed on the filtered sample.

## TPH, DRO and Mineral Oil result is based on analysis of cold extract with DCM as solvent.

\*\* = INAB Accredited Tests ++ = Subcontracted Tests n/a = Non-INAB Accredited Tests

The above results relate only to the sample tested

This report should not be regenerated except in full and with the consent of T.E. Laboratories Ltd.

Exceedances are highlighted in bold.

MAC = Maximum Admissable Concentration.



Trading as

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CERTIFICATE OF ANALYSIS

Page 1 of 2

Analysis of Aqueous Sample (Huntstown Ret 1986) Project Description:

Lab Dodfor any 128528 Mr. Colin Doyle Attention:

Company: Roadstone Belgard, 07/04/2016

For its getten but en Sampled: Fortunestown Road, Address: Belgard, Tallaght,

Dublin 24. Certificate No: L/16/0691 Date Rec'd: 08/04/2016

Our Ref: WS-40746 22/04/2016 Issue Date:

One samples was analysed for a range of determinands. **Project Summary:** 

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

Ms Breda Moore Peter O'Byrne Technical Manager Quality Manager



Date Sampled: 07/04/2016 Date Rec'd: 08/04/2016

Date Analysis Commenced: 08/04/2016

Our Ref. :WS-40746 Certificate No. L/16/0691

Determinand	Sample ID	W4	MAC
	Lab ID	1285 <u>2</u> 8 <sup>13 - 101</sup>	Values
Ammoniacal Nitrogen BOD pH Suspended Solids Temperature °C Orthophosphate as P	n/a n/a ** n/a foil on-site don	20008 2000 7.9 2000 7.9 10 10 10	0.5 5 6.0-9.0 15 25 1

Concentrations expressed in mg/l (ppm) unless otherwise stated.

\*\* = INAB Accredited Tests ++ = Subcontracted Tests n/a = Non-INAB Accredited Tests

The above results relate only to the sample tested

This report should not be regenerated except in full and with the consent of T.E. Laboratories Ltd.

Exceedances are highlighted in bold.

MAC = Maximum Admissable Concentration.

MRC = Minimum Required Concentration.

# Mineral Oil result is based on analysis of cold extract with Hexane mixture as solvent.



Trading as

# TelLab &

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

CERTIFICATE OF ANALYSIS

Page 1 of 2

Project Description:

Analysis of Aqueous Sample (Huntstown)

Attention:

Mr. Colin Doyle

Lab forty and

128657

Company: Address: Roadstone Belgard,

Fortunestown Road,

For Held to Date Sampled:

: 14/04/2016

Belgard,

allaght

Tallaght,

Dublin 24. L/16/0732

Date Rec'd:

15/04/2016

Certificate No: Issue Date:

03/05/2016

Our Ref:

WS-40792

**Project Summary:** 

One samples was 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

Peter O'Byrne Quality Manager



Date Sampled:14 /04/2016 Date Rec'd: 15/04/2016

Date Analysis Commenced: 15/04/2016

Our Ref. :WS-40792 Certificate No. L/16/0732

Determinand	Sample ID	W4	MAC
	Lab ID	128657 12 12 12 12 12 12 12 12 12 12 12 12 12	Values
Ammoniacal Nitrogen BOD pH Suspended Solids Temperature <sup>o</sup> C Orthophosphate as P	n/a n/a ** n/a Fo <sup>t in</sup> on-site con	Red of the control of	0.5 5 6.0-9.0 15 25 1

Concentrations expressed in mg/l (ppm) unless otherwise stated.

The above results relate only to the sample tested

This report should not be regenerated except in full and with the consent of T.E. Laboratories Ltd.

Exceedances are highlighted in bold.

MAC = Maximum Admissable Concentration.

MRC = Minimum Required Concentration.

# Mineral Oil result is based on analysis of cold extract with Hexane mixture as solvent.

<sup>\*\* =</sup> INAB Accredited Tests ++ = Subcontracted Tests n/a = Non-INAB Accredited Tests



Trading as

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CERTIFICATE OF ANALYSIS

Page 1 of 6

Project Description:

Analysis of Aqueous Sample (Huntstown Med 1128)

Attention:

Mr. Colin Doyle

For its pection pure suppled:

128686 -128695

Company: Address:

Roadstone Belgard,

Fortunestown Road, Belgard,

Tallaght, Dublin 24.

Certificate No:

L/16/0736

Date Rec'd:

18/04/2016

18/04/2016

Issue Date:

12/05/2016

Our Ref:

WS-40806 & 16-64169

**Project Summary:** 

Ten samples were analysed for a range of determinands.

Please see page 2-6 for results. Terms & Conditions and methods

used are outlined in the attached appendix.

No. of Pages:

Results page 2-6 plus 4 page appendix

Peter O'Byrne Quality Manager



Date Sampled: 18/04/2016 Date Rec'd: 18/04/2016

Date Analysis Commenced: 18/04/2016 Our Ref. :WS-40806 & 16-64169

Certificate No. L/16/0736

	Sample ID	W4	MAC Values
Determinand	Lab ID	128686	values
		<0.08 and difference	
Ammoniacal Nitrogen	n/a	<0.08. 40	<0.5
BOD	n/a	-ce-<2101	<5
Cadmium #	**	100 <b>50</b> .03	7.
Copper #	**	0.05 € 0.05	
Dissolved Solids	n/a	ectioning 434	
Diesel Range Organics ##	++	<0.08 my (0.03 my (0.05 my (0.	-
Iron #	** 601	0.05	-
Lead #	** (0)	<0.20	_
Magnesium	** 1101	12	2
Manganese #	OID.	0.05	. <del></del>
Nickel #	**	<0.10	-
рH	**	7.6	6-9
Orthophosphate as P	**	<0.33	0.5
PRO	++	<0.001	-
Suspended Solids	n/a	8	<15
Temperature °C	on-site	10	<25°C
TPH ##	++	<0.010	-
Zinc #	**	0.03	-
N. 7. N. 1. N. 1. 7. N. 1. N. 1. 7. N. 1. N. 1. 7. N. 1. N.			

Concentrations are expressed as mg/l (ppm) unless otherwise specified.

