

## CHAPTER 14 – NOISE AND VIBRATION

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## List of Acronyms

AOD	Above Ordnance Datum
BAT	Best Available Techniques
BPM	Best Practicable Means
CEMP	Construction & Environmental Management Plan
CRTN	Calculation of Road Traffic Noise
Development	All activities within the red line planning boundary (see Drawing ECL-BQ-000 in Technical Appendix TA1-1)
Development Site	The physical site on which the Development is to be located as defined by the red line planning boundary (see Drawing ECL-BQ-000 in Technical Appendix TA1-1)
DMRB	Design Manual for Roads & Bridges
EHO	Environmental Health Officer
END	European Union Directive 2002/49/EC relating to the assessment and management of environmental noise
ERF	Energy Recovery Facility
GDG	Guideline Development Group
HGV	Heavy Goods Vehicles
IEMA	Institute of Environmental Management and Assessment
IPPC	Integrated Pollution Prevention and Control
KEA	Key Environmental Aspect
LGV	Light Goods Vehicle
LOAEL	Lowest observable adverse effect
NEC	Noise Exposure Category
NSR	Noise Sensitive Receptor
PPV	Peak Particle Velocity
SOAEL	Significant observable adverse effect level
TAN	Technical Advice Note
WHO	World Health Organisation

## List of Amendments

- TA14-7 added to respond to comments from Powys CC EHO

## 14. NOISE

### 14.1. Introduction

14.1.1. This chapter assesses the likely significant environmental effects of the Development in relation to noise. It should be noted that in line with the Scoping Direction, vibration has been scoped out of the ES. It describes the methods used to assess the effects, the existing sound climate and the assessment of future baseline sound levels in the vicinity of the Development Site. In addition, the potentially affected noise sensitive receptors are identified. The chapter sets out direct and indirect likely significant effects arising from the construction operation, the decommissioning and operational phases of the Development and provides details of mitigation measures to control noise.

14.1.2. The assessment includes:

- description of the existing sound environment;
- outline of the likely evolution of the future baseline sound levels;
- identification of those aspects of the Development that may cause noise effects;
- predictions of noise levels during the operation phase upon the nearest Noise Sensitive Receptors (“NSRs”);
- details of potential cumulative effects where noise from other potential developments may also affect the same NSRs; and
- likely residual significant effects taking account of proposed mitigation.

14.1.3. Potential noise effects are considered in the context of the predicted background sound levels at nearest NSRs, which at this location are likely to be influenced by road traffic.

#### Scope

14.1.4. The noise assessment identifies potential noise impacts associated with the Development on neighbouring NSRs during both construction / decommissioning and operation. The scope of the assessment and agreement was reached in terms of baseline methodology, NSRs, appropriate guidance and standards and noise limits with Powys County Council (PCC) consultee. The assessment of vibration during the construction / decommissioning and operation phase was scoped out of the assessment as agreed with PCC (as detailed in section 15.5.1 of the Request for Scoping Direction and as confirmed in section 7.10 of the PINS EIA Scoping Direction). This chapter has therefore been informed by the Direction and consultation with PCC.

#### Consultation

14.1.5. It was agreed, following consultation with Powys County Council EHO, that the appropriate noise criteria relevant to the Development would relate to the following:

- Daytime (0700-2300 hours): Rating level not exceeding representative background sound level +4dB at NSRs, measured in accordance with BS4142: 2014. Relevant measurement period 1 hour in terms of LAeq.
- Night-time: Rating level not exceeding representative background sound level +4dB at NSRs or absolute limit of 30dB LAeq<sub>15mins</sub>, whichever is the higher,

measured in accordance with BS4142: 2014. Relevant measurement period 15 minutes in terms of LAeq.

- 14.1.6. The above was agreed as being a suitable approach due to the very low background sound levels, which would ensure no adverse impact would occur and levels would be well within sleep disturbance criteria (with open window).
- 14.1.7. The noise assessment has benefited from pre-application discussions with Powys County Council Environmental Health Officer and submissions relating to the scoping exercise.
- 14.1.8. The author of this assessment has over 35 years' experience in the field of industrial and environmental acoustics with a Masters' Degree in Acoustics and is a Member of the Institute of Acoustics, Member of the Association of Noise Consultants, Member of the Academy of Experts and an Incorporated Engineer (see Technical Appendix 1-2).

## **14.2. Relevant Legislation, Planning Policy & Guidance**

### **General**

- 14.2.1. To establish the impact of noise on existing NSRs it is necessary to consider the relevant noise guidance, standards and policy for an industrial development. The following section examines the guidance and establishes the methodology to be adopted for assessing noise impacts.
- 14.2.2. Information used in this assessment has been obtained from the following sources:
- ordnance Survey maps of the local area;
  - general layout of the Development;
  - Technical Advice Note ("TAN") 11, 'Noise' – 1997;
  - IPPC - Technical Guidance Note IPPC H3 Part 2 – Noise Assessment & Control;
  - British Standards BS4142: 2014+A1:2019, BS5228: 2009+A1:2014 and BS8233: 2014;
  - World Health Organisation: 'Guidelines for Community Noise' - April 1999;
  - World Health Organisation 'Night Noise Guidelines for Europe' – 2009;
  - World Health Organisation 'Environmental Noise Guidelines for the European Region':2018;
  - Department of Transport 'Calculation of Road Traffic Noise': 1988;
  - Design Manual for Roads and Bridges (DMRB), LA 111 Noise and Vibration – November 2019;
  - ISO 9613-2: 1996 Acoustics – Attenuation of Sound During Propagation Outdoors;
  - British Standards BS6472-1 2008 and BS7385:1993, Part 2;
  - New Zealand Transport Agency research paper entitled 'Ground Vibration from Road Construction' in May 2012;
  - Architectural Services Department, Hong Kong SAR Government 'Groundborne Vibration from Percussive Piling' 14th Asia Pacific Vibration Conference 5th - 8th December 2011;
  - Appendix C3: 'Construction and Demolition Vibration Study' – Jersey Future Hospital 15 June 2017; Ove Arup & Partners (Arup); and
  - NVC Library data.



- 14.2.3. The following section outlines the key planning policy and guidance that relates to the assessment of residential amenity and protection of residents from general environmental and industrial noise sources.
- 14.2.4. Within the introduction of Technical Advice Note (Wales) 11: 1997 `Noise` it states:  
*“This note provides advice on how the planning system can be used to minimise the adverse impact of noise without placing unreasonable restrictions on development or adding unduly to the costs and administrative burdens of business.”*
- 14.2.5. Technical Advice Note 11 (“TAN 11”) provides the following information:
- it indicates how noise issues should be handled in development plans and development control;
  - outlines ways of mitigating the adverse impact of noise;
  - provides specific guidance on noisy and noise-sensitive development;
  - introduces the use of noise exposure categories;
  - gives guidance on the use of planning conditions relating to noise.
- 14.2.6. The guidance introduces the concept of Noise Exposure Categories (“NEC”), which have been derived to assist local planning authorities in their consideration of planning applications for residential development near transport-related noise sources. The NEC procedure is only applicable for the introduction of a new residential development into an area with an existing noise source. Technical Appendix 14-1 provides guidance for various types of noise sources, which includes road traffic, aircraft and railways.
- 14.2.7. For reference, the recommended noise exposure categories for new dwellings near existing sources are shown below in Table 14-1. Note that these noise categories are based upon measurements taken in an open site (i.e. without any proposed attenuating features in place).
- 14.2.8. The level at the boundary of NEC A and NEC B is based on guidance provided by the World Health Organisation (“WHO”) health criteria from 1980, which states that *“general daytime outdoor noise levels of less than 55dB(A) Leq are desirable to prevent any significant community annoyance”*.
- 14.2.9. The night-time noise level at the boundary of NEC A and NEC B is also based upon the WHO health criteria, stating *“based on limited data available, a level of less than 35dB(A) is recommended to preserve the restorative process of sleep”*.
- 14.2.10. Table 14-1 provides an interpretation of the NEC categories in terms of granting planning permission.

**Table 14-1: NEC Categories**

NEC Category	Description	Noise Range $L_{Aeq,T}$ dB
A	Noise need not be considered as a determining factor in granting planning permission, although the noise level at the high end of the category should not be regarded as desirable.	<55dB(A) daytime (16hr) <45dB(A) night-time (8hr) Road, rail and mixed sources
B	Noise should be taken into account when determining planning applications and, where appropriate, conditions imposed to ensure an adequate level of protection.	55-63dB(A) daytime (16hr) 45-59dB(A) night-time (8hr) Road, rail and mixed sources

- 14.2.11. In applying these noise exposure categories, it states:  
*“Different indices have been used to describe noise from different sources, and limits have been set over different time periods. This has caused confusion, and this advice follows the move towards consistency advocated in BS 7445: 1991 by expressing all noises of  $L_{Aeq,T}$ . The recommended time periods are 0700-2300 and 2300-0700.”*
- 14.2.12. Within the general guidance it states *“where there is a clear need for new residential development in an already noisy area some or all NECs might be increased by up to 3dB(A) above the recommended levels. In other cases, a reduction of up to 3dB(A) may be justified.”*
- 14.2.13. For noisy industrial development, the guidance refers to BS 4142 - ‘Method for Rating Industrial Noise Affecting Mixed Residential and Industrial Areas’ (updated in 2014).

#### Other Guidance

##### **BS4142: 2014+A1:2019 ‘Methods for rating and assessing industrial and commercial sound’**

- 14.2.14. BS4142: 2014+A1:2019 ‘Methods for rating and assessing industrial and commercial sound’ is based on the measurement of background sound using LA90 noise measurements, compared to source noise levels measured in LAeq units. Once any corrections have been applied for source noise tonality, distinct impulses etc., the difference between these two measurements (i.e. known as the ‘rating’ level) determines the impact magnitude. Typically, the greater the difference, the greater the magnitude of the impact:
- a difference of around +10 dB or more is likely to be an indication of a significant adverse impact (although this can be dependent on the context); and
  - a difference of around +5dB is likely to be an indication of an adverse impact, depending on the context.
- 14.2.15. The lower the rating level is relative to the measured background sound level, the less likely it is that the specific sound source will have an adverse impact or a significant adverse impact. Where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low impact (although this can be dependent on the context).

14.2.16. In order to establish the rating level, corrections for the noise character need to be taken into consideration. The Standard states that when considering the perceptibility:  
*“Consider the subjective prominence of the character of the specific sound at the noise-sensitive locations and the extent to which such acoustically distinguishing characteristics will attract attention.”*

14.2.17. The subjective method adopted includes the character corrections provided in Table 14-2.

**Table 14-2: BS4142: 2014 Character Corrections**

Level of Perceptibility	Correction for tonal character dB	Correction for impulsivity dB	Correction for intermittency dB	Correction for 'other character' dB
Not perceptible	0	0	0	0
Just perceptible	+2	+3	0	0
Clearly perceptible	+4	+6	+3*	+3*
Highly perceptible	+6	+9	+3*	+3*

Note to Table

\*Standard defines this should be readily distinctive against the residual acoustic environment, it is interpreted therefore to be either clearly or highly perceptible as a character.

14.2.18. If characteristics likely to affect perception and response are present in the specific sound, within the same reference period, then the applicable corrections ought normally to be added arithmetically. However, if any single feature is dominant to the exclusion of the others then it might be appropriate to apply a reduced or even zero correction for the minor characteristics

**BS8233: 2014 ‘Guidance on sound insulation and noise reduction for buildings’**

14.2.19. The British Standard BS8233 provides additional guidance on noise levels within buildings. These are based on the WHO recommendations and the criteria given in BS8233 for unoccupied spaces within residential properties.

14.2.20. The guidance provided in section 7.7 of BS8233 provides recommended internal ambient noise levels for resting, dining and sleeping within residential dwellings. Table 14-3 provides detail of the levels given in the standard.

**Table 14-3: BS8233:2014 Indoor ambient noise levels for dwellings**

Activity	Location	07:00 to 23:00	23:00 to 07:00
Resting	Living Room	35 dB LAeq,16hours	-
Dining	Dining room/area	40 dB LAeq,16hours	-
Sleeping (daytime resting)	Bedroom	35 dB LAeq,16hours	30 dB LAeq,8hours
Study and work requiring concentration	Staff/Meeting Room, Training Room	35-45dB LAeq8hours	-
	Executive Office	35-45dB LAeq8hours	-

14.2.21. This standard would be appropriate to apply to existing or proposed residential development. The Development noise contribution should be within the proposed internal noise levels, which would include the following noise limits:

- Living room areas:  $\leq 35\text{dB } L_{Aeq,16\text{hours}}$  (0700-2300 hours) [equivalent to an external level of approximately  $65\text{dB } L_{Aeq,16\text{hours}}$  based on typical standard double-glazed units in the closed position and approximately  $50\text{dB } L_{Aeq,16\text{hours}}$  in the open position]
- Bedrooms:  $\leq 30\text{dB } L_{Aeq,8\text{hours}}$  (2300-0700 hours) [equivalent to an external level of approximately  $60\text{dB } L_{Aeq,8\text{hours}}$  based on typical standard double glazed units in the closed position and approximately  $45\text{dB } L_{Aeq,8\text{hours}}$  in the open position].
- Offices:  $35\text{dB}$  to  $45\text{dB } L_{Aeq,8\text{hours}}$  [equivalent to an external level of approximately  $65\text{dB}$  to  $75\text{dB } L_{Aeq,8\text{hours}}$  based on typical standard double-glazed units in the closed position].

14.2.22. The above internal bedroom limits would comply with sleep disturbance criteria defined by WHO. The WHO night noise guidelines for Europe refers to sleep disturbance limit of  $42\text{dB}$ - $45\text{dB } L_{Amax}$  for regular peak events within bedrooms [which is approximately  $57\text{dB}$ - $60\text{dB } L_{Amax}$  external to the bedroom window in the open position].

#### **World Health Organisation (WHO) Guidelines for Community Noise: April 1999**

14.2.23. This document provides further updated information on noise and its effects on the community. Within the document for noise 'In Dwellings', it states that "The effects of noise in dwellings, typically, are sleep disturbance, annoyance and speech interference". For bedrooms, the critical effect is sleep disturbance. Indoor guideline values for bedrooms are  $30\text{dB } L_{Aeq}$  for continuous noise and  $45\text{dB } L_{Amax}$  for single sound events. Lower noise levels may be disturbing depending upon the nature of the noise source. At night-time, outside sound levels about 1 metre from the facades of living spaces should not exceed  $45\text{dB } L_{Aeq}$ , so that people may sleep with bedroom windows open. This value was obtained by assuming that the noise reduction from outside to inside with the window open is  $15\text{dB}$ . To enable casual conversation indoors during daytime, the sound level of interfering noise should not exceed  $35\text{dB } L_{Aeq}$ . To protect the majority of people from being seriously annoyed during the daytime, the outdoor sound level from steady, continuous noise should not exceed  $55\text{dB } L_{Aeq}$  on balconies, terraces and in outdoor living areas. To protect the majority of people from being moderately annoyed during the daytime, the outdoor sound level should not exceed  $50\text{dB } L_{Aeq}$ . Where it is practical and feasible, the lower outdoor sound level should be considered to represent the maximum desirable sound level for new development.

#### **World Health Organisation (WHO) - Night noise guidelines for Europe: 2009**

14.2.24. The WHO regional office for Europe set up a working group of experts to provide scientific advice to the Member States for the development of future legislation and policy action in the area of assessment and control of night noise exposure. Considering the scientific evidence on the thresholds of night noise exposure indicated by  $L_{\text{night,outside}}$  as defined in the Environmental Noise Directive (2002/49/EC), an  $L_{\text{night,outside}}$  of  $40\text{dB}$  should be the target of the night noise guidance (NNG) to protect the public, including the most vulnerable groups such as children, the chronically ill and the elderly.  $L_{\text{night,outside}}$  value of  $55\text{dB}$  is

recommended as an interim target for the countries where the NNG cannot be achieved in the short term for various reasons, and where policy-makers choose to adopt a stepwise approach.

### **World Health Organisation (WHO) – Environmental Noise Guidelines for the European Region: 2018**

- 14.2.25. The objective of the ‘Environmental Noise Guidelines for the European Region’ is stated in the Executive Summary of the report:

*“The main purpose of these guidelines is to provide recommendations for protecting human health from exposure to environmental noise originating from various sources: transportation (road traffic, railway and aircraft) noise, wind turbine noise and leisure noise. Leisure noise in this context refers to all noise sources that people are exposed to due to leisure activities, such as attending nightclubs, pubs, fitness classes, live sporting events, concerts or live music venues and listening to loud music through personal listening devices. The guidelines focus on the WHO European Region and provide policy guidance to Member States that is compatible with the noise indicators used on the European Union’s END [European Union Directive 2002/49/EC relating to the assessment and management of environmental noise (“END”).”*

- 14.2.26. The document provides recommendations for road traffic, railway, aircraft, wind turbine and leisure noise based on a strong or conditional recommendation.

- 14.2.27. In terms of road traffic noise, where NSRs are predominantly affected by road traffic the ‘strong’ recommendation for protection of residential receptors is as follows:

*“For average noise exposure, the GDG [Guideline Development Group] strongly recommends reducing noise levels produced by road traffic below 53 decibels (dB) Lden, as road traffic noise above this level is associated with adverse health effects. For night noise exposure, the DGG strongly recommends reducing noise levels produced by road traffic during night time below 45dB Lden, as night-time road traffic noise above this level is associated with adverse effects on sleep.”*

### **IPPC - Technical Guidance Note IPPC H3 Part 2 – Noise Assessment & Control**

- 14.2.28. This guidance note remains current, despite the change in Environmental Permitting Regulations and is approved for use by Natural Resources Wales.

- 14.2.29. Integrated Pollution Prevention and Control (“IPPC”) is a regulatory system that employs an integrated approach to control the environmental impacts of certain industrial activities. It involves, determining the appropriate controls for industry, to protect the environment through a single permitting process. To gain an Environmental Permit, operators have to show that they have systematically developed proposals to apply the ‘Best Available Techniques’ (“BAT”) and meet certain other requirements, taking account of relevant local factors.

- 14.2.30. In terms of noise specifically, the use of BAT has to be considered and balanced within the wider context of other releases to different media (air, land and water) and taking issues such as usage of energy and raw materials into account. Noise cannot therefore be

considered in isolation from other impacts on the environment.

- 14.2.31. The definition of pollution includes “emissions which may be harmful to human health or the quality of the environment, cause offence to human senses or impair or interfere with amenities and other legitimate uses of the environment”. BAT is therefore likely to be similar, in practice, to the requirements of the Statutory Nuisance legislation which requires the use of “best practicable means” to prevent or minimise noise nuisance. In the case of noise, “offence to human senses” may be judged by the likelihood of complaints. However, the lack of complaint should not necessarily imply the absence of a noise problem. In some cases, it may be possible, and desirable, to reduce noise emissions still further at reasonable costs and this may therefore be BAT for noise emissions.
- 14.2.32. In summary, the aim of BAT should be to achieve the following:
- Underpinning of good practice - a basic level of which the operator should employ for the control of noise including adequate maintenance of any parts of plant or equipment whose deterioration may give rise to increases in noise. For example, this would include bearings, air handling plant, the building fabric as well as specific noise attenuation measures associated with plant, equipment or machinery.
  - Noise levels should not be loud enough to give reasonable cause for annoyance for persons in the vicinity, which is a more appropriate environmental standard than that of Statutory Nuisance and is normally the aim of most planning or other conditions applied by Local Authorities.
  - Prevention of “*creeping background*” (creeping ambient i.e. LAeq levels), which is the gradual increase in sound levels as industry expands and areas develop.
- 14.2.33. The indicative requirements apply to both new and existing activities, but it is more difficult to justify departures from them in the case of new activities. Indeed, because the requirements for noise are likely to be strongly influenced by the local environmental conditions, new installations are expected to meet BAT from the outset and to demonstrate that noise reduction or prevention has been built into the process design. For most existing plant, especially where there are no existing noise limits, the focus is on good practice (BAT) and the need to ensure that there is no reasonable cause for annoyance. In assessing any noise impact, it is more normal to monitor existing levels and apply corrections and calculations, rather than rely on predictions.
- 14.2.34. The guidance makes reference to BS4142:1997, BS8233:1999 and WHO guidance for absolute levels for protection of community annoyance. The two British Standards have been updated since the guidance was published and the latest versions have been considered in this assessment.

### **Road Traffic Noise**

- 14.2.35. No guidance exists to assess increased traffic noise on existing roads from new developments. However, any change in noise levels along affected roads would be relevant to subsequent planning applications.
- 14.2.36. The standard index used in the UK for describing road traffic noise is LA10, which is the ‘A’ weighted sound level in dB exceeded for 10% of the assessment period (ref. LA 111 Terms and Definitions). Daytime noise is assessed using the 18-hour LA10, following the



methodology given in the Department of Transport's Calculation of Road Traffic Noise ("CRTN").

- 14.2.37. For the both construction phase of the ERF and subsequent operational phase it is proposed that the majority of HGV movements would be restricted to a 12-hour daytime period. Therefore, an assessment has been undertaken on the impact of road traffic in relation to the increase in noise level based on a 12-hour average using an LA10 index. In respect to impacts, a 12-hour period would present a worst case compared with the use of an 18-hour time frame and is therefore considered to represent a robust assessment.
- 14.2.38. For road traffic noise, the CRTN calculation method can be used to predict noise levels from the movement of traffic along adjacent roads. Construction and operation predicted noise levels at sensitive receptors can be compared with predicted noise without the Development, to establish any likely significant increase in overall traffic noise. Traffic data for the CRTN assessment presented in this chapter is based on the figures contained within the Transport Assessment ("TA") (see Technical Appendix 8-1). The TA sets out existing and predicted traffic data for the assessment year based on established growth factors and known committed developments. In this regard the impact of road traffic noise is inherently a cumulative assessment.
- 14.2.39. According to CRTN where the traffic flow volumes are very low (i.e. where traffic flows below 50 vehicles per hour or 1,000 vehicles per 18 hours) then the CRTN methodology is unreliable (ref. paragraph 30 of CRTN). For the assessment of on-site traffic, we have therefore applied ISO9613-2 calculation methodology using a 'line source' to represent moving vehicles with appropriate speed and empirical sound power levels obtained from other similar sites in the UK.

#### **Guidance on Construction Noise**

##### **BS 5228-1: 2009+A1: 2014 Code of Practice for Noise and Vibration Control on Construction and Open Sites**

- 14.2.40. BS5228 refers to: "the need for the protection against noise and vibration of persons living and working in the vicinity of, and those working on, construction and open sites. It recommends procedures for noise and vibration control in respect of construction operations and aims to assist architects, contractors and site operatives, designers, developers, engineers, local authority environmental health officers and planners."
- 14.2.41. Part 1 deals with noise in terms of background legislation and gives recommendations for basic methods of noise control relating to construction and open sites where significant noise levels may be generated. The guidance is aimed at giving advice on achieving 'best practice' in controlling noise and vibration from construction and open sites. There is an example of noise limits given in Annex E, which sets out cut-off limits between 65dB(A) and 75dB(A) or 5dB(A) above the ambient noise, whichever is the greater. Part 2 of BS 5228 deals specifically with vibration control and provide the legislative background to the control of vibration and recommendations for controlling vibration at source and management controls (e.g. liaison with communities, supervision, preparation and choice of plant etc.).



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### **14.3. The Existing Environment**

- 14.3.1. A full description of the existing environment is provided in Chapter 5 The Existing Environment. The location of the Development is shown on Figure 1-1 in Chapter 1.

#### **Environmental Assessment Boundary**

- 14.3.2. The noise assessment will consider the NSRs that are closest to the Site boundary around the Development. The nearest receptors to the Development Site will experience the greatest noise and vibration impacts.
- 14.3.3. The Development Site is located within Buttington Quarry, approximately 5km north east of Welshpool. The quarry is adjacent to and accessed from the A458 Welshpool-Shrewsbury trunk road. The Welshpool to Shrewsbury railway line is located north of the quarry.
- 14.3.4. The quarry is located within the Severn Valley, which is generally formed by open countryside that is bounded to the northeast and southeast respectively by Breidden Hills and Long Mountain. The River Severn passes some 1.2km to the north west of the site.
- 14.3.5. The village of Buttington is located approximately 2km to the south of the quarry, and Trewern village circa 1.5km to the north. The small settlement of Cefn (generally accepted to be part of Trewern) lies approximately 200m north of the quarry site boundary.
- 14.3.6. For identification purposes, the proposed Development Site is centred on National Grid Reference SJ 26783 10111 (OSGR: 326690, 310106).
- 14.3.7. The main area of the Development Site is located within the quarry void, which is set within a small ridge of rising ground. The base of the quarry extends down to a depth of approximately 88m AOD relative to the adjoining unquarried land at approximately 120m AOD.
- 14.3.8. The local sound environment is generally formed by local road traffic and occasional farming and industrial activities.
- 14.3.9. The fixed monitoring positions selected are representative of the residential areas around the DNS application boundary.
- 14.3.10. The monitoring positions are shown on Figure 14-1. The noise monitoring positions are representative of nearest residential receptors adjacent to the Development and provide broadband data of the existing sound climate at these receptors. Details of the instrumentation used for the survey are detailed in Appendix 14-2.

**Figure 14-1: Baseline Sound Monitoring & Receptor Positions**



Key to Figure 14-1

- Baseline Noise Monitoring Positions
- Nearest Residential Receptor Areas
- Ecological Receptor
- Commercial Receptor

14.3.11. The Development would operate 24 hours per day and 7 days per week. Waste would be brought to the ERF via HGVs primarily between the hours of 07.00 and 19.00 Monday to Friday and over 6 hours on a Saturday and no deliveries on Sundays or Public Holidays.

**Base Line Conditions**

14.3.12. A sound survey has been carried out in the vicinity of the NSRs to the Proposed Development to determine existing representative background and residual sound levels. The aim of the sound survey was to:

- identify the existing baseline sound levels for use as a reference for background and residual sound levels in the assessment of impacts related to the construction and operation of the Development;
- enable the assessment baseline to be established and understand the effects of existing or proposed developments on the future baseline; and
- characterise the nearest noise sensitive receptors (NSRs) or noise sensitive sites.

14.3.13. The methodology and approach to the sound survey and assessment included the following:

- establishing the nearest NSRs;
- evaluation of present and assessment background and ambient sound levels;
- evaluation of noise sources from the Development in terms of typical operating levels;
- assessment of specific noise sources in relation to appropriate guidance and

- standards (e.g. BS4142: 2014+A1:2019, BS8233: 2014); and
  - identification of any noise mitigation measures necessary, where noise generated from the Development has been identified as exceeding noise limits or would have the potential to cause a significant increase in noise levels from the assessment baseline.
- 14.3.14. The existing baseline sound survey was undertaken over a complete week period from Friday 20<sup>th</sup> through to Thursday 26<sup>th</sup> July 2019 at five fixed locations (as agreed with Powys City Council EHO) and is therefore considered to provide representative baseline sound levels.
- 14.3.15. The existing background sound survey was carried out in accordance with the advice given in BS4142: 2014.
- 14.3.16. The monitoring positions were as follows:
- Location P1 – Rear of Cefn Cottage north of the site. Monitoring position P1 is representative of the nearest receptors to the north of the Development, which are located below the crest of the quarry on high ground. Noise levels at this location are generally affected by road traffic noise from the A458 road. The monitoring position chosen was located on land to the rear of the property on open high ground. Photo 1 in Appendix 14-2 shows the location.
  - Location P2 – Sale Farm to the west of the site. Monitoring position P2 was within the land around the vacant and derelict farm buildings of Sale Farm, which is located west of the Development. The noise climate at this location is generally formed by distant road traffic movement, occasional local vehicle movements and farming activities. Monitoring was on land to the side of the old farmhouse circa 50m from the Red Line Boundary. Photo 2 in Appendix 14-2 shows the location.
  - Location P3 – Whitehouse Farm – southeast. Monitoring position P3 was within the curtilage of Sale Farm farmhouse, which is located east of the Development. The noise climate at this location is generally formed by distant road traffic movement, occasional local vehicle movements and farming activities. Monitoring was on an open grassed garden area in front of the farmhouse circa 120m from the Red Line Boundary. Photo 3 in Appendix 14-2 shows the location.
  - Location P4 – Brookside adjacent to the site entrance. Position P4 was chosen to represent nearest receptors to the site access off the A458 road. The general noise climate is dominated by local road traffic noise. Monitoring was undertaken within the rear garden of the property southwest of the dwelling. The Brookside property boundary is adjacent to the site entrance and red line boundary. Refer to Photo 14 in Appendix 1-2 for monitoring position.
  - Location P5 – Position P5 was chosen to represent York House which is located adjacent to the site access road behind an existing embankment. The monitoring position was taken on top of the embankment and set back around 20m from the access road. Refer to Photo 4 in Appendix 14-2 for monitoring position.
- 14.3.17. See Figure 14-1 and Appendix 14-2 for further detail on monitoring positions.
- 14.3.18. Although ambient noise levels can vary depending on weather conditions, the purpose of the baseline survey is to monitor sound levels under suitable weather conditions (i.e. dry, light winds (<5m/s) and temperature above 0deg). Appendix 14-3 provides the meteorological data relevant to the baseline survey undertaken for this assessment

showing suitable weather conditions. This then provides a typical and representative indication of ambient conditions. The effect of wind on noise levels can be significant, as an example, BS8233: 2014 (Ref. Paragraph 6.8) states:

*'Whether noise levels are measured or predicted, wind gradients, temperature gradients and turbulence affect the level of received sound and audibility over short periods. The magnitude of these effects, i.e. variations in noise level and audibility, increases with increasing distance between source and receptor. The effects are asymmetrical and, for distances of 500m to 1000 m, typically range from increasing the level by typically 2 dB downwind to reducing it by typically 10 dB upwind. It is not usually practicable to use these factors in design, but the prevailing wind direction should be considered when planning building orientation. Noise from wind and precipitation, including the wind-generated noise from trees, can also affect noise measurements.'*

14.3.19. For the purpose of this assessment, it is assumed that monitoring and assessment of operational noise from the Development would be undertaken under suitable weather conditions (i.e. during testing and commissioning of the Development) and therefore any significant positive or negative vector from wind direction is not representative. The effect of wind speed and direction can also increase background noise levels thereby masking any potential increase in site-specific noise levels. For this reason, it is assumed that typical weather conditions apply and no increase or decrease for the wind vector is required.

14.3.20. In consideration of the cross section of monitoring positions and locations, which were in appropriate amenity areas of properties and included a weekend period, it is considered that the results represent a good indication of existing baseline levels. Any monitoring periods where rainfall occurred, or wind speeds were above 5m/s or temperature below 0°C were removed from the data set for analysis. This can then be referenced for the assessment of impacts for the Development operation.

#### Existing Background Sound Survey Results

14.3.21. The results of measurements taken at the fixed monitoring positions are presented in Tables 14-4 to 14-5 and detailed measurements are provided in Appendix 14-3.

**Table 14-4: Existing Background Sound Levels at Monitoring Positions -Daytime**

Monitoring Position	Average LAeq dB	Median LA90 dB	Mean LA90 dB	Most Common Place dB	LAmx dB	Representative LA90 dB
P1. Rear Cefn Cottage	55	42	42	42	61-84	42
P2. Sale Farm	42	32	32	32	37-82	32
P3. Brookside	65	43	42	45	73-99	42
P4. Whitehouse Farm	46	34	33	36	36-91	33
P5. Rear of York House	56	42	42	46	63-89	42

**Table 14-5: Existing Background Sound Levels at Monitoring Positions -Night-time**

Monitoring Position	Av. LAeq dB	Median LA90 dB	Mean LA90 dB	Most Common Place dB	LAmx dB	Representative LA90 dB
P1. Rear Cefn Cottage	49	27	29	25	55-75	25
P2. Sale Farm	40	22	24	20	36-70	20
P3. Brookside	59	32	34	31	69-88	31
P4. Whitehouse Farm	40	24	27	23	30-79	23
P5. Rear of York House	50	29	31	27	62-77	27

14.3.22. The results of existing background sound measurements taken at the residential monitoring positions indicate that representative background sound levels during the daytime period (0700-2300 hours) vary between 32dB and 42dB LA90 and during the night-time period (i.e. between 2300-0700 hours) between 20dB and 31dB LA90.

#### Identification of Residential Noise Sensitive Receptors

- 14.3.23. Based on distance relative to the Development, the nearest residential properties are located
- Receptor R1 – Lower Cefn located approximately 320m to the north-east of the centre of the red line boundary;
  - Receptor R2 – Cefn Cottage located west and to the centre of the development at a distance of approximately 110m from the red line boundary.
  - Receptor R3 – Cefn Farm located approximately 160m to the north-west of the red line boundary;
  - Receptor R4 – Sale Farm located approximately 300m to the east of the centre of the red line boundary;
  - Receptor R5 – Green Farm located approximately 280m to the south-west of the centre of the red line boundary;
  - Receptor R6 – Whitehouse Farm located approximately 340 to the south- west of the red line boundary;
  - Receptor R7 – Brookside located approximately 25m to the west of the red line boundary, adjacent to the site entrance; and
  - Receptor R8 – York House located approximately 10m to the south of the red line boundary and circa 450m southwest of the Site, adjacent to the site entrance.

#### Commercial, Ecological & Future Receptors

14.3.24. Commercial receptors in the vicinity of the Development includes the offices of the industrial buildings immediately southwest of the Site identified as commercial receptors containing offices (Receptor R9). This receptor is located adjacent to the access road to the Site and approximately 260 metres from the Site entrance.

- 14.3.25. In respect of Ecological receptors, the Ecology Chapter identifies potential Badger sets towards the northwest of the Site within a woodland area circa 70m from the Site boundary on higher ground relative to datum levels and below the top of the quarry (Receptor R10).
- 14.3.26. In terms of future receptors Application ref. 20/0045/FUL by Border Hardcore for a Storage and Distribution Centre has been given planning permission within an existing building at the entrance end of the quarry site. The effect of any additional traffic in terms of committed development has been taken into account in the traffic assessment impacts.
- 14.3.27. There are no known future receptors proposed that would be of greater sensitivity than those considered in this assessment.

#### **Likely Future Conditions**

- 14.3.28. The cumulative effects of other development in the vicinity of the Development, whether proposed or permitted have been considered in Section 14.4.74 of this Chapter to show the impact on future baseline levels.
- 14.3.29. If the Development does not proceed, then the quarrying operations are likely to continue which could result in increased noise and vibration. Traffic movements, particularly HGVs, would substantially increase causing an increase in road traffic noise.
- 14.3.30. The site is zoned for employment use, once quarried out to a flat development platform additional small to medium industrial units would be constructed. The potential uses for these units is unknown, therefore any potential noise impact associated with them is unknown.
- 14.3.31. Other factors that would influence future baseline levels include the natural growth of road traffic along the local road network, which would gradually increase noise levels at NSRs over time.

#### **14.4. Environmental Effects Assessment**

- 14.4.1. The level of an effect is a function of the sensitivity or importance of the receiver, or receptor, and the scale or magnitude of the effect. In the case of this assessment the level of the effect has been determined by reference to existing guidance and standards that are explained below. In terms of this ES, the significance criteria are provided in Section 14.5. of this Chapter together with the overall assessment of significance based on the requirements of methodology in Chapter 2.
- 14.4.2. For the purposes of this Chapter, the impact of the construction and decommissioning phase have been considered together, as both phases will have a similar impact on the noise climate.
- 14.4.3. Four types of receptor have been identified:
- residents of existing and proposed houses adjacent to the Development who could experience site construction noise during daytime periods;



- residents of existing and proposed houses adjacent to the Development who could experience site operational noise during daytime and night-time periods;
- commercial offices of business premises adjacent to the Development who could experience site operational noise during the daytime.
- residents of existing houses who could experience additional road noise from the construction, operation and decommissioning of the Development; and
- ecological sensitive sites, which may have wildlife receptors.

### Construction and Decommissioning –Residents - Noise Assessment Criteria

- 14.4.4. For residents of houses that could be exposed to construction and decommissioning noise, BS5228:2009+A1:2014 is considered to be the appropriate standard. This standard does not prescribe limits but requires ‘best practicable means’ (“BPM”) to be employed to control noise generation. The criterion therefore is that BPM should be employed and conditions implemented for example to restrict construction noise to non-sensitive hours.
- 14.4.5. The construction and decommissioning impact semantic scale, set out in Table 14.7, is based on the ABC method of assessment described in Annex E of BS5228, which sets out threshold values depending upon the ambient noise at receptors, which have been defined from the baseline sound survey.
- 14.4.6. According to the guidance found within the DMRB LA 111, the lowest observable adverse effect level (“LOAEL”) and significant observable adverse effect level (“SOAEL”) for noise sensitive receptors during construction are shown in Table 14-6.

**Table 14-6: Construction Time Period – LOAEL and SOAEL**

Time Period	LOAEL	SOAEL	Guidance Level LAeq <sub>1hr</sub> dB
Day (0700-1900 hours Weekday and 0700-1200 Saturdays)	Baseline noise levels L <sub>Aeq,T</sub>	Threshold level determined as per BS5228-1:2009+A1:2014 Section E3.2 and Table E.1 BS 5228-1:2009+A1:2014	65-70
Night (2300-0700 hours)	Baseline noise levels L <sub>Aeq,T</sub>	Threshold level determined as per BS5228-1:2009+A1:2014 Section E3.2 and Table E.1 BS 5228-1:2009+A1:2014	45-50
Evening and weekends (time periods not covered above)	Baseline noise levels L <sub>Aeq,T</sub>	Threshold level determined as per BS5228-1:2009+A1:2014 Section E3.2 and Table E.1 BS 5228-1:2009+A1:2014	55-60

- 14.4.7. The magnitude of impact for construction noise is outlined in Table 14-7 (as defined in DMRB LA 111).



**Table 14-7: Impact Magnitude Category: Construction & Decommissioning Noise**

Magnitude of Impact	Construction Noise Level
Negligible	Below LOAEL
Minor (Slight)	Above or equal to LOAEL and below SOAEL
Moderate	Above or equal to SOAEL and below SOAEL +5dB
Major (Substantial/Severe)	Above or equal to SOAEL +5dB

**Construction Phase – Road Traffic Noise Assessment Criteria**

14.4.8. The magnitude of impact for construction noise is outlined in Table 14-8 (as defined in DMRB LA 111).

**Table 14-8: Impact Magnitude Category: Construction Road Traffic Noise**

Magnitude of Impact	Increase in basic noise level of closest public road used for construction traffic (dB)
Negligible	Less than 1.0
Minor (Slight)	Greater than or equal to 1.0 and less than 3.0
Moderate	Greater than or equal to 3.0 and less than 5.0
Major (Substantial/Severe)	Greater than or equal to 5.0

14.4.9. It should be noted, construction noise and construction traffic noise shall constitute a significant effect where it is determined that a major or moderate magnitude of impact will occur for a duration exceeding:

- 1) 10 or more days or nights in any 15 consecutive days or nights;
- 2) a total number of days exceeding 40 in any 6 consecutive months.

**Operational Noise – Assessment Criteria**

14.4.10. Table 14-9 shows the proposed impact magnitude methodology considering the guidance contained within BS4142: 2014+A1:2019 for fixed and mobile plant noise (e.g. fans, turbines and Site HGV movements etc.).

**Table 14-9: Impact Magnitude Scale – Future Noise Against Existing in Accordance with BS4142:2014 (Operational Phase)**

Rating Level Above Background Noise dB(A) as BS4142:2014+A1:2019	Description of Effect	Impact Magnitude
-10 to 0	No discernible effect on the receptor	Negligible
+0.1 to +4.4	Non-intrusive - Noise impact can be heard but does not cause any change in behaviour or attitude. Can slightly affect the character of the area but not such that there is a perceived change in the quality of life.	Slight
+4.5 to +9.4	Intrusive - Noise impact can be heard and causes small changes in behaviour and/or attitude. Affects the character of the area such that there is a perceived change in the quality of life. Potential for non-awakening sleep disturbance.	Moderate
+9.5 or greater	Disruptive – Causes a material change in behaviour and/or attitude e.g. avoiding certain activities during periods of intrusion. Potential for sleep disturbance resulting in difficulty getting to sleep. Quality of life diminished due to change in character of the area.	Substantial
Undefined*	Physically Harmful – Significant changes in behaviour and/or inability to mitigate effect of noise leading to psychological stress or physiological effects e.g. regular sleep deprivation/awakening; loss of appetite, significant, medically definable harm	Severe

- 14.4.11. It should be noted, the ‘rating’ level is the difference between the noise contribution from Site and the existing background sound level allowing for any adjustments required for noise characteristics (i.e. tonal, impulsive or intermittent noise character). The Standard advises that rounding of numbers to one decimal place should relate to levels of 0.5dB or above, which is reflected in the table limits. The impact magnitude scales in Tables 14-10 to 14-12 are used in the assessment of operational noise impacts.
- 14.4.12. Where the rating level is undefined, the level at which physical harm occurs will be dependent upon a number of site-specific factors, which may include type and character of noise source, location, human sensitivities, duration and receptor expectations etc.
- 14.4.13. The Institute of Environmental Management and Assessment (“IEMA”) has provided ‘Guidelines for Environmental Noise Impact Assessment’. The guidelines set out an example of how changes in noise level may be assessed in terms of residual LAeq. This assists in determining the impact of Site operational noise relative to the context of the noise climate, which is detailed in Table 14.13.

**Table 14-10: Impact Magnitude Scale – General Site Noise**

Change in Sound Levels LAeq dB	Description of Effect	Impact Magnitude
< +2.9	No discernible effect on the receptor	Negligible
+3.0 to +4.9 (high receptor sensitivity)	Non-intrusive - Noise impact can be heard but does not cause any change in behaviour or attitude. Can slightly affect the character of the area but not such that there is a perceived change in the quality of life.	Slight
+5.0 to +9.9 (high receptor sensitivity)	Intrusive - Noise impact can be heard and causes small changes in behaviour and/or attitude. Affects the character of the area such that there is a perceived change in the quality of life. Potential for non-awakening sleep disturbance.	Moderate
+10 or greater (high receptor sensitivity)	Disruptive – Causes a material change in behaviour and/or attitude e.g. avoiding certain activities during periods of intrusion. Potential for sleep disturbance resulting in difficulty getting to sleep. Quality of life diminished due to change in character of the area.	Substantial
Undefined*	Physically Harmful – Significant changes in behaviour and/or inability to mitigate effect of noise leading to psychological stress or physiological effects e.g. regular sleep deprivation/awakening; loss of appetite, significant, medically definable harm	Severe

Note to Table

\*The level at which physical harm occurs will be dependent upon a number of site-specific factors, which may include type and character of noise source, location, human sensitivities, duration and receptor expectations etc.

**Table 14-11: Impact Magnitude Scale – Absolute Noise (Operational Phase) in accordance with WHO guidelines (night-time)**

Site Noise Levels LAeq dB 15mins	Subjective Response	Impact Magnitude
≤35	Complaint highly unlikely	Negligible
>35 to ≤40	Complaint unlikely	Slight
>40 to 45	Marginal significance	Moderate
>45	Complaint Likely	Substantial
>55	Complaint highly likely	Severe

14.4.14. The WHO thresholds for night noise exposure indicated by  $L_{\text{night, outside}}$  as defined in the Environmental Noise Directive (2002/49/EC), relates to a  $L_{\text{night, outside}}$  level of 40dB to protect the public, including the most vulnerable groups such as children, the chronically ill and the elderly.

14.4.15. In order to determine the level of the effect, not only must the magnitude of this impact be determined but also the sensitivity of the receptors to the impact. For this assessment,

the categories presented in Table 14.12 have been adopted.

**Table 14-12: Receptor Sensitivity**

Receptor Sensitivity	Type of Receptor
High	Dwellings / residential properties including houses, flats, old people's homes, hospitals, caravans
Medium	Schools, churches and open spaces/conservation areas.
Low	Commercial premises including retails and offices etc.
Negligible	Industrial premises including warehouses and distribution etc.

- 14.4.16. Based upon the assessment of impact magnitude and the sensitivity of individual receptors, the matrix shown in Table 14-13 has been developed in order to provide an indication of the possible level of effect for each predicted noise impact. Given that there are many factors which may affect the level of the effect of an impact, not least, the character of the noise and timescales over which the noise operates, the overall level of effect must be assessed on an individual basis using professional judgement and experience. Therefore, whilst the matrix provides a useful indication of the likely significance it cannot be applied in all situations.

**Table 14-13: Level of Effect Matrix**

Impact Magnitude	Receptor Sensitivity		
	High	Medium	Low/Negligible
Severe	Major	Major / Moderate	Moderate / Minor
Substantial	Major / Moderate	Moderate	Minor
Moderate	Moderate	Moderate / Minor	Minor / Neutral
Slight	Minor	Minor / Neutral	Neutral
No Significant Impact (Negligible)	Neutral	Neutral	Neutral

- 14.4.17. Where a level of effect is defined as Major or Major / Moderate then the effect is likely to be considered significant i.e. an impact that is likely to be a key material factor in the decision-making process.

#### Road Traffic Noise – Assessment Criteria

- 14.4.18. To assess the likely impact on noise sensitive receptors from any traffic noise generated as a result of the Development on the local road network, noise calculations have been undertaken using CRTN methodology and traffic flow information for the Development.
- 14.4.19. The DMRB LA 111 provides guidance on the magnitude of change in terms of road traffic noise. The procedure for assessing noise impacts advises the use of a LA<sub>10</sub> measurement index based on a daytime 18-hour time period (i.e. 0600 to 2400 hours) and night-time period (i.e. 0000-0600 hours). Further assessment of the impact would be required where

changes of 1dB(A) or more are expected in the short-term and changes of 3dB(A) in the long term.

- 14.4.20. DMRB LA 111 defines the short term and long-term scenarios are considered to represent the situation when a new road opens (short term) and 15 years after a road opens (long term). The magnitude of change criteria are set out in Table 14.14 for the short term and 14.15 for the long term.

**Table 14-14: Example of Magnitude of Impact for Changes in Road Traffic Noise in the Short Term**

Short Term Magnitude	Short Term Noise Change (dB LA10,18hr OR Lnight)
Negligible	Less than 1.0
Minor (Slight)	1.0 to 2.9
Moderate	3.0 to 4.9
Major (Substantial/Severe)	Greater than or equal to 5.0

**Table 14-15: Example of Magnitude of Impact for Changes in Road Traffic Noise in the Long Term**

Short Term Magnitude	Short Term Noise Change (dB LA10,18hr OR Lnight)
Negligible	Less than 3.0
Minor (Slight)	3.0 to 4.9
Moderate	5.0 to 9.9
Major (Substantial/Severe)	Greater than or equal to 10.0

- 14.4.21. The impact magnitude categories can then be correlated with the receptor sensitivity categories provided in Table 14-12 to establish a level of effect as defined in Table 14-13.
- 14.4.22. DMRB LA 111 defines the short term and long-term scenarios are considered to represent the situation when a new road opens (short term) and 15 years after a road opens (long term).

#### Assumptions and Limitations

- 14.4.23. No specific limitations were encountered in the preparation of this assessment chapter for the Development. In terms of the cumulative effects from permitted development, there was limited information on submitted application documentation from developments relating to likely noise generation, but where data was available, analysis has been provided.

#### Construction Effects – Plant Noise

- 14.4.24. Construction works would involve the movement of soils, piling and the construction of new buildings, infrastructure. Excavators, haulage lorries, piling rigs, cranes, dumpers,

concrete plant, pneumatic breakers, diggers and paving machines would all, at some time during the construction programme, be operating at the Red Line Boundary. In addition, ancillary equipment such as small generators, pumps and compressors may also be operating on occasions.

- 14.4.25. The above noise sources and their associated activities would vary from day to day and may be in use at different stages of the construction period for relatively short durations. The noisiest activities are expected to be generated during piling and infrastructure work during the initial stages of construction when excavators, piling rigs, concreting plant or similar may be in use.
- 14.4.26. The actual noise level produced by construction work would vary at the nearest property boundary at any time depending upon a number of factors including the plant location, duration of operation, hours of operation, intervening topography and type of plant being used. Refer to Appendix 14-4 for construction plant inventory that has been taken into account in the assessment.
- 14.4.27. The construction works would take place during normal daytime operating hours (unless otherwise agreed with the Local Authority). The daytime activities and associated noise levels are provided in Table 14-16, which is based on the ABC method of assessment within BS5228: 2009 (Annex E.3.2.).
- 14.4.28. The decommissioning works would involve similar plant or plant of similar noise levels and therefore we would not expect the assessment of impacts to change when comparing the construction or decommissioning phase of works.

**Table 14-16: Noise Predictions for Highest Likely Construction Noise for existing NSRs (daytime activities)**

Position	Approximate Distance to receptor (m)	Activity	Predicted Noise Level, LAeq <sub>1hr</sub> dB	Typical Residual Noise LAeq dB	BS5228 Guidance Value LAeq dB	Excess over Guidance LAeq dB (daytime)
<b>High Sensitivity Receptors</b>						
R1. Lower Cefn	300-450	Site Preparation	48-57	55*	65	0
	310-450	Piling	52-58	55*	65	0
	300-450	General activities	45-54	55*	65	0
	300-450	Infrastructure	45-59	55*	65	0
	310-450	Building Construction	49-64	55*	65	0
R2. Cefn Cottage	90-300	Site Preparation	48-57	55	65	0
	120-230	Piling	52-58	55	65	0
	110-300	General activities	45-54	55	65	0
	110-300	Infrastructure	45-59	55	65	0
	120-300	Building Construction	49-64	55	65	0

**Table14-16: Noise Predictions for Highest Likely Construction Noise for existing NSRs (daytime activities) (cont)**

Position	Approximate Distance to receptor (m)	Activity	Predicted Noise Level, LAeq <sub>1hr</sub> dB	Typical Residual Noise LAeq dB	BS5228 Guidance Value LAeq dB	Excess over Guidance LAeq dB (daytime)
<b>High Sensitivity Receptors</b>						
R3. Cefn Farm	130-500	Site Preparation	46-56	55*	65	0
	220-420	Piling	49-54	55*	65	0
	130-500	General activities	43-54	55*	65	0
	220-500	Infrastructure	43-55	55*	65	0
	240-420	Building Construction	48-58	55*	65	0
R4 Sale Farm	140-450	Site Preparation	46-55	42	65	0
	170-370	Piling	50-57	42	65	0
	140-450	General activities	44-54	42	65	0
	170-370	Infrastructure	46-57	42	65	0
	170-370	Building Construction	49-61	42	65	0
R5. Green Farm	180-340	Site Preparation	46-50	46	65	0
	190-300	Piling	49-53	46	65	0
	180-340	General activities	41-49	46	65	0
	180-340	Infrastructure	43-54	46	65	0
	190-300	Building Construction	48-60	46	65	0
R6. Whitehouse Farm	180-400	Site Preparation	47-53	46	65	0
	220-370	Piling	50-54	46	65	0
	180-400	General activities	45-52	46	65	0
	180-400	Infrastructure	45-57	46	65	0
	220-370	Building Construction	49-58	46	65	0
R7. Brookside	180-780	Site Preparation	54-59	65	70	0
	520-740	Piling	50-53	65	70	0
	180-780	General activities	45-58	65	70	0
	180-780	Infrastructure	45-58	65	70	0
	520-740	Building Construction	49-52	65	70	0
R8. York House	220-800	Site Preparation	47-57	56	65	0
	560-770	Piling	50-52	56	65	0
	220-800	General activities	45-56	56	65	0
	220-800	Infrastructure	45-59	56	65	0
	560-770	Building Construction	49-51	56	65	0



**Table14-16: Noise Predictions for Highest Likely Construction Noise for existing NSRs (daytime activities) (cont)**

Position	Approximate Distance to receptor (m)	Activity	Predicted Noise Level, LAeq <sub>1hr</sub> dB	Typical Residual Noise LAeq dB	BS5228 Guidance Value LAeq dB	Excess over Guidance LAeq dB (daytime)
<b>Medium Sensitivity Receptors</b>						
R9. Ecology receptors (west)	80-300	Site Preparation	50-60	55*	65	0
	140-300	Piling	52-58	55*	65	0
	90-350	General activities	46-58	55*	65	0
	80-300	Infrastructure	47-64	55*	65	0
	140-300	Building Construction	58-64	55*	65	0
<b>Low Sensitivity Receptors</b>						
R10. Offices (southwest)	70-650	Site Preparation	56-67	56**	70	0
	360-600	Piling	53-59	56**	70	0
	250-600	General activities	52-64	56**	70	0
	70-650	Infrastructure	54-65	56**	70	0
	360-600	Building Construction	58-63	56**	70	0

Notes to Table

\*Residual levels assumed to be similar to Cefn Cottage due to proximity to local road network.

\*\*Residual levels assumed to be similar to York House due to distance from local road network

Note: De-commissioning phase of works would produce similar or lower levels of noise compared with construction. The calculations allow for the screening effect of the quarry walls.

- 14.4.29. On the basis of the above predictions (as indicated in Table 14-16 , the increase in noise, as a result of construction, is likely to result in an impact magnitude classification of negligible to slight resulting in a neutral to minor level of effect at all residential receptors (i.e. as defined in Table 14-12 with receptors of a high sensitivity). The results show that there are no significant effects.
- 14.4.30. For the nearest office within an industrial building (i.e. low sensitivity as established in Table 14-12 for commercial premises) the results show an impact magnitude classification of negligible and a neutral significance (as determined in Table 14-13). The results show that there are no significant effects.
- 14.4.31. For the nearest ecological receptor, the results show a slight impact magnitude and minor significance and no likely significant effects.
- 14.4.32. The application of applying best practice in accordance with BS5228-1:2009+A1:2014 will assist in minimising impact from construction noise.

**Construction Phase Noise Effects – Road Traffic Noise**

- 14.4.33. Chapter 4 and Chapter 8 outlines the potential construction phase activities and the level of staff and HGV traffic that could arise during peak stages of the construction period.

These estimates indicate that construction traffic could reach a peak 384 two-way car/LGV movements and up to 141 two-way HGV movements per day. The construction delivery hours would be generally limited to 07.00 to 19.00hrs Monday to Friday and 07.00 to 12.00hrs Saturday.

- 14.4.34. Table 14-17 provides details of predicted highest likely impacts due to the increased traffic flow along the local road network based on a 12-hour period. This calculation does not allow for any consequential reduction in effective traffic flow demand when compared to permitted development (i.e. assumes a 'worst case' scenario in terms of comparison of the highest likely construction traffic relative to baseline traffic flows in 2025).

**Table 14-17: Noise Predictions for Highest Likely Construction Road Traffic Noise for existing NSRs (daytime activities) based on weekday and weekend periods**

Link Description	Period	2025	2025	Change (with development)	Impact magnitude/ Significance
		'Do nothing'	'Do something'		
		LA10 <sub>12hrs</sub> (Sat)	LA10 <sub>12hrs</sub> (Sat)	LA10 <sub>12hrs</sub> (Sat 6hrs)	
A483N (Junction 1)	Weekday	63.7	63.7	0	Negligible/Neutral effect
	Saturday	59.5	59.6	+0.1	Negligible/Neutral effect
A483N (Junction 2)	Weekday	66.9	66.9	0	Negligible/Neutral effect
	Saturday	63.4	63.6	+0.2	Negligible/Neutral effect
A458	Weekday	60.3	60.4	+0.1	Negligible/Neutral effect
	Saturday	55.6	56.2	+0.6	Negligible/Neutral effect
A483S (Junction 1)	Weekday	62.5	62.5	0	Negligible/Neutral effect
	Saturday	59.0	59.2	+0.2	Negligible/Neutral effect
A483S (Junction 2)	Weekday	61.8	61.8	0	Negligible/Neutral effect
	Saturday	58.2	58.4	+0.2	Negligible/Neutral effect
Rhalt Lane	Weekday	58.4	58.5	+0.1	Negligible/Neutral effect
	Saturday	52.4	52.5	+0.1	Negligible/Neutral effect
Private Access	Weekday	45.9	45.9	0	Negligible/Neutral effect
	Saturday	42.6	42.7	+0.1	Negligible/Neutral effect
Salop Road (Junction 2)	Weekday	61.1	61.1	0	Negligible/Neutral effect
	Saturday	54.8	55.1	+0.3	Negligible/Neutral effect

Note to Table

Above levels assume a distance of 10m from the kerbside for the purpose of the analysis

- 14.4.35. Table 14-17 provides details of predicted highest likely impacts due to the increased traffic flow along the local road network during the construction phase. The construction traffic would not routinely travel along routes that would include residential receptors. The results show a negligible change in impact magnitude and neutral effect. The results therefore show no significant effects.

### Construction Noise – Mitigation

- 14.4.36. In accordance with BS5228, best practical means would be employed to control the noise generation (e.g. using equipment that is regularly maintained, where practicable use equipment fitted with silencers or acoustic hoods).
- 14.4.37. In consideration of the likely highest levels of construction noise, the following approach would be considered as part of the Construction Environmental Management Plan (“CEMP”) (see Technical Appendix 4-1):
- restriction of construction hours to non-sensitive times of day would normally form part of the planning consent conditions;
  - sensible routing of the construction plant to avoid the nearest residential properties (where practicable);
  - careful choice of piling rigs to minimise noise as practicable (e.g. use of continuous flight auger piling);
  - careful choice of road breaker and compressor during grid and water connection works to minimise noise;
  - avoid un-necessary plant operation and revving of plant or vehicles;
  - locate plant away from nearest sensitive receptors or in locations which provide good screening in the direction of sensitive receptors;
  - installation of the acoustic screen along the entrance relative to Brookside property via a 2.1m high close-boarded fence or solid screen of minimum mass of 12kg/m<sup>2</sup> (the location of this is shown on ECL Drawing ECL-BQ1001 – Proposed Site Plan in Technical Appendix 1-1 ; and
  - use of broadband noise reverse alarms (where practicable) on mobile plant.

### Operation – Effects

- 14.4.38. Tables 14-18 and 14-19 show the highest noise prediction relating to fixed plant and vehicular noise sources at the ERF operating during daytime and fixed plant only operating during night-time periods. Calculations include the incorporated noise control measures outlined at paragraph 14.4.70.

### Agreed Operational Noise Limits

- 14.4.39. Following formal consultation with the Local Authority Environmental Health Officer at Powys County Council and consideration of relevant guidance and standards, the following noise limits were agreed:
- Daytime at residential receptors: Rating level not exceeding 4dB(A) above the representative background sound levels (LA90) as a 1-hour LAeq as assessed in accordance with BS4142: 2014.
  - Night-time residential receptors: Not exceeding 30dB LAeq<sub>15mins</sub> or a rating level not exceeding 4dB(A) above the representative background sound levels (LA90) whichever is higher [rating level as a 15-minute LAeq as assessed in accordance with BS4142: 2014].

### Daytime Operations

14.4.40. Table 14-18 below provides information on the predicted noise levels during daytime operations (i.e. in accordance with section 7.2 Note 1 of BS4142: 2014+A1:2019 07.00 to 23.00 hours) at the Development.

**Table 14-18: Predicted Noise Contribution from Proposed Development during Daytime (with incorporated noise mitigation measures)**

Receptor Position	Time Period (0700-2300) hours	Predicted Rating Noise Level from ERF <sup>1</sup> LAeq <sub>1hr</sub> dB	Assessment Baseline Sound Levels <sup>2</sup> LA90 [LAeq] dB	Rating compared to Baseline Sound dB	Noise Change <sup>3</sup> LAeq dB	Impact magnitude/ Significance effect
R1. Lower Cefn	Daytime	24	42 [55]	-18	0	Negligible/ Neutral
R2. Cefn Cottage	Daytime	31	42 [55]	-11	0	Negligible/ Neutral
R3. Cefn Farm	Daytime	28	42 [55]	-14	0	Negligible/ Neutral
R4. Sale Farm	Daytime	28	32 [42]	-4	+0.2	Negligible/ Neutral
R5. Green Farm	Daytime	30	33 [46]	-3	+0.1	Negligible/ Neutral
R6. Whitehouse	Daytime	30	33 [46]	-3	+0.1	Negligible/ Neutral
R7. Brookside	Daytime	36	42 [65]	-6	0	Negligible /Neutral
R8. York House	Daytime	33	42 [56]	-9	0	Negligible/ Neutral

Notes to Table

Note 1: Noise characteristics at receptor locations do not include a penalty, this would be controlled by design.

Note 2: Based on a complete week of baseline sound monitoring at NSRs.

Note 3: Column 6 is calculated by the logarithmic addition of columns 3 and column 4 Leq level in brackets [ ] and subtraction of the background Leq noise level (i.e. column 4 in brackets [ ]) to give the change in overall noise level.

14.4.41. The predicted noise levels reflect ERF attributable noise with the mitigation measures (as detailed in section 14.4.70). The rating compared to baseline sound in Table 14.18 shows the difference between the predicted rating noise level and assessment baseline sound level at the receptor positions. No character penalty is required based on mitigation measures and residual noise influence, which provides masking of noise at NSRs. The rating level is therefore in accordance with the methodology found within BS4142:2014+A1:2019, which is the most relevant applicable noise assessment guidance.

14.4.42. According to BS4142: 2014+A1:2019, the rating level relative to the assessment baseline noise would indicate negligible impact magnitude at all receptors. Based on this impact

magnitude and the receptor sensitivity, Table 14-18 shows that the operational noise impacts from the ERF are therefore considered to represent a neutral level of effect, and not significant.

- 14.4.43. In relation to the IEMA guidelines (which considers the increase in existing residual noise and therefore the context of the impact, reference Table 14-13), it can be seen that the magnitude of the impact during daytime periods (i.e. the noise change) shows that there is no change or no significant change in noise level, which indicates a negligible impact and a neutral level of effect.

#### Ecological and Commercial Receptors

- 14.4.44. At the nearest Ecological receptor to the ERF (Receptor 9) the predicted noise level is indicated to be between 36dB to 40dB LAeq<sub>1hr</sub> and is therefore not significant.
- 14.4.45. The nearest office receptor to the ERF would relate to the adjacent industrial buildings south from the Development (Receptor R10). The nearest plant to the receptor is circa 260m. The relevant guidance would relate to BS8233: 2014 (refer to Table 14-3) which provides recommended internal levels for offices (i.e. 35-45dB LAeq). This would equate to an external level of circa 65-75dB LAeq for attenuation from a typical double-glazed window. The predicted noise level at R10 is indicated to be 46dB to 48dB LAeq<sub>1hr</sub> and is therefore not significant.

