

7. *Appendix I - Contour plots for dispersion modelling assessment (process contributions only)*

Odour contour plot are illustrated in this section. Contour plots are only supplied in this section for illustrative purposes only.



144342-14/11/2014-FI Environment-Part 2



7.1. Site layout and location

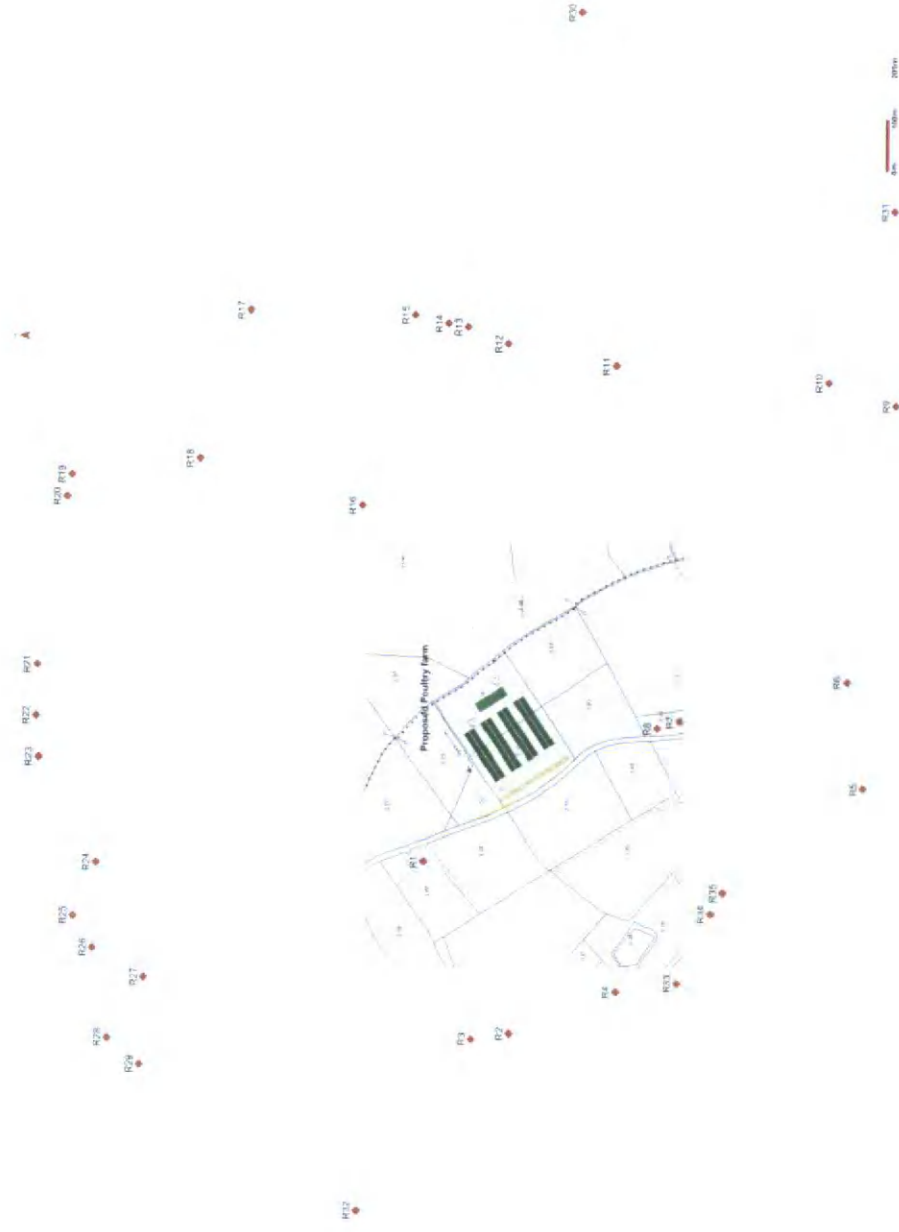


Figure 7.1. Aerial facility layout map showing proposed location of Kevin O Regan poultry unit.

7.2. Dispersion modelling contour plots for Scenario 1

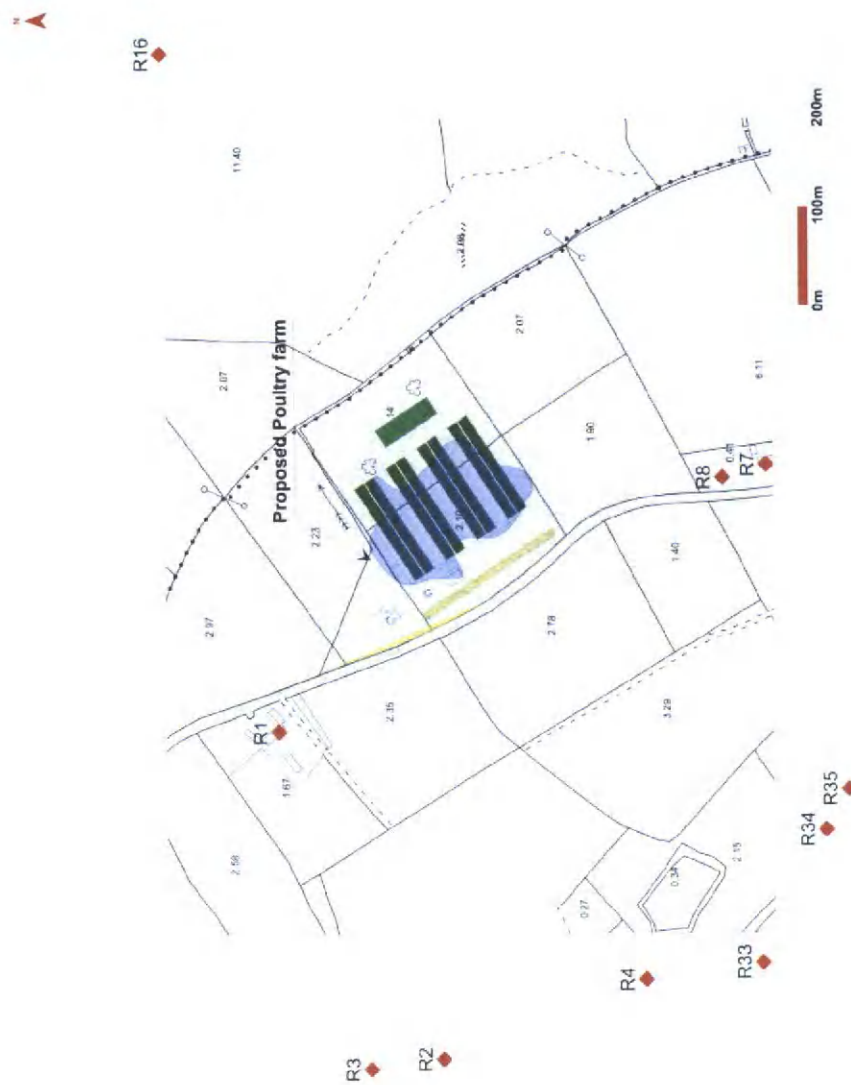


Figure 7.2. Predicted odour plume spread of Kevin O Regan proposed operations for Scenario 1 at the 98th percentile of hourly averages for odour concentrations of $\leq 3.0 \text{ OU}_E \text{ m}^{-3}$ (■).

8. *Appendix II* - Meteorological data used within the Dispersion modelling study.

8.1 Meteorological file Cork 2003 to 2007 inclusive

Table 8.1. Tabular illustration of Cork 2003 to 2007 meteorological files (5 years).

5 year Meteorological file for Cork 2003 to 2007 inclusive							
Dir \ Speed	<= 1.54 m/s	<= 3.09 m/s	<= 5.14 m/s	<= 8.23 m/s	<= 10.80 m/s	> 10.80 m/s	Total
0.0	0.18	0.31	1.68	1.03	0.26	0.01	3.48
22.5	0.18	0.22	1.44	0.78	0.12	0.00	2.75
45.0	0.12	0.17	0.83	0.46	0.05	0.00	1.64
67.5	0.20	0.41	1.09	0.55	0.18	0.00	2.45
90.0	0.28	0.53	1.58	0.89	0.15	0.03	3.45
112.5	0.28	0.76	2.33	1.38	0.30	0.10	5.15
135.0	0.20	0.52	1.81	0.96	0.26	0.15	3.89
157.5	0.34	0.69	2.36	1.50	0.51	0.16	5.57
180.0	0.51	0.95	2.69	1.38	0.49	0.08	6.10
202.5	0.60	1.18	3.88	2.56	1.22	0.37	9.83
225.0	0.42	0.83	5.19	3.28	1.17	0.45	11.33
247.5	0.37	0.89	5.40	2.70	0.70	0.22	10.28
270.0	0.35	0.81	2.68	1.72	0.47	0.12	6.15
292.5	0.40	1.16	4.04	2.05	0.68	0.18	8.50
315.0	0.33	1.00	4.32	2.00	0.53	0.11	8.29
337.5	0.38	0.99	5.69	2.48	0.39	0.05	9.98
Total	5.13	11.42	47.02	25.73	7.47	2.05	98.82
Calms	-	-	-	-	-	-	0.93
Missing	-	-	-	-	-	-	0.24
Total	-	-	-	-	-	-	100.00

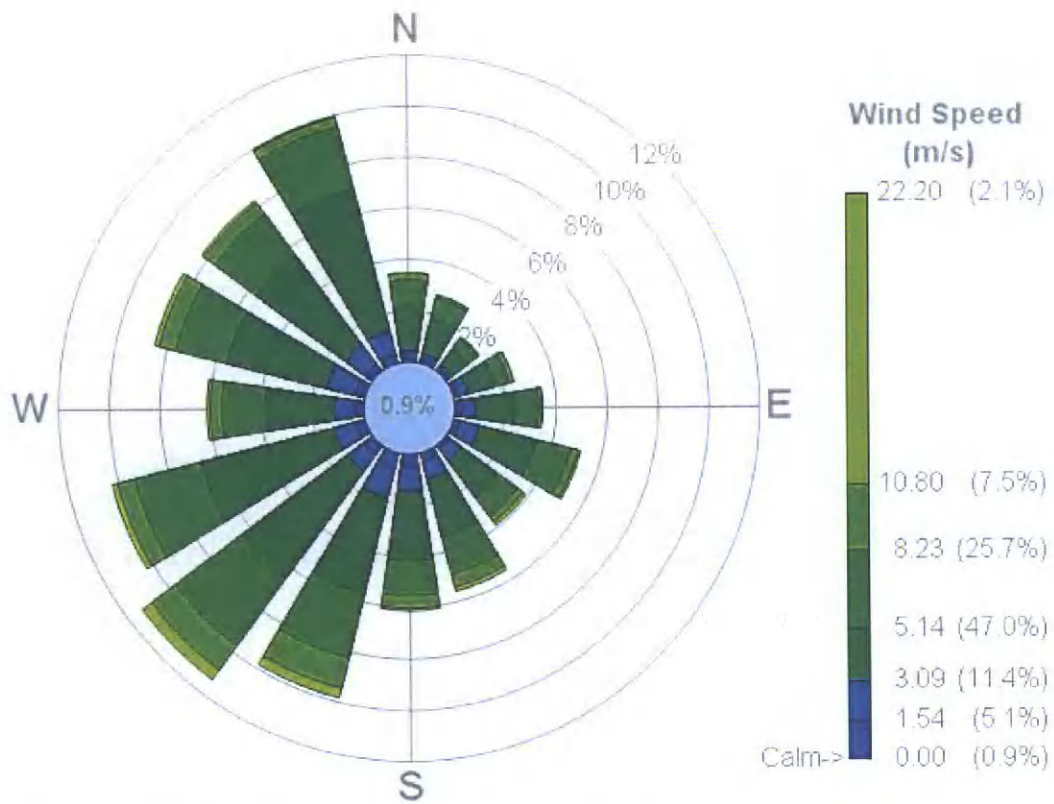


Figure 8.1. Windrose illustration of meteorological files Cork 2003 to 2007 inclusive.



NOISE IMPACT ASSESSMENT

**Agricultural development of 4 no
Broiler houses Knockbrown, Bandon
Co. Cork**

14/04342

FWE
11/10/2014

Noise Impact Assessment

Report prepared by Oliver Fitzsimons MSc. BSc. MIOA

1 INTRODUCTION

This noise impact assessment has been prepared in response to a request for further information by Cork county Council dated 15/04/2014.

Point 15 of the RFI looks for:

A site specific noise assessment for the proposed development which will consider in detail the noise impact from the proposed development on all sensitive receptors within 1000m of the site.

This noise report evaluates the potential noise impacts arising from the construction and operation of the proposed poultry facility to be located in the townland of Knockbrown, Bandon Co. Cork.

2 METHODOLOGY

Criteria against which predicted noise levels are assessed have been derived from recognised national guidelines. Noise levels from similar types of activity have been used to make predictions of potential noise levels. The projected road traffic numbers have been obtained from data provided in section 5.10 of the EIS for the development.

The assessment includes:

- A baseline noise survey, and description of the existing noise environment
- Prediction of noise levels for construction and operational phases
- An assessment of the effects of noise during both construction and operation
- Details of any necessary mitigation measures to be undertaken

3 ASSESSMENT CRITERIA

The Protection of the Environment (POE) Act 2003 includes noise in the definition of environmental pollution, which encompasses the 'introduction to an environmental medium, as a result of human activity, of ... noise which may be harmful to human health or the quality of the environment, result in damage to material property, or impair or interfere with amenities and other legitimate uses of the environment'. Noise can be defined as any sound which has the potential to cause disturbance, discomfort or psychological stress to a subject exposed to it (EPA,2006).

The criteria for environmental noise control are of annoyance or nuisance rather than hearing damage. In general a noise level is liable to provoke a complaint whenever its level exceeds by a certain margin the pre-existing noise level or when it attains an absolute level. A change in noise level of 2 dB(A) is 'barely perceptible', while an increase in noise level of 10 dB(A) is perceived as a twofold increase in loudness.

The EPA recommend that existing background noise levels in the vicinity of a proposed site should be considered in the formulation of appropriate noise limits, however this approach has not often been adopted in practice; Typically generic noise criteria have been applied.

4 THE EXISTING ENVIRONMENT

The procedure detailed in the EPA guidance document NG4 was followed to assess the existing noise environment.

According to *NG4* a four step process should be followed to determine appropriate noise criteria for a potential development.

Step 1 – Quiet Area Screening of the Development Location

Step 2 – Baseline Environmental Noise Survey

Step 3 – Screen for Areas of Low Background Noise

Step 4 – Determine Appropriate Noise Criteria

4.1 QUIET AREA SCREENING OF THE DEVELOPMENT LOCATION

It was determined at the preliminary screening stage that the proposed site does not meet the necessary criteria and is therefore not considered to be a quiet area as per the EPA definition.

4.2 BASELINE NOISE SURVEY

Measurement Procedure

The baseline noise survey was carried out proximal to the nearest noise sensitive receptor (NSR) to the proposed development, NSR 1. The existing ambient and background noise levels in the area of the proposed development were established during a period of continuous monitoring at representative location in the environs of the proposed development.

Monitoring was undertaken over an 8 day period from the 29th September to the 7th October 2014.

The microphone was located at 1.5m above ground level and away from reflecting surfaces. Acoustic instrumentation was calibrated before and after each survey and no drift of calibration was observed (calibration level 114 dB at 1000 Hz).

The following conditions were adhered to in undertaking the noise survey:

- Measurement of ambient noise levels were taken during varied weather conditions using instruments of Class 1 specification.
- Monitoring locations were selected to coincide with local residences
- Measurements were undertaken during weekday and weekend periods
- The survey was carried out in accordance with ISO 1996 Part 1 (Description and Measurement of Environmental Noise - Part 1: Basic Quantities and Procedures)

Instrumentation Used

The following instrumentation was used in the baseline survey:

- One Larson Davis 812 Precision Integrating Sound Level Analyser/Data logger (Calibration certificate presented in appendix 2)
- Wind Shields Type: Larson Davis 2120 Windscreen
- Calibration Type: Larson Davis Precision Acoustic Calibrator Model CA 250

4.2.1 Site Description

The proposed development would be located on a green field site in the townland of Knockbrown, Bandon, County Cork. The poultry facility would be located off the R602, *Bandon to Timoleague* road approximately 5km south of the town of Bandon, see Figure 1.