## TPH and DRO result is based on analysis of cold extract with DCM as solvent.

\*\* = INAB Accredited Tests ++ = Subcontracted Tests n/a = Non-INAB Accredited Tests



Trading as

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CERTIFICATE OF ANALYSIS

Page 1 of 2

Analysis of Aqueous Sample (Huntstown Medius) Project Description:

Mr. Colin Doyle Attention: 129105

For High on Date Sampled: Company: Roadstone Belgard, 05/05/2016 Address: Fortunestown Road, Belgard,

Tallaght, Dublin 24. L/16/0855 Date Rec'd: 06/05/2016

Issue Date: 20/05/2016 Our Ref: WS-40932

**Project Summary:** One samples was 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

Certificate No:

Peter O'Byrne Ms Breda Moore Quality Manager Technical Manager



Date Sampled:05/05/2016 Date Rec'd: 06/05/2016

Date Analysis Commenced: 06/05/2016

Our Ref. :WS-40932 Certificate No. L/16/0855

	Sample ID	W4	MAC Values
Determinand	Lab ID	129105 (0	
Ammoniacal Nitrogen BOD pH Suspended Solids Temperature °C Orthophosphate as P	n/a n/a ** n/a çor on-site; cor ***	7.6 13 0.33	0.5 5 6.0-9.0 15 25 1

Concentrations expressed in mg/l (ppm) unless otherwise stated.

\*\* = INAB Accredited Tests ++ = Subcontracted Tests n/a = Non-INAB Accredited Tests

The above results relate only to the sample tested

This report should not be regenerated except in full and with the consent of T.E. Laboratories Ltd.

Exceedances are highlighted in bold.

MAC = Maximum Admissable Concentration.

MRC = Minimum Required Concentration.



Trading as

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

CERTIFICATE OF ANALYSIS

Page 1 of 2

Analysis of Aqueous Sample (Huntstown Heart 150) Project Description:

129257 Mr. Colin Doyle Attention:

Consent of copyright on Date Sampled: Roadstone Belgard, 12/05/2016 Company: Address: Fortunestown Road,

Belgard, Tallaght, Dublin 24.

L/16/0910 Certificate No:

27/05/2016 Our Ref: WS-40986 Issue Date:

One samples was analysed for a range of determinands. Project Summary:

Please see page 2 for results. Terms & Conditions and methods

13/05/2016

used are outlined in the attached appendix.

No. of Pages: Results page 2 plus 4 page appendix

Ms Breda Moore Peter O'Byrne **Technical Manager** Quality Manager



Date Sampled: 12/05/2016 Date Rec'd: 13/05/2016

Date Analysis Commenced: 13/05/2016

Our Ref. :WS-40985 Certificate No. L/16/0910

	Sample ID	27. 20	o <sup>iti©</sup> MAC Values
Determinand	Lab ID	129257	
Ammoniacal Nitrogen BOD pH Suspended Solids Temperature °C Orthophosphate as P	n/a n/a ** n/a con on-site, con ***	7.7 4 14 <0.33	0.5 5 6.0-9.0 15 25 1

Concentrations expressed in mg/l (ppm) unless otherwise stated.

The above results relate only to the sample tested

This report should not be regenerated except in full and with the consent of T.E. Laboratories Ltd.

Exceedances are highlighted in bold.

MAC = Maximum Admissable Concentration.

MRC = Minimum Required Concentration.

<sup>\*\* =</sup> INAB Accredited Tests ++ = Subcontracted Tests n/a = Non-INAB Accredited Tests



Trading as

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CERTIFICATE OF ANALYSIS

Page 1 of 5

Analysis of Aqueous Sample (Huntstown Heriuse) Project Description:

Lab The derived by Red Lord 129296 - 129304 Mr. Colin Doyle Attention:

Company: Roadstone Belgard, 16/05/2016

For inspection of Date Sampled: Address: Fortunestown Road, Belgard, Tallaght,

Dublin 24. L/16/0919 Date Rec'd: 17/05/2016 Certificate No:

01/06/2016 Our Ref: WS-40995 & 16-66890 Issue Date:

Nine samples were analysed for a range of determinands. Project Summary:

Please see page 2-5 for results. Terms & Conditions and methods

used are outlined in the attached appendix.

Results page 2-5 plus 4 page appendix No. of Pages:

Peter O'Byrne Ms Breda Moore Quality Manager Technical Manager



Date Sampled: 16/05/2016 Date Rec'd: 17/05/2016 Date Analysis Commenced: 16 Our Ref.: WS-40995 & 16-668 Certificate No. L/16/0919	90	Adoses only, and other rec	
	Sample ID	ion PitedW4	MAC
Determinand	Lab ID	September 129296	Values
Ammoniacal Nitrogen BOD pH Orthophosphate as P Suspended Solids Temperature °C	n/a cod n/a <sub>th</sub> cod n/a <sub>**</sub> n/a on-site	<0.08 <2 7.9 <0.33 3 12	<0.5 <5 6-9 0.5 <15 <25°C

Concentrations are expressed as mg/l (ppm) unless otherwise specified.

<sup>\*\* =</sup> INAB Accredited Tests 



Trading as

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CERTIFICATE OF ANALYSIS

Page 1 of 2

Project Description:

Analysis of Aqueous Sample (Huntstown Analysis of Aqueous Sample (Hunt

Attention:

Mr. Colin Doyle

Lab To all of and 129550
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129550

Company: Address:

Roadstone Belgard, Fortunestown Road,

Belgard,

Tallaght,

Dublin 24.

Certificate No:

L/16/0998

Date Rec'd:

27/05/2016

Issue Date:

13/06/2016

Our Ref:

WS-41069

**Project Summary:** 

One samples was 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

Peter O'Byrne Quality Manager



Date Sampled: 26/05/2016 Date Rec'd: 27/05/2016

Date Analysis Commenced: 27/05/2016

Our Ref. :WS-41069 Certificate No. L/16/0998

Determinand	Sample ID	W4	MAC
	Lab ID	129550 of	Values
Ammoniacal Nitrogen BOD pH Suspended Solids Temperature <sup>o</sup> C Orthophosphate as P	n/a n/a ** n/a coin on-site con	2 13 <0.33	0.5 5 6.0-9.0 15 25 1

Concentrations expressed in mg/l (ppm) unless otherwise stated.

\*\* = INAB Accredited Tests ++ = Subcontracted Tests n/a = Non-INAB Accredited Tests

The above results relate only to the sample tested

This report should not be regenerated except in full and with the consent of T.E. Laboratories Ltd.

Exceedances are highlighted in bold.

MAC = Maximum Admissable Concentration.

MRC = Minimum Required Concentration.



Trading as

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

CERTIFICATE OF ANALYSIS

Page 1 of 2

Project Description:

Analysis of Aqueous Sample (Huntstown Ref. 158)

Attention:

Mr. Colin Doyle

Lab De of the draw

129884

Company:

Roadstone Belgard,

Fortunestown Road,

For inspection of Date Sampled:

09/06/2016

Address:

Belgard,

Tallaght,

Dublin 24. L/16/1107

Date Rec'd:

10/06/2016

Certificate No: Issue Date:

21/06/2016

Our Ref:

WS-41179

**Project Summary:** 

One samples was 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

Peter O'Byrne Quality Manager



Date Sampled: 09/06/2016 Date Rec'd: 10/06/2016

Date Analysis Commenced: 10/06/2016

Our Ref. :WS-41179 Certificate No. L/16/1107

Determinand	Sample ID  Lab ID	129884 of	WAC Values
Ammoniacal Nitrogen BOD pH Suspended Solids Temperature °C Orthophosphate as P	n/a n/a ** n/a cot on-site cot **	7.9 7.9 7.9 7.9 7.9 7.9 7.9 7.9	0.5 5 6.0-9.0 15 25 1

Concentrations expressed in mg/l (ppm) unless otherwise stated.