#### Night-time Operations

- 14.4.46. Table 14-19 provides information on the predicted noise levels during night-time (i.e. 23.00 to 07.00 hours according to BS4142: 2014 section 7.2 Note 1).

**Table 14-19: Predicted Noise Contribution from Proposed Development during Night-time (with incorporated noise mitigation measures)**

Receptor Position	Time Period (2300-0700) hours	Predicted Rating Noise Level from ERF <sup>1</sup> LAeq <sub>1hr</sub> dB	Assessment Baseline Sound Levels <sup>2</sup> LA90 [LAeq] dB	Rating compared to Baseline Sound dB	Noise Change <sup>3</sup> LAeq dB	Absolute Limit LAeq (15mins) dB	Impact magnitude/ Significance effect
R1. Lower Cefn	Night-time	23	25 [49]	-2	0	30	Negligible/ Neutral
R2. Cefn Cottage	Night-time	30	25 [49]	+5	+0.1	30	Negligible/ Neutral
R3. Cefn Farm	Night-time	26	25 [49]	+1	0	30	Negligible/ Neutral
R4. Sale Farm	Night-time	27	20 [40]	+7	+0.2	30	Negligible/ Neutral
R5. Green Farm	Night-time	27	23 [40]	+4	+0.2	30	Negligible/ Neutral

**Table14-19: Predicted Noise Contribution from Proposed Development during Night-time (with incorporated noise mitigation measures)**

Receptor Position	Time Period (2300-0700) hours	Predicted Rating Noise Level from ERF <sup>1</sup> LAeq <sub>1hr</sub> dB	Assessment Baseline Sound Levels <sup>2</sup> LA90 [LAeq] dB	Rating compared to Baseline Sound dB	Noise Change <sup>3</sup> LAeq dB	Absolute Limit LAeq (15mins) dB	Impact magnitude/ Significance effect
R6. Whitehouse	Night-time	27	23 [40]	+4	+0.2	30	Negligible/ Neutral
R7. Brookside	Night-time	24	31 [59]	-7	0	30	Negligible/ Neutral
R8. York House	Night-time	19	27 [50]	-8	0	30	Negligible/ Neutral

**Note to Table**

Note 1: Noise characteristics at receptor locations do not include a penalty as this would be eliminated by design. This would be controlled by design.

Note 2: Based on a complete week of baseline sound monitoring at NSRs.

Note 3: Column 6 is calculated by the logarithmic addition of columns 3 and column 4 Leq level in [ ] and subtraction of the background Leq noise level (i.e. column 4 in [ ]) to give the change in overall noise level. Absolute noise limit agreed with the EHO is 30dB LAeq as this complies with all standards for sleep disturbance and BS4142: 2014+A1:2019 is not reliable at such low levels of background and rating level.

14.4.47. According to BS4142: 2014+A1:2019, the rating level relative to the assessment baseline noise indicates in general a negligible to moderate impact magnitude (refer to Table 14-12). However, due to the very low background sound levels and very low rating level BS4142 states (ref: BS4142: 2014 Section 11 (Assessment of Impacts) Note 2).

*“NOTE 2 Adverse impacts may include but not be limited to annoyance and sleep disturbance. Not all adverse impacts will lead to complaints and not every complaint is proof of an adverse impact.*

*Where the initial estimate of the impact needs to be modified due to the context, take all pertinent factors into consideration, including the following.*

- 1) The absolute level of sound. For a given difference between the rating level and the background sound level, the magnitude of the overall impact might be greater for an acoustic environment where the residual sound level is high than for an acoustic environment where the residual sound level is low.*

*Where background sound levels and rating levels are low, absolute levels might be as, or more, relevant than the margin by which the rating level exceeds the background. This is especially true at night.”*

14.4.48. The reference to the night-time absolute limits in Table 14-19 is therefore more appropriate and the impact is shown to be negligible. The operational noise impacts from the ERF are therefore considered to represent a neutral level of effect and not significant.

14.4.49. In relation to the IEMA guidelines and making reference to Table 14-13, it can be seen that the magnitude of the impact during night-time periods (i.e. the noise change) shows that the change in noise level is a maximum of 0.2dB which indicates negligible impact. The predicted level of effect would therefore be neutral and not significant.

14.4.50. Night-time LA<sub>max</sub> highest levels are likely to be well below WHO external regular events of 60dB to avoid sleep disturbance.

### Ecological Receptors

14.4.51. The nearest Ecological receptor to the ERF (Receptor 9) predicted noise level is indicated to be between 33dB to 36dB LA<sub>eq1hr</sub> and is therefore not significant.

### Operational Road Traffic Noise

14.4.52. Chapter 8 outlines the level of staff and HGV traffic that could arise during peak stages of the operation period. These estimates indicate that operation traffic could reach a peak 22 two-way car/LGV movements and up to 100 two-way HGV movements per day. The operation delivery hours would be generally limited to 07.00 to 19.00hrs Monday to Friday and 07.00 to 12.00hrs Saturday.

14.4.53. Table 14-20 provides details of predicted highest likely impacts due to the increased traffic flow along the local road network based on a 12-hour weekday and 5-hour Saturday period.

**Table 14-20: Noise Predictions for Highest Likely Operation Road Traffic Noise for existing NSRs (daytime activities) based on 12-hour weekday and 5-hour Saturday period**

Link Description	Period	2025	2025	Change (with development)	Impact magnitude/ Significance
		'Do nothing' LA10 <sub>12hrs</sub> (Sat 5hrs)	'Do something' LA10 <sub>12hrs</sub> (Sat 5hrs) (dB)	LA10 <sub>12hrs</sub> (Sat 5hrs) (dB)	
A483N (Junction 1)	Weekday	63.7	63.7	0	Negligible/Neutral effect
	Saturday	61.1	61.2	+0.1	Negligible/Neutral effect
A483N (Junction 2)	Weekday	66.9	66.9	0	Negligible/Neutral effect
	Saturday	64.2	64.4	+0.2	Negligible/Neutral effect
A458	Weekday	60.3	60.4	+0.1	Negligible/Neutral effect
	Saturday	57.4	57.9	+0.5	Negligible/Neutral effect
A483S (Junction 1)	Weekday	62.5	62.5	0	Negligible/Neutral effect
	Saturday	59.8	60.0	+0.2	Negligible/Neutral effect
A483S (Junction 2)	Weekday	61.8	61.9	+0.1	Negligible/Neutral effect
	Saturday	59.0	59.2	+0.2	Negligible/Neutral effect



**Table14-20: Noise Predictions for Highest Likely Operation Road Traffic Noise for existing NSRs (daytime activities) based on 12-hour weekday and 5-hour Saturday period (cont)**

Link Description	Period	2025	2025	Change (with development) LA10 <sub>12hrs</sub> (Sat 5hrs) (dB)	Impact magnitude/ Significance
		`Do nothing` LA10 <sub>12hrs</sub> (Sat 5hrs)	`Do something` LA10 <sub>12hrs</sub> (Sat 5hrs) (dB)		
Rhalt Lane	Weekday	58.4	58.5	+0.1	Negligible/Neutral effect
	Saturday	56.2	56.4	+0.2	Negligible/Neutral effect
Private Access	Weekday	45.9	45.9	0	Negligible/Neutral effect
	Saturday	43.4	43.5	+0.1	Negligible/Neutral effect
Salop Road (Junction 2)	Weekday	61.1	61.1	0	Negligible/Neutral effect
	Saturday	54.3	54.5	+0.2	Negligible/Neutral effect

Note to Table

Above levels assume a distance of 10m from the kerbside for the purpose of the analysis

- 14.4.54. Table 14-20 provides details of predicted highest likely impacts due to the increased traffic flow along the local road network during the operation phase. The construction traffic would not routinely travel along routes that would include residential receptors. The results show a negligible change in impact magnitude and neutral effect. The results therefore show no significant effects.

### Operation – Mitigation

- 14.4.55. The predicted noise levels from the Development have been calculated using the noise levels provided within Technical Appendix 14-5. The noise levels are based on library data from similar plant used on other UK sites and include the following measures which are all standard commonly applied forms of mitigation applied at other similar facilities operating in the UK:

- buildings constructed from double skin insulated cladding (Rw=40dB to 42dB e.g. Corus double skinned insulated cladding 19/1000 liner, 180mm mineral wool (15-23kg/m<sup>3</sup>), 32/1000 outer);
- air cooled condenser fans operating at an overall sound power level of 98dB(A) (e.g. 6 fans at 90dB(A) sound power each fan);
- fan stack designed to a sound power level of 80dB(A) SWL at flue exit point of stack;
- turbine air cooler fans – overall sound power level with all fans operating designed to a level of 85dB(A). This to be acoustically screened locally (3 sided – northeast to southwest directions) and circa 1m higher than the top of the unit);
- boiler vent - silencers (roof top) operating a maximum level of 80dB(A) sound power level at end of silencer;

- turbine vent - silencer (roof top) operating a maximum level of 80dB(A) sound power level.;
- turbine door acoustic type insulated to  $R_w = 29\text{dB}$ ;
- other doors facing north-west to be acoustically insulated to a minimum  $R_w = 24\text{dB}$ ;
- doors to Tipping Hall closed except for access to vehicles for offloading and collection unless for maintenance or emergency ( $R_w = 12\text{dB}$ );
- all other doors minimum  $R_w = 18\text{dB}$ ;
- ventilation louvres fitted with acoustic louvres (minimum  $R_w = 17\text{dB}$ ) except ventilation louvres to Turbine Hall or western side of buildings or any ventilation openings higher than 10m above ground fitted with attenuators to  $R_w = 25\text{dB}$ ;
- sound power levels of other plant as detailed in Appendix 14-5;
- vehicles fitted with non-tonal reversing alarms (i.e. broadband type noise alarms);
- all plant designed to prevent any perceptible noise character at residential receptors; and
- screen along the entrance road with the boundary with Brookside dwelling to a height of 2.1m, this can be formed by brickwork, stonework, close-boarded fencing or any solid screen having a minimum mass of  $12\text{kg/m}^2$ .

14.4.56. There are several different ways in which the criteria can be achieved, for example, the use of noise control at source, latest plant design and/or the selection of different plant equipment, which may be quieter, can be investigated. The chosen method(s) of mitigation should be appropriate to meet the noise criteria and the application of BAT. The above measures are just one combination that would be effective in achieving the requisite noise levels during the daytime and night-time periods.

### **The Development Overall**

14.4.57. Noise and vibration levels have been considered and assessed during the construction/decommissioning and operational phases of the Development. Relevant and appropriate noise and vibration guidance and standards have been used to determine the impact. The assessment has been undertaken to inform and guide the design of the Development, such that any likely noise and vibration impact on existing and potential sensitive receptors is minimised.

14.4.58. The assessment shows that there would be no significant impacts during the construction/decommissioning or operation of the Development following the implementation of appropriate mitigation.

### **The Development in Combination with Other Developments**

14.4.59. The following projects have been identified as having the potential to result in cumulative effects with the Development:

- Border Hardcore have submitted a planning application (planning ref. 20/0045/FUL) for a Storage and Distribution unit, however there are no concerns given by the EHO in relation to noise and no information provided in terms of generated noise levels. The site is circa 90m from the nearest receptor at Brookside and circa 250m from the ERF site entrance. There are no likely significant

cumulative effects expected from this development.

### Interactive Effects

14.4.60. Interactions with other Key Environmental Aspect (“KEA’s”) are provided below in Table 14-21.

**Table 14-21: Interactive Effects on Noise**

KEA Interaction	Interactive Effects
Noise and Ecology	Impact of noise on designated sites has been taken into account and the modelling study has demonstrated that the impact is negligible.
Noise and Health Impact Assessment	Levels emitted during operational phase are within noise guidance and standards set for the protection of human health
Noise and Transport	Increase in noise levels due to traffic the effect is shown to be negligible.

## 14.5. Environmental Effects Analysis

14.5.1. Based on the Environmental Effects Assessment for all Development phases discussed in Section 14.4, a detailed environmental effects analysis is provided in Tables 14-23 to 14-25. For consistency with the environmental Effects Assessment, the construction and decommissioning phases of the Development are considered together. The evaluation criteria are provided in Table 14-22.

14.5.2. The environmental effects for the Development are described using the following factors:

- magnitude;
- geographic extent;
- duration;
- frequency;
- reversibility; and
- ecological and socio-cultural context.

**Table 14-22: Environmental Effects Assessment Evaluation Criteria**

<b>Criteria</b>	<b>Description</b>
Magnitude of Impact (Mg)	<ul style="list-style-type: none"> <li>As detailed in section 14.4 above for each source of effect in accordance with the relevant standards and guidance</li> </ul>
Geographic Extent of Impact (GE)	<ul style="list-style-type: none"> <li>Within ERF Boundary – 0m</li> <li>Up to 100 from ERF – 100m</li> <li>Up to 500m from ERF – 500m</li> <li>Up to 1km or greater from ERF – 1km</li> </ul>
Frequency of Impact (F)	<ul style="list-style-type: none"> <li>Single event (Sin)</li> <li>Annual activity (Ann)</li> <li>Monthly occurrence (Mon)</li> <li>Continuous activity (Con)</li> </ul>
Duration of Impact (D)	<ul style="list-style-type: none"> <li>1 week (1w)</li> <li>1 month (1m)</li> <li>2-6 months (2-6)</li> <li>6-12 months (6-12)</li> <li>12-36 months (12-36)</li> <li>Over 36 months (&gt;36)</li> </ul>
Reversibility of Impact (R)	<ul style="list-style-type: none"> <li>Unknown - there is insufficient research/experience to indicate whether the environmental effect is reversible</li> <li>High - previous research/experience indicates the environmental effect is reversible</li> <li>Medium - previous research/experience indicates the environmental effect may be reversible</li> <li>Low - previous research/ experience indicates that there is a small likelihood that the environmental effect is reversible</li> <li>Nil - previous research/ experience indicates that the environmental effect is irreversible</li> </ul>
Ecological, Cultural and Socio-economic Context of Impact (ESC)	<ul style="list-style-type: none"> <li>Relatively pristine area not adversely affected by human activity (Low)</li> <li>Evidence of human activity (Med)</li> <li>High level of human activity (High)</li> </ul>

**Table 14-23: Environmental Effects Analysis – Noise: Construction/Decommissioning**

Activity	Potential Effect	Evaluation Criteria					
		Mg	GE	F	D	R	ESC
Construction Noise	Increase in noise levels due to construction works	Neg	500m	Cont	12-36	High	Med
	<p><b>Conclusion:</b> Noise generated in the construction/decommissioning is considered to be not significant, provided that the noise mitigation measures outlined in the CEMP are followed.</p> <p><b>Mitigation:</b> Application of best practice in accordance with BS5228. Implementation of CEMP</p>						
Construction Road Traffic	Increase in road traffic noise due to construction works	Neg	1km	Cont	12-36	High	High
	<p><b>Conclusion:</b> The increase in road traffic noise, not significant at the majority of receptors, with the exception of Brookfield house.</p> <p><b>Mitigation:</b> The introduction of a temporary acoustic screen at site entrance along boundary with Brookfield House for the construction phase of the development. Application of best practice in accordance with BS5228 and where appropriate/practicable a route agreement to and from site. Implementation of the CEMP.</p>						

**Table 14-24: Environmental Effects Analysis – Noise: Operation**

Activity	Potential Effect	Evaluation Criteria					
		Mg	GE	F	D	R	ESC
Operation Noise	Increase in noise levels due to ERF operations	Neg	500m	Cont	>36	High	Med
	<p><b>Conclusion:</b> The rating level relative to baseline noise would indicate a negligible impact at all receptors. Based on this receptor (i.e. the worst-case receptor) the operational noise impacts from the ERF are considered not significant. The noise mitigation strategy has been incorporated into the design of the Installation to control noise</p> <p><b>Mitigation:</b> No further mitigation is required.</p>						

**Table 14-24: Environmental Effects Analysis – Noise: Operation (cont)**

Activity	Potential Effect	Evaluation Criteria					
		Mg	GE	F	D	R	ESC
Operation Road Traffic	Increase in road traffic noise due to ERF operations	Neg	1km	Cont	>36	High	High
	<b>Conclusion:</b> The increase in road traffic noise during the operation phase is shown to be negligible at all receptors and therefore not significant.						
	<b>Mitigation:</b> No mitigation measures necessary on local road network						

**Table 14-25: Environmental Effects Analysis – Noise: Cumulative**

Activity	Potential Effect	Evaluation Criteria					
		Mg	GE	F	D	R	ESC
Permitted or Proposed Development in the Area	Increase in noise levels due to permitted or proposed development in the area	Neg	1km	Cont	12-36	High	Med
	<b>Conclusion:</b> There are no likely significant cumulative effects expected from the Development in combination with any other known developments.						
	<b>Mitigation</b> No mitigation measures necessary.						

## 14.6. Residual Environmental Effects

- 14.6.1. During the construction period there would be a variety of noise sources in use at different stages and their associated activities would vary from day to day. The highest noise levels relative to nearest receptors are likely to occur during piling, infrastructure, and building activities. The peak noise activities do not normally occur over long periods of time and best practical means would be employed to control the noise being generated. It is concluded that the increase in construction noise with the implementation of mitigation measures, using best practice, is likely to result in an impact magnitude classification of negligible at residential receptors and a neutral level of effect.
- 14.6.2. The assessment of impact on existing residential areas from any increase in road traffic noise during the daytime construction or operational stage of the Development shows no significant change in noise levels and therefore there is likely to be a negligible impact at receptors and neutral level of effect.
- 14.6.3. During the operation of the Development the assessment of impact indicates a negligible impact magnitude at all receptors and therefore considered to represent a neutral level of effect.

14.6.4. In summary, no significant noise effects have been identified by the noise assessment in relation to construction or operation of the Development with respect to noise or plant vibration.

14.6.5. Residual adverse environmental effects for the Project are provided in Table 14-26.

**Table 14-26: Summary of Residual Adverse Environmental Effects – Noise**

<b>Development Phase</b>	<b>Residual Adverse Environmental Effect</b>	<b>Significance</b>	<b>Likely Effect on the Environment</b>
Construction/ Decommissioning	Noise increase due to construction works	Negligible <b>Not Significant</b>	Residual adverse environmental effects are small and would not result in any significant changes in noise.
	Noise increase in road traffic due to construction works	Negligible <b>Not Significant</b>	Residual adverse environmental effects are small and would not result in any significant changes in noise.
Operation	Noise increase due to Site operations	Negligible (daytime) Negligible (night-time) <b>Not Significant</b>	Residual adverse environmental effects are small and would not result in any significant changes in noise.
	Noise increase in road traffic due to Site operations	Negligible <b>Not Significant</b>	Residual adverse environmental effects are small and would not result in any significant changes in noise.

## 14.7. Summary

14.7.1. This chapter provides an assessment of the noise and vibration impacts of the Development during its operation period at the identified noise sensitive receptors (NSRs). The study benefits from a baseline study to inform the assessment and to ensure that the impacts are determined in context with the baseline sound climate.

14.7.2. The assessment has been undertaken to inform and guide the design of the Development such that any likely noise and vibration impact on noise sensitive receptors complies with appropriate and relevant guidance and standards.

14.7.3. During the operational phase impacts from industrial noise sources and on-site vehicle movements on nearest sensitive receptors have been assessed and compared with appropriate and relevant noise guidance and standards. An example of noise mitigation measures has been provided relating to plant design levels and building construction detail to control radiated noise from the Development Site and the assessment concludes that there would be no significant impacts.



- 14.7.4. Road traffic movements as a result of Development have been considered on the local road network relative to existing receptors and the assessment concludes that this would not produce any significant change or impact.
- 14.7.5. Cumulative noise effects from proposed and existing noise sources in the vicinity of the development have been considered and the assessment shows no significant increase in overall noise levels at NSRs and therefore no significant impact is likely.
- 14.7.6. Construction noise was also considered in this assessment and best practice would be applied during this phase in accordance with relevant Standards.
- 14.7.7. In summary, no significant noise effects have been identified by the assessment in relation to site construction/decommissioning or operational phases of the development.

## 14.8. References

- Technical Advice Note (TAN) 11, 'Noise' – 1997
- BS4142: 2014+A1:2019 'Methods for rating and assessing industrial and commercial sound'
- BS8233: 2014 'Guidance on sound insulation and noise reduction for buildings'
- Guidelines for Community Noise – World Health Organisation: April 1999
- World Health Organisation 'Night Noise Guidelines for Europe' – 2009;
- BS7445: 2003 - Description and measurement of environmental noise.
- BS5228-1:2009+A1:2014 'Code of Practice for noise and vibration control on construction and open sites'.
- BS5228-2: 2009+A1:2019 'Code of Practice for noise and vibration control on construction and open sites – Vibration'.
- ISO 9613-2: 1996 Acoustics – Attenuation of Sound During Propagation Outdoors.
- Design Manual for Roads and Bridges, LA 111 Noise and Vibration – November 2019
- IPPC - Technical Guidance Note IPPC H3 Part 2 – Noise Assessment & Control
- BS6472: 2008 'Guide to the evaluation of human exposure to vibration in buildings'
- New Zealand Transport Agency research paper entitled 'Ground Vibration from Road Construction' in May 2012
- Measured vibration levels from Bomag vibratory compactor and fitted probability of exceedance curves (Hiller & Crabb 2000)
- Groundborne Vibration from Percussive Piling': 2011 Extract from 14<sup>th</sup> Asia Pacific Vibration Conference, Hong Kong Polytechnic University (Architectural Services Department, Hong Kong SAR Government)

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## **Technical Appendix 14-1 Noise Technical Terms**

## NOISE TECHNICAL TERMS

Sound is produced by mechanical vibration of a surface, which sets up rapid pressure fluctuations in the surrounding air.

Between the quietest audible sound and the loudest tolerable sound there is a million to one ratio in sound pressure level. It is because of this wide range that a noise level scale based on logarithms is used in noise measurement. This is the decibel or dB scale.

Audibility of sound covers a range of about 0 to 140 decibels (dB) corresponding to the intensity of the sound pressure level. The ability to recognise a particular sound is dependent on the pitch or frequencies present in the source. Sound pressure measurements taken with a microphone cannot differentiate in the same way as the ear, consequently a correction is applied by the noise measuring instrument in order to correspond more closely to the frequency response of the ear which responds to sounds from 20 Hz to 20000 Hz. This is known as 'A weighting' and written as dB(A).

The use of this unit is internationally accepted and correlates well with subjective annoyance to noise.

The logarithmic basis of noise measurements means that when considering more than one noise source their addition must be undertaken in terms of logarithmic arithmetic. Thus, two noise sources each of 40 dB(A) acting together would not give rise to  $40 + 40 = 80$  dB(A) but rather  $40 + 40 = 43$  dB(A). This 3 dB(A) increase represents a doubling in sound energy but would be only just perceptible to a human ear.

The attached chart gives typical noise levels in terms of dB(A) for common situations.

Noise levels can vary with time according to source activity and indices have been developed in order to be able to assign a value to represent a period of noise level variations and to correspond with subjective response.

The definition in layman's terms is given below for terminology used in the measurement and results obtained during the survey work.

**A-weighting:** Normal hearing covers the frequency (pitch) range from about 20Hz to 20,000 Hz but sensitivity of the ear is greatest between about 500Hz and 5000Hz. The "A-weighting" is an electrical circuit built into noise meters to mimic this characteristic of the human ear.

**Ambient noise:** The totally encompassing sound in a given situation at a given time usually composed of sound from many sources near and far.

**Attenuation:** Noise reduction

**Background noise:** The general quiet periods of ambient noise when the noise source under investigation is not there.

**Decibel (dB):** The unit of measurement for sound based on a logarithmic scale. 0dB is the threshold of normal hearing; 140dB is the threshold of pain. A change of 1dB is only detectable under controlled laboratory conditions.

**dB(A) [decibel A weighted]:** Decibels measured on a sound level meter incorporating a frequency weighting (A weighting) serves to distinguish sounds of different frequency (or pitch) in a similar way to how the human ear responds. Measurements in dB(A) broadly agrees with an individual's

assessment of loudness. A change of 3dB(A) is the minimum perceptible under normal everyday conditions, and a change of 10dB(A) corresponds roughly to doubling or halving the loudness of sound.

**dB(C): [decibel C weighted]:** Frequency weighting which does not alter low frequency octave band levels by very much compared to 'A' weighting. Similar to linear reading (i.e. linear does not alter frequency spectra at all)

**Frequency (Hz):** The number of sound waves to pass a point in one second.

**L<sub>Aeq</sub>:** This is a noise index used to describe the "average" level of a noise that varies with time (T). It allows for the different sensitivities of the human ear to different frequencies (pitch), and averages fluctuating noise levels in a manner, which correlates well with human perceptions of loudness.

**L<sub>A10,T</sub>:** This noise index gives an indication of the upper limit or peak levels of the fluctuating noise. It is the "A weighted" noise level exceeded for 10 per cent of the specified measurement period (T). e.g. If the measurement period was over 10 hours and the L<sub>A10</sub> reading was say 60dB, then this means that for 1 hour out of 10 the level went above 60dB.

**L<sub>A90,T</sub>:** This noise index gives an indication of the lower limit or levels of the fluctuating noise. It is the "A weighted" noise level exceeded for 90 per cent of the specified measurement period (T). e.g. If the measurement period was over 10 hours and the L<sub>A90</sub> reading was say 50dB, then this means that for 9 hours out of 10 the level went above 50dB.

**L<sub>Amax</sub>:** This is the highest A weighted noise level recorded during a noise measurement period.

**L<sub>night\_outside</sub> :** This is the A-weighted long-term average sound level measured outside as defined in ISO 1996-2: 1987, determined over all the night periods of a year.

**Residual noise:** The ambient noise remaining at a given position in a given situation when the noise source under investigation is not there.

**Specific noise:** The noise source under investigation for assessing the likelihood of complaints.

## Examples of typical noise levels

Source/Activity	Indicative noise level [dB(A)]
Threshold of hearing	0
Rural night-time background	20-40
Quiet bedroom	35
Wind farm at 350m	35-45
Busy road at 5km	35-45
Car at 65km/h at 100m	55
Busy general office	60
Conversation	60
Truck at 50km/h at 100m	65
City Traffic at 5m	75-85
Pneumatic drill at 7m	95
Jet aircraft at 250m	105
Threshold of pain	140

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**Technical Appendix 14-2**  
**Noise Instrumentation and Survey Details**

## APPENDIX 14-2

### NOISE INSTRUMENTATION & SURVEY DETAILS

**Survey Period:** Friday 20<sup>th</sup> (0900-1145) to Thursday 26<sup>th</sup> July 2018 (1215-1315)

**Monitoring Positions:**

The baseline survey was carried out at 5 positions which provide a good representation of the background levels in the area being in proximity to the nearest sensitive receptors to the plant. The monitoring positions included:

- Location 1 – Rear of Cefn Cottage north of the site
- Location 2 – Sale Farm to the west of the site;
- Location 3 – Whitehouse Farm - southeast
- Location 4 – Brookside adjacent to the site entrance

Additional of Location 5 – Adjacent to York House on site embankment as additional information.

See photographs attached showing positions and Figure 14-1 in Chapter 14 text.

**Measurements:**

Sequential 15-minute monitoring periods using Type 1 microphones mounted on tripod and fitted with wind shield. Calibrated prior to and after measurements with calibrator.

Weather station positioned at Location 2 on high ground on west side of farmhouse unoccupied building. Measurements of LAeq, LA90, LA10 and LMax levels.

**Weather:**

Weather conditions monitored every 5 minutes recording wind speed, temperature, humidity, wind direction and rainfall events.

All noise meters and calibrator within calibration requirements of BS4142: 2014.

Measurements undertaken in accordance with BS4142: 2014 methodology.

**Instrumentation**

<b>Manufacturer</b>	<b>Description</b>	<b>Type</b>	<b>Calibration Due date</b>	<b>Serial No.</b>
Cirrus	Real Time Sound Analyser	171A	February 2019	G061253
Cirrus	Real Time Sound Analyser	1710A	May 2019	G066350
Norsonic	Real Time Sound Analyser	140		1402790
Norsonic	Real Time Sound Analyser	140		1403353
Cirrus	Real Time Sound Analyser	171B	February 2019	G056142
Cirrus	Electronic Calibrator	CR: 513A	August 2019	031523

The noise meters used during the survey are precision grade type 1 meters to IEC 651 standard and accuracy.

Calibration Setting: 94dB

Meter Setting: Fast Response

Fixed Position noise meters were mounted in a weatherproof box with extension lead to microphone



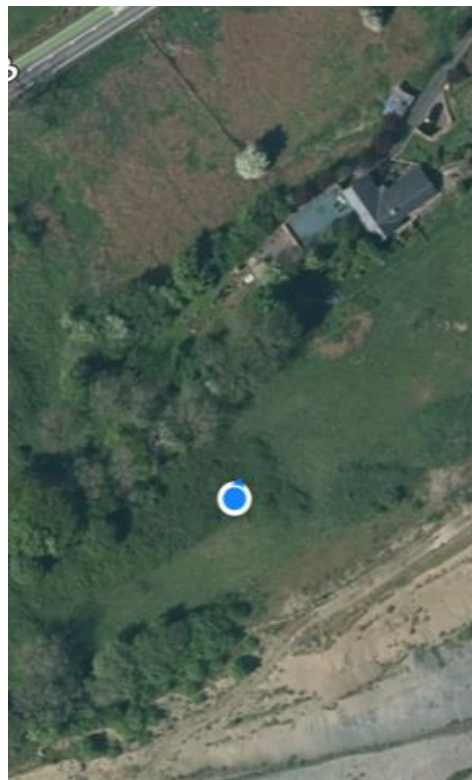
mounted on a tripod fixed to a height of approximately 1.5m above ground level and fitted with a wind shield.

Instruments were calibrated before and after monitoring to calibration level of 94dB.

No drift in calibration was recorded.

### **Photographs of Noise Monitoring Locations**

#### **P1: Rear of Cefn Cottage on open land**

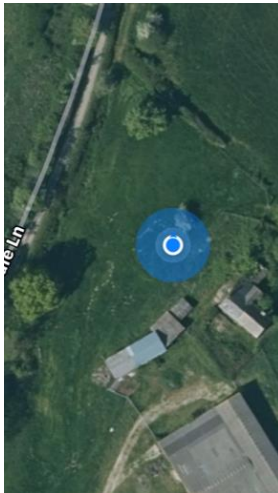


**P2: Western side of Sale Farm**

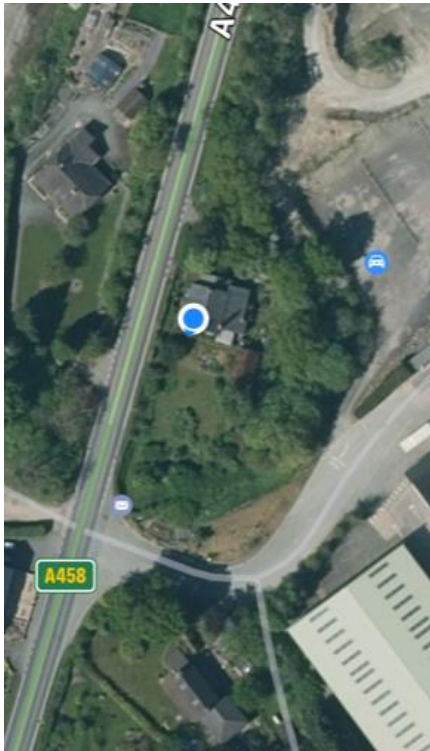
**Noise meter**



**Weather Station**

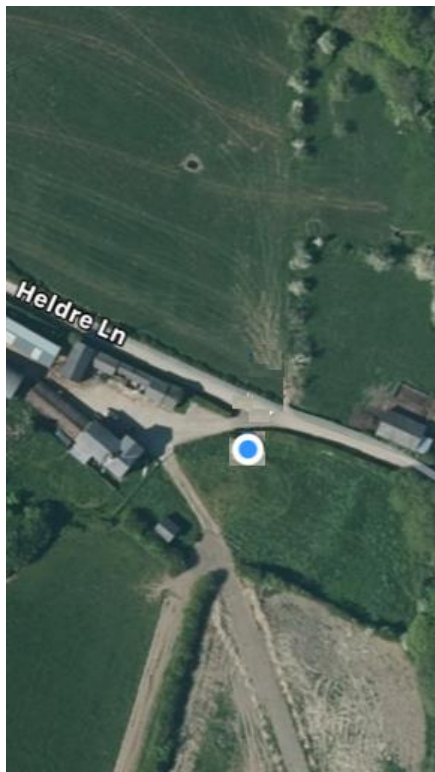


**P3: Brookside Garden**

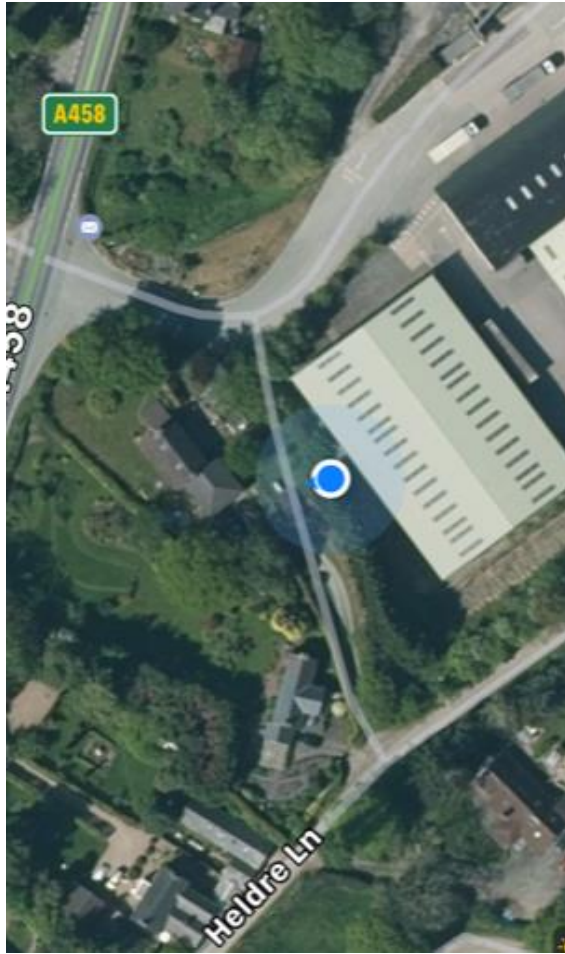




**P4: Whitehouse Farm Garden Area**



**P5: Embankment to Side of York House**



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## **Technical Appendix 14-3 Baseline Noise Survey Results**

## Baseline Noise Survey Results

### Statistical Analysis

	Cefn Cottage	Cefn Cottage	Sale Farm	Sale Farm	Brookside	Brookside	Whitehouse	Whitehouse	York House	York House
Column1	1 day	1 night	2 day	2 night	3 day	3 night	4 day	4 night	5 day	5 night
Total number of values	390	192	393	192	397	192	390	192	391	192
Number of excluded values	0	0	0	0	0	0	0	0	0	0
Number of binned values	390	192	393	192	397	192	390	192	391	192
Minimum	26	22	21	19	30	29	23	22	27	22
25% Percentile	39.0	25.0	30.0	20.0	39.0	31.0	30.8	23.0	38.0	25.3
<b>Median</b>	<b>42.0</b>	<b>27.0</b>	<b>32.0</b>	<b>22.0</b>	<b>43.0</b>	<b>32.0</b>	<b>34.0</b>	<b>24.0</b>	<b>42.0</b>	<b>29.0</b>
75% Percentile	45.0	32.8	34.0	27.0	46.0	36.0	36.0	34.0	46.0	35.8
Maximum	57	41	48	38	60	45	45	38	57	46
<b>Most common place</b>	<b>42</b>	<b>24/25</b>	<b>32</b>	<b>20</b>	<b>45</b>	<b>31</b>	<b>36</b>	<b>23</b>	<b>46</b>	<b>27</b>
<b>Mean</b>	<b>41.6</b>	<b>28.5</b>	<b>32.0</b>	<b>24.1</b>	<b>42.3</b>	<b>33.7</b>	<b>33.0</b>	<b>27.2</b>	<b>42.1</b>	<b>30.6</b>
Std. Deviation	5.2	5.0	3.4	5.1	5.0	4.2	4.1	5.5	5.4	6.6
Std. Error of Mean	0.3	0.4	0.2	0.4	0.3	0.3	0.2	0.4	0.3	0.5
Lower 95% CI of mean	41.1	27.8	31.7	23.4	41.8	33.1	32.5	26.4	41.6	29.7
Upper 95% CI of mean	42.1	29.2	32.4	24.8	42.7	34.3	33.4	28.0	42.6	31.6



## Noise Survey Results

Date: Friday 20th - July 2018

Location: Buttington Quarry

TABLE 1

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 1 - Cefn Cottage**

Instrumentation: Cirrus 171A Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
11:45	15:00	56.4	59.2	46.8	68.3	
12:00	15:00	56.0	59.0	46.5	64.1	
12:15	15:00	56.1	59.0	47.8	70.2	
12:30	15:00	55.8	59.1	44.5	64.5	
12:45	15:00	55.6	58.3	46.2	75.2	
13:00	15:00	57.9	60.1	44.0	75.2	
13:15	15:00	56.0	59.1	46.2	72.0	
13:30	15:00	55.7	59.1	48.0	65.5	
13:45	15:00	57.7	58.7	49.8	75.1	
14:00	15:00	57.3	59.5	50.6	72.1	
14:15	15:00	57.0	60.2	50.2	73.6	
14:30	15:00	57.2	60.0	50.2	65.0	
14:45	15:00	57.2	59.7	51.8	63.5	
Average 1145-1500		56.6	59.3	47.9	64-75	

## Noise Survey Results

Date: Friday 20th - July 2018

TABLE 2

Location: Buttington Quarry

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 1 - Cefn Cottage**

Instrumentation: Cirrus 171A Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	59.6	60.9	56.6	73.8	
15:15	15:00	59.1	61.1	55.6	65.2	
15:30	15:00	56.7	59.5	50.7	63.0	
15:45	15:00	57.2	59.1	49.6	72.9	
16:00	15:00	56.2	59.2	47.5	67.8	
16:15	15:00	56.3	59.3	46.0	67.1	
16:30	15:00	56.1	59.2	47.9	66.8	
16:45	15:00	57.1	59.0	46.2	74.2	
17:00	15:00	56.7	59.7	49.2	65.2	
17:15	15:00	56.5	59.5	47.2	64.8	
17:30	15:00	56.5	59.6	49.9	64.1	
17:45	15:00	57.7	59.3	49.5	74.8	
18:00	15:00	56.5	59.7	47.5	66.6	
18:15	15:00	56.2	59.5	43.7	67.1	
18:30	15:00	56.6	59.7	50.9	63.9	
18:45	15:00	60.2	61.2	56.7	74.9	
19:00	15:00	58.2	60.4	54.9	66.6	
19:15	15:00	57.1	59.8	51.3	64.9	
19:30	15:00	56.0	59.1	49.1	65.0	
19:45	15:00	56.5	58.8	47.4	71.4	
20:00	15:00	55.1	58.1	45.3	73.1	
20:15	15:00	54.3	57.4	45.5	65.6	
20:30	15:00	53.4	56.6	44.7	62.3	
20:45	15:00	55.7	58.4	49.9	70.7	
21:00	15:00	55.7	58.1	47.5	71.7	
21:15	15:00	54.4	57.7	41.7	79.0	
21:30	15:00	53.4	56.5	41.3	73.2	
21:45	15:00	50.8	54.8	39.1	62.4	
22:00	15:00	52.6	55.8	38.1	70.7	
22:15	15:00	53.9	57.0	41.1	67.2	
22:30	15:00	52.5	56.2	45.2	67.8	
22:45	15:00	49.1	53.1	40.9	62.5	
Average 1500-2300		56.3	58.5	47.4	62-79	

## Noise Survey Results

Date: Friday 20th - Saturday 21st July 2018

Site: Buttington Quarry

TABLE 3

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 1 - Cefn Cottage**

Instrumentation: Cirrus 171A Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	49.9	54.4	38.7	62.3	
23:15	15:00	47.7	51.8	35.7	65.6	
23:30	15:00	49.0	53.1	33.9	66.1	
23:45	15:00	47.7	51.8	32.9	63.5	
00:00	15:00	46.7	51.1	31.7	62.3	
00:15	15:00	46.4	50.4	31.9	63.4	
00:30	15:00	46.3	50.9	32.0	62.4	
00:45	15:00	44.0	47.7	28.0	59.3	
01:00	15:00	42.7	47.1	27.9	61.2	
01:15	15:00	42.9	40.9	25.2	62.3	
01:30	15:00	44.6	47.5	26.0	62.7	
01:45	15:00	44.4	48.0	24.7	62.8	
02:00	15:00	46.9	50.8	25.2	63.0	
02:15	15:00	39.7	40.0	25.5	59.3	
02:30	15:00	42.1	43.4	24.8	60.9	
02:45	15:00	35.8	35.5	24.3	55.2	
03:00	15:00	42.7	42.4	24.9	60.7	
03:15	15:00	54.3	46.0	26.1	75.2	
03:30	15:00	44.2	49.0	25.1	59.6	
03:45	15:00	45.5	42.3	25.5	65.5	
04:00	15:00	48.1	52.3	26.5	65.9	
04:15	15:00	44.9	47.7	25.5	59.5	
04:30	15:00	46.7	51.1	28.6	63.8	
04:45	15:00	46.1	49.8	30.3	63.1	
05:00	15:00	48.5	52.3	31.6	65.2	
05:15	15:00	46.0	51.1	32.7	61.0	
05:30	15:00	47.9	51.5	32.6	63.0	
05:45	15:00	48.8	54.0	32.6	62.5	
06:00	15:00	51.2	56.3	33.6	64.8	
06:15	15:00	50.1	54.5	33.4	66.1	
06:30	15:00	52.4	55.4	34.0	72.0	
06:45	15:00	54.1	57.5	34.0	72.2	
Average 2300-0700		48.1	49.3	29.5	55-75	
Average 1145-2300		56.4	58.7	47.5	62-79	

## Noise Survey Results

Date: Saturday 21st July 2018

Location: Buttington Quarry

TABLE 4

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 1 - Cefn Cottage**

Instrumentation: Cirrus 171A Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	52.5	56.8	34.8	66.0	
07:15	15:00	57.9	57.6	39.7	80.5	
07:30	15:00	54.6	57.9	40.2	72.3	
07:45	15:00	56.3	59.0	39.7	74.1	
08:00	15:00	53.1	57.0	39.1	66.5	
08:15	15:00	54.0	57.7	40.1	65.3	
08:30	15:00	54.0	57.5	41.9	65.4	
08:45	15:00	56.5	58.3	42.1	74.6	
09:00	15:00	55.4	58.8	43.8	67.6	
09:15	15:00	54.8	58.3	44.5	65.4	
09:30	15:00	54.8	57.4	47.3	68.6	
09:45	15:00	57.4	58.9	39.2	72.9	
10:00	15:00	54.6	57.8	43.0	63.2	
10:15	15:00	55.3	58.1	48.9	67.0	
10:30	15:00	56.4	58.7	47.4	73.0	
10:45	15:00	57.0	58.5	43.8	75.5	
11:00	15:00	55.1	58.1	46.9	66.3	
11:15	15:00	55.5	58.4	46.1	63.7	
11:30	15:00	56.0	58.7	48.9	65.1	
11:45	15:00	57.2	58.7	48.6	74.5	
12:00	15:00	55.7	58.4	49.9	61.6	
12:15	15:00	55.1	58.1	45.3	63.0	
12:30	15:00	55.3	58.3	45.2	65.4	
12:45	15:00	55.6	58.3	47.1	66.8	
13:00	15:00	56.9	58.6	43.4	73.8	
13:15	15:00	55.1	58.4	41.3	62.7	
13:30	15:00	54.8	58.1	44.2	64.0	
13:45	15:00	57.9	58.9	44.0	75.0	
14:00	15:00	56.4	58.7	45.0	78.3	
14:15	15:00	55.0	58.4	42.3	62.6	
14:30	15:00	55.8	59.0	45.1	64.4	
14:45	15:00	56.5	58.5	45.0	81.1	
Average 0700-1500		55.7	58.2	43.9	62-81	

## Noise Survey Results

Date: Saturday 21st July 2018

TABLE 5

Location: Buttington Quarry

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 1 - Cefn Cottage**

Instrumentation: Cirrus 171A Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	56.7	57.5	45.2	74.8	
15:15	15:00	54.6	57.5	38.9	74.4	
15:30	15:00	54.3	58.0	41.3	64.9	
15:45	15:00	56.2	57.6	41.7	74.5	
16:00	15:00	54.5	57.6	45.0	63.8	
16:15	15:00	54.7	57.5	42.1	75.3	
16:30	15:00	53.6	57.1	40.6	64.3	
16:45	15:00	56.9	57.6	40.2	76.8	
17:00	15:00	53.9	57.9	40.8	62.1	
17:15	15:00	53.8	57.4	40.9	62.3	
17:30	15:00	53.8	57.8	39.5	64.1	
17:45	15:00	56.8	58.4	40.1	75.3	
18:00	15:00	55.2	58.1	41.5	74.6	
18:15	15:00	53.6	57.3	40.1	63.9	
18:30	15:00	55.4	57.8	42.1	72.3	
18:45	15:00	56.1	58.8	43.7	73.1	
19:00	15:00	53.7	57.6	41.0	64.3	
19:15	15:00	53.7	57.5	40.1	65.7	
19:30	15:00	53.1	57.3	38.6	61.5	
19:45	15:00	54.8	57.6	37.0	72.6	
20:00	15:00	55.2	57.8	38.7	73.1	
20:15	15:00	52.5	56.7	35.2	67.7	
20:30	15:00	51.4	56.2	30.4	63.7	
20:45	15:00	54.0	56.8	33.6	75.0	
21:00	15:00	55.1	55.5	31.9	75.4	
21:15	15:00	49.4	54.3	30.3	61.1	
21:30	15:00	50.9	55.5	31.4	64.6	
21:45	15:00	53.3	55.8	32.2	72.2	
22:00	15:00	49.7	54.9	30.2	61.0	
22:15	15:00	57.2	56.1	33.8	75.1	
22:30	15:00	50.0	54.7	30.7	62.5	
22:45	15:00	50.0	54.4	31.1	63.6	
Average 1500-2300		54.3	57.0	37.8	61.77	

## Noise Survey Results

Date: Saturday 21st - Sunday 22nd July 2018

Site: Buttington Quarry

TABLE 6

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 1 - Cefn Cottage**

Instrumentation: Cirrus 171A Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	48.2	52.8	26.2	65.3	
23:15	15:00	49.3	54.1	27.7	63.5	
23:30	15:00	48.3	53.1	27.9	63.2	
23:45	15:00	47.0	51.2	27.0	62.9	
00:00	15:00	48.5	53.2	26.9	64.0	
00:15	15:00	44.9	49.4	25.0	60.2	
00:30	15:00	43.0	45.3	24.5	62.8	
00:45	15:00	45.8	50.0	24.3	63.2	
01:00	15:00	43.2	42.5	24.4	59.3	
01:15	15:00	43.5	47.2	24.2	61.1	
01:30	15:00	44.2	48.8	24.7	61.2	
01:45	15:00	45.1	47.5	24.4	65.2	
02:00	15:00	45.2	49.8	23.5	60.4	
02:15	15:00	37.6	36.1	22.4	56.3	
02:30	15:00	41.3	42.3	22.7	60.9	
02:45	15:00	39.2	34.4	22.2	59.0	
03:00	15:00	43.7	40.7	22.6	62.0	
03:15	15:00	46.0	50.6	24.2	62.2	
03:30	15:00	45.8	48.8	23.6	62.8	
03:45	15:00	41.6	41.5	24.3	59.3	
04:00	15:00	42.5	36.8	22.7	60.6	
04:15	15:00	44.0	42.7	22.6	61.8	
04:30	15:00	46.4	49.2	25.8	63.5	
04:45	15:00	45.9	50.9	28.0	62.1	
05:00	15:00	47.4	50.3	27.9	64.7	
05:15	15:00	46.4	48.8	27.9	63.4	
05:30	15:00	47.9	52.7	29.9	63.3	
05:45	15:00	54.7	55.2	30.4	74.1	
06:00	15:00	53.7	51.2	29.7	74.4	
06:15	15:00	49.3	53.7	29.6	63.7	
06:30	15:00	51.2	55.9	32.0	69.7	
06:45	15:00	50.0	54.8	33.3	63.7	
Average 2300-0700		47.5	48.2	26.0	56-74	
Average 0700-2300		55.1	57.5	40.8	61-81	

## Noise Survey Results

Date: Sunday 22nd July 2018

Location: Buttington Quarry

TABLE 7

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 1 - Cefn Cottage**

Instrumentation: Cirrus 171A Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	50.9	56.0	31.3	63.8	
07:15	15:00	52.8	56.8	32.3	70.4	
07:30	15:00	52.5	57.1	35.1	67.0	
07:45	15:00	53.5	57.9	34.4	71.4	
08:00	15:00	52.6	57.0	36.1	64.4	
08:15	15:00	54.4	57.4	36.2	78.9	
08:30	15:00	52.5	56.8	36.1	66.8	
08:45	15:00	58.9	58.3	37.7	78.5	
09:00	15:00	54.2	58.0	37.7	68.5	
09:15	15:00	58.2	58.2	39.2	84.2	
09:30	15:00	53.9	57.5	41.6	63.3	
09:45	15:00	55.2	58.8	45.5	65.0	
10:00	15:00	55.9	59.3	40.9	72.7	
10:15	15:00	56.4	58.3	42.4	75.7	
10:30	15:00	56.4	58.8	46.3	72.9	
10:45	15:00	58.0	58.7	45.9	76.8	
11:00	15:00	55.0	58.5	44.3	65.2	
11:15	15:00	59.5	58.8	44.5	82.5	
11:30	15:00	56.7	58.6	44.9	74.7	
11:45	15:00	57.1	59.1	48.1	73.4	
12:00	15:00	56.5	58.9	46.0	72.5	
12:15	15:00	55.4	58.1	47.4	64.8	
12:30	15:00	55.0	58.2	40.4	62.5	
12:45	15:00	56.3	58.1	45.2	73.4	
13:00	15:00	55.0	58.2	44.3	64.2	
13:15	15:00	54.2	57.4	43.7	65.9	
13:30	15:00	57.5	58.4	47.1	75.9	
13:45	15:00	55.8	58.7	47.1	66.3	
14:00	15:00	55.0	58.4	42.7	62.3	
14:15	15:00	55.1	58.2	42.2	65.2	
14:30	15:00	55.2	58.3	44.1	63.5	
14:45	15:00	55.8	58.3	46.4	70.9	
Average 0700-1500		55.7	58.1	41.8	62-84	



## Noise Survey Results

Date: Sunday 22nd July 2018

TABLE 8

Location: Buttington Quarry

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 1 - Cefn Cottage**

Instrumentation: Cirrus 171A Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	56.1	59.0	44.9	70.8	
15:15	15:00	55.6	58.3	47.4	63.7	
15:30	15:00	55.0	57.7	47.9	62.7	
15:45	15:00	56.6	58.8	43.7	72.5	
16:00	15:00	58.8	59.0	44.3	77.3	
16:15	15:00	56.1	59.1	46.9	68.2	
16:30	15:00	55.7	58.5	46.4	62.3	
16:45	15:00	56.9	58.7	46.6	73.8	
17:00	15:00	57.6	58.8	39.6	76.0	
17:15	15:00	55.8	58.8	47.0	64.0	
17:30	15:00	57.9	59.2	47.2	75.3	
17:45	15:00	55.7	58.7	42.1	62.0	
18:00	15:00	56.7	59.5	47.5	71.4	
18:15	15:00	55.7	59.1	41.5	66.5	
18:30	15:00	55.5	58.5	41.8	66.2	
18:45	15:00	55.6	57.8	41.7	72.0	
19:00	15:00	54.9	58.3	38.4	68.2	
19:15	15:00	54.9	58.2	41.0	67.8	
19:30	15:00	56.9	58.6	42.4	74.7	
19:45	15:00	54.6	58.1	42.3	63.6	
20:00	15:00	54.0	58.1	36.2	64.3	
20:15	15:00	54.3	58.4	40.3	63.2	
20:30	15:00	54.1	58.1	38.8	65.1	
20:45	15:00	54.8	58.1	34.8	72.5	
21:00	15:00	52.5	57.2	35.3	62.7	
21:15	15:00	54.2	58.2	37.1	67.0	
21:30	15:00	55.6	57.2	33.3	74.6	
21:45	15:00	51.0	55.5	35.4	61.9	
22:00	15:00	49.8	54.7	32.7	66.8	
22:15	15:00	49.9	54.6	30.8	60.5	
22:30	15:00	47.7	52.3	26.0	61.7	
22:45	15:00	48.7	53.7	26.2	62.3	
Average 1500-2300		55.2	57.8	40.2	61-77	

## Noise Survey Results

Date: Sunday 22nd - Monday 23rd July 2018

Site: Buttington Quarry

TABLE 9

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 1 - Cefn Cottage**

Instrumentation: Cirrus 171A Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	48.1	53.4	25.7	62.8	
23:15	15:00	47.0	52.1	23.9	62.5	
23:30	15:00	46.8	52.1	25.2	61.7	
23:45	15:00	45.4	50.1	23.7	61.3	
00:00	15:00	48.3	52.2	24.7	66.2	
00:15	15:00	43.9	45.2	24.2	60.0	
00:30	15:00	46.7	50.0	23.7	64.2	
00:45	15:00	47.6	49.1	23.6	66.8	
01:00	15:00	42.8	47.2	24.0	57.3	
01:15	15:00	40.7	31.5	23.4	61.7	
01:30	15:00	40.8	42.0	24.3	60.3	
01:45	15:00	46.3	41.0	24.0	65.0	
02:00	15:00	37.1	35.7	23.0	54.8	
02:15	15:00	42.7	43.5	23.3	61.4	
02:30	15:00	41.8	41.7	24.4	59.8	
02:45	15:00	46.2	44.5	24.6	64.1	
03:00	15:00	46.8	46.2	24.6	64.1	
03:15	15:00	45.2	47.5	25.1	63.1	
03:30	15:00	47.0	50.6	25.3	62.8	
03:45	15:00	44.6	45.4	24.5	65.2	
04:00	15:00	48.8	53.4	27.4	64.6	
04:15	15:00	51.4	56.6	28.0	64.8	
04:30	15:00	48.3	52.0	30.1	64.0	
04:45	15:00	52.9	57.8	33.8	68.0	
05:00	15:00	51.1	55.8	33.7	66.1	
05:15	15:00	52.5	57.4	33.9	65.9	
05:30	15:00	52.0	56.5	35.3	66.9	
05:45	15:00	53.1	57.8	35.2	73.1	
06:00	15:00	52.6	57.2	37.8	64.8	
06:15	15:00	54.4	59.1	39.4	65.8	
06:30	15:00	54.8	58.2	37.1	72.0	
06:45	15:00	55.7	59.1	39.8	73.1	
Average 2300-0700		49.7	50.1	28.0	55-73	
Average 0700-2300		55.5	57.9	41	61-84	

## Noise Survey Results

Date: Monday 23rd July 2018

Location: Buttington Quarry

**TABLE 10**

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 1 - Cefn Cottage**

Instrumentation: Cirrus 171A Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	54.9	59.1	36.6	65.4	
07:15	15:00	54.4	58.2	39.9	67.8	
07:30	15:00	56.7	59.3	43.9	72.4	
07:45	15:00	56.5	58.8	43.3	74.2	
08:00	15:00	55.1	58.4	41.7	65.9	
08:15	15:00	54.8	58.2	43.2	64.8	
08:30	15:00	55.3	58.7	42.9	68.5	
08:45	15:00	56.5	58.4	36.3	75.2	
09:00	15:00	54.1	57.8	40.2	65.1	
09:15	15:00	54.5	58.1	44.0	62.9	
09:30	15:00	55.0	58.2	41.5	65.8	
09:45	15:00	58.8	59.7	39.1	76.0	
10:00	15:00	55.5	59.2	45.0	65.1	
10:15	15:00	54.8	58.1	41.6	66.9	
10:30	15:00	57.4	59.9	47.0	76.7	
10:45	15:00	56.6	59.2	42.9	72.8	
11:00	15:00	57.5	59.3	46.7	74.6	
11:15	15:00	54.8	58.1	42.4	65.1	
11:30	15:00	57.0	58.6	44.5	74.9	
11:45	15:00	54.9	58.2	44.1	63.4	
12:00	15:00	55.2	58.4	42.4	65.6	
12:15	15:00	54.5	57.8	40.3	63.6	
12:30	15:00	54.8	58.1	41.8	67.4	
12:45	15:00	54.5	58.2	39.9	66.3	
13:00	15:00	57.5	59.4	44.6	75.8	
13:15	15:00	55.4	58.8	43.6	66.0	
13:30	15:00	56.0	59.8	45.1	64.1	
13:45	15:00	59.0	60.1	48.1	76.0	
14:00	15:00	56.8	60.2	46.4	67.3	
14:15	15:00	55.8	59.2	45.7	64.5	
14:30	15:00	55.3	58.8	44.2	64.3	
14:45	15:00	57.9	59.8	46.4	74.9	
Average 0700-1500		56.0	58.8	43.0	63-77	

## Noise Survey Results

Date: Monday 23rd July 2018

TABLE 11

Location: Buttington Quarry

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 1 - Cefn Cottage**

Instrumentation: Cirrus 171A Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	56.5	60.0	42.5	70.3	
15:15	15:00	55.2	58.9	42.0	63.9	
15:30	15:00	56.2	59.1	47.5	66.5	
15:45	15:00	57.7	60.2	43.0	74.8	
16:00	15:00	56.3	59.6	45.7	68.5	
16:15	15:00	54.6	58.1	39.2	66.3	
16:30	15:00	55.0	58.4	40.4	64.4	
16:45	15:00	54.8	58.2	44.5	64.1	
17:00	15:00	57.3	58.5	47.1	75.2	
17:15	15:00	55.0	58.4	44.7	64.8	
17:30	15:00	55.2	58.3	46.5	64.6	
17:45	15:00	56.7	58.4	44.0	74.6	
18:00	15:00	55.8	59.4	40.7	69.3	
18:15	15:00	55.4	59.0	41.9	72.0	
18:30	15:00	54.3	58.2	38.0	64.2	
18:45	15:00	54.9	58.3	34.3	72.2	
19:00	15:00	55.6	58.5	39.4	73.2	
19:15	15:00	55.0	58.7	38.2	65.4	
19:30	15:00	53.0	57.4	37.3	64.4	
19:45	15:00	56.2	58.1	39.2	74.3	
20:00	15:00	54.0	58.3	40.7	65.1	
20:15	15:00	53.1	57.8	38.0	64.9	
20:30	15:00	53.4	58.2	35.7	64.2	
20:45	15:00	53.2	56.3	31.7	72.7	
21:00	15:00	54.0	56.5	32.8	72.8	
21:15	15:00	50.4	54.8	33.1	65.4	
21:30	15:00	49.9	54.4	31.8	61.8	
21:45	15:00	49.1	54.3	31.8	64.2	
22:00	15:00	53.4	56.9	30.6	71.7	
22:15	15:00	50.0	53.3	30.0	67.0	
22:30	15:00	48.7	51.7	26.8	66.3	
22:45	15:00	44.5	49.5	25.6	60.5	
Average 1500-2300		54.5	57.4	38.3	61-75	

## Noise Survey Results

Date: Monday 23rd - Tuesday 24th July 2018

Site: Buttington Quarry

TABLE 12

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 1 - Cefn Cottage**

Instrumentation: Cirrus 171A Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	47.5	52.4	27.0	64.4	
23:15	15:00	46.2	51.1	27.0	62.9	
23:30	15:00	46.5	51.1	28.0	61.1	
23:45	15:00	42.3	47.2	24.0	57.0	
00:00	15:00	45.5	48.9	24.0	62.4	
00:15	15:00	42.8	47.0	23.2	65.5	
00:30	15:00	38.8	34.6	22.7	56.9	
00:45	15:00	44.5	43.3	22.7	65.4	
01:00	15:00	45.9	50.0	24.5	62.0	
01:15	15:00	44.0	45.1	23.9	62.2	
01:30	15:00	47.0	44.4	23.3	64.5	
01:45	15:00	42.5	38.4	22.8	60.7	
02:00	15:00	41.0	32.6	23.6	61.5	
02:15	15:00	40.6	41.0	24.3	60.2	
02:30	15:00	43.0	42.4	22.8	64.5	
02:45	15:00	41.8	41.0	23.5	60.6	
03:00	15:00	43.0	37.7	23.8	61.5	
03:15	15:00	45.7	42.8	24.3	65.1	
03:30	15:00	42.2	41.0	23.7	59.4	
03:45	15:00	45.5	47.7	23.0	63.7	
04:00	15:00	46.2	49.7	23.7	63.4	
04:15	15:00	49.7	54.8	25.6	63.8	
04:30	15:00	50.3	55.8	27.7	66.1	
04:45	15:00	49.0	53.2	32.1	66.1	
05:00	15:00	51.5	56.4	32.3	67.5	
05:15	15:00	50.5	54.9	32.8	68.2	
05:30	15:00	51.2	56.6	32.8	64.8	
05:45	15:00	51.0	55.9	33.6	62.8	
06:00	15:00	53.4	57.9	34.2	64.4	
06:15	15:00	54.6	59.0	35.6	67.0	
06:30	15:00	54.5	58.1	36.3	71.8	
06:45	15:00	54.9	58.2	36.5	74.2	
Average 2300-0700		48.8	48.4	27.0	57-74	
Average 0700-2300		55.3	58	40.6	61-77	