All residential dwellings within 1345 meters of the proposed development site, see Figure 2.

- The nearest noise sensitive receptors and the separation distance (to the centre of the proposed site) are listed in table 1 and identified in Figure 2.
- A summary of the monitoring results is presented in Table 2.
- Detailed baseline monitoring data can be found in Appendix 1



Table 1 Noise Sensitive Receptors

Id	Eastings	Northings	Separation distance (metres)
NSR1	547383	549465	232
NSR2	547396	549421	274
NSR3	547125	549914	375
NSR4	547065	549338	508
NSR5	547815	550032	514
NSR6	547024	549361	523
NSR7	546871	549544	577
NSR8	547473	549099	596
NSR9	546888	549426	602
NSR10	546790	549749	640
NSR11	547266	549068	646
NSR12	546780	549822	661
NSR13	548085	549544	674
NSR14	548128	549752	702
NSR15	548161	549829	746
NSR16	548168	549866	760
NSR17	548184	549930	792
NSR18	547907	550345	809
NSR19	548053	549135	838
NSR20	548008	549006	899
NSR21	547124	550544	904
NSR22	546900	550453	925
NSR23	548194	550247	945
NSR24	547328	550655	967
NSR25	547408	550660	967
NSR26	547507	550658	968
NSR27	546959	550551	978
NSR28	547021	550589	984
NSR29	547833	550600	993
NSR30	547876	550591	1004
NSR31	546730	550460	1037
NSR32	546445	550042	1043
NSR33	546782	550522	1051
NSR34	548383	549009	1175
NSR35	548769	549611	1344

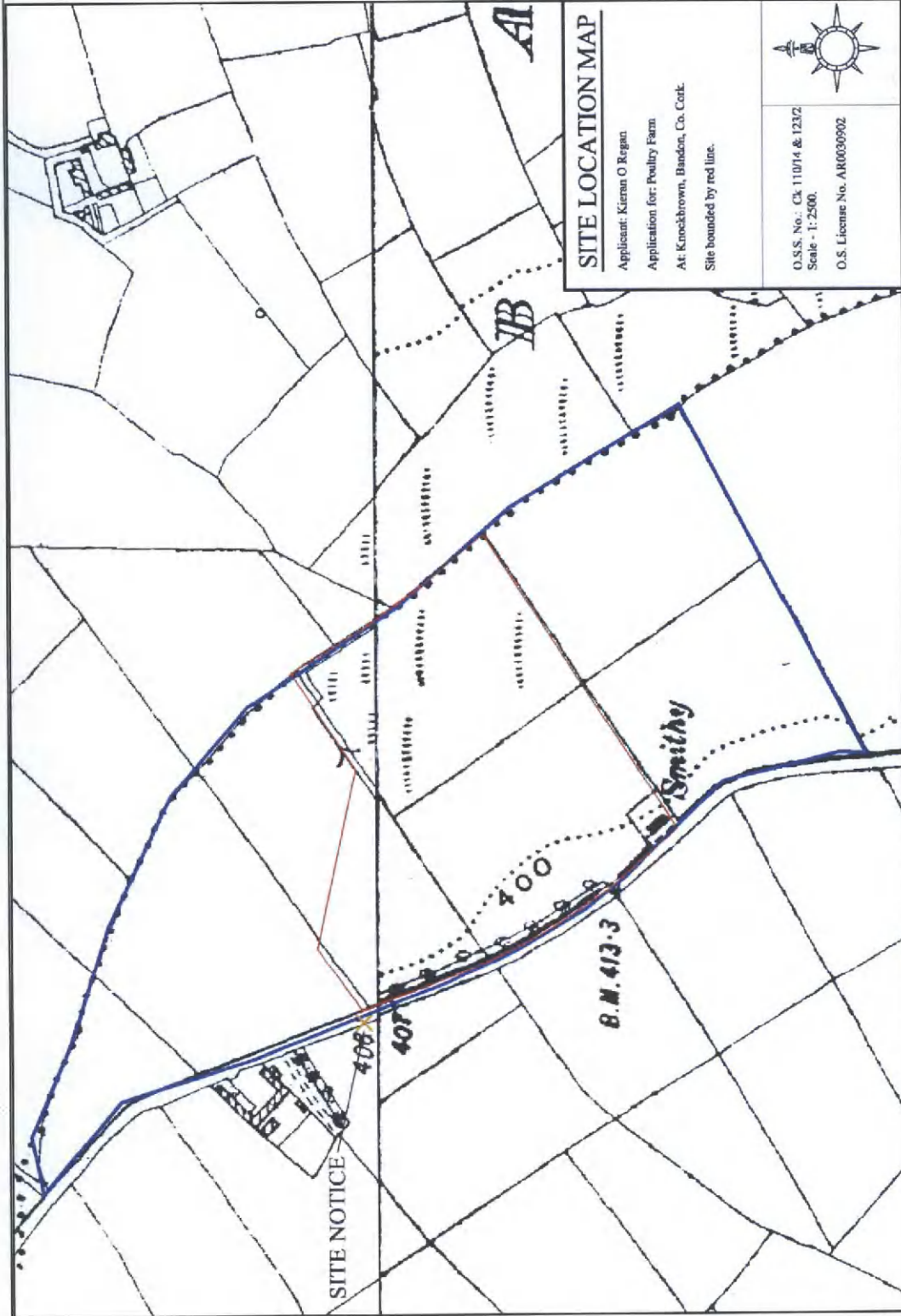


Figure 1 Site location



Figure 2 Site layout and Noise Sensitive Receptors (NSRs)

4.2.2 Results of Noise Survey

Traditionally environmental noise limits have typically been stated over daytime and night-time periods only. Recent EPA guidelines recommend that limits be set over three distinct periods i.e. daytime, evening, and night-time.

With this in mind the baseline noise data has been divided into these distinct time categories.

- Daytime Period 07:00 – 19:00
- Evening Period 19:00 – 23:00
- Night Period 23:00 – 07:00

The existing ambient and background noise levels in the area of the proposed development were established during a period of continuous monitoring at NSR3.

- Monitoring period 29/09/14 to 07/10/2014.
- The complete dataset from the baseline study is presented in the Appendix 1.
- A summary of the intervals (mean values) measurements is given in Table 2 below

Table 2 Baseline noise levels mean values – 15 minute interval data

Monitoring Location id	Day-time Noise levels dB(A)			Evening-time Noise Levels dB(A)			Night-time Noise levels dB(A)		
	Leq	L ₁₀	L ₉₀	Leq	L ₁₀	L ₉₀	Leq	L ₁₀	L ₉₀
NSR3	56	59	42	52	51	36	44	40	32

Note:

- Average noise levels for a specific period are the arithmetic average of the measured LAF noise levels during the relevant period.
- All noise levels derived averages are rounded to the nearest whole integer
- Leq is the equivalent continuous noise level or ambient level.
- L10 is the noise level exceeded or equalled for 10% of the interval.
- L90 (background) is the noise level equalled or exceeded for 90% of a sample interval

4.3 SCREENING FOR AREAS OF LOW BACKGROUND NOISE

For all areas not identified as 'Quiet Areas' in Step 1, the existing background noise levels measured during the environmental noise survey should be examined to determine if they satisfy the following criteria:

- Average Daytime Background Noise Level $\leq 40\text{dB LAF90}$, and
- Average Evening Background Noise Level $\leq 35\text{dB LAF90}$, and
- Average Night-time Background Noise Level $\leq 30\text{dB LAF90}$.

The summary results are presented in table 2 above.

It is apparent that the conditions listed above are not pertinent to this particular site.

4.4 DETERMINE APPROPRIATE NOISE CRITERIA

The fourth and final step in the process is determining appropriate Noise Criteria. Table 3 details recommended noise limits of each time period for sites with differing background noise levels.

The site at *Knockbrown* falls into the least stringent category

Table 3 Recommended noise criteria

Scenario	Daytime Noise Criterion, dB $L_{Ar,T}$ (07:00 to 19:00hrs)	Evening Noise Criterion, dB $L_{Ar,T}$ (19:00 to 23:00hrs)	Night-time Noise Criterion, dB $L_{Aeq,T}$ (23:00 to 07:00hrs)
Quiet Area	Noise from the licensed site to be at least 10dB below the average daytime background noise level measured during the baseline noise survey.	Noise from the licensed site to be at least 10dB below the average evening background noise level measured during the baseline noise survey.	Noise from the licensed site to be at least 10dB below the average night-time background noise level measured during the baseline noise survey.
Areas of Low Background Noise	45dB	40dB	35dB
All other Areas	55dB	50dB	45dB

4.5 DESCRIPTION OF BACKGROUND NOISE LEVELS.

The noise survey demonstrates that the site has relatively low background noise levels but that it is not a particularly quiet area.

The main source of noise in the area is that derived from road traffic movements on the adjacent R602 Bandon to Timoleague road.

5 CHARACTERISTICS OF PROPOSAL

The proposed development consists of the construction and operation of 4 no. poultry grow houses, of 2435 m² floor area each.

Each of these houses is proposed to house a maximum of 50,000 birds.

As part of the development a biomass burner would be installed, which would convert the soiled waste from the houses to heat energy to be used onsite.

6 POTENTIAL NOISE IMPACTS

The noise impact of the proposal consists of:

- Construction activity
- Road traffic movement to and from the site
- Operation of the facility

6.1 PREDICTION METHODOLOGY

Predicted noise levels at the nearest noise sensitive receptor can be according to the following formula:

$$Lp2 = Lp1 + \Delta L\psi - \Sigma \Delta L \text{ where,}$$

$Lp2$ = Sound Pressure level in decibels at Receptor.

$Lp1$ = Sound pressure level in decibels at known distance.

$\Delta L\psi$ = correction for direction effects in a horizontal plane,

$\Sigma \Delta L = \Delta Ld + \Delta La + \Delta Lr + \Delta Ls + \Delta Lv + \Delta Lg + \Delta Lw$, and where,

ΔLd = geometric spreading (spherical radiation)

$\Delta Ld = 20 \log_{10} (d1/d2)$, where, $d1$ is the receptor distance , while $d2$ is the distance from the source (metres).

ΔLa = air absorption

ΔLr = reflection and diffraction

ΔLs = screening

ΔLv = vegetation

ΔLg = ground absorption

ΔLw = wind gradients

NB.

- Separation distance to the nearest NSR is from the site boundary {NSR3 160 metres}
- Predictions assume air and ground absorption to be 0 over short distances.
- No attenuation is included for screening (barriers).

6.1 CONSTRUCTION PHASE

Increased traffic flow would be generated on the local road network by arrival and departure of construction workers and by road haulage traffic delivering construction materials to the site.

During the peak construction period it is envisaged that there would be a maximum of 20 construction workers employed on site.

6.1.1 Typical Construction Noise Levels

Table 4 presents typical construction related noise levels and numbers of mobile plant for the proposed construction job.

These noise levels have been sourced from measurements of noise sources at other construction sites. The levels are based on measurements taken at 20m from the geometric centre of activity when the equipment was in continuous operating mode.

Table 4 Typical construction plant and associated noise levels

Type	Number	Typical Noise level dB(A) Leq @ 20 meters
Dump truck – 25 Tonne	2	71
Excavator- Wheeled	1	71
Excavator – Tracked 25 Tonne	1	73
Bulldozer	1	75
Vibrating Roller	1	68
Tractor/Bowser	1	70

Maximum potential cumulative noise levels from construction activity would be 80 dB(A) at 20 metres.

This levels of noise would result in noise imissions at the nearest NSR of 60dBA.

6.2 TRAFFIC MOVEMENTS

Predicted Traffic numbers are detailed in section 5.10 of the EIS for the development.

The main traffic generated to the site would be from the following site operations:

- Feed deliveries representing 52 deliveries annually.
- Gas Deliveries – representing 14 deliveries annually
- Bedding deliveries – representing 14 deliveries annually
- Waste Removal – representing 42 removals annually
- Washings Soiled water – representing 42 removals annually.
- Bird Deliveries – representing 28 bird deliveries annually.
- Bird Collections – representing 28 bird collections annually.
- Employee movements – 2 employees daily

This equates to 222 trips or 444 vehicle movements {to and from the site}

Equivalent to c. 1.22 traffic movements per day.

Increases in noise levels can be accurately calculated when the percentage increase in traffic flow is known (Ref. HMSO Calculation of Road Traffic Noise, 1988). There is a logarithmic relationship between noise levels and traffic volume and the higher the existing traffic volume the greater the traffic increase required to produce a perceptible noise change.

Typically, doubling the traffic flow produces a 3 dB (A) change in noise level.

The predicted level of traffic increase would have a negligible impact on ambient noise levels.

6.3 OPERATIONAL PHASE

The only marginally significant noise sources associated with the operation of the facility could be:

- the operation of the proposed heating system (Biomass burner)
- the operation of the air fans
- Sporadic noise associated with the delivery of feed. Feed would be pumped from the delivery trucks into onsite storage silos.

The delivery of feed is a sporadic activity of low frequency (1 delivery per week) and short duration (30 minutes per delivery).

Noise emissions associated with this activity would be 82 dBA at source.

This activity would result in noise imissions measured at the nearest NSR of c. 49dBA.

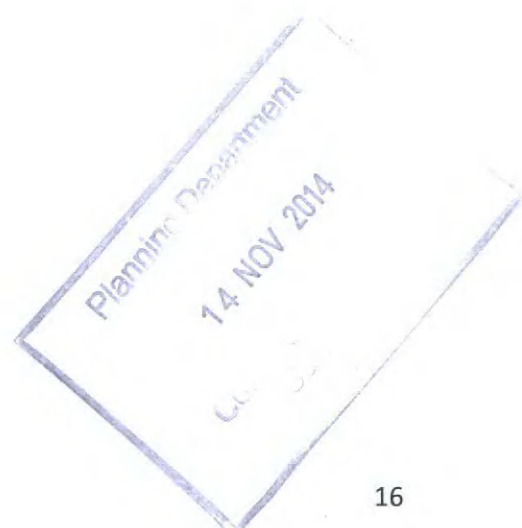
It is predicted that the operation of the heating system would result in noise levels at source of 73 – 75 dBA.

It is predicted that air fans would result in noise levels at source of 65 – 70 dBA

A facility of this size would have up to two fans resulting in maximum cumulative emissions of 73 dBA.

Therefore the ongoing, cumulative noise from onsite activity (excluding the feed delivery) would be c. 77 dBA.

This would result in noise imissions at the nearest NSR of below 40 dBA.



7.0 TARGET CRITERION AND NOISE LIMITS

7.1 NOISE DURING CONSTRUCTION

There are no mandatory noise limits for construction noise in Ireland or in the UK.

The National Roads Authority (NRA) has published construction noise limits in a 2004 publication entitled "Guidelines for the Treatment of Noise and Vibration in National Roads Schemes". These limits, which are presented in Table 5 below, represent a reasonable compromise between the practical limitations in a construction project, and the need to ensure an acceptable ambient noise level for the residents and nearby sensitive areas. It is also considered best practice to apply these limits to other construction projects.

Table 5 Construction noise limits

<i>Days & Time</i>	L_{Aeq} (1hr) dB	L_{AMax} (1hr) dB
Monday to Friday (07:00 to 19:00)	70	80
Monday to Friday (19:00 to 22:00)	60	65
Saturday (08:00 to 16:30)	65	75
Sunday and Bank Holidays (08:00 to 16:30)	60	65

Note:

Maximum permissible noise levels at the façade of dwellings during construction.