\*\* = INAB Accredited Tests ++ = Subcontracted Tests n/a = Non-INAB Accredited Tests

The above results relate only to the sample tested

This report should not be regenerated except in full and with the consent of T.E. Laboratories Ltd.

Exceedances are highlighted in bold.

MAC = Maximum Admissable Concentration.

MRC = Minimum Required Concentration.



Trading as

# **TelLab**

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CERTIFICATE OF ANALYSIS

Page 1 of 5

Project Description:

Analysis of Aqueous Sample (Huntstown Ref. 158).

Attention:

Mr. Colin Doyle

Lab Doily and 150233 - 13

For ingle tion of copyright on Date Sampled: 21/06/2016

130233 - 130240

Company: Address:

Roadstone Belgard,

Fortunestown Road,

Belgard, Tallaght,

Dublin 24.

Date Rec'd:

21/06/2016

Certificate No:

Issue Date:

L/16/1168 19/07/2016

Our Ref:

WS-41238 & 16-70656

Project Summary:

Nine samples were analysed for a range of determinands.

Please see page 2-5 for results. Terms & Conditions and methods

used are outlined in the attached appendix.

No. of Pages:

Results page 2-5 plus 4 page appendix

Peter O'Byrne Quality Manager



Date Sampled: 21/06/2016 Date Rec'd: 21/06/2016

Date Analysis Commenced: 21/06/2016

Our Ref. :WS-41238 & 16-70656

Certificate No. L/16/1168

	Sample ID	SW4	otte MAC Values
Determinand	Lab ID	130233 (0)	
Ammoniacal Nitrogen BOD pH Suspended Solids Temperature °C Orthophosphate as P	n/a n/a ** n/a con on-site, con ***	8.0 14 <0.33	0.5 5 6.0-9.0 15 25 1

Concentrations expressed in mg/l (ppm) unless otherwise stated.

\*\* = INAB Accredited Tests ++ = Subcontracted Tests n/a = Non-INAB Accredited Tests

The above results relate only to the sample tested

This report should not be regenerated except in full and with the consent of T.E. Laboratories Ltd.

Exceedances are highlighted in bold.

MAC = Maximum Admissable Concentration.

MRC = Minimum Required Concentration.



Trading as

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CERTIFICATE OF ANALYSIS

Page 1 of 3

Analysis of Aqueous Sample (Huntstown) Analysis of Aqueous Sample (Huntstown) Project Description:

Belgard,

Lab De offy and Mr. Colin Doyle Attention: 130435 - 130436

Company: Roadstone Belgard, 30/06/2016 Address: Fortunestown Road,

Consent of copyright on Pate Sampled: Tallaght, Dublin 24.

Certificate No: L/16/1239 30/06/2016

26/07/2016 Issue Date: Our Ref: WS-41310 & 16-71713

**Project Summary:** Two samples was 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

Peter O'Byrne Ms Breda Moore Quality Manager **Technical Manager** 



Date Sampled: 30/06/2016 Date Rec'd: 30/06/2016

Date Analysis Commenced: 30/06/2016

Our Ref. :WS-41310 & 16-71713

Certificate No. L/16/1239

Determinand	Sample ID  Lab ID	W4 130435 of	MAC Values
Ammoniacal Nitrogen	n/a	Redict No. 08  Redict No. 08  7.7  7.7  7.1  Not recorded  <0.33	0.5
BOD	n/a		5
pH	**		6.0-9.0
Suspended Solids	n/a çorig		15
Temperature <sup>o</sup> C	on-site con		25
Orthophosphate as P	**		1

Concentrations expressed in mg/l (ppm) unless otherwise stated.

The above results relate only to the sample tested

This report should not be regenerated except in full and with the consent of T.E. Laboratories Ltd.

Exceedances are highlighted in bold.

MAC = Maximum Admissable Concentration.

MRC = Minimum Required Concentration.

<sup>\*\* =</sup> INAB Accredited Tests ++ = Subcontracted Tests n/a = Non-INAB Accredited Tests



Trading as

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

> CERTIFICATE OF ANALYSIS Page 1 of 2

Project Description:

Analysis of Aqueous Sample (Huntstown Ref. 1986)

Attention:

Mr. Colin Doyle

Lab Doity any 150694

For inspection of the Sampled: 07/07/2016

Company:

Roadstone Belgard,

Address:

Fortunestown Road, Belgard,

Tallaght,

Dublin 24.

Certificate No:

L/16/1305

Date Rec'd:

08/07/2016

Issue Date:

27/07/2016

Our Ref:

WS-41377

**Project Summary:** 

One sample was 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

Peter O'Byrne Quality Manager



Date Sampled: 07/07/2016 Date Rec'd: 08/07/2016

Date Analysis Commenced: 08/07/2016

Our Ref. :WS-41377 Certificate No. L/16/1305

	Sample ID	W4	MAC Values
Determinand	Lab ID	130694	
Ammoniacal Nitrogen BOD pH Suspended Solids Temperature °C Orthophosphate as P	n/a n/a ** n/a çor on-site con **	7.9 4 18 <0.33	0.5 5 6.0-9.0 15 25 1

Concentrations expressed in mg/l (ppm) unless otherwise stated.

\*\* = INAB Accredited Tests ++ = Subcontracted Tests n/a = Non-INAB Accredited Tests

The above results relate only to the sample tested

This report should not be regenerated except in full and with the consent of T.E. Laboratories Ltd.

Exceedances are highlighted in bold.

MAC = Maximum Admissable Concentration.

MRC = Minimum Required Concentration.



Trading as

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CERTIFICATE OF ANALYSIS

Page 1 of 3

Project Description:

Analysis of Aqueous Sample (Huntstown) et 1186

Attention:

Mr. Colin Doyle

Lab De off dry 131238

131238

131238

O4/08/2016

Foling Parish on Pare Sampled: 04/08/2016

Company:

Roadstone Belgard,

Address:

Fortunestown Road, Belgard,

Tallaght,

Dublin 24.