## Noise Survey Results

Date: Tuesday 24th July 2018

Location: Buttington Quarry

**TABLE 13**

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 1 - Cefn Cottage**

Instrumentation: Cirrus 171A Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	55.7	59.5	42.5	67.7	
07:15	15:00	55.2	58.9	43.0	64.9	
07:30	15:00	56.2	59.1	41.8	72.4	
07:45	15:00	55.6	58.7	37.0	72.6	
08:00	15:00	54.9	58.2	43.9	64.7	
08:15	15:00	54.0	57.6	41.8	70.3	
08:30	15:00	54.2	57.6	41.2	61.9	
08:45	15:00	56.2	58.5	40.2	74.2	
09:00	15:00	54.6	58.4	41.2	66.8	
09:15	15:00	54.4	58.3	37.6	64.9	
09:30	15:00	54.1	57.8	40.5	63.3	
09:45	15:00	57.7	59.2	41.4	74.7	
10:00	15:00	54.7	57.9	39.9	71.9	
10:15	15:00	54.7	58.4	39.6	64.6	
10:30	15:00	54.2	57.5	41.6	67.5	
10:45	15:00	57.4	58.8	42.4	75.1	
11:00	15:00	54.9	58.4	43.5	64.5	
11:15	15:00	55.6	58.8	47.8	66.4	
11:30	15:00	57.1	59.1	44.2	74.7	
11:45	15:00	55.0	58.7	42.9	63.1	
12:00	15:00	55.8	58.2	41.8	73.9	
12:15	15:00	55.6	59.0	45.7	64.9	
12:30	15:00	56.0	59.9	43.8	67.8	
12:45	15:00	57.1	59.1	46.2	75.1	
13:00	15:00	56.1	59.3	45.1	67.4	
13:15	15:00	57.2	59.8	47.5	75.2	
13:30	15:00	57.0	59.3	44.1	74.0	
13:45	15:00	57.0	59.7	44.6	75.1	
14:00	15:00	55.7	58.9	46.1	63.6	
14:15	15:00	56.4	59.8	44.5	65.4	
14:30	15:00	55.1	58.5	46.3	64.5	
14:45	15:00	58.8	60.5	42.7	79.2	
Average 0700-1500		55.9	58.8	42.9	62-79	

## Noise Survey Results

Date: Tuesday 24th July 2018

TABLE 14

Location: Buttington Quarry

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 1 - Cefn Cottage**

Instrumentation: Cirrus 171A Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	55.6	59.3	41.8	66.0	
15:15	15:00	57.2	60.3	45.7	78.1	
15:30	15:00	55.6	59.0	42.1	66.4	
15:45	15:00	57.3	59.2	43.0	75.7	
16:00	15:00	55.2	58.5	43.8	67.0	
16:15	15:00	55.6	59.1	42.3	66.9	
16:30	15:00	56.2	59.5	45.8	67.6	
16:45	15:00	57.6	59.1	42.9	75.7	
17:00	15:00	56.5	59.5	46.3	65.6	
17:15	15:00	56.0	59.5	43.4	65.3	
17:30	15:00	55.8	59.1	43.6	66.9	
17:45	15:00	57.6	59.1	44.2	75.1	
18:00	15:00	56.2	59.3	42.4	70.2	
18:15	15:00	55.9	59.6	41.5	68.2	
18:30	15:00	54.0	58.0	37.8	64.0	
18:45	15:00	55.1	58.1	39.0	71.7	
19:00	15:00	55.9	59.8	36.4	73.4	
19:15	15:00	54.3	58.1	40.1	68.2	
19:30	15:00	53.2	57.4	37.2	64.0	
19:45	15:00	55.0	57.7	36.7	74.3	
20:00	15:00	54.8	57.5	35.2	72.4	
20:15	15:00	53.5	57.8	36.2	64.7	
20:30	15:00	52.8	57.3	32.7	66.2	
20:45	15:00	53.8	56.8	34.8	71.9	
21:00	15:00	54.3	56.9	36.0	73.2	
21:15	15:00	50.7	55.0	33.8	64.7	
21:30	15:00	50.2	54.3	33.4	67.7	
21:45	15:00	51.6	55.9	33.0	67.1	
22:00	15:00	52.7	55.5	30.8	72.3	
22:15	15:00	51.0	55.3	33.6	62.6	
22:30	15:00	49.5	53.9	28.4	65.1	
22:45	15:00	48.4	53.3	27.5	63.4	
Average 1500-2300		54.9	57.8	38.5	63-78	

## Noise Survey Results

Date: Tuesday 24th - Wednesday 25th July 2018

Site: Buttington Quarry

TABLE 15

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 1 - Cefn Cottage**

Instrumentation: Cirrus 171A Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	49.7	53.9	30.2	64.9	
23:15	15:00	46.5	52.1	26.1	61.4	
23:30	15:00	48.0	52.3	26.4	68.5	
23:45	15:00	47.4	52.3	27.3	62.2	
00:00	15:00	48.4	52.2	28.5	64.8	
00:15	15:00	44.7	45.8	25.4	63.9	
00:30	15:00	45.2	49.9	25.2	61.9	
00:45	15:00	44.8	44.5	25.7	64.0	
01:00	15:00	45.0	49.0	25.5	61.6	
01:15	15:00	45.3	48.5	25.3	61.8	
01:30	15:00	37.8	31.6	25.0	56.6	
01:45	15:00	46.2	43.7	25.5	66.1	
02:00	15:00	38.2	30.8	25.1	61.8	
02:15	15:00	38.2	31.5	25.3	60.1	
02:30	15:00	40.0	33.2	25.4	62.5	
02:45	15:00	42.7	43.2	25.1	60.9	
03:00	15:00	42.5	45.9	27.0	58.5	
03:15	15:00	41.6	40.1	25.4	61.2	
03:30	15:00	43.9	44.9	26.6	61.8	
03:45	15:00	43.5	42.3	25.4	62.4	
04:00	15:00	50.5	53.8	28.4	65.8	
04:15	15:00	50.2	55.0	29.4	63.9	
04:30	15:00	50.4	55.3	31.5	64.8	
04:45	15:00	50.2	55.3	32.7	65.8	
05:00	15:00	51.2	56.6	35.8	66.6	
05:15	15:00	50.9	55.8	36.0	63.8	
05:30	15:00	52.3	57.1	36.6	64.0	
05:45	15:00	52.4	56.9	36.6	67.1	
06:00	15:00	52.1	56.4	37.4	65.6	
06:15	15:00	53.2	57.8	38.8	65.6	
06:30	15:00	54.8	58.3	38.0	72.9	
06:45	15:00	55.8	58.9	39.8	73.4	
Average 2300-0700		49.3	48.9	29.5	57-73	
Average 0700-2300		55.4	58.2	40.6	62-79	



## Noise Survey Results

Date: Wednesday 25th July 2018

Location: Buttington Quarry

TABLE 16

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 1 - Cefn Cottage**

Instrumentation: Cirrus 171A Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	55.6	59.5	41.7	66.1	
07:15	15:00	55.2	59.0	41.8	67.1	
07:30	15:00	55.4	59.2	41.1	69.5	
07:45	15:00	56.8	60.1	42.1	72.9	
08:00	15:00	51.4	45.5	40.1	73.2	
08:15	15:00	51.4	51.5	39.5	79.8	
08:30	15:00	51.2	55.0	41.8	63.4	
08:45	15:00	56.2	55.9	46.2	75.2	
09:00	15:00	51.9	55.6	37.0	65.1	
09:15	15:00	53.0	56.8	46.2	65.8	
09:30	15:00	54.0	57.9	38.6	64.8	
09:45	15:00	57.6	58.7	42.3	75.0	
10:00	15:00	55.8	58.5	40.2	82.0	
10:15	15:00	55.7	58.8	44.7	67.6	
10:30	15:00	54.3	57.6	42.2	66.8	
10:45	15:00	58.3	59.2	40.9	77.1	
11:00	15:00	55.3	58.4	43.1	72.1	
11:15	15:00	54.7	58.2	42.3	63.9	
11:30	15:00	56.6	57.3	43.9	75.6	
11:45	15:00	54.4	58.0	43.2	63.6	
12:00	15:00	54.3	57.9	40.8	65.1	
12:15	15:00	54.8	58.2	40.5	64.0	
12:30	15:00	53.6	57.1	42.1	64.9	
12:45	15:00	56.2	58.2	42.7	73.6	
13:00	15:00	54.4	58.2	38.7	64.4	
13:15	15:00	53.8	57.5	42.0	64.9	
13:30	15:00	53.2	57.3	39.1	65.2	
13:45	15:00	55.8	58.0	41.6	73.7	
14:00	15:00	56.1	57.8	41.5	75.6	
14:15	15:00	55.5	59.1	43.0	70.9	
14:30	15:00	54.9	58.2	42.1	66.4	
14:45	15:00	54.5	58.0	40.0	65.3	
Average 0700-1500		55.0	57.4	41.7	63-82	

## Noise Survey Results

Date: Wednesday 25th July 2018

TABLE 17

Location: Buttington Quarry

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 1 - Cefn Cottage**

Instrumentation: Cirrus 171A Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	58.4	59.9	42.7	76.8	
15:15	15:00	53.2	56.8	40.9	62.9	
15:30	15:00	54.3	57.7	42.1	64.2	
15:45	15:00	57.3	59.0	40.9	75.6	
16:00	15:00	55.1	58.7	44.0	64.1	
16:15	15:00	54.3	57.7	37.9	70.4	
16:30	15:00	55.0	58.4	40.7	64.9	
16:45	15:00	56.6	60.0	42.1	67.1	
17:00	15:00	58.2	59.1	48.3	76.4	
17:15	15:00	55.5	58.6	42.7	64.3	
17:30	15:00	55.5	58.8	43.1	64.7	
17:45	15:00	57.1	58.7	42.1	75.0	
18:00	15:00	54.8	58.2	38.8	69.5	
18:15	15:00	55.0	58.3	41.0	67.3	
18:30	15:00	53.8	57.8	37.5	63.6	
18:45	15:00	55.5	58.5	39.0	72.4	
19:00	15:00	56.0	58.7	39.6	72.6	
19:15	15:00	53.2	57.2	34.9	64.4	
19:30	15:00	52.4	56.9	34.6	63.4	
19:45	15:00	54.3	56.6	36.6	72.6	
20:00	15:00	54.1	56.8	35.1	70.8	
20:15	15:00	52.4	56.4	37.4	63.4	
20:30	15:00	52.1	56.3	36.0	64.0	
20:45	15:00	53.4	56.7	36.5	71.3	
21:00	15:00	53.8	56.2	35.7	73.1	
21:15	15:00	51.7	56.2	35.1	63.4	
21:30	15:00	50.4	54.9	33.1	62.7	
21:45	15:00	51.0	55.3	34.3	63.9	
22:00	15:00	52.4	53.9	31.9	72.6	
22:15	15:00	49.5	54.2	31.4	60.8	
22:30	15:00	49.4	54.0	29.7	64.3	
22:45	15:00	48.5	52.5	29.1	65.7	
Average 1500-2300		54.5	57.2	38.0	61.77	

## Noise Survey Results

Date: Wednesday 25th- Thursday 26th July 2018

Site: Buttington Quarry

TABLE 18

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 1 - Cefn Cottage**

Instrumentation: Cirrus 171A Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	47.8	52.7	31.1	63.0	
23:15	15:00	47.7	52.9	29.7	61.8	
23:30	15:00	47.7	52.6	28.3	62.7	
23:45	15:00	46.7	50.6	26.8	61.6	
00:00	15:00	44.9	49.7	26.0	61.1	
00:15	15:00	39.9	42.3	24.6	59.7	
00:30	15:00	45.3	49.1	24.1	60.7	
00:45	15:00	43.4	47.1	25.8	61.0	
01:00	15:00	45.6	48.1	26.7	65.4	
01:15	15:00	47.1	51.6	24.1	63.0	
01:30	15:00	45.0	44.7	24.5	65.1	
01:45	15:00	42.2	40.0	26.6	63.8	
02:00	15:00	41.5	36.5	25.6	60.5	
02:15	15:00	44.1	45.8	25.1	61.1	
02:30	15:00	43.5	45.9	26.7	60.0	
02:45	15:00	39.5	38.9	25.5	58.3	
03:00	15:00	37.7	36.2	26.1	58.6	
03:15	15:00	43.4	46.9	27.6	59.2	
03:30	15:00	44.5	41.7	27.4	63.0	
03:45	15:00	44.0	46.6	27.3	61.1	
04:00	15:00	50.2	54.7	29.3	65.2	
04:15	15:00	50.2	55.7	33.5	65.1	
04:30	15:00	49.9	55.5	34.4	62.3	
04:45	15:00	47.7	51.8	34.3	64.1	
05:00	15:00	52.0	56.0	39.5	67.3	
05:15	15:00	50.9	55.6	38.0	65.1	
05:30	15:00	52.4	56.7	40.3	67.2	
05:45	15:00	51.7	56.3	39.3	66.1	
06:00	15:00	53.1	57.7	39.9	66.1	
06:15	15:00	54.1	58.6	41.1	71.2	
06:30	15:00	55.1	58.7	40.2	72.9	
06:45	15:00	55.7	59.1	40.4	72.3	
Average 2300-0700		49.3	49.9	30.6	58-73	
Average 0700-2300		54.8	57.2	39.8	61-82	

## Noise Survey Results

Date: Thursday 26th July 2018

Location: Buttington Quarry

**TABLE 19**

Client: ECL

Project: Buttington Quarry ERF

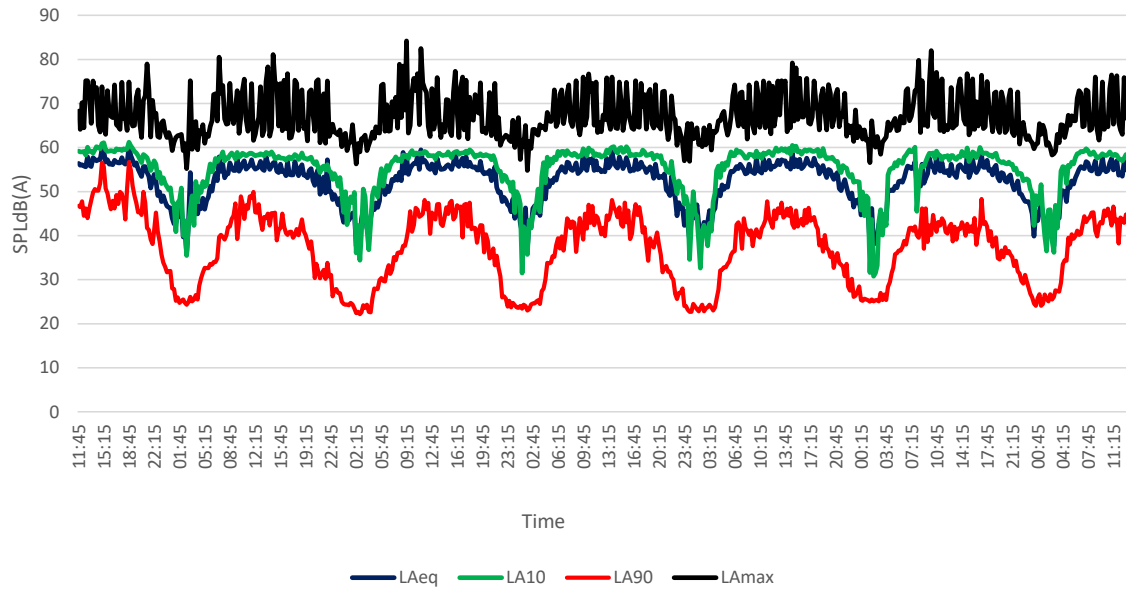
Data: **Baseline Sound Survey: Position 1 - Cefn Cottage**

Instrumentation: Cirrus 171A Real Time Analyser (G056142)

Calibration: 94dB

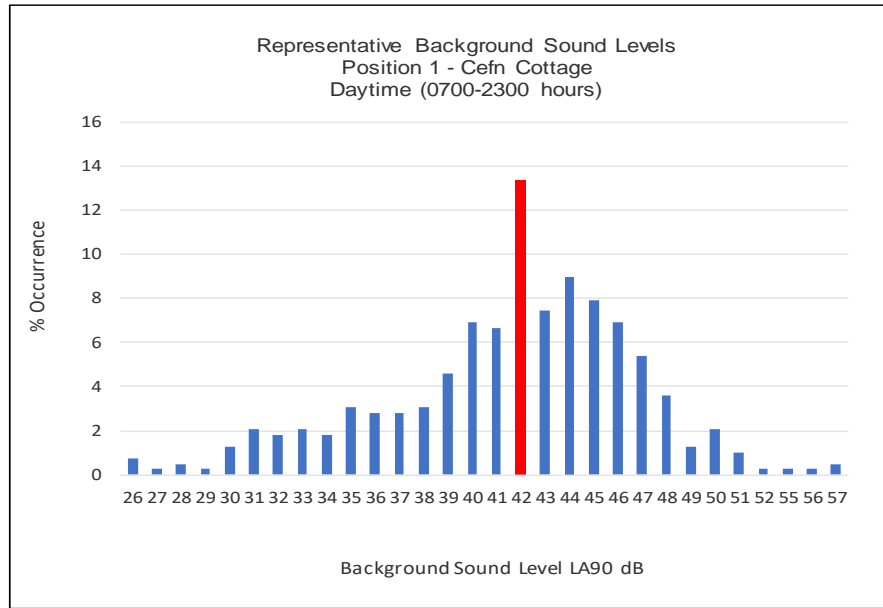
Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	55.3	59.0	42.7	64.7	
07:15	15:00	55.2	59.2	44.4	64.9	
07:30	15:00	56.8	59.7	43.1	73.1	
07:45	15:00	56.5	59.3	43.8	72.8	
08:00	15:00	54.9	58.4	44.2	63.9	
08:15	15:00	54.7	58.5	45.2	64.2	
08:30	15:00	55.5	59.0	45.3	66.6	
08:45	15:00	57.0	58.3	41.1	76.0	
09:00	15:00	54.0	57.6	39.8	64.0	
09:15	15:00	54.0	57.9	42.3	61.7	
09:30	15:00	54.7	58.1	43.1	64.6	
09:45	15:00	57.9	58.6	42.8	74.9	
10:00	15:00	55.0	58.3	45.7	64.1	
10:15	15:00	54.5	58.2	44.5	65.9	
10:30	15:00	54.8	58.4	46.1	64.7	
10:45	15:00	56.5	59.0	44.6	73.3	
11:00	15:00	57.5	58.4	42.3	76.5	
11:15	15:00	54.9	58.1	46.6	65.3	
11:30	15:00	55.6	58.5	43.2	73.2	
11:45	15:00	57.0	58.3	43.7	76.3	
12:00	15:00	53.7	57.5	38.2	65.8	
12:15	15:00	54.2	57.3	44.1	64.0	
12:30	15:00	53.5	57.0	43.7	63.0	
12:45	15:00	56.9	57.6	42.9	75.9	
13:00	15:00	54.9	58.4	44.8	66.7	
Average 0700-1315		55.5	58.3	43.5	62-77	
<b>Overall Average</b>		<b>48.8</b>	<b>49.1</b>	<b>28.4</b>	<b>55-75</b>	
<b>Overall Average</b>		<b>55.4</b>	<b>57.9</b>	<b>41.5</b>	<b>61-84</b>	

Background Sound Survey: Position 1 - Cefn Cottage  
Friday 20th - Thursday 26th July 2018

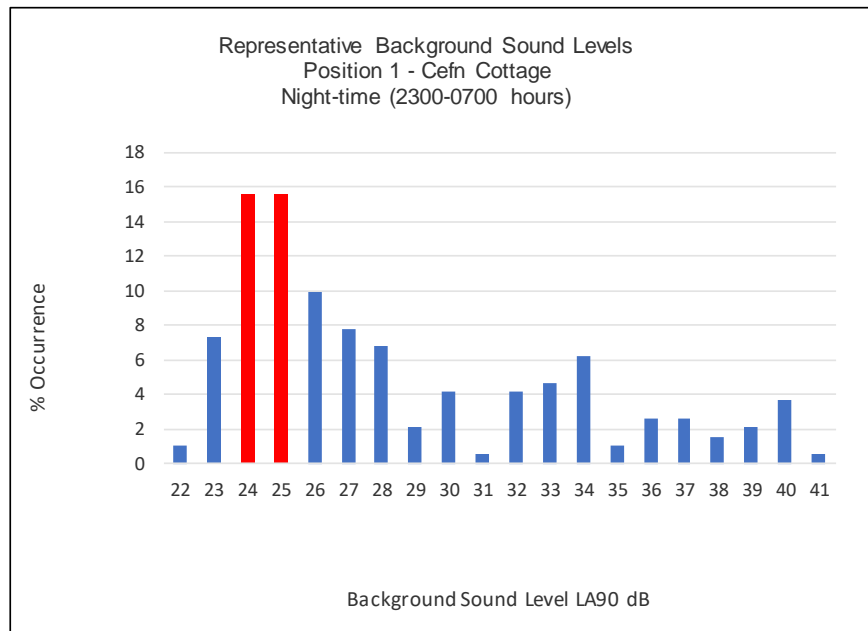


### LA90 Representative Levels

LA90	% Occurrence
26	0.8
27	0.3
28	0.5
29	0.3
30	1.3
31	2.1
32	1.8
33	2.1
34	1.8
35	3.1
36	2.8
37	2.8
38	3.1
39	4.6
40	6.9
41	6.7
<b>42</b>	<b>13.3</b>
43	7.4
44	9.0
45	7.9
46	6.9
47	5.4
48	3.6
49	1.3
50	2.1
51	1.0
52	0.3
55	0.3
56	0.3
57	0.5



LA90	% Occurrence
22	1.0
23	7.3
<b>24</b>	<b>15.6</b>
<b>25</b>	<b>15.6</b>
26	9.9
27	7.8
28	6.8
29	2.1
30	4.2
31	0.5
32	4.2
33	4.7
34	6.3
35	1.0
36	2.6
37	2.6
38	1.6
39	2.1
40	3.6
41	0.5



## Noise Survey Results

Date: Friday 20th - July 2018

Location: Buttington Quarry

**TABLE 20**

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 2 - Sale Farm**

Instrumentation: Cirrus 171A Real Time Analyser (G066350)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
10:00	15:00	50.1	48.2	30.9	81.8	
10:15	15:00	52.8	55.8	31.3	78.2	
10:30	15:00	38.6	39.3	30.4	72.4	
10:45	15:00	38.0	38.4	31.3	62.0	
11:00	15:00	51.0	56.2	34.7	63.5	
11:15	15:00	47.8	53.8	30.3	61.3	
11:30	15:00	45.5	47.5	37.0	63.9	
11:45	15:00	39.7	42.4	36.2	47.9	
12:00	15:00	39.4	41.0	37.0	50.5	
12:15	15:00	37.5	39.3	34.5	46.5	
12:30	15:00	38.8	40.7	34.2	57.8	
12:45	15:00	41.5	44.4	36.5	58.7	
13:00	15:00	43.5	44.8	38.3	62.7	
13:15	15:00	40.8	45.1	34.6	54.2	
13:30	15:00	38.1	40.7	33.3	55.0	
13:45	15:00	46.2	47.6	35.8	63.8	
14:00	15:00	46.4	48.3	41.5	63.4	
14:15	15:00	45.8	48.9	39.4	63.7	
14:30	15:00	43.2	45.3	39.5	53.7	
14:45	15:00	45.3	47.3	41.9	58.7	
Average 1000-1500		45.9	45.8	35.4	47-82	

## Noise Survey Results

Date: Friday 20th - July 2018

TABLE 21

Location: Buttington Quarry

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 2 - Sale Farm**

Instrumentation: Cirrus 171A Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	51.9	54.1	47.7	69.7	
15:15	15:00	50.2	53.1	42.6	65.0	
15:30	15:00	37.9	39.9	34.3	51.7	
15:45	15:00	39.9	39.6	33.6	61.0	
16:00	15:00	38.1	39.7	33.8	53.5	
16:15	15:00	45.1	46.0	33.6	65.1	
16:30	15:00	41.6	39.2	32.6	68.2	
16:45	15:00	41.1	42.2	33.4	60.3	
17:00	15:00	38.4	41.2	33.8	52.7	
17:15	15:00	34.7	35.9	32.4	47.7	
17:30	15:00	34.9	36.4	32.5	51.9	
17:45	15:00	39.5	36.2	31.6	60.8	
18:00	15:00	46.5	37.7	30.9	67.0	
18:15	15:00	37.5	39.5	31.3	51.6	
18:30	15:00	42.8	42.4	34.3	62.0	
18:45	15:00	48.5	49.9	41.5	64.8	
19:00	15:00	43.7	45.4	40.4	61.0	
19:15	15:00	41.0	44.8	34.2	57.4	
19:30	15:00	40.8	44.7	33.6	57.9	
19:45	15:00	42.1	40.9	33.9	61.9	
20:00	15:00	38.8	41.2	34.7	55.4	
20:15	15:00	40.8	44.5	35.1	61.6	
20:30	15:00	40.2	44.3	33.4	50.1	
20:45	15:00	43.5	46.4	36.2	60.7	
21:00	15:00	39.5	36.0	30.3	62.8	
21:15	15:00	31.0	32.4	28.2	46.0	
21:30	15:00	32.1	34.1	28.7	50.2	
21:45	15:00	31.1	33.5	27.7	42.5	
22:00	15:00	34.9	32.3	25.8	55.8	
22:15	15:00	41.1	44.6	29.1	53.7	
22:30	15:00	35.3	39.9	28.7	52.5	
22:45	15:00	30.4	30.5	25.1	37.4	
Average 1500-2300		43.1	40.9	33.3	37-70	



## Noise Survey Results

Date: Friday 20th - Saturday 21st July 2018

Site: Buttington Quarry

TABLE 22

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 2 - Sale Farm**

Instrumentation: Cirrus 171A Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	33.1	32.9	24.4	44.0	
23:15	15:00	31.0	30.7	21.9	47.7	
23:30	15:00	31.3	30.5	21.4	46.9	
23:45	15:00	33.4	33.8	21.2	54.3	
00:00	15:00	34.5	35.7	20.3	49.7	
00:15	15:00	34.1	36.2	20.5	48.0	
00:30	15:00	34.3	36.2	21.6	44.8	
00:45	15:00	35.8	36.4	20.7	51.6	
01:00	15:00	34.1	36.2	19.8	45.8	
01:15	15:00	30.2	32.7	19.2	47.4	
01:30	15:00	33.2	35.5	19.7	49.4	
01:45	15:00	33.6	35.7	21.2	45.7	
02:00	15:00	28.3	29.4	20.1	41.1	
02:15	15:00	28.6	29.7	19.6	44.1	
02:30	15:00	27.3	28.5	19.8	49.2	
02:45	15:00	27.8	29.7	19.2	44.6	
03:00	15:00	25.8	27.4	19.1	40.9	
03:15	15:00	49.7	30.4	20.3	67.2	
03:30	15:00	30.5	32.2	20.1	41.0	
03:45	15:00	28.8	30.9	19.9	39.7	
04:00	15:00	32.8	34.0	22.2	40.3	
04:15	15:00	32.8	34.5	20.4	46.2	
04:30	15:00	35.3	37.1	23.3	47.1	
04:45	15:00	40.1	37.5	22.2	55.0	
05:00	15:00	42.0	44.7	22.1	56.3	
05:15	15:00	41.5	41.5	28.0	59.7	
05:30	15:00	41.0	40.9	29.6	58.8	
05:45	15:00	47.4	42.8	29.2	67.2	
06:00	15:00	37.6	39.1	26.3	52.3	
06:15	15:00	41.2	41.3	28.4	65.3	
06:30	15:00	48.2	45.9	30.6	65.7	
06:45	15:00	42.9	42.6	29.7	62.5	
Average 2300-0700		40.3	35.4	22.6	40-67	
Average 1000-2300		44.4	42.7	34.1	37-82	

## Noise Survey Results

Date: Saturday 21st July 2018

Location: Buttington Quarry

**TABLE 23**

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 2 - Sale Farm**

Instrumentation: Cirrus 171A Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	39.7	40.4	30.0	64.6	
07:15	15:00	37.6	40.9	30.6	56.0	
07:30	15:00	37.2	39.8	31.2	53.0	
07:45	15:00	41.9	40.4	30.1	61.3	
08:00	15:00	41.6	43.9	32.4	64.3	
08:15	15:00	37.4	40.0	32.4	55.0	
08:30	15:00	39.6	41.9	32.4	61.7	
08:45	15:00	43.2	42.0	33.8	64.1	
09:00	15:00	39.1	40.9	32.6	59.2	
09:15	15:00	37.2	37.3	29.2	65.2	
09:30	15:00	40.5	44.1	30.7	63.0	
09:45	15:00	44.7	45.2	31.2	64.1	
10:00	15:00	39.2	40.4	31.2	61.0	
10:15	15:00	38.9	41.9	31.9	54.4	
10:30	15:00	40.3	40.7	31.5	62.3	
10:45	15:00	40.8	39.4	30.5	62.5	
11:00	15:00	37.5	39.8	32.2	56.3	
11:15	15:00	38.5	41.2	32.2	62.0	
11:30	15:00	42.3	44.1	34.7	59.7	
11:45	15:00	42.6	41.5	33.5	64.0	
12:00	15:00	40.9	43.8	32.9	63.0	
12:15	15:00	38.2	41.3	32.6	53.3	
12:30	15:00	37.9	40.2	33.7	53.0	
12:45	15:00	39.1	41.4	35.2	53.7	
13:00	15:00	43.6	39.3	32.5	64.4	
13:15	15:00	37.9	40.6	32.5	53.3	
13:30	15:00	35.0	37.1	31.8	45.8	
13:45	15:00	44.3	43.3	31.0	64.8	
14:00	15:00	42.7	42.2	34.3	61.0	
14:15	15:00	42.3	44.4	32.7	65.9	
14:30	15:00	38.5	41.2	34.2	48.9	
14:45	15:00	37.9	40.1	34.1	50.0	
Average 0700-1500		40.6	41.3	32.2	46-66	

## Noise Survey Results

Date: Saturday 21st July 2018

TABLE 24

Location: Buttington Quarry

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 2 - Sale Farm**

Instrumentation: Cirrus 171A Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	44.3	41.9	35.3	65.5	
15:15	15:00	39.6	42.9	34.5	54.6	
15:30	15:00	41.0	43.1	32.2	59.3	
15:45	15:00	43.7	41.6	32.4	65.4	
16:00	15:00	38.2	41.1	33.9	51.6	
16:15	15:00	38.3	40.7	33.0	55.4	
16:30	15:00	36.7	39.7	31.3	53.1	
16:45	15:00	43.0	38.1	30.5	65.6	
17:00	15:00	38.8	40.7	34.1	56.0	
17:15	15:00	38.4	40.9	30.8	54.7	
17:30	15:00	35.0	37.1	28.8	52.0	
17:45	15:00	42.2	39.5	32.2	63.9	
18:00	15:00	39.7	41.9	34.2	53.8	
18:15	15:00	38.2	41.0	32.3	54.3	
18:30	15:00	43.1	43.6	34.9	62.5	
18:45	15:00	44.1	43.8	33.9	65.7	
19:00	15:00	39.2	41.9	35.0	48.5	
19:15	15:00	39.9	42.3	33.3	54.4	
19:30	15:00	39.4	41.8	34.0	52.5	
19:45	15:00	41.7	39.2	32.4	63.3	
20:00	15:00	41.7	40.2	32.8	63.4	
20:15	15:00	37.0	38.8	31.8	53.5	
20:30	15:00	34.4	37.5	27.4	48.7	
20:45	15:00	41.6	39.4	29.1	63.8	
21:00	15:00	43.2	36.7	27.3	65.5	
21:15	15:00	33.0	34.7	26.0	57.5	
21:30	15:00	34.6	37.3	29.2	46.7	
21:45	15:00	43.4	42.2	30.9	63.6	
22:00	15:00	32.6	35.1	26.6	48.6	
22:15	15:00	44.5	36.2	28.7	64.1	
22:30	15:00	34.5	37.9	27.0	45.5	
22:45	15:00	32.1	35.2	26.6	42.0	
Average 1500-2300		40.5	39.8	31.3	42-66	

## Noise Survey Results

Date: Saturday 21st - Sunday 22nd July 2018

Site: Buttington Quarry

TABLE 25

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 2 - Sale Farm**

Instrumentation: Cirrus 171A Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	33.7	35.0	23.0	40.9	
23:15	15:00	36.3	37.8	25.4	44.7	
23:30	15:00	35.7	37.0	21.4	42.9	
23:45	15:00	35.0	34.6	23.1	49.0	
00:00	15:00	38.3	38.5	24.0	53.8	
00:15	15:00	29.0	29.8	19.7	47.4	
00:30	15:00	30.6	31.9	20.1	39.1	
00:45	15:00	31.8	33.8	20.0	43.1	
01:00	15:00	31.9	33.2	21.1	48.1	
01:15	15:00	31.4	33.4	21.2	45.9	
01:30	15:00	30.8	32.5	19.6	45.5	
01:45	15:00	31.5	33.0	20.4	45.8	
02:00	15:00	30.7	31.9	20.2	46.8	
02:15	15:00	27.7	28.8	19.2	43.6	
02:30	15:00	25.8	24.9	18.9	47.2	
02:45	15:00	26.4	24.8	19.2	44.8	
03:00	15:00	27.4	28.0	18.7	41.7	
03:15	15:00	28.2	28.4	19.2	43.8	
03:30	15:00	28.3	28.1	19.4	42.4	
03:45	15:00	28.5	28.6	19.3	43.4	
04:00	15:00	28.2	27.2	19.0	44.4	
04:15	15:00	30.2	30.7	19.5	48.9	
04:30	15:00	34.5	32.4	21.9	56.0	
04:45	15:00	43.7	37.0	23.0	64.8	
05:00	15:00	41.3	42.6	23.9	63.5	
05:15	15:00	43.1	39.0	24.6	62.4	
05:30	15:00	44.0	40.3	27.2	65.3	
05:45	15:00	36.8	37.2	27.2	50.3	
06:00	15:00	39.8	40.3	28.2	56.3	
06:15	15:00	40.8	39.0	27.2	64.5	
06:30	15:00	45.2	42.4	28.1	66.1	
06:45	15:00	44.3	42.7	29.0	68.3	
Average 2300-0700		38.1	33.9	22.2	39-68	
Average 0700-2300		40.6	40.5	31.7	42-66	

## Noise Survey Results

Date: Sunday 22nd July 2018

Location: Buttington Quarry

**TABLE 26**

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 2 - Sale Farm**

Instrumentation: Cirrus 171A Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	35.4	38.5	28.4	52.4	
07:15	15:00	36.8	39.8	28.3	55.4	
07:30	15:00	35.3	36.2	28.6	59.4	
07:45	15:00	37.9	38.6	29.0	55.9	
08:00	15:00	43.0	41.4	29.4	69.9	
08:15	15:00	35.3	36.7	29.4	57.3	
08:30	15:00	35.2	38.2	29.3	61.5	
08:45	15:00	45.8	42.2	31.0	66.5	
09:00	15:00	40.5	41.7	30.6	67.9	
09:15	15:00	36.5	38.8	30.9	60.8	
09:30	15:00	35.5	38.2	30.6	48.7	
09:45	15:00	36.1	38.4	31.3	57.4	
10:00	15:00	36.4	39.0	31.6	51.3	
10:15	15:00	36.9	39.0	32.3	58.4	
10:30	15:00	39.2	40.2	33.0	61.0	
10:45	15:00	43.3	38.1	32.8	66.2	
11:00	15:00	37.6	40.6	32.4	55.1	
11:15	15:00	39.8	40.9	32.0	62.5	
11:30	15:00	43.2	42.3	31.1	62.8	
11:45	15:00	41.6	39.6	31.6	63.7	
12:00	15:00	38.4	40.1	32.1	58.1	
12:15	15:00	43.3	47.3	33.9	57.0	
12:30	15:00	44.7	43.1	33.3	62.8	
12:45	15:00	40.1	37.2	31.9	62.0	
13:00	15:00	35.0	37.3	31.4	54.4	
13:15	15:00	41.4	40.5	32.0	63.6	
13:30	15:00	41.7	37.6	32.0	63.8	
13:45	15:00	34.0	35.7	31.8	45.4	
14:00	15:00	40.6	39.7	31.4	59.8	
14:15	15:00	37.8	41.2	32.3	51.1	
14:30	15:00	36.3	38.2	32.8	48.8	
14:45	15:00	36.6	38.6	32.7	49.3	
Average 0700-1500		40.0	39.5	31.3	45-70	

## Noise Survey Results

Date: Sunday 22nd July 2018

TABLE 27

Location: Buttington Quarry

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 2 - Sale Farm**

Instrumentation: Cirrus 171A Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmix (dB)	Observations
15:00	15:00	35.6	37.4	33.0	49.4	
15:15	15:00	37.8	39.4	33.3	54.2	
15:30	15:00	35.6	38.0	31.5	48.4	
15:45	15:00	40.8	39.7	29.5	63.2	
16:00	15:00	44.2	37.8	29.9	66.3	
16:15	15:00	37.7	40.2	31.4	53.2	
16:30	15:00	36.8	40.2	30.0	53.2	
16:45	15:00	40.0	36.7	32.0	62.3	
17:00	15:00	43.8	39.3	30.1	66.3	
17:15	15:00	36.6	38.2	32.2	54.2	
17:30	15:00	44.6	45.3	33.9	65.0	
17:45	15:00	45.2	46.0	32.5	70.3	
18:00	15:00	44.6	45.4	31.3	69.8	
18:15	15:00	42.9	40.9	30.4	62.6	
18:30	15:00	39.6	42.4	33.5	51.7	
18:45	15:00	44.0	44.5	34.9	63.1	
19:00	15:00	40.1	42.1	32.1	57.8	
19:15	15:00	38.0	38.8	31.0	65.6	
19:30	15:00	43.0	41.0	32.5	64.0	
19:45	15:00	37.9	40.1	33.7	50.5	
20:00	15:00	37.4	40.2	32.2	54.6	
20:15	15:00	39.3	42.2	32.5	55.8	
20:30	15:00	49.0	46.9	37.4	68.8	
20:45	15:00	45.5	43.7	33.0	70.2	
21:00	15:00	37.6	40.5	31.9	48.7	
21:15	15:00	37.7	40.4	32.2	48.3	
21:30	15:00	43.1	39.0	29.2	64.6	
21:45	15:00	34.5	37.1	29.1	48.6	
22:00	15:00	33.6	37.0	26.3	50.3	
22:15	15:00	32.7	35.3	25.2	47.5	
22:30	15:00	31.2	30.9	22.5	50.8	
22:45	15:00	30.4	30.1	22.7	42.3	
Average 1500-2300		41.5	39.9	31.0	42-70	

## Noise Survey Results

Date: Sunday 22nd - Monday 23rd July 2018

Site: Buttington Quarry

TABLE 28

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 2 - Sale Farm**

Instrumentation: Cirrus 171A Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	30.5	30.9	21.5	39.8	
23:15	15:00	32.4	33.8	21.0	39.3	
23:30	15:00	30.9	32.3	21.0	39.2	
23:45	15:00	30.0	30.8	21.3	40.8	
00:00	15:00	32.4	32.4	23.3	44.6	
00:15	15:00	30.0	30.7	21.0	46.5	
00:30	15:00	29.8	30.7	21.0	40.4	
00:45	15:00	33.8	33.2	21.0	50.0	
01:00	15:00	32.4	32.1	21.9	53.5	
01:15	15:00	28.2	28.0	20.8	40.0	
01:30	15:00	28.5	27.7	20.3	49.8	
01:45	15:00	29.9	30.8	20.7	43.3	
02:00	15:00	26.7	26.8	20.0	39.0	
02:15	15:00	29.0	29.7	20.5	43.0	
02:30	15:00	32.8	33.0	20.8	48.3	
02:45	15:00	29.7	30.2	20.2	45.0	
03:00	15:00	30.8	31.3	21.1	44.7	
03:15	15:00	29.9	30.0	21.2	46.3	
03:30	15:00	30.5	31.3	21.0	41.4	
03:45	15:00	29.8	30.3	20.8	40.3	
04:00	15:00	31.7	32.0	23.6	41.1	
04:15	15:00	34.6	35.8	24.4	45.7	
04:30	15:00	35.8	36.8	26.4	44.7	
04:45	15:00	44.7	45.7	28.4	63.5	
05:00	15:00	47.9	50.4	30.4	67.0	
05:15	15:00	47.7	44.7	30.7	66.7	
05:30	15:00	48.6	46.3	31.2	64.0	
05:45	15:00	43.3	46.7	33.4	56.2	
06:00	15:00	44.3	46.4	35.6	62.8	
06:15	15:00	43.9	46.6	35.1	61.2	
06:30	15:00	44.8	47.4	36.2	60.2	
06:45	15:00	43.8	46.1	35.0	59.9	
Average 2300-0700		40.7	35.7	24.7	39-67	
Average 0700-2300		40.8	39.7	31.1	42-70	

## Noise Survey Results

Date: Monday 23rd July 2018

Location: Buttington Quarry

TABLE 29

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 2 - Sale Farm**

Instrumentation: Cirrus 171A Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	46.7	46.3	36.2	66.7	
07:15	15:00	41.4	43.4	33.8	60.0	
07:30	15:00	43.6	44.6	34.9	66.4	
07:45	15:00	40.1	39.6	31.2	60.8	
08:00	15:00	39.7	41.2	33.2	61.5	
08:15	15:00	38.4	40.8	33.0	58.3	
08:30	15:00	39.2	41.1	33.2	56.0	
08:45	15:00	41.4	44.9	31.9	57.6	
09:00	15:00	42.9	38.1	28.9	65.7	
09:15	15:00	44.2	45.5	30.3	63.8	
09:30	15:00	39.3	38.0	29.8	65.2	
09:45	15:00	53.1	46.0	30.5	75.7	
10:00	15:00	38.1	40.4	31.8	58.8	
10:15	15:00	35.5	37.2	31.0	58.8	
10:30	15:00	35.4	37.4	31.8	48.8	
10:45	15:00	42.6	39.5	31.6	62.8	
11:00	15:00	38.4	37.0	31.7	59.3	
11:15	15:00	35.5	37.6	32.0	56.3	
11:30	15:00	40.5	35.8	31.1	64.0	
11:45	15:00	35.0	37.3	31.3	48.8	
12:00	15:00	36.3	37.9	31.6	54.9	
12:15	15:00	35.4	38.1	31.1	49.6	
12:30	15:00	37.4	40.2	31.3	55.8	
12:45	15:00	36.8	39.1	32.3	55.9	
13:00	15:00	38.3	38.8	32.6	56.1	
13:15	15:00	37.3	39.6	33.1	50.9	
13:30	15:00	37.0	38.9	34.4	47.3	
13:45	15:00	44.3	40.7	35.2	66.0	
14:00	15:00	45.5	39.1	34.3	73.9	
14:15	15:00	37.3	38.8	33.8	53.4	
14:30	15:00	41.2	39.4	33.6	62.5	
14:45	15:00	44.2	39.9	35.0	66.2	
Average 0700-1500		42.6	40.1	32.4	47-76	



## Noise Survey Results

Date: Monday 23rd July 2018

TABLE 30

Location: Buttington Quarry

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 2 - Sale Farm**

Instrumentation: Cirrus 171A Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	47.7	46.7	32.8	67.5	
15:15	15:00	39.3	40.4	33.5	56.5	
15:30	15:00	38.7	39.6	34.3	56.5	
15:45	15:00	42.5	42.1	34.1	64.0	
16:00	15:00	46.2	43.5	33.6	65.7	
16:15	15:00	35.9	38.4	31.8	50.1	
16:30	15:00	43.1	41.8	32.0	62.8	
16:45	15:00	36.7	39.4	31.1	53.0	
17:00	15:00	37.1	38.8	31.5	53.4	
17:15	15:00	35.5	38.2	30.4	52.2	
17:30	15:00	34.9	37.1	30.9	52.5	
17:45	15:00	38.5	39.7	32.1	56.8	
18:00	15:00	41.1	41.8	31.1	59.2	
18:15	15:00	35.5	37.5	30.8	54.9	
18:30	15:00	35.7	36.7	30.3	60.2	
18:45	15:00	38.3	39.3	31.0	60.7	
19:00	15:00	39.3	40.9	33.4	59.2	
19:15	15:00	38.6	41.2	33.9	53.2	
19:30	15:00	38.9	41.5	33.0	56.1	
19:45	15:00	39.8	39.6	31.8	60.1	
20:00	15:00	36.2	36.9	31.6	57.0	
20:15	15:00	41.7	38.5	31.7	60.0	
20:30	15:00	32.5	33.9	29.4	47.9	
20:45	15:00	38.6	34.4	27.0	62.3	
21:00	15:00	37.4	37.4	29.9	58.9	
21:15	15:00	35.5	37.9	31.4	49.3	
21:30	15:00	36.1	38.8	31.1	50.0	
21:45	15:00	30.1	32.6	25.3	50.6	
22:00	15:00	36.2	33.8	25.2	58.9	
22:15	15:00	30.7	31.4	24.1	43.3	
22:30	15:00	30.2	30.6	23.7	40.5	
22:45	15:00	30.4	28.9	21.0	40.3	
Average 1500-2300		39.5	38.1	30.5	40-68	

## Noise Survey Results

Date: Monday 23rd - Tuesday 24th July 2018

Site: Buttington Quarry

TABLE 31

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 2 - Sale Farm**

Instrumentation: Cirrus 171A Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	31.0	31.6	22.9	40.8	
23:15	15:00	40.1	34.1	21.2	56.6	
23:30	15:00	29.5	29.9	21.4	38.2	
23:45	15:00	34.7	31.8	22.8	51.0	
00:00	15:00	32.4	33.6	21.7	45.8	
00:15	15:00	30.6	31.0	20.3	41.4	
00:30	15:00	25.9	26.2	19.6	35.6	
00:45	15:00	30.8	31.1	20.1	41.4	
01:00	15:00	30.7	31.3	21.4	43.0	
01:15	15:00	29.4	29.5	20.7	47.1	
01:30	15:00	31.0	31.9	20.3	47.0	
01:45	15:00	28.5	28.6	19.4	45.0	
02:00	15:00	28.6	29.0	20.6	43.2	
02:15	15:00	33.1	34.9	21.5	47.1	
02:30	15:00	29.7	30.3	20.1	48.0	
02:45	15:00	30.1	30.7	20.1	47.5	
03:00	15:00	29.8	30.2	20.4	47.1	
03:15	15:00	29.5	30.0	20.5	40.8	
03:30	15:00	27.3	27.6	19.1	42.4	
03:45	15:00	30.1	30.9	19.7	41.3	
04:00	15:00	29.8	30.4	20.4	40.4	
04:15	15:00	31.6	32.5	21.7	41.1	
04:30	15:00	34.0	32.7	22.0	48.7	
04:45	15:00	48.3	42.9	24.4	65.4	
05:00	15:00	42.2	39.0	25.6	69.3	
05:15	15:00	46.9	42.3	28.9	68.7	
05:30	15:00	40.2	41.9	29.3	57.7	
05:45	15:00	42.3	45.6	31.0	58.7	
06:00	15:00	41.1	44.5	30.7	55.1	
06:15	15:00	39.2	41.3	28.8	62.4	
06:30	15:00	42.0	44.6	32.2	61.4	
06:45	15:00	44.4	46.1	32.5	64.5	
Average 2300-0700		39.1	34.3	23.2	36-69	
Average 0700-2300		41.3	39	31.4	40-76	

## Noise Survey Results

Date: Tuesday 24th July 2018

Location: Buttington Quarry

**TABLE 32**

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 2 - Sale Farm**

Instrumentation: Cirrus 171A Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	42.2	43.6	33.3	65.9	
07:15	15:00	40.5	42.3	33.2	61.6	
07:30	15:00	39.4	42.0	33.4	57.4	
07:45	15:00	42.0	42.3	31.7	67.3	
08:00	15:00	36.8	39.4	32.3	53.4	
08:15	15:00	40.4	41.1	33.2	64.6	
08:30	15:00	37.2	39.1	32.5	51.2	
08:45	15:00	40.4	43.0	34.4	56.6	
09:00	15:00	37.2	39.4	32.3	54.8	
09:15	15:00	40.5	43.4	34.2	56.9	
09:30	15:00	42.2	40.8	33.6	64.5	
09:45	15:00	40.5	42.5	34.6	59.0	
10:00	15:00	39.3	42.0	34.2	55.7	
10:15	15:00	41.6	42.6	32.8	66.9	
10:30	15:00	38.1	40.5	32.4	55.1	
10:45	15:00	41.3	41.6	32.6	63.8	
11:00	15:00	40.1	38.6	31.9	61.2	
11:15	15:00	41.8	44.0	32.9	57.5	
11:30	15:00	41.2	39.1	33.5	63.3	
11:45	15:00	34.1	35.4	30.0	51.1	
12:00	15:00	38.8	39.5	29.9	60.3	
12:15	15:00	38.3	40.3	34.6	52.1	
12:30	15:00	39.8	42.2	35.2	57.2	
12:45	15:00	41.5	43.5	35.6	58.9	
13:00	15:00	38.2	40.5	35.0	49.0	
13:15	15:00	40.1	40.7	34.8	59.2	
13:30	15:00	40.7	41.5	34.7	60.1	
13:45	15:00	39.9	41.5	34.5	60.1	
14:00	15:00	39.2	41.0	35.6	56.2	
14:15	15:00	39.0	40.8	34.8	60.8	
14:30	15:00	40.1	43.3	34.5	54.5	
14:45	15:00	49.0	45.0	33.9	70.5	
Average 0700-1500		40.9	41.3	33.5	49-71	

## Noise Survey Results

Date: Tuesday 24th July 2018

TABLE 33

Location: Buttington Quarry

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 2 - Sale Farm**

Instrumentation: Cirrus 171A Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	40.5	41.0	34.7	60.8	
15:15	15:00	40.7	43.8	35.4	55.5	
15:30	15:00	48.9	51.8	38.8	66.2	
15:45	15:00	50.7	52.6	44.3	76.2	
16:00	15:00	50.7	53.0	44.9	69.2	
16:15	15:00	47.3	49.2	42.8	67.1	
16:30	15:00	45.8	47.3	41.2	66.1	
16:45	15:00	47.8	49.9	42.8	66.6	
17:00	15:00	46.8	48.0	41.5	69.6	
17:15	15:00	40.0	42.9	34.3	56.1	
17:30	15:00	39.3	41.7	34.6	56.7	
17:45	15:00	39.9	40.4	34.6	58.6	
18:00	15:00	39.5	39.7	34.3	62.8	
18:15	15:00	37.5	39.7	34.0	50.3	
18:30	15:00	34.9	36.8	31.3	50.4	
18:45	15:00	39.1	38.9	31.9	60.5	
19:00	15:00	38.0	38.2	31.9	57.8	
19:15	15:00	37.1	39.7	32.2	52.5	
19:30	15:00	35.5	37.2	31.3	52.7	
19:45	15:00	39.1	37.9	30.4	61.5	
20:00	15:00	41.7	37.5	30.4	64.2	
20:15	15:00	34.4	36.1	30.8	49.2	
20:30	15:00	34.2	35.6	29.7	51.8	
20:45	15:00	39.7	34.1	28.3	60.1	
21:00	15:00	39.1	34.9	28.6	60.8	
21:15	15:00	32.3	34.2	26.6	46.3	
21:30	15:00	34.2	35.8	28.2	50.3	
21:45	15:00	29.7	31.6	26.0	46.5	
22:00	15:00	37.7	33.8	25.5	60.4	
22:15	15:00	30.9	33.5	26.4	42.0	
22:30	15:00	30.1	30.4	23.0	39.8	
22:45	15:00	30.3	31.9	22.4	39.2	
Average 1500-2300		43.1	40.0	32.9	39-76	

## Noise Survey Results

Date: Tuesday 24th - Wednesday 25th July 2018

Site: Buttington Quarry

TABLE 34

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 2 - Sale Farm**

Instrumentation: Cirrus 171A Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	36.5	35.2	23.9	55.5	
23:15	15:00	30.5	31.6	21.3	40.2	
23:30	15:00	29.5	29.7	22.6	38.4	
23:45	15:00	31.8	32.2	23.9	37.3	
00:00	15:00	31.2	31.6	23.0	42.1	
00:15	15:00	31.0	31.8	21.6	40.5	
00:30	15:00	28.3	28.5	20.2	42.0	
00:45	15:00	30.0	31.0	20.8	41.1	
01:00	15:00	30.1	30.3	22.1	38.8	
01:15	15:00	29.8	31.2	20.5	41.8	
01:30	15:00	27.3	28.0	19.4	41.1	
01:45	15:00	29.2	29.5	20.2	45.0	
02:00	15:00	27.6	27.7	19.2	41.6	
02:15	15:00	29.8	30.2	20.1	45.1	
02:30	15:00	28.5	28.2	19.9	48.8	
02:45	15:00	28.7	29.0	19.6	46.2	
03:00	15:00	31.8	32.6	21.5	45.6	
03:15	15:00	28.1	28.7	20.0	39.7	
03:30	15:00	33.3	33.8	21.5	47.6	
03:45	15:00	30.8	31.6	20.4	43.6	
04:00	15:00	35.4	37.0	23.4	45.0	
04:15	15:00	35.2	36.2	25.0	45.6	
04:30	15:00	35.8	36.1	26.8	46.0	
04:45	15:00	41.5	43.1	28.5	55.2	
05:00	15:00	41.7	42.8	31.2	53.7	
05:15	15:00	45.6	44.0	32.1	69.0	
05:30	15:00	44.9	45.4	34.2	60.3	
05:45	15:00	49.4	47.3	34.6	69.0	
06:00	15:00	42.9	45.9	32.5	58.7	
06:15	15:00	42.5	45.8	33.8	62.0	
06:30	15:00	44.7	45.2	33.7	63.9	
06:45	15:00	44.5	47.4	34.0	60.6	
Average 2300-0700		39.9	35.3	24.7	37-69	
Average 0700-2300		42.1	40.6	33.2	39-76	

## Noise Survey Results

Date: Wednesday 25th July 2018

Location: Buttington Quarry

TABLE 35

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 2 - Sale Farm**

Instrumentation: Cirrus 171A Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	39.4	39.6	34.6	61.8	
07:15	15:00	40.5	43.1	34.3	63.1	
07:30	15:00	40.3	41.3	34.5	60.3	
07:45	15:00	41.3	41.7	32.9	62.2	
08:00	15:00	44.0	48.2	31.6	62.6	
08:15	15:00	42.2	46.7	30.7	58.2	
08:30	15:00	43.7	44.4	29.8	70.1	
08:45	15:00	42.2	37.5	29.1	65.6	
09:00	15:00	36.2	38.5	28.6	54.3	
09:15	15:00	39.0	42.8	28.1	57.3	
09:30	15:00	41.1	38.9	29.8	61.3	
09:45	15:00	41.2	38.9	29.5	62.3	
10:00	15:00	40.3	41.4	29.8	62.0	
10:15	15:00	41.6	37.7	29.9	63.2	
10:30	15:00	33.5	36.0	28.7	55.1	
10:45	15:00	43.7	40.1	29.3	65.4	
11:00	15:00	42.8	43.1	30.2	66.7	
11:15	15:00	44.2	44.4	31.2	65.8	
11:30	15:00	45.8	45.1	32.1	66.7	
11:45	15:00	41.0	45.1	31.9	56.4	
12:00	15:00	41.0	43.4	31.5	59.9	
12:15	15:00	34.8	36.9	30.4	55.5	
12:30	15:00	37.3	38.1	31.5	54.8	
12:45	15:00	43.5	47.6	32.2	59.9	
13:00	15:00	36.2	37.5	31.2	52.3	
13:15	15:00	36.6	38.4	30.5	54.7	
13:30	15:00	47.5	43.3	30.6	71.0	
13:45	15:00	41.0	40.5	32.4	62.8	
14:00	15:00	39.9	39.0	31.9	61.3	
14:15	15:00	46.8	45.1	31.8	66.1	
14:30	15:00	37.6	37.9	31.7	60.5	
14:45	15:00	43.7	41.1	30.8	66.2	
Average 0700-1500		42.0	41.4	31.0	52-71	

## Noise Survey Results

Date: Wednesday 25th July 2018

TABLE 36

Location: Buttington Quarry

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 2 - Sale Farm**

Instrumentation: Cirrus 171A Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	47.9	44.9	32.0	67.5	
15:15	15:00	35.9	38.4	30.4	51.6	
15:30	15:00	32.9	33.5	29.3	55.2	
15:45	15:00	37.8	39.7	29.4	56.8	
16:00	15:00	36.6	38.5	31.7	59.8	
16:15	15:00	37.0	38.7	31.8	55.5	
16:30	15:00	34.0	36.7	29.8	47.8	
16:45	15:00	48.4	43.1	29.0	69.0	
17:00	15:00	41.3	39.1	30.9	62.9	
17:15	15:00	35.0	37.9	30.1	49.3	
17:30	15:00	34.9	36.9	30.4	48.6	
17:45	15:00	40.8	36.2	29.8	62.6	
18:00	15:00	33.8	37.0	28.4	50.2	
18:15	15:00	33.9	34.9	28.7	51.3	
18:30	15:00	32.5	34.7	28.3	47.5	
18:45	15:00	39.4	39.5	30.3	60.1	
19:00	15:00	39.1	35.4	29.0	60.8	
19:15	15:00	36.6	38.2	30.5	60.6	
19:30	15:00	42.0	38.8	30.6	62.4	
19:45	15:00	40.5	36.7	30.5	62.3	
20:00	15:00	41.5	40.4	30.0	62.4	
20:15	15:00	37.1	39.8	31.8	49.2	
20:30	15:00	39.6	39.9	30.6	63.7	
20:45	15:00	37.8	38.4	30.0	58.4	
21:00	15:00	38.3	34.4	29.6	62.0	
21:15	15:00	32.7	34.2	29.6	45.2	
21:30	15:00	34.6	38.0	29.7	49.2	
21:45	15:00	35.5	37.1	30.7	58.0	
22:00	15:00	39.9	38.8	29.4	62.7	
22:15	15:00	35.7	38.5	29.9	49.9	
22:30	15:00	36.7	39.6	24.9	54.0	
22:45	15:00	35.8	39.0	27.1	49.9	
Average 1500-2300		39.9	38.0	29.8	45-69	

## Noise Survey Results

Date: Wednesday 25th- Thursday 26th July 2018

Site: Buttington Quarry

TABLE 37

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 2 - Sale Farm**

Instrumentation: Cirrus 171A Real Time Analyser (G056142)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	36.2	37.5	26.3	48.5	
23:15	15:00	38.4	40.0	27.4	52.2	
23:30	15:00	36.8	38.1	25.8	50.7	
23:45	15:00	34.7	36.2	22.1	48.8	
00:00	15:00	33.3	35.2	22.4	51.7	
00:15	15:00	40.0	34.5	23.5	64.1	
00:30	15:00	34.7	36.9	22.5	48.8	
00:45	15:00	34.7	36.2	20.5	50.1	
01:00	15:00	35.7	35.6	21.8	50.9	
01:15	15:00	36.1	38.4	20.2	49.2	
01:30	15:00	33.6	35.8	20.0	46.6	
01:45	15:00	31.9	33.3	22.6	46.0	
02:00	15:00	31.6	32.8	22.0	46.9	
02:15	15:00	33.1	34.7	20.3	46.6	
02:30	15:00	34.5	36.1	23.9	46.2	
02:45	15:00	32.3	33.8	21.2	44.2	
03:00	15:00	32.6	34.1	20.7	47.1	
03:15	15:00	33.9	34.7	25.3	52.7	
03:30	15:00	33.0	34.4	24.4	42.3	
03:45	15:00	33.6	35.5	24.0	48.3	
04:00	15:00	36.7	38.1	27.5	50.4	
04:15	15:00	38.2	39.3	29.6	47.0	
04:30	15:00	38.3	39.3	29.7	49.3	
04:45	15:00	40.3	41.2	31.3	55.0	
05:00	15:00	42.0	42.7	33.0	56.8	
05:15	15:00	45.0	43.1	35.3	65.5	
05:30	15:00	42.0	44.7	36.7	61.5	
05:45	15:00	43.1	45.1	38.3	65.6	
06:00	15:00	42.4	44.5	37.4	58.2	
06:15	15:00	49.2	50.9	38.2	69.6	
06:30	15:00	45.7	44.8	37.0	67.8	
06:45	15:00	45.0	47.0	36.7	63.9	
Average 2300-0700		40.3	38.6	27.1	36-70	
Average 0700-2300		41.1	39.6	30.4	45-71	



## Noise Survey Results

Date: Thursday 26th July 2018

Location: Buttington Quarry

TABLE 38

Client: ECL

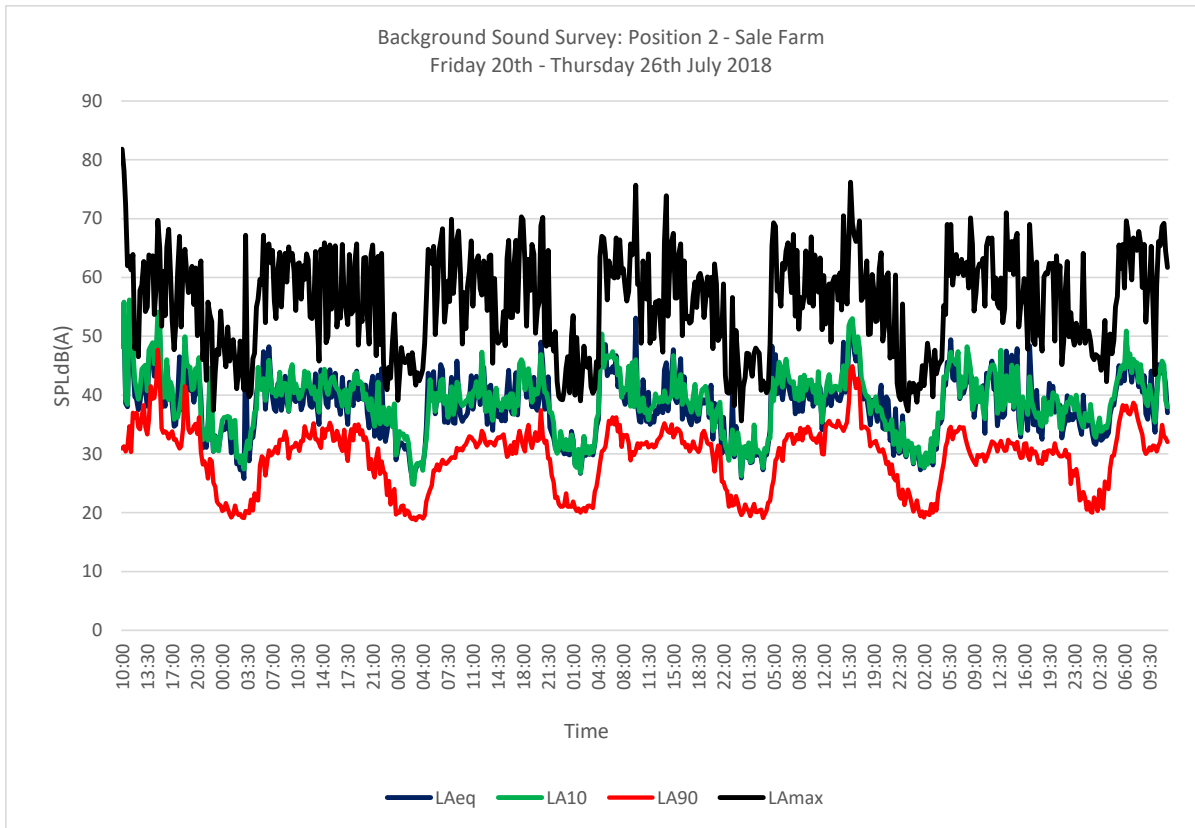
Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 2 - Sale Farm**