Source: "Guidelines for the Treatment of Noise & Vibration in National Road Schemes", NRA, 2004

7.2 NOISE DURING OPERATION OF THE POULTRY FACILITY

Based on the findings in section 4 above the following noise limits are deemed appropriate for the site:

- Daytime 55 dBA
- Evening 50 dBA
- Night 45 dBA

Additional noise conditions:

- There shall be no clearly audible tonal component in the noise emission from any activity at any noise sensitive location'.
- Operational sirens and similar, in routine use on-site shall be modified and maintained so as not to be audible at any noise sensitive location.

8 MITIGATING MEASURES

Though the predicted off-site noise imissions would be only marginally significant and well within recommended guidelines the following mitigation measures are nonetheless proposed for the proposed development

- An acoustic berm (minimum height of 4m) should be constructed at the boundary of the site (refer to figure 3 below.) The berm should be sited to act as a barrier between the nearest noise sensitive receptors. As such the berm should be located primarily on the north and south boundaries. This berm should be constructed with soil material sourced from the site development works. The berm should be planted with suitable native shrubs which should also provide visual screening. This acoustic barrier should provide additional noise attenuation of c 8 dBA.
- 'Noisy' activities including feed deliveries will be restricted to daytime hours
- All construction should be carried out in accordance with BS 5228: Noise Control on Construction and Open Sites Part 1: 2009. Accordingly all construction traffic to be used on site should have effective well-maintained silencers. Operators of all mobile equipment should be instructed to avoid unnecessary revving of machinery and limiting the hours of site activities that are likely to give high noise level emissions. Where possible the contractor should be instructed to use the least noisy equipment. With efficient use of well maintained mobile equipment considerably lower noise levels (3-6 dB(A)) than those predicted can be attained. The Project Engineer should closely supervise all construction activity.

Construction activity due to its nature is a temporary activity and thus any impacts should be short term. All construction works should be carried out during daytime periods.



9 CONCLUSION

- The maximum noise levels predicted should occur during the construction phase of the development and should pertain for short periods only. Construction noise by nature is a temporary activity and should have no long-term negative effects.
- Noise impacts from the minimal increase in road traffic volumes should be negligible.
- During normal operation of the facility there should no significant noise sources consequently there should be a negligible noise impact at all nearby residents.
- Noise imissions should contain no clearly audible tones and should not be impulsive in nature.
- Predicted noise imissions should be well within recommended criteria levels

REFERENCES

- (1) Noise Control on Construction and Open Sites - Part 1. Code of Practice for Basic Information and Procedures for Noise Control)
- (2) BS 5228: Part 1: 2009, Noise and Vibration Control on Construction and Open Sites
- (3) ISO 1996/1Acoustics – Description and Measurement of environmental noise- Part 1: Basic quantities and procedures
- (4) ISO 1996-2: Acoustics – Description and Measurement of environmental noise Part 2: Acquisition of data pertinent to land use
- (5) ISO 1996-3: Acoustics- Description and Measurement of environmental noise Part 3: Application to noise limits
- (6) Calculation of Road Traffic Noise, Department of Welsh Office, 1988 HMSO
- (7) EPA guidance Note NG4
- (8) The National Roads Authority (NRA), Guidelines for the Treatment of Noise and Vibration in National Roads Schemes (2004)
- (9) BS 5228: Noise Control on Construction and Open Sites Part 1: Code of Practice for Basic Information and Procedures for Noise Control (2009)

Appendix 1 Noise Monitoring Data

Date	Time	Duration	L _{Aeq}	L _A F5	L _A F10	L _A F50	L _A F90
29/09/2014	11:45:00	00:15:00.0	53.1	59.6	54.0	45.5	37.6
29/09/2014	12:00:00	00:15:00.0	54.5	61.8	56.5	47.2	38.0
29/09/2014	12:15:00	00:15:00.0	54.0	61.9	56.7	46.0	36.5
29/09/2014	12:30:00	00:15:00.0	54.0	61.2	55.3	48.2	40.9
29/09/2014	12:45:00	00:15:00.0	53.9	61.9	56.3	48.3	40.1
29/09/2014	13:00:00	00:15:00.0	54.8	60.9	54.6	47.2	41.8
29/09/2014	13:15:00	00:15:00.0	53.0	60.1	55.3	48.2	41.5
29/09/2014	13:30:00	00:15:00.0	53.3	60.1	55.5	47.1	39.5
29/09/2014	13:45:00	00:15:00.0	54.7	62.5	57.3	49.2	42.6
29/09/2014	14:00:00	00:15:00.0	52.4	58.1	52.9	48.0	42.6
29/09/2014	14:15:00	00:15:00.0	53.6	60.1	55.1	48.3	40.5
29/09/2014	14:30:00	00:15:00.0	55.7	62.7	58.5	50.7	42.1
29/09/2014	14:45:00	00:15:00.0	55.3	63.2	59.2	49.7	40.9
29/09/2014	15:00:00	00:15:00.0	55.8	63.5	59.1	49.7	41.5
29/09/2014	15:15:00	00:15:00.0	54.7	62.5	57.8	49.9	42.5
29/09/2014	15:30:00	00:15:00.0	55.1	63.0	58.7	48.9	41.1
29/09/2014	15:45:00	00:15:00.0	56.1	64.1	60.0	50.3	40.1
29/09/2014	16:00:00	00:15:00.0	55.9	63.9	60.4	49.2	42.1
29/09/2014	16:15:00	00:15:00.0	56.1	63.8	59.3	50.3	42.6
29/09/2014	16:45:00	00:15:00.0	56.9	64.8	61.1	50.9	42.9
29/09/2014	17:00:00	00:15:00.0	56.4	64.2	59.3	50.5	40.6
29/09/2014	17:15:00	00:15:00.0	56.2	63.8	59.8	50.8	38.9
29/09/2014	17:30:00	00:15:00.0	57.6	65.6	62.4	52.9	43.1
29/09/2014	17:45:00	00:15:00.0	56.9	64.8	61.4	51.4	41.3
29/09/2014	18:00:00	00:15:00.0	57.0	64.7	61.8	51.7	40.2
29/09/2014	18:15:00	00:15:00.0	56.8	64.8	61.1	51.0	41.3
29/09/2014	18:30:00	00:15:00.0	56.4	64.8	60.3	48.5	38.8
29/09/2014	18:45:00	00:15:00.0	56.3	64.4	60.2	48.5	37.5
29/09/2014	19:00:00	00:15:00.0	54.7	62.3	57.2	47.0	37.8
29/09/2014	19:15:00	00:15:00.0	55.0	63.0	58.9	49.4	39.0
29/09/2014	19:30:00	00:15:00.0	54.2	60.7	55.1	46.4	35.8
29/09/2014	19:45:00	00:15:00.0	53.9	59.3	52.7	42.8	35.2
29/09/2014	20:00:00	00:15:00.0	53.1	60.2	53.8	42.4	30.7
29/09/2014	20:15:00	00:15:00.0	53.3	60.1	53.2	43.3	30.8
29/09/2014	20:30:00	00:15:00.0	51.4	57.6	50.1	39.5	31.3
29/09/2014	20:45:00	00:15:00.0	51.1	57.1	50.7	40.3	30.6
29/09/2014	21:00:00	00:15:00.0	50.1	54.6	47.8	37.7	31.3
29/09/2014	21:15:00	00:15:00.0	46.4	46.9	42.3	34.1	30.4
29/09/2014	21:30:00	00:15:00.0	51.3	57.0	50.4	40.1	30.7

Noise Impact assessment Knockbrowne, Bandon, Co. Cork

Date	Time	Duration	LAeq	LAF5	LAF10	LAF50	LAF90
29/09/2014	21:45:00	00:15:00.0	48.7	51.5	44.6	34.1	29.7
29/09/2014	22:00:00	00:15:00.0	47.8	49.0	43.9	33.1	28.9
29/09/2014	22:15:00	00:15:00.0	49.1	52.5	46.0	36.2	27.5
29/09/2014	22:30:00	00:15:00.0	49.9	52.0	46.8	35.9	28.4
29/09/2014	22:45:00	00:15:00.0	45.0	43.4	36.9	29.1	27.4
29/09/2014	23:00:00	00:15:00.0	47.0	47.6	42.3	32.1	27.7
29/09/2014	23:15:00	00:15:00.0	47.6	50.3	44.0	33.1	28.9
29/09/2014	23:30:00	00:15:00.0	47.9	47.3	41.6	31.2	28.3
29/09/2014	23:45:00	00:15:00.0	41.9	36.5	31.7	30.1	27.0
30/09/2014	00:00:00	00:15:00.0	44.6	41.3	33.7	31.9	28.8
30/09/2014	00:15:00	00:15:00.0	30.5	35.5	33.4	27.0	23.0
30/09/2014	00:30:00	00:15:00.0	44.1	43.1	36.8	32.1	29.2
30/09/2014	00:45:00	00:15:00.0	41.5	34.8	31.5	30.9	28.7
30/09/2014	01:00:00	00:15:00.0	40.0	33.3	29.3	28.5	26.9
30/09/2014	01:15:00	00:15:00.0	44.7	41.1	33.4	29.9	28.0
30/09/2014	01:30:00	00:15:00.0	33.4	39.4	37.3	30.1	25.0
30/09/2014	01:45:00	00:15:00.0	31.8	36.9	34.6	28.9	25.6
30/09/2014	02:00:00	00:15:00.0	31.9	34.5	33.2	28.9	24.6
30/09/2014	02:15:00	00:15:00.0	44.8	43.3	38.3	35.3	32.1
30/09/2014	02:30:00	00:15:00.0	41.3	42.0	39.6	35.8	31.7
30/09/2014	02:45:00	00:15:00.0	36.3	40.4	38.7	34.7	31.4
30/09/2014	03:00:00	00:15:00.0	41.2	44.8	43.3	38.5	31.9
30/09/2014	03:15:00	00:15:00.0	36.4	41.4	39.5	34.3	31.1
30/09/2014	03:30:00	00:15:00.0	47.6	46.2	44.0	40.9	36.9
30/09/2014	03:45:00	00:15:00.0	36.4	40.9	39.3	34.0	30.4
30/09/2014	04:00:00	00:15:00.0	41.7	40.2	38.6	37.3	32.9
30/09/2014	04:15:00	00:15:00.0	46.3	48.2	43.7	40.9	37.1
30/09/2014	04:30:00	00:15:00.0	43.1	44.2	42.2	40.1	37.0
30/09/2014	04:45:00	00:15:00.0	48.8	51.8	49.1	45.3	41.2
30/09/2014	05:00:00	00:15:00.0	45.4	44.1	42.9	43.0	38.8
30/09/2014	05:15:00	00:15:00.0	44.2	46.7	44.7	37.9	34.4
30/09/2014	05:30:00	00:15:00.0	45.9	47.4	43.2	39.1	34.4
30/09/2014	05:45:00	00:15:00.0	47.7	50.0	46.4	42.8	38.6
30/09/2014	06:00:00	00:15:00.0	51.8	56.3	51.2	43.8	37.5
30/09/2014	06:15:00	00:15:00.0	51.7	54.6	50.4	46.3	42.0
30/09/2014	06:30:00	00:15:00.0	56.1	63.7	58.5	51.8	45.6
30/09/2014	06:45:00	00:15:00.0	54.4	61.1	56.0	49.7	45.2
30/09/2014	07:00:00	00:15:00.0	55.4	62.4	59.0	52.1	45.5
30/09/2014	09:45:00	00:15:00.0	58.3	64.5	60.8	55.9	50.4
30/09/2014	10:00:00	00:15:00.0	57.9	64.7	60.0	54.7	48.6
30/09/2014	10:15:00	00:15:00.0	56.7	63.3	58.7	53.6	48.3
30/09/2014	10:30:00	00:15:00.0	54.7	61.6	55.8	50.8	44.7
30/09/2014	10:45:00	00:15:00.0	55.2	62.8	57.8	50.0	44.2

Noise Impact assessment Knockbrown, Bandon, Co. Cork

Date	Time	Duration	LAeq	LAF5	LAF10	LAF50	LAF90
30/09/2014	11:00:00	00:15:00.0	53.6	59.0	54.1	50.0	45.3
30/09/2014	11:15:00	00:15:00.0	56.8	63.5	59.2	53.5	48.3
30/09/2014	11:30:00	00:15:00.0	56.0	63.2	57.7	50.9	45.6
30/09/2014	11:45:00	00:15:00.0	56.3	64.3	59.2	51.0	42.5
30/09/2014	12:00:00	00:15:00.0	55.3	61.7	56.6	49.7	43.4
30/09/2014	12:15:00	00:15:00.0	56.6	63.7	59.8	50.3	41.1
30/09/2014	12:30:00	00:15:00.0	55.0	61.9	56.7	49.5	41.5
30/09/2014	12:45:00	00:15:00.0	54.0	60.9	55.5	47.4	39.6
30/09/2014	13:00:00	00:15:00.0	53.5	60.2	54.3	45.2	38.1
30/09/2014	13:15:00	00:15:00.0	54.9	61.6	55.3	46.7	38.4
30/09/2014	13:30:00	00:15:00.0	53.3	60.6	55.0	47.2	39.5
30/09/2014	13:45:00	00:15:00.0	55.8	63.4	58.6	48.3	41.5
30/09/2014	14:00:00	00:15:00.0	56.6	64.0	59.0	50.2	42.6
30/09/2014	14:15:00	00:15:00.0	55.7	63.1	57.4	48.4	42.6
30/09/2014	14:30:00	00:15:00.0	56.6	64.3	59.5	51.1	45.1
30/09/2014	14:45:00	00:15:00.0	57.0	64.9	61.0	52.1	45.0
30/09/2014	15:00:00	00:15:00.0	55.8	63.8	59.3	50.0	43.4
30/09/2014	15:15:00	00:15:00.0	55.0	62.3	57.0	49.0	43.3
30/09/2014	15:30:00	00:15:00.0	56.1	63.8	59.8	50.5	43.7
30/09/2014	15:45:00	00:15:00.0	56.3	64.0	59.7	50.2	45.2
30/09/2014	16:00:00	00:15:00.0	57.2	64.1	60.6	52.2	45.6
30/09/2014	16:15:00	00:15:00.0	57.4	65.4	61.9	51.6	46.4
30/09/2014	16:30:00	00:15:00.0	55.6	63.0	58.9	49.8	44.6
30/09/2014	16:45:00	00:15:00.0	57.8	65.6	62.7	51.7	45.6
30/09/2014	17:00:00	00:15:00.0	55.8	63.7	59.6	50.5	44.6
30/09/2014	17:15:00	00:15:00.0	56.5	64.5	59.3	48.5	41.9
30/09/2014	17:30:00	00:15:00.0	57.6	65.5	61.5	49.7	40.3
30/09/2014	17:45:00	00:15:00.0	57.0	65.2	61.6	51.3	41.5
30/09/2014	18:00:00	00:15:00.0	58.3	66.2	63.2	52.4	41.5
30/09/2014	18:15:00	00:15:00.0	56.3	64.4	60.3	49.4	41.8
30/09/2014	18:30:00	00:15:00.0	57.0	64.3	61.1	51.4	39.5
30/09/2014	18:45:00	00:15:00.0	55.9	63.8	60.0	48.7	38.3
30/09/2014	19:00:00	00:15:00.0	55.6	63.6	59.2	47.9	38.1
30/09/2014	19:15:00	00:15:00.0	54.5	62.4	56.4	46.5	36.0
30/09/2014	19:30:00	00:15:00.0	54.7	62.0	56.6	45.1	36.7
30/09/2014	19:45:00	00:15:00.0	53.1	60.7	54.6	41.8	35.3
30/09/2014	20:00:00	00:15:00.0	53.7	61.3	55.2	41.7	32.3
30/09/2014	20:15:00	00:15:00.0	53.4	59.9	53.1	39.3	34.3
30/09/2014	20:30:00	00:15:00.0	48.6	51.9	45.4	36.7	32.0
30/09/2014	20:45:00	00:15:00.0	49.8	52.9	45.8	37.2	34.2
30/09/2014	21:00:00	00:15:00.0	53.1	56.4	49.5	39.3	34.8
30/09/2014	21:15:00	00:15:00.0	50.2	52.8	45.9	36.1	32.4
30/09/2014	21:30:00	00:15:00.0	50.2	52.1	45.5	35.2	31.8