Certificate No: L/16/1473 Date Rec'd: 05/08/2016

Issue Date:

19/08/2016

Our Ref:

WS-41546

**Project Summary:** 

One sample was 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

Peter O'Byrne Quality Manager



Date Sampled: 04/08/2016 Date Rec'd: 05/08/2016

Date Analysis Commenced: 05/08/2016

Our Ref. :WS-41546 Certificate No. L/16/1473

	Sample ID	Discharge	dire MAC
Determinand	Lab ID	131238 for	Values
Ammoniacal Nitrogen BOD pH Suspended Solids Temperature °C Orthophosphate as P	n/a n/a ** n/a çon on-sites con **son	Redign 12 6:08  Redign 12 6:08  8.1  4  20  <0.33	0.5 5 6.0-9.0 15 25

Concentrations expressed in mg/l (ppm) unless otherwise stated.

The above results relate only to the sample tested

This report should not be regenerated except in full and with the consent of T.E. Laboratories Ltd.

Exceedances are highlighted in bold.

MAC = Maximum Admissable Concentration.

MRC = Minimum Required Concentration.

<sup>\*\* =</sup> INAB Accredited Tests ++ = Subcontracted Tests n/a = Non-INAB Accredited Tests



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CERTIFICATE OF ANALYSIS

Page 1 of 3

Analysis of Aqueous Sample (Huntstown) Land tot different Project Description:

Attention: Mr. Colin Doyle

For its ection to the Campled: Mr. Leonard Grogan

Company: Roadstone Belgard,

Address: Fortunestown Road, Belgard,

Tallaght,

Dublin 24. Certificate No: L/16/1531

Date Rec'd:

12/08/2016

131502

11/08/2016

WS-41599

Issue Date: 24/08/2016 Our Ref:

One sample was 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

Peter O'Byrne Quality Manager

**Project Summary:** 



Date Sampled: 11/08/2016 Date Rec'd: 12/08/2016

Date Analysis Commenced: 12/08/2016

Our Ref. :WS-41599 Certificate No. L/16/1531

Determinand	Sample ID  Lab ID	Discharge only of 131502 for on	MAC Values
Ammoniacal Nitrogen BOD pH Suspended Solids Temperature °C Orthophosphate as P	n/a n/a ** n/a foot on-site foot	Redical Residence (0.08 specifical residence (0.	0.5 5 6.0-9.0 15 25 1

Concentrations expressed in mg/l (ppm) unless otherwise stated.

\*\* = INAB Accredited Tests ++ = Subcontracted Tests n/a = Non-INAB Accredited Tests

The above results relate only to the sample tested

This report should not be regenerated except in full and with the consent of T.E. Laboratories Ltd.

Exceedances are highlighted in bold.

MAC = Maximum Admissable Concentration.

MRC = Minimum Required Concentration.



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CERTIFICATE OF ANALYSIS

Page 1 of 3

Project Description:

Analysis of Aqueous Sample (Huntstown Met 1158)

Attention:

Mr. Colin Doyle

131583 - 131585

Mr. Leonard Grogan

B Maguire

Company: Address:

Roadstone Belgard,

Fortunestown Road,

131583 - 1;
For inspection of ate Sampled: 18/08/2016

Belgard, Tallaght,

Dublin 24.

L/16/1565

Date Rec'd:

19/08/2016

Issue Date:

Certificate No:

05/09/2016

Our Ref:

WS41635 & 16-76488

**Project Summary:** 

Three samples were analysed for a range of determinands.

Please see page 2-3 for results. Terms & Conditions and methods

used are outlined in the attached appendix.

No. of Pages:

Results page 2-3 plus 4 page appendix

Peter O'Byrne Quality Manager



Date Sampled: 18/08/2016 Date Rec'd: 19/08/2016

Date Analysis Commenced: 19/08/2016

Our Ref. :WS-41635 & 16-76488

Certificate No. L/16/1565

1924			Jeg.
	Sample ID	W4	other MAC
	**S	(epa spiit).	ov Values
Determinand	Lab ID	1315830 01	
		DOS TED	
Ammoniacal Nitrogen	n/a	<b>₹0.08</b>	0.5
BOD	n/a	citother < 2	5
COD	n/a	20° 024 8	
pН	** 601	198 7.7	6.0-9.0
Suspended Solids	n/a	Rection et <2 Rection 8 7.7 1	15
Temperature °C	on-site	19	25
Orthophosphate as P	on-site	<0.33	1

Concentrations expressed in mg/l (ppm) unless otherwise stated.

\*\* = INAB Accredited Tests ++ = Subcontracted Tests n/a = Non-INAB Accredited Tests

The above results relate only to the sample tested

This report should not be regenerated except in full and with the consent of T.E. Laboratories Ltd.

Exceedances are highlighted in bold.

MAC = Maximum Admissable Concentration.

MRC = Minimum Required Concentration.



Trading as

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CERTIFICATE OF ANALYSIS

Page 1 of 4

Project Description:

Analysis of Aqueous Sample (Huntstown) (Huntstown)

Attention:

Mr. Colin Doyle

Lab Dolly and For infection of the Sampled: 29/08/2016 131711 - 131717

Mr. Leonard Grogan

B Maguire

Company: Address:

Roadstone Belgard,

Fortunestown Road,

Belgard, Tallaght,

Dublin 24.

Certificate No:

L/16/1627

Date Rec'd:

29/08/2016

Issue Date:

13/09/2016

Our Ref:

WS-41695 & 16-77221

Project Summary:

Seven samples were analysed for a range of determinands.

Please see page 2-4 for results. Terms & Conditions and methods

used are outlined in the attached appendix.

No. of Pages:

Results page 2-4 plus 4 page appendix

Peter O'Byrne Quality Manager



Date Sampled: 29/08/2016 Date Rec'd: 29/08/2016

Date Analysis Commenced: 30/08/2016

Our Ref. :WS-41695 & 16-77221

Certificate No. L/16/1627

Determinand	Sample ID	W4 1317,11 1,10	MAC Values
Determinand		6 .6	
Ammoniacal Nitrogen	n/a n/a ** n/a con on-sites con	50.08	0.5
BOD	n/a	getticaties <2	5
рН	**	dit 7.6	6.0-9.0
Suspended Solids	n/a 🖓	<1	15
Temperature °C	on-sites	19	25
Orthophosphate as P	Consent C	<0.33	1

Concentrations expressed in mg/l (ppm) unless otherwise stated.

\*\* = INAB Accredited Tests ++ = Subcontracted Tests n/a = Non-INAB Accredited Tests

The above results relate only to the sample tested

This report should not be regenerated except in full and with the consent of T.E. Laboratories Ltd.

Exceedances are highlighted in bold.

MAC = Maximum Admissable Concentration.

MRC = Minimum Required Concentration.



Trading as

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CERTIFICATE OF ANALYSIS

Page 1 of 2

Analysis of Aqueous Sample (Huntstownship) Laboro and for any Project Description:

Attention: Mr. Colin Doyle 131984

Mr. Leonard Grogan

08/09/2016 Roadstone Belgard, Company:

For its pection purposed in the Sampled: Address: Fortunestown Road,

Belgard, Tallaght,

Dublin 24.