Instrumentation: Cirrus 171A Real Time Analyser (G056142)

Calibration: 94dB

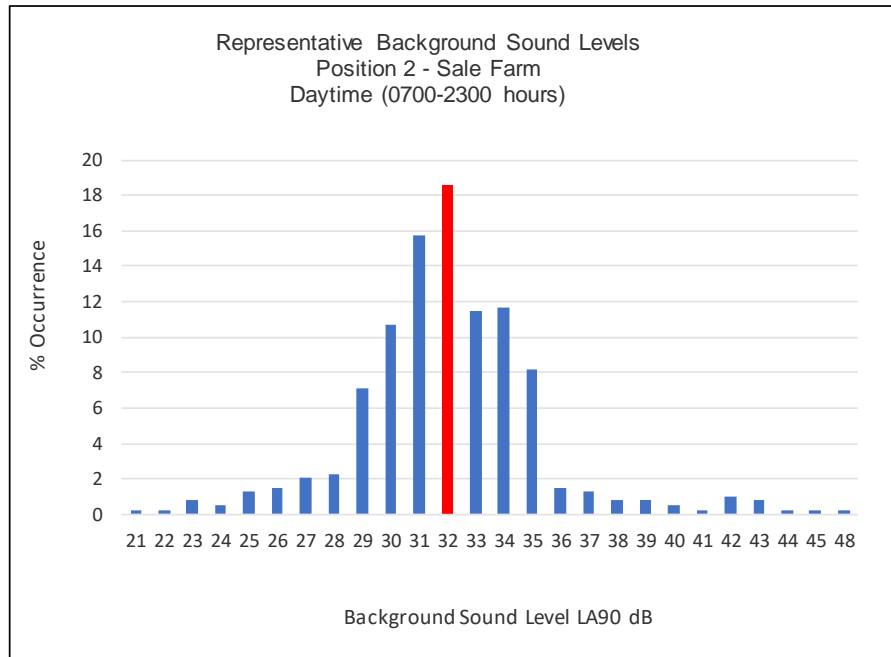
Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	42.2	43.8	37.6	59.6	
07:15	15:00	44.9	46.1	38.7	66.7	
07:30	15:00	44.9	45.5	38.2	65.0	
07:45	15:00	44.0	45.5	36.6	64.6	
08:00	15:00	41.4	42.2	35.3	67.8	
08:15	15:00	44.4	45.2	34.2	65.7	
08:30	15:00	40.5	42.0	33.3	58.3	
08:45	15:00	43.3	40.9	30.7	65.6	
09:00	15:00	36.8	38.7	30.0	52.4	
09:15	15:00	35.9	38.2	30.4	58.0	
09:30	15:00	39.5	41.7	31.1	58.9	
09:45	15:00	44.1	39.6	30.6	65.3	
10:00	15:00	36.9	39.2	31.4	54.1	
10:15	15:00	33.7	35.4	31.3	43.5	
10:30	15:00	39.7	40.2	30.4	58.6	
10:45	15:00	45.2	43.5	31.4	66.1	
11:00	15:00	44.7	44.3	32.0	65.4	
11:15	15:00	43.7	45.8	34.9	68.7	
11:30	15:00	44.0	45.1	33.0	69.2	
11:45	15:00	41.8	39.1	32.7	64.5	
12:00	15:00	37.0	38.0	32.0	61.7	
Average 0700-1215		42.4	41.9	33.1	44-69	
<b>Overall Average</b>		<b>39.8</b>	<b>35.5</b>	<b>24</b>	<b>36-70</b>	
<b>Overall Average</b>		<b>41.9</b>	<b>40.4</b>	<b>32</b>	<b>37-82</b>	



### LA90 Representative Levels

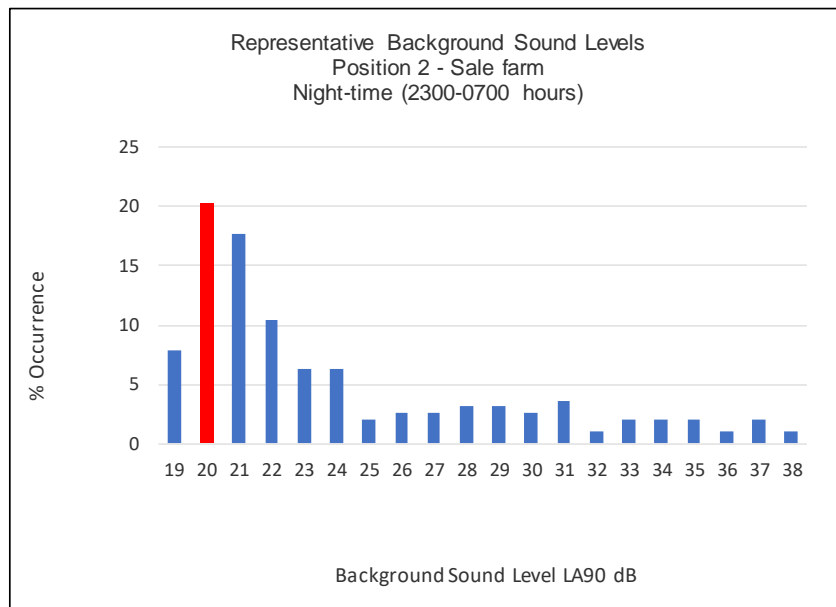
**LA90 % Occurrence**

21	0.3
22	0.3
23	0.8
24	0.5
25	1.3
26	1.5
27	2.0
28	2.3
29	7.1
30	10.7
31	15.8
<b>32</b>	<b>18.6</b>
33	11.5
34	11.7
35	8.1
36	1.5
37	1.3
38	0.8
39	0.8
40	0.5
41	0.3
42	1.0
43	0.8
44	0.3
45	0.3
48	0.3



**LA90 % Occurrence**

19	7.8
<b>20</b>	<b>20.3</b>
21	17.7
22	10.4
23	6.3
24	6.3
25	2.1
26	2.6
27	2.6
28	3.1
29	3.1
30	2.6
31	3.6
32	1.0
33	2.1
34	2.1
35	2.1
36	1.0
37	2.1
38	1.0



## Noise Survey Results

Date: Friday 20th - July 2018

Location: Buttington Quarry

**TABLE 39**

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 3 - Brookside**

Instrumentation: Norsonic 140 Real Time Analyser (1402790)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
09:30	15:00	65.8	69.6	46.3	83.2	
09:45	15:00	65.2	69.2	45.1	79.7	
10:00	15:00	65.0	69.0	45.1	77.6	
10:15	15:00	65.0	68.6	43.5	79.1	
10:30	15:00	65.8	69.5	43.8	76.6	
10:45	15:00	65.1	68.9	44.3	78.8	
11:00	15:00	65.1	69.1	42.1	77.2	
11:15	15:00	65.6	69.3	46.8	76.5	
11:30	15:00	66.1	69.7	49.3	77.4	
11:45	15:00	66.2	69.7	47.7	78.1	
12:00	15:00	66.2	69.8	45.3	81.2	
12:15	15:00	65.9	69.6	45.8	76.2	
12:30	15:00	65.8	69.2	48.7	77.1	
12:45	15:00	65.1	68.7	43.9	78.3	
13:00	15:00	66.2	69.9	46.0	78.9	
13:15	15:00	66.0	69.8	45.7	77.9	
13:30	15:00	65.6	69.2	43.9	78.0	
13:45	15:00	66.4	69.7	48.4	78.3	
14:00	15:00	66.7	70.2	51.0	76.5	
14:15	15:00	66.7	70.1	53.3	76.9	
14:30	15:00	68.3	71.5	52.4	78.4	
14:45	15:00	68.2	71.7	53.3	78.2	
Average 0930-1500		66.0	69.6	46.9	76-83	

## Noise Survey Results

Date: Friday 20th - July 2018

TABLE 40

Location: Buttington Quarry

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 3 - Brookside**

Instrumentation: Norsonic 140 Real Time Analyser (1402790)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	68.5	72.0	57.4	79.5	
15:15	15:00	69.4	72.3	59.8	80.1	
15:30	15:00	68.0	71.6	51.1	80.0	
15:45	15:00	68.0	71.2	52.7	80.0	
16:00	15:00	67.4	71.0	49.7	78.5	
16:15	15:00	67.5	71.2	47.7	78.3	
16:30	15:00	67.8	71.3	50.2	81.1	
16:45	15:00	67.0	70.7	52.1	77.9	
17:00	15:00	68.0	71.5	52.7	79.0	
17:15	15:00	67.6	71.1	52.4	77.4	
17:30	15:00	67.7	70.8	53.6	87.0	
17:45	15:00	67.4	70.3	54.5	78.6	
18:00	15:00	66.9	70.3	50.8	80.5	
18:15	15:00	67.0	70.4	46.3	81.0	
18:30	15:00	67.4	70.8	52.7	77.2	
18:45	15:00	68.3	71.3	54.8	80.3	
19:00	15:00	67.5	70.9	51.3	77.5	
19:15	15:00	67.3	70.9	49.5	80.3	
19:30	15:00	67.0	70.9	48.8	78.7	
19:45	15:00	66.2	70.3	46.7	76.3	
20:00	15:00	66.0	70.0	46.2	77.3	
20:15	15:00	65.5	69.7	45.0	76.9	
20:30	15:00	64.6	69.3	40.2	78.7	
20:45	15:00	65.0	69.7	46.1	75.7	
21:00	15:00	65.2	69.8	45.1	78.7	
21:15	15:00	64.7	69.6	42.7	77.4	
21:30	15:00	63.8	68.8	45.1	77.9	
21:45	15:00	62.1	67.5	42.0	77.4	
22:00	15:00	62.3	67.9	41.7	76.1	
22:15	15:00	61.6	66.8	44.9	79.9	
22:30	15:00	61.7	67.8	42.6	75.8	
22:45	15:00	61.0	67.1	38.9	74.9	
Average 1500-2300		66.5	70.2	48.6	75-87	

## Noise Survey Results

Date: Friday 20th - Saturday 21st July 2018

Site: Buttington Quarry

TABLE 41

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 3 - Brookside**

Instrumentation: Norsonic 140 Real Time Analyser (1402790)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	60.8	66.8	39.4	75.6	
23:15	15:00	58.0	60.3	37.7	76.0	
23:30	15:00	60.1	65.4	37.3	78.9	
23:45	15:00	57.5	59.6	37.1	74.9	
00:00	15:00	57.8	59.1	37.0	72.2	
00:15	15:00	57.8	55.5	36.2	75.1	
00:30	15:00	57.5	60.4	36.1	74.3	
00:45	15:00	56.4	51.7	35.5	77.4	
01:00	15:00	54.1	51.0	35.5	72.2	
01:15	15:00	55.5	44.2	35.4	78.2	
01:30	15:00	54.3	47.4	34.9	75.3	
01:45	15:00	54.4	51.6	34.7	72.1	
02:00	15:00	57.4	55.2	34.7	75.7	
02:15	15:00	49.9	38.6	34.4	71.6	
02:30	15:00	52.5	42.9	34.3	70.6	
02:45	15:00	46.6	35.7	34.1	70.2	
03:00	15:00	52.6	40.1	34.1	75.1	
03:15	15:00	52.9	43.1	34.2	74.7	
03:30	15:00	53.9	46.6	34.0	73.0	
03:45	15:00	55.9	48.8	34.1	78.3	
04:00	15:00	58.8	57.3	34.0	78.6	
04:15	15:00	55.1	45.4	34.0	77.1	
04:30	15:00	58.1	53.6	34.1	80.7	
04:45	15:00	58.2	54.9	34.3	79.6	
05:00	15:00	53.7	48.5	34.1	74.1	
05:15	15:00	57.2	55.3	35.9	76.8	
05:30	15:00	59.0	61.3	36.4	77.5	
05:45	15:00	59.8	64.4	36.5	76.3	
06:00	15:00	61.4	65.3	37.1	79.2	
06:15	15:00	60.4	63.6	36.8	77.6	
06:30	15:00	60.8	65.9	37.9	77.1	
06:45	15:00	63.3	68.6	37.0	78.7	
Average 2300-0700		57.8	54.0	35.6	70-81	
Average 0930-2300		66.3	69.9	47.9	75-87	

## Noise Survey Results

Date: Saturday 21st July 2018

Location: Buttington Quarry

**TABLE 42**

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 3 - Brookside**

Instrumentation: Norsonic 140 Real Time Analyser (1402790)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	61.8	67.4	36.1	76.8	
07:15	15:00	63.0	68.6	38.0	76.4	
07:30	15:00	65.2	69.3	42.2	83.2	
07:45	15:00	63.9	68.7	39.9	76.9	
08:00	15:00	64.1	68.9	38.1	78.1	
08:15	15:00	64.5	68.9	39.5	80.0	
08:30	15:00	63.8	68.4	38.0	77.3	
08:45	15:00	65.4	69.3	45.6	76.5	
09:00	15:00	69.6	70.0	44.5	97.0	
09:15	15:00	66.3	70.0	45.7	79.8	
09:30	15:00	66.1	69.8	43.1	77.9	
09:45	15:00	65.8	69.4	40.0	78.0	
10:00	15:00	65.1	69.0	39.8	74.8	
10:15	15:00	65.3	69.1	45.9	74.4	
10:30	15:00	65.8	69.5	45.6	78.4	
10:45	15:00	65.5	69.2	44.8	75.6	
11:00	15:00	66.0	69.4	51.4	76.3	
11:15	15:00	65.8	69.1	38.7	77.5	
11:30	15:00	66.4	69.8	48.2	75.2	
11:45	15:00	65.6	69.1	43.5	78.6	
12:00	15:00	66.3	69.6	50.8	75.3	
12:15	15:00	64.8	68.7	40.5	75.1	
12:30	15:00	64.7	68.5	41.2	79.4	
12:45	15:00	65.2	69.0	46.1	74.5	
13:00	15:00	65.0	69.1	39.1	75.7	
13:15	15:00	65.2	69.1	42.9	75.3	
13:30	15:00	64.9	68.5	39.8	78.2	
13:45	15:00	64.6	68.1	39.8	83.7	
14:00	15:00	65.5	69.2	40.1	75.4	
14:15	15:00	64.9	68.6	40.5	75.2	
14:30	15:00	65.9	69.6	41.5	78.0	
14:45	15:00	64.7	68.3	39.5	79.8	
Average 0700-1500		65.4	69.0	42.2	74-97	

## Noise Survey Results

Date: Saturday 21st July 2018

TABLE 43

Location: Buttington Quarry

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 3 - Brookside**

Instrumentation: Norsonic 140 Real Time Analyser (1402790)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	64.2	68.3	39.3	74.0	
15:15	15:00	65.2	67.9	37.3	89.5	
15:30	15:00	64.3	68.3	37.8	76.0	
15:45	15:00	64.3	68.5	36.1	76.3	
16:00	15:00	64.5	68.5	39.6	78.4	
16:15	15:00	64.2	68.2	38.8	79.0	
16:30	15:00	64.5	68.6	39.8	80.5	
16:45	15:00	63.5	67.8	40.8	77.8	
17:00	15:00	63.5	68.2	36.1	73.1	
17:15	15:00	63.8	67.9	37.7	74.5	
17:30	15:00	63.7	68.1	37.2	75.2	
17:45	15:00	64.3	68.7	37.2	74.9	
18:00	15:00	63.9	68.5	38.5	75.3	
18:15	15:00	63.8	68.2	38.7	74.8	
18:30	15:00	63.7	68.5	36.6	76.1	
18:45	15:00	64.3	69.0	37.4	75.4	
19:00	15:00	63.4	68.3	35.1	76.0	
19:15	15:00	63.0	67.3	35.4	78.8	
19:30	15:00	63.1	68.1	34.1	74.9	
19:45	15:00	62.8	68.0	33.2	75.0	
20:00	15:00	63.0	67.8	37.1	77.3	
20:15	15:00	62.0	67.3	35.4	77.0	
20:30	15:00	60.4	66.1	32.5	77.6	
20:45	15:00	61.9	67.5	33.2	76.8	
21:00	15:00	59.8	65.2	32.7	73.8	
21:15	15:00	59.1	64.5	31.2	75.0	
21:30	15:00	61.1	66.5	31.7	77.7	
21:45	15:00	61.3	66.9	35.2	74.3	
22:00	15:00	60.3	66.1	33.0	74.4	
22:15	15:00	61.1	66.5	33.2	75.1	
22:30	15:00	60.1	65.6	31.7	75.2	
22:45	15:00	60.6	65.9	31.9	76.3	
Average 1500-2300		63.0	67.5	35.8	73-90	



## Noise Survey Results

Date: Saturday 21st - Sunday 22nd July 2018

Site: Buttington Quarry

TABLE 44

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 3 - Brookside**

Instrumentation: Norsonic 140 Real Time Analyser (1402790)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	57.7	63.8	32.1	71.4	
23:15	15:00	59.2	63.9	32.4	77.1	
23:30	15:00	59.0	63.9	32.1	74.6	
23:45	15:00	58.2	62.4	31.1	75.6	
00:00	15:00	60.4	61.9	30.9	87.8	
00:15	15:00	56.0	55.1	31.2	72.2	
00:30	15:00	52.1	40.2	31.0	74.7	
00:45	15:00	57.1	59.1	31.7	78.0	
01:00	15:00	51.9	44.7	31.5	70.9	
01:15	15:00	53.4	46.5	32.2	73.7	
01:30	15:00	54.3	50.9	31.7	71.9	
01:45	15:00	54.9	48.2	32.1	75.7	
02:00	15:00	54.5	48.7	31.8	73.5	
02:15	15:00	51.4	41.9	31.9	73.3	
02:30	15:00	52.1	46.2	31.8	72.7	
02:45	15:00	49.0	39.3	31.9	70.9	
03:00	15:00	53.5	43.7	32.0	73.7	
03:15	15:00	55.4	50.4	32.3	75.5	
03:30	15:00	57.3	53.1	32.2	79.3	
03:45	15:00	51.8	45.3	32.1	70.5	
04:00	15:00	52.6	43.0	32.0	71.4	
04:15	15:00	53.8	46.2	32.1	73.7	
04:30	15:00	56.2	50.8	32.7	77.2	
04:45	15:00	55.5	52.5	32.7	75.1	
05:00	15:00	56.6	55.4	33.5	78.3	
05:15	15:00	54.0	50.3	34.3	75.1	
05:30	15:00	55.2	54.1	34.6	73.5	
05:45	15:00	59.0	62.9	37.2	74.7	
06:00	15:00	54.4	54.4	36.8	71.7	
06:15	15:00	59.8	63.3	37.0	78.9	
06:30	15:00	60.4	65.5	37.8	75.7	
06:45	15:00	60.2	65.1	36.3	79.2	
Average 2300-0700		56.5	52.9	32.9	71-88	
Average 0700-2300		64.3	68.2	38.9	73-97	

## Noise Survey Results

Date: Sunday 22nd July 2018

Location: Buttington Quarry

TABLE 45

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 3 - Brookside**

Instrumentation: Norsonic 140 Real Time Analyser (1402790)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	60.6	65.7	37.9	76.2	
07:15	15:00	61.7	67.3	39.0	77.9	
07:30	15:00	62.8	68.1	39.9	78.6	
07:45	15:00	63.5	68.3	38.2	85.5	
08:00	15:00	63.1	68.3	40.1	76.7	
08:15	15:00	62.6	67.4	38.9	78.8	
08:30	15:00	62.1	67.3	40.4	75.5	
08:45	15:00	63.3	68.1	39.6	78.0	
09:00	15:00	63.1	67.9	38.8	77.5	
09:15	15:00	65.1	69.0	39.9	88.9	
09:30	15:00	64.2	68.4	40.9	76.1	
09:45	15:00	65.3	69.3	44.5	76.6	
10:00	15:00	65.7	70.0	42.2	75.6	
10:15	15:00	65.5	68.8	40.5	84.8	
10:30	15:00	65.0	69.1	42.4	79.0	
10:45	15:00	65.6	69.3	47.3	78.5	
11:00	15:00	65.5	69.1	45.8	80.0	
11:15	15:00	65.5	69.1	43.5	79.8	
11:30	15:00	65.5	69.1	45.5	75.7	
11:45	15:00	65.8	69.4	46.7	75.8	
12:00	15:00	65.3	68.5	43.7	79.2	
12:15	15:00	64.6	68.6	39.6	75.8	
12:30	15:00	65.1	69.0	44.8	78.9	
12:45	15:00	65.2	68.6	42.7	82.3	
13:00	15:00	64.7	68.7	42.7	76.2	
13:15	15:00	63.9	68.0	40.3	76.0	
13:30	15:00	64.9	68.5	38.4	79.6	
13:45	15:00	65.1	68.2	43.2	81.3	
14:00	15:00	64.1	68.2	43.7	75.1	
14:15	15:00	64.4	68.5	40.8	75.1	
14:30	15:00	64.9	68.7	40.7	79.0	
14:45	15:00	65.2	68.9	44.8	79.4	
Average 0700-1500		64.5	68.5	41.8	75-89	

## Noise Survey Results

Date: Sunday 22nd July 2018

TABLE 46

Location: Buttington Quarry

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 3 - Brookside**

Instrumentation: Norsonic 140 Real Time Analyser (1402790)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	64.6	68.3	40.6	81.5	
15:15	15:00	65.7	69.3	43.7	77.4	
15:30	15:00	65.0	68.7	43.1	75.8	
15:45	15:00	64.8	68.5	41.0	76.3	
16:00	15:00	65.3	68.9	40.6	77.9	
16:15	15:00	65.2	68.9	43.4	74.8	
16:30	15:00	64.7	68.8	36.0	74.4	
16:45	15:00	65.5	69.2	44.2	72.8	
17:00	15:00	65.2	69.2	39.0	77.5	
17:15	15:00	65.6	69.2	41.3	74.6	
17:30	15:00	65.9	69.5	41.0	81.2	
17:45	15:00	65.8	69.5	43.3	75.0	
18:00	15:00	65.9	69.8	44.0	77.7	
18:15	15:00	65.0	69.1	40.6	77.4	
18:30	15:00	65.2	69.2	42.4	73.9	
18:45	15:00	64.4	68.7	38.7	75.8	
19:00	15:00	63.8	68.1	34.5	76.5	
19:15	15:00	64.0	68.5	37.0	76.5	
19:30	15:00	63.8	68.2	35.9	78.0	
19:45	15:00	63.5	68.3	35.6	74.9	
20:00	15:00	64.0	68.5	34.0	75.1	
20:15	15:00	63.5	68.3	32.6	74.9	
20:30	15:00	63.7	68.6	36.6	76.6	
20:45	15:00	62.1	67.4	37.6	76.1	
21:00	15:00	63.1	68.5	31.8	79.4	
21:15	15:00	62.5	67.5	32.9	77.1	
21:30	15:00	62.0	67.4	32.4	75.5	
21:45	15:00	61.3	66.9	31.8	75.1	
22:00	15:00	60.2	65.7	34.3	74.5	
22:15	15:00	61.2	67.0	37.3	73.6	
22:30	15:00	57.9	62.8	32.3	74.2	
22:45	15:00	59.5	63.4	33.7	77.2	
Average 1500-2300		64.1	68.1	37.9	73-82	

## Noise Survey Results

Date: Sunday 22nd - Monday 23rd July 2018

Site: Buttington Quarry

TABLE 47

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 3 - Brookside**

Instrumentation: Norsonic 140 Real Time Analyser (1402790)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	57.8	62.8	30.7	73.6	
23:15	15:00	57.4	59.0	29.8	74.3	
23:30	15:00	57.4	61.4	32.8	74.0	
23:45	15:00	55.7	53.1	30.6	74.6	
00:00	15:00	57.4	55.9	30.8	75.7	
00:15	15:00	55.5	51.6	30.5	75.5	
00:30	15:00	56.5	51.1	30.6	77.2	
00:45	15:00	56.2	48.9	30.6	76.0	
01:00	15:00	55.3	52.8	30.6	74.9	
01:15	15:00	50.5	38.7	29.9	73.7	
01:30	15:00	52.0	45.1	30.2	73.2	
01:45	15:00	55.3	46.1	30.5	77.2	
02:00	15:00	49.5	41.8	30.0	70.6	
02:15	15:00	51.5	42.3	30.3	73.5	
02:30	15:00	54.7	46.6	30.8	76.9	
02:45	15:00	55.4	47.6	31.0	79.9	
03:00	15:00	55.5	45.6	31.1	79.1	
03:15	15:00	56.4	49.7	31.3	76.8	
03:30	15:00	56.6	53.2	31.6	76.5	
03:45	15:00	55.0	51.0	31.4	75.6	
04:00	15:00	59.2	56.9	33.1	78.1	
04:15	15:00	61.4	64.1	35.2	78.2	
04:30	15:00	59.0	58.2	35.9	79.4	
04:45	15:00	61.5	64.6	37.6	81.3	
05:00	15:00	61.3	65.6	39.9	79.6	
05:15	15:00	62.8	67.5	40.0	80.1	
05:30	15:00	62.8	67.1	41.5	79.6	
05:45	15:00	63.8	68.6	42.2	80.5	
06:00	15:00	61.8	67.3	43.3	77.5	
06:15	15:00	64.0	68.9	42.3	78.4	
06:30	15:00	63.8	68.7	42.7	77.5	
06:45	15:00	64.8	69.2	44.1	79.2	
Average 2300-0700		59.5	56.0	34.2	71-81	
Average 0700-2300		64.3	68.3	39.8	73-89	

## Noise Survey Results

Date: Monday 23rd July 2018

Location: Buttington Quarry

**TABLE 48**

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 3 - Brookside**

Instrumentation: Norsonic 140 Real Time Analyser (1402790)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	65.2	69.7	45.8	79.7	
07:15	15:00	65.2	70.1	45.5	76.8	
07:30	15:00	66.3	70.2	48.5	83.6	
07:45	15:00	65.7	69.9	47.6	78.2	
08:00	15:00	66.3	70.7	47.7	78.3	
08:15	15:00	66.4	70.3	46.7	78.3	
08:30	15:00	66.3	70.1	44.8	80.1	
08:45	15:00	64.8	69.1	43.3	77.6	
09:00	15:00	64.5	68.9	44.8	75.3	
09:15	15:00	65.4	69.0	43.7	80.0	
09:30	15:00	65.1	69.1	43.5	81.6	
09:45	15:00	65.1	68.9	44.6	80.1	
10:00	15:00	65.5	69.0	48.5	76.6	
10:15	15:00	64.6	68.4	43.1	78.2	
10:30	15:00	65.8	69.5	46.6	77.2	
10:45	15:00	64.9	68.6	45.2	78.8	
11:00	15:00	65.3	68.9	44.8	78.7	
11:15	15:00	65.0	68.5	46.9	79.4	
11:30	15:00	65.1	68.6	45.2	76.3	
11:45	15:00	64.8	68.6	48.1	75.7	
12:00	15:00	65.5	69.0	48.8	78.4	
12:15	15:00	65.0	68.7	46.8	80.6	
12:30	15:00	64.9	68.9	46.9	77.4	
12:45	15:00	64.5	68.4	43.6	77.1	
13:00	15:00	65.2	69.0	46.3	79.6	
13:15	15:00	64.5	68.6	44.3	78.9	
13:30	15:00	65.4	69.0	48.8	77.9	
13:45	15:00	66.0	69.7	45.7	77.2	
14:00	15:00	66.1	69.7	47.9	83.0	
14:15	15:00	65.2	69.1	44.8	77.6	
14:30	15:00	65.2	69.2	44.9	78.3	
14:45	15:00	65.7	69.5	45.8	79.5	
Average 0700-1500		65.3	69.2	45.9	75-84	

## Noise Survey Results

Date: Monday 23rd July 2018

TABLE 49

Location: Buttington Quarry

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 3 - Brookside**

Instrumentation: Norsonic 140 Real Time Analyser (1402790)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	65.3	69.1	47.8	78.1	
15:15	15:00	64.7	68.6	45.1	76.3	
15:30	15:00	65.5	68.9	47.2	83.7	
15:45	15:00	65.8	69.5	43.5	77.7	
16:00	15:00	65.8	69.7	48.0	77.7	
16:15	15:00	64.6	68.6	45.5	78.5	
16:30	15:00	65.5	69.5	44.2	79.5	
16:45	15:00	65.1	69.1	44.5	79.5	
17:00	15:00	66.0	69.6	49.6	75.2	
17:15	15:00	65.4	69.7	46.6	77.6	
17:30	15:00	65.5	69.5	48.5	75.6	
17:45	15:00	65.1	69.0	47.0	76.6	
18:00	15:00	66.3	70.1	43.3	84.0	
18:15	15:00	65.7	70.0	45.8	78.8	
18:30	15:00	65.5	70.0	44.9	79.7	
18:45	15:00	64.1	68.5	43.6	79.4	
19:00	15:00	64.4	69.2	43.2	76.5	
19:15	15:00	65.0	69.5	45.8	79.9	
19:30	15:00	62.7	67.9	39.8	77.7	
19:45	15:00	62.9	67.6	44.0	76.3	
20:00	15:00	62.9	68.0	41.6	77.8	
20:15	15:00	62.7	67.9	42.0	76.2	
20:30	15:00	62.4	67.3	38.7	78.8	
20:45	15:00	60.3	66.1	36.3	74.8	
21:00	15:00	61.7	66.8	36.8	81.1	
21:15	15:00	61.1	65.9	41.3	79.6	
21:30	15:00	60.1	65.7	37.8	76.4	
21:45	15:00	60.5	65.8	35.2	82.4	
22:00	15:00	60.9	66.3	35.8	78.1	
22:15	15:00	60.3	64.0	33.8	83.4	
22:30	15:00	58.9	62.2	32.7	79.5	
22:45	15:00	55.8	52.8	30.9	75.0	
Average 1500-2300		63.9	67.6	42.2	75-84	

## Noise Survey Results

Date: Monday 23rd - Tuesday 24th July 2018

Site: Buttington Quarry

TABLE 50

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 3 - Brookside**

Instrumentation: Norsonic 140 Real Time Analyser (1402790)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	57.8	59.3	33.2	75.6	
23:15	15:00	56.3	57.2	30.5	75.3	
23:30	15:00	56.2	53.5	30.7	76.6	
23:45	15:00	52.6	49.9	32.1	69.5	
00:00	15:00	55.2	51.0	31.1	74.9	
00:15	15:00	51.8	47.8	30.4	69.3	
00:30	15:00	49.8	40.4	29.1	74.9	
00:45	15:00	50.5	44.0	29.5	74.2	
01:00	15:00	56.6	53.4	31.2	76.8	
01:15	15:00	53.5	43.1	30.9	77.2	
01:30	15:00	55.7	48.8	30.2	78.0	
01:45	15:00	53.1	43.7	29.8	75.2	
02:00	15:00	52.0	41.4	30.1	74.0	
02:15	15:00	50.0	39.9	30.5	73.1	
02:30	15:00	54.2	49.4	30.9	74.4	
02:45	15:00	53.0	42.2	30.6	77.1	
03:00	15:00	53.8	45.2	30.9	78.1	
03:15	15:00	55.9	47.6	31.3	79.4	
03:30	15:00	51.8	45.7	30.8	73.2	
03:45	15:00	56.1	51.3	30.9	78.0	
04:00	15:00	56.5	51.2	30.9	78.5	
04:15	15:00	59.1	57.8	31.8	77.3	
04:30	15:00	59.9	59.8	33.3	77.9	
04:45	15:00	59.6	59.8	36.0	78.5	
05:00	15:00	58.3	57.6	34.5	77.6	
05:15	15:00	61.1	65.7	37.6	77.2	
05:30	15:00	61.2	65.4	39.5	78.0	
05:45	15:00	61.0	66.5	39.5	77.4	
06:00	15:00	62.8	67.6	43.1	77.2	
06:15	15:00	63.7	68.8	41.9	79.6	
06:30	15:00	63.3	68.3	41.3	77.4	
06:45	15:00	63.8	68.9	41.1	79.2	
Average 2300-0700		58.3	53.5	33.3	69-80	
Average 0700-2300		64.7	68.3	44	75-84	

## Noise Survey Results

Date: Tuesday 24th July 2018

Location: Buttington Quarry

**TABLE 51**

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 3 - Brookside**

Instrumentation: Norsonic 140 Real Time Analyser (1402790)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	65.8	70.5	44.4	80.5	
07:15	15:00	65.7	69.8	44.4	81.6	
07:30	15:00	66.3	70.0	47.0	85.5	
07:45	15:00	65.4	69.4	45.9	76.4	
08:00	15:00	65.7	69.7	44.7	79.0	
08:15	15:00	65.7	69.6	47.1	76.0	
08:30	15:00	65.2	69.4	45.5	75.4	
08:45	15:00	65.8	70.0	46.9	79.7	
09:00	15:00	65.6	69.7	45.1	78.3	
09:15	15:00	64.7	68.9	45.3	78.6	
09:30	15:00	64.8	68.9	44.3	80.0	
09:45	15:00	64.7	69.0	44.3	78.6	
10:00	15:00	65.0	69.0	44.1	76.1	
10:15	15:00	64.9	68.6	45.2	79.2	
10:30	15:00	65.0	68.8	45.3	79.5	
10:45	15:00	64.7	68.7	44.2	77.4	
11:00	15:00	64.7	68.3	45.4	79.0	
11:15	15:00	65.0	68.7	48.6	78.8	
11:30	15:00	65.0	69.5	45.1	76.9	
11:45	15:00	65.4	69.1	45.5	78.0	
12:00	15:00	65.1	69.2	40.7	78.6	
12:15	15:00	65.6	69.6	47.4	79.5	
12:30	15:00	64.8	69.1	43.1	78.3	
12:45	15:00	64.5	68.7	44.2	78.4	
13:00	15:00	65.3	69.0	47.1	78.5	
13:15	15:00	65.4	69.6	44.8	77.1	
13:30	15:00	65.0	69.1	44.9	79.6	
13:45	15:00	64.8	68.9	43.9	79.3	
14:00	15:00	65.0	69.1	45.5	74.7	
14:15	15:00	65.5	69.5	46.0	77.6	
14:30	15:00	64.7	69.0	47.0	74.4	
14:45	15:00	65.6	69.7	45.3	76.9	
Average 0700-1500		65.2	69.3	45.3	74-86	



## Noise Survey Results

Date: Tuesday 24th July 2018

TABLE 52

Location: Buttington Quarry

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 3 - Brookside**

Instrumentation: Norsonic 140 Real Time Analyser (1402790)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	64.9	69.1	43.6	78.6	
15:15	15:00	70.7	70.0	47.1	98.8	
15:30	15:00	65.3	69.3	44.1	79.6	
15:45	15:00	65.6	69.5	45.6	78.3	
16:00	15:00	64.5	68.5	44.4	77.1	
16:15	15:00	64.8	68.6	44.7	77.7	
16:30	15:00	65.0	69.1	48.3	79.8	
16:45	15:00	65.2	69.4	44.1	77.9	
17:00	15:00	65.8	69.5	47.1	80.2	
17:15	15:00	65.4	69.3	44.8	78.1	
17:30	15:00	65.7	69.5	45.1	79.0	
17:45	15:00	64.7	68.4	45.5	79.1	
18:00	15:00	65.4	69.3	46.0	77.3	
18:15	15:00	64.5	68.7	42.8	79.1	
18:30	15:00	63.5	68.1	39.1	75.4	
18:45	15:00	63.4	68.2	40.6	77.2	
19:00	15:00	64.1	68.9	39.9	78.4	
19:15	15:00	63.1	67.7	41.4	79.2	
19:30	15:00	63.0	67.9	39.6	78.0	
19:45	15:00	62.4	67.5	39.7	76.8	
20:00	15:00	62.9	68.1	39.9	76.0	
20:15	15:00	62.8	67.5	40.2	77.9	
20:30	15:00	61.9	67.2	37.4	78.0	
20:45	15:00	62.4	67.8	41.5	73.4	
21:00	15:00	62.0	67.2	40.0	79.1	
21:15	15:00	61.3	66.6	38.6	79.2	
21:30	15:00	59.4	64.8	38.0	75.7	
21:45	15:00	62.3	67.2	35.2	80.8	
22:00	15:00	60.4	65.6	32.6	74.9	
22:15	15:00	61.4	66.7	37.1	74.7	
22:30	15:00	59.9	64.8	32.1	80.6	
22:45	15:00	59.4	63.9	30.1	79.2	
Average 1500-2300		64.1	67.9	41.1	73-99	

## Noise Survey Results

Date: Tuesday 24th - Wednesday 25th July 2018

Site: Buttington Quarry

TABLE 53

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 3 - Brookside**

Instrumentation: Norsonic 140 Real Time Analyser (1402790)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	59.8	62.9	30.7	80.4	
23:15	15:00	57.6	61.2	30.4	75.7	
23:30	15:00	58.0	60.5	29.3	78.1	
23:45	15:00	57.8	59.6	31.0	76.7	
00:00	15:00	58.7	56.7	30.2	79.5	
00:15	15:00	55.3	52.2	29.4	77.4	
00:30	15:00	54.4	51.1	29.3	74.5	
00:45	15:00	55.9	47.4	29.3	77.9	
01:00	15:00	56.6	55.2	29.6	74.8	
01:15	15:00	56.9	50.0	28.8	76.0	
01:30	15:00	50.5	36.8	29.0	73.6	
01:45	15:00	56.1	44.6	29.9	80.6	
02:00	15:00	49.3	41.5	29.4	72.9	
02:15	15:00	49.5	41.3	29.4	72.9	
02:30	15:00	49.4	35.1	29.2	73.7	
02:45	15:00	52.2	45.6	30.1	74.0	
03:00	15:00	53.8	50.4	31.1	72.4	
03:15	15:00	51.2	41.6	30.2	73.8	
03:30	15:00	55.5	49.6	30.9	77.3	
03:45	15:00	53.6	50.3	30.9	73.0	
04:00	15:00	60.1	55.6	31.3	79.8	
04:15	15:00	60.1	59.0	34.1	79.8	
04:30	15:00	60.1	61.2	34.8	78.4	
04:45	15:00	60.6	63.9	37.2	78.6	
05:00	15:00	60.7	63.0	37.7	78.3	
05:15	15:00	61.7	65.5	37.9	79.2	
05:30	15:00	62.3	67.1	39.0	78.1	
05:45	15:00	62.3	67.7	39.0	77.7	
06:00	15:00	62.2	67.3	40.2	79.6	
06:15	15:00	64.2	68.9	43.3	80.4	
06:30	15:00	63.9	68.8	44.2	77.8	
06:45	15:00	65.1	69.7	44.6	79.3	
Average 2300-0700		59.3	55.4	33.2	72-81	
Average 0700-2300		64.7	68.5	43.1	73-99	

## Noise Survey Results

Date: Wednesday 25th July 2018

Location: Buttington Quarry

TABLE 54

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 3 - Brookside**

Instrumentation: Norsonic 140 Real Time Analyser (1402790)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	65.7	70.4	43.8	77.6	
07:15	15:00	66.1	70.5	45.2	80.2	
07:30	15:00	65.6	70.1	43.0	77.8	
07:45	15:00	66.5	70.5	45.2	82.6	
08:00	15:00	63.0	67.6	39.9	78.3	
08:15	15:00	65.9	69.5	46.5	87.0	
08:30	15:00	63.0	67.3	42.0	77.0	
08:45	15:00	66.2	69.7	42.0	77.5	
09:00	15:00	65.0	69.2	40.1	81.3	
09:15	15:00	65.0	69.1	41.2	78.7	
09:30	15:00	65.1	68.8	43.9	78.9	
09:45	15:00	64.6	68.7	41.1	77.4	
10:00	15:00	65.3	69.0	42.7	78.1	
10:15	15:00	64.9	68.6	42.9	77.8	
10:30	15:00	63.8	68.0	44.6	78.0	
10:45	15:00	64.5	68.2	40.7	78.2	
11:00	15:00	64.8	68.7	41.4	76.7	
11:15	15:00	64.2	68.0	41.7	76.7	
11:30	15:00	63.5	67.2	37.3	79.3	
11:45	15:00	63.7	67.7	46.0	77.2	
12:00	15:00	63.5	67.8	38.1	76.3	
12:15	15:00	64.5	68.3	39.9	76.9	
12:30	15:00	63.9	67.9	37.3	78.3	
12:45	15:00	63.4	67.5	39.3	76.0	
13:00	15:00	63.2	67.2	38.5	77.1	
13:15	15:00	63.3	67.1	37.9	76.1	
13:30	15:00	62.8	67.0	42.1	76.4	
13:45	15:00	63.6	67.4	40.9	78.8	
14:00	15:00	63.5	67.7	38.3	76.7	
14:15	15:00	63.4	67.6	40.7	75.6	
14:30	15:00	64.1	67.8	40.5	77.1	
14:45	15:00	63.3	67.4	36.0	76.0	
Average 0700-1500		64.4	68.4	41.3	76-87	

## Noise Survey Results

Date: Wednesday 25th July 2018

TABLE 55

Location: Buttington Quarry

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 3 - Brookside**

Instrumentation: Norsonic 140 Real Time Analyser (1402790)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	64.5	68.4	40.4	78.0	
15:15	15:00	63.1	67.1	39.5	78.6	
15:30	15:00	64.0	68.0	41.7	75.9	
15:45	15:00	63.2	67.1	38.0	79.6	
16:00	15:00	64.4	68.1	38.2	77.0	
16:15	15:00	63.5	67.6	37.0	76.3	
16:30	15:00	64.1	68.6	37.0	77.4	
16:45	15:00	65.0	68.8	43.5	80.3	
17:00	15:00	65.3	69.1	45.3	75.4	
17:15	15:00	64.9	68.7	41.4	75.1	
17:30	15:00	64.7	68.7	40.5	78.2	
17:45	15:00	64.4	68.7	43.0	76.1	
18:00	15:00	64.4	68.7	39.9	77.2	
18:15	15:00	64.6	68.8	38.0	80.2	
18:30	15:00	63.5	67.9	37.1	75.5	
18:45	15:00	64.2	69.1	36.6	77.0	
19:00	15:00	64.4	68.6	38.2	78.1	
19:15	15:00	63.4	67.8	34.4	77.3	
19:30	15:00	62.1	67.2	33.3	77.5	
19:45	15:00	62.1	67.2	30.8	76.3	
20:00	15:00	62.0	67.0	32.9	77.1	
20:15	15:00	62.9	67.9	37.7	77.7	
20:30	15:00	62.1	67.3	37.6	76.0	
20:45	15:00	61.8	67.2	38.1	78.1	
21:00	15:00	61.3	66.5	38.9	75.4	
21:15	15:00	62.1	67.2	39.0	78.8	
21:30	15:00	61.3	66.5	36.4	77.1	
21:45	15:00	61.3	66.6	38.3	77.3	
22:00	15:00	60.4	66.1	36.8	76.8	
22:15	15:00	59.7	65.1	33.8	75.0	
22:30	15:00	60.1	64.2	32.7	81.5	
22:45	15:00	59.4	63.9	33.1	78.9	
Average 1500-2300		63.2	67.5	37.8	75-82	

## Noise Survey Results

Date: Wednesday 25th- Thursday 26th July 2018

Site: Buttington Quarry

TABLE 56

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 3 - Brookside**

Instrumentation: Norsonic 140 Real Time Analyser (1402790)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	58.4	63.4	30.6	75.1	
23:15	15:00	57.8	61.1	31.2	76.2	
23:30	15:00	58.1	61.7	30.5	76.5	
23:45	15:00	56.8	58.1	29.1	75.2	
00:00	15:00	54.5	54.0	30.3	70.9	
00:15	15:00	51.4	43.5	28.6	73.5	
00:30	15:00	56.1	51.9	29.1	75.9	
00:45	15:00	53.6	47.4	29.0	74.3	
01:00	15:00	55.7	51.5	28.9	76.6	
01:15	15:00	56.8	50.9	29.0	77.2	
01:30	15:00	55.4	48.6	29.3	76.4	
01:45	15:00	51.8	43.7	29.3	75.2	
02:00	15:00	52.5	41.2	28.7	77.7	
02:15	15:00	54.6	47.1	28.7	78.4	
02:30	15:00	54.9	47.5	29.1	78.3	
02:45	15:00	51.8	44.9	29.5	72.8	
03:00	15:00	48.3	39.7	29.5	71.8	
03:15	15:00	54.2	45.9	29.8	77.0	
03:30	15:00	55.3	49.4	30.3	77.2	
03:45	15:00	56.0	51.6	30.8	76.1	
04:00	15:00	61.5	59.1	32.6	80.6	
04:15	15:00	60.2	58.8	32.9	78.1	
04:30	15:00	60.7	62.7	31.9	78.0	
04:45	15:00	57.9	59.1	33.7	78.9	
05:00	15:00	60.7	63.1	36.1	79.3	
05:15	15:00	61.5	64.3	38.7	82.5	
05:30	15:00	62.1	67.1	42.5	76.9	
05:45	15:00	62.0	67.1	40.2	77.4	
06:00	15:00	63.2	68.4	41.3	77.9	
06:15	15:00	64.0	69.0	43.9	77.5	
06:30	15:00	64.2	69.3	42.7	79.8	
06:45	15:00	64.2	69.4	44.6	78.6	
Average 2300-0700		59.2	55.6	32.9	71-83	
Average 0700-2300		63.8	67.9	39.5	75-87	

### Noise Survey Results

Date: Thursday 26th July 2018

Location: Buttington Quarry

TABLE 57

Client: ECL

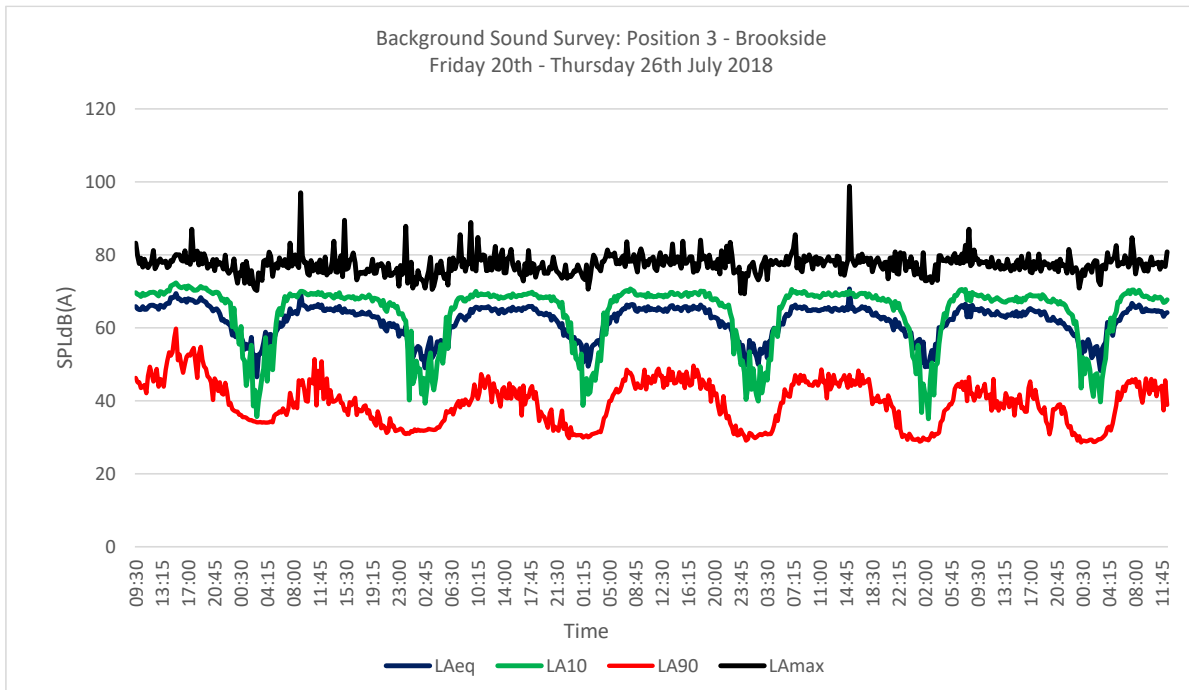
Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 3 - Brookside**

Instrumentation: Norsonic 140 Real Time Analyser (1402790)

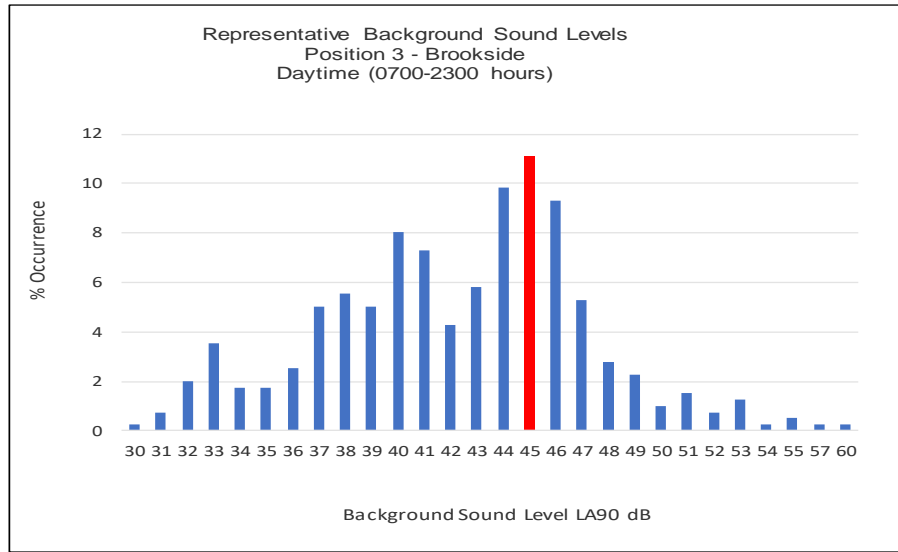
Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmix (dB)	Observations
07:00	15:00	65.2	70.2	45.4	76.6	
07:15	15:00	65.2	69.3	44.9	77.7	
07:30	15:00	66.7	70.4	45.8	84.7	
07:45	15:00	66.1	70.4	45.1	80.8	
08:00	15:00	65.5	69.4	46.0	74.8	
08:15	15:00	65.7	69.7	43.8	77.2	
08:30	15:00	66.3	70.3	45.2	78.8	
08:45	15:00	65.7	69.5	41.4	78.5	
09:00	15:00	64.4	68.7	39.5	77.1	
09:15	15:00	64.5	68.5	42.7	75.6	
09:30	15:00	65.2	68.7	46.1	77.5	
09:45	15:00	64.7	68.5	43.7	75.5	
10:00	15:00	64.7	68.0	41.9	77.4	
10:15	15:00	64.6	68.0	46.0	79.4	
10:30	15:00	64.6	67.7	42.9	77.2	
10:45	15:00	64.8	68.6	45.5	77.7	
11:00	15:00	64.5	68.2	41.3	77.7	
11:15	15:00	64.7	68.1	43.6	78.0	
11:30	15:00	64.5	68.4	43.4	76.0	
11:45	15:00	64.5	68.0	44.1	78.0	
12:00	15:00	63.1	66.9	37.4	77.0	
12:15	15:00	63.9	67.1	45.6	76.8	
12:30	15:00	64.2	67.7	38.9	80.8	
Average 0700-1245		64.9	68.7	43.5	75-85	
<b>Overall Average</b>		<b>58.5</b>	<b>54.5</b>	<b>33.6</b>	<b>69-88</b>	
<b>Overall Average</b>		<b>64.7</b>	<b>68.5</b>	<b>42.1</b>	<b>73-99</b>	

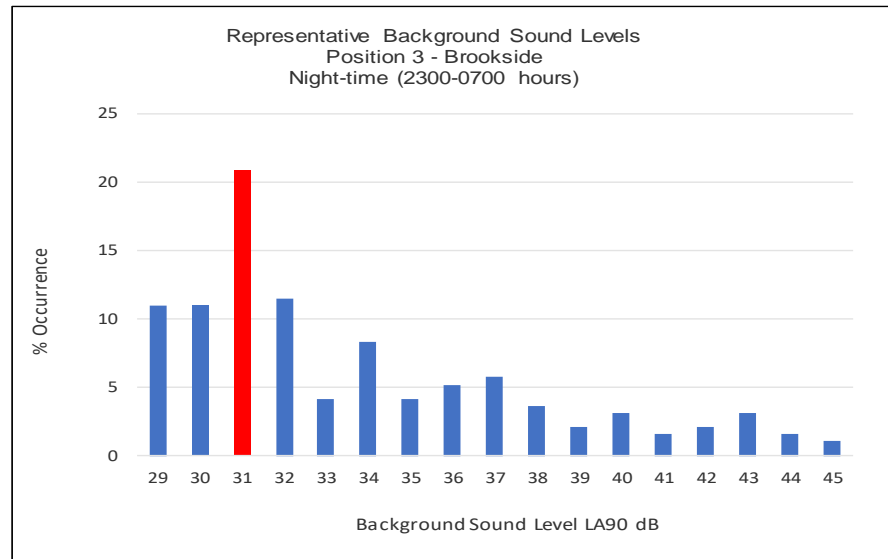


### LA90 Representative Levels

LA90	% Occurrence
30	0.3
31	0.8
32	2.0
33	3.5
34	1.8
35	1.8
36	2.5
37	5.0
38	5.5
39	5.0
40	8.1
41	7.3
42	4.3
43	5.8
44	9.8
<b>45</b>	<b>11.1</b>
46	9.3
47	5.3
48	2.8
49	2.3
50	1.0
51	1.5
52	0.8
53	1.3
54	0.3
55	0.5
57	0.3
60	0.3



LA90	% Occurrence
29	10.9
30	10.9
<b>31</b>	<b>20.8</b>
32	11.5
33	4.2
34	8.3
35	4.2
36	5.2
37	5.7
38	3.6
39	2.1
40	3.1
41	1.6
42	2.1
43	3.1
44	1.6
45	1.0



## Noise Survey Results

Date: Friday 20th - July 2018

Location: Buttington Quarry

TABLE 58

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 4 - Whitehouse Farm**

Instrumentation: Norsonic 140 Real Time Analyser (1403353)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
11:00	15:00	39.8	43.7	30.4	55.9	
11:15	15:00	51.9	50.1	32.4	81.2	
11:30	15:00	49.8	49.4	35.6	75.3	
11:45	15:00	59.6	49.5	35.9	82.3	
12:00	15:00	51.5	51.3	35.0	72.3	
12:15	15:00	41.8	45.1	33.4	61.9	
12:30	15:00	41.2	44.1	32.2	59.4	
12:45	15:00	42.7	45.5	32.7	63.5	
13:00	15:00	46.1	49.0	37.0	66.8	
13:15	15:00	46.8	47.1	33.6	70.7	
13:30	15:00	44.3	47.5	31.0	63.7	
13:45	15:00	43.5	43.1	33.2	61.2	
14:00	15:00	45.5	45.5	38.0	66.1	
14:15	15:00	45.8	48.2	37.9	67.3	
14:30	15:00	46.4	46.2	38.0	66.0	
14:45	15:00	46.3	49.4	40.7	66.8	
Average 1100-1500		50.1	47.2	34.8	56-82	



## Noise Survey Results

Date: Friday 20th - July 2018

TABLE 59

Location: Buttington Quarry

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 4 - Whitehouse Farm**

Instrumentation: Norsonic 140 Real Time Analyser (1403353)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	51.2	51.8	45.2	68.3	
15:15	15:00	50.0	52.6	44.0	68.8	
15:30	15:00	43.0	44.8	36.6	62.8	
15:45	15:00	44.5	46.7	36.1	65.5	
16:00	15:00	44.1	47.8	36.2	60.4	
16:15	15:00	43.7	46.1	36.5	64.6	
16:30	15:00	43.8	47.4	35.5	64.5	
16:45	15:00	44.6	47.3	37.0	67.0	
17:00	15:00	45.2	44.1	35.6	67.3	
17:15	15:00	42.1	44.5	35.1	65.6	
17:30	15:00	46.4	47.1	36.0	72.1	
17:45	15:00	49.0	50.6	35.1	72.0	
18:00	15:00	40.5	43.3	34.6	60.5	
18:15	15:00	45.7	48.2	36.5	65.0	
18:30	15:00	41.5	43.0	37.3	62.1	
18:45	15:00	47.9	49.3	43.0	67.7	
19:00	15:00	44.5	45.3	40.7	69.5	
19:15	15:00	46.5	45.8	37.5	70.8	
19:30	15:00	41.7	44.7	35.6	65.6	
19:45	15:00	42.4	42.7	32.1	66.7	
20:00	15:00	41.5	41.8	30.6	67.0	
20:15	15:00	41.7	45.5	32.6	64.7	
20:30	15:00	37.5	37.5	30.2	62.9	
20:45	15:00	43.3	46.6	36.0	67.0	
21:00	15:00	34.8	36.0	32.3	54.4	
21:15	15:00	48.2	33.6	29.5	74.5	
21:30	15:00	32.5	32.9	28.8	54.2	
21:45	15:00	28.1	29.2	26.4	36.4	
22:00	15:00	36.0	29.3	26.7	64.5	
22:15	15:00	40.4	44.8	29.9	54.3	
22:30	15:00	36.6	40.1	29.6	45.0	
22:45	15:00	38.6	29.5	27.3	69.6	
Average 1500-2300		44.6	43.1	34.6	36-75	

## Noise Survey Results

Date: Friday 20th - Saturday 21st July 2018

Site: Buttington Quarry

TABLE 60

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 4 - Whitehouse Farm**

Instrumentation: Norsonic 140 Real Time Analyser (1403353)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	40.5	32.0	26.4	70.3	
23:15	15:00	34.8	30.4	25.3	63.2	
23:30	15:00	25.4	26.2	24.4	37.1	
23:45	15:00	25.6	26.4	23.9	38.0	
00:00	15:00	46.6	38.4	23.9	70.6	
00:15	15:00	45.9	40.1	35.0	71.1	
00:30	15:00	25.7	27.8	23.9	35.6	
00:45	15:00	27.7	26.8	23.5	48.4	
01:00	15:00	37.5	30.0	26.4	65.1	
01:15	15:00	26.3	27.3	25.0	38.1	
01:30	15:00	26.3	28.3	24.5	35.3	
01:45	15:00	25.0	26.0	24.0	34.5	
02:00	15:00	26.1	28.2	23.9	39.2	
02:15	15:00	27.6	28.8	26.0	38.7	
02:30	15:00	27.7	28.9	26.2	33.4	
02:45	15:00	28.8	29.8	26.9	37.3	
03:00	15:00	27.4	28.6	25.7	33.5	
03:15	15:00	26.6	28.4	23.1	37.0	
03:30	15:00	23.0	23.5	22.5	31.7	
03:45	15:00	23.9	25.8	22.6	30.8	
04:00	15:00	23.1	23.7	22.6	30.6	
04:15	15:00	32.8	28.8	22.6	61.1	
04:30	15:00	34.6	36.5	32.5	52.2	
04:45	15:00	35.4	36.1	33.3	55.2	
05:00	15:00	40.1	43.2	33.7	56.8	
05:15	15:00	40.5	44.2	34.3	54.9	
05:30	15:00	43.0	46.8	35.5	56.9	
05:45	15:00	43.0	46.0	36.1	63.3	
06:00	15:00	45.9	47.0	35.4	67.2	
06:15	15:00	42.8	45.9	36.3	61.2	
06:30	15:00	42.4	45.2	34.9	60.2	
06:45	15:00	44.1	46.6	36.7	63.0	
Average 2300-0700		39.4	33.5	28.0	31-71	
Average 1100-2300		47.3	44.4	34.6	36-82	

## Noise Survey Results

Date: Saturday 21st July 2018

Location: Buttington Quarry

TABLE 61

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 4 - Whitehouse Farm**

Instrumentation: Norsonic 140 Real Time Analyser (1403353)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	47.0	50.7	36.7	64.2	
07:15	15:00	41.6	45.0	35.5	57.8	
07:30	15:00	44.2	48.0	37.3	60.9	
07:45	15:00	44.7	47.6	37.1	63.1	
08:00	15:00	47.0	50.3	39.9	65.4	
08:15	15:00	44.0	46.2	36.6	63.2	
08:30	15:00	45.2	48.0	36.0	68.8	
08:45	15:00	48.5	49.8	37.0	69.9	
09:00	15:00	47.3	49.1	37.7	67.8	
09:15	15:00	47.9	50.5	38.6	73.0	
09:30	15:00	47.3	45.5	36.5	72.7	
09:45	15:00	42.8	45.4	35.8	65.1	
10:00	15:00	47.3	46.3	32.9	71.6	
10:15	15:00	46.6	47.9	30.8	68.2	
10:30	15:00	42.4	44.3	32.4	64.3	
10:45	15:00	43.1	44.7	32.2	65.6	
11:00	15:00	45.3	46.9	32.4	65.3	
11:15	15:00	48.6	52.0	31.6	69.8	
11:30	15:00	40.2	44.0	31.4	55.5	
11:45	15:00	41.6	44.0	30.6	62.0	
12:00	15:00	43.9	46.6	32.3	64.6	
12:15	15:00	41.9	45.3	34.4	59.2	
12:30	15:00	41.5	43.1	34.3	62.8	
12:45	15:00	42.6	45.0	33.4	61.1	
13:00	15:00	42.0	44.2	32.8	63.9	
13:15	15:00	40.0	42.0	33.1	60.7	
13:30	15:00	42.4	43.9	33.9	63.6	
13:45	15:00	42.9	47.3	34.4	58.5	
14:00	15:00	39.4	43.5	28.9	53.7	
14:15	15:00	42.6	44.9	31.3	67.0	
14:30	15:00	41.3	43.7	29.9	62.3	
14:45	15:00	41.5	42.4	32.5	62.7	
Average 0700-1500		44.7	46.2	34.1	54-73	