Noise Impact assessment Knockbrow, Bandon, Co. Cork

Date	Time	Duration	LAeq	LAF5	LAF10	LAF50	LAF90
30/09/2014	21:45:00	00:15:00.0	50.2	54.3	47.9	37.1	32.2
30/09/2014	22:00:00	00:15:00.0	49.6	53.0	46.5	35.0	30.1
30/09/2014	22:15:00	00:15:00.0	47.0	46.9	38.2	33.2	29.5
30/09/2014	22:30:00	00:15:00.0	51.8	56.9	50.2	38.5	30.4
30/09/2014	22:45:00	00:15:00.0	42.7	34.9	29.7	30.5	28.3
30/09/2014	23:00:00	00:15:00.0	46.0	45.0	38.2	32.1	29.3
30/09/2014	23:15:00	00:15:00.0	50.4	54.0	47.0	35.7	29.9
30/09/2014	23:30:00	00:15:00.0	56.0	52.3	44.9	34.2	29.4
30/09/2014	23:45:00	00:14:59.9	37.3	35.6	29.2	27.5	26.3
01/10/2014	00:00:00	00:15:00.0	45.3	44.5	36.2	32.7	30.4
01/10/2014	00:15:00	00:15:00.0	39.0	34.3	27.9	28.4	26.6
01/10/2014	00:30:00	00:15:00.0	38.5	31.1	26.9	29.0	26.9
01/10/2014	00:45:00	00:15:00.0	45.0	41.6	36.0	31.1	28.9
01/10/2014	01:00:00	00:15:00.0	26.0	28.9	27.9	24.7	23.1
01/10/2014	01:15:00	00:15:00.0	42.2	32.6	27.1	29.9	28.2
01/10/2014	01:30:00	00:15:00.0	39.6	30.4	27.2	28.4	26.9
01/10/2014	01:45:00	00:15:00.0	41.7	32.5	25.9	29.0	27.8
01/10/2014	02:00:00	00:15:00.0	44.1	40.6	32.3	30.7	28.0
01/10/2014	02:15:00	00:15:00.0	25.3	27.6	26.9	24.3	22.7
01/10/2014	02:30:00	00:15:00.0	26.2	30.2	28.5	24.2	22.5
01/10/2014	02:45:00	00:15:00.0	25.7	26.4	25.2	22.6	21.5
01/10/2014	03:00:00	00:15:00.0	26.0	28.0	26.8	23.6	22.2
01/10/2014	03:15:00	00:15:00.0	38.8	30.1	25.6	27.4	26.4
01/10/2014	03:30:00	00:15:00.0	24.5	25.7	24.8	22.9	22.1
01/10/2014	03:45:00	00:15:00.0	39.4	40.0	37.0	33.5	25.1
01/10/2014	04:00:00	00:15:00.0	45.3	48.4	45.8	42.6	34.5
01/10/2014	04:15:00	00:15:00.0	36.1	40.4	37.5	33.1	28.9
01/10/2014	04:30:00	00:15:00.0	44.4	43.0	38.0	32.8	28.6
01/10/2014	04:45:00	00:15:00.0	45.7	45.2	40.6	34.1	29.2
01/10/2014	05:00:00	00:15:00.0	47.8	48.1	42.5	35.5	30.1
01/10/2014	05:15:00	00:15:00.0	48.1	48.1	41.7	35.2	29.1
01/10/2014	05:30:00	00:15:00.0	43.0	40.0	35.2	30.8	27.2
01/10/2014	05:45:00	00:15:00.0	49.2	50.5	43.8	35.6	28.2
01/10/2014	06:00:00	00:15:00.0	50.9	56.0	49.2	38.8	30.1
01/10/2014	06:15:00	00:15:00.0	52.5	57.3	50.9	41.2	32.3
01/10/2014	06:30:00	00:15:00.0	54.7	62.0	55.3	42.5	34.4
01/10/2014	06:45:00	00:15:00.0	53.9	60.5	53.8	41.4	35.9
01/10/2014	07:00:00	00:15:00.0	56.8	64.2	59.7	49.1	40.4
01/10/2014	07:15:00	00:15:00.0	60.6	63.8	58.9	49.4	41.2
01/10/2014	07:30:00	00:15:00.0	56.8	65.3	60.9	49.7	40.3
01/10/2014	07:45:00	00:15:00.0	57.3	65.5	61.9	48.6	39.7
01/10/2014	08:00:00	00:15:00.0	56.9	64.8	60.7	50.7	41.3
01/10/2014	08:15:00	00:15:00.0	57.4	64.9	61.7	53.0	45.0

Noise Impact assessment Knockbrown, Bandon, Co. Cork

Date	Time	Duration	LAeq	LAF5	LAF10	LAF50	LAF90
01/10/2014	08:30:00	00:15:00.0	57.4	65.8	62.4	51.6	45.3
01/10/2014	08:45:00	00:15:00.0	57.6	66.0	62.3	49.6	41.7
01/10/2014	09:00:00	00:15:00.0	58.0	66.0	62.9	49.4	41.0
01/10/2014	09:15:00	00:15:00.0	54.5	62.3	56.8	45.5	38.2
01/10/2014	09:30:00	00:15:00.0	57.0	63.5	59.3	46.3	39.9
01/10/2014	09:45:00	00:15:00.0	54.3	62.4	56.5	45.2	38.6
01/10/2014	10:00:00	00:15:00.0	53.1	60.3	53.8	42.7	36.8
01/10/2014	10:15:00	00:15:00.0	52.4	58.4	52.4	45.3	39.0
01/10/2014	10:30:00	00:15:00.0	53.7	61.6	55.9	46.4	37.7
01/10/2014	10:45:00	00:15:00.0	54.4	62.3	56.9	43.7	37.6
01/10/2014	11:00:00	00:15:00.0	54.2	61.8	56.0	45.7	39.0
01/10/2014	11:15:00	00:15:00.0	53.1	59.9	53.5	41.9	36.9
01/10/2014	11:30:00	00:15:00.0	54.8	62.3	56.6	43.6	35.6
01/10/2014	11:45:00	00:15:00.0	53.9	61.4	55.3	47.5	40.5
01/10/2014	12:00:00	00:15:00.0	56.0	63.1	58.7	48.4	39.0
01/10/2014	12:15:00	00:15:00.0	55.0	63.1	58.0	46.6	37.9
01/10/2014	12:30:00	00:15:00.0	54.8	62.7	58.2	45.8	38.0
01/10/2014	12:45:00	00:15:00.0	52.0	58.5	51.6	41.1	36.0
01/10/2014	13:00:00	00:15:00.0	53.2	60.4	54.9	47.3	38.9
01/10/2014	13:15:00	00:15:00.0	52.6	59.8	54.2	44.5	37.3
01/10/2014	13:30:00	00:15:00.0	52.3	58.6	52.2	43.9	36.1
01/10/2014	13:45:00	00:15:00.0	53.5	60.6	55.2	43.0	37.8
01/10/2014	14:00:00	00:15:00.0	54.5	62.4	57.3	48.5	37.2
01/10/2014	14:15:00	00:15:00.0	54.8	62.1	57.3	50.5	40.4
01/10/2014	14:30:00	00:15:00.0	54.1	62.2	56.6	45.6	36.6
01/10/2014	14:45:00	00:15:00.0	58.3	64.6	61.3	49.0	41.0
01/10/2014	15:00:00	00:15:00.0	55.6	63.3	59.3	45.6	38.1
01/10/2014	15:15:00	00:15:00.0	54.8	61.6	56.1	46.2	38.3
01/10/2014	15:30:00	00:15:00.0	53.8	61.6	56.0	43.3	35.9
01/10/2014	15:45:00	00:15:00.0	55.7	63.0	59.2	45.0	36.3
01/10/2014	16:00:00	00:15:00.0	54.5	61.1	58.5	46.0	35.6
01/10/2014	16:15:00	00:15:00.0	55.8	64.2	59.4	47.8	38.2
01/10/2014	16:30:00	00:15:00.0	54.8	61.8	55.8	44.6	38.6
01/10/2014	16:45:00	00:15:00.0	57.1	63.9	60.1	46.8	39.2
01/10/2014	17:00:00	00:15:00.0	55.7	64.2	59.5	48.4	38.7
01/10/2014	17:15:00	00:15:00.0	56.0	63.6	59.4	47.3	38.8
01/10/2014	17:30:00	00:15:00.0	56.7	64.7	60.9	49.9	39.3
01/10/2014	17:45:00	00:15:00.0	56.3	64.7	60.4	46.0	38.0
01/10/2014	18:00:00	00:15:00.0	56.7	64.9	61.5	47.6	38.7
01/10/2014	18:15:00	00:15:00.0	57.0	65.1	61.8	49.1	41.4
01/10/2014	18:30:00	00:15:00.0	57.0	64.7	61.1	49.9	40.4
01/10/2014	18:45:00	00:15:00.0	55.9	63.6	59.8	45.1	38.5
01/10/2014	19:00:00	00:15:00.0	54.4	62.1	57.3	43.2	37.3

Noise Impact assessment Knockbrowne, Bandon, Co. Cork

Date	Time	Duration	LAeq	LAF5	LAF10	LAF50	LAF90
01/10/2014	19:15:00	00:15:00.0	54.1	61.1	56.6	44.5	36.1
01/10/2014	19:30:00	00:15:00.0	54.5	63.1	57.5	43.5	37.0
01/10/2014	19:45:00	00:15:00.0	53.9	60.9	55.2	42.2	37.4
01/10/2014	20:00:00	00:15:00.0	53.0	60.2	53.6	39.0	34.8
01/10/2014	20:15:00	00:15:00.0	52.8	59.4	52.6	42.1	35.9
01/10/2014	20:30:00	00:15:00.0	55.7	62.0	56.3	43.7	35.4
01/10/2014	20:45:00	00:15:00.0	52.7	58.3	51.8	39.3	34.5
01/10/2014	21:00:00	00:15:00.0	47.0	48.5	40.2	35.6	33.7
01/10/2014	21:15:00	00:15:00.0	51.5	56.2	48.8	39.1	35.9
01/10/2014	21:30:00	00:15:00.0	49.7	52.6	46.0	38.7	32.7
01/10/2014	21:45:00	00:15:00.0	50.4	54.6	47.7	38.0	32.5
01/10/2014	22:00:00	00:15:00.0	51.5	55.9	49.2	37.3	30.9
01/10/2014	22:15:00	00:15:00.0	46.1	47.5	39.9	32.7	29.9
01/10/2014	22:30:00	00:15:00.0	44.4	43.0	33.6	31.3	29.3
01/10/2014	22:45:00	00:15:00.0	47.5	47.9	37.3	31.5	28.7
01/10/2014	23:00:00	00:15:00.0	48.1	47.8	39.7	33.2	29.9
01/10/2014	23:15:00	00:15:00.0	49.2	51.1	42.9	34.7	30.2
01/10/2014	23:30:00	00:15:00.0	47.8	46.2	36.2	31.6	28.9
01/10/2014	23:45:00	00:14:59.9	46.6	46.3	35.3	29.7	28.1
02/10/2014	00:00:00	00:15:00.0	25.4	28.0	27.1	24.7	23.1
02/10/2014	00:15:00	00:15:00.0	39.4	28.1	24.7	27.5	26.3
02/10/2014	00:30:00	00:15:00.0	45.1	43.1	33.8	28.1	26.8
02/10/2014	00:45:00	00:15:00.0	40.7	31.1	24.5	27.6	26.7
02/10/2014	01:00:00	00:15:00.0	43.1	38.8	30.4	27.7	26.6
02/10/2014	01:15:00	00:15:00.0	41.2	33.0	26.4	27.3	26.4
02/10/2014	01:30:00	00:15:00.0	23.4	25.2	24.5	22.8	22.0
02/10/2014	01:45:00	00:15:00.0	23.9	26.7	25.0	22.7	22.0
02/10/2014	02:00:00	00:15:00.0	38.5	26.9	23.1	26.2	25.6
02/10/2014	02:15:00	00:15:00.0	23.1	24.5	23.3	21.9	21.3
02/10/2014	02:30:00	00:15:00.0	22.5	24.3	23.2	22.0	21.4
02/10/2014	02:45:00	00:15:00.0	24.7	24.5	23.2	21.6	21.1
02/10/2014	03:00:00	00:15:00.0	22.3	23.5	22.6	21.7	21.3
02/10/2014	03:15:00	00:15:00.0	23.5	26.9	25.2	22.0	21.2
02/10/2014	03:30:00	00:15:00.0	23.0	23.1	22.4	21.5	21.1
02/10/2014	03:45:00	00:15:00.0	42.4	30.2	23.0	26.3	25.8
02/10/2014	04:00:00	00:15:00.0	26.1	32.2	27.3	22.2	21.3
02/10/2014	04:15:00	00:15:00.0	24.7	23.8	23.0	21.7	21.2
02/10/2014	04:30:00	00:15:00.0	43.7	34.7	27.5	26.4	25.8
02/10/2014	04:45:00	00:15:00.0	48.1	45.3	34.9	27.9	26.3
02/10/2014	05:00:00	00:15:00.0	49.0	48.4	40.6	28.8	26.3
02/10/2014	05:15:00	00:15:00.0	43.3	38.6	28.2	27.5	26.3
02/10/2014	05:30:00	00:15:00.0	46.9	39.6	31.4	29.9	27.1
02/10/2014	05:45:00	00:15:00.0	46.9	43.3	33.0	30.4	27.1

Noise Impact assessment Knockbrown, Bandon, Co. Cork

Date	Time	Duration	LAeq	LAF5	LAF10	LAF50	LAF90
02/10/2014	06:00:00	00:15:00.0	49.0	48.9	39.2	31.0	26.9
02/10/2014	06:15:00	00:15:00.0	53.4	60.2	53.4	38.5	29.2
02/10/2014	06:30:00	00:15:00.0	54.8	62.1	56.2	40.4	29.8
02/10/2014	06:45:00	00:15:00.0	53.5	59.6	52.9	39.5	31.9
02/10/2014	07:00:00	00:15:00.0	54.7	62.6	56.6	43.3	35.4
02/10/2014	07:15:00	00:15:00.0	55.4	62.6	58.4	47.4	36.8
02/10/2014	07:30:00	00:15:00.0	56.3	64.8	59.5	50.3	42.9
02/10/2014	07:45:00	00:15:00.0	57.8	65.8	62.3	51.6	42.3
02/10/2014	08:00:00	00:15:00.0	57.5	65.4	62.0	51.5	42.5
02/10/2014	08:15:00	00:15:00.0	57.0	65.3	61.9	51.0	41.7
02/10/2014	08:30:00	00:15:00.0	55.8	64.4	58.9	48.1	40.1
02/10/2014	08:45:00	00:15:00.0	56.8	64.5	61.2	49.0	39.8
02/10/2014	09:00:00	00:15:00.0	56.3	64.6	60.1	46.5	39.5
02/10/2014	09:15:00	00:15:00.0	55.3	63.4	58.0	46.6	37.6
02/10/2014	09:30:00	00:15:00.0	54.9	61.4	54.8	43.2	37.9
02/10/2014	09:45:00	00:15:00.0	51.3	55.9	48.9	40.2	36.2
02/10/2014	10:00:00	00:15:00.0	54.6	61.4	56.1	45.5	36.0
02/10/2014	10:15:00	00:15:00.0	53.5	60.0	53.9	41.7	35.7
02/10/2014	10:30:00	00:15:00.0	54.9	62.6	58.3	47.2	35.8
02/10/2014	10:45:00	00:15:00.0	54.1	62.2	56.4	44.2	37.0
02/10/2014	11:00:00	00:15:00.0	54.6	61.9	56.2	43.4	37.0
02/10/2014	11:15:00	00:15:00.0	51.2	57.0	50.3	40.0	36.7
02/10/2014	11:30:00	00:15:00.0	54.7	62.4	57.4	49.0	41.7
02/10/2014	11:45:00	00:15:00.0	54.8	62.1	57.6	49.2	44.1
02/10/2014	12:00:00	00:15:00.0	54.0	61.1	55.5	48.0	41.1
02/10/2014	12:15:00	00:15:00.0	54.9	62.6	57.2	50.9	42.4
02/10/2014	12:30:00	00:15:00.0	54.2	60.8	55.1	47.5	42.5
02/10/2014	12:45:00	00:15:00.0	54.5	62.5	57.3	50.0	44.5
02/10/2014	13:00:00	00:15:00.0	52.4	58.3	52.3	48.0	41.2
02/10/2014	13:15:00	00:15:00.0	54.5	61.4	56.1	49.4	42.8
02/10/2014	13:30:00	00:15:00.0	55.4	61.6	56.6	49.8	42.6
02/10/2014	13:45:00	00:15:00.0	55.4	62.1	57.5	51.4	45.1
02/10/2014	14:00:00	00:15:00.0	55.2	61.7	56.4	51.2	44.8
02/10/2014	14:15:00	00:15:00.0	55.4	62.5	58.0	50.8	44.9
02/10/2014	14:30:00	00:15:00.0	54.2	60.8	55.5	50.6	45.0
02/10/2014	14:45:00	00:15:00.0	54.9	61.1	56.1	51.5	46.3
02/10/2014	15:00:00	00:15:00.0	55.9	62.9	58.5	53.3	48.1
02/10/2014	15:15:00	00:15:00.0	56.8	63.4	59.1	54.8	50.0
02/10/2014	15:30:00	00:15:00.0	57.1	63.3	60.0	54.6	48.9
02/10/2014	15:45:00	00:15:00.0	56.3	63.7	60.0	53.3	48.6
02/10/2014	16:00:00	00:15:00.0	56.0	62.7	58.4	53.4	47.3
02/10/2014	16:15:00	00:15:00.0	56.5	63.6	58.9	54.2	48.5
02/10/2014	16:30:00	00:15:00.0	56.4	63.9	59.6	54.5	48.5