09/09/2016 Certificate No: L/16/1693 Date Rec'd:

07/10/2016 Our Ref: WS-41763 Issue Date:

One sample was analysed for a range of determinands. **Project Summary:** 

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

Ms Breda Moore Peter O'Byrne Technical Manager Quality Manager



Date Sampled: 08/09/2016 Date Rec'd: 09/09/2016

Date Analysis Commenced: 09/09/2016

Our Ref. :WS-41763 Certificate No. L/16/1693

Determinand	Sample ID	W4 13,198,40 fot at	MAC Values
Ammoniacal Nitrogen BOD pH Suspended Solids Temperature <sup>o</sup> C Orthophosphate as P	n/a n/a ** n/a on-site	7.6 <10.08 7.6 <1 17 <0.33	0.5 5 6.0-9.0 15 25

Concentrations expressed in mg/l (ppm) unless otherwise stated.

The above results relate only to the sample tested

This report should not be regenerated except in full and with the consent of T.E. Laboratories Ltd.

Exceedances are highlighted in bold.

MAC = Maximum Admissable Concentration.

MRC = Minimum Required Concentration.

<sup>\*\* =</sup> INAB Accredited Tests ++ = Subcontracted Tests n/a = Non-INAB Accredited Tests



Trading as

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CERTIFICATE OF ANALYSIS

Page 1 of 2

Analysis of Aqueous Sample (Huntstown) Text 1980 Project Description:

Attention:

Certificate No:

Mr. Colin Doyle 132158 Mr. Leonard Grogan

Company: Roadstone Belgard, 15/09/2016

For High on Date Sampled: Address: Fortunestown Road, Belgard,

Tallaght, Dublin 24. L/16/1743 Date Rec'd: 16/09/2016

Issue Date: 10/10/2016 Our Ref: WS-41814

**Project Summary:** One sample was 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

Peter O'Byrne Ms Breda Moore Quality Manager **Technical Manager** 



Date Sampled: 15/09/2016 Date Rec'd: 16/09/2016

Date Analysis Commenced: 16/09/2016

Our Ref. :WS-41814 Certificate No. L/16/1743

Determinand	Sample ID  Lab ID	W4 13215 80 FOT 100	MAC Values
Ammoniacal Nitrogen BOD pH Suspended Solids Temperature °C Orthophosphate as P	n/a n/a ** totil n/a todil on-site	7.9 5 17 60.33	0.5 5 6.0-9.0 15 25 1

Concentrations expressed in mg/l (ppm) unless otherwise stated.

The above results relate only to the sample tested

This report should not be regenerated except in full and with the consent of T.E. Laboratories Ltd.

Exceedances are highlighted in bold.

MAC = Maximum Admissable Concentration.

MRC = Minimum Required Concentration.

<sup>\*\* =</sup> INAB Accredited Tests ++ = Subcontracted Tests n/a = Non-INAB Accredited Tests



Trading as

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> CERTIFICATE OF ANALYSIS Page 1 of 2

Project Description:

Analysis of Aqueous Sample (Huntstown) Text 150

Attention:

Mr. Colin Doyle

ad, For its pecial pur tenther ...
Consent of copyright on Date Sampled:

132341

22/09/2016

Company:

Address:

Mr. Leonard Grogan

Roadstone Belgard,

Fortunestown Road,

Belgard, Tallaght,

Dublin 24.

L/16/1805

23/09/2016

Certificate No: Issue Date:

10/10/2016

Our Ref:

WS-41877

**Project Summary:** 

One sample was 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

Peter O'Byrne **Quality Manager** 



Date Sampled: 22/09/2016 Date Rec'd: 23/09/2016

Date Analysis Commenced: 23/09/2016

Our Ref. :WS-41877 Certificate No. L/16/1805

Determinand	Sample ID Lab ID	13234 10 10 10 10 10 10 10 10 10 10 10 10 10	MAC Values
Ammoniacal Nitrogen BOD pH Suspended Solids Temperature °C Orthophosphate as P	n/a n/a ** For n/a on-site	2 12 <0.33	0.5 5 6.0-9.0 15 25 1

Concentrations expressed in mg/l (ppm) unless otherwise stated.

\*\* = INAB Accredited Tests ++ = Subcontracted Tests n/a = Non-INAB Accredited Tests

The above results relate only to the sample tested

This report should not be regenerated except in full and with the consent of T.E. Laboratories Ltd.

Exceedances are highlighted in bold.

MAC = Maximum Admissable Concentration.

MRC = Minimum Required Concentration.



Trading as

# **felLab**

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CERTIFICATE OF ANALYSIS

Page 1 of 5

Project Description:

Analysis of Aqueous Sample (Huntstown Met 1152) Labor Dally and

Attention:

Mr. Colin Doyle

132456 - 13

For inspection Date Sampled: 29/09/2016

132456 - 132464

Mr. Leonard Grogan

Company: Address:

Roadstone Belgard,

Fortunestown Road,

Belgard, Tallaght,

Dublin 24.

Certificate No:

L/16/1848

Date Rec'd:

29/09/2016

Issue Date:

04/11/2016

Our Ref:

WS-41916 & 16-80149

& 16-82388

**Project Summary:** 

Nine samples were analysed for a range of determinands.

Please see page 2-5 for results. Terms & Conditions and methods

used are outlined in the attached appendix.

No. of Pages:

Results page 2-5 plus 4 page appendix

Peter O'Byrne Quality Manager



Date Sampled: 29/09/2016 Date Rec'd: 29/09/2016

Date Analysis Commenced: 30/09/2016 Our Ref. :WS-41916 & 16-80149 & 16-82388

Certificate No. L/16/1848

Determinand	Sample ID	W4	MAC
	Lab ID	132456 (c)	Values
Ammoniacal Nitrogen BOD pH (pH units) Suspended Solids Temperature <sup>o</sup> C Orthophosphate as P	n/a n/a ** n/a ço <sup>t</sup> on-site; co	pecial 20:08  rection rection of the control of the	0.5 5 6.0-9.0 15 25 1

Concentrations expressed in mg/l (ppm) unless otherwise stated.

\*\* = INAB Accredited Tests ++ = Subcontracted Tests n/a = Non-INAB Accredited Tests

The above results relate only to the sample tested

This report should not be regenerated except in full and with the consent of T.E. Laboratories Ltd.

Exceedances are highlighted in bold.

MAC = Maximum Admissable Concentration.

MRC = Minimum Required Concentration.