## Noise Survey Results

Date: Saturday 21st July 2018

TABLE 62

Location: Buttington Quarry

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 4 - Whitehouse Farm**

Instrumentation: Norsonic 140 Real Time Analyser (1403353)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	44.7	47.2	35.4	65.5	
15:15	15:00	59.1	52.7	36.3	86.7	
15:30	15:00	44.0	46.0	34.6	61.5	
15:45	15:00	43.5	44.5	34.0	63.4	
16:00	15:00	40.7	42.8	33.2	63.5	
16:15	15:00	40.9	43.3	34.1	59.3	
16:30	15:00	49.1	43.0	35.5	78.3	
16:45	15:00	39.7	42.3	34.4	57.4	
17:00	15:00	42.1	43.8	33.9	65.8	
17:15	15:00	40.6	42.7	33.8	64.0	
17:30	15:00	39.9	41.6	33.8	58.2	
17:45	15:00	40.0	42.7	33.9	60.6	
18:00	15:00	44.8	41.6	33.7	69.3	
18:15	15:00	38.6	40.1	29.1	62.4	
18:30	15:00	37.2	40.7	29.5	57.5	
18:45	15:00	48.0	46.5	32.5	70.4	
19:00	15:00	36.8	38.5	29.0	58.5	
19:15	15:00	37.7	40.0	29.8	58.9	
19:30	15:00	39.1	40.7	29.5	64.2	
19:45	15:00	43.6	45.3	28.5	64.1	
20:00	15:00	41.5	45.1	28.7	59.3	
20:15	15:00	40.1	38.0	26.3	64.9	
20:30	15:00	33.8	33.7	24.8	54.4	
20:45	15:00	34.5	35.9	24.1	59.2	
21:00	15:00	37.9	38.6	25.6	61.0	
21:15	15:00	29.4	30.0	24.4	54.6	
21:30	15:00	27.1	29.4	23.7	42.2	
21:45	15:00	39.1	37.6	23.7	61.1	
22:00	15:00	27.4	28.6	25.5	40.9	
22:15	15:00	26.6	27.9	24.6	37.8	
22:30	15:00	26.4	26.7	24.6	44.4	
22:45	15:00	44.9	32.1	25.2	65.2	
Average 1500-2300		46.0	39.7	29.9	38-87	

## Noise Survey Results

Date: Saturday 21st - Sunday 22nd July 2018

Site: Buttington Quarry

TABLE 63

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 4 - Whitehouse Farm**

Instrumentation: Norsonic 140 Real Time Analyser (1403353)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	25.4	26.1	24.3	45.0	
23:15	15:00	26.5	28.7	24.3	36.8	
23:30	15:00	31.5	27.6	24.4	58.4	
23:45	15:00	27.6	29.3	23.7	39.1	
00:00	15:00	28.4	32.3	22.7	40.9	
00:15	15:00	22.7	23.3	21.8	42.5	
00:30	15:00	22.9	23.3	21.9	41.7	
00:45	15:00	24.0	25.1	22.5	45.1	
01:00	15:00	41.6	37.0	22.8	68.9	
01:15	15:00	44.9	36.8	22.8	72.4	
01:30	15:00	23.2	24.0	22.2	35.2	
01:45	15:00	23.2	23.7	22.4	39.0	
02:00	15:00	24.1	24.6	22.7	37.9	
02:15	15:00	24.0	24.6	22.9	37.8	
02:30	15:00	23.8	24.5	22.7	37.9	
02:45	15:00	23.9	24.2	22.2	42.1	
03:00	15:00	23.1	23.8	22.1	36.4	
03:15	15:00	23.5	24.3	22.6	32.7	
03:30	15:00	23.5	24.3	22.5	32.8	
03:45	15:00	23.2	23.8	22.5	37.6	
04:00	15:00	30.5	24.3	22.3	57.5	
04:15	15:00	33.4	24.2	22.5	61.9	
04:30	15:00	34.2	35.5	29.0	49.2	
04:45	15:00	35.7	36.8	33.3	51.6	
05:00	15:00	39.6	39.2	33.6	59.8	
05:15	15:00	38.3	39.9	33.8	57.6	
05:30	15:00	44.4	43.6	34.1	70.7	
05:45	15:00	47.3	50.3	37.4	62.2	
06:00	15:00	43.9	46.4	36.1	64.2	
06:15	15:00	45.6	44.5	35.0	70.8	
06:30	15:00	39.7	41.3	35.1	61.1	
06:45	15:00	41.7	44.0	35.2	61.2	
Average 2300-0700		38.8	31.3	26.4	33-72	
Average 0700-2300		45.4	42.9	31.9	38-87	

## Noise Survey Results

Date: Sunday 22nd July 2018

Location: Buttington Quarry

TABLE 64

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 4 - Whitehouse Farm**

Instrumentation: Norsonic 140 Real Time Analyser (1403353)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	40.7	43.7	35.3	62.4	
07:15	15:00	42.8	46.1	35.7	65.4	
07:30	15:00	46.8	50.1	36.3	66.6	
07:45	15:00	42.5	45.7	34.7	62.2	
08:00	15:00	42.0	44.8	34.6	61.6	
08:15	15:00	41.2	43.7	35.1	61.8	
08:30	15:00	44.2	46.6	35.1	63.5	
08:45	15:00	44.9	47.0	34.6	68.6	
09:00	15:00	42.6	45.5	33.6	61.1	
09:15	15:00	41.9	43.9	34.2	65.7	
09:30	15:00	42.9	44.3	35.5	63.2	
09:45	15:00	46.7	50.4	35.9	67.1	
10:00	15:00	41.0	43.4	32.4	63.4	
10:15	15:00	47.2	43.9	31.8	70.9	
10:30	15:00	37.1	39.1	31.6	58.5	
10:45	15:00	47.4	53.1	32.5	65.0	
11:00	15:00	45.1	45.1	31.4	66.5	
11:15	15:00	51.6	43.5	31.4	76.7	
11:30	15:00	42.1	42.0	29.8	61.5	
11:45	15:00	38.7	41.6	30.3	63.4	
12:00	15:00	55.8	43.5	31.0	83.0	
12:15	15:00	40.5	42.6	30.1	59.3	
12:30	15:00	40.9	43.3	31.5	59.0	
12:45	15:00	39.0	41.4	30.2	60.9	
13:00	15:00	38.4	40.8	30.3	59.0	
13:15	15:00	43.9	44.6	31.3	66.1	
13:30	15:00	40.0	43.1	30.5	58.9	
13:45	15:00	37.6	39.5	29.4	58.3	
14:00	15:00	43.0	45.4	32.8	62.3	
14:15	15:00	42.7	45.5	32.5	62.1	
14:30	15:00	40.6	41.0	30.0	62.5	
14:45	15:00	40.5	40.6	33.1	64.4	
Average 0700-1500		45.4	44.2	32.6	58-83	

## Noise Survey Results

Date: Sunday 22nd July 2018

TABLE 65

Location: Buttington Quarry

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 4 - Whitehouse Farm**

Instrumentation: Norsonic 140 Real Time Analyser (1403353)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	42.0	43.4	35.2	60.1	
15:15	15:00	43.7	43.5	34.0	68.5	
15:30	15:00	50.3	43.7	34.0	76.1	
15:45	15:00	39.8	41.3	34.1	61.7	
16:00	15:00	38.9	40.3	34.0	60.8	
16:15	15:00	43.4	44.7	35.6	66.8	
16:30	15:00	39.1	41.1	34.3	60.1	
16:45	15:00	41.3	42.9	35.1	64.2	
17:00	15:00	39.1	40.7	34.1	59.6	
17:15	15:00	39.8	41.0	34.7	63.3	
17:30	15:00	41.4	42.3	34.9	63.3	
17:45	15:00	40.6	41.4	33.8	64.0	
18:00	15:00	49.2	40.9	33.7	73.6	
18:15	15:00	42.1	39.1	28.9	67.2	
18:30	15:00	39.5	39.2	28.4	63.4	
18:45	15:00	39.8	38.0	28.7	67.8	
19:00	15:00	41.3	42.3	31.6	61.4	
19:15	15:00	45.5	38.4	29.0	80.8	
19:30	15:00	38.0	40.7	29.5	59.1	
19:45	15:00	42.2	46.0	29.3	61.0	
20:00	15:00	39.9	43.0	30.6	61.9	
20:15	15:00	38.1	41.2	28.1	59.7	
20:30	15:00	44.5	45.2	29.6	68.9	
20:45	15:00	43.1	45.7	26.9	64.9	
21:00	15:00	33.8	34.4	26.1	64.3	
21:15	15:00	31.3	34.1	26.6	47.1	
21:30	15:00	32.0	34.3	25.8	49.1	
21:45	15:00	51.4	34.5	25.6	74.8	
22:00	15:00	27.8	28.9	24.7	42.6	
22:15	15:00	26.0	27.2	24.6	45.5	
22:30	15:00	41.2	29.2	24.5	68.2	
22:45	15:00	34.0	27.1	24.6	61.8	
Average 1500-2300		43.1	39.2	30.3	43-81	

## Noise Survey Results

Date: Sunday 22nd - Monday 23rd July 2018

Site: Buttington Quarry

TABLE 66

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 4 - Whitehouse Farm**

Instrumentation: Norsonic 140 Real Time Analyser (1403353)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	40.4	26.6	24.3	71.4	
23:15	15:00	27.0	29.9	24.5	35.5	
23:30	15:00	27.0	29.6	24.3	46.8	
23:45	15:00	41.6	32.5	24.6	68.9	
00:00	15:00	44.9	38.7	25.9	71.6	
00:15	15:00	26.2	26.9	25.4	32.9	
00:30	15:00	26.6	27.8	23.3	47.0	
00:45	15:00	25.4	26.5	23.7	32.5	
01:00	15:00	27.4	30.7	22.6	41.3	
01:15	15:00	23.4	24.3	22.4	31.2	
01:30	15:00	23.6	24.4	22.6	41.5	
01:45	15:00	24.4	25.6	22.9	32.9	
02:00	15:00	24.0	24.9	22.9	37.9	
02:15	15:00	23.8	24.5	22.9	35.0	
02:30	15:00	27.4	28.7	23.7	44.7	
02:45	15:00	24.2	25.5	22.9	36.5	
03:00	15:00	24.3	25.5	22.9	34.4	
03:15	15:00	24.4	25.5	23.2	35.3	
03:30	15:00	24.3	25.4	23.1	43.2	
03:45	15:00	24.4	25.5	23.0	37.5	
04:00	15:00	26.1	27.5	24.5	35.4	
04:15	15:00	26.5	28.2	24.7	37.2	
04:30	15:00	29.8	33.0	25.2	45.1	
04:45	15:00	37.7	38.2	26.6	62.5	
05:00	15:00	40.2	41.8	32.8	62.8	
05:15	15:00	40.6	42.7	34.7	60.5	
05:30	15:00	43.0	45.4	35.2	63.8	
05:45	15:00	41.4	44.5	34.8	62.5	
06:00	15:00	46.2	48.5	36.2	66.1	
06:15	15:00	43.4	46.2	36.3	63.3	
06:30	15:00	44.5	47.1	35.4	64.0	
06:45	15:00	54.7	45.5	35.7	76.7	
Average 2300-0700		42.0	32.4	26.7	31-77	
Average 0700-2300		44.4	41.7	31.4	43-83	



## Noise Survey Results

Date: Monday 23rd July 2018

Location: Buttington Quarry

TABLE 67

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 4 - Whitehouse Farm**

Instrumentation: Norsonic 140 Real Time Analyser (1403353)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	44.3	44.5	35.6	67.3	
07:15	15:00	43.8	46.2	36.3	65.8	
07:30	15:00	43.5	45.9	36.1	61.7	
07:45	15:00	42.4	44.5	35.0	66.0	
08:00	15:00	42.7	45.0	35.8	68.6	
08:15	15:00	46.1	48.9	37.3	62.3	
08:30	15:00	45.3	48.4	37.3	62.9	
08:45	15:00	46.0	48.7	36.1	67.3	
09:00	15:00	39.9	42.1	35.2	61.0	
09:15	15:00	41.9	44.8	36.6	60.8	
09:30	15:00	44.3	46.6	35.8	63.9	
09:45	15:00	51.9	47.6	34.8	73.6	
10:00	15:00	42.2	43.4	34.8	62.8	
10:15	15:00	43.8	45.6	31.2	64.9	
10:30	15:00	43.8	43.8	32.5	67.5	
10:45	15:00	48.4	51.1	32.6	74.2	
11:00	15:00	44.4	46.5	31.6	64.0	
11:15	15:00	38.6	41.0	31.6	57.8	
11:30	15:00	48.8	49.5	32.6	75.8	
11:45	15:00	41.7	43.4	31.3	64.5	
12:00	15:00	39.6	42.4	31.5	59.3	
12:15	15:00	40.1	43.3	32.2	57.0	
12:30	15:00	44.4	44.6	33.3	66.0	
12:45	15:00	38.9	41.3	31.6	58.2	
13:00	15:00	44.8	43.9	32.6	70.6	
13:15	15:00	39.8	41.9	31.9	61.7	
13:30	15:00	38.5	40.5	32.5	56.0	
13:45	15:00	44.9	41.9	33.2	67.3	
14:00	15:00	41.1	44.0	33.8	60.2	
14:15	15:00	42.5	44.6	35.3	65.2	
14:30	15:00	43.2	46.5	34.1	60.2	
14:45	15:00	41.7	44.6	36.1	58.1	
Average 0700-1500		44.4	44.9	34.0	56-76	

## Noise Survey Results

Date: Monday 23rd July 2018

TABLE 68

Location: Buttington Quarry

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 4 - Whitehouse Farm**

Instrumentation: Norsonic 140 Real Time Analyser (1403353)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	46.2	46.1	34.5	64.9	
15:15	15:00	43.2	45.7	34.9	60.5	
15:30	15:00	41.4	44.2	36.1	57.5	
15:45	15:00	40.1	42.9	35.0	56.7	
16:00	15:00	47.0	46.5	36.2	68.0	
16:15	15:00	43.5	43.6	35.9	74.0	
16:30	15:00	42.8	45.1	36.9	66.3	
16:45	15:00	47.4	49.0	37.4	67.3	
17:00	15:00	43.3	45.0	36.5	70.3	
17:15	15:00	48.3	46.3	37.1	72.7	
17:30	15:00	47.7	49.4	37.1	68.1	
17:45	15:00	46.5	45.6	36.6	72.1	
18:00	15:00	45.4	47.8	36.4	63.4	
18:15	15:00	44.6	47.2	36.7	64.6	
18:30	15:00	42.4	45.3	36.3	60.1	
18:45	15:00	40.7	41.5	35.5	61.2	
19:00	15:00	41.9	44.4	35.4	61.4	
19:15	15:00	40.7	40.4	32.9	64.8	
19:30	15:00	37.5	37.1	32.3	62.4	
19:45	15:00	41.1	44.8	30.2	58.7	
20:00	15:00	33.7	35.0	29.1	59.6	
20:15	15:00	35.9	35.1	28.6	65.0	
20:30	15:00	43.7	33.0	26.9	70.4	
20:45	15:00	29.6	32.0	25.3	48.1	
21:00	15:00	28.7	30.9	25.0	50.5	
21:15	15:00	30.6	31.7	25.5	55.9	
21:30	15:00	33.8	37.2	26.3	51.0	
21:45	15:00	31.8	35.2	24.9	51.2	
22:00	15:00	31.6	33.4	25.5	56.1	
22:15	15:00	29.4	28.1	23.9	55.5	
22:30	15:00	25.5	27.5	23.7	37.7	
22:45	15:00	25.4	26.6	23.8	39.9	
Average 1500-2300		42.7	40.1	31.8	38-74	

## Noise Survey Results

Date: Monday 23rd - Tuesday 24th July 2018

Site: Buttington Quarry

TABLE 69

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 4 - Whitehouse Farm**

Instrumentation: Norsonic 140 Real Time Analyser (1403353)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	43.4	31.7	23.6	66.3	
23:15	15:00	45.5	31.0	23.5	71.4	
23:30	15:00	37.5	27.1	23.6	61.3	
23:45	15:00	39.2	28.7	25.0	69.5	
00:00	15:00	27.7	29.5	25.1	41.3	
00:15	15:00	27.7	28.4	24.4	41.1	
00:30	15:00	25.7	26.8	24.1	37.9	
00:45	15:00	42.4	40.2	25.2	69.0	
01:00	15:00	45.9	41.2	26.4	73.6	
01:15	15:00	27.1	27.9	25.8	40.2	
01:30	15:00	27.4	28.5	25.6	35.6	
01:45	15:00	26.6	28.1	24.3	37.1	
02:00	15:00	26.3	27.6	25.0	33.2	
02:15	15:00	29.0	31.3	24.7	43.7	
02:30	15:00	25.5	26.7	24.2	36.8	
02:45	15:00	25.2	25.9	24.2	46.6	
03:00	15:00	25.1	26.2	24.0	34.1	
03:15	15:00	24.2	25.1	23.3	34.2	
03:30	15:00	23.8	24.5	22.9	38.4	
03:45	15:00	24.8	26.3	23.1	36.7	
04:00	15:00	23.6	24.3	22.8	38.0	
04:15	15:00	33.3	25.6	22.8	61.1	
04:30	15:00	34.1	35.7	28.7	51.0	
04:45	15:00	35.5	37.1	33.3	49.3	
05:00	15:00	37.3	38.8	33.9	55.4	
05:15	15:00	38.1	40.0	34.1	55.5	
05:30	15:00	42.2	45.3	35.8	61.2	
05:45	15:00	40.8	43.8	35.4	59.8	
06:00	15:00	46.5	44.2	34.7	69.1	
06:15	15:00	40.0	42.7	34.4	57.5	
06:30	15:00	48.0	46.0	36.3	74.4	
06:45	15:00	45.4	46.5	37.4	64.0	
Average 2300-0700		40.1	32.9	27.4	33-74	
Average 0700-2300		43.6	42.5	32.9	38-76	

## Noise Survey Results

Date: Tuesday 24th July 2018

Location: Buttington Quarry

TABLE 70

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 4 - Whitehouse Farm**

Instrumentation: Norsonic 140 Real Time Analyser (1403353)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmix (dB)	Observations
07:00	15:00	45.5	48.2	36.7	73.2	
07:15	15:00	42.7	44.9	35.8	61.5	
07:30	15:00	45.1	48.3	36.5	65.3	
07:45	15:00	45.2	47.8	36.6	61.6	
08:00	15:00	45.1	48.4	37.2	63.4	
08:15	15:00	45.8	47.6	37.5	64.8	
08:30	15:00	49.7	53.2	39.4	68.6	
08:45	15:00	48.1	49.8	36.8	68.7	
09:00	15:00	43.6	46.8	35.8	62.1	
09:15	15:00	46.8	49.6	36.2	66.8	
09:30	15:00	43.1	46.1	35.5	60.2	
09:45	15:00	43.0	45.0	36.4	62.8	
10:00	15:00	50.0	44.8	36.1	77.1	
10:15	15:00	41.3	44.7	34.9	54.7	
10:30	15:00	43.4	45.3	34.4	62.1	
10:45	15:00	45.4	44.4	34.1	67.2	
11:00	15:00	47.8	42.8	31.5	76.0	
11:15	15:00	41.3	44.7	33.7	57.5	
11:30	15:00	47.5	48.7	36.8	68.4	
11:45	15:00	44.1	47.4	36.3	61.5	
12:00	15:00	47.4	50.1	38.5	65.5	
12:15	15:00	44.7	48.0	37.5	61.1	
12:30	15:00	46.0	49.4	39.3	61.7	
12:45	15:00	44.3	47.6	36.5	61.1	
13:00	15:00	44.7	48.0	36.0	65.5	
13:15	15:00	41.5	43.6	34.0	61.4	
13:30	15:00	44.8	43.6	33.0	68.4	
13:45	15:00	45.3	46.1	35.3	67.8	
14:00	15:00	41.5	42.5	33.9	64.7	
14:15	15:00	43.9	42.5	34.9	63.6	
14:30	15:00	41.5	42.1	34.8	65.5	
14:45	15:00	48.4	49.0	34.7	72.8	
Average 0700-1500		45.6	46.6	35.8	55-77	

## Noise Survey Results

Date: Tuesday 24th July 2018

TABLE 71

Location: Buttington Quarry

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 4 - Whitehouse Farm**

Instrumentation: Norsonic 140 Real Time Analyser (1403353)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	41.5	43.8	36.0	57.4	
15:15	15:00	45.7	50.1	36.0	63.6	
15:30	15:00	41.6	43.0	34.6	65.9	
15:45	15:00	41.6	40.6	34.6	65.7	
16:00	15:00	40.3	42.6	35.2	58.1	
16:15	15:00	39.9	42.4	34.5	63.7	
16:30	15:00	40.7	42.1	36.0	58.9	
16:45	15:00	44.4	45.6	36.4	64.4	
17:00	15:00	43.4	44.7	35.6	66.5	
17:15	15:00	42.7	43.1	35.3	63.6	
17:30	15:00	45.4	49.8	36.6	61.2	
17:45	15:00	43.1	43.2	35.1	71.4	
18:00	15:00	41.8	43.2	34.5	64.0	
18:15	15:00	51.6	49.1	34.9	76.0	
18:30	15:00	45.8	44.3	33.5	66.1	
18:45	15:00	40.1	40.4	33.7	63.9	
19:00	15:00	39.9	41.6	35.0	63.1	
19:15	15:00	39.8	40.7	34.4	65.9	
19:30	15:00	40.0	42.1	33.9	61.4	
19:45	15:00	43.0	45.0	34.1	69.6	
20:00	15:00	40.8	44.2	34.2	53.6	
20:15	15:00	38.7	38.9	27.1	64.4	
20:30	15:00	44.4	43.0	26.2	70.8	
20:45	15:00	30.5	33.6	25.4	45.6	
21:00	15:00	32.7	32.0	25.2	63.5	
21:15	15:00	40.6	33.4	24.6	64.0	
21:30	15:00	27.5	28.6	23.8	48.0	
21:45	15:00	35.7	28.9	23.7	63.3	
22:00	15:00	24.8	25.8	23.0	46.8	
22:15	15:00	35.8	30.4	23.7	59.7	
22:30	15:00	46.4	44.3	23.4	71.8	
22:45	15:00	24.8	26.8	22.9	37.9	
Average 1500-2300		42.7	40.2	31.3	38-76	

## Noise Survey Results

Date: Tuesday 24th - Wednesday 25th July 2018

Site: Buttington Quarry

TABLE 72

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 4 - Whitehouse Farm**

Instrumentation: Norsonic 140 Real Time Analyser (1403353)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	26.0	26.7	23.0	41.9	
23:15	15:00	45.8	29.3	22.9	78.8	
23:30	15:00	24.2	25.6	22.7	32.9	
23:45	15:00	25.3	26.9	22.9	36.4	
00:00	15:00	33.8	27.7	23.3	57.8	
00:15	15:00	25.4	26.7	23.0	53.2	
00:30	15:00	24.2	25.3	22.9	36.1	
00:45	15:00	24.6	25.4	22.9	40.4	
01:00	15:00	41.6	42.0	25.1	64.8	
01:15	15:00	43.4	28.0	22.9	69.2	
01:30	15:00	24.0	25.3	22.6	36.5	
01:45	15:00	24.2	25.3	23.1	34.4	
02:00	15:00	25.0	24.9	23.1	55.9	
02:15	15:00	24.0	24.8	22.7	43.1	
02:30	15:00	23.9	24.7	22.8	42.9	
02:45	15:00	23.6	24.3	22.8	34.1	
03:00	15:00	24.5	25.4	23.3	32.4	
03:15	15:00	24.7	26.0	22.7	34.7	
03:30	15:00	32.4	25.6	23.2	60.4	
03:45	15:00	23.9	24.7	23.0	30.0	
04:00	15:00	25.1	27.0	23.0	35.6	
04:15	15:00	33.7	33.5	24.2	60.2	
04:30	15:00	36.4	37.4	34.3	54.9	
04:45	15:00	36.7	37.6	34.6	52.9	
05:00	15:00	38.7	40.3	35.0	58.2	
05:15	15:00	38.6	38.2	34.1	60.7	
05:30	15:00	41.4	40.8	35.9	73.6	
05:45	15:00	42.4	44.0	36.5	66.1	
06:00	15:00	45.4	46.8	36.4	65.1	
06:15	15:00	44.5	47.9	36.3	60.5	
06:30	15:00	47.3	46.1	36.7	72.3	
06:45	15:00	49.0	51.1	36.7	69.4	
Average 2300-0700		40.2	32.0	27.0	30-79	
Average 0700-2300		44.4	43.4	33.5	38-77	

## Noise Survey Results

Date: Wednesday 25th July 2018

Location: Buttington Quarry

TABLE 73

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 4 - Whitehouse Farm**

Instrumentation: Norsonic 140 Real Time Analyser (1403353)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	44.0	47.5	36.6	61.7	
07:15	15:00	44.1	45.9	35.7	65.0	
07:30	15:00	43.2	45.4	36.6	62.8	
07:45	15:00	45.2	47.5	37.2	62.8	
08:00	15:00	49.7	53.2	37.4	66.3	
08:15	15:00	51.0	54.1	40.0	73.0	
08:30	15:00	61.1	58.7	44.6	90.6	
08:45	15:00	45.2	48.2	36.2	63.7	
09:00	15:00	49.1	51.4	36.6	70.6	
09:15	15:00	47.2	49.9	35.4	64.9	
09:30	15:00	44.7	47.3	35.3	63.8	
09:45	15:00	45.3	45.8	34.8	67.4	
10:00	15:00	46.7	49.3	33.2	69.4	
10:15	15:00	46.5	48.1	33.4	68.2	
10:30	15:00	50.3	54.2	34.9	67.1	
10:45	15:00	47.8	48.3	30.3	68.7	
11:00	15:00	46.8	48.8	39.2	63.7	
11:15	15:00	41.1	43.5	31.2	61.0	
11:30	15:00	45.3	48.0	32.5	64.2	
11:45	15:00	49.2	47.5	34.7	78.4	
12:00	15:00	44.4	47.5	34.1	64.4	
12:15	15:00	40.5	43.9	32.7	61.0	
12:30	15:00	45.9	42.4	30.0	71.4	
12:45	15:00	44.2	48.2	32.9	58.7	
13:00	15:00	42.4	44.2	32.4	59.5	
13:15	15:00	49.0	47.8	31.8	71.3	
13:30	15:00	45.6	45.7	31.1	64.5	
13:45	15:00	41.9	43.2	30.1	59.7	
14:00	15:00	40.8	43.8	31.8	59.7	
14:15	15:00	46.1	47.2	31.9	65.5	
14:30	15:00	44.0	46.7	33.3	65.0	
14:45	15:00	44.0	46.7	36.2	60.9	
Average 0700-1500		49.1	47.8	34.5	59-91	

## Noise Survey Results

Date: Wednesday 25th July 2018

TABLE 74

Location: Buttington Quarry

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 4 - Whitehouse Farm**

Instrumentation: Norsonic 140 Real Time Analyser (1403353)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	48.7	49.0	35.8	67.4	
15:15	15:00	42.1	45.1	35.2	61.1	
15:30	15:00	40.8	43.8	34.4	56.4	
15:45	15:00	41.5	44.2	34.8	60.2	
16:00	15:00	44.7	47.2	35.8	64.9	
16:15	15:00	45.1	46.6	36.0	67.4	
16:30	15:00	42.0	44.6	35.3	62.1	
16:45	15:00	42.2	44.0	35.1	62.1	
17:00	15:00	45.7	43.7	33.9	80.4	
17:15	15:00	40.4	43.2	34.3	59.7	
17:30	15:00	43.2	46.1	34.3	63.8	
17:45	15:00	40.8	42.9	34.2	64.8	
18:00	15:00	40.4	41.7	34.6	61.5	
18:15	15:00	44.8	46.5	30.9	68.8	
18:30	15:00	39.6	41.5	29.5	66.0	
18:45	15:00	42.5	42.8	29.5	62.6	
19:00	15:00	39.1	41.5	28.6	57.5	
19:15	15:00	39.8	42.5	30.1	60.0	
19:30	15:00	42.3	45.7	31.7	62.0	
19:45	15:00	42.4	45.1	29.6	65.8	
20:00	15:00	38.5	40.9	30.5	58.9	
20:15	15:00	40.7	44.2	29.9	60.5	
20:30	15:00	42.1	43.4	26.8	64.3	
20:45	15:00	30.6	32.7	26.5	46.5	
21:00	15:00	35.8	32.4	25.3	63.1	
21:15	15:00	40.5	37.6	24.8	64.5	
21:30	15:00	30.1	31.2	25.1	48.8	
21:45	15:00	28.1	30.2	23.8	42.4	
22:00	15:00	36.7	28.3	23.5	66.0	
22:15	15:00	31.6	26.1	23.4	58.8	
22:30	15:00	38.3	32.4	23.5	63.3	
22:45	15:00	44.8	34.2	24.0	70.0	
Average 1500-2300		42.0	40.7	30.3	42-80	



## Noise Survey Results

Date: Wednesday 25th- Thursday 26th July 2018

Site: Buttington Quarry

TABLE 75

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 4 - Whitehouse Farm**

Instrumentation: Norsonic 140 Real Time Analyser (1403353)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	27.0	28.7	23.0	46.1	
23:15	15:00	38.7	29.8	23.2	68.1	
23:30	15:00	25.7	26.5	23.4	50.4	
23:45	15:00	30.0	26.7	23.0	58.7	
00:00	15:00	24.2	25.8	22.6	34.1	
00:15	15:00	24.5	25.3	22.3	39.5	
00:30	15:00	42.5	39.8	23.0	70.9	
00:45	15:00	43.5	40.4	23.7	69.5	
01:00	15:00	25.5	27.0	23.4	36.0	
01:15	15:00	25.1	26.4	23.4	37.4	
01:30	15:00	24.3	25.2	23.2	35.5	
01:45	15:00	25.1	26.0	23.4	45.8	
02:00	15:00	25.1	26.5	23.1	43.5	
02:15	15:00	24.9	26.4	23.1	41.7	
02:30	15:00	24.9	26.4	23.2	38.4	
02:45	15:00	25.5	27.4	23.2	38.9	
03:00	15:00	25.7	27.1	22.7	47.0	
03:15	15:00	25.2	26.8	23.5	33.7	
03:30	15:00	26.1	28.3	23.1	38.4	
03:45	15:00	24.6	26.0	22.8	40.1	
04:00	15:00	30.0	33.7	24.1	40.2	
04:15	15:00	34.5	37.5	27.2	52.6	
04:30	15:00	38.7	39.7	33.0	61.0	
04:45	15:00	37.0	38.6	34.7	50.6	
05:00	15:00	38.2	39.3	35.3	53.3	
05:15	15:00	39.5	41.0	36.7	55.9	
05:30	15:00	45.1	47.5	37.3	65.6	
05:45	15:00	42.1	45.2	37.8	55.2	
06:00	15:00	43.8	46.7	37.7	62.0	
06:15	15:00	44.3	47.6	37.4	61.2	
06:30	15:00	46.1	49.6	37.4	63.0	
06:45	15:00	44.7	47.5	36.8	62.5	
Average 2300-0700		39.0	33.6	27.4	34-71	
Average 0700-2300		46.9	44.2	32.4	42-91	

### Noise Survey Results

Date: Thursday 26th July 2018

Location: Buttington Quarry

TABLE 76

Client: ECL

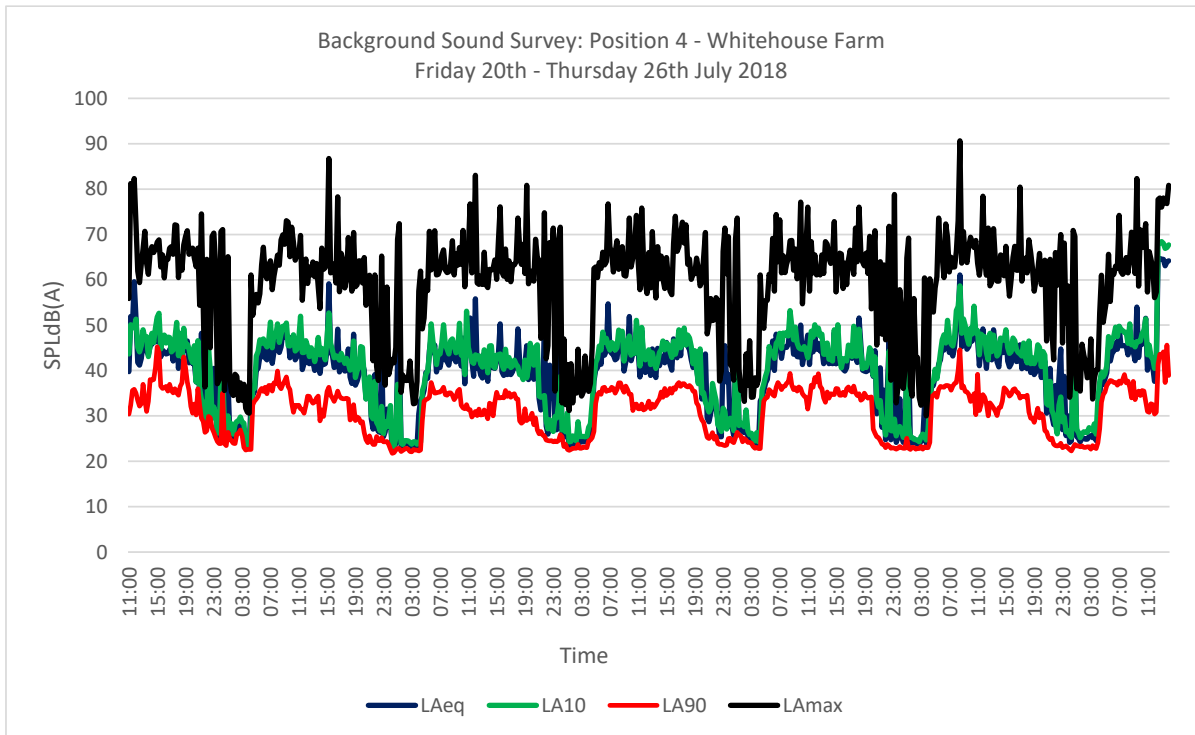
Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 4 - Whitehouse Farm**

Instrumentation: Norsonic 140 Real Time Analyser (1403353)

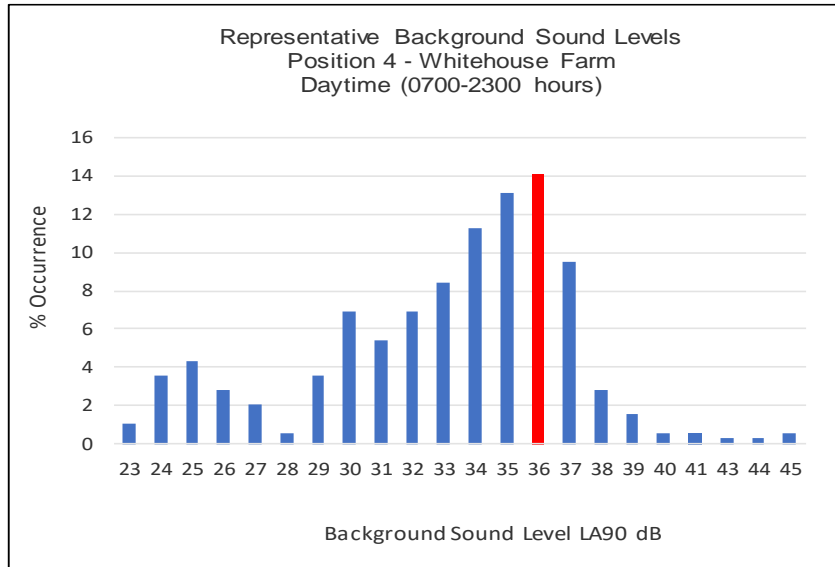
Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAMax (dB)	Observations
07:00	15:00	49.7	49.8	37.7	74.2	
07:15	15:00	45.5	49.1	37.2	61.8	
07:30	15:00	45.5	48.8	38.0	61.2	
07:45	15:00	45.5	48.4	39.1	61.8	
08:00	15:00	45.4	48.4	37.3	64.9	
08:15	15:00	43.5	46.0	37.7	61.5	
08:30	15:00	46.9	50.3	36.3	65.0	
08:45	15:00	46.7	45.7	34.0	70.5	
09:00	15:00	44.1	46.2	37.6	65.9	
09:15	15:00	42.2	45.2	33.6	61.4	
09:30	15:00	54.0	46.4	35.1	82.3	
09:45	15:00	42.9	46.4	35.5	58.6	
10:00	15:00	47.1	46.5	34.5	71.0	
10:15	15:00	45.8	48.2	35.6	67.1	
10:30	15:00	47.7	48.8	35.5	68.9	
10:45	15:00	51.5	51.4	33.2	72.4	
11:00	15:00	40.1	43.5	31.0	57.3	
11:15	15:00	44.4	45.6	30.8	66.2	
11:30	15:00	42.0	43.1	32.7	64.5	
11:45	15:00	40.9	42.6	32.5	62.6	
12:00	15:00	37.6	40.5	30.4	56.1	
12:15	15:00	40.9	43.3	30.8	57.3	
Average 0700-1230		46.7	46.6	34.8	56-82	
<b>Overall Average</b>		<b>40.1</b>	<b>32.6</b>	<b>27.1</b>	<b>30-79</b>	
<b>Overall Average</b>		<b>45.5</b>	<b>43.3</b>	<b>32.8</b>	<b>36-91</b>	

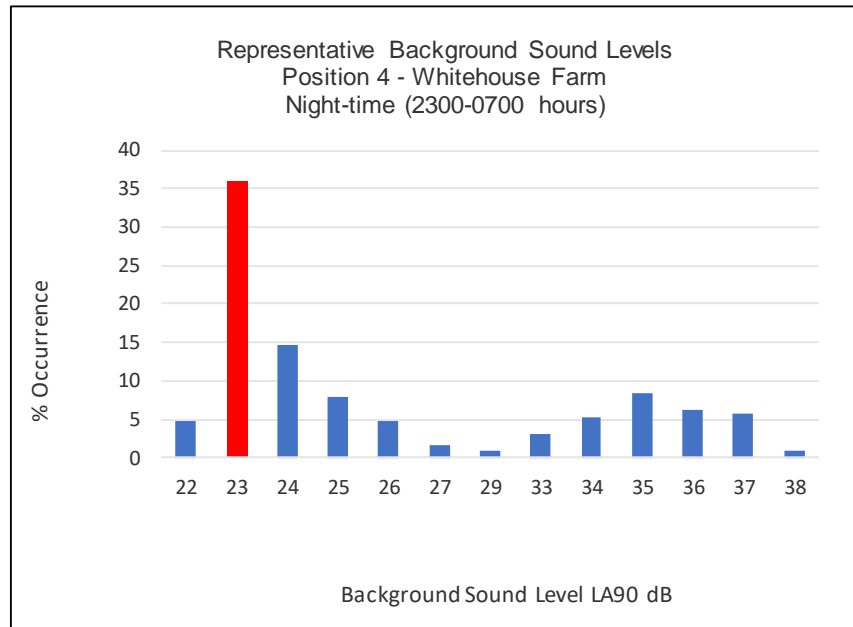


### LA90 Representative Levels

LA90	% Occurrence
23	1.0
24	3.6
25	4.4
26	2.8
27	2.1
28	0.5
29	3.6
30	6.9
31	5.4
32	6.9
33	8.5
34	11.3
35	13.1
<b>36</b>	<b>14.1</b>
37	9.5
38	2.8
39	1.5
40	0.5
41	0.5
43	0.3
44	0.3
45	0.5



LA90	% Occurrence
22	4.7
<b>23</b>	<b>35.9</b>
24	14.6
25	7.8
26	4.7
27	1.6
29	1.0
33	3.1
34	5.2
35	8.3
36	6.3
37	5.7
38	1.0



## Noise Survey Results

Date: Friday 20th - July 2018

Location: Buttington Quarry

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 5 - York House**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

**TABLE 77**

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
11:15	15:00	58.8	61.2	48.6	81.6	
11:30	15:00	58.4	61.4	49.4	67.2	
11:45	15:00	58.5	61.5	48.7	68.6	
12:00	15:00	58.3	61.5	46.3	67.5	
12:15	15:00	57.7	61.1	45.7	69.1	
12:30	15:00	57.8	60.8	48.6	68.0	
12:45	15:00	57.5	60.4	46.1	70.1	
13:00	15:00	58.1	61.1	47.9	67.5	
13:15	15:00	57.5	60.8	46.6	67.3	
13:30	15:00	57.0	60.5	44.8	67.0	
13:45	15:00	58.6	61.4	49.7	70.5	
14:00	15:00	59.0	61.9	52.2	66.2	
14:15	15:00	58.6	61.3	52.4	67.0	
14:30	15:00	59.4	62.0	53.6	67.4	
14:45	15:00	59.4	61.8	54.1	68.1	
Average 1115-1500		58.3	61.2	49.0	66-82	

## Noise Survey Results

Date: Friday 20th - July 2018

TABLE 78

Location: Buttington Quarry

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 5 - York House**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	60.8	62.9	57.2	67.9	
15:15	15:00	60.7	62.7	56.8	68.1	
15:30	15:00	58.5	61.7	51.1	68.0	
15:45	15:00	58.8	61.6	51.1	67.9	
16:00	15:00	58.2	61.2	49.5	66.3	
16:15	15:00	58.3	61.4	49.8	67.0	
16:30	15:00	58.4	61.5	50.2	67.5	
16:45	15:00	58.1	61.2	50.6	67.0	
17:00	15:00	59.0	61.9	51.7	67.1	
17:15	15:00	58.8	61.5	50.7	67.4	
17:30	15:00	58.9	61.6	51.9	74.6	
17:45	15:00	59.0	61.5	52.5	66.2	
18:00	15:00	57.9	60.9	48.4	67.9	
18:15	15:00	58.3	61.4	47.5	68.9	
18:30	15:00	58.7	61.7	51.1	66.3	
18:45	15:00	60.3	62.6	55.5	68.6	
19:00	15:00	58.4	61.0	52.3	66.7	
19:15	15:00	58.0	61.2	49.2	67.9	
19:30	15:00	57.5	61.0	49.2	66.4	
19:45	15:00	57.5	61.0	46.9	65.4	
20:00	15:00	57.2	61.0	47.7	67.6	
20:15	15:00	56.4	60.2	44.5	67.2	
20:30	15:00	55.4	59.7	39.8	64.8	
20:45	15:00	56.5	60.2	48.3	70.9	
21:00	15:00	55.8	59.9	45.6	67.7	
21:15	15:00	55.1	59.5	43.1	67.0	
21:30	15:00	54.7	58.8	43.5	69.0	
21:45	15:00	53.0	57.4	41.4	67.2	
22:00	15:00	53.2	57.9	41.4	64.8	
22:15	15:00	54.4	57.7	46.5	70.9	
22:30	15:00	52.6	57.3	43.2	65.3	
22:45	15:00	51.7	57.3	39.1	65.0	
Average 1500-2300		57.7	60.6	48.4	65-75	

## Noise Survey Results

Date: Friday 20th - Saturday 21st July 2018

Site: Buttington Quarry

TABLE 79

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 5 - York House**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	51.5	56.4	39.0	65.6	
23:15	15:00	48.7	52.7	34.1	65.9	
23:30	15:00	50.5	55.1	31.9	65.9	
23:45	15:00	48.8	52.9	30.7	65.4	
00:00	15:00	48.3	52.9	28.8	64.2	
00:15	15:00	47.8	48.7	27.8	68.1	
00:30	15:00	48.4	53.3	28.3	63.3	
00:45	15:00	46.7	48.4	25.8	67.3	
01:00	15:00	44.9	46.2	25.9	63.8	
01:15	15:00	45.5	40.6	24.8	67.6	
01:30	15:00	45.0	45.4	23.2	64.8	
01:45	15:00	46.1	47.2	22.5	64.4	
02:00	15:00	47.9	52.4	23.7	65.0	
02:15	15:00	41.0	35.9	22.3	62.6	
02:30	15:00	43.5	40.7	22.2	61.8	
02:45	15:00	38.1	32.1	21.5	64.5	
03:00	15:00	43.3	37.6	21.5	64.7	
03:15	15:00	46.6	41.8	22.8	66.8	
03:30	15:00	45.0	44.0	21.7	67.2	
03:45	15:00	46.8	45.7	23.0	66.6	
04:00	15:00	49.5	53.1	24.6	66.2	
04:15	15:00	46.7	47.0	24.0	66.3	
04:30	15:00	49.0	51.1	27.1	68.7	
04:45	15:00	48.0	48.9	28.0	67.6	
05:00	15:00	46.0	46.3	28.3	64.2	
05:15	15:00	49.0	52.4	34.0	66.8	
05:30	15:00	50.5	54.5	36.6	65.7	
05:45	15:00	50.4	54.9	35.3	67.1	
06:00	15:00	52.3	56.8	35.6	68.6	
06:15	15:00	51.9	56.5	35.4	69.4	
06:30	15:00	52.3	56.8	36.6	68.2	
06:45	15:00	54.2	59.4	35.6	67.4	
Average 2300-0700		48.7	49.0	28.2	62-69	
Average 1115-2300		57.9	60.7	48.5	65-82	

## Noise Survey Results

Date: Saturday 21st July 2018

Location: Buttington Quarry

TABLE 80

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 5 - York House**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmix (dB)	Observations
07:00	15:00	53.0	58.3	33.0	66.5	
07:15	15:00	53.8	58.9	33.3	65.6	
07:30	15:00	55.8	59.8	36.2	72.5	
07:45	15:00	55.7	60.1	35.2	73.0	
08:00	15:00	54.4	59.2	34.2	66.9	
08:15	15:00	55.3	59.6	35.9	68.1	
08:30	15:00	54.9	59.3	36.4	66.0	
08:45	15:00	56.1	60.0	36.6	67.9	
09:00	15:00	58.9	60.7	39.4	83.4	
09:15	15:00	56.8	60.4	40.2	66.8	
09:30	15:00	56.8	60.3	42.3	66.5	
09:45	15:00	57.1	60.5	39.3	67.0	
10:00	15:00	56.2	59.9	40.8	65.5	
10:15	15:00	56.8	60.0	43.4	64.5	
10:30	15:00	57.0	60.4	45.9	67.6	
10:45	15:00	56.7	59.9	38.0	66.2	
11:00	15:00	57.4	60.3	48.8	66.3	
11:15	15:00	57.0	60.2	38.6	66.8	
11:30	15:00	57.7	60.7	47.0	67.3	
11:45	15:00	56.9	60.0	41.2	68.3	
12:00	15:00	57.8	60.4	48.9	77.0	
12:15	15:00	56.3	59.7	41.1	68.0	
12:30	15:00	56.2	59.8	41.9	67.9	
12:45	15:00	56.6	59.8	46.0	64.4	
13:00	15:00	56.5	59.9	39.6	67.1	
13:15	15:00	56.4	60.0	41.6	63.9	
13:30	15:00	56.5	60.0	39.5	66.7	
13:45	15:00	56.3	59.5	39.8	70.5	
14:00	15:00	57.2	60.5	40.0	66.6	
14:15	15:00	56.5	59.8	39.9	72.6	
14:30	15:00	57.3	60.6	42.6	70.4	
14:45	15:00	56.2	59.7	38.9	70.8	
Average 0700-1500		56.5	59.9	40.2	64-83	

## Noise Survey Results

Date: Saturday 21st July 2018

TABLE 81

Location: Buttington Quarry

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 5 - York House**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	56.0	59.9	38.1	66.7	
15:15	15:00	55.9	59.6	38.6	71.4	
15:30	15:00	56.7	60.2	37.9	69.0	
15:45	15:00	56.2	60.0	36.0	68.4	
16:00	15:00	56.3	59.9	41.5	68.0	
16:15	15:00	55.8	59.6	38.3	70.0	
16:30	15:00	56.5	60.0	40.5	68.2	
16:45	15:00	55.6	59.5	39.8	67.4	
17:00	15:00	55.6	59.7	36.2	66.5	
17:15	15:00	55.6	59.5	38.3	65.6	
17:30	15:00	55.3	59.5	36.7	66.2	
17:45	15:00	56.0	60.0	37.6	66.5	
18:00	15:00	55.9	60.2	38.7	64.6	
18:15	15:00	55.4	59.5	38.7	65.9	
18:30	15:00	55.8	60.1	36.8	66.3	
18:45	15:00	55.7	60.1	36.4	66.3	
19:00	15:00	55.3	59.8	36.9	65.1	
19:15	15:00	54.8	59.1	36.0	70.0	
19:30	15:00	54.7	59.5	33.8	65.0	
19:45	15:00	54.7	59.4	33.0	67.1	
20:00	15:00	55.3	59.5	38.8	70.0	
20:15	15:00	53.5	58.3	34.6	66.2	
20:30	15:00	51.9	56.9	31.9	65.8	
20:45	15:00	53.5	58.3	33.0	71.1	
21:00	15:00	52.0	56.8	31.7	66.6	
21:15	15:00	50.7	55.6	26.7	65.6	
21:30	15:00	52.2	56.9	29.7	68.3	
21:45	15:00	53.5	58.3	33.9	68.9	
22:00	15:00	51.6	56.7	31.4	66.8	
22:15	15:00	53.3	57.8	31.5	69.9	
22:30	15:00	51.8	56.7	28.7	67.3	
22:45	15:00	51.3	56.3	28.6	64.7	
Average 1500-2300		54.8	58.9	35.3	65-71	



## Noise Survey Results

Date: Saturday 21st - Sunday 22nd July 2018

Site: Buttington Quarry

TABLE 82

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 5 - York House**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	48.9	54.1	30.3	64.0	
23:15	15:00	50.9	55.6	30.5	67.3	
23:30	15:00	49.8	54.7	28.8	64.9	
23:45	15:00	49.3	53.7	24.5	66.4	
00:00	15:00	52.6	54.2	24.6	77.1	
00:15	15:00	47.0	50.7	25.4	64.9	
00:30	15:00	44.6	43.7	24.8	65.7	
00:45	15:00	47.6	50.6	27.0	65.8	
01:00	15:00	43.8	43.7	26.1	61.5	
01:15	15:00	45.0	44.8	27.1	63.4	
01:30	15:00	45.9	47.7	24.9	63.4	
01:45	15:00	46.1	45.6	25.8	66.7	
02:00	15:00	45.6	45.7	23.9	66.6	
02:15	15:00	42.7	39.3	22.7	62.5	
02:30	15:00	43.6	41.5	23.7	65.0	
02:45	15:00	41.6	38.6	22.7	64.1	
03:00	15:00	44.6	43.0	24.0	65.2	
03:15	15:00	46.6	47.7	25.2	65.1	
03:30	15:00	48.0	48.5	24.8	66.7	
03:45	15:00	43.3	42.8	24.3	62.8	
04:00	15:00	43.7	42.6	23.4	63.5	
04:15	15:00	45.6	45.4	23.9	66.8	
04:30	15:00	47.3	48.8	27.4	66.6	
04:45	15:00	47.6	50.4	29.1	65.7	
05:00	15:00	49.5	52.3	32.8	67.9	
05:15	15:00	48.0	50.5	34.8	64.2	
05:30	15:00	49.6	53.2	35.7	67.0	
05:45	15:00	50.8	54.5	38.6	64.4	
06:00	15:00	49.5	52.9	38.9	65.4	
06:15	15:00	51.3	55.1	37.9	66.1	
06:30	15:00	51.7	56.4	37.3	66.9	
06:45	15:00	51.6	55.8	35.5	65.9	
Average 2300-0700		48.2	48.9	28.3	62-77	
Average 0700-2300		55.7	59.3	37.7	64-83	

## Noise Survey Results

Date: Sunday 22nd July 2018

Location: Buttington Quarry

TABLE 83

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 5 - York House**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmix (dB)	Observations
07:00	15:00	52.0	56.4	39.3	66.2	
07:15	15:00	58.5	58.3	39.2	89.2	
07:30	15:00	53.6	58.4	39.0	67.1	
07:45	15:00	54.7	58.9	40.8	77.9	
08:00	15:00	54.1	58.8	39.3	67.1	
08:15	15:00	54.2	58.7	38.8	68.5	
08:30	15:00	53.9	58.5	39.9	65.9	
08:45	15:00	56.8	60.4	39.5	71.6	
09:00	15:00	55.3	59.8	40.1	69.2	
09:15	15:00	57.8	60.6	39.7	82.3	
09:30	15:00	56.4	60.1	42.6	67.7	
09:45	15:00	57.3	60.9	44.3	66.5	
10:00	15:00	57.4	61.3	43.2	67.3	
10:15	15:00	56.8	60.2	41.2	72.3	
10:30	15:00	57.0	60.5	44.1	68.3	
10:45	15:00	57.5	60.7	47.2	67.8	
11:00	15:00	57.4	60.8	45.4	68.0	
11:15	15:00	57.7	60.8	45.7	74.7	
11:30	15:00	57.4	60.5	44.7	73.7	
11:45	15:00	57.4	60.8	44.9	66.9	
12:00	15:00	57.2	60.2	43.3	70.4	
12:15	15:00	56.6	60.1	40.1	65.3	
12:30	15:00	56.6	60.1	41.2	69.6	
12:45	15:00	57.7	60.2	44.3	81.8	
13:00	15:00	56.4	59.9	44.2	67.4	
13:15	15:00	55.7	59.3	40.8	66.5	
13:30	15:00	56.5	59.5	39.2	71.1	
13:45	15:00	57.1	60.0	42.9	73.1	
14:00	15:00	55.9	59.5	43.2	65.5	
14:15	15:00	55.7	59.4	41.4	67.6	
14:30	15:00	56.6	60.0	40.9	71.7	
14:45	15:00	56.9	60.2	44.3	65.9	
Average 0700-1500		56.5	59.8	42.0	65-89	

## Noise Survey Results

Date: Sunday 22nd July 2018

TABLE 84

Location: Buttington Quarry

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 5 - York House**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	56.4	59.6	41.8	72.3	
15:15	15:00	57.1	60.3	44.5	68.8	
15:30	15:00	56.7	60.0	42.5	66.3	
15:45	15:00	56.5	59.8	41.3	66.6	
16:00	15:00	56.9	60.0	43.4	66.1	
16:15	15:00	56.9	60.3	42.9	72.4	
16:30	15:00	56.7	60.0	37.2	74.1	
16:45	15:00	57.1	60.3	43.7	67.0	
17:00	15:00	57.3	60.3	38.2	80.8	
17:15	15:00	57.1	60.3	42.4	64.6	
17:30	15:00	57.8	60.8	42.1	72.6	
17:45	15:00	57.2	60.5	42.8	66.7	
18:00	15:00	57.7	61.0	45.6	69.0	
18:15	15:00	56.6	60.3	41.2	65.2	
18:30	15:00	56.9	60.4	42.7	66.8	
18:45	15:00	56.1	59.9	39.1	67.4	
19:00	15:00	55.9	59.8	35.6	67.2	
19:15	15:00	55.8	59.7	38.5	75.4	
19:30	15:00	55.8	59.6	38.4	67.6	
19:45	15:00	55.5	59.7	35.8	66.7	
20:00	15:00	55.4	59.6	35.0	64.8	
20:15	15:00	55.3	60.0	33.9	66.2	
20:30	15:00	55.2	59.5	36.9	67.5	
20:45	15:00	54.3	59.2	37.9	65.2	
21:00	15:00	54.3	59.3	30.6	70.4	
21:15	15:00	54.1	58.9	33.7	66.8	
21:30	15:00	54.0	58.9	33.0	67.5	
21:45	15:00	53.0	58.0	31.7	65.9	
22:00	15:00	51.8	57.1	34.3	65.0	
22:15	15:00	52.5	57.5	36.9	64.8	
22:30	15:00	49.5	53.9	32.8	63.2	
22:45	15:00	50.6	54.3	33.2	68.0	
Average 1500-2300		55.8	59.3	38.4	63-81	

## Noise Survey Results

Date: Sunday 22nd - Monday 23rd July 2018

Site: Buttington Quarry

TABLE 85

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 5 - York House**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	49.5	54.2	28.6	64.7	
23:15	15:00	48.7	52.8	25.4	64.7	
23:30	15:00	48.8	52.7	32.1	66.6	
23:45	15:00	46.8	49.7	28.9	66.2	
00:00	15:00	49.5	53.0	29.7	66.7	
00:15	15:00	46.4	47.9	27.5	66.0	
00:30	15:00	47.5	48.6	28.3	67.2	
00:45	15:00	47.9	48.4	28.5	66.9	
01:00	15:00	45.9	47.4	28.6	66.2	
01:15	15:00	42.5	39.3	25.9	65.2	
01:30	15:00	44.2	43.4	26.9	65.6	
01:45	15:00	46.0	45.3	27.0	67.2	
02:00	15:00	41.3	39.8	24.7	64.2	
02:15	15:00	43.8	42.6	25.5	66.7	
02:30	15:00	44.8	43.6	26.7	66.2	
02:45	15:00	46.4	46.5	26.8	67.6	
03:00	15:00	46.8	46.2	26.6	66.2	
03:15	15:00	47.2	48.3	27.1	67.1	
03:30	15:00	48.6	50.8	27.2	67.0	
03:45	15:00	46.2	48.3	27.8	64.2	
04:00	15:00	50.3	53.9	31.4	70.5	
04:15	15:00	52.2	56.5	34.8	69.8	
04:30	15:00	50.3	53.6	36.1	67.9	
04:45	15:00	52.8	56.8	38.7	67.7	
05:00	15:00	52.3	56.3	40.9	70.9	
05:15	15:00	54.2	58.3	42.7	72.2	
05:30	15:00	54.0	58.2	43.5	67.9	
05:45	15:00	55.4	59.8	45.1	70.0	
06:00	15:00	54.0	58.7	44.3	66.4	
06:15	15:00	54.9	59.4	44.7	67.1	
06:30	15:00	56.0	60.6	43.5	67.7	
06:45	15:00	56.4	60.6	43.8	72.6	
Average 2300-0700		50.9	51.3	32.5	64-73	
Average 0700-2300		56.1	59.5	40.2	63-89	

## Noise Survey Results

Date: Monday 23rd July 2018

Location: Buttington Quarry

TABLE 86

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 5 - York House**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	56.7	60.9	45.5	67.9	
07:15	15:00	56.5	60.5	45.5	67.5	
07:30	15:00	58.9	61.6	48.2	82.0	
07:45	15:00	57.4	61.1	47.1	66.9	
08:00	15:00	57.4	61.2	47.4	68.4	
08:15	15:00	57.3	60.8	48.6	66.8	
08:30	15:00	57.2	60.8	46.8	68.1	
08:45	15:00	56.0	60.0	45.2	67.1	
09:00	15:00	55.7	59.4	44.7	67.5	
09:15	15:00	56.6	60.0	45.1	68.1	
09:30	15:00	55.9	59.7	43.1	71.2	
09:45	15:00	58.2	60.4	45.3	75.7	
10:00	15:00	57.0	60.3	46.7	67.0	
10:15	15:00	56.8	60.2	43.8	75.9	
10:30	15:00	57.9	61.1	47.3	70.1	
10:45	15:00	57.2	60.5	46.0	70.0	
11:00	15:00	58.0	61.1	45.8	71.8	
11:15	15:00	57.2	60.3	47.6	71.4	
11:30	15:00	57.3	60.3	46.9	72.3	
11:45	15:00	57.6	60.5	48.5	68.8	
12:00	15:00	57.7	60.8	49.6	67.1	
12:15	15:00	56.5	59.9	46.7	67.7	
12:30	15:00	56.6	60.0	47.4	70.8	
12:45	15:00	56.4	59.9	45.2	67.6	
13:00	15:00	57.5	60.8	47.9	67.9	
13:15	15:00	56.9	60.6	45.4	68.3	
13:30	15:00	57.6	60.9	48.7	67.5	
13:45	15:00	58.9	61.8	47.6	72.1	
14:00	15:00	58.6	61.8	48.7	72.4	
14:15	15:00	57.4	60.9	46.6	66.9	
14:30	15:00	57.3	60.8	46.9	69.5	
14:45	15:00	58.7	61.5	48.3	70.0	
Average 0700-1500		57.3	60.6	46.7	67-82	

## Noise Survey Results

Date: Monday 23rd July 2018

TABLE 87

Location: Buttington Quarry

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 5 - York House**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	59.4	61.9	50.5	75.0	
15:15	15:00	56.7	60.5	45.6	65.7	
15:30	15:00	58.1	60.9	49.5	71.4	
15:45	15:00	58.1	61.4	45.9	69.0	
16:00	15:00	58.3	61.6	49.4	70.8	
16:15	15:00	56.5	60.2	46.3	66.1	
16:30	15:00	57.0	60.4	47.0	66.7	
16:45	15:00	56.7	60.1	46.6	70.6	
17:00	15:00	57.2	60.4	48.1	66.3	
17:15	15:00	57.1	60.5	47.7	71.9	
17:30	15:00	57.0	60.2	49.3	66.0	
17:45	15:00	57.2	60.4	47.0	67.1	
18:00	15:00	57.5	60.9	44.0	74.6	
18:15	15:00	57.1	60.7	47.5	66.6	
18:30	15:00	56.6	60.4	47.2	68.3	
18:45	15:00	55.5	59.4	45.4	68.8	
19:00	15:00	56.5	60.3	46.8	69.1	
19:15	15:00	56.9	60.8	46.9	67.7	
19:30	15:00	54.8	59.2	42.9	67.2	
19:45	15:00	55.6	59.6	45.2	66.9	
20:00	15:00	55.8	60.3	42.7	68.3	
20:15	15:00	55.0	59.5	43.3	68.5	
20:30	15:00	54.7	59.2	40.4	68.7	
20:45	15:00	52.6	57.4	38.5	64.6	
21:00	15:00	53.2	57.5	38.2	68.0	
21:15	15:00	53.0	56.8	41.0	70.2	
21:30	15:00	52.0	56.6	39.7	64.0	
21:45	15:00	51.6	56.0	36.8	67.6	
22:00	15:00	52.8	57.3	38.1	68.1	
22:15	15:00	51.4	54.8	34.9	69.4	
22:30	15:00	50.7	54.2	33.0	67.9	
22:45	15:00	47.1	49.6	29.7	64.8	
Average 1500-2300		55.9	59.0	43.6	64.75	