Noise Impact assessment Knockbrowne, Bandon, Co. Cork

Date	Time	Duration	LAeq	LAF5	LAF10	LAF50	LAF90
02/10/2014	16:45:00	00:15:00.0	56.5	63.9	60.2	54.2	48.4
02/10/2014	17:00:00	00:15:00.0	57.9	64.8	63.0	55.7	49.4
02/10/2014	17:15:00	00:15:00.0	57.3	65.1	61.7	54.5	47.3
02/10/2014	17:30:00	00:15:00.0	57.9	65.3	62.7	54.7	49.0
02/10/2014	17:45:00	00:15:00.0	57.1	65.2	61.2	53.1	46.8
02/10/2014	18:00:00	00:15:00.0	57.5	65.1	62.2	53.9	45.6
02/10/2014	18:15:00	00:15:00.0	56.4	63.9	60.2	53.5	47.5
02/10/2014	18:30:00	00:15:00.0	56.7	64.5	60.6	53.5	46.8
02/10/2014	18:45:00	00:15:00.0	54.7	62.5	57.3	51.1	44.8
02/10/2014	19:00:00	00:15:00.0	54.7	62.2	57.5	50.2	44.8
02/10/2014	19:15:00	00:15:00.0	55.2	62.3	58.6	52.0	47.0
02/10/2014	19:30:00	00:15:00.0	54.7	62.5	57.8	51.8	45.4
02/10/2014	19:45:00	00:15:00.0	52.6	58.2	53.6	49.5	43.8
02/10/2014	20:00:00	00:15:00.0	56.2	63.3	58.7	53.2	47.8
02/10/2014	20:15:00	00:15:00.0	53.8	60.1	55.3	51.6	47.3
02/10/2014	20:30:00	00:15:00.0	54.5	60.3	56.2	51.7	46.6
02/10/2014	20:45:00	00:15:00.0	53.0	58.7	54.0	50.5	45.8
02/10/2014	21:00:00	00:15:00.0	54.4	60.3	55.9	51.8	47.4
02/10/2014	21:15:00	00:15:00.0	53.4	59.1	54.8	51.1	47.4
02/10/2014	21:30:00	00:15:00.0	51.0	54.3	52.6	47.3	43.4
02/10/2014	21:45:00	00:15:00.0	52.6	56.3	54.0	49.6	45.6
02/10/2014	22:00:00	00:15:00.0	52.9	57.0	54.4	49.2	44.5
02/10/2014	22:15:00	00:15:00.0	50.2	53.7	52.1	47.5	43.6
02/10/2014	22:30:00	00:15:00.0	50.0	52.8	51.0	46.6	43.0
02/10/2014	22:45:00	00:15:00.0	51.9	55.2	53.2	49.4	45.8
02/10/2014	23:00:00	00:15:00.0	58.5	58.8	54.0	50.0	46.2
02/10/2014	23:15:00	00:15:00.0	47.5	50.6	49.1	43.9	40.6
02/10/2014	23:30:00	00:15:00.0	49.7	50.0	48.0	47.6	43.5
02/10/2014	23:45:00	00:14:59.9	49.1	51.1	49.6	45.3	41.5
03/10/2014	00:00:00	00:15:00.0	50.6	54.2	52.3	48.0	43.9
03/10/2014	00:15:00	00:15:00.0	50.5	55.2	53.4	47.4	42.9
03/10/2014	00:30:00	00:15:00.0	53.2	57.8	55.2	50.8	45.7
03/10/2014	00:45:00	00:15:00.0	53.8	58.3	56.0	51.3	45.7
03/10/2014	01:00:00	00:15:00.0	53.3	58.8	56.4	51.3	45.4
03/10/2014	01:15:00	00:15:00.0	52.4	56.6	55.6	50.4	46.1
03/10/2014	01:30:00	00:15:00.0	52.5	57.0	55.2	50.9	47.5
03/10/2014	01:45:00	00:15:00.0	53.3	57.8	56.5	51.8	48.2
03/10/2014	02:00:00	00:15:00.0	49.8	54.2	53.0	48.4	44.5
03/10/2014	02:15:00	00:15:00.0	48.9	52.2	51.4	48.1	44.9
03/10/2014	02:30:00	00:15:00.0	49.4	53.3	52.4	48.4	44.6
03/10/2014	02:45:00	00:15:00.0	53.2	57.1	55.8	50.8	46.9
03/10/2014	03:00:00	00:15:00.0	50.7	54.7	53.6	49.5	46.5
03/10/2014	03:15:00	00:15:00.0	49.6	53.3	52.0	46.4	43.7

Noise Impact assessment Knockbrowne, Bandon, Co. Cork

Date	Time	Duration	LAeq	LAF5	LAF10	LAF50	LAF90
03/10/2014	03:30:00	00:15:00.0	49.3	53.8	52.2	47.4	43.9
03/10/2014	03:45:00	00:15:00.0	49.3	53.8	52.4	48.0	43.5
03/10/2014	04:00:00	00:15:00.0	47.7	51.1	50.3	46.0	41.3
03/10/2014	04:15:00	00:15:00.0	50.0	54.7	53.2	46.7	42.5
03/10/2014	04:30:00	00:15:00.0	48.6	52.0	50.0	46.8	42.8
03/10/2014	04:45:00	00:15:00.0	47.6	49.3	48.0	44.1	40.9
03/10/2014	05:00:00	00:15:00.0	47.5	48.9	47.0	45.4	41.2
03/10/2014	05:15:00	00:15:00.0	47.4	50.3	49.0	45.0	41.4
03/10/2014	05:30:00	00:15:00.0	47.7	52.5	49.5	44.6	40.2
03/10/2014	05:45:00	00:15:00.0	47.8	49.2	47.6	45.8	40.6
03/10/2014	06:00:00	00:15:00.0	51.5	57.1	52.1	46.8	40.8
03/10/2014	06:15:00	00:15:00.0	53.3	57.9	53.9	49.9	45.3
03/10/2014	06:30:00	00:15:00.0	56.4	63.4	58.7	52.3	47.0
03/10/2014	06:45:00	00:15:00.0	55.2	60.9	57.7	52.9	48.0
03/10/2014	07:00:00	00:15:00.0	54.3	60.3	56.2	51.0	46.9
03/10/2014	07:15:00	00:15:00.0	56.2	63.2	59.1	53.4	48.8
03/10/2014	07:30:00	00:15:00.0	57.1	63.9	60.3	54.6	50.3
03/10/2014	07:45:00	00:15:00.0	57.3	65.0	61.0	54.8	48.6
03/10/2014	08:00:00	00:15:00.0	56.2	63.6	59.4	53.9	46.9
03/10/2014	08:15:00	00:15:00.0	57.6	64.9	61.3	55.2	48.6
03/10/2014	08:30:00	00:15:00.0	58.7	65.4	62.6	55.5	50.0
03/10/2014	08:45:00	00:15:00.0	58.5	66.0	62.1	56.6	49.6
03/10/2014	09:00:00	00:15:00.0	58.4	65.2	61.8	54.7	49.3
03/10/2014	09:15:00	00:15:00.0	58.0	64.9	60.8	54.5	49.7
03/10/2014	09:30:00	00:15:00.0	57.2	63.8	60.3	53.4	45.4
03/10/2014	09:45:00	00:15:00.0	54.6	60.4	54.7	47.6	40.8
03/10/2014	10:00:00	00:15:00.0	54.5	61.3	56.2	47.6	39.9
03/10/2014	10:15:00	00:15:00.0	56.7	64.0	60.1	49.3	40.6
03/10/2014	10:30:00	00:15:00.0	55.6	63.0	58.3	48.9	39.5
03/10/2014	10:45:00	00:15:00.0	55.9	63.3	58.8	48.8	38.8
03/10/2014	11:00:00	00:15:00.0	53.4	60.3	54.1	42.7	35.6
03/10/2014	11:15:00	00:15:00.0	56.0	63.0	58.3	47.4	37.6
03/10/2014	12:45:00	00:15:00.0	58.4	65.8	60.3	52.5	46.7
03/10/2014	13:00:00	00:15:00.0	56.6	62.1	58.1	53.4	41.4
03/10/2014	13:15:00	00:15:00.0	58.7	65.5	61.4	55.8	51.7
03/10/2014	13:30:00	00:15:00.0	58.1	64.2	60.3	55.1	46.7
03/10/2014	13:45:00	00:15:00.0	58.5	66.2	60.7	54.0	48.2
03/10/2014	14:00:00	00:15:00.0	57.8	65.7	60.9	50.6	43.8
03/10/2014	14:15:00	00:15:00.0	60.1	66.0	63.0	57.7	44.9
03/10/2014	15:15:00	00:15:00.0	63.2	69.5	66.9	60.1	55.1
03/10/2014	15:30:00	00:15:00.0	62.1	68.2	66.0	58.8	50.6
03/10/2014	16:30:00	00:15:00.0	59.8	67.6	64.2	56.8	52.2
03/10/2014	16:45:00	00:15:00.0	59.3	67.6	64.2	53.1	46.8

Noise Impact assessment Knockbrown, Bandon, Co. Cork

Date	Time	Duration	LAeq	LAF5	LAF10	LAF50	LAF90
03/10/2014	17:00:00	00:15:00.0	59.8	67.4	63.9	52.0	45.0
03/10/2014	17:15:00	00:15:00.0	58.2	66.7	63.4	49.3	41.7
03/10/2014	17:30:00	00:15:00.0	58.1	66.1	63.3	52.4	43.5
03/10/2014	17:45:00	00:15:00.0	59.1	66.7	64.0	51.7	43.1
03/10/2014	18:00:00	00:15:00.0	57.2	65.4	61.7	50.2	41.5
03/10/2014	18:15:00	00:15:00.0	58.2	66.2	63.0	52.1	43.8
03/10/2014	18:30:00	00:15:00.0	59.8	66.0	63.5	56.5	47.5
03/10/2014	20:00:00	00:15:00.0	56.1	61.7	57.5	53.9	48.1
03/10/2014	20:15:00	00:15:00.0	55.8	62.8	56.8	50.9	46.2
03/10/2014	20:30:00	00:15:00.0	55.0	60.3	55.1	51.1	46.1
03/10/2014	20:45:00	00:15:00.0	54.2	59.2	54.6	51.4	44.6
03/10/2014	21:00:00	00:15:00.0	55.5	62.3	56.8	52.4	47.3
03/10/2014	21:15:00	00:15:00.0	54.1	59.6	53.9	48.0	43.2
03/10/2014	21:30:00	00:15:00.0	51.8	54.9	50.1	45.6	41.0
03/10/2014	21:45:00	00:15:00.0	53.4	60.2	54.1	44.7	39.2
03/10/2014	22:00:00	00:15:00.0	54.1	57.8	55.6	51.2	40.0
03/10/2014	22:15:00	00:15:00.0	54.2	58.0	55.1	52.2	47.0
03/10/2014	22:30:00	00:15:00.0	53.2	59.2	53.4	47.6	42.7
03/10/2014	22:45:00	00:15:00.0	50.7	53.8	51.0	47.9	42.8
03/10/2014	23:00:00	00:15:00.0	56.5	60.8	58.4	53.8	48.5
03/10/2014	23:45:00	00:14:59.9	56.5	61.4	60.2	52.6	47.7
04/10/2014	00:00:00	00:15:00.0	50.6	53.7	51.4	48.1	44.0
04/10/2014	00:15:00	00:15:00.0	49.3	52.1	49.3	46.4	42.1
04/10/2014	00:30:00	00:15:00.0	49.5	51.4	47.4	43.8	39.2
04/10/2014	00:45:00	00:15:00.0	44.0	46.5	43.7	40.3	36.1
04/10/2014	01:00:00	00:15:00.0	47.9	48.2	44.0	39.9	35.4
04/10/2014	01:15:00	00:15:00.0	43.4	44.7	41.3	37.2	32.9
04/10/2014	01:30:00	00:15:00.0	48.0	47.9	43.3	38.0	34.0
04/10/2014	01:45:00	00:15:00.0	45.9	47.0	42.9	38.1	33.2
04/10/2014	02:00:00	00:15:00.0	47.2	47.0	43.0	38.1	33.1
04/10/2014	02:15:00	00:15:00.0	46.7	44.5	39.8	35.1	31.2
04/10/2014	02:30:00	00:15:00.0	44.4	44.9	39.6	34.5	30.3
04/10/2014	02:45:00	00:15:00.0	46.4	44.0	38.4	34.5	30.4
04/10/2014	03:00:00	00:15:00.0	46.7	46.2	40.9	35.9	31.3
04/10/2014	03:15:00	00:15:00.0	36.3	42.0	38.4	33.0	28.8
04/10/2014	03:30:00	00:15:00.0	41.9	43.4	39.5	35.0	30.2
04/10/2014	03:45:00	00:15:00.0	44.9	46.1	42.3	36.8	32.3
04/10/2014	04:00:00	00:15:00.0	36.0	40.9	37.2	33.9	31.0
04/10/2014	04:15:00	00:15:00.0	45.5	44.1	39.6	35.9	31.1
04/10/2014	04:30:00	00:15:00.0	45.6	38.0	32.4	30.9	29.4
04/10/2014	04:45:00	00:15:00.0	27.1	29.1	26.5	23.5	22.5
04/10/2014	05:00:00	00:15:00.0	42.5	36.1	32.5	30.8	28.3
04/10/2014	05:15:00	00:15:00.0	49.1	48.1	43.2	36.2	30.4