Trading as

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> CERTIFICATE OF ANALYSIS Page 1 of 2

Project Description:

Analysis of Aqueous Sample (Huntstownske Insert Lab Pool for any

Attention:

Mr. Colin Doyle

Mr. Leonard Grogan

Company:

Roadstone Belgard,

Fortunestown Road,

132791

For inspection purpose Sampled: 13/10/2016

Address:

Belgard,

Tallaght,

Dublin 24. L/16/1941

Date Rec'd:

14/10/2016

Certificate No: Issue Date:

15/11/2016

Our Ref:

WS-42012 & 16-83365

**Project Summary:** 

One sample was 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

Peter O'Byrne Quality Manager



Date Sampled: 13/10/2016 Date Rec'd: 14/10/2016

Date Analysis Commenced: 14/10/2016

Our Ref. :WS-42012 &16-83365

Certificate No. L/16/1941

Determinand	Sample ID	W4	MAC
	Lab ID	132 <b>79</b> 1117 <sup>3</sup>	Values
Ammoniacal Nitrogen BOD pH (ph Units) Suspended Solids Temperature °C Orthophosphate as P (Note1)	n/a n/a ** n/a, inset on-site	other 7.9 8 11 <0.01	0.5 5 6.0-9.0 15 25

Concentrations expressed in mg/l (ppm) unless otherwise stated.

Note 1: Subcontracted due to instrument breakdown.

\*\* = INAB Accredited Tests ++ = Subcontracted Tests n/a = Non-INAB Accredited Tests

The above results relate only to the sample tested

This report should not be regenerated except in full and with the consent of T.E. Laboratories Ltd.

Exceedances are highlighted in bold.

MAC = Maximum Admissable Concentration.

MRC = Minimum Required Concentration.



Trading as

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CERTIFICATE	OF	<b>ANALYSIS</b>
Page 1	of 2	2

Analysis of Aqueous Sample (Huntstown) Her 1180

Attention:

Project Description:

Mr. Colin Doyle

...vad, For inspection Particular Sampled:

132927

Mr. Leonard Grogan

19/10/201

Company: Address:

Roadstone Belgard,

Fortunestown Road,

Belgard, Tallaght,

Dublin 24.

20/10/2016

Certificate No:

Issue Date:

L/16/1982 16/11/2016

Our Ref:

WS-42052 &16-83365

**Project Summary:** 

One sample was 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

Peter O'Byrne Quality Manager



Date Sampled: 19/10/2016 Date Rec'd: 20/10/2016

Date Analysis Commenced: 20/10/2016

Our Ref. :WS-42052 &16-83365

Certificate No. L/16/1982

Determinand	Sample ID Lab ID	W4 . 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	MAC Values
Ammoniacal Nitrogen BOD pH (pH Units) Suspended Solids Temperature °C Orthophosphate as P (Note1)	n/a n/a n/a n/a n/a on-site  Conset++	0.000 0.000 0.000 0.000 0.001	0.5 5 6.0-9.0 15 25 1

Concentrations expressed in mg/l (ppm) unless otherwise stated.

Note1: Subcontracted due to instrument breakdown.

The above results relate only to the sample tested

This report should not be regenerated except in full and with the consent of T.E. Laboratories Ltd.

Exceedances are highlighted in bold.

MAC = Maximum Admissable Concentration.

MRC = Minimum Required Concentration.

<sup>\*\* =</sup> INAB Accredited Tests ++ = Subcontracted Tests n/a = Non-INAB Accredited Tests



Trading as

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CERTIFICATE OF ANALYSIS

Page 1 of 5

Project Description:

Analysis of Aqueous Sample (Huntstown) the tipe

Attention:

Mr. Colin Doyle

132980 - 132987

Mr. Leonard Grogan

Mr. B McGuire

132980 - 1:

For inspection date Sampled: 24/10/2016

Company: Address:

Roadstone Belgard, Fortunestown Road,

Belgard, Tallaght,

Dublin 24.

L/16/2004

Date Rec'd:

24/10/2016

Certificate No: Issue Date:

16/11/2016

Our Ref:

WS-42074 & 16-83365 &

16-82267

**Project Summary:** 

Eight samples were analysed for a range of determinands.

Please see page 2-5 for results. Terms & Conditions and methods

used are outlined in the attached appendix.

No. of Pages:

Results page 2-5 plus 4 page appendix

Peter O'Byrne Quality Manager



Date Sampled: 24/10/2016 Date Rec'd : 24/10/2016

Date Analysis Commenced: 24/10/2016 Our Ref. :WS-42074 & 16-83365 & 16-82267

Certificate No. L/16/2004

	Sample ID	W4	MAC
Determinand	Lab ID	132980 st <sup>1380</sup>	Values
Ammoniacal Nitrogen	n/a	50.08 A COLOR OF STATE OF STAT	<0.5
BOD	n/a	3 es 3 k2	<5
Cadmium #	**	nitonite 0.03	_
Copper #	**	1.01 P. rett <0.05	-
Dissolved Solids	n/a	cttewill 533	-
Diesel Range Organics ##	++ :115	0.019	-
Iron #	** 601 951	<0.05	-
Lead #	** & COX	<0.20	-
Magnesium (Note 1)	THO.	8	-
Manganese #	COIS**	<0.03	.=>
Nickel #	**	<0.10	
pH (pH Units)	**	7.8	6-9
Orthophosphate as P (Note 1)	++	0.03	0.5
PRO	++	0.0083	.57
Suspended Solids	n/a	3	<15
Temperature °C	on-site	12	<25°C
TPH ##	++	0.019	14
Zinc #	**	0.01	

Concentrations are expressed as mg/l (ppm) unless otherwise specified.

## TPH and DRO result is based on analysis of cold extract with DCM as solvent. Note1: Subcontracted due to instrument breakdown.

\*\* = INAB Accredited Tests ++ = Subcontracted Tests n/a = Non-INAB Accredited Tests



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CERTIFICATE OF ANALYSIS

Page 1 of 2

Project Description:

Analysis of Aqueous Sample (Huntstown Analysis of Aqueous Analysis of Aqueous Analysis of Aqueous Analysis of Aqueous (Huntstown Analysis of Aqueous Analysis of Aqueous (Huntstown Analysis of Aqueous (Huntstown Analysis of Aqueous (Huntstown Analysis of Aqueous (Huntstown Analysis of Aqueous (Hunt Lab To did and

Attention:

Address:

Mr. Colin Dovle

133144

Mr. Leonard Grogan

Company:

Roadstone Belgard,

Ed jis pedian pri fedur.

Ed jis pedian or Date Sampled: Fortunestown Road,

Belgard, Tallaght,

Dublin 24.