## Noise Survey Results

Date: Monday 23rd - Tuesday 24th July 2018

Site: Buttington Quarry

TABLE 88

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 5 - York House**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	49.3	52.7	33.5	66.2	
23:15	15:00	48.1	51.9	29.0	65.2	
23:30	15:00	48.0	51.1	29.4	65.3	
23:45	15:00	44.9	47.8	31.7	62.9	
00:00	15:00	46.9	49.3	30.0	66.6	
00:15	15:00	44.2	46.5	29.2	62.1	
00:30	15:00	41.3	39.2	24.3	64.7	
00:45	15:00	45.3	44.4	26.4	65.5	
01:00	15:00	48.5	51.5	29.9	67.7	
01:15	15:00	44.7	42.3	29.0	64.9	
01:30	15:00	47.5	48.3	26.7	67.2	
01:45	15:00	44.2	42.1	26.8	64.2	
02:00	15:00	43.5	41.3	26.6	64.8	
02:15	15:00	43.2	42.0	28.7	65.2	
02:30	15:00	45.2	46.5	28.5	64.6	
02:45	15:00	44.8	44.9	28.0	67.1	
03:00	15:00	44.6	43.2	28.5	65.0	
03:15	15:00	47.2	49.3	29.2	65.5	
03:30	15:00	43.2	42.4	26.5	62.8	
03:45	15:00	47.4	48.2	28.1	67.7	
04:00	15:00	48.0	49.6	29.3	67.2	
04:15	15:00	50.5	53.8	31.9	66.6	
04:30	15:00	50.8	54.8	30.1	67.2	
04:45	15:00	50.8	53.2	36.6	67.9	
05:00	15:00	51.1	54.8	37.4	66.9	
05:15	15:00	53.2	57.3	41.2	68.0	
05:30	15:00	52.8	57.1	40.6	67.3	
05:45	15:00	53.3	57.3	41.3	72.2	
06:00	15:00	54.8	59.2	43.2	67.6	
06:15	15:00	54.9	59.6	42.5	67.4	
06:30	15:00	54.5	59.2	42.7	66.0	
06:45	15:00	55.2	59.4	43.4	69.4	
Average 2300-0700		49.9	50.0	32.2	62-72	
Average 0700-2300		56.7	59.8	45.1	64-82	

## Noise Survey Results

Date: Tuesday 24th July 2018

Location: Buttington Quarry

TABLE 89

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 5 - York House**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	56.6	60.6	45.7	68.6	
07:15	15:00	57.0	60.8	43.3	72.1	
07:30	15:00	57.3	60.9	46.6	73.8	
07:45	15:00	56.8	60.4	45.8	67.0	
08:00	15:00	56.7	60.4	45.9	67.5	
08:15	15:00	56.8	60.4	47.0	68.6	
08:30	15:00	56.8	60.3	46.2	66.6	
08:45	15:00	57.4	60.7	47.6	76.3	
09:00	15:00	57.0	60.5	46.8	66.7	
09:15	15:00	56.6	60.3	46.3	67.1	
09:30	15:00	56.1	59.6	45.6	72.2	
09:45	15:00	56.5	60.0	46.7	72.0	
10:00	15:00	57.2	60.3	46.0	73.8	
10:15	15:00	56.3	59.5	47.6	76.1	
10:30	15:00	55.9	59.6	45.7	66.1	
10:45	15:00	56.5	59.8	47.3	72.6	
11:00	15:00	56.3	59.5	47.0	67.9	
11:15	15:00	57.1	60.2	48.5	71.8	
11:30	15:00	57.5	61.3	47.0	66.5	
11:45	15:00	56.6	60.0	46.5	66.6	
12:00	15:00	56.1	59.8	41.8	73.4	
12:15	15:00	57.8	61.2	48.8	68.9	
12:30	15:00	57.2	61.1	45.3	68.6	
12:45	15:00	57.1	60.9	46.1	67.5	
13:00	15:00	57.3	60.7	47.8	67.8	
13:15	15:00	58.8	61.9	46.1	73.3	
13:30	15:00	57.2	60.9	46.7	68.1	
13:45	15:00	57.6	61.4	45.1	70.5	
14:00	15:00	57.3	60.7	47.7	71.2	
14:15	15:00	57.9	61.2	48.1	72.1	
14:30	15:00	57.2	60.7	47.9	66.7	
14:45	15:00	58.1	61.4	46.5	77.6	
Average 0700-1500		57.0	60.5	46.5	66-78	



## Noise Survey Results

Date: Tuesday 24th July 2018

TABLE 90

Location: Buttington Quarry

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 5 - York House**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	56.4	60.3	45.7	66.9	
15:15	15:00	59.5	61.2	47.8	81.5	
15:30	15:00	56.9	60.6	47.2	75.5	
15:45	15:00	56.4	59.8	45.6	69.0	
16:00	15:00	56.0	59.4	45.9	68.9	
16:15	15:00	55.8	59.3	45.1	66.8	
16:30	15:00	56.8	60.1	48.5	65.3	
16:45	15:00	57.5	61.1	45.8	68.7	
17:00	15:00	58.4	61.3	48.9	72.1	
17:15	15:00	56.9	60.5	45.4	68.0	
17:30	15:00	57.1	60.5	46.7	65.8	
17:45	15:00	57.2	60.3	47.3	68.9	
18:00	15:00	57.2	60.5	47.2	70.6	
18:15	15:00	56.4	60.0	45.6	68.7	
18:30	15:00	55.2	59.5	40.1	65.0	
18:45	15:00	54.6	58.9	40.8	66.2	
19:00	15:00	55.7	60.0	42.1	67.8	
19:15	15:00	54.8	58.8	42.9	67.0	
19:30	15:00	54.0	58.6	40.5	67.2	
19:45	15:00	54.2	58.9	40.0	69.2	
20:00	15:00	54.6	59.0	40.6	68.3	
20:15	15:00	54.2	58.8	40.6	66.8	
20:30	15:00	53.1	57.9	38.5	66.0	
20:45	15:00	53.6	58.3	40.6	70.3	
21:00	15:00	53.5	57.9	39.6	68.6	
21:15	15:00	52.0	56.4	39.5	69.0	
21:30	15:00	51.6	56.0	38.3	67.9	
21:45	15:00	53.1	57.5	35.6	70.6	
22:00	15:00	51.8	56.6	34.7	67.1	
22:15	15:00	52.5	57.2	37.0	65.4	
22:30	15:00	50.8	55.0	32.7	67.8	
22:45	15:00	50.1	54.1	28.5	66.5	
Average 1500-2300		55.4	58.9	42.0	65-82	

## Noise Survey Results

Date: Tuesday 24th - Wednesday 25th July 2018

Site: Buttington Quarry

TABLE 91

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 5 - York House**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	50.7	54.8	30.9	69.8	
23:15	15:00	48.3	51.9	28.4	65.4	
23:30	15:00	48.1	52.3	26.7	65.0	
23:45	15:00	48.7	51.8	32.4	67.2	
00:00	15:00	48.5	51.1	29.1	66.6	
00:15	15:00	46.7	49.4	27.1	65.9	
00:30	15:00	45.6	48.0	26.4	65.6	
00:45	15:00	46.6	45.1	25.6	66.6	
01:00	15:00	47.6	51.2	27.1	67.0	
01:15	15:00	47.3	48.0	24.2	67.6	
01:30	15:00	41.8	41.2	24.7	66.0	
01:45	15:00	46.0	45.7	26.9	68.5	
02:00	15:00	40.6	39.0	25.6	62.6	
02:15	15:00	41.4	39.0	25.1	66.8	
02:30	15:00	40.2	37.0	24.2	63.5	
02:45	15:00	44.3	44.2	27.3	67.4	
03:00	15:00	44.7	46.2	30.4	63.6	
03:15	15:00	43.4	42.9	27.4	65.4	
03:30	15:00	46.4	45.8	28.7	69.3	
03:45	15:00	45.8	48.9	29.0	64.2	
04:00	15:00	51.0	53.9	30.7	67.0	
04:15	15:00	51.3	54.6	34.9	68.0	
04:30	15:00	51.3	55.2	35.6	67.8	
04:45	15:00	52.1	55.9	39.0	67.9	
05:00	15:00	52.2	56.3	39.3	68.0	
05:15	15:00	53.1	57.4	40.0	70.6	
05:30	15:00	54.0	58.0	41.1	67.2	
05:45	15:00	53.6	58.2	40.7	66.9	
06:00	15:00	53.7	57.7	42.6	68.6	
06:15	15:00	55.0	59.3	44.5	68.3	
06:30	15:00	55.5	59.9	44.6	67.9	
06:45	15:00	56.3	60.6	46.1	67.2	
Average 2300-0700		50.5	50.6	32.1	63-71	
Average 0700-2300		56.3	59.7	44.2	65-82	

## Noise Survey Results

Date: Wednesday 25th July 2018

Location: Buttington Quarry

TABLE 92

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 5 - York House**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	56.8	60.9	45.0	68.2	
07:15	15:00	56.6	60.7	46.0	67.1	
07:30	15:00	56.6	60.7	45.1	67.6	
07:45	15:00	57.8	61.4	44.5	74.2	
08:00	15:00	54.7	59.0	40.7	66.0	
08:15	15:00	56.2	59.6	45.3	72.7	
08:30	15:00	54.3	58.6	39.6	66.5	
08:45	15:00	57.9	61.3	41.4	67.9	
09:00	15:00	56.2	60.3	40.8	68.4	
09:15	15:00	56.5	60.4	42.3	67.6	
09:30	15:00	56.2	60.0	42.0	69.9	
09:45	15:00	56.1	60.1	41.3	67.7	
10:00	15:00	56.5	60.1	42.5	67.7	
10:15	15:00	56.0	59.6	44.4	66.9	
10:30	15:00	55.3	59.3	43.2	68.3	
10:45	15:00	56.1	59.8	41.1	68.1	
11:00	15:00	55.9	59.6	41.1	67.7	
11:15	15:00	55.7	59.3	39.8	67.2	
11:30	15:00	55.6	59.2	36.8	67.9	
11:45	15:00	55.2	58.8	43.8	66.4	
12:00	15:00	54.5	58.4	37.6	64.7	
12:15	15:00	54.6	58.4	39.0	66.7	
12:30	15:00	53.6	57.6	35.8	66.5	
12:45	15:00	53.7	57.5	38.7	65.6	
13:00	15:00	53.4	57.2	40.5	64.9	
13:15	15:00	53.0	56.8	37.0	62.9	
13:30	15:00	53.0	56.8	40.4	64.1	
13:45	15:00	53.5	57.3	37.9	64.6	
14:00	15:00	52.9	56.8	35.4	63.9	
14:15	15:00	53.6	57.4	38.2	65.6	
14:30	15:00	53.9	57.5	37.9	66.5	
14:45	15:00	53.2	57.1	35.4	64.0	
Average 0700-1500		55.3	59.0	40.6	63-74	

## Noise Survey Results

Date: Wednesday 25th July 2018

TABLE 93

Location: Buttington Quarry

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 5 - York House**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
15:00	15:00	55.1	58.8	38.2	70.1	
15:15	15:00	53.2	57.2	36.9	64.1	
15:30	15:00	54.1	57.8	39.4	70.2	
15:45	15:00	53.7	57.4	37.9	66.0	
16:00	15:00	54.5	57.9	36.4	64.7	
16:15	15:00	53.6	57.5	35.5	71.2	
16:30	15:00	54.0	57.8	36.1	71.4	
16:45	15:00	54.3	57.9	39.6	66.6	
17:00	15:00	55.6	58.8	45.4	71.2	
17:15	15:00	57.7	58.8	41.3	81.9	
17:30	15:00	54.7	58.5	38.9	64.6	
17:45	15:00	54.4	58.2	41.0	65.8	
18:00	15:00	54.4	58.4	39.0	66.3	
18:15	15:00	54.3	58.2	38.4	65.8	
18:30	15:00	53.6	57.6	37.2	64.3	
18:45	15:00	53.7	58.0	36.7	63.9	
19:00	15:00	54.1	58.2	36.8	64.4	
19:15	15:00	52.8	57.2	33.9	64.3	
19:30	15:00	51.9	56.7	32.5	67.2	
19:45	15:00	52.1	56.7	30.1	64.6	
20:00	15:00	53.8	57.3	33.2	76.8	
20:15	15:00	52.6	56.8	35.6	73.3	
20:30	15:00	51.6	56.3	37.5	65.1	
20:45	15:00	51.7	56.5	37.9	64.4	
21:00	15:00	51.0	55.7	37.4	64.4	
21:15	15:00	51.8	56.4	37.5	67.1	
21:30	15:00	50.9	56.0	35.7	64.3	
21:45	15:00	51.1	55.9	37.4	64.3	
22:00	15:00	50.7	55.6	34.3	65.8	
22:15	15:00	49.7	54.8	33.5	63.2	
22:30	15:00	49.8	53.6	31.1	68.9	
22:45	15:00	48.9	53.4	31.0	66.5	
Average 1500-2300		53.3	57.1	36.7	63-82	

## Noise Survey Results

Date: Wednesday 25th- Thursday 26th July 2018

Site: Buttington Quarry

TABLE 94

Client: ECL

Project: Buttington Quarry ERF

Data: **Baseline Sound Survey: Position 5 - York House**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
23:00	15:00	48.7	53.3	28.6	64.7	
23:15	15:00	47.8	52.0	31.1	63.8	
23:30	15:00	48.2	52.2	27.4	64.8	
23:45	15:00	46.5	49.8	25.7	63.7	
00:00	15:00	44.6	47.9	27.9	63.2	
00:15	15:00	42.1	40.8	23.3	66.7	
00:30	15:00	45.8	47.2	23.4	63.8	
00:45	15:00	43.9	43.7	24.6	65.2	
01:00	15:00	46.0	48.4	22.9	64.2	
01:15	15:00	47.2	48.7	24.0	66.7	
01:30	15:00	44.2	44.5	23.9	64.3	
01:45	15:00	41.7	41.2	24.7	63.5	
02:00	15:00	41.5	36.7	22.3	65.2	
02:15	15:00	44.0	42.2	21.6	64.3	
02:30	15:00	44.2	42.4	22.8	64.8	
02:45	15:00	41.6	39.7	24.3	62.8	
03:00	15:00	39.1	36.8	25.0	63.3	
03:15	15:00	44.5	44.5	24.8	65.9	
03:30	15:00	44.8	44.9	26.1	63.6	
03:45	15:00	46.2	46.8	26.5	65.9	
04:00	15:00	50.3	54.3	29.9	66.2	
04:15	15:00	49.5	53.3	33.0	66.2	
04:30	15:00	49.8	54.0	31.6	65.5	
04:45	15:00	47.1	49.6	33.0	66.5	
05:00	15:00	50.3	54.6	36.8	65.2	
05:15	15:00	50.9	54.8	39.1	66.7	
05:30	15:00	52.4	56.7	41.0	68.4	
05:45	15:00	51.8	56.2	41.4	65.0	
06:00	15:00	52.7	57.0	41.8	64.8	
06:15	15:00	54.0	58.3	44.2	67.7	
06:30	15:00	53.7	58.1	43.5	67.4	
06:45	15:00	54.0	58.3	44.5	67.1	
Average 2300-0700		48.9	49.0	30.0	63-68	
Average 0700-2300		54.5	58	38.6	63-82	

## Noise Survey Results

Date: Thursday 26th July 2018

Location: Buttington Quarry

TABLE 95

Client: ECL

Project: Buttington Quarry ERF

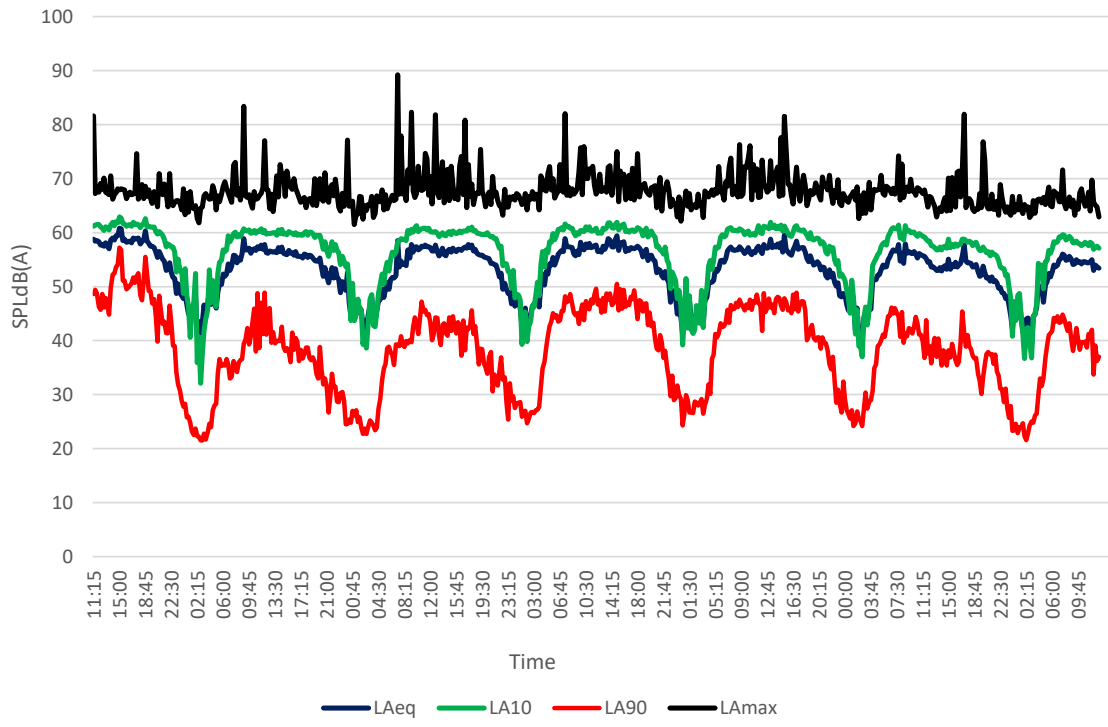
Data: **Baseline Sound Survey: Position 5 - York House**

Instrumentation: Cirrus 171A Real Time Analyser (G061253)

Calibration: 94dB

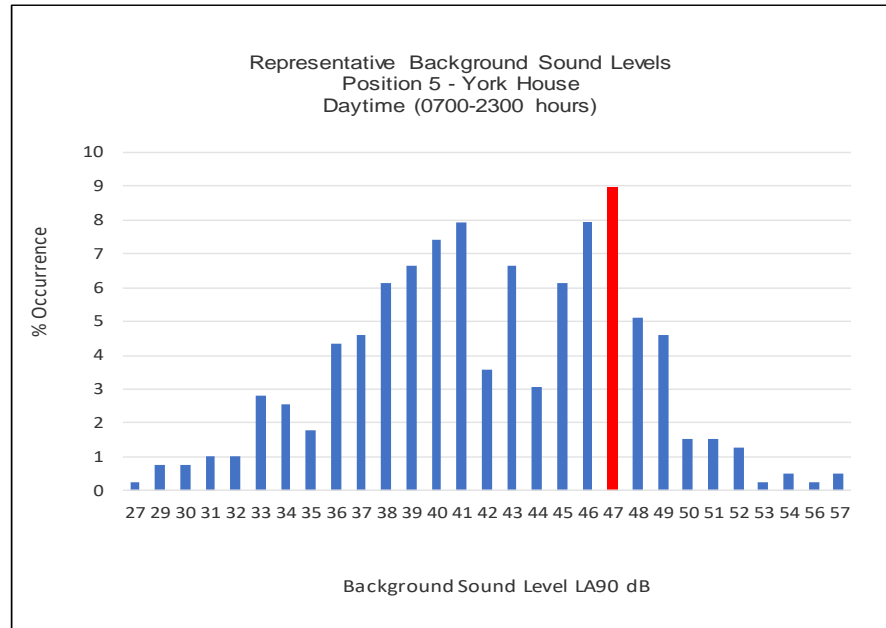
Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmx (dB)	Observations
07:00	15:00	55.0	59.2	43.3	65.7	
07:15	15:00	55.2	59.1	43.4	65.7	
07:30	15:00	56.0	59.6	44.8	71.6	
07:45	15:00	55.8	59.5	44.0	65.4	
08:00	15:00	54.9	58.6	42.8	64.4	
08:15	15:00	55.0	58.9	41.8	65.4	
08:30	15:00	55.6	59.3	43.2	66.6	
08:45	15:00	55.1	58.9	40.2	64.8	
09:00	15:00	54.1	58.1	38.1	66.0	
09:15	15:00	54.2	58.1	40.0	63.2	
09:30	15:00	55.0	58.4	42.3	65.4	
09:45	15:00	54.5	58.0	40.2	64.3	
10:00	15:00	54.6	57.9	38.3	67.4	
10:15	15:00	54.2	57.6	39.7	68.1	
10:30	15:00	54.6	57.8	39.6	66.2	
10:45	15:00	54.6	58.2	39.8	64.9	
11:00	15:00	54.4	57.9	38.7	65.4	
11:15	15:00	54.4	57.6	41.2	67.5	
11:30	15:00	54.6	58.2	41.0	64.0	
11:45	15:00	55.0	58.0	42.0	69.7	
12:00	15:00	53.0	56.9	33.7	65.6	
12:15	15:00	54.0	57.3	39.1	65.1	
12:30	15:00	53.7	57.5	36.2	64.8	
12:45	15:00	53.4	57.1	37.0	62.9	
Average 0700-1300		54.6	58.2	40.4	63-72	
<b>Overall Average</b>		<b>49.6</b>	<b>49.8</b>	<b>30.5</b>	<b>62-77</b>	
<b>Overall Average</b>		<b>56.1</b>	<b>59.4</b>	<b>42</b>	<b>63-89</b>	

Background Sound Survey: Position 5- York House  
Friday 20th - Thursday 26th July 2018

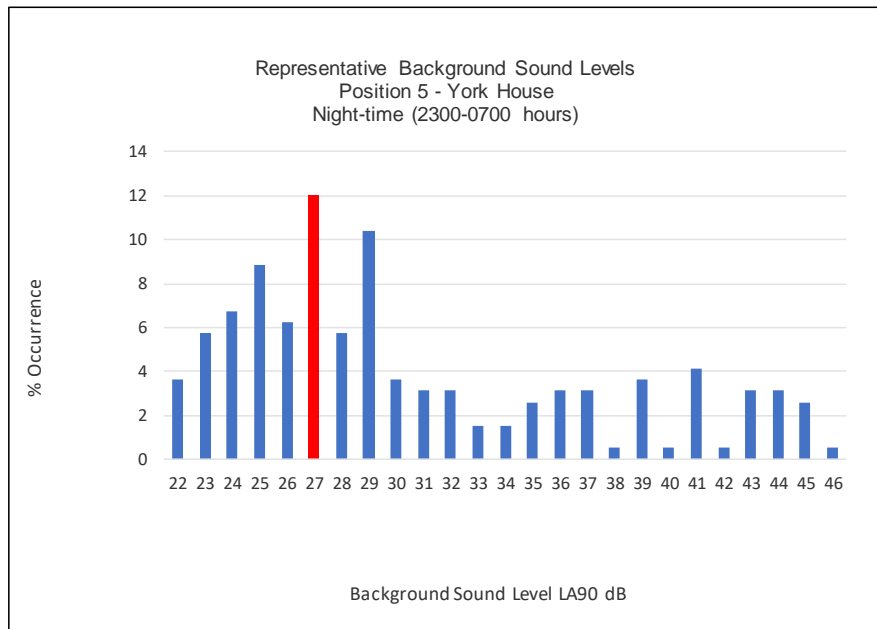


### LA90 Representative Levels

LA90	% Occurrence
27	0.3
29	0.8
30	0.8
31	1.0
32	1.0
33	2.8
34	2.6
35	1.8
36	4.3
37	4.6
38	6.1
39	6.6
40	7.4
41	7.9
<b>42</b>	<b>3.6</b>
43	6.6
44	3.1
45	6.1
<b>46</b>	<b>7.9</b>
47	9.0
48	5.1
49	4.6
50	1.5
51	1.5
52	1.3
53	0.3
54	0.5
56	0.3
57	0.5



LA90	% Occurrence
22	3.6
23	5.7
24	6.8
25	8.9
26	6.3
<b>27</b>	<b>12.0</b>
28	5.7
29	10.4
30	3.6
31	3.1
32	3.1
33	1.6
34	1.6
35	2.6
36	3.1
37	3.1
38	0.5
39	3.6
40	0.5
41	4.2
42	0.5
43	3.1
44	3.1
45	2.6
46	0.5





# Meteorological Conditions

Weather conditions were recorded during the baseline survey are detailed on the following pages: The climatic conditions suitable for monitoring environmental noise levels were used from the data in accordance with advice given in BS4142: 2014. Any unsuitable monitoring periods were removed from the data set (i.e. high winds or rain or temperatures below zero).

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Wind Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
20/07/18	9:30	20.3	20.4	20.2	41	6.6	0.0	---	0.00	0.0	---	20.3	19.1	19.1	761.9	0.00	0.0	0.000	0.007	18.2	55	9.0	17.6
20/07/18	9:35	20.6	20.7	20.4	42	7.2	0.0	---	0.00	0.0	---	20.6	19.3	19.3	760.1	0.00	0.0	0.000	0.008	18.3	55	9.1	17.7
20/07/18	9:40	20.7	20.8	20.6	46	8.7	0.0	SSE	0.00	1.8	S	20.7	19.7	19.7	759.8	0.00	0.0	0.000	0.008	18.5	55	9.3	17.8
20/07/18	9:45	20.3	20.6	19.9	46	8.3	0.0	---	0.00	0.0	---	20.3	19.3	19.3	759.9	0.00	0.0	0.000	0.007	18.6	55	9.4	17.9
20/07/18	9:50	19.8	19.9	19.7	49	8.8	0.9	SE	0.27	2.7	S	19.8	19.1	19.1	760.1	0.00	0.0	0.000	0.005	18.8	55	9.5	18.2
20/07/18	9:55	19.7	19.7	19.7	51	9.2	0.4	SE	0.13	1.8	ESE	19.7	18.9	18.9	760.1	0.00	0.0	0.000	0.005	18.9	56	10.0	18.4
20/07/18	10:00	19.8	19.8	19.7	51	9.3	0.4	SSW	0.13	2.2	SSW	19.8	19.1	19.1	759.9	0.00	0.0	0.000	0.005	19.7	55	10.4	19.2
20/07/18	10:05	19.8	19.9	19.8	52	9.6	0.4	SSW	0.13	2.2	S	19.8	19.2	19.2	760.0	0.00	0.0	0.000	0.005	20.8	54	11.2	20.2
20/07/18	10:10	20.1	20.3	19.9	53	10.2	0.4	MSW	0.13	2.2	SSW	20.1	19.5	19.5	760.4	0.00	0.0	0.000	0.006	21.2	54	11.5	20.4
20/07/18	10:15	20.6	20.8	20.3	47	8.9	0.4	SSE	0.13	1.8	W	20.6	19.7	19.7	759.9	0.00	0.0	0.000	0.008	21.3	54	11.6	20.6
20/07/18	10:20	20.9	21.0	20.9	48	9.5	0.4	SSW	0.13	1.8	WSW	20.9	19.9	19.9	759.9	0.00	0.0	0.000	0.009	21.5	54	11.8	20.8
20/07/18	10:25	21.1	21.2	21.1	48	9.6	0.4	SW	0.13	2.2	SW	21.1	20.0	20.0	759.8	0.00	0.0	0.000	0.009	21.7	54	12.0	21.1
20/07/18	10:30	21.2	21.3	21.2	46	9.1	0.4	MSW	0.13	2.2	S	21.2	20.1	20.1	759.8	0.00	0.0	0.000	0.010	21.8	54	12.1	21.3
20/07/18	10:35	21.6	21.7	21.3	44	8.8	0.9	S	0.27	2.7	SE	21.6	20.4	20.4	759.9	0.00	0.0	0.000	0.011	22.0	54	12.3	21.6
20/07/18	10:40	21.8	21.8	21.6	44	9.0	0.4	S	0.13	1.3	SSW	21.8	20.7	20.7	759.7	0.00	0.0	0.000	0.012	22.3	54	12.5	22.0
20/07/18	10:45	21.9	21.9	21.8	43	8.7	0.4	S	0.13	1.8	SW	21.9	20.8	20.8	759.6	0.00	0.0	0.000	0.012	22.5	54	12.7	22.3
20/07/18	10:50	21.8	21.8	21.8	44	9.0	0.4	SSW	0.13	2.2	SE	21.8	20.8	20.8	759.7	0.00	0.0	0.000	0.012	22.8	54	13.0	22.7
20/07/18	10:55	21.8	21.8	21.7	44	9.0	0.4	SW	0.13	1.8	SE	21.8	20.8	20.8	759.6	0.00	0.0	0.000	0.012	23.1	54	13.2	23.1
20/07/18	11:00	21.9	21.9	21.8	46	9.7	0.4	SSW	0.13	1.8	SSE	21.9	21.0	21.0	759.6	0.00	0.0	0.000	0.012	23.3	54	13.5	23.4
20/07/18	11:05	22.0	22.0	21.9	42	8.5	0.0	SW	0.00	1.3	SSW	22.0	20.9	20.9	759.7	0.00	0.0	0.000	0.013	23.6	53	13.4	23.6
20/07/18	11:10	21.9	22.0	21.8	44	9.1	0.4	SSE	0.13	1.8	SSE	21.9	20.9	20.9	759.6	0.00	0.0	0.000	0.012	23.8	53	13.6	23.9
20/07/18	11:15	21.7	21.8	21.7	47	9.9	0.4	S	0.13	1.3	SSW	21.7	20.8	20.8	759.7	0.00	0.0	0.000	0.012	23.9	53	13.8	24.1
20/07/18	11:20	21.6	21.6	21.4	46	9.5	0.0	SSW	0.00	0.9	SSW	21.6	20.6	20.6	759.6	0.00	0.0	0.000	0.011	24.2	52	13.7	24.3
20/07/18	11:25	21.4	21.4	21.3	48	9.9	0.0	SSW	0.00	0.9	SSW	21.4	20.4	20.4	759.5	0.00	0.0	0.000	0.011	24.3	52	13.8	24.4
20/07/18	11:30	21.3	21.3	21.3	54	11.6	0.0	SSW	0.00	1.3	WSW	21.3	20.6	20.6	759.5	0.00	0.0	0.000	0.010	24.3	52	13.8	24.4
20/07/18	11:35	21.2	21.3	21.1	56	12.1	0.4	SW	0.13	1.3	SW	21.2	20.6	20.6	759.6	0.00	0.0	0.000	0.010	24.4	51	13.6	24.4
20/07/18	11:40	20.9	21.1	20.9	60	12.9	0.0	SW	0.00	0.4	SW	20.9	20.6	20.6	759.5	0.00	0.0	0.000	0.009	24.4	51	13.6	24.4
20/07/18	11:45	20.8	20.9	20.6	58	12.2	0.4	SW	0.13	2.7	NW	20.8	20.3	20.3	759.7	0.00	0.0	0.000	0.008	24.3	50	13.2	24.3
20/07/18	11:50	20.4	20.6	20.2	58	11.8	0.4	SW	0.13	2.2	SW	20.4	20.0	20.0	759.7	0.00	0.0	0.000	0.007	24.3	50	13.2	24.3
20/07/18	11:55	20.0	20.2	19.9	60	12.0	0.4	SW	0.13	1.8	NW	20.0	19.8	19.8	759.7	0.00	0.0	0.000	0.006	24.2	50	13.1	24.2
20/07/18	12:00	19.7	19.7	19.7	60	11.7	0.4	SW	0.13	1.3	NW	19.7	19.5	19.5	759.7	0.00	0.0	0.000	0.005	24.2	50	13.1	24.2

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Wind Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
20/07/18	12:05	19.6	19.7	19.5	60	11.6	0.0	SSW	0.00	1.8	SSW	19.6	19.4	19.4	759.7	0.00	0.0	0.000	0.004	24.1	50	13.0	24.2
20/07/18	12:10	19.5	19.5	19.5	60	11.5	0.4	SW	0.13	1.8	SW	19.5	19.2	19.2	759.7	0.00	0.0	0.000	0.004	24.1	50	13.0	24.1
20/07/18	12:15	19.5	19.5	19.5	59	11.3	0.0	W	0.00	1.8	W	19.5	19.2	19.2	759.8	0.00	0.0	0.000	0.004	24.0	50	12.9	24.1
20/07/18	12:20	19.6	19.7	19.5	62	12.1	0.4	SW	0.13	1.8	WSW	19.6	19.5	19.5	759.8	0.00	0.0	0.000	0.004	24.0	50	12.9	24.1
20/07/18	12:25	19.8	19.8	19.8	59	11.5	0.4	W	0.13	1.8	WSW	19.8	19.5	19.5	759.7	0.00	0.0	0.000	0.005	24.0	50	12.9	24.1
20/07/18	12:30	19.9	19.9	19.8	59	11.6	0.4	W	0.13	3.1	W	19.9	19.7	19.7	759.7	0.00	0.0	0.000	0.005	24.0	50	12.9	24.1
20/07/18	12:35	19.9	19.9	19.9	61	12.1	0.4	WNW	0.13	1.8	WNW	19.9	19.8	19.8	759.7	0.00	0.0	0.000	0.005	24.0	50	12.9	24.1
20/07/18	12:40	19.8	19.9	19.8	59	11.6	0.0	NNW	0.00	0.9	NNW	19.8	19.6	19.6	759.6	0.00	0.0	0.000	0.005	24.0	50	12.9	24.1
20/07/18	12:45	19.7	19.8	19.7	62	12.2	0.0	NNW	0.00	0.4	NNW	19.7	19.6	19.6	759.7	0.00	0.0	0.000	0.005	24.0	50	12.9	24.1
20/07/18	12:50	19.7	19.8	19.6	61	11.9	0.4	NNE	0.13	2.2	NNW	19.7	19.5	19.5	759.7	0.00	0.0	0.000	0.005	24.0	50	12.9	24.1
20/07/18	12:55	19.6	19.6	19.5	61	11.9	0.4	W	0.13	2.2	NNW	19.6	19.4	19.4	759.7	0.00	0.0	0.000	0.004	24.0	50	12.9	24.1
20/07/18	13:00	19.3	19.5	19.2	60	11.4	0.4	WNW	0.13	3.1	W	19.3	19.1	19.1	759.7	0.00	0.0	0.000	0.003	23.9	50	12.8	23.9
20/07/18	13:05	19.1	19.1	18.9	63	11.8	0.0	S	0.00	0.9	SSW	19.1	18.9	18.9	759.6	0.00	0.0	0.000	0.003	23.9	50	12.8	23.9
20/07/18	13:10	18.7	18.9	18.6	66	12.2	0.4	SW	0.13	2.2	SW	18.7	18.6	18.6	759.6	0.00	0.0	0.000	0.001	23.8	50	12.8	23.9
20/07/18	13:15	18.5	18.6	18.4	68	12.5	0.4	SSW	0.13	2.2	SSW	18.5	18.4	18.4	759.5	0.00	0.0	0.000	0.001	23.7	49	12.4	23.7
20/07/18	13:20	18.3	18.4	18.2	68	12.3	0.0	SW	0.00	1.3	SW	18.3	18.2	18.2	759.5	0.00	0.0	0.000	0.000	23.7	49	12.3	23.6
20/07/18	13:25	18.2	18.2	18.2	69	12.4	0.4	SW	0.13	1.8	SSW	18.2	18.2	18.2	759.6	0.00	0.0	0.000	0.000	23.6	49	12.3	23.5
20/07/18	13:30	18.2	18.2	18.1	69	12.4	0.0	WSW	0.00	1.3	WSW	18.2	18.1	18.1	759.5	0.00	0.0	0.001	0.000	23.5	49	12.2	23.4
20/07/18	13:35	18.2	18.2	18.1	68	12.2	0.0	S	0.00	0.9	SSE	18.2	18.1	18.1	759.6	0.00	0.0	0.001	0.000	23.4	49	12.1	23.3
20/07/18	13:40	18.2	18.2	18.2	67	11.9	0.4	SW	0.13	1.8	WNW	18.2	18.1	18.1	759.5	0.00	0.0	0.001	0.000	23.4	49	12.1	23.3
20/07/18	13:45	18.3	18.3	18.2	68	12.3	0.4	WSW	0.13	1.8	SW	18.3	18.3	18.3	759.5	0.00	0.0	0.000	0.000	23.3	49	12.0	23.1
20/07/18	13:50	18.3	18.3	18.2	68	12.3	0.4	W	0.13	3.1	WSW	18.3	18.3	18.3	759.5	0.00	0.0	0.000	0.000	23.3	49	12.0	23.1
20/07/18	13:55	18.1	18.2	17.8	71	12.7	0.9	WNW	0.27	3.1	N	18.1	18.1	18.1	759.5	0.00	0.0	0.001	0.000	23.2	49	11.9	23.0
20/07/18	14:00	17.6	17.8	17.3	72	12.5	0.4	WNW	0.13	1.8	WNW	17.6	17.6	17.6	7								

WeatherLink 5.9.2 07/08/18 14:35: Deans

File Setup Reports Browse Window Help

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Wind Chill	Heat Index	THW	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
20/07/18	14:40	15.6	15.7	15.4	80	12.1	0.4	SW	0.13	3.1	SW	15.6	15.5	15.5	759.7	0.00	1.0	0.010	0.000	21.2	48	9.7	20.1
20/07/18	14:45	15.3	15.4	15.3	80	11.9	0.4	SW	0.13	1.3	SSE	15.3	15.3	15.3	759.6	0.25	1.0	0.010	0.000	20.9	48	9.5	19.9
20/07/18	14:50	15.1	15.2	15.0	80	11.7	0.4	WSW	0.13	1.3	S	15.1	15.0	15.0	759.7	0.25	1.8	0.011	0.000	20.7	48	9.3	19.7
20/07/18	14:55	14.9	15.0	14.9	81	11.7	0.0	SSW	0.00	1.3	SSW	14.9	14.8	14.8	759.7	0.00	1.8	0.012	0.000	20.4	48	9.1	19.6
20/07/18	15:00	14.8	14.8	14.8	82	11.8	0.0	SSW	0.00	0.4	SSW	14.8	14.8	14.8	759.7	0.51	4.1	0.012	0.000	20.2	48	8.8	19.3
20/07/18	15:05	14.8	14.8	14.8	83	11.9	0.0	SSW	0.00	0.4	SSW	14.8	14.7	14.7	759.6	0.25	5.1	0.012	0.000	19.9	48	8.6	19.1
20/07/18	15:10	14.7	14.8	14.7	83	11.9	0.0	SSW	0.00	0.4	SSW	14.7	14.7	14.7	759.5	0.51	6.1	0.013	0.000	19.7	48	8.4	18.8
20/07/18	15:15	14.7	14.7	14.7	84	12.0	0.0	---	0.00	0.0	---	14.7	14.6	14.6	759.5	0.51	5.8	0.013	0.000	19.5	48	8.2	18.6
20/07/18	15:20	14.7	14.7	14.7	85	12.2	0.0	---	0.00	0.0	---	14.7	14.6	14.6	759.5	0.00	2.8	0.013	0.000	19.3	49	8.3	18.5
20/07/18	15:25	14.7	14.8	14.7	85	12.2	0.0	SSW	0.00	0.9	SSW	14.7	14.7	14.7	759.5	0.00	1.5	0.013	0.000	19.1	49	8.1	18.2
20/07/18	15:30	14.8	14.8	14.8	86	12.5	0.0	SSW	0.00	0.9	SSW	14.8	14.8	14.8	759.4	0.00	1.0	0.012	0.000	18.9	49	8.0	18.0
20/07/18	15:35	14.8	14.8	14.8	86	12.5	0.0	SSW	0.00	0.4	SSW	14.8	14.8	14.8	759.4	0.00	0.0	0.012	0.000	18.8	49	7.9	17.9
20/07/18	15:40	14.8	14.8	14.8	86	12.5	0.0	SSW	0.00	0.4	SSW	14.8	14.8	14.8	759.3	0.00	0.0	0.012	0.000	18.7	49	7.8	17.8
20/07/18	15:45	14.8	14.8	14.8	86	12.5	0.0	SSW	0.00	0.4	SSW	14.8	14.8	14.8	759.5	0.00	0.0	0.012	0.000	18.6	49	7.6	17.6
20/07/18	15:50	14.8	14.8	14.8	86	12.5	0.0	SSW	0.00	0.9	SSW	14.8	14.8	14.8	759.4	0.00	0.0	0.012	0.000	18.5	49	7.6	17.5
20/07/18	15:55	14.8	14.9	14.8	86	12.5	0.0	SW	0.00	0.9	SW	14.8	14.8	14.8	759.4	0.00	0.0	0.012	0.000	18.4	49	7.5	17.4
20/07/18	16:00	14.9	15.0	14.9	86	12.6	0.0	SW	0.00	1.3	SW	14.9	14.9	14.9	759.4	0.00	0.0	0.012	0.000	18.3	49	7.4	17.3
20/07/18	16:05	15.1	15.2	15.0	87	13.0	0.0	SW	0.00	0.9	SW	15.1	15.2	15.2	759.4	0.25	0.0	0.011	0.000	18.2	50	7.6	17.3
20/07/18	16:10	15.3	15.3	15.2	87	13.1	0.0	SW	0.00	1.3	SW	15.3	15.3	15.3	759.3	0.00	0.0	0.011	0.000	18.1	50	7.5	17.2
20/07/18	16:15	15.4	15.5	15.3	87	13.2	0.4	WSW	0.13	1.8	SW	15.4	15.5	15.5	759.4	0.00	0.0	0.010	0.000	18.1	50	7.5	17.2
20/07/18	16:20	15.6	15.7	15.5	87	13.5	0.0	WSW	0.00	1.8	WSW	15.6	15.7	15.7	759.4	0.00	0.0	0.009	0.000	18.1	50	7.5	17.2
20/07/18	16:25	15.8	15.8	15.7	87	13.6	0.0	SSW	0.00	1.3	SSW	15.8	15.9	15.9	759.4	0.00	0.0	0.009	0.000	18.1	50	7.5	17.2
20/07/18	16:30	15.8	15.8	15.8	86	13.5	0.4	WSW	0.13	1.3	SW	15.8	15.9	15.9	759.2	0.00	0.0	0.009	0.000	18.2	50	7.6	17.2
20/07/18	16:35	15.9	15.9	15.8	86	13.5	0.0	S	0.00	0.4	S	15.9	16.0	16.0	759.2	0.00	0.0	0.008	0.000	18.2	51	7.9	17.3
20/07/18	16:40	16.0	16.1	15.9	86	13.7	0.4	WSW	0.13	1.8	WSW	16.0	16.1	16.1	759.2	0.00	0.0	0.008	0.000	18.3	51	8.0	17.4
20/07/18	16:45	16.1	16.1	16.1	85	13.6	0.4	SW	0.13	1.3	SW	16.1	16.2	16.2	759.2	0.00	0.0	0.008	0.000	18.4	51	8.1	17.5
20/07/18	16:50	16.1	16.1	16.1	84	13.4	0.0	SSW	0.00	1.8	SSE	16.1	16.2	16.2	759.1	0.00	0.0	0.008	0.000	18.4	51	8.1	17.5
20/07/18	16:55	16.0	16.1	15.9	84	13.3	0.4	SW	0.13	2.2	WSW	16.0	16.1	16.1	759.0	0.00	0.0	0.008	0.000	18.4	51	8.1	17.5
20/07/18	17:00	15.8	15.9	15.8	84	13.1	0.0	SW	0.00	1.3	SW	15.8	15.9	15.9	759.1	0.00	0.0	0.009	0.000	18.4	51	8.1	17.5
20/07/18	17:05	15.8	15.8	15.8	84	13.1	0.0	SW	0.00	0.4	SW	15.8	15.8	15.8	759.1	0.00	0.0	0.009	0.000	18.4	51	8.1	17.5
20/07/18	17:10	15.7	15.8	15.7	83	12.8	0.4	WSW	0.13	1.3	WSW	15.7	15.7	15.7	759.1	0.00	0.0	0.009	0.000	18.3	51	8.0	17.4

WeatherLink 5.9.2 07/08/18 14:35: Deans

File Setup Reports Browse Window Help

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Wind Chill	Heat Index	THW	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
20/07/18	17:15	15.6	15.7	15.6	84	12.9	0.0	WSW	0.00	1.3	WSW	15.6	15.7	15.7	759.1	0.00	0.0	0.009	0.000	18.3	51	8.0	17.4
20/07/18	17:20	15.6	15.6	15.6	84	12.9	0.0	WSW	0.00	0.4	WSW	15.6	15.7	15.7	759.0	0.00	0.0	0.009	0.000	18.2	51	7.9	17.3
20/07/18	17:25	15.6	15.6	15.6	84	12.9	0.0	WSW	0.00	0.4	WSW	15.6	15.7	15.7	759.0	0.00	0.0	0.009	0.000	18.1	51	7.8	17.2
20/07/18	17:30	15.6	15.6	15.6	84	12.9	0.0	SSW	0.00	1.8	SSW	15.6	15.7	15.7	759.0	0.00	0.0	0.009	0.000	18.1	51	7.8	17.1
20/07/18	17:35	15.6	15.6	15.6	84	12.9	0.0	SSW	0.00	0.9	SSW	15.6	15.7	15.7	759.1	0.00	0.0	0.009	0.000	18.0	51	7.7	17.1
20/07/18	17:40	15.6	15.6	15.6	84	12.9	0.0	SW	0.00	0.4	SW	15.6	15.7	15.7	759.0	0.00	0.0	0.009	0.000	17.9	51	7.7	17.0
20/07/18	17:45	15.6	15.7	15.6	84	12.9	0.0	---	0.00	0.0	---	15.6	15.7	15.7	759.0	0.00	0.0	0.009	0.000	17.8	51	7.6	16.9
20/07/18	17:50	15.7	15.7	15.6	83	12.8	0.0	SW	0.00	0.4	SW	15.7	15.7	15.7	759.0	0.00	0.0	0.009	0.000	17.8	51	7.6	16.9
20/07/18	17:55	15.7	15.7	15.6	84	13.0	0.0	SW	0.00	0.4	SW	15.7	15.7	15.7	759.1	0.00	0.0	0.009	0.000	17.8	51	7.5	16.8
20/07/18	18:00	15.7	15.7	15.7	84	13.0	0.0	---	0.00	0.9	SW	15.7	15.7	15.7	759.1	0.00	0.0	0.009	0.000	17.7	51	7.4	16.8
20/07/18	18:05	15.7	15.7	15.7	84	13.0	0.0	---	0.00	0.0	---	15.7	15.7	15.7	759.1	0.00	0.0	0.009	0.000	17.7	51	7.4	16.7
20/07/18	18:10	15.7	15.7	15.7	84	13.0	0.0	---	0.00	0.0	---	15.7	15.7	15.7	759.1	0.00	0.0	0.009	0.000	17.6	51	7.3	16.6
20/07/18	18:15	15.7	15.7	15.6	84	13.0	0.0	SW	0.00	0.4	SW	15.7	15.7	15.7	759.1	0.00	0.0	0.009	0.000	17.6	51	7.3	16.6
20/07/18	18:20	15.6	15.6	15.6	84	12.9	0.0	---	0.00	0.0	---	15.6	15.7	15.7	759.1	0.00	0.0	0.009	0.000	17.5	51	7.2	16.6
20/07/18	18:25	15.6	15.6	15.6	85	13.1	0.0	SW	0.00	0.9	SW	15.6	15.7	15.7	759.0	0.00	0.0	0.009	0.000	17.4	51	7.1	16.4
20/07/18	18:30	15.5	15.6	15.5	85	13.0	0.0	SW	0.00	0.9	SW	15.5	15.6	15.6	759.0	0.00	0.0	0.010	0.000	17.3	52	7.4	16.4
20/07/18	18:35	15.4	15.5	15.3	85	12.9	0.0	SW	0.00	0.9	SW	15.4	15.5	15.5	759.0	0.25	0.0	0.010	0.000	17.3	52	7.3	16.3
20/07/18	18:40	15.3	15.3	15.3	86	13.0	0.0	SW	0.00	0.4	SW	15.3	15.4	15.4	759.0	0.25	2.8	0.010	0.000	17.2	52	7.3	16.3
20/07/18	18:45	15.3	15.3	15.2	86	12.9	0.0	WSW	0.00	0.9	WSW	15.3	15.3	15.3	759.0	0.51	6.9	0.011	0.000	17.2	52	7.2	16.2
20/07/18	18:50	15.2	15.2	15.2	86	12.8	0.0	WSW	0.00	0.4	WSW	15.2	15.2	15.2	759.0	0.51	10.4	0.011	0.000	17.1	52	7.1	16.1
20/07/18	18:55	15.1	15.1	15.1	87	13.0	0.0	WSW	0.00	0.9	WSW	15.1	15.2	15.2	759.0	0.25	5.3	0.011	0.000	16.9	52	7.0	16.0
20/07/18	19:00	15.0	15.1	14.9	87	12.9	0.0	WSW	0.00	0.4	WSW	15.0	15.1	15.1	759.0	0.25	2.5	0.012	0.000	16.9	52	7.0	15.9
20/07/18	19:05	14.9	14.9	14.9	87	12.8	0.0	---</															

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Wind Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
20/07/18	19:50	14.7	14.7	14.6	89	12.9	0.0	WSW	0.00	0.9	WSW	14.7	14.7	14.7	758.9	0.00	0.0	0.013	0.000	16.3	52	6.4	15.3
20/07/18	19:55	14.6	14.6	14.5	89	12.8	0.0	WSW	0.00	0.9	WSW	14.6	14.7	14.7	758.9	0.00	0.0	0.013	0.000	16.3	52	6.4	15.3
20/07/18	20:00	14.5	14.5	14.5	89	12.7	0.0	WSW	0.00	0.9	WSW	14.5	14.6	14.6	758.9	0.00	0.0	0.013	0.000	16.2	52	6.3	15.2
20/07/18	20:05	14.5	14.5	14.4	89	12.7	0.0	---	0.00	0.0	---	14.5	14.6	14.6	758.9	0.00	0.0	0.013	0.000	16.1	52	6.2	15.1
20/07/18	20:10	14.4	14.4	14.4	89	12.7	0.0	---	0.00	0.0	---	14.4	14.5	14.5	758.9	0.25	0.0	0.014	0.000	16.1	52	6.2	15.1
20/07/18	20:15	14.4	14.4	14.4	89	12.7	0.0	---	0.00	0.0	---	14.4	14.5	14.5	758.9	0.00	0.0	0.014	0.000	16.0	52	6.1	15.0
20/07/18	20:20	14.4	14.4	14.4	89	12.7	0.0	---	0.00	0.0	---	14.4	14.5	14.5	758.9	0.00	0.0	0.014	0.000	15.9	52	6.1	14.9
20/07/18	20:25	14.4	14.4	14.4	89	12.7	0.0	WSW	0.00	0.4	WSW	14.4	14.5	14.5	759.0	0.00	0.0	0.014	0.000	15.8	52	6.0	14.8
20/07/18	20:30	14.4	14.4	14.4	89	12.7	0.0	WSW	0.00	0.4	WSW	14.4	14.5	14.5	759.0	0.00	0.0	0.014	0.000	15.8	52	6.0	14.8
20/07/18	20:35	14.4	14.5	14.4	89	12.7	0.0	---	0.00	0.0	---	14.4	14.5	14.5	758.9	0.00	0.0	0.014	0.000	15.7	52	5.9	14.7
20/07/18	20:40	14.4	14.4	14.4	90	12.8	0.0	---	0.00	0.0	---	14.4	14.5	14.5	758.9	0.00	0.0	0.014	0.000	15.7	52	5.9	14.7
20/07/18	20:45	14.4	14.4	14.4	90	12.8	0.0	WSW	0.00	0.9	WSW	14.4	14.5	14.5	758.9	0.25	0.0	0.014	0.000	15.7	53	6.1	14.7
20/07/18	20:50	14.4	14.4	14.3	90	12.8	0.0	WSW	0.00	0.4	WSW	14.4	14.5	14.5	758.9	0.00	0.0	0.014	0.000	15.6	53	6.0	14.6
20/07/18	20:55	14.3	14.3	14.3	90	12.7	0.0	WSW	0.00	0.4	WSW	14.3	14.4	14.4	758.8	0.00	0.0	0.014	0.000	15.6	53	6.0	14.6
20/07/18	21:00	14.3	14.3	14.2	90	12.7	0.0	WSW	0.00	0.9	WSW	14.3	14.3	14.3	758.7	0.00	0.0	0.014	0.000	15.5	53	6.0	14.5
20/07/18	21:05	14.2	14.2	14.2	90	12.6	0.0	WSW	0.00	0.4	WSW	14.2	14.3	14.3	758.7	0.00	0.0	0.014	0.000	15.4	53	5.9	14.4
20/07/18	21:10	14.2	14.2	14.2	90	12.6	0.0	WSW	0.00	0.4	WSW	14.2	14.3	14.3	758.7	0.00	0.0	0.014	0.000	15.4	53	5.9	14.4
20/07/18	21:15	14.2	14.2	14.2	90	12.6	0.0	WSW	0.00	0.4	WSW	14.2	14.3	14.3	758.7	0.00	0.0	0.014	0.000	15.3	53	5.8	14.3
20/07/18	21:20	14.2	14.2	14.2	90	12.6	0.0	WSW	0.00	0.9	WSW	14.2	14.3	14.3	758.7	0.00	0.0	0.014	0.000	15.3	53	5.7	14.3
20/07/18	21:25	14.2	14.2	14.2	90	12.6	0.0	---	0.00	0.0	---	14.2	14.3	14.3	758.7	0.00	0.0	0.014	0.000	15.2	53	5.7	14.2
20/07/18	21:30	14.2	14.2	14.2	90	12.5	0.0	WSW	0.00	0.4	WSW	14.2	14.2	14.2	758.9	0.00	0.0	0.014	0.000	15.2	53	5.6	14.2
20/07/18	21:35	14.2	14.2	14.2	90	12.5	0.0	WSW	0.00	0.9	WSW	14.2	14.2	14.2	758.9	0.00	0.0	0.014	0.000	15.2	53	5.6	14.2
20/07/18	21:40	14.2	14.2	14.2	90	12.5	0.0	WSW	0.00	0.9	WSW	14.2	14.2	14.2	758.9	0.00	0.0	0.014	0.000	15.1	53	5.6	14.1
20/07/18	21:45	14.2	14.2	14.2	90	12.5	0.0	WSW	0.00	1.3	WSW	14.2	14.2	14.2	758.9	0.00	0.0	0.014	0.000	15.1	53	5.5	14.1
20/07/18	21:50	14.2	14.2	14.2	91	12.7	0.0	WSW	0.00	0.9	WSW	14.2	14.2	14.2	759.0	0.00	0.0	0.014	0.000	15.0	53	5.5	14.0
20/07/18	21:55	14.2	14.2	14.2	91	12.7	0.0	WSW	0.00	0.9	WSW	14.2	14.2	14.2	758.9	0.00	0.0	0.014	0.000	15.0	53	5.5	14.0
20/07/18	22:00	14.2	14.2	14.2	91	12.7	0.0	---	0.00	0.0	---	14.2	14.2	14.2	758.9	0.00	0.0	0.014	0.000	14.9	53	5.4	13.9
20/07/18	22:05	14.2	14.2	14.2	91	12.7	0.0	WSW	0.00	1.3	WSW	14.2	14.2	14.2	758.8	0.25	0.0	0.014	0.000	14.9	53	5.4	13.9
20/07/18	22:10	14.2	14.2	14.2	91	12.7	0.0	WSW	0.00	1.3	WSW	14.2	14.2	14.2	758.8	0.00	0.0	0.014	0.000	14.9	53	5.4	13.9
20/07/18	22:15	14.2	14.2	14.2	91	12.7	0.0	---	0.00	0.0	---	14.2	14.2	14.2	758.8	0.00	0.0	0.014	0.000	14.8	53	5.3	13.8
20/07/18	22:20	14.2	14.2	14.2	91	12.7	0.0	WSW	0.00	0.9	WSW	14.2	14.2	14.2	758.8	0.25	1.0	0.014	0.000	14.8	53	5.3	13.8

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Wind Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
20/07/18	22:25	14.2	14.2	14.2	91	12.7	0.0	WSW	0.00	0.9	WSW	14.2	14.2	14.2	758.8	0.00	1.0	0.014	0.000	14.8	53	5.3	13.8
20/07/18	22:30	14.2	14.2	14.2	91	12.7	0.0	WSW	0.00	0.4	WSW	14.2	14.2	14.2	758.7	0.00	1.0	0.014	0.000	14.7	53	5.2	13.7
20/07/18	22:35	14.2	14.2	14.2	91	12.7	0.0	---	0.00	0.0	---	14.2	14.2	14.2	758.8	0.00	1.0	0.014	0.000	14.7	53	5.2	13.7
20/07/18	22:40	14.2	14.2	14.1	91	12.7	0.0	---	0.00	0.0	---	14.2	14.1	14.1	758.7	0.00	0.0	0.015	0.000	14.7	53	5.2	13.7
20/07/18	22:45	14.1	14.1	14.1	91	12.6	0.0	---	0.00	0.0	---	14.1	14.1	14.1	758.8	0.00	0.0	0.015	0.000	14.7	53	5.2	13.7
20/07/18	22:50	14.1	14.1	14.1	91	12.6	0.0	WSW	0.00	0.4	WSW	14.1	14.1	14.1	758.7	0.00	0.0	0.015	0.000	14.7	53	5.2	13.7
20/07/18	22:55	14.1	14.1	14.1	91	12.6	0.0	WSW	0.00	0.4	WSW	14.1	14.1	14.1	758.8	0.00	0.0	0.015	0.000	14.6	53	5.1	13.6
20/07/18	23:00	14.2	14.2	14.1	91	12.7	0.0	WSW	0.00	0.9	WSW	14.2	14.2	14.2	758.8	0.00	0.0	0.014	0.000	14.6	53	5.1	13.6
20/07/18	23:05	14.2	14.2	14.2	91	12.7	0.0	WSW	0.00	0.9	WSW	14.2	14.2	14.2	758.7	0.00	0.0	0.014	0.000	14.6	54	5.3	13.6
20/07/18	23:10	14.2	14.2	14.2	91	12.7	0.0	WSW	0.00	0.4	WSW	14.2	14.2	14.2	758.8	0.00	0.0	0.014	0.000	14.6	54	5.3	13.6
20/07/18	23:15	14.2	14.2	14.2	91	12.7	0.0	---	0.00	0.0	---	14.2	14.2	14.2	758.8	0.00	0.0	0.014	0.000	14.5	54	5.3	13.6
20/07/18	23:20	14.2	14.2	14.2	91	12.7	0.0	---	0.00	0.0	---	14.2	14.2	14.2	758.8	0.00	0.0	0.014	0.000	14.5	54	5.3	13.6
20/07/18	23:25	14.2	14.2	14.2	91	12.7	0.0	---	0.00	0.0	---	14.2	14.2	14.2	758.8	0.00	0.0	0.014	0.000	14.5	54	5.3	13.6
20/07/18	23:30	14.2	14.2	14.2	91	12.7	0.0	---	0.00	0.0	---	14.2	14.2	14.2	758.8	0.00	0.0	0.014	0.000	14.5	54	5.3	13.6
20/07/18	23:35	14.2	14.2	14.2	91	12.7	0.0	---	0.00	0.0	---	14.2	14.2	14.2	758.8	0.00	0.0	0.014	0.000	14.5	54	5.3	13.6
20/07/18	23:40	14.2	14.2	14.2	91	12.8	0.0	---	0.00	0.0	---	14.2	14.3	14.3	758.8	0.00	0.0	0.014	0.000	14.4	54	5.2	13.5
20/07/18	23:45	14.2	14.2	14.2	91	12.8	0.0	---	0.00	0.0	---	14.2	14.3	14.3	758.8	0.00	0.0	0.014	0.000	14.4	54	5.2	13.4
20/07/18	23:50	14.2	14.2	14.2	91	12.8	0.0	---	0.00	0.0	---	14.2	14.3	14.3	758.9	0.00	0.0	0.014	0.000	14.4	54	5.2	13.4
20/07/18	23:55	14.2	14.2	14.2	91	12.8	0.0	---	0.00	0.0	---	14.2	14.3	14.3	758.8	0.00	0.0	0.014	0.000	14.4	54	5.2	13.4
21/07/18	00:00	14.2	14.2	14.2	92	12.9	0.0	---	0.00	0.0	---	14.2	14.3	14.3	758.8	0.00	0.0	0.014	0.000	14.4	54	5.2	13.4
21/07/18	0:05	14.2	14.2	14.2	92	12.9	0.0	---	0.00	0.0	---	14.2	14.3	14.3	758.8	0.00	0.0	0.014	0.000	14.4	54	5.2	13.4
21/07/18	0:10	14.2	14.2	14.2	92	12.9	0.0	---	0.00	0.0	---	14.2	14.3	14.3	758.8	0.00	0.0	0.014	0.000	14.4	54	5.2	13.4
21/07/18	0:15	14.2	14.2	14.2	92	12.9	0.0	---	0.00	0.0	---	14.2	14.3	14.3	758.8	0.00	0.0	0.014	0.000	14.4	54	5.2	13.4
21/07/18	0:20	14.2	14.2	14.2	92	12.9	0.0	---	0.00	0.0	---	14.2	14.3	14.3	758.8	0.00	0.0	0.014	0.000	14.4	54	5.2	13