Noise Impact assessment Knockbrown, Bandon, Co. Cork

Date	Time	Duration	LAeq	LAF5	LAF10	LAF50	LAF90
04/10/2014	05:30:00	00:15:00.0	46.2	45.3	41.6	36.6	30.9
04/10/2014	05:45:00	00:15:00.0	40.0	43.6	40.7	33.4	29.0
04/10/2014	06:00:00	00:15:00.0	27.4	30.8	28.5	25.0	23.3
04/10/2014	06:15:00	00:15:00.0	44.5	42.9	38.1	33.6	27.7
04/10/2014	06:30:00	00:15:00.0	49.5	45.6	37.8	31.2	28.0
04/10/2014	06:45:00	00:15:00.0	49.6	50.2	45.7	38.4	30.2
04/10/2014	07:00:00	00:15:00.0	51.7	53.7	49.2	41.1	33.9
04/10/2014	07:15:00	00:15:00.0	52.8	57.4	54.4	47.0	40.3
04/10/2014	07:30:00	00:15:00.0	51.4	55.8	51.3	45.6	40.6
04/10/2014	07:45:00	00:15:00.0	53.3	58.4	52.9	46.6	41.4
04/10/2014	08:00:00	00:15:00.0	52.7	57.4	53.4	47.0	40.3
04/10/2014	08:15:00	00:15:00.0	55.5	62.5	57.9	48.0	40.9
04/10/2014	08:30:00	00:15:00.0	53.9	60.4	55.5	46.8	39.3
04/10/2014	08:45:00	00:15:00.0	53.8	59.1	53.8	46.6	40.5
04/10/2014	09:00:00	00:15:00.0	54.8	61.6	56.1	48.1	40.6
04/10/2014	09:15:00	00:15:00.0	56.9	64.0	61.0	53.3	43.1
04/10/2014	09:30:00	00:15:00.0	57.7	65.7	62.3	52.2	43.2
04/10/2014	09:45:00	00:15:00.0	56.5	64.6	59.7	50.2	40.3
04/10/2014	10:00:00	00:15:00.0	56.3	64.0	60.1	51.0	40.1
04/10/2014	10:15:00	00:15:00.0	56.1	63.6	59.4	50.3	39.8
04/10/2014	10:30:00	00:15:00.0	55.4	63.1	57.9	47.7	38.2
04/10/2014	10:45:00	00:15:00.0	55.5	63.3	58.8	48.4	38.8
04/10/2014	11:00:00	00:15:00.0	55.6	63.9	58.7	49.2	39.9
04/10/2014	11:15:00	00:15:00.0	55.9	64.0	59.5	48.5	40.2
04/10/2014	11:30:00	00:15:00.0	56.7	64.4	59.3	47.1	39.7
04/10/2014	11:45:00	00:15:00.0	55.5	63.4	59.1	48.6	40.7
04/10/2014	12:00:00	00:15:00.0	55.6	63.5	59.5	49.8	41.6
04/10/2014	12:15:00	00:15:00.0	56.5	64.6	60.4	51.0	42.7
04/10/2014	12:30:00	00:15:00.0	55.1	63.3	58.4	49.6	42.1
04/10/2014	12:45:00	00:15:00.0	59.4	64.5	60.8	49.5	40.8
04/10/2014	13:00:00	00:15:00.0	55.3	63.6	58.2	46.2	39.8
04/10/2014	13:15:00	00:15:00.0	55.7	63.7	59.2	49.1	41.5
04/10/2014	13:30:00	00:15:00.0	54.9	63.0	57.4	49.2	39.3
04/10/2014	13:45:00	00:15:00.0	56.1	64.0	60.7	50.0	41.8
04/10/2014	14:00:00	00:15:00.0	55.5	63.9	59.6	47.2	38.9
04/10/2014	14:15:00	00:15:00.0	53.7	61.7	55.8	44.4	37.1
04/10/2014	14:30:00	00:15:00.0	56.8	64.2	59.6	48.2	41.2
04/10/2014	14:45:00	00:15:00.0	55.2	62.8	57.6	49.6	41.2
04/10/2014	15:00:00	00:15:00.0	55.6	63.8	58.1	45.9	39.8
04/10/2014	15:15:00	00:15:00.0	56.9	65.0	61.1	51.3	43.5
04/10/2014	15:30:00	00:15:00.0	56.0	63.8	59.8	50.4	42.4
04/10/2014	15:45:00	00:15:00.0	56.0	63.7	59.1	50.5	42.8
04/10/2014	16:00:00	00:15:00.0	57.0	64.8	61.5	52.1	44.3

Noise Impact assessment Knockbrowne, Bandon, Co. Cork

Date	Time	Duration	LAeq	LAF5	LAF10	LAF50	LAF90
04/10/2014	16:15:00	00:15:00.0	55.8	64.1	59.4	50.4	42.0
04/10/2014	16:30:00	00:15:00.0	55.4	63.4	59.0	49.7	41.2
04/10/2014	16:45:00	00:15:00.0	56.9	64.6	61.7	51.6	41.7
04/10/2014	17:00:00	00:15:00.0	61.3	63.9	58.8	51.9	42.8
04/10/2014	17:15:00	00:15:00.0	59.7	63.7	59.3	48.2	40.7
04/10/2014	17:30:00	00:15:00.0	53.9	61.7	55.9	47.0	39.9
04/10/2014	17:45:00	00:15:00.0	56.0	63.7	60.3	51.1	40.8
04/10/2014	18:00:00	00:15:00.0	57.6	65.1	62.6	50.5	39.8
04/10/2014	18:15:00	00:15:00.0	54.7	62.4	56.6	45.3	37.9
04/10/2014	18:30:00	00:15:00.0	54.4	61.9	56.9	46.6	37.8
04/10/2014	18:45:00	00:15:00.0	54.8	62.1	56.6	47.0	35.7
04/10/2014	19:00:00	00:15:00.0	53.4	60.9	55.4	42.6	34.8
04/10/2014	19:15:00	00:15:00.0	53.9	61.4	56.0	46.6	34.7
04/10/2014	19:30:00	00:15:00.0	54.3	62.1	56.5	46.1	36.0
04/10/2014	19:45:00	00:15:00.0	53.6	61.3	55.7	42.9	32.7
04/10/2014	20:00:00	00:15:00.0	53.0	59.5	53.3	42.4	35.5
04/10/2014	20:15:00	00:15:00.0	53.6	60.9	54.4	42.7	33.6
04/10/2014	20:30:00	00:15:00.0	53.1	60.3	54.7	44.4	31.0
04/10/2014	20:45:00	00:15:00.0	51.3	56.5	49.5	38.0	33.1
04/10/2014	21:00:00	00:15:00.0	51.0	56.2	49.6	39.4	30.1
04/10/2014	21:15:00	00:15:00.0	52.3	57.3	50.2	41.0	30.7
04/10/2014	21:30:00	00:15:00.0	47.8	49.1	43.3	31.3	28.5
04/10/2014	21:45:00	00:15:00.0	48.9	50.9	43.3	31.0	27.8
04/10/2014	22:00:00	00:15:00.0	44.7	44.5	39.4	33.0	27.3
04/10/2014	22:15:00	00:15:00.0	51.1	53.5	47.5	35.4	27.6
04/10/2014	22:30:00	00:15:00.0	49.7	52.6	45.7	33.8	27.5
04/10/2014	22:45:00	00:15:00.0	47.0	46.4	40.7	28.2	26.9
04/10/2014	23:00:00	00:15:00.0	50.1	53.7	49.0	35.8	27.8
04/10/2014	23:15:00	00:15:00.0	45.3	42.4	35.0	27.7	26.5
04/10/2014	23:30:00	00:15:00.0	25.5	28.9	26.1	22.9	22.1
04/10/2014	23:45:00	00:15:00.0	49.9	51.9	46.6	30.6	27.4
05/10/2014	00:00:00	00:15:00.0	46.4	47.5	41.2	27.8	26.7
05/10/2014	00:15:00	00:15:00.0	41.4	35.5	27.5	27.3	26.7
05/10/2014	00:30:00	00:15:00.0	41.6	33.9	27.6	28.2	27.4
05/10/2014	00:45:00	00:15:00.0	47.0	48.7	42.7	30.6	27.7
05/10/2014	01:00:00	00:15:00.0	45.3	44.9	36.3	28.1	26.5
05/10/2014	01:15:00	00:15:00.0	27.9	31.5	26.3	25.7	24.9
05/10/2014	01:30:00	00:15:00.0	46.4	45.0	39.7	28.0	26.5
05/10/2014	01:45:00	00:15:00.0	43.9	41.3	34.9	28.2	26.7
05/10/2014	02:00:00	00:15:00.0	48.0	48.8	43.1	30.8	26.4
05/10/2014	02:15:00	00:15:00.0	41.6	34.1	26.8	26.5	25.9
05/10/2014	02:30:00	00:15:00.0	48.1	48.4	42.5	32.0	26.3
05/10/2014	02:45:00	00:15:00.0	45.2	45.9	36.6	31.6	28.3

Noise Impact assessment Knockbrown, Bandon, Co. Cork

Date	Time	Duration	LAeq	LAF5	LAF10	LAF50	LAF90
05/10/2014	03:00:00	00:15:00.0	25.3	27.8	26.8	24.2	22.7
05/10/2014	03:15:00	00:15:00.0	44.6	45.1	33.2	28.8	27.5
05/10/2014	03:30:00	00:15:00.0	45.5	43.0	35.7	33.7	30.3
05/10/2014	03:45:00	00:15:00.0	44.7	41.5	35.7	31.6	28.2
05/10/2014	04:00:00	00:15:00.0	39.2	34.1	27.4	27.5	25.9
05/10/2014	04:15:00	00:15:00.0	42.4	32.5	24.9	26.8	26.0
05/10/2014	04:30:00	00:15:00.0	38.8	33.2	27.3	27.9	25.8
05/10/2014	04:45:00	00:15:00.0	25.4	30.7	26.4	22.5	21.0
05/10/2014	05:00:00	00:15:00.0	35.6	35.5	33.2	29.8	26.4
05/10/2014	05:15:00	00:15:00.0	23.3	26.4	25.0	21.8	21.2
05/10/2014	05:30:00	00:15:00.0	42.6	38.9	36.6	30.7	25.4
05/10/2014	05:45:00	00:15:00.0	51.4	57.4	54.9	47.9	40.1
05/10/2014	06:00:00	00:15:00.0	45.2	49.2	46.0	41.6	35.4
05/10/2014	06:15:00	00:15:00.0	47.4	49.5	46.1	39.9	32.3
05/10/2014	06:30:00	00:15:00.0	42.7	44.6	40.4	34.2	28.8
05/10/2014	06:45:00	00:15:00.0	48.9	50.4	45.4	37.4	29.9
05/10/2014	07:00:00	00:15:00.0	44.8	48.0	45.3	38.6	30.8
05/10/2014	07:15:00	00:15:00.0	48.9	51.4	48.5	41.9	33.3
05/10/2014	07:30:00	00:15:00.0	47.7	49.4	46.6	41.9	33.0
05/10/2014	07:45:00	00:15:00.0	48.1	53.6	49.8	44.3	33.5
05/10/2014	08:00:00	00:15:00.0	47.5	50.1	46.8	41.2	34.6
05/10/2014	08:15:00	00:15:00.0	49.4	53.8	49.5	42.8	36.4
05/10/2014	08:30:00	00:15:00.0	45.5	50.2	45.5	39.2	34.8
05/10/2014	08:45:00	00:15:00.0	49.2	52.6	49.5	42.3	37.6
05/10/2014	09:00:00	00:15:00.0	55.9	63.2	60.3	47.6	41.2
05/10/2014	09:15:00	00:15:00.0	54.8	60.9	58.2	52.0	46.5
05/10/2014	09:30:00	00:15:00.0	51.8	55.9	51.2	46.2	39.3
05/10/2014	09:45:00	00:15:00.0	57.4	64.1	59.3	51.8	42.5
05/10/2014	10:00:00	00:15:00.0	54.5	61.6	56.1	47.5	41.1
05/10/2014	10:15:00	00:15:00.0	55.1	62.6	56.7	49.2	43.2
05/10/2014	10:30:00	00:15:00.0	54.7	61.3	56.9	49.5	44.1
05/10/2014	10:45:00	00:15:00.0	54.1	60.5	56.0	48.4	42.0
05/10/2014	11:00:00	00:15:00.0	55.2	63.1	57.8	50.1	44.3
05/10/2014	11:15:00	00:15:00.0	59.0	66.8	64.2	51.3	39.0
05/10/2014	11:30:00	00:15:00.0	59.7	66.4	64.8	56.2	48.7
05/10/2014	11:45:00	00:15:00.0	58.1	65.8	61.5	54.8	48.0
05/10/2014	12:00:00	00:15:00.0	58.2	65.7	61.9	55.4	50.1
05/10/2014	12:15:00	00:15:00.0	57.1	64.3	60.6	54.4	48.4
05/10/2014	12:30:00	00:15:00.0	56.0	63.1	58.7	53.9	48.4
05/10/2014	12:45:00	00:15:00.0	56.3	63.3	58.6	52.7	47.4
05/10/2014	13:00:00	00:15:00.0	57.4	65.0	61.0	54.3	48.3
05/10/2014	13:15:00	00:15:00.0	57.1	64.7	60.2	54.5	49.9
05/10/2014	13:30:00	00:15:00.0	57.0	64.1	60.1	54.0	49.6

Noise Impact assessment Knockbrown, Bandon, Co. Cork

Date	Time	Duration	LAeq	LAF5	LAF10	LAF50	LAF90
05/10/2014	13:45:00	00:15:00.0	56.3	63.3	59.0	52.6	47.7
05/10/2014	14:00:00	00:15:00.0	57.6	63.9	60.5	53.8	47.9
05/10/2014	14:15:00	00:15:00.0	59.6	66.0	64.0	56.1	50.8
05/10/2014	14:30:00	00:15:00.0	58.9	65.6	62.8	55.6	47.3
05/10/2014	14:45:00	00:15:00.0	58.0	64.8	61.6	54.3	47.7
05/10/2014	15:15:00	00:15:00.0	55.9	61.7	58.2	52.2	47.7
05/10/2014	15:30:00	00:15:00.0	58.8	65.1	62.4	55.8	51.2
05/10/2014	15:45:00	00:15:00.0	57.6	64.9	60.9	53.9	48.2
05/10/2014	16:45:00	00:15:00.0	57.7	64.5	60.7	54.2	49.1
05/10/2014	17:00:00	00:15:00.0	58.9	65.7	62.9	55.3	50.9
05/10/2014	23:30:00	00:15:00.0	59.4	64.3	63.3	56.4	47.3
05/10/2014	23:45:00	00:15:00.0	51.8	53.9	50.6	47.9	43.6
06/10/2014	00:00:00	00:15:00.0	48.8	53.9	51.5	45.2	39.6
06/10/2014	00:15:00	00:15:00.0	47.0	50.8	47.7	44.6	40.8
06/10/2014	00:30:00	00:15:00.0	44.6	47.8	44.0	42.2	39.0
06/10/2014	00:45:00	00:15:00.0	48.9	49.9	44.9	40.3	36.5
06/10/2014	01:00:00	00:15:00.0	42.2	37.6	36.3	36.7	34.1
06/10/2014	01:15:00	00:15:00.0	38.0	37.0	35.4	35.2	33.2
06/10/2014	01:30:00	00:15:00.0	41.1	37.0	35.3	35.5	33.9
06/10/2014	01:45:00	00:15:00.0	46.1	39.5	34.8	34.7	33.0
06/10/2014	02:00:00	00:15:00.0	43.0	46.5	44.8	39.5	33.2
06/10/2014	02:15:00	00:15:00.0	43.2	39.5	37.3	36.1	33.8
06/10/2014	02:30:00	00:15:00.0	41.4	41.3	38.0	35.5	32.4
06/10/2014	02:45:00	00:15:00.0	41.5	45.5	44.2	39.3	35.9
06/10/2014	03:00:00	00:15:00.0	39.4	44.5	42.7	36.3	32.7
06/10/2014	03:15:00	00:15:00.0	31.2	34.8	34.1	29.5	27.6
06/10/2014	03:30:00	00:15:00.0	42.9	36.7	33.6	33.8	31.9
06/10/2014	03:45:00	00:15:00.0	48.6	45.9	37.8	37.7	34.6
06/10/2014	04:00:00	00:15:00.0	37.0	32.6	31.5	31.8	30.2
06/10/2014	04:15:00	00:15:00.0	39.7	47.7	44.2	33.2	31.6
06/10/2014	04:30:00	00:15:00.0	28.7	31.3	30.5	27.9	26.6
06/10/2014	04:45:00	00:15:00.0	46.1	48.1	45.5	36.8	31.4
06/10/2014	05:00:00	00:15:00.0	50.5	52.9	48.5	40.7	32.7
06/10/2014	05:15:00	00:15:00.0	50.0	51.1	47.4	41.9	31.2
06/10/2014	05:30:00	00:15:00.0	48.3	47.8	45.0	40.5	32.9
06/10/2014	05:45:00	00:15:00.0	47.0	46.8	42.2	39.7	36.5
06/10/2014	06:00:00	00:15:00.0	50.8	55.3	48.7	39.0	34.6
06/10/2014	06:15:00	00:15:00.0	55.1	62.9	56.8	43.5	37.9
06/10/2014	06:30:00	00:15:00.0	55.6	63.9	58.8	44.2	38.3
06/10/2014	06:45:00	00:15:00.0	51.6	57.4	50.7	40.6	36.8
06/10/2014	07:15:00	00:15:00.0	58.8	64.8	59.3	49.2	42.6
06/10/2014	07:30:00	00:15:00.0	57.2	65.6	60.8	50.3	44.5
06/10/2014	07:45:00	00:15:00.0	58.0	65.9	63.3	52.0	44.5