L/16/2049

Date Rec'd:

04/11/2016

03/11/2016

Certificate No: Issue Date:

18/11/2016

Our Ref:

WS-42115

**Project Summary:** 

One sample was 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

Peter O'Byrne Quality Manager



Date Sampled: 03/11/2016 Date Rec'd: 04/11/2016

Date Analysis Commenced: 04/11/2016

Our Ref. :WS-42115 Certificate No. L/16/2049

Determinand	Sample ID	W4	MAC
	Lab ID	133144 fot not	Values
Ammoniacal Nitrogen BOD pH Suspended Solids Temperature <sup>o</sup> C Orthophosphate as P	n/a n/a ** n/a on-site	Petion Pure 0.08  10 1	0.5 5 6.0-9.0 15 25 1

Concentrations expressed in mg/l (ppm) unless otherwise stated.

\*\* = INAB Accredited Tests ++ = Subcontracted Tests n/a = Non-INAB Accredited Tests

The above results relate only to the sample tested

This report should not be regenerated except in full and with the consent of T.E. Laboratories Ltd.

Exceedances are highlighted in bold.

MAC = Maximum Admissable Concentration.



Trading as

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CERTIFICATE OF ANALYSIS

Page 1 of 2

Analysis of Aqueous Sample (Huntstown 1964) Project Description:

133317 Attention: Mr. Colin Doyle

Mr. Leonard Grogan

Roadstone Belgard, 10/11/2016 Company:

For inglection of Date Sampled: Address: Fortunestown Road,

Belgard, Tallaght, Dublin 24.

Certificate No: L/16/2089 Date Rec'd: 11/11/2016

18/11/2016 Our Ref: Issue Date: WS-42156

**Project Summary:** One sample was 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

Ms Breda Moore Peter O'Byrne **Technical Manager** Quality Manager



Date Sampled: 10/11/2016 Date Rec'd: 11/11/2016

Date Analysis Commenced: 11/11/2016

Our Ref. :WS-42156 Certificate No. L/16/2089

Determinand	Sample ID	W4	MAC
	Lab ID	133317 tot	Values
Ammoniacal Nitrogen BOD pH Suspended Solids Temperature °C Orthophosphate as P	n/a n/a ** n/a Forth on-sites	7.9 7.8 8 <0.33	0.5 5 6.0-9.0 15 25 1

Concentrations expressed in mg/l (ppm) unless otherwise stated.

\*\* = INAB Accredited Tests ++ = Subcontracted Tests n/a = Non-INAB Accredited Tests

The above results relate only to the sample tested

This report should not be regenerated except in full and with the consent of T.E. Laboratories Ltd.

Exceedances are highlighted in bold.

MAC = Maximum Admissable Concentration.



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CERTIFICATE OF ANALYSIS

Page 1 of 2

Analysis of Aqueous Sample (Huntstown Heat use Project Description:

Labord Por Out of Attention: Mr. Colin Doyle

Mr. Leonard Grogan

Roadstone Belgard, Company:

133465

For inspection Date Sampled: 17/11/2016 Address: Fortunestown Road,

Belgard, Tallaght, Dublin 24.

Certificate No: L/16/2137 Date Rec'd: 18/11/2016

02/12/2016 Issue Date: Our Ref: WS-42204

**Project Summary:** One sample was 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

Peter O'Byrne Ms Breda Moore Quality Manager Technical Manager



Date Sampled: 17/11/2016 Date Rec'd: 18/11/2016

Date Analysis Commenced: 18/11/2016

Our Ref. :WS-42204 Certificate No. L/16/2137

Determinand	Sample ID	W4	MAC
	Lab ID	133465 Fot his	Values
Ammoniacal Nitrogen BOD pH ( pH Units ) Suspended Solids Temperature <sup>°</sup> C Orthophosphate as P	n/a n/a ** n/a for on-sites on-sites Constitut	7 <0.33	0.5 5 6.0-9.0 15 25 1

Concentrations expressed in mg/l (ppm) unless otherwise stated.

\*\* = INAB Accredited Tests ++ = Subcontracted Tests n/a = Non-INAB Accredited Tests

The above results relate only to the sample tested

This report should not be regenerated except in full and with the consent of T.E. Laboratories Ltd.

Exceedances are highlighted in bold.

MAC = Maximum Admissable Concentration.



Trading as

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CERTIFICATE OF ANALYSIS

Page 1 of 2

Project Description:

Analysis of Aqueous Sample (Huntstown) 12. Lab Be of lor and

Attention:

Mr. Colin Doyle

Mr. Leonard Grogan

133609

133609

Folitigation Virgetteur.

Folitigation Date Sampled: 24/11/2016

Company: Address:

Roadstone Belgard,

Fortunestown Road,

Belgard,

Tallaght,

Dublin 24. L/16/2187

Date Rec'd:

25/11/2016

Certificate No: Issue Date:

12/12/2016

Our Ref:

WS-42249

**Project Summary:** 

One sample was 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

Peter O'Byrne Quality Manager



Date Sampled: 24/11/2016 Date Rec'd: 25/11/2016

Date Analysis Commenced: 25/11/2016

Our Ref. :WS-42249 Certificate No. L/16/2187

Determinand	Sample ID	W4	MAC
	Lab ID	133 <b>60</b> 9, <sup>tot</sup> at	Values
Ammoniacal Nitrogen	n/a	not recorded	0.5
BOD	n/a		5
pH	**		6.0-9.0
Suspended Solids	n/a for of		15
Temperature °C	on-sites		25
Orthophosphate as P	on-sites		1

Concentrations expressed in mg/l (ppm) unless otherwise stated.

\*\* = INAB Accredited Tests ++ = Subcontracted Tests n/a = Non-INAB Accredited Tests

The above results relate only to the sample tested

This report should not be regenerated except in full and with the consent of T.E. Laboratories Ltd.

Exceedances are highlighted in bold.

MAC = Maximum Admissable Concentration.



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CERTIFICATE OF ANALYSIS

Page 1 of 4

Project Description: Analysis of Aqueous Sample (Huntstown)

Attention: Mr. Colin Doyle Lab LD: 133744 - 133750

Mr. Leonard Grogan

Mr. B McGuire

Company: Roadstone Belgard, Date Sampled: 29/11/2016

Address: Fortunestown Pool

Address: Fortunestown Road, Institute of the Belgard,

Tallaght,
Dublin 24.
L/16/2213
Date Rec'd;

Issue Date: 23/12/2016 Our Ref: WS-42275 & 16-85671

Project Summary: Seven samples were analysed for a range of determinands.

Please see page 2-4 for results. Terms & Conditions and methods

30/11/2016

used are outlined in the attached appendix.