WeatherLink 5.9.2 07/08/18 14:37: Deans

File Setup Reports Browse Window Help

Browse Records

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Wind Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
21/07/18	6:10	14.4	14.4	14.3	93	13.3	0.0	---	0.00	0.0	---	14.4	14.5	14.5	759.2	0.00	0.0	0.014	0.000	14.3	56	5.6	13.4
21/07/18	6:15	14.4	14.4	14.3	93	13.3	0.0	---	0.00	0.0	---	14.4	14.6	14.6	759.2	0.00	0.0	0.014	0.000	14.4	56	5.7	13.6
21/07/18	6:20	14.4	14.5	14.4	93	13.3	0.0	---	0.00	0.0	---	14.4	14.6	14.6	759.3	0.00	0.0	0.014	0.000	14.4	56	5.7	13.6
21/07/18	6:25	14.6	14.6	14.5	93	13.5	0.0	---	0.00	0.0	---	14.6	14.7	14.7	759.3	0.00	0.0	0.013	0.000	14.4	56	5.7	13.6
21/07/18	6:30	14.6	14.7	14.6	93	13.5	0.0	---	0.00	0.0	---	14.6	14.7	14.7	759.4	0.00	0.0	0.013	0.000	14.5	56	5.8	13.7
21/07/18	6:35	14.7	14.7	14.7	93	13.5	0.0	---	0.00	0.0	---	14.7	14.8	14.8	759.4	0.00	0.0	0.013	0.000	14.5	56	5.8	13.7
21/07/18	6:40	14.8	14.8	14.7	93	13.7	0.0	---	0.00	0.0	---	14.8	14.9	14.9	759.4	0.00	0.0	0.012	0.000	14.6	56	5.9	13.7
21/07/18	6:45	14.8	14.8	14.8	93	13.7	0.0	---	0.00	0.0	---	14.8	14.9	14.9	759.4	0.00	0.0	0.012	0.000	14.6	56	5.9	13.8
21/07/18	6:50	14.9	14.9	14.8	93	13.8	0.0	---	0.00	0.0	---	14.9	15.1	15.1	759.4	0.00	0.0	0.012	0.000	14.7	56	6.0	13.8
21/07/18	6:55	15.0	15.0	14.9	93	13.9	0.0	---	0.00	0.0	---	15.0	15.2	15.2	759.4	0.00	0.0	0.012	0.000	14.7	56	6.0	13.9
21/07/18	7:00	15.1	15.1	15.0	93	14.0	0.0	---	0.00	0.0	---	15.1	15.3	15.3	759.4	0.00	0.0	0.011	0.000	14.8	56	6.1	14.0
21/07/18	7:05	15.1	15.1	15.1	93	14.0	0.0	---	0.00	0.0	---	15.1	15.3	15.3	759.5	0.00	0.0	0.011	0.000	14.9	56	6.2	14.1
21/07/18	7:10	15.1	15.2	15.1	93	14.0	0.0	---	0.00	0.0	---	15.1	15.3	15.3	759.5	0.00	0.0	0.011	0.000	15.0	56	6.3	14.2
21/07/18	7:15	15.2	15.2	15.2	93	14.0	0.0	---	0.00	0.0	---	15.2	15.3	15.3	759.6	0.00	0.0	0.011	0.000	15.1	56	6.3	14.2
21/07/18	7:20	15.2	15.3	15.2	93	14.1	0.0	---	0.00	0.0	---	15.2	15.4	15.4	759.6	0.00	0.0	0.011	0.000	15.2	56	6.4	14.3
21/07/18	7:25	15.2	15.3	15.2	92	13.9	0.0	---	0.00	0.0	---	15.2	15.4	15.4	759.6	0.00	0.0	0.011	0.000	15.2	56	6.5	14.4
21/07/18	7:30	15.2	15.3	15.2	93	14.0	0.0	---	0.00	0.0	---	15.2	15.3	15.3	759.6	0.00	0.0	0.011	0.000	15.3	56	6.6	14.5
21/07/18	7:35	15.3	15.3	15.3	93	14.2	0.0	---	0.00	0.0	---	15.3	15.4	15.4	759.7	0.00	0.0	0.011	0.000	15.4	57	7.0	14.6
21/07/18	7:40	15.3	15.3	15.3	93	14.2	0.0	---	0.00	0.0	---	15.3	15.5	15.5	759.8	0.00	0.0	0.010	0.000	15.6	57	7.1	14.7
21/07/18	7:45	15.4	15.4	15.3	93	14.3	0.0	---	0.00	0.0	---	15.4	15.7	15.7	759.8	0.00	0.0	0.010	0.000	15.7	57	7.2	14.8
21/07/18	7:50	15.5	15.5	15.4	92	14.2	0.0	---	0.00	0.0	---	15.5	15.7	15.7	759.8	0.00	0.0	0.010	0.000	15.8	57	7.3	14.9
21/07/18	7:55	15.6	15.7	15.5	92	14.3	0.0	---	0.00	0.0	---	15.6	15.8	15.8	759.8	0.00	0.0	0.009	0.000	15.9	57	7.4	15.1
21/07/18	8:00	15.8	15.8	15.7	92	14.5	0.0	---	0.00	0.0	---	15.8	16.0	16.0	759.9	0.00	0.0	0.009	0.000	16.1	57	7.6	15.3
21/07/18	8:05	15.9	16.1	15.8	92	14.6	0.0	WSW	0.00	0.9	WSW	15.9	16.1	16.1	760.0	0.00	0.0	0.008	0.000	16.3	57	7.7	15.5
21/07/18	8:10	16.1	16.1	16.1	92	14.8	0.0	WSW	0.00	0.9	WSW	16.1	16.3	16.3	760.0	0.00	0.0	0.008	0.000	16.4	57	7.9	15.7
21/07/18	8:15	16.2	16.2	16.1	92	14.9	0.0	---	0.00	0.0	---	16.2	16.4	16.4	760.0	0.00	0.0	0.008	0.000	16.6	57	8.1	15.8
21/07/18	8:20	16.1	16.1	16.1	92	14.8	0.0	---	0.00	0.0	---	16.1	16.3	16.3	760.0	0.00	0.0	0.008	0.000	16.7	57	8.2	15.9
21/07/18	8:25	16.2	16.2	16.1	92	14.9	0.0	---	0.00	0.0	---	16.2	16.4	16.4	759.9	0.00	0.0	0.008	0.000	16.9	57	8.3	16.2
21/07/18	8:30	16.3	16.4	16.2	92	15.0	0.0	---	0.00	0.0	---	16.3	16.6	16.6	760.0	0.00	0.0	0.007	0.000	17.0	57	8.4	16.3
21/07/18	8:35	16.4	16.4	16.4	92	15.1	0.0	---	0.00	0.0	---	16.4	16.7	16.7	760.0	0.00	0.0	0.007	0.000	17.2	57	8.6	16.4
21/07/18	8:40	16.6	16.7	16.4	92	15.3	0.0	---	0.00	0.0	---	16.6	16.9	16.9	760.0	0.00	0.0	0.006	0.000	17.3	57	8.7	16.6

Type here to search

14:37 07/08/2018

WeatherLink 5.9.2 07/08/18 14:38: Deans

File Setup Reports Browse Window Help

Browse Records

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Wind Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
21/07/18	8:45	16.6	16.7	16.6	91	15.1	0.0	---	0.00	0.0	---	16.6	16.8	16.8	760.0	0.00	0.0	0.006	0.000	17.4	57	8.8	16.7
21/07/18	8:50	16.7	16.7	16.6	91	15.2	0.0	---	0.00	0.0	---	16.7	16.9	16.9	760.0	0.00	0.0	0.006	0.000	17.4	57	8.8	16.8
21/07/18	8:55	16.7	16.7	16.7	90	15.0	0.0	---	0.00	0.0	---	16.7	16.9	16.9	760.0	0.00	0.0	0.006	0.000	17.5	57	8.9	16.8
21/07/18	9:00	16.6	16.7	16.6	90	14.9	0.0	---	0.00	0.0	---	16.6	16.8	16.8	759.9	0.00	0.0	0.006	0.000	17.6	57	8.9	16.9
21/07/18	9:05	16.6	16.6	16.4	89	14.7	0.0	---	0.00	0.0	---	16.6	16.8	16.8	759.9	0.00	0.0	0.006	0.000	17.6	57	9.0	16.9
21/07/18	9:10	16.4	16.4	16.4	89	14.6	0.0	---	0.00	0.0	---	16.4	16.6	16.6	759.9	0.00	0.0	0.007	0.000	17.7	57	9.0	17.0
21/07/18	9:15	16.3	16.4	16.3	89	14.5	0.0	---	0.00	0.0	---	16.3	16.6	16.6	759.9	0.00	0.0	0.007	0.000	17.7	56	8.8	17.1
21/07/18	9:20	16.4	16.4	16.4	89	14.6	0.0	---	0.00	0.0	---	16.4	16.6	16.6	760.0	0.00	0.0	0.007	0.000	17.8	56	8.9	17.1
21/07/18	9:25	16.4	16.6	16.4	89	14.6	0.0	---	0.00	0.0	---	16.4	16.7	16.7	759.9	0.00	0.0	0.007	0.000	17.8	56	8.9	17.1
21/07/18	9:30	16.6	16.7	16.6	88	14.6	0.0	---	0.00	0.0	---	16.6	16.8	16.8	759.9	0.00	0.0	0.006	0.000	17.8	56	8.9	17.2
21/07/18	9:35	16.8	17.0	16.7	88	14.8	0.0	---	0.00	0.0	---	16.8	17.1	17.1	759.8	0.00	0.0	0.005	0.000	17.8	56	8.9	17.2
21/07/18	9:40	17.1	17.2	17.0	86	14.7	0.0	---	0.00	0.0	---	17.1	17.4	17.4	759.8	0.00	0.0	0.004	0.000	17.9	57	9.3	17.3
21/07/18	9:45	17.3	17.3	17.2	86	14.9	0.0	WSW	0.00	0.4	WSW	17.3	17.6	17.6	759.8	0.00	0.0	0.004	0.000	18.1	57	9.4	17.4
21/07/18	9:50	17.5	17.6	17.3	85	14.9	0.0	---	0.00	0.0	---	17.5	17.8	17.8	759.8	0.00	0.0	0.003	0.000	18.1	57	9.5	17.5
21/07/18	9:55	17.8	17.9	17.7	82	14.7	0.0	---	0.00	0.0	---	17.8	18.1	18.1	759.8	0.00	0.0	0.002	0.000	18.2	57	9.6	17.6
21/07/18	10:00	18.0	18.2	17.9	81	14.7	0.0	---	0.00	0.0	---	18.0	18.3	18.3	760.0	0.00	0.0	0.001	0.000	18.3	57	9.6	17.7
21/07/18	10:05	18.4	18.5	18.2	80	14.9	0.0	WSW	0.00	1.3	WSW	18.4	18.8	18.8	759.9	0.00	0.0	0.000	0.000	18.4	57	9.7	17.8
21/07/18	10:10	18.8	18.9	18.6	80	15.3	0.4	NNE	0.13	1.8	NNE	18.8	19.3	19.3	759.9	0.00	0.0	0.000	0.002	18.6	57	9.9	18.0
21/07/18	10:15	19.1	19.3	18.9	77	14.9	0.0	NNE	0.00	0.4	NNE	19.1	19.4	19.4	759.9	0.00	0.0	0.000	0.003	18.7	57	10.0	18.2
21/07/18	10:20	19.6	19.8	19.3	77	15.4	0.0	WSW	0.00	1.3	NNE	19.6	20.1	20.1	759.9	0.00	0.0	0.000	0.004	18.9	58	10.5	18.5
21/07/18	10:25	19.8	19.8	19.8	74	15.0	0.0	---	0.00	0.0	---	19.8	20.2	20.2	759.9	0.00	0.0	0.000	0.005	19.2	58	10.8	18.8
21/07/18	10:30	20.1	20.2	19.8	73	15.1	0.0	W	0.00	0.9	W	20.1	20.5	20.5	760.0	0.00	0.0	0.000	0.006	19.5	58	11.0	19.2
21/07/18	10:35	20.4	20.6	20.2	71	15.0	0.4	NNW	0.13	1.8	NNW	20.4	20.7	20.7	760.1	0.00	0.0	0.000	0.007	19.8	59	11.5	19.5
21/07/18	10:40	20.7	20.7	20.6	68	14.5	0.0	---	0.00	0.0	---	20.7	20.7	20.7	759.8	0.00	0.0	0.000	0.008	20.1	59	11.8	19.8
21/07/18	10:45	20.7	20.8	20.7	69																		

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Hi Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
21/07/18	11:25	21.6	21.6	21.4	67	15.2	0.9	NNW	0.27	2.7	N	21.6	21.6	21.6	759.9	0.00	0.0	0.000	0.011	23.6	59	15.1	23.9
21/07/18	11:30	21.3	21.4	21.2	67	14.9	0.0	NNE	0.00	1.3	NNE	21.3	21.2	21.2	759.9	0.00	0.0	0.000	0.010	23.9	59	15.4	24.3
21/07/18	11:35	21.1	21.3	21.1	66	14.5	0.0	NNE	0.00	1.3	NNE	21.1	21.0	21.0	759.8	0.00	0.0	0.000	0.010	24.1	58	15.3	24.5
21/07/18	11:40	21.1	21.2	21.1	68	15.0	0.4	NNE	0.13	1.8	NNE	21.1	21.1	21.1	759.8	0.00	0.0	0.000	0.010	24.3	58	15.5	24.7
21/07/18	11:45	21.0	21.1	21.0	69	15.1	0.4	NNE	0.13	1.3	NNE	21.0	21.1	21.1	759.8	0.00	0.0	0.000	0.009	24.5	58	15.7	24.8
21/07/18	11:50	21.0	21.0	21.0	67	14.6	0.4	NNE	0.13	1.3	NNE	21.0	20.9	20.9	759.9	0.00	0.0	0.000	0.009	24.7	57	15.6	24.9
21/07/18	11:55	21.1	21.1	21.0	67	14.7	0.0	NNE	0.00	1.3	NNE	21.1	21.0	21.0	759.9	0.00	0.0	0.000	0.009	24.8	57	15.7	25.1
21/07/18	12:00	21.2	21.3	21.1	70	15.5	0.0	NNE	0.00	0.9	NNE	21.2	21.2	21.2	760.0	0.00	0.0	0.000	0.010	24.9	57	15.8	25.2
21/07/18	12:05	21.5	21.6	21.3	66	14.9	0.4	NNE	0.13	1.8	NNE	21.5	21.4	21.4	760.1	0.00	0.0	0.000	0.011	25.1	57	15.9	25.3
21/07/18	12:10	21.8	21.9	21.6	66	15.2	0.4	NNW	0.13	1.8	N	21.8	21.9	21.9	760.0	0.00	0.0	0.000	0.012	25.2	57	16.0	25.4
21/07/18	12:15	22.0	22.1	22.0	65	15.1	0.4	N	0.13	1.8	N	22.0	22.1	22.1	760.2	0.00	0.0	0.000	0.013	25.3	57	16.2	25.7
21/07/18	12:20	22.3	22.4	22.1	65	15.4	0.0	NW	0.00	1.3	N	22.3	22.4	22.4	760.1	0.00	0.0	0.000	0.014	25.5	57	16.4	25.8
21/07/18	12:25	22.6	22.7	22.4	62	14.9	0.0	---	0.00	0.0	---	22.6	22.7	22.7	760.0	0.00	0.0	0.000	0.015	25.7	58	16.8	26.1
21/07/18	12:30	22.8	22.9	22.7	64	15.7	0.4	N	0.13	2.7	N	22.8	23.2	23.2	760.2	0.00	0.0	0.000	0.016	25.9	58	17.0	26.3
21/07/18	12:35	23.1	23.2	23.1	60	14.9	0.4	NNW	0.13	2.2	N	23.1	23.4	23.4	760.0	0.00	0.0	0.000	0.016	26.1	58	17.2	26.6
21/07/18	12:40	23.0	23.1	22.9	61	15.1	0.4	N	0.13	1.8	N	23.0	23.3	23.3	759.9	0.00	0.0	0.000	0.016	26.3	58	17.4	26.8
21/07/18	12:45	22.7	22.9	22.5	63	15.3	0.9	N	0.27	2.2	N	22.7	23.0	23.0	760.0	0.00	0.0	0.000	0.015	26.4	58	17.5	27.0
21/07/18	12:50	22.3	22.5	22.1	63	14.9	0.9	N	0.27	1.8	N	22.3	22.4	22.4	759.9	0.00	0.0	0.000	0.014	26.6	57	17.4	27.1
21/07/18	12:55	21.9	22.1	21.8	65	15.1	0.4	N	0.13	1.8	N	21.9	22.0	22.0	760.0	0.00	0.0	0.000	0.013	26.7	57	17.5	27.3
21/07/18	13:00	21.8	21.8	21.7	65	14.9	0.4	N	0.13	2.2	N	21.8	21.8	21.8	760.0	0.00	0.0	0.000	0.012	26.8	57	17.6	27.4
21/07/18	13:05	21.8	21.8	21.8	66	15.2	0.4	N	0.13	1.8	N	21.8	21.9	21.9	759.9	0.00	0.0	0.000	0.012	26.9	57	17.7	27.5
21/07/18	13:10	21.9	21.9	21.8	66	15.2	0.4	N	0.13	1.3	N	21.9	22.0	22.0	759.9	0.00	0.0	0.000	0.012	26.9	57	17.7	27.6
21/07/18	13:15	21.9	22.0	21.9	66	15.3	0.4	N	0.13	1.3	N	21.9	22.1	22.1	759.8	0.00	0.0	0.000	0.013	27.0	57	17.8	27.6
21/07/18	13:20	22.0	22.0	22.0	64	14.9	0.0	N	0.00	1.3	N	22.0	22.1	22.1	759.8	0.00	0.0	0.000	0.013	27.1	56	17.6	27.7
21/07/18	13:25	22.0	22.0	22.0	64	14.9	0.0	N	0.00	1.3	N	22.0	22.1	22.1	759.9	0.00	0.0	0.000	0.013	27.2	56	17.7	27.8
21/07/18	13:30	22.0	22.0	22.0	63	14.6	0.0	N	0.00	0.4	N	22.0	22.0	22.0	759.9	0.00	0.0	0.000	0.013	27.2	56	17.7	27.8
21/07/18	13:35	22.2	22.3	22.1	65	15.3	0.0	---	0.00	0.0	---	22.2	22.4	22.4	760.0	0.00	0.0	0.000	0.014	27.3	56	17.7	27.9
21/07/18	13:40	22.4	22.5	22.3	63	15.1	0.0	N	0.00	0.4	N	22.4	22.6	22.6	760.0	0.00	0.0	0.000	0.014	27.3	56	17.8	28.0
21/07/18	13:45	22.6	22.6	22.5	61	14.7	0.0	N	0.00	1.3	N	22.6	22.7	22.7	760.0	0.00	0.0	0.000	0.015	27.4	56	17.8	28.1
21/07/18	13:50	22.6	22.6	22.4	58	13.9	0.0	---	0.00	0.0	---	22.6	22.6	22.6	759.9	0.00	0.0	0.000	0.015	27.4	56	17.9	28.2
21/07/18	13:55	22.3	22.4	22.3	62	14.7	0.0	N	0.00	0.9	N	22.3	22.4	22.4	759.9	0.00	0.0	0.000	0.014	27.6	56	18.0	28.3

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Hi Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
21/07/18	14:00	22.2	22.3	22.1	64	15.1	0.4	WNW	0.13	2.2	SSW	22.2	22.3	22.3	759.9	0.00	0.0	0.000	0.014	27.6	56	18.0	28.3
21/07/18	14:05	21.9	22.1	21.8	64	14.8	0.0	WNW	0.00	1.3	WNW	21.9	21.9	21.9	759.9	0.00	0.0	0.000	0.013	27.4	55	17.6	28.1
21/07/18	14:10	21.6	21.8	21.4	64	14.5	0.4	NNW	0.13	1.3	NW	21.6	21.5	21.5	759.9	0.00	0.0	0.000	0.011	27.4	55	17.5	28.0
21/07/18	14:15	21.3	21.4	21.2	67	14.9	0.0	SSW	0.00	1.8	WSW	21.3	21.2	21.2	759.8	0.00	0.0	0.000	0.010	27.2	55	17.4	27.7
21/07/18	14:20	21.1	21.2	21.0	66	14.5	0.0	WSW	0.00	0.9	WSW	21.1	20.9	20.9	760.0	0.00	0.0	0.000	0.009	27.1	55	17.2	27.5
21/07/18	14:25	21.0	21.0	20.9	67	14.6	0.0	---	0.00	0.0	---	21.0	20.9	20.9	760.0	0.00	0.0	0.000	0.009	26.9	55	17.1	27.3
21/07/18	14:30	20.9	21.0	20.9	67	14.6	0.0	WSW	0.00	0.4	WSW	20.9	20.9	20.9	760.1	0.00	0.0	0.000	0.009	26.7	55	16.9	27.1
21/07/18	14:35	21.0	21.1	21.0	68	14.9	0.0	NW	0.00	1.3	N	21.0	21.0	21.0	760.1	0.00	0.0	0.000	0.009	26.4	55	16.7	26.8
21/07/18	14:40	21.2	21.3	21.1	65	14.4	0.4	NNE	0.13	1.8	NNE	21.2	21.1	21.1	760.2	0.00	0.0	0.000	0.010	26.3	55	16.6	26.7
21/07/18	14:45	21.4	21.6	21.3	67	15.1	0.0	NNE	0.00	0.9	NNE	21.4	21.4	21.4	760.2	0.00	0.0	0.000	0.011	26.3	55	16.5	26.6
21/07/18	14:50	21.7	21.7	21.6	65	14.8	1.3	NNE	0.40	2.7	NNE	21.7	21.6	21.6	760.2	0.00	0.0	0.000	0.012	26.2	55	16.5	26.6
21/07/18	14:55	21.8	21.9	21.7	65	15.0	0.4	NW	0.13	1.8	NW	21.8	21.8	21.8	760.2	0.00	0.0	0.000	0.012	26.2	55	16.5	26.6
21/07/18	15:00	21.9	21.9	21.9	64	14.8	0.4	N	0.13	1.8	N	21.9	21.9	21.9	760.2	0.00	0.0	0.000	0.013	26.3	55	16.5	26.6
21/07/18	15:05	21.9	22.0	21.9	64	14.8	0.0	NNW	0.00	1.3	N	21.9	21.9	21.9	760.1	0.00	0.0	0.000	0.013	26.3	55	16.5	26.6
21/07/18	15:10	22.0	22.0	22.0	64	14.9	0.4	N	0.13	1.8	N	22.0	22.1	22.1	760.1	0.00	0.0	0.000	0.013	26.3	56	16.9	26.7
21/07/18	15:15	22.0	22.0	22.0	64	14.9	0.9	N	0.27	1.8	N	22.0	22.1	22.1	760.2	0.00	0.0	0.000	0.013	26.4	56	16.9	26.8
21/07/18	15:20	22.2	22.4	22.0	64	15.1	0.4	N	0.13	1.8	N	22.2	22.3	22.3	760.2	0.00	0.0	0.000	0.014	26.4	56	17.0	26.9
21/07/18	15:25	22.7	22.9	22.4	61	14.8	0.4	N	0.13	1.8	N	22.7	22.9	22.9	760.2	0.00	0.0	0.000	0.015	26.6	56	17.1	27.0
21/07/18	15:30	23.1	23.2	22.9	61	15.1	0.9	N	0.27	2.2	N	23.1	23.4	23.4	760.1	0.00	0.0	0.000	0.016	26.7	56	17.2	27.2
21/07/18	15:35	23.1	23.2	22.9	59	14.6	0.9	N	0.27	2.2	N	23.1	23.3	23.3	759.9	0.00	0.0	0.000	0.016	26.9	56	17.4	27.4
21/07/18	15:40	22.9	22.9	22.8	60	14.7	0.0	NNE	0.00	1.3	NNE	22.9	23.2	23.2	760.0	0.00	0.0	0.000	0.016	27.1	56	17.5	27.6
21/07/18	15:45	22.8	22.8	22.8	60	14.6	0.0	NNE	0.00	0.4	NNE	22.8	23.0	23.0	760.0	0.00	0.0	0.000	0.015	27.2	56	17.7	27.8
21/07/18	15:50	22.8	22.8	22.7	61	14.9	0.0	---	0.00	0.0	---	22.8	23.1	23.1	760.1	0.00	0.0	0.000	0.015	27.3	56	17.8	28.0
21/07/18	15:55	22.9	22.9	22.8	61	15.0	0.0																

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Hi Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
21/07/18	16:35	24.3	24.3	24.2	55	14.7	0.9	N	0.27	2.7	N	24.3	24.5	24.5	759.8	0.00	0.0	0.000	0.021	28.3	56	18.7	29.5
21/07/18	16:40	24.3	24.4	24.3	55	14.7	0.0	NNE	0.00	1.8	NNE	24.3	24.5	24.5	759.8	0.00	0.0	0.000	0.021	28.5	56	18.9	29.8
21/07/18	16:45	24.4	24.4	24.4	56	15.1	0.4	NNE	0.13	2.2	NNE	24.4	24.7	24.7	759.8	0.00	0.0	0.000	0.021	28.8	56	19.1	30.3
21/07/18	16:50	24.4	24.5	24.4	55	14.8	0.0	---	0.00	0.0	---	24.4	24.6	24.6	759.6	0.00	0.0	0.000	0.021	29.0	56	19.3	30.6
21/07/18	16:55	24.5	24.6	24.4	56	15.1	0.0	NNE	0.00	1.3	NNE	24.5	24.7	24.7	759.8	0.00	0.0	0.000	0.021	29.2	56	19.5	30.9
21/07/18	17:00	24.8	24.9	24.6	55	15.1	1.3	NNE	0.40	2.7	NNE	24.8	24.9	24.9	759.7	0.00	0.0	0.000	0.022	29.3	56	19.6	31.1
21/07/18	17:05	25.2	25.3	24.9	56	15.8	0.9	NNE	0.27	2.2	NNE	25.2	25.4	25.4	759.7	0.00	0.0	0.000	0.024	29.5	56	19.8	31.3
21/07/18	17:10	25.4	25.6	25.3	54	15.5	0.9	NNE	0.27	2.7	NNE	25.4	25.7	25.7	759.7	0.00	0.0	0.000	0.025	29.7	56	20.0	31.6
21/07/18	17:15	25.8	25.9	25.7	51	14.9	0.0	NNE	0.00	1.3	NNE	25.8	25.9	25.9	759.7	0.00	0.0	0.000	0.026	29.8	56	20.1	31.9
21/07/18	17:20	25.9	26.0	25.9	50	14.7	0.0	NNE	0.00	0.9	NNE	25.9	26.0	26.0	759.7	0.00	0.0	0.000	0.026	30.1	56	20.3	32.4
21/07/18	17:25	25.9	26.0	25.8	50	14.7	0.0	NNE	0.00	0.4	NNE	25.9	25.9	25.9	759.4	0.00	0.0	0.000	0.026	30.3	56	20.5	32.8
21/07/18	17:30	25.9	25.9	25.8	50	14.7	0.0	NNE	0.00	0.9	NNE	25.9	25.9	25.9	759.5	0.00	0.0	0.000	0.026	30.4	55	20.4	33.0
21/07/18	17:35	25.9	25.9	25.9	50	14.7	0.0	NNE	0.00	1.8	NNE	25.9	25.9	25.9	759.6	0.00	0.0	0.000	0.026	30.6	55	20.5	33.3
21/07/18	17:40	25.9	25.9	25.8	51	15.0	0.0	NNE	0.00	0.4	NNE	25.9	26.0	26.0	759.6	0.00	0.0	0.000	0.026	30.7	54	20.3	33.3
21/07/18	17:45	25.6	25.8	25.5	53	15.3	0.0	NNE	0.00	0.9	NNE	25.6	25.8	25.8	759.7	0.00	0.0	0.000	0.025	30.7	54	20.3	33.3
21/07/18	17:50	25.2	25.4	24.8	53	15.0	0.9	NNE	0.27	2.7	NNE	25.2	25.3	25.3	759.6	0.00	0.0	0.000	0.025	30.7	54	20.3	33.3
21/07/18	17:55	24.4	24.8	24.1	56	15.1	0.4	NNE	0.13	1.8	NNE	24.4	24.7	24.7	759.6	0.00	0.0	0.000	0.021	30.6	53	19.9	32.9
21/07/18	18:00	23.8	24.1	23.6	58	15.0	0.4	NNE	0.13	1.8	NNE	23.8	24.2	24.2	759.7	0.00	0.0	0.000	0.019	30.4	53	19.7	32.5
21/07/18	18:05	23.3	23.6	22.9	60	15.1	0.9	NNE	0.27	2.7	NNE	23.3	23.7	23.7	759.6	0.00	0.0	0.000	0.017	30.2	53	19.6	32.2
21/07/18	18:10	22.9	22.9	22.9	65	16.0	0.4	NNE	0.13	1.3	NNE	22.9	23.3	23.3	759.6	0.00	0.0	0.000	0.016	29.9	53	19.3	31.6
21/07/18	18:15	22.9	22.7	22.7	63	15.3	0.4	NNE	0.13	1.8	NNE	22.7	23.0	23.0	759.7	0.00	0.0	0.000	0.015	29.8	53	19.2	31.3
21/07/18	18:20	22.7	22.7	22.7	63	15.3	0.4	NNE	0.13	1.8	NNE	22.7	22.9	22.9	759.7	0.00	0.0	0.000	0.015	29.6	53	19.0	31.0
21/07/18	18:25	22.6	22.7	22.5	64	15.5	0.4	NNE	0.13	2.2	NNE	22.6	22.9	22.9	759.8	0.00	0.0	0.000	0.015	29.3	53	18.8	30.7
21/07/18	18:30	22.3	22.5	22.1	65	15.4	1.3	NNE	0.40	2.7	NNE	22.3	22.4	22.4	759.8	0.00	0.0	0.000	0.014	29.1	53	18.6	30.4
21/07/18	18:35	21.8	22.0	21.6	66	15.1	1.8	N	0.54	4.0	NNE	21.8	21.8	21.8	759.7	0.00	0.0	0.000	0.012	28.9	53	18.3	30.2
21/07/18	18:40	21.3	21.6	21.1	68	15.1	1.3	N	0.40	2.7	N	21.3	21.3	21.3	759.7	0.00	0.0	0.000	0.010	28.7	53	18.1	29.8
21/07/18	18:45	20.9	21.1	20.8	69	15.0	1.3	NNE	0.40	2.7	NE	20.9	21.0	21.0	759.7	0.00	0.0	0.000	0.009	28.4	53	17.9	29.3
21/07/18	18:50	20.7	20.8	20.7	71	15.3	0.9	NNW	0.27	1.8	NNE	20.7	20.9	20.9	759.7	0.00	0.0	0.000	0.008	28.2	53	17.7	29.0
21/07/18	18:55	20.7	20.7	20.6	70	15.0	0.9	N	0.27	1.8	NNW	20.7	20.8	20.8	759.8	0.00	0.0	0.000	0.008	27.9	53	17.4	28.6
21/07/18	19:00	20.6	20.6	20.6	71	15.2	0.9	NNE	0.27	1.8	NNE	20.6	20.9	20.9	759.9	0.00	0.0	0.000	0.008	27.7	53	17.2	28.2
21/07/18	19:05	20.5	20.6	20.4	71	15.1	1.3	NNE	0.40	3.1	NNE	20.5	20.8	20.8	759.9	0.00	0.0	0.000	0.008	27.4	53	17.0	27.9

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Hi Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
21/07/18	19:10	20.3	20.4	20.2	71	14.9	1.3	N	0.40	2.7	N	20.3	20.7	20.7	759.8	0.00	0.0	0.000	0.007	27.2	53	16.8	27.6
21/07/18	19:15	20.1	20.2	19.9	71	14.7	1.3	N	0.40	2.7	N	20.1	20.4	20.4	759.9	0.00	0.0	0.000	0.006	27.0	53	16.6	27.3
21/07/18	19:20	19.9	19.9	19.8	72	14.7	0.9	N	0.27	2.2	NNE	19.9	20.3	20.3	760.0	0.00	0.0	0.000	0.005	26.8	53	16.4	27.1
21/07/18	19:25	19.8	19.8	19.7	73	14.8	0.4	NNW	0.13	2.2	NNE	19.8	20.2	20.2	760.1	0.00	0.0	0.000	0.005	26.6	53	16.2	26.8
21/07/18	19:30	19.6	19.7	19.6	73	14.6	0.4	N	0.13	2.2	N	19.6	19.9	19.9	760.0	0.00	0.0	0.000	0.004	26.3	53	16.0	26.6
21/07/18	19:35	19.5	19.6	19.5	74	14.7	0.4	N	0.13	1.8	N	19.5	19.9	19.9	760.0	0.00	0.0	0.000	0.004	26.1	53	15.8	26.3
21/07/18	19:40	19.4	19.5	19.3	74	14.6	0.9	N	0.27	2.2	N	19.4	19.7	19.7	760.1	0.00	0.0	0.000	0.004	25.9	53	15.6	26.1
21/07/18	19:45	19.3	19.3	19.2	75	14.7	0.4	N	0.13	2.2	N	19.3	19.6	19.6	760.0	0.00	0.0	0.000	0.003	25.7	53	15.4	25.8
21/07/18	19:50	19.3	19.4	19.2	75	14.7	0.4	NNW	0.13	1.8	NNW	19.3	19.6	19.6	760.1	0.00	0.0	0.000	0.003	25.5	53	15.2	25.7
21/07/18	19:55	19.4	19.4	19.4	74	14.6	0.4	N	0.13	1.8	N	19.4	19.7	19.7	760.0	0.00	0.0	0.000	0.004	25.3	53	15.0	25.4
21/07/18	20:00	19.4	19.4	19.4	74	14.6	0.0	N	0.00	0.9	N	19.4	19.7	19.7	760.0	0.00	0.0	0.000	0.004	25.1	53	14.8	25.1
21/07/18	20:05	19.3	19.3	19.3	75	14.8	0.4	N	0.13	1.8	N	19.3	19.7	19.7	760.1	0.00	0.0	0.000	0.003	24.9	54	14.9	25.0
21/07/18	20:10	19.2	19.3	19.1	74	14.5	0.0	N	0.00	1.3	N	19.2	19.6	19.6	760.1	0.00	0.0	0.000	0.003	24.7	54	14.7	24.8
21/07/18	20:15	19.1	19.1	19.1	75	14.6	0.0	N	0.00	1.3	N	19.1	19.4	19.4	760.1	0.00	0.0	0.000	0.003	24.4	54	14.5	24.6
21/07/18	20:20	19.1	19.1	19.1	76	14.7	0.0	N	0.00	0.4	N	19.1	19.4	19.4	760.1	0.00	0.0	0.000	0.003	24.2	54	14.3	24.4
21/07/18	20:25	18.9	19.1	18.9	76	14.6	0.0	N	0.00	0.4	N	18.9	19.3	19.3	760.1	0.00	0.0	0.000	0.002	24.1	54	14.2	24.3
21/07/18	20:30	18.8	18.9	18.8	76	14.5	0.0	---	0.00	0.0	---	18.8	19.1	19.1	760.1	0.00	0.0	0.000	0.002	23.8	54	14.0	24.1
21/07/18	20:35	18.7	18.8	18.6	76	14.3	0.0	---	0.00	0.0	---	18.7	18.9	18.9	760.0	0.00	0.0	0.000	0.001	23.6	54	13.8	23.8
21/07/18	20:40	18.5	18.6	18.4	76	14.2	0.0	---	0.00	0.0	---	18.5	18.7	18.7	760.1	0.00	0.0	0.000	0.001	23.4	54	13.6	23.4
21/07/18	20:45	18.3	18.4	18.2	77	14.2	0.0	---	0.00	0.0	---	18.3	18.6	18.6	760.1	0.00	0.0	0.000	0.000	23.2	54	13.3	23.2
21/07/18	20:50	18.0	18.2	17.9	78	14.1	0.0	---	0.00	0.0	---	18.0	18.2	18.2	760.2	0.00	0.0	0.001	0.000	22.9	54	13.1	22.9
21/07/18	20:55	17.8	17.9	17.7	78	13.9	0.0	---	0.00	0.0	---	17.8	17.9	17.9	760.3	0.00	0.0	0.002	0.000	22.7	54	12.9	22.7
21/07/18	21:00	17.6	17.7	17.5	79	13.9	0.0	---	0.00	0.0	---	17.6	17.8	17.8	760.4	0.00	0.0	0.003	0.000	22.5	54	12.7	22.3
21/07/18	21:05	17.4	17.5	17.3	79	13.7	0.0</																

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Wind Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
21/07/18	21:45	15.8	15.8	15.7	85	13.3	0.0	---	0.00	0.0	---	15.8	15.8	15.8	760.9	0.00	0.0	0.009	0.000	20.3	54	10.7	19.7
21/07/18	21:50	15.7	15.7	15.6	85	13.2	0.0	---	0.00	0.0	---	15.7	15.7	15.7	760.9	0.00	0.0	0.009	0.000	20.1	54	10.5	19.6
21/07/18	21:55	15.6	15.6	15.6	86	13.3	0.0	---	0.00	0.0	---	15.6	15.7	15.7	761.0	0.00	0.0	0.009	0.000	19.8	54	10.3	19.3
21/07/18	22:00	15.6	15.6	15.5	86	13.2	0.0	---	0.00	0.0	---	15.6	15.6	15.6	761.0	0.00	0.0	0.010	0.000	19.6	54	10.0	19.1
21/07/18	22:05	15.5	15.5	15.5	87	13.3	0.0	---	0.00	0.0	---	15.5	15.6	15.6	761.0	0.00	0.0	0.010	0.000	19.4	55	10.1	18.9
21/07/18	22:10	15.5	15.5	15.5	87	13.3	0.0	---	0.00	0.0	---	15.5	15.6	15.6	761.1	0.00	0.0	0.010	0.000	19.2	55	10.0	18.7
21/07/18	22:15	15.5	15.5	15.5	87	13.3	0.0	---	0.00	0.0	---	15.5	15.6	15.6	761.0	0.00	0.0	0.010	0.000	19.1	55	9.8	18.5
21/07/18	22:20	15.4	15.5	15.4	87	13.3	0.0	---	0.00	0.0	---	15.4	15.6	15.6	761.0	0.00	0.0	0.010	0.000	18.9	55	9.6	18.3
21/07/18	22:25	15.3	15.4	15.3	87	13.2	0.0	---	0.00	0.0	---	15.3	15.4	15.4	761.0	0.00	0.0	0.010	0.000	18.7	55	9.5	18.1
21/07/18	22:30	15.2	15.3	15.2	87	13.1	0.0	---	0.00	0.0	---	15.2	15.3	15.3	761.0	0.00	0.0	0.011	0.000	18.6	55	9.3	17.9
21/07/18	22:35	15.1	15.2	15.1	87	13.0	0.0	---	0.00	0.0	---	15.1	15.2	15.2	761.0	0.00	0.0	0.011	0.000	18.4	55	9.2	17.7
21/07/18	22:40	15.1	15.1	15.0	88	13.1	0.0	---	0.00	0.0	---	15.1	15.2	15.2	761.1	0.00	0.0	0.011	0.000	18.2	55	9.0	17.6
21/07/18	22:45	15.1	15.1	15.1	88	13.1	0.0	---	0.00	0.0	---	15.1	15.2	15.2	761.1	0.00	0.0	0.011	0.000	18.1	55	8.9	17.4
21/07/18	22:50	15.1	15.1	15.1	88	13.1	0.0	---	0.00	0.0	---	15.1	15.2	15.2	761.1	0.00	0.0	0.011	0.000	17.9	55	8.8	17.2
21/07/18	22:55	15.2	15.2	15.2	88	13.2	0.0	---	0.00	0.0	---	15.2	15.2	15.2	761.1	0.00	0.0	0.011	0.000	17.8	55	8.6	17.1
21/07/18	23:00	15.2	15.2	15.2	88	13.2	0.0	---	0.00	0.0	---	15.2	15.2	15.2	761.1	0.00	0.0	0.011	0.000	17.7	56	8.8	17.0
21/07/18	23:05	15.2	15.2	15.2	89	13.4	0.0	---	0.00	0.0	---	15.2	15.3	15.3	761.1	0.00	0.0	0.011	0.000	17.4	56	8.7	16.8
21/07/18	23:10	15.2	15.2	15.2	89	13.4	0.0	---	0.00	0.0	---	15.2	15.3	15.3	761.1	0.00	0.0	0.011	0.000	17.6	56	8.6	16.7
21/07/18	23:15	15.2	15.2	15.2	89	13.4	0.0	---	0.00	0.0	---	15.2	15.3	15.3	761.1	0.00	0.0	0.011	0.000	17.4	56	8.5	16.7
21/07/18	23:20	15.1	15.2	15.1	89	13.3	0.0	---	0.00	0.0	---	15.1	15.2	15.2	761.2	0.00	0.0	0.011	0.000	17.3	56	8.4	16.6
21/07/18	23:25	15.1	15.1	15.1	89	13.3	0.0	---	0.00	0.0	---	15.1	15.2	15.2	761.1	0.00	0.0	0.011	0.000	17.2	56	8.4	16.5
21/07/18	23:30	15.1	15.1	15.0	89	13.3	0.0	---	0.00	0.0	---	15.1	15.2	15.2	761.2	0.00	0.0	0.011	0.000	17.1	56	8.3	16.3
21/07/18	23:35	15.0	15.0	15.0	89	13.2	0.0	---	0.00	0.0	---	15.0	15.1	15.1	761.1	0.00	0.0	0.012	0.000	17.1	56	8.2	16.3
21/07/18	23:40	14.9	15.0	14.9	89	13.1	0.0	---	0.00	0.0	---	14.9	15.1	15.1	761.1	0.00	0.0	0.012	0.000	16.9	56	8.1	16.2
21/07/18	23:45	14.9	14.9	14.9	89	13.1	0.0	---	0.00	0.0	---	14.9	15.1	15.1	761.1	0.00	0.0	0.012	0.000	16.9	56	8.1	16.1
21/07/18	23:50	14.9	14.9	14.9	89	13.1	0.0	---	0.00	0.0	---	14.9	15.1	15.1	761.1	0.00	0.0	0.012	0.000	16.8	57	8.2	16.0
21/07/18	23:55	14.9	14.9	14.9	89	13.1	0.0	---	0.00	0.0	---	14.9	15.1	15.1	761.1	0.00	0.0	0.012	0.000	16.8	57	8.2	16.0
22/07/18	00:00	14.9	14.9	14.8	89	13.1	0.0	---	0.00	0.0	---	14.9	14.9	14.9	761.1	0.00	0.0	0.012	0.000	16.7	57	8.2	15.9
22/07/18	0:05	14.8	14.8	14.8	89	13.0	0.0	---	0.00	0.0	---	14.8	14.9	14.9	761.1	0.00	0.0	0.012	0.000	16.6	57	8.1	15.8
22/07/18	0:10	14.8	14.8	14.8	89	13.0	0.0	---	0.00	0.0	---	14.8	14.9	14.9	761.1	0.00	0.0	0.012	0.000	16.6	57	8.0	15.8
22/07/18	0:15	14.8	14.8	14.8	89	13.0	0.0	---	0.00	0.0	---	14.8	14.9	14.9	761.1	0.00	0.0	0.012	0.000	16.6	57	8.0	15.8

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Wind Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
22/07/18	0:20	14.8	14.8	14.8	89	13.0	0.0	---	0.00	0.0	---	14.8	14.8	14.8	761.0	0.00	0.0	0.012	0.000	16.4	57	7.9	15.7
22/07/18	0:25	14.8	14.8	14.7	89	13.0	0.0	---	0.00	0.0	---	14.8	14.8	14.8	761.0	0.00	0.0	0.012	0.000	16.3	57	7.8	15.6
22/07/18	0:30	14.7	14.7	14.7	89	12.9	0.0	---	0.00	0.0	---	14.7	14.7	14.7	761.0	0.00	0.0	0.013	0.000	16.3	57	7.8	15.6
22/07/18	0:35	14.7	14.7	14.6	89	12.9	0.0	---	0.00	0.0	---	14.7	14.7	14.7	761.0	0.00	0.0	0.013	0.000	16.3	57	7.7	15.5
22/07/18	0:40	14.6	14.6	14.6	89	12.8	0.0	---	0.00	0.0	---	14.6	14.7	14.7	760.9	0.00	0.0	0.013	0.000	16.2	57	7.6	15.4
22/07/18	0:45	14.6	14.6	14.6	89	12.8	0.0	---	0.00	0.0	---	14.6	14.7	14.7	760.9	0.00	0.0	0.013	0.000	16.1	57	7.6	15.3
22/07/18	0:50	14.5	14.6	14.5	89	12.7	0.0	---	0.00	0.0	---	14.5	14.6	14.6	760.9	0.00	0.0	0.013	0.000	16.1	57	7.5	15.3
22/07/18	0:55	14.5	14.5	14.5	89	12.7	0.0	---	0.00	0.0	---	14.5	14.6	14.6	760.9	0.00	0.0	0.013	0.000	16.0	57	7.5	15.2
22/07/18	1:00	14.5	14.5	14.5	89	12.7	0.0	---	0.00	0.0	---	14.5	14.6	14.6	760.9	0.00	0.0	0.013	0.000	15.9	57	7.4	15.1
22/07/18	1:05	14.5	14.5	14.5	89	12.7	0.0	---	0.00	0.0	---	14.5	14.6	14.6	760.9	0.00	0.0	0.013	0.000	15.8	57	7.3	15.0
22/07/18	1:10	14.4	14.5	14.4	89	12.7	0.0	---	0.00	0.0	---	14.4	14.5	14.5	760.9	0.00	0.0	0.014	0.000	15.8	57	7.3	14.9
22/07/18	1:15	14.4	14.4	14.4	89	12.7	0.0	---	0.00	0.0	---	14.4	14.5	14.5	760.8	0.00	0.0	0.014	0.000	15.7	57	7.2	14.9
22/07/18	1:20	14.4	14.5	14.4	89	12.7	0.0	---	0.00	0.0	---	14.4	14.5	14.5	760.9	0.00	0.0	0.014	0.000	15.7	57	7.2	14.8
22/07/18	1:25	14.5	14.5	14.4	89	12.7	0.0	---	0.00	0.0	---	14.5	14.6	14.6	760.8	0.00	0.0	0.013	0.000	15.7	58	7.4	14.9
22/07/18	1:30	14.5	14.5	14.5	89	12.7	0.0	---	0.00	0.0	---	14.5	14.6	14.6	760.8	0.00	0.0	0.013	0.000	15.6	58	7.3	14.8
22/07/18	1:35	14.5	14.5	14.4	89	12.7	0.0	---	0.00	0.0	---	14.5	14.6	14.6	760.8	0.00	0.0	0.013	0.000	15.6	58	7.3	14.8
22/07/18	1:40	14.4	14.4	14.4	89	12.7	0.0	---	0.00	0.0	---	14.4	14.5	14.5	760.8	0.00	0.0	0.014	0.000	15.5	58	7.3	14.7
22/07/18	1:45	14.4	14.4	14.4	89	12.7	0.0	---	0.00	0.0	---	14.4	14.5	14.5	760.9	0.00	0.0	0.014	0.000	15.5	58	7.3	14.7
22/07/18	1:50	14.3	14.3	14.3	89	12.5	0.0	---	0.00	0.0	---	14.3	14.4	14.4	760.9	0.00	0.0	0.014	0.000	15.4	58	7.2	14.6
22/07/18	1:55	14.2	14.2	14.2	89	12.4	0.0	---	0.00	0.0	---	14.2	14.3	14.3	760.8	0.00	0.0	0.014	0.000	15.3	58	7.1	14.6
22/07/18	2:00	14.2	14.2	14.2	89	12.4	0.0	---	0.00	0.0	---	14.2	14.3	14.3	760.9	0.00	0.0	0.014	0.000	15.3	58	7.1	14.6
22/07/18	2:05	14.2	14.2	14.1	89	12.4	0.0	---	0.00	0.0	---	14.2	14.2	14.2	760.9	0.00	0.0	0.014	0.000	15.2	58	7.0	14.4
22/07/18	2:10	14.1	14.1	14.1	89	12.3	0.0	---	0.00	0.0	---	14.1	14.1	14.1	760.9	0.00	0.0	0.015	0.000	15.2	58	7.0	14.4
22/07/18	2:15	14.0	14.1	14.0	89	12.2	0.0	---	0.00	0.0	---	14.0	14.1	14.1	760.9	0.00	0.0	0.015	0.000	15.1	58	6.9	14.3</



WeatherLink 5.9.2 07/08/18 14:40: Deans

File Setup Reports Browse Window Help

Browse Records

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Wind Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
22/07/18	2:55	13.7	13.7	13.7	88	11.8	0.0	---	0.00	0.0	---	13.7	13.7	13.7	760.9	0.00	0.0	0.016	0.000	14.6	58	6.4	13.8
22/07/18	3:00	13.8	13.8	13.7	88	11.9	0.0	---	0.00	0.0	---	13.8	13.8	13.8	760.9	0.00	0.0	0.016	0.000	14.5	58	6.3	13.7
22/07/18	3:05	13.8	13.8	13.8	88	11.9	0.0	---	0.00	0.0	---	13.8	13.8	13.8	760.9	0.00	0.0	0.016	0.000	14.4	58	6.3	13.7
22/07/18	3:10	13.9	13.9	13.8	88	11.9	0.0	---	0.00	0.0	---	13.9	13.9	13.9	760.9	0.00	0.0	0.015	0.000	14.4	58	6.2	13.6
22/07/18	3:15	13.9	13.9	13.9	88	11.9	0.0	N	0.00	0.4	N	13.9	13.9	13.9	760.8	0.00	0.0	0.015	0.000	14.4	58	6.2	13.6
22/07/18	3:20	14.0	14.0	13.9	88	12.0	0.0	N	0.00	0.4	N	14.0	14.0	14.0	760.8	0.00	0.0	0.015	0.000	14.3	58	6.2	13.6
22/07/18	3:25	14.1	14.1	14.0	88	12.1	0.0	N	0.00	1.3	N	14.1	14.1	14.1	760.9	0.00	0.0	0.015	0.000	14.3	58	6.1	13.5
22/07/18	3:30	14.2	14.2	14.1	87	12.0	0.0	NE	0.00	0.9	NE	14.2	14.2	14.2	760.8	0.00	0.0	0.014	0.000	14.3	58	6.1	13.5
22/07/18	3:35	14.3	14.4	14.2	86	12.0	0.0	NE	0.00	0.9	NE	14.3	14.3	14.3	760.7	0.00	0.0	0.014	0.000	14.3	58	6.1	13.5
22/07/18	3:40	14.6	14.6	14.4	86	12.2	0.0	NE	0.00	0.9	NE	14.6	14.6	14.6	760.9	0.00	0.0	0.013	0.000	14.3	58	6.1	13.5
22/07/18	3:45	14.7	14.7	14.6	85	12.2	0.0	NE	0.00	0.9	NE	14.7	14.6	14.6	760.8	0.00	0.0	0.013	0.000	14.3	58	6.1	13.5
22/07/18	3:50	14.8	14.8	14.7	84	12.1	0.0	NE	0.00	1.3	NE	14.8	14.7	14.7	760.9	0.00	0.0	0.012	0.000	14.3	58	6.1	13.5
22/07/18	3:55	14.8	14.9	14.8	84	12.2	0.0	NE	0.00	1.3	ENE	14.8	14.8	14.8	760.9	0.00	0.0	0.012	0.000	14.3	58	6.1	13.5
22/07/18	4:00	14.9	15.0	14.9	83	12.1	0.0	ENE	0.00	1.3	ENE	14.9	14.9	14.9	760.9	0.00	0.0	0.012	0.000	14.3	58	6.2	13.6
22/07/18	4:05	15.0	15.1	15.0	83	12.1	0.0	ENE	0.00	0.9	ENE	15.0	14.9	14.9	760.9	0.00	0.0	0.012	0.000	14.4	58	6.2	13.6
22/07/18	4:10	15.1	15.1	15.1	83	12.2	0.0	ENE	0.00	0.9	ENE	15.1	15.1	15.1	760.9	0.00	0.0	0.011	0.000	14.4	59	6.5	13.6
22/07/18	4:15	15.1	15.2	15.1	83	12.2	0.0	ENE	0.00	0.4	ENE	15.1	15.1	15.1	760.8	0.00	0.0	0.011	0.000	14.4	59	6.5	13.6
22/07/18	4:20	15.2	15.2	15.2	83	12.3	0.4	ENE	0.13	1.8	E	15.2	15.1	15.1	760.8	0.00	0.0	0.011	0.000	14.4	59	6.5	13.6
22/07/18	4:25	15.2	15.2	15.2	82	12.1	0.4	E	0.13	1.8	E	15.2	15.1	15.1	760.8	0.00	0.0	0.011	0.000	14.5	59	6.6	13.7
22/07/18	4:30	15.3	15.3	15.2	82	12.2	0.9	S	0.27	1.8	S	15.3	15.2	15.2	760.8	0.00	0.0	0.011	0.000	14.5	59	6.6	13.7
22/07/18	4:35	15.3	15.3	15.3	81	12.1	0.0	SW	0.00	1.8	SW	15.3	15.3	15.3	760.9	0.00	0.0	0.010	0.000	14.5	59	6.6	13.7
22/07/18	4:40	15.3	15.3	15.3	81	12.1	0.0	SW	0.00	0.9	SW	15.3	15.3	15.3	760.9	0.00	0.0	0.010	0.000	14.5	59	6.6	13.7
22/07/18	4:45	15.4	15.4	15.3	81	12.1	0.0	SW	0.00	1.3	SW	15.4	15.3	15.3	760.9	0.00	0.0	0.010	0.000	14.6	59	6.6	13.8
22/07/18	4:50	15.4	15.4	15.4	81	12.2	0.0	SW	0.00	1.8	SW	15.4	15.4	15.4	760.9	0.00	0.0	0.010	0.000	14.6	59	6.6	13.8
22/07/18	4:55	15.4	15.4	15.4	81	12.2	0.0	SW	0.00	0.4	SW	15.4	15.4	15.4	760.9	0.00	0.0	0.010	0.000	14.6	59	6.6	13.8
22/07/18	5:00	15.4	15.4	15.4	81	12.2	0.0	SW	0.00	1.8	SW	15.4	15.4	15.4	760.6	0.00	0.0	0.010	0.000	14.6	59	6.7	13.8
22/07/18	5:05	15.4	15.4	15.3	81	12.2	0.4	SW	0.13	0.9	SW	15.4	15.4	15.4	760.7	0.00	0.0	0.010	0.000	14.7	59	6.7	13.9
22/07/18	5:10	15.3	15.3	15.3	81	12.1	0.4	SW	0.13	1.3	SW	15.3	15.3	15.3	760.7	0.00	0.0	0.010	0.000	14.7	59	6.7	13.9
22/07/18	5:15	15.3	15.3	15.3	82	12.3	0.4	SW	0.13	1.3	SW	15.3	15.3	15.3	760.7	0.00	0.0	0.010	0.000	14.7	59	6.7	13.9
22/07/18	5:20	15.3	15.3	15.3	82	12.3	0.0	SW	0.00	1.3	WSW	15.3	15.3	15.3	760.8	0.00	0.0	0.010	0.000	14.7	59	6.7	13.9
22/07/18	5:25	15.3	15.3	15.3	82	12.3	0.0	SSW	0.00	0.9	WSW	15.3	15.3	15.3	760.7	0.00	0.0	0.010	0.000	14.7	59	6.7	13.9

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File Setup Reports Browse Window Help

Browse Records

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Wind Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
22/07/18	5:30	15.3	15.3	15.3	82	12.3	0.4	SW	0.13	1.8	SW	15.3	15.3	15.3	760.7	0.00	0.0	0.010	0.000	14.7	59	6.7	13.9
22/07/18	5:35	15.4	15.4	15.3	82	12.3	0.4	S	0.13	1.8	WSW	15.4	15.4	15.4	760.7	0.00	0.0	0.010	0.000	14.7	59	6.8	13.9
22/07/18	5:40	15.4	15.4	15.4	82	12.4	0.4	S	0.13	1.8	S	15.4	15.4	15.4	760.7	0.00	0.0	0.010	0.000	14.7	59	6.8	13.9
22/07/18	5:45	15.5	15.5	15.4	82	12.4	0.4	SSW	0.13	1.3	SW	15.5	15.5	15.5	760.8	0.00	0.0	0.010	0.000	14.7	59	6.8	13.9
22/07/18	5:50	15.6	15.6	15.5	82	12.5	0.9	SSW	0.27	1.8	SSW	15.6	15.6	15.6	760.8	0.00	0.0	0.010	0.000	14.8	59	6.8	14.0
22/07/18	5:55	15.6	15.6	15.6	81	12.4	0.9	SW	0.27	2.2	WSW	15.6	15.6	15.6	760.8	0.00	0.0	0.009	0.000	14.8	59	6.9	14.1
22/07/18	6:00	15.7	15.7	15.7	81	12.4	0.9	SW	0.27	2.2	SW	15.7	15.7	15.7	760.8	0.00	0.0	0.009	0.000	14.8	59	6.9	14.1
22/07/18	6:05	15.7	15.8	15.7	81	12.5	0.9	SSW	0.27	2.7	SSE	15.7	15.7	15.7	760.9	0.00	0.0	0.009	0.000	14.9	59	6.9	14.1
22/07/18	6:10	15.8	15.8	15.8	81	12.5	0.4	SSW	0.13	1.8	SSW	15.8	15.8	15.8	760.9	0.00	0.0	0.009	0.000	14.9	59	7.0	14.2
22/07/18	6:15	15.8	15.8	15.8	81	12.6	0.4	SW	0.13	1.8	W	15.8	15.8	15.8	760.9	0.00	0.0	0.009	0.000	15.0	59	7.0	14.2
22/07/18	6:20	15.9	15.9	15.8	81	12.6	0.4	SSW	0.13	1.8	SSE	15.9	15.9	15.9	760.8	0.00	0.0	0.008	0.000	15.0	59	7.1	14.3
22/07/18	6:25	15.9	16.1	15.9	80	12.5	0.4	SW	0.13	1.8	SW	15.9	15.9	15.9	760.8	0.00	0.0	0.008	0.000	15.2	59	7.2	14.4
22/07/18	6:30	16.1	16.1	16.1	80	12.6	0.4	SW	0.13	1.8	SW	16.1	16.1	16.1	760.8	0.00	0.0	0.008	0.000	15.2	59	7.3	14.4
22/07/18	6:35	16.1	16.1	16.1	80	12.7	0.4	SW	0.13	2.2	SW	16.1	16.1	16.1	760.7	0.00	0.0	0.008	0.000	15.3	59	7.3	14.5
22/07/18	6:40	16.1	16.1	16.1	80	12.7	0.9	SW	0.27	1.8	S	16.1	16.1	16.1	760.7	0.00	0.0	0.008	0.000	15.3	59	7.4	14.6
22/07/18	6:45	16.1	16.1	16.1	80	12.7	0.4	WSW	0.13	1.8	SSW	16.1	16.1	16.1	760.8	0.00	0.0	0.008	0.000	15.4	59	7.4	14.6
22/07/18	6:50	16.2	16.3	16.1	80	12.8	0.4	S	0.13	1.8	WSW	16.2	16.2	16.2	760.7	0.00	0.0	0.007	0.000	15.5	59	7.5	14.7
22/07/18	6:55	16.3	16.4	16.3	80	12.9	0.9	SW	0.27	2.2	S	16.3	16.4	16.4	760.8	0.00	0.0	0.007	0.000	15.6	59	7.6	14.8
22/07/18	7:00	16.4	16.4	16.4	79	12.7	0.9	SW	0.27	1.8	SW	16.4	16.4	16.4	760.8	0.00	0.0	0.007	0.000	15.6	59	7.6	14.8
22/07/18	7:05	16.5	16.6	16.4	79	12.8	0.0	SSW	0.00	0.9	SSW	16.5	16.6	16.6	760.9	0.00	0.0	0.006	0.000	15.7	59	7.7	15.0
22/07/18	7:10	16.6	16.6	16.6	79	12.9	0.4	WSW	0.13	1.8	SW	16.6	16.6	16.6	760.9	0.00	0.0	0.006	0.000	15.8	59	7.8	15.1
22/07/18	7:15	16.7	16.7	16.7	78	12.8	0.0	SW	0.00	1.3	SW	16.7	16.7	16.7	761.0	0.00	0.0	0.006	0.000	15.9	59	7.9	15.2
22/07/18	7:20	16.7	16.7	16.7	78	12.9	0.0	SE	0.00	0.9	SW	16.7	16.7	16.7	761.0	0.00	0.0	0.006	0.000	16.0	59	8.0	15.3
22/07/18	7:25	16.8	16.8	16.7	78	13.0	0.0	SSE	0.00	0.9	SSE	16.8	16.9	16.9	761.0	0.00	0.0						

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File Setup Reports Browse Window Help