Noise Impact assessment Knockbrowne, Bandon, Co. Cork

Date	Time	Duration	LAeq	LAF5	LAF10	LAF50	LAF90
06/10/2014	08:00:00	00:15:00.0	57.8	65.7	62.1	52.9	44.5
06/10/2014	08:15:00	00:15:00.0	58.3	65.9	62.8	54.8	45.8
06/10/2014	08:30:00	00:15:00.0	57.5	65.3	62.0	51.5	42.1
06/10/2014	08:45:00	00:15:00.0	58.2	66.2	63.4	52.4	42.1
06/10/2014	09:00:00	00:15:00.0	55.9	64.0	58.7	49.9	40.1
06/10/2014	09:15:00	00:15:00.0	55.7	63.6	58.4	49.6	41.1
06/10/2014	09:30:00	00:15:00.0	55.7	63.7	59.6	49.1	41.7
06/10/2014	09:45:00	00:15:00.0	54.5	61.6	56.4	46.7	40.0
06/10/2014	10:00:00	00:15:00.0	53.9	61.2	55.8	45.3	38.4
06/10/2014	10:15:00	00:15:00.0	53.5	59.7	55.5	45.8	37.7
06/10/2014	10:30:00	00:15:00.0	54.3	61.5	55.5	44.7	38.2
06/10/2014	10:45:00	00:15:00.0	55.4	63.3	58.9	48.7	39.1
06/10/2014	11:00:00	00:15:00.0	56.2	64.0	60.3	48.1	38.7
06/10/2014	11:15:00	00:15:00.0	55.2	62.8	57.0	45.4	38.9
06/10/2014	11:30:00	00:15:00.0	54.9	63.0	57.3	43.7	35.8
06/10/2014	11:45:00	00:15:00.0	55.9	62.9	57.8	52.2	43.5
06/10/2014	12:00:00	00:15:00.0	55.8	63.0	58.0	50.1	40.3
06/10/2014	12:15:00	00:15:00.0	56.0	64.1	59.1	46.6	38.2
06/10/2014	12:30:00	00:15:00.0	55.4	63.3	58.6	47.3	37.9
06/10/2014	12:45:00	00:15:00.0	54.1	61.5	56.0	43.3	36.1
06/10/2014	13:00:00	00:15:00.0	55.7	63.5	58.6	46.9	36.9
06/10/2014	13:15:00	00:15:00.0	54.2	61.8	56.7	44.3	34.1
06/10/2014	13:30:00	00:15:00.0	54.0	61.3	55.2	42.5	35.1
06/10/2014	13:45:00	00:15:00.0	55.5	63.1	58.5	46.4	39.0
06/10/2014	14:00:00	00:15:00.0	55.9	62.9	57.5	46.6	39.0
06/10/2014	14:15:00	00:15:00.0	53.9	60.8	55.2	44.5	37.9
06/10/2014	14:30:00	00:15:00.0	55.1	62.5	57.6	49.1	40.5
06/10/2014	14:45:00	00:15:00.0	56.4	64.1	59.8	52.4	45.0
06/10/2014	15:00:00	00:15:00.0	57.1	64.3	60.4	53.6	46.8
06/10/2014	15:15:00	00:15:00.0	56.0	63.4	58.8	51.2	41.2
06/10/2014	15:30:00	00:15:00.0	57.1	64.7	61.1	51.1	39.2
06/10/2014	15:45:00	00:15:00.0	57.3	65.2	61.3	52.0	42.4
06/10/2014	16:00:00	00:15:00.0	55.7	63.2	58.6	50.1	38.2
06/10/2014	16:15:00	00:15:00.0	56.4	64.6	60.0	50.2	38.8
06/10/2014	16:30:00	00:15:00.0	57.0	65.2	60.9	51.4	39.4
06/10/2014	16:45:00	00:15:00.0	55.1	63.6	57.9	47.6	38.5
06/10/2014	17:00:00	00:15:00.0	57.0	64.6	61.3	50.8	42.8
06/10/2014	17:15:00	00:15:00.0	56.6	64.5	59.9	50.4	42.2
06/10/2014	17:30:00	00:15:00.0	58.4	66.3	63.9	52.4	40.5
06/10/2014	17:45:00	00:15:00.0	58.7	66.4	63.9	53.3	42.2
06/10/2014	18:00:00	00:15:00.0	57.9	65.9	62.2	52.1	43.0
06/10/2014	18:15:00	00:15:00.0	57.2	65.3	61.6	51.5	40.4
06/10/2014	18:30:00	00:15:00.0	55.3	63.3	59.0	44.7	34.9

Noise Impact assessment Knockbrown, Bandon, Co. Cork

Date	Time	Duration	LAeq	LAF5	LAF10	LAF50	LAF90
06/10/2014	18:45:00	00:15:00.0	56.3	64.4	59.4	45.3	36.5
06/10/2014	19:00:00	00:15:00.0	55.4	63.6	59.1	45.0	36.4
06/10/2014	19:15:00	00:15:00.0	53.7	60.7	54.1	38.8	33.8
06/10/2014	19:30:00	00:15:00.0	54.1	61.3	55.0	41.8	33.6
06/10/2014	19:45:00	00:15:00.0	53.5	61.4	55.9	41.1	34.0
06/10/2014	20:00:00	00:15:00.0	52.6	59.4	52.6	39.3	34.9
06/10/2014	20:15:00	00:15:00.0	53.9	60.7	53.9	40.1	35.2
06/10/2014	20:30:00	00:15:00.0	53.7	61.2	55.5	42.5	37.1
06/10/2014	20:45:00	00:15:00.0	53.2	60.4	54.0	42.4	35.9
06/10/2014	21:00:00	00:15:00.0	53.8	61.0	54.0	42.5	37.0
06/10/2014	21:15:00	00:15:00.0	48.7	52.0	44.9	33.0	29.8
06/10/2014	21:30:00	00:15:00.0	51.3	57.1	50.7	36.6	29.9
06/10/2014	21:45:00	00:15:00.0	51.2	57.0	49.9	37.2	30.6
06/10/2014	22:00:00	00:15:00.0	49.8	52.8	47.2	37.2	29.9
06/10/2014	22:15:00	00:15:00.0	51.5	56.2	49.8	39.0	30.2
06/10/2014	22:30:00	00:15:00.0	42.3	36.5	32.6	30.8	28.8
06/10/2014	22:45:00	00:15:00.0	47.5	49.1	40.8	33.0	29.0
06/10/2014	23:00:00	00:15:00.0	47.8	49.8	41.2	32.9	29.0
06/10/2014	23:15:00	00:15:00.0	46.9	45.4	36.8	34.8	29.5
06/10/2014	23:30:00	00:15:00.0	49.2	50.6	44.3	34.0	30.0
06/10/2014	23:45:00	00:15:00.0	41.3	33.7	30.3	29.1	28.0
07/10/2014	00:00:00	00:15:00.0	46.7	42.9	36.1	30.2	28.3
07/10/2014	00:15:00	00:15:00.0	45.1	42.2	35.3	29.2	28.1
07/10/2014	00:30:00	00:15:00.0	43.6	38.6	33.7	28.7	27.8
07/10/2014	00:45:00	00:15:00.0	44.5	40.1	33.6	28.6	27.6
07/10/2014	01:00:00	00:15:00.0	45.6	42.5	33.8	27.7	27.2
07/10/2014	01:15:00	00:15:00.0	38.5	32.4	26.2	27.1	26.6
07/10/2014	01:30:00	00:15:00.0	25.1	28.6	25.5	23.6	22.8
07/10/2014	01:45:00	00:15:00.0	24.4	25.3	24.1	23.1	22.6
07/10/2014	02:00:00	00:15:00.0	23.8	24.0	23.6	22.9	22.5
07/10/2014	02:15:00	00:15:00.0	42.3	32.9	26.2	27.7	27.2
07/10/2014	02:30:00	00:15:00.0	30.6	37.8	30.9	26.0	25.5
07/10/2014	02:45:00	00:15:00.0	25.5	29.5	27.5	23.8	22.8
07/10/2014	03:00:00	00:15:00.0	29.5	33.2	31.5	26.4	24.1
07/10/2014	03:15:00	00:15:00.0	51.3	56.7	55.6	49.0	38.0
07/10/2014	03:30:00	00:15:00.0	41.3	44.0	41.3	35.2	29.1
07/10/2014	03:45:00	00:15:00.0	46.1	43.6	37.1	32.9	29.0
07/10/2014	04:00:00	00:15:00.0	31.4	34.6	31.8	28.8	27.0
07/10/2014	04:15:00	00:15:00.0	44.1	39.8	35.3	30.9	28.3
07/10/2014	04:30:00	00:15:00.0	42.8	40.7	34.5	30.5	28.1
07/10/2014	04:45:00	00:15:00.0	48.6	50.8	45.0	37.2	29.7
07/10/2014	05:00:00	00:15:00.0	49.8	50.9	44.3	34.7	29.1
07/10/2014	05:15:00	00:15:00.0	46.1	46.2	39.2	32.3	27.8

Date	Time	Duration	LAeq	LAF5	LAF10	LAF50	LAF90
07/10/2014	05:30:00	00:15:00.0	46.1	46.4	41.6	32.4	27.8
07/10/2014	05:45:00	00:15:00.0	49.7	52.6	46.8	30.0	27.9
07/10/2014	06:00:00	00:15:00.0	51.7	56.3	51.6	39.1	28.5
07/10/2014	06:15:00	00:15:00.0	53.2	58.7	53.4	42.2	29.1
07/10/2014	06:30:00	00:15:00.0	55.0	62.1	57.1	46.7	33.7
07/10/2014	06:45:00	00:15:00.0	53.1	60.1	54.4	44.5	31.5
07/10/2014	07:00:00	00:15:00.0	55.1	62.6	57.3	48.5	36.6
07/10/2014	07:15:00	00:15:00.0	56.8	65.0	59.8	51.4	43.7
07/10/2014	07:30:00	00:15:00.0	57.5	65.6	61.6	52.2	43.4
07/10/2014	07:45:00	00:15:00.0	57.1	65.2	61.2	51.6	43.3
07/10/2014	08:00:00	00:15:00.0	58.3	66.1	62.4	54.4	44.7
07/10/2014	08:15:00	00:15:00.0	57.0	64.8	61.3	51.3	44.1
07/10/2014	08:30:00	00:15:00.0	57.6	65.8	62.0	52.7	46.1
07/10/2014	08:45:00	00:15:00.0	58.3	66.5	62.8	53.3	45.4
07/10/2014	09:00:00	00:15:00.0	56.9	65.2	61.3	50.5	40.6
07/10/2014	09:15:00	00:15:00.0	56.3	63.5	59.8	50.2	41.9
07/10/2014	09:30:00	00:01:46.6	56.0	64.8	59.3	50.6	41.2

Appendix 2 Sound Level meter Calibration Certificate



Certificate of Calibration

Certificate Number: 21617

Sound Level Meter Larson Davis Model 812

Client: Environmental Measurements on behalf of Tara Mines
Unit 12, Tallaght Business Centre
Whitestown Business Park
Co. Dublin 24, Ireland

Instrument Make: Larson Davis Instrument Model: 812 Serial Number: 0783 Preamplifier Make: Larson Davis Preamplifier Model: 828 Serial Number: 2754 Extension Cable: not supplied	Microphone Make: PCB Microphone Model: 377B02 Serial Number: 120081 Calibrator Make: Calibrator Model: Calibrator Serial Number: Calibrator Adaptor: Calibrator Certification Ref:
--	---

This is to certify that the above instrument was calibrated according to MTS Calibration Ltd. Measurement Procedures and was found to comply as summarised below. The measurements were carried out using the Test Equipment listed below, all of whose calibrations are traceable to UK National Standards. The management controls of MTS Calibration Ltd. are registered in its current Quality Manual, and are designed to be in compliance with BS EN ISO/IEC 17025: 2005. Copies of the relevant certificates, test procedures and test results, together with the traceability of test equipment are filed with MTS Calibration Ltd. and extracts are available on request.

This instrument was tested in accordance with the recommendations of BS 7580: Part 1 1997 (not all tests were performed) with the following results:

	Manufacturer's Specification	BS EN 60651 Type 1
Self-Generated Noise:	Complies	no specification – measured 17.7 dB(A)
Dynamic Linearity – electrical response:	Complies	Complies between 22.7 and 129.5dB(A)
Frequency Weighting A – electrical response:	Complies	Complies
Frequency Weighting A – acoustic response:	Complies	Complies
Frequency Weighting C – electrical response:	Complies	Complies
Crest Factor:	Complies	Complies
Burst (RMS accuracy):	Complies	Complies
Time Weightings F, S, I (Detector):	Complies	Complies
Microphone Response:	Complies	Complies (assessed as overall acoustic specification)

Calibrated at 114.02 dB re 20µPa, 250 Hz – calibration offset = 9.0 dB
Polarisation Voltage 0 V

Test Equipment:	Manufacturer	Model	Serial No.	Traceability Ref.	Cal. Due
Equipment					
Acoustic Calibrator 250Hz	Larson Davis	CAL250	4483	TE 116	October 2014
Real-Time Frequency Analyser	Larson Davis	2900	0510	TE 165	July 2014
Digital Multimeter	Agilent	34401A	MY41046986	TE 152	July 2014
Signal Generator	Hewlett Packard	33120A	US34007158	TE 163	July 2014

Date of Receipt: 14th February 2014
Date of Calibration: 17th – 18th February 2014
Date of Certificate: 18th February 2014

Authorised Signatory

 Stuart Cowling
 Page 1 of 12

MTS Calibration Ltd
Company Registration Number: 06188525 England and Wales
The Grange Business Centre, Belasis Avenue, Billingham TS23 1LG, England
 Telephone: 0044 1642 876410 Fax: 0044 1642 876411 E-Mail: pmarsh@slmcal.co.uk or tsherris@slmcal.co.uk
<http://www.slmcal.co.uk>

Planning Department
14 NOV 2014

MJ KEHOE TRANSPORT LIMITED,

**Kilbride,
The Ballagh,
Enniscorthy,
Co. Wexford.**

Tel/Fax: 053 9136164

Mobile: 087 2534168

Vat number: IE 3776965 B

**Shannonvale Foods,
Clonakilty,
Cork.**

14.10.14

To Whom It May Concern:

M.J. Kehoe Transport has been transporting poultry litter for Shannonvale foods for many years. We are in a position to take 1500 tonnes of chicken litter per annum from the new proposed broiler development in Bandon, West Cork. Our waste permit number is WCP-LK-08-582-01.

Any queries please do not hesitate to contact me.