No. of Pages: Results page 2-4 plus 4 page appendix

Certificate No:

Peter O'Byrne Ms Breda Moore
Quality Manager Technical Manager



Date Sampled: 29/11/2016 Date Rec'd: 30/11/2016

Date Analysis Commenced: 30/11/2016

Our Ref. :WS-42275 & 16-85671 Certificate No. L/16/2213

Determinand	Sample ID Lab ID	DUID SE W4	MAC Values
Ammoniacal Nitrogen	n/a	<ul> <li>Counter</li> <li>&lt;0.08</li> <li>&lt;2</li> <li>7.7</li> <li>&lt;0.33</li> <li>2</li> <li>5</li> </ul>	<0.5
BOD	n/a		<5
pH (pH Units)	** For in the		6-9
Orthophosphate as P	** +-b copy in the		0.5
Suspended Solids	++b copy in the		<15
Temperature °C	** Con-site		<25°C

Concentrations are expressed as mg/l (ppm) unless otherwise specified.

The above results relate only to the sample tested

This report should not be regenerated except in full and with the consent of T.E. Laboratories Ltd. Excedences are highlighted in bold

<sup>\*\* =</sup> INAB Accredited Tests ++ = Subcontracted Tests n/a = Non-INAB Accredited Tests



Trading as

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CERTIFICATE OF ANALYSIS

Page 1 of 2

Analysis of Aqueous Sample (Huntstown Met 1158) Project Description:

Laby B. Olly ally 133954 Attention: Mr. Cormac McCarthy

Mr. Leonard Grogan Mr. B McGuire

Company: Roadstone Belgard, 07/12/2016

For jiege client of teelur. Address: Fortunestown Road,

Belgard, Tallaght, Dublin 24.

08/12/2016 Certificate No: L/16/2274 Date Rec'd:

Issue Date: 20/01/2017 Our Ref: WS-42338 & 17-88738

**Project Summary:** One sample was 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

Peter O'Byrne Quality Manager



Date Sampled: 07/12/2016 Date Rec'd: 08/12/2016

Date Analysis Commenced: 08/12/2016

Our Ref. :WS-42338 & 17-88738

Certificate No. L/16/2274

Determinand	Sample ID	W4 1339548	o <sup>ttet V</sup> MAC Ottes Values
Ammoniacal Nitrogen BOD pH (pH Units) Suspended Solids Temperature °C Orthophosphate as P		Petitor 1800 08 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0.5 5 6.0-9.0 15 25 1

Concentrations expressed in mg/l (ppm) unless otherwise stated.

\*\* = INAB Accredited Tests ++ = Subcontracted Tests n/a = Non-INAB Accredited Tests

Note 1: Subcontracted due to instrument breakdown.

The above results relate only to the sample tested

This report should not be regenerated except in full and with the consent of T.E. Laboratories Ltd.

Exceedances are highlighted in bold.

MAC = Maximum Admissable Concentration.



Trading as

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> CERTIFICATE OF ANALYSIS Page 1 of 2

Project Description:

Analysis of Aqueous Sample (Huntstown) The Line Property of the Company of the Co

Attention:

Mr. Cormac McCarthy

Lab 15 Oil V ally 134146

Mr. Leonard Grogan

Mr. B McGuire

Company:

Roadstone Belgard,

For the cition of the Sampled:

15/12/2016

Address:

Fortunestown Road, Belgard,

Tallaght,

L/16/2339

Dublin 24.

Date Rec'd:

16/12/2016

Issue Date:

Certificate No:

23/01/2017

Our Ref:

WS-42404 & 17-88738

**Project Summary:** 

One sample was 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

Peter O'Byrne Quality Manager



Date Sampled: 15/12/2016 Date Rec'd: 16/12/2016

Date Analysis Commenced: 16/12/2016

Our Ref. :WS-42404 & 17-88738

Certificate No. L/16/2339

Determinand	Sample ID		diff <sup>to</sup> MAC diff <sup>to</sup> Values
Determinand	Lab ID	1341467	
Ammoniacal Nitrogen BOD pH ( pH Units ) Suspended Solids Temperature <sup>o</sup> C Orthophosphate as P	n/a n/a ** n/a on-site <sup>Fol</sup>	7 <0.01 ( note 1 )	0.5 5 6.0-9.0 15 25 1

Concentrations expressed in mg/l (ppm) unless otherwise stated.

\*\* = INAB Accredited Tests ++ = Subcontracted Tests n/a = Non-INAB Accredited Tests

Note 1: Subcontracted due to instrument breakdown.

The above results relate only to the sample tested

This report should not be regenerated except in full and with the consent of T.E. Laboratories Ltd.

Exceedances are highlighted in bold.

MAC = Maximum Admissable Concentration.





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CERTIFICATE OF ANALYSIS

Page 1 of 4

Project Description:

Analysis of Aqueous Sample (Huntstown) Met like

Attention:

Mr. Cormac McCarthy

134268 - 134274

Mr. Leonard Grogan

Mr. B McGuire

134268 - 1.

134268 - 1.

134268 - 1.

134268 - 1.

134268 - 1.

134268 - 1.

Company: Address:

Roadstone Belgard, Fortunestown Road,

Belgard,

Tallaght,

Dublin 24.

L/16/2368

Date Rec'd:

20/12/2016

Issue Date:

Certificate No:

01/02/2017

Our Ref:

WS-42433, 16-87515

& 17-89638

Project Summary:

Seven samples were analysed for a range of determinands.

Please see page 2-4 for results. Terms & Conditions and methods

used are outlined in the attached appendix.

No. of Pages:

Results page 2-4 plus 4 page appendix

Peter O'Byrne Quality Manager

# TelLab &

#### ANALYSIS OFAQUEOUS SAMPLES.

Date Sampled: 20/12/2016 Date Rec'd: 20/12/2016 Date Analysis Commenced: 20/12/2016 Our Ref.: WS-42433, 16-87515 & 17-89638 Certificate No. L/16/2368			
	Sample ID	etion difference W4	MAC Values
Determinand	Lab ID	134268	<u> </u>
Ammoniacal Nitrogen BOD pH (pH Units) Orthophosphate as P (Note 1) Suspended Solids Temperature °C	n/a Forthir n/a Forthir n/a on-site	<0.08 <2 8.0 <0.01 9 5	<0.5 <5 6-9 0.5 <15 <25°C

Note 1: Subcontracted due to instrument breakdown

Concentrations are expressed as mg/l (ppm) unless otherwise specified.

\*\* = INAB Accredited Tests ++ = Subcontracted Tests n/a = Non-INAB Accredited Tests

Ref: 501.00180.00152 15 February 2017

ATTACHMENT B

OCATION OF GROUNDWATER WELL GW4

Consent of convince transfer of convince trans

Consent of copyright owner required for any other use.



Screen Grab from AutoCAD showing Location of GW4 (on ortho-rectified ITM grid referenced aerial photograph obtained from drone survey) Co-ordinates circled in red at base of screen.

SLR Consulting Ireland

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Huntstown Inert Soil Waste Recovery Facility Reply to EPA Article 12 Compliance Notice



Location of GW4 - Immediately inside Roadstone Boundary (neighbouring property to west / left of photo)

Consent of copyright owner required for any other use.