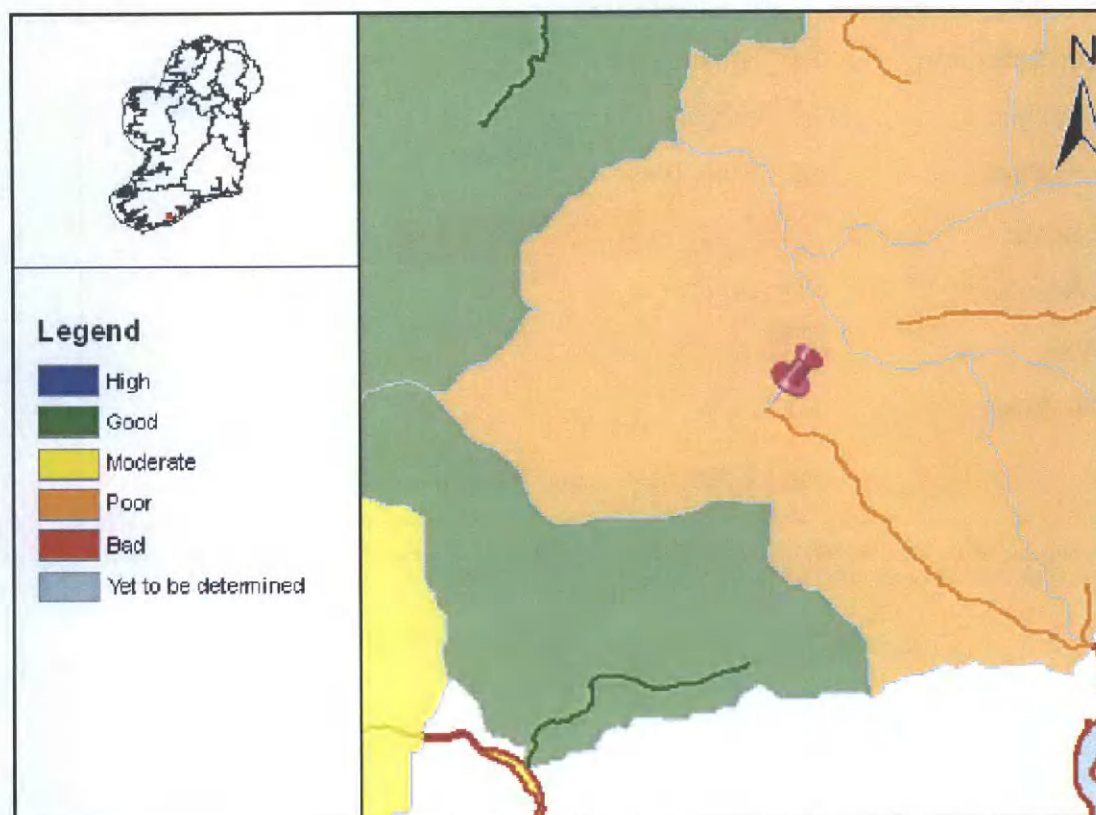
Kind Regards

PP Fiona Murtagh

**M.J. Kehoe
Director**



Full Report for Waterbody Kilbrittain River (Coastal)



River Basin Management Plans (RBMPs) have been published for all River Basin Districts in Ireland in accordance with the requirements of the Water Framework Directive. The WaterMaps viewer is an integral part of the River Basin Management Plan and provides access to information at individual waterbody level and at Water Management Unit level for all the River Basin Districts in Ireland.

The following report provides summary plan information about the selected waterbody (indicated by the pin in the map above) relating to its status, risks, objectives, and measures proposed to retain status where this is adequate, or improve it where necessary. Waterbodies can relate to surface waters (these include rivers, lakes, estuaries [transitional waters], and coastal waters), or to groundwaters. Other relevant information not included in this report can be viewed using the WaterMaps viewer, including areas listed in the Register of Protected Areas.

You will find brief notes at the bottom of some of the individual report sheets that will help you in interpreting the information presented. More detailed information can be obtained in relation to all aspects of the RBMPs at www.wfdireland.ie.



Summary Information:

Water Management Unit: IE_SW_Bandon/Stick
WaterBody Category: River Waterbody
WaterBody Name: Kilbrittain River (Coastal)
WaterBody Code: IE_SW_20_1947
Overall Status: Poor
Overall Objective: Restore_2021
Overall Risk: 1a At Risk
Heavily Modified: No



Report data based upon final RBMP, 2009-2015.

The information provided above is a summary of the principal findings related to the selected waterbody. Further details and explanation of individual elements of the report are outlined in the following pages.



Status Report

Water Management Unit: IE_SW_Bandon/Stick
WaterBody Category: River Waterbody
WaterBody Name: Kilbrittain River (Coastal)
WaterBody Code: IE_SW_20_1947
Overall Status Result: Poor
Heavily Modified: No



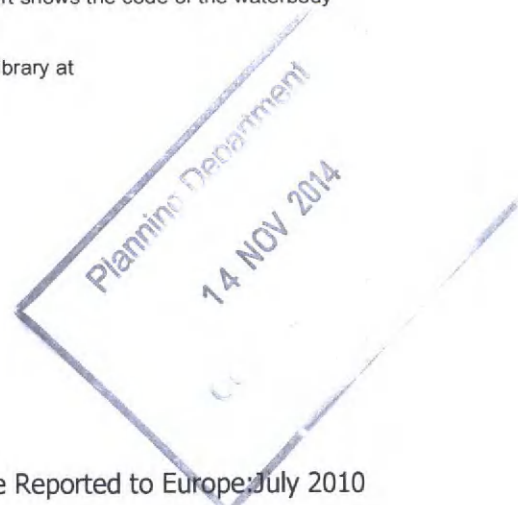
Status Element Description		Result
Status information		
Q	Macroinvertebrate status	Good
PC	General physico-chemical status	N/A
FPQ	Freshwater Pearl Mussel / Macroinvertebrate status	N/A
DIA	Diatoms status	N/A
HYM	Hydromorphology status	N/A
FIS	Fish status	Poor
SP	Specific Pollutants status (SP)	N/A
ES	Overall ecological status	Poor
CS	Overall chemical status (PAS)	n/a
EXT	Extrapolated status	N/A
MON	Monitored water body	YES
DON	Donor water bodies	N/A

n/a - not assessed

Status

By 'Status' we mean the condition of the water in the waterbody. It is defined by its chemical status and its ecological status, whichever is worse. Waters are ranked in one of 5 status classes: High, Good, Moderate, Poor, Bad. However, not all waterbodies have been monitored, and in such cases the status of a similar nearby waterbody has been used (extrapolated) to assign status. If this has been done the first line of the status report shows the code of the waterbody used to extrapolate.

You can read more about status and how it is measured in our RBMP Document Library at www.wfdireland.ie (Directory 15 Status).



Date Reported to Europe: July 2010

Date Report Created 13/11/2014



Risk Report

Water Management Unit: IE_SW_Bandon/Stick
WaterBody Category: River Waterbody
WaterBody Name: Kilbrittain River (Coastal)
WaterBody Code: IE_SW_20_1947
Overall Risk Result: **1a** At Risk
Heavily Modified: No



Risk Test Description		Risk
Diffuse Risk Sources		
RD1	EPA diffuse model (2008)	1b Probably At Risk
RD2a	Road Wash - Soluble Copper	Not At Risk
RD2b	Road Wash - Total Zinc	Not At Risk
RD2c	Road Wash - Total Hydrocarbons	Not At Risk
RD3	Railways	Not At Risk
RD4a	Forestry - Acidification (2008)	Not At Risk
RD4b	Forestry - Suspended Solids (2008)	Not At Risk
RD4c	Forestry - Eutrophication (2008)	2a Probably Not At Risk
RD5	Overall Unsewered (2008)	Not At Risk
RD5a	Unsewered Areas - Pathogens (2008)	2a Probably Not At Risk
RD5b	Unsewered Phosphorus (2008)	Not At Risk
RD6a	Arable	2a Probably Not At Risk
RD6b	Sheep Dip	Not At Risk
RD6c	Forestry - Dangerous Substances	Not At Risk
RDO	Diffuse Overall -Worst Case (2008)	1b Probably At Risk
Hydrology		
RHY1	Water balance - Abstraction	Not At Risk
Morphological Risk Sources		
RM1	Channelisation (2008)	Not At Risk
RM2	Embankments (2008)	Not At Risk
RM3	Impoundments	Not At Risk
RM4	Water Regulation	Not At Risk
RM5	Intensive Landuse	N/A
RMO	Morphology Overall - Worst Case (2008)	Not At Risk
Overall Risk		
RA	Rivers Overall - Worst Case (2008)	1a At Risk



Point Risk Sources		
RP1	WWTPs (2008)	Not At Risk
RP2	CSOs	Not At Risk
RP3	IPPCs (2008)	Not At Risk
RP4	Section 4s (2008)	Not At Risk
RP5	WTPs/Mines/Quarries/Landfills	N/A
RPO	Overall Risk from Point Sources - Worst Case (2008)	Not At Risk
Q Value		
Q	EPA Q rating and Margaritifera Assessment	N/A
Q/RDI or Point/Diffuse		
QPD	Q class/EPA Diffuse Model or worst case of Point and Diffuse (2008)	1a At Risk
Rivers Direct Impacts		
RDI1	Rivers Direct Impacts - Dangerous Substances	N/A

Risk

By 'risk' we mean the risk that a waterbody will not achieve good ecological or good chemical status/potential at least by 2015. To examine risk the various pressures acting on the waterbody were identified along with any evidence of impact on water status. Depending on the extent of the pressure and its potential for impact, and the amount of information available, the risk to the water body was placed in one of four categories: 1a at risk; 1b probably at risk; 2a probably not at risk; 2b not at risk. Note that '2008' after the risk category means that the risk assessment was revised in 2008. All other risks were determined as part of an earlier risk assessment in 2005.

You can read more about risk assessment in our 'WFD Risk Assessment Update' document in the RBMP document library, and other documents at www.wfdireland.ie (Directory 31 Risk Assessments).



Date Reported to Europe: July 2010

Date Report Created 13/11/2014



Objectives Report

Water Management Unit: IE_SW_Bandon/Stick

WaterBody Category: River Waterbody

WaterBody Name: Kilbrittain River (Coastal)

WaterBody Code: IE_SW_20_1947

Overall Objective: Restore_2021

Heavily Modified: No



Objectives Description		Result
Extended timescale information		
E1	Extended timescales due to time requirements to upgrade WWTP discharges	No Status
E2	Extended timescales due to delayed recovery of chemical pollution and chemical status failures	No Status
E3	Extended timescales due to delayed recovery following reduction in agricultural nutrient losses	No Status
E4	Extended timescales due to delayed recovery from physical modifications and physical damage	No Status
E5	Extended timescales due to delayed recovery following implementing forestry acidification measures	No Status
E6	Extended timescales due to physical recovery timescales at mines and contaminated sites	No Status
E7	Extended timescales due to delayed recovery of highly impacted sites	No Status
E8	Extended timescales due to delayed recovery following reduction in agricultural nutrient losses	No Status
E9	Extended timescales due to delayed recovery from nitrogen losses to estuaries	2021
E10	Extended timescales due to delayed recovery following reduction in agricultural nutrient losses	No Status
E11	Extended timescales due to delayed recovery from physical modifications and physical damage (overgrazing)	No Status
E12	Extended timescales due to delayed recovery from physical modifications and physical damage (channelisation)	No Status
E13	Extended timescales from Northern Ireland Environment Agency	No Status
EOV	Overall extended timescale - combination of all extended timescales fields	2021
E14	Extended timescales due to the presence of Freshwater Pearl Mussel populations	No Status
EX15	Extended timescales due to highly impacted sites	No Status

Objectives information		
OB1	Prevent deterioration objective	No Status
OB2	Restore at least good status objective	Restore_2021
OB3	Reduce chemical pollution objective	No Status
OB4	Protected areas objective	No Status
OB5	Northern Ireland Environment Agency objective	No Status
OBO	Overall objectives	Restore_2021

Extended timescales

Extended timescales have been set for certain waters due to technical, economic, environmental or recovery constraints. Extended timescales are usually of one planning cycle (6 years, to 2021) but in some cases are two planning cycles (to 2027).

Objectives

In general, we are required to ensure that our waters achieve at least good status/potential by 2015, and that their status does not deteriorate. Having identified the status of waters (this is given earlier in this report), the next stage is to set objectives for waters. Objectives consider waters that require protection from deterioration as well as waters that require restoration and the timescales needed for recovery. Four default objectives have been set initially:-

Prevent Deterioration

Restore Good Status

Reduce Chemical Pollution

Achieve Protected Areas Objectives

These objectives have been refined based on the measures available to achieve them, the latter's likely effectiveness, and consideration of cost-effective combinations of measures. Where it is considered necessary extended deadlines have been set for achieving objectives in 2021 or 2027.



Date Reported to Europe July 2010

Date Report Created 13/11/2014



Measures Report

Water Management Unit: IE_SW_Bandon/Stick

WaterBody Category: River Waterbody

WaterBody Name: Kilbriain River (Coastal)

WaterBody Code: IE_SW_20_1947

Heavily Modified: No



	Measures Description	Applicable
BC	Total number of basic measures which apply to this waterbody	20
BW	Directive - Bathing Waters Directive	No
BIR	Directive - Birds Directive	No
HAB	Directive - Habitats Directive	No
DW	Directive - Drinking Waters Directive	No
MAE	Directive - Major Accidents and Emergencies Directive	Yes
EIA	Directive - Environmental Impact Assessment Directive	Yes
SS	Directive - Sewage Sludge Directive	Yes
UWT	Directive - Urban Waste Water Treatment Directive	Yes
PPP	Directive - Plant Protection Products Directive	Yes
NIT	Directive - Nitrates Directive	Yes
IPC	Directive - Integrated Pollution Prevention Control Directive	Yes
CR	Other Stipulated Measure - Cost recovery for water use	Yes
SUS	Other Stipulated Measure - Promotion of efficient and sustainable water use	Yes
DWS	Other Stipulated Measure - Protection of drinking water sources	Yes
ABS	Other Stipulated Measure - Control of abstraction and impoundment	Yes
POI	Other Stipulated Measure - Control of point source discharges	Yes
DIF	Other Stipulated Measure - Control of diffuse source discharges	Yes
PS	Other Stipulated Measure - Control of priority substances	Yes
MOD	Other Stipulated Measure - Controls on physical modifications to surface waters	Yes
OA	Other Stipulated Measure - Controls on other activities impacting on water status	Yes
AP	Other Stipulated Measure - Prevention or reduction of the impact of accidental pollution incidents	Yes
TP1	WSIP - Agglomerations with treatment plants requiring capital works	No
TP2	WSIP - Agglomerations with treatment plants requiring further investigation prior to capital works	No
TP3	WSIP - Agglomerations requiring the implementation of actions identified in Shellfish PRPs	No
TP4	WSIP - Agglomerations with treatment plants requiring improved operational performance	No
TP5	WSIP - Agglomerations requiring investigation of CSOs	No

Date Reported to Europe: July 2010

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TP6	WSIP - Agglomerations where existing treatment capacity is currently adequate but predicted loadings would result in overloading	No
OTS	On-site waste water treatment systems	Yes
FPM	Freshwater Pearl Mussel sub-basin plan	No
SHE	Shellfish Pollution Reduction Plan	Yes
IPR	IPPC licences requiring review	No
WPR	Water Pollution Act licences requiring review	No
FOR	Forestry guidelines and regulations	Yes
CH1	Chanelisation measures	No
CH2	Chanelisation investigations	No
OG	Overgrazing measures	No
HQW	Protect high quality waters	No

Measures

Measures are necessary to ensure that we meet the objectives set out in the previous page of this report. Many measures are already provided for in national legislation and must be implemented. Other measures have been recently introduced or are under preparation. A range of additional potential measures are also being considered but require further development. Any agreed additional measures can be introduced through the update of Water Management Unit Action Plans during the implementation process.

You can read more about Basic Measures in 'River Basin Planning Guidance' and in other documents in our RBMP Document Library at www.wfdireland.ie.