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Wind Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
22/07/18	8:05	17.8	17.9	17.8	76	13.5	0.0	WSW	0.00	0.9	WSW	17.8	17.9	17.9	761.3	0.00	0.0	0.002	0.000	17.1	59	9.0	16.4
22/07/18	8:10	17.9	18.1	17.9	74	13.2	0.0	WSW	0.00	0.9	WSW	17.9	18.0	18.0	761.4	0.00	0.0	0.001	0.000	17.3	59	9.2	16.7
22/07/18	8:15	18.1	18.1	18.1	74	13.3	0.0	WSW	0.00	1.3	WSW	18.1	18.1	18.1	761.3	0.00	0.0	0.001	0.000	17.4	59	9.3	16.8
22/07/18	8:20	18.1	18.2	18.1	73	13.2	0.0	WSW	0.00	1.3	WSW	18.1	18.2	18.2	761.3	0.00	0.0	0.001	0.000	17.6	59	9.4	16.9
22/07/18	8:25	18.1	18.2	18.1	74	13.4	0.0	WSW	0.00	0.9	WSW	18.1	18.2	18.2	761.3	0.00	0.0	0.001	0.000	17.7	59	9.6	17.2
22/07/18	8:30	18.2	18.2	18.2	74	13.5	0.0	WSW	0.00	0.9	WSW	18.2	18.3	18.3	761.3	0.00	0.0	0.000	0.000	17.8	59	9.7	17.3
22/07/18	8:35	18.3	18.4	18.2	74	13.6	0.4	WSW	0.13	1.3	WSW	18.3	18.4	18.4	761.3	0.00	0.0	0.000	0.000	18.0	59	9.9	17.5
22/07/18	8:40	18.5	18.6	18.4	73	13.6	0.0	WSW	0.00	0.9	WSW	18.5	18.6	18.6	761.4	0.00	0.0	0.000	0.000	18.1	59	10.0	17.6
22/07/18	8:45	18.7	18.8	18.6	73	13.7	0.4	SW	0.13	2.2	SW	18.7	18.8	18.8	761.3	0.00	0.0	0.000	0.001	18.2	59	10.1	17.7
22/07/18	8:50	18.8	18.9	18.8	71	13.5	0.4	SW	0.13	3.1	WSW	18.8	18.9	18.9	761.3	0.00	0.0	0.000	0.002	18.4	59	10.2	17.9
22/07/18	8:55	18.9	18.9	18.9	71	13.5	0.4	WSW	0.13	2.2	WSW	18.9	19.1	19.1	761.2	0.00	0.0	0.000	0.002	18.6	59	10.4	18.1
22/07/18	9:00	19.1	19.1	18.9	71	13.7	0.4	WNW	0.13	2.7	WSW	19.1	19.2	19.2	761.3	0.00	0.0	0.000	0.003	18.7	59	10.5	18.3
22/07/18	9:05	19.2	19.2	19.1	70	13.6	0.4	SW	0.13	2.2	SSW	19.2	19.3	19.3	761.2	0.00	0.0	0.000	0.003	18.8	59	10.6	18.4
22/07/18	9:10	19.3	19.4	19.2	70	13.7	0.4	SW	0.13	1.8	SW	19.3	19.6	19.6	761.2	0.00	0.0	0.000	0.003	19.0	59	10.8	18.6
22/07/18	9:15	19.4	19.5	19.4	70	13.8	0.9	WSW	0.27	2.2	WSW	19.4	19.7	19.7	761.3	0.00	0.0	0.000	0.004	19.2	59	11.0	18.8
22/07/18	9:20	19.6	19.6	19.5	69	13.8	0.4	SW	0.13	2.7	W	19.6	19.8	19.8	761.3	0.00	0.0	0.000	0.004	19.3	59	11.1	19.0
22/07/18	9:25	19.7	19.9	19.7	69	13.9	0.9	WNW	0.27	3.1	WNW	19.7	19.9	19.9	761.2	0.00	0.0	0.000	0.005	19.6	59	11.3	19.3
22/07/18	9:30	19.9	20.1	19.9	68	13.9	0.4	WSW	0.13	1.8	WSW	19.9	20.2	20.2	761.2	0.00	0.0	0.000	0.006	19.8	59	11.5	19.5
22/07/18	9:35	20.2	20.3	20.1	68	14.1	0.4	W	0.13	1.8	W	20.2	20.4	20.4	761.2	0.00	0.0	0.000	0.007	20.0	59	11.7	19.8
22/07/18	9:40	20.6	20.7	20.4	66	14.0	0.4	SW	0.13	2.7	WSW	20.6	20.6	20.6	761.2	0.00	0.0	0.000	0.008	20.2	60	12.2	20.0
22/07/18	9:45	20.8	20.8	20.7	65	14.0	0.0	WSW	0.00	1.8	WSW	20.8	20.7	20.7	761.2	0.00	0.0	0.000	0.008	20.5	60	12.5	20.2
22/07/18	9:50	20.9	20.9	20.8	65	14.1	0.9	SW	0.27	4.9	SW	20.9	20.8	20.8	761.2	0.00	0.0	0.000	0.009	20.8	60	12.7	20.4
22/07/18	9:55	20.9	20.9	20.9	65	14.1	0.9	W	0.27	2.7	SW	20.9	20.8	20.8	761.2	0.00	0.0	0.000	0.009	21.1	60	13.0	20.6
22/07/18	10:00	20.9	21.0	20.9	66	14.4	0.4	SW	0.13	2.2	WSW	20.9	20.8	20.8	761.2	0.00	0.0	0.000	0.009	21.3	60	13.2	20.9
22/07/18	10:05	21.1	21.1	21.0	66	14.5	0.4	SSW	0.13	1.3	W	21.1	20.9	20.9	761.2	0.00	0.0	0.000	0.009	21.6	60	13.5	21.2
22/07/18	10:10	21.2	21.3	21.1	65	14.4	0.9	SW	0.27	2.2	SW	21.2	21.1	21.1	761.1	0.00	0.0	0.000	0.010	21.8	59	13.4	21.5
22/07/18	10:15	21.3	21.3	21.3	66	14.7	1.3	W	0.40	3.1	WSW	21.3	21.3	21.3	761.1	0.00	0.0	0.000	0.010	22.0	59	13.6	21.8
22/07/18	10:20	21.4	21.6	21.3	65	14.6	0.4	WNW	0.13	1.8	WNW	21.4	21.3	21.3	761.1	0.00	0.0	0.000	0.011	22.3	59	13.9	22.2
22/07/18	10:25	21.7	21.8	21.6	66	15.1	0.9	NW	0.27	2.7	WSW	21.7	21.7	21.7	761.0	0.00	0.0	0.000	0.012	22.5	59	14.1	22.6
22/07/18	10:30	21.9	21.9	21.8	64	14.8	0.4	SW	0.13	3.1	WNW	21.9	21.9	21.9	761.1	0.00	0.0	0.000	0.012	22.7	59	14.3	22.9
22/07/18	10:35	21.9	21.9	21.9	64	14.8	0.9	W	0.27	2.2	WNW	21.9	21.9	21.9	761.1	0.00	0.0	0.000	0.013	22.9	59	14.5	23.2

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File Setup Reports Browse Window Help

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Wind Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
22/07/18	10:40	21.8	21.9	21.7	63	14.5	0.4	WSW	0.13	2.2	WSW	21.8	21.8	21.8	761.1	0.00	0.0	0.000	0.012	23.2	59	14.7	23.4
22/07/18	10:45	21.7	21.7	21.7	65	14.9	0.9	N	0.27	3.1	N	21.7	21.7	21.7	761.0	0.00	0.0	0.000	0.012	23.4	59	14.9	23.7
22/07/18	10:50	21.7	21.7	21.7	63	14.4	0.4	W	0.13	1.8	WSW	21.7	21.6	21.6	761.0	0.00	0.0	0.000	0.012	23.6	59	15.1	23.9
22/07/18	10:55	21.8	21.9	21.7	65	15.0	0.9	W	0.27	3.1	WNW	21.8	21.8	21.8	761.1	0.00	0.0	0.000	0.012	23.8	59	15.3	24.2
22/07/18	11:00	22.1	22.1	21.9	64	14.9	0.4	NW	0.13	1.8	NW	22.1	22.1	22.1	761.1	0.00	0.0	0.000	0.013	23.9	58	15.2	24.3
22/07/18	11:05	22.2	22.3	22.1	64	15.1	0.4	WNW	0.13	1.3	WNW	22.2	22.3	22.3	760.9	0.00	0.0	0.000	0.014	24.1	58	15.3	24.5
22/07/18	11:10	22.4	22.5	22.3	61	14.5	0.4	WSW	0.13	1.8	WSW	22.4	22.6	22.6	761.0	0.00	0.0	0.000	0.014	24.3	58	15.5	24.7
22/07/18	11:15	22.5	22.5	22.5	62	14.9	0.4	WSW	0.13	2.7	NW	22.5	22.7	22.7	761.0	0.00	0.0	0.000	0.014	24.5	58	15.7	24.8
22/07/18	11:20	22.6	22.7	22.5	63	15.2	0.0	SSE	0.00	1.3	SSE	22.6	22.8	22.8	761.0	0.00	0.0	0.000	0.015	24.7	58	15.9	25.1
22/07/18	11:25	22.8	22.9	22.7	62	15.1	0.0	S	0.00	1.8	WSW	22.8	23.1	23.1	761.0	0.00	0.0	0.000	0.015	24.9	58	16.1	25.2
22/07/18	11:30	22.9	22.9	22.8	62	15.2	0.4	W	0.13	1.3	NNW	22.9	23.2	23.2	760.9	0.00	0.0	0.000	0.016	25.1	58	16.2	25.4
22/07/18	11:35	22.9	22.9	22.9	62	15.2	0.4	WNW	0.13	1.8	NW	22.9	23.2	23.2	761.0	0.00	0.0	0.000	0.016	25.2	58	16.4	25.6
22/07/18	11:40	22.9	23.1	22.9	60	14.8	0.0	WNW	0.00	0.9	WNW	22.9	23.2	23.2	761.0	0.00	0.0	0.000	0.016	25.4	58	16.6	25.8
22/07/18	11:45	23.3	23.6	23.1	60	15.1	0.0	WNW	0.00	0.4	WNW	23.3	23.7	23.7	761.0	0.00	0.0	0.000	0.017	25.6	58	16.7	25.9
22/07/18	11:50	23.7	23.7	23.6	59	15.2	1.3	N	0.40	2.7	NE	23.7	24.1	24.1	761.0	0.00	0.0	0.000	0.019	25.7	58	16.8	26.2
22/07/18	11:55	23.7	23.7	23.7	61	15.7	1.3	N	0.40	2.7	NE	23.7	24.2	24.2	761.0	0.00	0.0	0.000	0.019	25.9	58	17.0	26.3
22/07/18	12:00	23.6	23.7	23.6	59	15.1	0.0	NNW	0.00	0.9	NNW	23.6	23.9	23.9	760.9	0.00	0.0	0.000	0.018	26.1	58	17.2	26.6
22/07/18	12:05	23.6	23.7	23.6	60	15.4	0.9	N	0.27	2.2	N	23.6	24.1	24.1	761.1	0.00	0.0	0.000	0.018	26.3	58	17.4	26.8
22/07/18	12:10	23.8	23.9	23.7	59	15.3	0.9	NNE	0.27	2.7	NNE	23.8	24.3	24.3	761.1	0.00	0.0	0.000	0.019	26.5	58	17.6	27.1
22/07/18	12:15	23.9	23.9	23.8	58	15.2	1.8	N	0.54	3.6	N	23.9	24.3	24.3	761.0	0.00	0.0	0.000	0.019	26.7	58	17.8	27.3
22/07/18	12:20	23.7	23.8	23.7	59	15.2	0.9	N	0.27	2.7	N	23.7	24.2	24.2	760.9	0.00	0.0	0.000	0.019	26.9	58	18.0	27.6
22/07/18	12:25	23.6	23.7	23.6	59	15.1	0.4	NNE	0.13	1.8	NNE	23.6	24.0	24.0	761.0	0.00	0.0	0.000	0.018	27.1	58	18.1	27.8
22/07/18	12:30	23.7	23.8	23.6	60	15.5	0.0	---	0.00	0.0	---	23.7	24.2	24.2	760.9	0.00	0.0	0.000	0.019	27.2	58	18.2	28.0
22/07/18	12:35	24.1	24.3	23.8	58	15.3	0.0	NNE	0.00	0.9	NNE	24.1	24.4	24.4									

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File Setup Reports Browse Window Help

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Wind Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
22/07/18	13:15	26.5	26.6	26.4	54	16.4	0.9	N	0.27	2.2	N	26.5	26.8	26.8	760.8	0.00	0.0	0.000	0.028	28.7	58	19.6	30.4
22/07/18	13:20	26.9	27.1	26.6	52	16.3	0.9	W	0.27	2.7	WNW	26.9	27.2	27.2	760.7	0.00	0.0	0.000	0.030	28.9	58	19.8	30.8
22/07/18	13:25	27.2	27.2	27.1	51	16.2	0.4	NNW	0.13	1.3	NW	27.2	27.3	27.3	760.7	0.00	0.0	0.000	0.031	29.1	59	20.3	31.2
22/07/18	13:30	27.1	27.2	27.1	51	16.1	0.9	N	0.27	1.8	N	27.1	27.3	27.3	760.7	0.00	0.0	0.000	0.030	29.3	59	20.4	31.4
22/07/18	13:35	27.1	27.2	26.9	50	15.8	1.3	N	0.40	4.0	N	27.1	27.2	27.2	760.6	0.00	0.0	0.000	0.030	29.4	59	20.6	31.7
22/07/18	13:40	26.7	26.9	26.6	51	15.7	0.4	N	0.13	1.3	N	26.7	26.8	26.8	760.6	0.00	0.0	0.000	0.029	29.6	59	20.7	32.1
22/07/18	13:45	26.7	26.8	26.6	51	15.7	0.0	N	0.00	0.9	N	26.7	26.8	26.8	760.7	0.00	0.0	0.000	0.029	29.7	59	20.9	32.3
22/07/18	13:50	26.9	27.1	26.8	50	15.6	0.4	NNE	0.13	1.3	NNE	26.9	27.0	27.0	760.6	0.00	0.0	0.000	0.030	29.9	59	21.0	32.6
22/07/18	13:55	27.1	27.1	27.1	51	16.1	1.3	N	0.40	2.7	NNE	27.1	27.2	27.2	760.7	0.00	0.0	0.000	0.030	30.0	59	21.1	32.8
22/07/18	14:00	27.2	27.3	27.1	53	16.8	0.9	N	0.27	2.7	W	27.2	27.5	27.5	760.7	0.00	0.0	0.000	0.031	30.2	59	21.3	33.2
22/07/18	14:05	27.7	28.0	27.3	48	15.7	0.4	WNW	0.13	2.7	W	27.7	27.8	27.8	760.6	0.00	0.0	0.000	0.032	30.3	60	21.7	33.8
22/07/18	14:10	28.3	28.6	28.0	47	15.9	0.4	NW	0.13	2.7	NNW	28.3	28.8	28.8	760.6	0.00	0.0	0.000	0.035	30.5	60	21.9	34.1
22/07/18	14:15	28.7	28.7	28.6	48	16.6	0.0	NNW	0.00	0.9	NNW	28.7	29.4	29.4	760.5	0.00	0.0	0.000	0.036	30.7	60	22.0	34.4
22/07/18	14:20	28.6	28.7	28.6	48	16.5	0.4	N	0.13	1.3	SSE	28.6	29.3	29.3	760.5	0.00	0.0	0.000	0.036	30.9	60	22.2	34.7
22/07/18	14:25	28.6	28.6	28.4	47	16.1	0.9	NNE	0.27	1.8	NW	28.6	29.1	29.1	760.5	0.00	0.0	0.000	0.035	31.1	60	22.4	34.9
22/07/18	14:30	28.4	28.4	28.3	47	16.0	0.4	NNE	0.13	2.2	NNE	28.4	28.9	28.9	760.5	0.00	0.0	0.000	0.035	31.3	61	22.9	35.7
22/07/18	14:35	28.6	28.8	28.6	49	16.8	0.9	WNW	0.27	2.7	WNW	28.6	29.4	29.4	760.4	0.00	0.0	0.000	0.036	31.5	61	23.1	36.1
22/07/18	14:40	28.8	28.9	28.8	46	16.1	0.4	NW	0.13	2.2	NW	28.8	29.5	29.5	760.2	0.00	0.0	0.000	0.036	31.7	61	23.3	36.7
22/07/18	14:45	28.4	28.9	28.0	48	16.4	0.9	NNE	0.27	2.2	N	28.4	29.0	29.0	760.2	0.00	0.0	0.000	0.035	31.9	61	23.5	37.3
22/07/18	14:50	27.9	28.0	27.9	51	16.9	0.9	NNE	0.27	2.7	NNE	27.9	28.4	28.4	760.5	0.00	0.0	0.000	0.033	32.1	60	23.4	37.4
22/07/18	14:55	28.2	28.2	28.0	48	16.1	0.4	N	0.13	2.2	N	28.2	28.6	28.6	760.3	0.00	0.0	0.000	0.034	32.3	60	23.5	37.8
22/07/18	15:00	28.1	28.2	27.9	47	15.7	0.4	N	0.13	1.8	N	28.1	28.3	28.3	760.3	0.00	0.0	0.000	0.034	32.4	60	23.7	38.2
22/07/18	15:05	27.7	27.9	27.7	51	16.7	0.9	NNW	0.27	2.2	N	27.7	28.1	28.1	760.4	0.00	0.0	0.000	0.033	32.7	60	23.9	38.8
22/07/18	15:10	27.9	28.2	27.7	48	15.9	0.9	NNW	0.27	2.2	NNW	27.9	28.2	28.2	760.5	0.00	0.0	0.000	0.033	32.8	60	24.0	39.1
22/07/18	15:15	28.4	28.6	28.2	49	16.6	0.9	N	0.27	2.2	N	28.4	29.0	29.0	760.4	0.00	0.0	0.000	0.035	33.1	60	24.3	39.8
22/07/18	15:20	28.6	28.7	28.6	48	16.5	0.9	NNW	0.27	2.2	NW	28.6	29.3	29.3	760.3	0.00	0.0	0.000	0.036	33.2	60	24.4	40.2
22/07/18	15:25	28.2	28.6	27.7	49	16.4	0.9	NNW	0.27	2.7	N	28.2	28.7	28.7	760.1	0.00	0.0	0.000	0.034	33.4	60	24.6	40.8
22/07/18	15:30	27.3	27.7	27.2	50	16.0	0.4	N	0.13	2.7	N	27.3	27.5	27.5	760.3	0.00	0.0	0.000	0.031	33.7	59	24.5	41.1
22/07/18	15:35	27.1	27.2	27.1	49	15.5	0.4	N	0.13	1.3	N	27.1	27.2	27.2	760.2	0.00	0.0	0.000	0.030	33.7	58	24.3	40.9
22/07/18	15:40	27.2	27.3	27.2	53	16.8	0.0	---	0.00	0.0	---	27.2	27.6	27.6	760.2	0.00	0.0	0.000	0.031	33.7	58	24.3	40.9
22/07/18	15:45	27.2	27.3	27.2	49	15.6	0.0	N	0.00	0.9	NNW	27.2	27.3	27.3	760.2	0.00	0.0	0.000	0.031	33.8	58	24.4	41.2

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File Setup Reports Browse Window Help

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Wind Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
22/07/18	15:50	27.3	27.4	27.3	49	15.7	0.4	SSE	0.13	2.7	SSE	27.3	27.4	27.4	760.1	0.00	0.0	0.000	0.031	33.7	57	24.0	40.6
22/07/18	15:55	27.7	28.1	27.4	51	16.7	0.4	WNW	0.13	1.3	WSW	27.7	28.1	28.1	760.2	0.00	0.0	0.000	0.033	33.8	57	24.1	40.9
22/07/18	16:00	28.5	28.8	28.1	47	16.1	0.4	NW	0.13	1.8	NW	28.5	29.1	29.1	760.1	0.00	0.0	0.000	0.035	33.8	57	24.1	40.9
22/07/18	16:05	28.9	28.9	28.8	43	15.1	0.4	NNW	0.13	1.8	NNW	28.9	29.3	29.3	760.1	0.00	0.0	0.000	0.037	33.9	57	24.2	41.2
22/07/18	16:10	28.7	28.8	28.4	49	16.2	0.4	NNW	0.13	1.8	NNW	28.7	29.3	29.3	760.1	0.00	0.0	0.000	0.036	34.1	57	24.3	41.5
22/07/18	16:15	28.2	28.4	28.0	48	16.2	0.0	N	0.00	1.3	N	28.2	28.7	28.7	760.1	0.00	0.0	0.000	0.034	34.2	56	24.1	41.4
22/07/18	16:20	27.8	28.0	27.8	51	16.8	0.4	N	0.13	1.8	N	27.8	28.3	28.3	760.1	0.00	0.0	0.000	0.033	34.2	56	24.2	41.6
22/07/18	16:25	27.7	27.8	27.7	49	16.0	0.4	WNW	0.13	0.9	WNW	27.7	27.9	27.9	760.2	0.00	0.0	0.000	0.033	34.2	56	24.2	41.6
22/07/18	16:30	27.7	27.8	27.7	49	16.0	0.0	N	0.00	0.4	N	27.7	27.9	27.9	760.2	0.00	0.0	0.000	0.032	34.2	56	24.2	41.6
22/07/18	16:35	27.8	27.8	27.8	49	16.1	0.0	N	0.00	0.4	N	27.8	28.1	28.1	760.1	0.00	0.0	0.000	0.033	34.2	55	23.9	41.2
22/07/18	16:40	27.8	27.8	27.8	50	16.4	0.0	N	0.00	0.4	N	27.8	28.1	28.1	760.1	0.00	0.0	0.000	0.033	34.2	55	23.8	41.1
22/07/18	16:45	27.7	27.8	27.7	51	16.6	0.0	---	0.00	0.0	---	27.7	28.1	28.1	760.1	0.00	0.0	0.000	0.032	34.1	55	23.7	40.8
22/07/18	16:50	27.6	27.7	27.6	51	16.6	0.0	---	0.00	0.0	---	27.6	27.9	27.9	760.1	0.00	0.0	0.000	0.032	34.0	55	23.7	40.6
22/07/18	16:55	27.4	27.6	27.4	53	17.0	0.0	---	0.00	0.0	---	27.4	27.9	27.9	760.1	0.00	0.0	0.000	0.032	33.9	55	23.6	40.5
22/07/18	17:00	27.3	27.3	27.3	52	16.6	0.0	---	0.00	0.0	---	27.3	27.7	27.7	760.1	0.00	0.0	0.000	0.031	33.8	54	23.2	39.7
22/07/18	17:05	27.2	27.3	27.1	49	15.6	0.0	---	0.00	0.0	---	27.2	27.3	27.3	760.1	0.00	0.0	0.000	0.031	33.6	54	23.0	39.3
22/07/18	17:10	27.0	27.1	26.8	54	16.9	0.0	N	0.00	0.4	N	27.0	27.4	27.4	760.1	0.00	0.0	0.000	0.030	33.4	54	22.8	38.7
22/07/18	17:15	26.7	26.8	26.6	54	16.6	0.0	---	0.00	0.0	---	26.7	27.1	27.1	760.0	0.00	0.0	0.000	0.029	33.2	54	22.6	38.2
22/07/18	17:20	26.5	26.6	26.4	55	16.7	0.0	N	0.00	0.4	N	26.5	26.9	26.9	760.0	0.00	0.0	0.000	0.028	32.9	54	22.4	37.7
22/07/18	17:25	26.3	26.4	26.3	55	16.6	0.0	---	0.00	0.0	---	26.3	26.7	26.7	759.9	0.00	0.0	0.000	0.028	32.7	54	22.2	37.2
22/07/18	17:30	26.3	26.3	26.3	56	16.9	0.0	N	0.00	0.4	N	26.3	26.7	26.7	759.9	0.00	0.0	0.000	0.028	32.6	54	22.0	36.8
22/07/18	17:35	26.3	26.3	26.2	56	16.9	0.0	N	0.00	0.9	N	26.3	26.7	26.7	759.9	0.00	0.0	0.000	0.028	32.4	54	21.9	36.4
22/07/18	17:40	26.2	26.2	26.2	56	16.7	0.0	N	0.00	0.9	N	26.2	26.6	26.6	760.0	0.00	0.0	0.000	0.027	32.2	54	21.7	36.0
22/07/18	17:45	26.2	26.2	26.2	57	17.0	0.0	N	0.00	1.3	N	26.2	26.7	26.7	759.9	0.00	0.0	0.000	0.027	32.0	54	21.5	35.7
22/07/18	17:50	26.3	26.3	26.2	56	16.8	0.4	N	0.13	1.8	N	26.3	26.										

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Wind Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
22/07/18	18:25	27.2	27.4	26.9	52	16.5	0.0	SW	0.00	1.3	SW	27.2	27.5	27.5	760.1	0.00	0.0	0.000	0.031	31.1	54	20.7	33.8
22/07/18	18:30	27.6	27.7	27.4	53	17.2	0.9	NNE	0.27	2.7	NE	27.6	28.1	28.1	760.0	0.00	0.0	0.000	0.032	31.0	55	20.9	33.8
22/07/18	18:35	27.4	27.6	27.2	56	17.8	0.4	N	0.13	2.2	WNW	27.4	28.1	28.1	760.1	0.00	0.0	0.000	0.031	30.9	55	20.8	33.7
22/07/18	18:40	26.9	27.2	26.6	57	17.7	0.4	WSW	0.13	1.8	WSW	26.9	27.5	27.5	760.1	0.00	0.0	0.000	0.030	30.9	54	20.5	33.4
22/07/18	18:45	26.4	26.6	26.2	58	17.5	0.9	NW	0.27	2.7	N	26.4	27.0	27.0	760.1	0.00	0.0	0.000	0.028	30.8	54	20.4	33.3
22/07/18	18:50	25.9	26.2	25.7	60	17.6	0.9	N	0.27	2.7	N	25.9	26.5	26.5	760.1	0.00	0.0	0.000	0.026	30.6	54	20.2	33.1
22/07/18	18:55	25.5	25.7	25.3	61	17.4	0.4	N	0.13	1.8	N	25.5	26.1	26.1	760.0	0.00	0.0	0.000	0.025	30.5	54	20.1	32.9
22/07/18	19:00	25.2	25.3	25.0	62	17.4	0.4	N	0.13	1.8	N	25.2	25.7	25.7	760.0	0.00	0.0	0.000	0.024	30.3	54	20.0	32.6
22/07/18	19:05	24.9	25.0	24.8	64	17.6	0.4	N	0.13	1.3	N	24.9	25.6	25.6	760.1	0.00	0.0	0.000	0.023	30.2	54	19.8	32.2
22/07/18	19:10	24.7	24.8	24.6	64	17.5	0.0	---	0.00	0.0	---	24.7	25.4	25.4	760.2	0.00	0.0	0.000	0.022	30.0	54	19.7	31.9
22/07/18	19:15	24.6	24.6	24.6	65	17.6	0.0	---	0.00	0.0	---	24.6	25.3	25.3	760.2	0.00	0.0	0.000	0.022	29.8	54	19.5	31.5
22/07/18	19:20	24.6	24.6	24.5	65	17.5	0.0	---	0.00	0.4	N	24.6	25.2	25.2	760.2	0.00	0.0	0.000	0.022	29.6	54	19.3	31.2
22/07/18	19:25	24.5	24.5	24.5	64	17.2	0.0	---	0.00	0.4	N	24.5	25.1	25.1	760.2	0.00	0.0	0.000	0.021	29.4	54	19.2	30.9
22/07/18	19:30	24.4	24.5	24.4	65	17.4	0.0	---	0.00	1.3	N	24.4	25.1	25.1	760.2	0.00	0.0	0.000	0.021	29.3	54	19.1	30.8
22/07/18	19:35	24.4	24.5	24.4	65	17.4	0.0	---	0.00	0.0	---	24.4	25.1	25.1	760.2	0.00	0.0	0.000	0.021	29.2	54	18.9	30.6
22/07/18	19:40	24.4	24.5	24.3	66	17.7	0.0	---	0.00	0.0	---	24.4	25.2	25.2	760.1	0.00	0.0	0.000	0.021	29.0	54	18.8	30.4
22/07/18	19:45	24.3	24.3	24.1	66	17.5	0.0	---	0.00	0.0	---	24.3	25.0	25.0	760.2	0.00	0.0	0.000	0.021	28.8	54	18.5	30.1
22/07/18	19:50	23.9	24.1	23.7	67	17.4	0.0	N	0.00	0.9	N	23.9	24.8	24.8	760.2	0.00	0.0	0.000	0.019	28.6	54	18.4	29.8
22/07/18	19:55	23.5	23.7	23.3	68	17.3	0.0	---	0.00	0.0	---	23.5	24.3	24.3	760.3	0.00	0.0	0.000	0.018	28.4	54	18.2	29.4
22/07/18	20:00	23.2	23.3	23.1	69	17.2	0.0	---	0.00	0.0	---	23.2	23.9	23.9	760.3	0.00	0.0	0.000	0.017	28.1	54	17.9	28.9
22/07/18	20:05	22.8	23.1	22.7	70	17.1	0.0	---	0.00	0.0	---	22.8	23.5	23.5	760.4	0.00	0.0	0.000	0.016	27.8	54	17.7	28.6
22/07/18	20:10	22.6	22.7	22.5	70	16.8	0.0	---	0.00	0.0	---	22.6	23.1	23.1	760.4	0.00	0.0	0.000	0.015	27.6	54	17.4	28.1
22/07/18	20:15	22.3	22.5	22.2	71	16.8	0.0	---	0.00	0.0	---	22.3	22.8	22.8	760.5	0.00	0.0	0.000	0.014	27.3	54	17.2	27.8
22/07/18	20:20	22.1	22.2	22.0	72	16.8	0.0	---	0.00	0.0	---	22.1	22.6	22.6	760.5	0.00	0.0	0.000	0.013	27.0	54	16.9	27.4
22/07/18	20:25	21.9	22.0	21.8	73	16.9	0.0	---	0.00	0.0	---	21.9	22.4	22.4	760.6	0.00	0.0	0.000	0.013	26.7	54	16.6	27.1
22/07/18	20:30	21.7	21.8	21.6	73	16.7	0.0	N	0.00	0.9	N	21.7	22.1	22.1	760.6	0.00	0.0	0.000	0.012	26.5	54	16.4	26.8
22/07/18	20:35	21.6	21.6	21.6	74	16.7	0.0	---	0.00	0.0	---	21.6	21.9	21.9	760.6	0.00	0.0	0.000	0.011	26.2	54	16.2	26.5
22/07/18	20:40	21.4	21.4	21.3	75	16.8	0.0	---	0.00	0.0	---	21.4	21.8	21.8	760.7	0.00	0.0	0.000	0.011	25.9	54	15.9	26.2
22/07/18	20:45	21.2	21.3	21.1	76	16.8	0.0	---	0.00	0.0	---	21.2	21.6	21.6	760.6	0.00	0.0	0.000	0.010	25.7	54	15.7	25.9
22/07/18	20:50	21.0	21.1	20.9	76	16.6	0.0	---	0.00	0.0	---	21.0	21.4	21.4	760.7	0.00	0.0	0.000	0.009	25.4	54	15.4	25.6
22/07/18	20:55	20.8	20.9	20.7	78	16.9	0.0	---	0.00	0.0	---	20.8	21.4	21.4	760.7	0.00	0.0	0.000	0.009	25.2	54	15.2	25.3

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Wind Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
22/07/18	21:00	20.6	20.7	20.5	78	16.6	0.0	---	0.00	0.0	---	20.6	21.3	21.3	760.8	0.00	0.0	0.000	0.008	24.9	54	14.9	25.0
22/07/18	21:05	20.4	20.5	20.3	79	16.7	0.0	---	0.00	0.0	---	20.4	21.2	21.2	760.8	0.00	0.0	0.000	0.007	24.7	54	14.7	24.8
22/07/18	21:10	20.2	20.3	20.1	79	16.5	0.0	---	0.00	0.0	---	20.2	20.9	20.9	760.8	0.00	0.0	0.000	0.007	24.4	54	14.5	24.6
22/07/18	21:15	19.9	20.1	19.8	80	16.4	0.0	---	0.00	0.0	---	19.9	20.7	20.7	760.9	0.00	0.0	0.000	0.006	24.2	54	14.3	24.3
22/07/18	21:20	19.7	19.8	19.6	80	16.1	0.0	---	0.00	0.0	---	19.7	20.3	20.3	760.9	0.00	0.0	0.000	0.005	23.9	54	14.0	24.1
22/07/18	21:25	19.4	19.6	19.3	81	16.1	0.0	---	0.00	0.0	---	19.4	20.1	20.1	760.9	0.00	0.0	0.000	0.004	23.6	54	13.8	23.8
22/07/18	21:30	19.2	19.3	19.1	82	16.1	0.0	---	0.00	0.0	---	19.2	19.8	19.8	761.0	0.00	0.0	0.000	0.003	23.4	54	13.6	23.4
22/07/18	21:35	19.1	19.1	18.9	82	15.9	0.0	---	0.00	0.0	---	19.1	19.6	19.6	761.0	0.00	0.0	0.000	0.003	23.2	54	13.3	23.2
22/07/18	21:40	18.9	18.9	18.8	83	15.9	0.0	---	0.00	0.0	---	18.9	19.4	19.4	761.0	0.00	0.0	0.000	0.002	22.9	54	13.1	22.8
22/07/18	21:45	18.7	18.8	18.6	83	15.7	0.0	---	0.00	0.0	---	18.7	19.2	19.2	761.0	0.00	0.0	0.000	0.001	22.7	54	12.9	22.6
22/07/18	21:50	18.6	18.6	18.4	83	15.6	0.0	---	0.00	0.0	---	18.6	19.0	19.0	761.0	0.00	0.0	0.000	0.001	22.4	54	12.6	22.2
22/07/18	21:55	18.4	18.4	18.3	84	15.6	0.0	---	0.00	0.0	---	18.4	18.8	18.8	761.1	0.00	0.0	0.000	0.000	22.2	54	12.4	21.8
22/07/18	22:00	18.3	18.3	18.2	84	15.5	0.0	---	0.00	0.0	---	18.3	18.7	18.7	761.2	0.00	0.0	0.000	0.000	21.9	54	12.2	21.4
22/07/18	22:05	18.2	18.2	18.1	85	15.6	0.0	---	0.00	0.0	---	18.2	18.6	18.6	761.2	0.00	0.0	0.001	0.000	21.7	54	12.0	21.1
22/07/18	22:10	18.1	18.1	18.1	85	15.5	0.0	---	0.00	0.0	---	18.1	18.4	18.4	761.3	0.00	0.0	0.001	0.000	21.4	54	11.7	20.8
22/07/18	22:15	18.1	18.1	18.1	86	15.7	0.0	---	0.00	0.0	---	18.1	18.4	18.4	761.3	0.00	0.0	0.001	0.000	21.2	54	11.5	20.5
22/07/18	22:20	18.1	18.1	18.1	86	15.7	0.0	---	0.00	0.0	---	18.1	18.4	18.4	761.3	0.00	0.0	0.001	0.000	21.0	54	11.3	20.3
22/07/18	22:25	17.9	18.1	17.9	86	15.6	0.0	---	0.00	0.0	---	17.9	18.3	18.3	761.2	0.00	0.0	0.001	0.000	20.8	55	11.4	20.2
22/07/18	22:30	17.9	17.9	17.9	86	15.6	0.0	N	0.00	0.4	N	17.9	18.3	18.3	761.2	0.00	0.0	0.001	0.000	20.6	55	11.2	20.0
22/07/18	22:35	17.9	17.9	17.9	86	15.5	0.0	---	0.00	0.0	---	17.9	18.3	18.3	761.3	0.00	0.0	0.002	0.000	20.4	55	11.0	19.9
22/07/18	22:40	17.9	17.9	17.9	87	15.7	0.0	---	0.00	0.0	---	17.9	18.3	18.3	761.3	0.00	0.0	0.002	0.000	20.2	55	10.8	19.7
22/07/18	22:45	17.9	17.9	17.8	87	15.7	0.0	---	0.00	0.0	---	17.9	18.3	18.3	761.4	0.00	0.0	0.002	0.000	20.0	55	10.7	19.6
22/07/18	22:50	17.8	17.8	17.8	87	15.6	0.0	N	0.00	0.4	N	17.8	18.2	18.2	761.4	0.00	0.0	0.002	0.000	19.8	55	10.5	19.4
22/07/18	22:55	17.8	17.9	17.8	87	15.6	0.0	N	0.00	1.3	N	17.8	18.2	18.2	761.4	0.00	0.0	0.002	0.000	19.7	55	10.4	19.2
22/07/18	23:00	17.9	17.																				



Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Wind Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
22/07/18	23:35	17.6	17.7	17.5	86	15.2	0.0	---	0.00	0.0	---	17.6	17.9	17.9	761.4	0.00	0.0	0.003	0.000	18.7	56	9.8	18.2
22/07/18	23:40	17.5	17.5	17.5	86	15.1	0.0	N	0.00	0.9	N	17.5	17.8	17.8	761.4	0.00	0.0	0.003	0.000	18.6	56	9.7	18.0
22/07/18	23:45	17.5	17.5	17.5	86	15.1	0.4	ESE	0.13	1.3	NNE	17.5	17.8	17.8	761.5	0.00	0.0	0.003	0.000	18.5	56	9.6	17.9
22/07/18	23:50	17.5	17.5	17.5	86	15.1	0.0	ESE	0.00	1.3	ESE	17.5	17.8	17.8	761.6	0.00	0.0	0.003	0.000	18.4	56	9.4	17.8
22/07/18	23:55	17.4	17.5	17.4	86	15.1	0.4	SE	0.13	1.3	SE	17.4	17.8	17.8	761.5	0.00	0.0	0.003	0.000	18.3	57	9.6	17.7
23/07/18	00:00	17.4	17.4	17.3	86	15.1	0.0	SE	0.00	1.3	SE	17.4	17.8	17.8	761.4	0.00	0.0	0.003	0.000	18.2	57	9.6	17.6
23/07/18	0:05	17.3	17.3	17.3	86	15.0	0.4	SW	0.13	2.2	S	17.3	17.7	17.7	761.5	0.00	0.0	0.003	0.000	18.1	57	9.5	17.5
23/07/18	0:10	17.3	17.3	17.3	86	15.0	0.4	WSW	0.13	1.8	SW	17.3	17.7	17.7	761.6	0.00	0.0	0.003	0.000	18.1	57	9.4	17.4
23/07/18	0:15	17.3	17.3	17.3	86	14.9	0.0	WSW	0.00	0.9	WSW	17.3	17.6	17.6	761.5	0.00	0.0	0.004	0.000	17.9	57	9.3	17.3
23/07/18	0:20	17.2	17.3	17.2	86	14.8	0.4	WSW	0.13	1.3	WSW	17.2	17.4	17.4	761.6	0.00	0.0	0.004	0.000	17.8	57	9.2	17.2
23/07/18	0:25	17.1	17.2	17.1	86	14.7	0.0	SW	0.00	1.8	SW	17.1	17.4	17.4	761.6	0.00	0.0	0.004	0.000	17.8	57	9.1	17.2
23/07/18	0:30	17.1	17.1	17.0	86	14.7	0.0	SW	0.00	1.8	SW	17.1	17.3	17.3	761.6	0.00	0.0	0.004	0.000	17.7	57	9.0	17.0
23/07/18	0:35	17.0	17.0	17.0	86	14.6	0.0	SW	0.00	0.4	SW	17.0	17.3	17.3	761.6	0.00	0.0	0.005	0.000	17.6	57	9.0	16.9
23/07/18	0:40	17.0	17.0	17.0	86	14.6	0.4	SW	0.13	1.3	SW	17.0	17.3	17.3	761.5	0.00	0.0	0.005	0.000	17.6	57	8.9	16.9
23/07/18	0:45	17.0	17.0	17.0	86	14.6	0.4	SW	0.13	1.3	SW	17.0	17.3	17.3	761.5	0.00	0.0	0.005	0.000	17.5	57	8.9	16.8
23/07/18	0:50	17.0	17.0	17.0	86	14.6	0.4	SW	0.13	1.8	SW	17.0	17.3	17.3	761.6	0.00	0.0	0.005	0.000	17.4	57	8.8	16.7
23/07/18	0:55	17.0	17.0	17.0	85	14.5	0.4	SW	0.13	1.3	SW	17.0	17.2	17.2	761.5	0.00	0.0	0.005	0.000	17.3	57	8.7	16.6
23/07/18	1:00	17.0	17.1	17.0	85	14.5	0.4	SW	0.13	2.2	SW	17.0	17.2	17.2	761.5	0.00	0.0	0.005	0.000	17.3	57	8.7	16.6
23/07/18	1:05	17.0	17.0	17.0	85	14.5	0.4	WSW	0.13	0.9	WSW	17.0	17.2	17.2	761.5	0.00	0.0	0.005	0.000	17.2	58	8.9	16.6
23/07/18	1:10	17.0	17.0	17.0	84	14.3	0.4	WSW	0.13	2.2	SW	17.0	17.2	17.2	761.4	0.00	0.0	0.005	0.000	17.2	58	8.8	16.5
23/07/18	1:15	17.0	17.0	17.0	84	14.3	0.4	WSW	0.13	1.3	WSW	17.0	17.2	17.2	761.5	0.00	0.0	0.005	0.000	17.1	58	8.8	16.4
23/07/18	1:20	17.0	17.0	17.0	84	14.3	0.0	SW	0.00	0.9	WSW	17.0	17.2	17.2	761.5	0.00	0.0	0.005	0.000	17.1	58	8.7	16.4
23/07/18	1:25	16.9	17.0	16.9	84	14.2	0.0	SSW	0.00	0.9	SW	16.9	17.2	17.2	761.4	0.00	0.0	0.005	0.000	16.9	58	8.6	16.2
23/07/18	1:30	16.9	16.9	16.9	84	14.2	0.0	SSW	0.00	0.9	SSW	16.9	17.1	17.1	761.4	0.00	0.0	0.005	0.000	16.9	58	8.6	16.2
23/07/18	1:35	16.8	16.9	16.8	84	14.1	0.0	SSW	0.00	1.3	WSW	16.8	17.0	17.0	761.4	0.00	0.0	0.005	0.000	16.8	58	8.5	16.1
23/07/18	1:40	16.7	16.8	16.7	84	14.0	0.0	WSW	0.00	1.8	SW	16.7	16.9	16.9	761.3	0.00	0.0	0.006	0.000	16.8	58	8.5	16.1
23/07/18	1:45	16.7	16.7	16.7	84	13.9	0.0	WSW	0.00	1.8	WSW	16.7	16.8	16.8	761.3	0.00	0.0	0.006	0.000	16.7	58	8.4	16.0
23/07/18	1:50	16.7	16.7	16.7	85	14.1	0.0	WSW	0.00	0.9	WSW	16.7	16.8	16.8	761.3	0.00	0.0	0.006	0.000	16.6	58	8.3	15.9
23/07/18	1:55	16.6	16.7	16.6	85	14.0	0.0	WSW	0.00	1.3	WSW	16.6	16.7	16.7	761.2	0.00	0.0	0.006	0.000	16.6	58	8.3	15.8
23/07/18	2:00	16.6	16.6	16.6	85	14.0	0.0	SW	0.00	0.9	WSW	16.6	16.7	16.7	761.2	0.00	0.0	0.006	0.000	16.6	58	8.3	15.8
23/07/18	2:05	16.6	16.6	16.6	85	14.0	0.0	SW	0.00	0.9	SW	16.6	16.7	16.7	761.2	0.00	0.0	0.006	0.000	16.4	58	8.2	15.7

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Wind Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
23/07/18	2:10	16.4	16.6	16.4	85	13.9	0.0	SW	0.00	0.9	SW	16.4	16.6	16.6	761.2	0.00	0.0	0.007	0.000	16.3	58	8.0	15.6
23/07/18	2:15	16.4	16.4	16.4	85	13.9	0.0	W	0.00	1.8	W	16.4	16.6	16.6	761.2	0.00	0.0	0.007	0.000	16.3	58	8.0	15.6
23/07/18	2:20	16.4	16.4	16.4	85	13.9	0.4	WSW	0.13	2.2	NW	16.4	16.6	16.6	761.2	0.00	0.0	0.007	0.000	16.3	58	8.0	15.6
23/07/18	2:25	16.3	16.4	16.3	86	13.9	0.4	SW	0.13	1.8	WSW	16.3	16.4	16.4	761.2	0.00	0.0	0.007	0.000	16.2	58	7.9	15.4
23/07/18	2:30	16.2	16.3	16.2	86	13.9	0.4	W	0.13	1.8	W	16.2	16.4	16.4	761.2	0.00	0.0	0.007	0.000	16.2	58	7.9	15.4
23/07/18	2:35	16.1	16.2	16.1	86	13.8	0.0	W	0.00	1.3	W	16.1	16.2	16.2	761.1	0.00	0.0	0.008	0.000	16.1	58	7.8	15.3
23/07/18	2:40	16.1	16.1	16.1	86	13.7	0.0	W	0.00	1.3	W	16.1	16.2	16.2	761.2	0.00	0.0	0.008	0.000	16.1	58	7.8	15.3
23/07/18	2:45	16.0	16.1	15.9	87	13.8	0.0	W	0.00	1.3	W	16.0	16.2	16.2	761.2	0.00	0.0	0.008	0.000	16.0	58	7.7	15.2
23/07/18	2:50	15.9	15.9	15.9	87	13.8	0.0	W	0.00	0.9	W	15.9	16.1	16.1	761.2	0.00	0.0	0.008	0.000	15.9	58	7.7	15.2
23/07/18	2:55	15.8	15.9	15.8	87	13.7	0.0	W	0.00	0.9	W	15.8	15.9	15.9	761.1	0.00	0.0	0.009	0.000	15.9	58	7.7	15.2
23/07/18	3:00	15.8	15.8	15.8	88	13.8	0.0	---	0.00	0.0	---	15.8	16.0	16.0	761.1	0.00	0.0	0.009	0.000	15.9	58	7.6	15.1
23/07/18	3:05	15.8	15.8	15.8	88	13.8	0.0	W	0.00	0.4	W	15.8	16.0	16.0	761.1	0.00	0.0	0.009	0.000	15.8	58	7.6	15.1
23/07/18	3:10	15.8	15.8	15.8	88	13.8	0.0	W	0.00	0.9	W	15.8	16.0	16.0	761.1	0.00	0.0	0.009	0.000	15.8	58	7.6	15.1
23/07/18	3:15	15.8	15.8	15.8	88	13.8	0.0	W	0.00	1.3	W	15.8	16.0	16.0	761.1	0.00	0.0	0.009	0.000	15.7	58	7.5	14.9
23/07/18	3:20	15.8	15.8	15.8	88	13.8	0.0	WSW	0.00	1.8	W	15.8	16.0	16.0	761.1	0.00	0.0	0.009	0.000	15.7	58	7.5	14.9
23/07/18	3:25	15.8	15.8	15.8	88	13.8	0.0	WSW	0.00	1.3	WSW	15.8	16.0	16.0	761.0	0.00	0.0	0.009	0.000	15.7	58	7.5	14.9
23/07/18	3:30	15.8	15.8	15.8	88	13.8	0.0	---	0.00	0.0	---	15.8	16.0	16.0	760.9	0.00	0.0	0.009	0.000	15.7	58	7.4	14.9
23/07/18	3:35	15.8	15.8	15.8	88	13.8	0.0	WSW	0.00	0.4	WSW	15.8	16.0	16.0	760.9	0.00	0.0	0.009	0.000	15.7	58	7.4	14.9
23/07/18	3:40	15.8	15.8	15.8	89	14.0	0.0	WSW	0.00	0.4	WSW	15.8	16.0	16.0	761.0	0.00	0.0	0.009	0.000	15.7	58	7.4	14.9
23/07/18	3:45	15.8	15.8	15.8	89	14.0	0.0	---	0.00	0.0	---	15.8	16.0	16.0	760.9	0.00	0.0	0.009	0.000	15.6	59	7.6	14.8
23/07/18	3:50	15.9	15.9	15.9	89	14.1	0.4	W	0.13	2.7	WSW	15.9	16.1	16.1	761.0	0.00	0.0	0.008	0.000	15.6	59	7.6	14.8
23/07/18	3:55	16.1	16.1	15.9	89	14.2	0.4	WSW	0.13	2.2	WSW	16.1	16.3	16.3	760.9	0.00	0.0	0.008	0.000	15.6	59	7.6	14.8
23/07/18	4:00	16.1	16.1	16.1	89	14.2	0.4	SW	0.13	1.8	SW	16.1	16.3	16.3	760.9	0.00	0.0	0.008	0.000	15.6	59	7.6	14.8
23/07/18	4:05	16.2	16.2	16.1	89	14.4	0.0	WSW	0.00	0.4	WS												

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Wind Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
23/07/18	4:45	16.1	16.1	16.1	88	14.1	0.4	SW	0.13	2.7	SW	16.1	16.2	16.2	760.9	0.00	0.0	0.008	0.000	15.6	59	7.6	14.8
23/07/18	4:50	15.9	16.1	15.9	88	14.0	0.0	SSW	0.00	0.9	SW	15.9	16.1	16.1	760.8	0.00	0.0	0.008	0.000	15.6	59	7.6	14.8
23/07/18	4:55	15.9	15.9	15.9	88	14.0	0.0	WSW	0.00	0.9	WSW	15.9	16.1	16.1	760.8	0.00	0.0	0.008	0.000	15.6	59	7.6	14.8
23/07/18	5:00	15.9	15.9	15.9	88	14.0	0.0	WSW	0.00	0.9	WSW	15.9	16.1	16.1	760.9	0.00	0.0	0.008	0.000	15.5	59	7.5	14.7
23/07/18	5:05	15.9	15.9	15.9	88	14.0	0.0	WSW	0.00	0.9	WSW	15.9	16.1	16.1	760.9	0.00	0.0	0.008	0.000	15.5	59	7.5	14.7
23/07/18	5:10	15.9	15.9	15.8	88	13.9	0.0	---	0.00	0.0	---	15.9	16.1	16.1	760.8	0.00	0.0	0.008	0.000	15.5	59	7.5	14.7
23/07/18	5:15	15.8	15.8	15.8	88	13.8	0.0	---	0.00	0.0	---	15.8	15.9	15.9	760.9	0.00	0.0	0.009	0.000	15.4	59	7.4	14.6
23/07/18	5:20	15.7	15.8	15.7	88	13.7	0.0	---	0.00	0.0	---	15.7	15.8	15.8	760.9	0.00	0.0	0.009	0.000	15.4	59	7.4	14.6
23/07/18	5:25	15.7	15.7	15.6	88	13.7	0.0	---	0.00	0.0	---	15.7	15.8	15.8	760.9	0.00	0.0	0.009	0.000	15.3	59	7.4	14.6
23/07/18	5:30	15.6	15.6	15.5	88	13.6	0.0	---	0.00	0.0	---	15.6	15.7	15.7	760.8	0.00	0.0	0.010	0.000	15.3	59	7.4	14.6
23/07/18	5:35	15.4	15.5	15.3	88	13.5	0.0	---	0.00	0.0	---	15.4	15.6	15.6	760.8	0.00	0.0	0.010	0.000	15.3	59	7.3	14.5
23/07/18	5:40	15.3	15.3	15.3	89	13.5	0.0	---	0.00	0.0	---	15.3	15.4	15.4	760.9	0.00	0.0	0.010	0.000	15.2	59	7.3	14.4
23/07/18	5:45	15.3	15.3	15.3	89	13.5	0.0	---	0.00	0.0	---	15.3	15.4	15.4	760.8	0.00	0.0	0.010	0.000	15.2	59	7.3	14.4
23/07/18	5:50	15.3	15.3	15.3	89	13.5	0.0	---	0.00	0.0	---	15.3	15.4	15.4	760.9	0.00	0.0	0.010	0.000	15.2	59	7.2	14.4
23/07/18	5:55	15.3	15.3	15.3	89	13.5	0.0	WSW	0.00	0.4	WSW	15.3	15.4	15.4	760.9	0.00	0.0	0.010	0.000	15.2	59	7.2	14.4
23/07/18	6:00	15.4	15.3	15.3	89	13.6	0.4	WNW	0.13	2.2	WNW	15.4	15.6	15.6	761.0	0.00	0.0	0.010	0.000	15.2	59	7.2	14.4
23/07/18	6:05	15.5	15.5	15.5	90	13.9	0.9	W	0.27	2.2	W	15.5	15.7	15.7	761.1	0.00	0.0	0.010	0.000	15.1	59	7.1	14.3
23/07/18	6:10	15.6	15.6	15.5	90	13.9	0.4	SW	0.13	1.8	SW	15.6	15.7	15.7	761.1	0.00	0.0	0.010	0.000	15.1	59	7.1	14.3
23/07/18	6:15	15.6	15.7	15.6	90	14.0	0.9	SW	0.27	2.7	SW	15.6	15.8	15.8	761.1	0.00	0.0	0.009	0.000	15.1	59	7.1	14.3
23/07/18	6:20	15.8	15.8	15.7	90	14.1	0.9	SW	0.27	4.0	SW	15.8	15.9	15.9	761.1	0.00	0.0	0.009	0.000	15.1	59	7.1	14.3
23/07/18	6:25	16.0	16.1	15.9	90	14.4	0.9	SW	0.27	2.2	W	16.0	16.2	16.2	761.0	0.00	0.0	0.008	0.000	15.2	59	7.2	14.4
23/07/18	6:30	16.2	16.4	16.1	89	14.4	0.9	SW	0.27	2.2	SW	16.2	16.4	16.4	760.9	0.00	0.0	0.007	0.000	15.2	59	7.2	14.4
23/07/18	6:35	16.4	16.6	16.4	89	14.6	0.4	WSW	0.13	2.2	SW	16.4	16.7	16.7	760.9	0.00	0.0	0.007	0.000	15.2	59	7.2	14.4
23/07/18	6:40	16.7	16.7	16.6	89	14.8	0.4	W	0.13	2.7	WSW	16.7	16.9	16.9	761.0	0.00	0.0	0.006	0.000	15.2	59	7.3	14.4
23/07/18	6:45	16.8	16.9	16.7	88	14.8	0.9	WSW	0.27	2.7	WSW	16.8	17.1	17.1	760.9	0.00	0.0	0.005	0.000	15.3	59	7.4	14.6
23/07/18	6:50	17.0	17.1	16.9	88	15.0	0.4	SW	0.13	1.8	SW	17.0	17.3	17.3	760.9	0.00	0.0	0.005	0.000	15.4	59	7.4	14.6
23/07/18	6:55	17.2	17.3	17.1	87	15.0	0.9	WSW	0.27	1.8	SW	17.2	17.5	17.5	760.9	0.00	0.0	0.004	0.000	15.4	59	7.5	14.7
23/07/18	7:00	17.3	17.4	17.3	87	15.1	0.4	SW	0.13	2.2	W	17.3	17.7	17.7	760.8	0.00	0.0	0.003	0.000	15.5	59	7.5	14.7
23/07/18	7:05	17.5	17.5	17.4	86	15.1	0.4	W	0.13	2.2	W	17.5	17.8	17.8	760.8	0.00	0.0	0.003	0.000	15.6	60	7.8	14.8
23/07/18	7:10	17.6	17.7	17.5	86	15.2	0.9	WSW	0.27	2.7	SW	17.6	17.9	17.9	760.7	0.00	0.0	0.003	0.000	15.7	60	7.9	14.9
23/07/18	7:15	17.7	17.8	17.7	85	15.2	0.4	SW	0.13	2.2	SW	17.7	18.1	18.1	760.7	0.00	0.0	0.002	0.000	15.7	60	8.0	15.0

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Wind Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
23/07/18	7:20	17.9	18.1	17.8	84	15.1	0.9	SW	0.27	2.2	WSW	17.9	18.2	18.2	760.7	0.00	0.0	0.002	0.000	15.8	60	8.1	15.2
23/07/18	7:25	18.2	18.3	18.1	84	15.4	0.9	SW	0.27	3.1	W	18.2	18.6	18.6	760.7	0.00	0.0	0.001	0.000	15.9	60	8.2	15.3
23/07/18	7:30	18.4	18.5	18.3	83	15.5	0.9	W	0.27	1.8	W	18.4	18.9	18.9	760.7	0.00	0.0	0.000	0.000	16.0	60	8.2	15.3
23/07/18	7:35	18.6	18.7	18.5	83	15.7	0.9	WNW	0.27	2.2	WSW	18.6	19.1	19.1	760.8	0.00	0.0	0.000	0.001	16.1	60	8.3	15.4
23/07/18	7:40	18.7	18.8	18.7	82	15.6	0.4	SW	0.13	2.2	SW	18.7	19.2	19.2	760.7	0.00	0.0	0.000	0.000	16.2	60	8.4	15.5
23/07/18	7:45	18.8	18.9	18.8	82	15.7	0.4	WNW	0.13	1.8	W	18.8	19.3	19.3	760.8	0.00	0.0	0.000	0.002	16.3	60	8.5	15.6
23/07/18	7:50	18.9	18.9	18.8	82	15.7	0.9	W	0.27	2.2	WSW	18.9	19.4	19.4	760.8	0.00	0.0	0.000	0.002	16.3	60	8.5	15.7
23/07/18	7:55	19.1	19.1	18.9	81	15.7	0.4	WSW	0.13	2.2	SW	19.1	19.6	19.6	760.8	0.00	0.0	0.000	0.003	16.4	60	8.7	15.8
23/07/18	8:00	19.2	19.3	19.1	79	15.4	1.8	WSW	0.54	4.0	W	19.2	19.7	19.7	760.9	0.00	0.0	0.000	0.003	16.6	60	8.8	15.9
23/07/18	8:05	19.3	19.4	19.3	78	15.4	1.3	WSW	0.40	4.0	WSW	19.3	19.8	19.8	760.8	0.00	0.0	0.000	0.003	16.6	60	8.8	15.9
23/07/18	8:10	19.5	19.6	19.4	78	15.6	1.3	SW	0.40	4.0	SSW	19.5	20.1	20.1	760.8	0.00	0.0	0.000	0.004	16.7	60	8.9	16.1
23/07/18	8:15	19.7	19.8	19.6	77	15.5	1.3	SW	0.40	2.7	S	19.7	20.2	20.2	760.8	0.00	0.0	0.000	0.005	16.8	60	9.0	16.2
23/07/18	8:20	19.8	19.9	19.8	77	15.7	1.3	WSW	0.40	3.6	WSW	19.8	20.4	20.4	760.8	0.00	0.0	0.000	0.005	16.9	60	9.1	16.3
23/07/18	8:25	20.0	20.1	19.9	76	15.6	0.9	SW	0.27	2.7	SSW	20.0	20.6	20.6	760.9	0.00	0.0	0.000	0.006	17.0	60	9.2	16.4
23/07/18	8:30	20.2	20.3	20.1	76	15.8	0.9	S	0.27	2.2	S	20.2	20.7	20.7	760.9	0.00	0.0	0.000	0.006	17.2	60	9.3	16.6
23/07/18	8:35	20.5	20.7	20.3	75	15.9	0.9	WSW	0.27	3.1	W	20.5	21.1	21.1	760.9	0.00	0.0	0.000	0.008	17.3	60	9.4	16.7
23/07/18	8:40	20.9	21.1	20.7	73	15.9	0.9	SW	0.27	2.2	SE	20.9	21.2	21.2	760.9	0.00	0.0	0.000	0.009	17.4	60	9.6	16.9
23/07/18	8:45	21.2	21.3	21.1	72	16.0	1.3	SW	0.40	2.7	WSW	21.2	21.4	21.4	760.9	0.00	0.0	0.000	0.010	17.7	60	9.8	17.2
23/07/18	8:50	21.4	21.4	21.3	71	15.9	0.9	SSW	0.27	2.7	SW	21.4	21.6	21.6	760.9	0.00	0.0	0.000	0.011	17.9	61	10.3	17.4
23/07/18	8:55	21.4	21.4	21.3	72	16.1	0.9	SW	0.27	2.2	S	21.4	21.6	21.6	760.8	0.00	0.0	0.000	0.011	18.2	61	10.5	17.8
23/07/18	9:00	21.3	21.3	21.3	72	16.1	0.4	S	0.13	2.7	SE	21.3	21.6	21.6	760.8	0.00	0.0	0.000	0.010	18.4	61	10.7	18.0
23/07/18	9:05	21.3	21.3	21.3	73	16.2	0.4	S	0.13	1.3	SSE	21.3	21.6	21.6	760.8	0.00	0.0	0.000	0.010	18.6	61	10.9	18.2
23/07/18	9:10	21.4	21.6	21.3	73	16.3	0.4	SSE	0.13	2.2	SE	21.4	21.7	21.7	760.8	0.00	0.0	0.000	0.011	18.8	61	11.1	18.4
23/07/18	9:15	21.7	21.9	21.6	73	16.7	0.9	WSW	0.27	2.7	WSW	21.7	22										

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Hi Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
23/07/18	9:55	23.4	23.7	23.2	68	17.1	0.9	SSW	0.27	2.2	S	23.4	24.2	24.2	760.6	0.00	0.0	0.000	0.018	20.9	61	13.1	20.6
23/07/18	10:00	23.8	23.8	23.7	67	17.3	0.9	S	0.27	3.1	SE	23.8	24.6	24.6	760.6	0.00	0.0	0.000	0.019	21.2	61	13.3	20.8
23/07/18	10:05	24.1	24.2	23.8	67	17.5	0.9	WSW	0.27	2.7	WSW	24.1	24.9	24.9	760.6	0.00	0.0	0.000	0.020	21.4	61	13.6	21.1
23/07/18	10:10	24.4	24.6	24.2	65	17.4	0.4	W	0.13	2.7	W	24.4	25.1	25.1	760.5	0.00	0.0	0.000	0.021	21.7	61	13.8	21.4
23/07/18	10:15	24.7	24.8	24.6	66	17.9	0.9	WSW	0.27	2.7	SW	24.7	25.5	25.5	760.6	0.00	0.0	0.000	0.022	22.0	61	14.1	21.9
23/07/18	10:20	24.9	25.0	24.8	65	17.9	0.9	SW	0.27	2.7	SW	24.9	25.6	25.6	760.5	0.00	0.0	0.000	0.023	22.3	62	14.6	22.3
23/07/18	10:25	25.3	25.5	25.1	64	18.0	0.4	SSW	0.13	1.8	WNW	25.3	26.1	26.1	760.6	0.00	0.0	0.000	0.024	22.6	62	15.0	22.8
23/07/18	10:30	25.8	25.9	25.6	61	17.7	1.3	WSW	0.40	2.7	WSW	25.8	26.4	26.4	760.5	0.00	0.0	0.000	0.026	23.0	62	15.3	23.4
23/07/18	10:35	25.9	26.0	25.9	61	17.8	1.3	W	0.40	2.7	NW	25.9	26.6	26.6	760.5	0.00	0.0	0.000	0.026	23.4	63	16.0	24.0
23/07/18	10:40	26.1	26.1	26.0	61	17.9	0.4	WNW	0.13	2.7	WNW	26.1	26.7	26.7	760.3	0.00	0.0	0.000	0.027	23.8	63	16.4	24.4
23/07/18	10:45	26.2	26.3	26.1	62	18.4	0.9	WSW	0.27	2.2	W	26.2	27.0	27.0	760.5	0.00	0.0	0.000	0.027	24.3	63	16.8	24.8
23/07/18	10:50	26.5	26.6	26.3	60	18.1	1.3	SW	0.40	3.1	NW	26.5	27.2	27.2	760.4	0.00	0.0	0.000	0.028	24.7	63	17.2	25.2
23/07/18	10:55	26.6	26.6	26.6	60	18.2	1.3	WNW	0.40	4.0	WNW	26.6	27.3	27.3	760.3	0.00	0.0	0.000	0.029	25.1	63	17.6	25.7
23/07/18	11:00	26.6	26.6	26.6	60	18.2	0.9	WSW	0.27	3.1	WSW	26.6	27.3	27.3	760.3	0.00	0.0	0.000	0.029	25.5	63	17.9	26.2
23/07/18	11:05	26.6	26.7	26.6	60	18.2	0.4	WSW	0.13	4.0	S	26.6	27.3	27.3	760.5	0.00	0.0	0.000	0.029	25.9	63	18.3	26.7
23/07/18	11:10	26.9	27.2	26.7	61	18.8	1.3	NW	0.40	3.6	W	26.9	27.9	27.9	760.4	0.00	0.0	0.000	0.030	26.3	63	18.7	27.1
23/07/18	11:15	27.3	27.6	27.2	57	18.1	0.9	SW	0.27	2.7	SSW	27.3	28.1	28.1	760.3	0.00	0.0	0.000	0.031	26.7	62	18.8	27.6
23/07/18	11:20	27.8	28.0	27.6	56	18.2	0.4	SW	0.13	2.7	WSW	27.8	28.7	28.7	760.3	0.00	0.0	0.000	0.033	27.0	62	19.1	28.0
23/07/18	11:25	27.9	28.0	27.7	56	18.3	0.4	SW	0.13	2.2	SE	27.9	28.8	28.8	760.1	0.00	0.0	0.000	0.033	27.4	62	19.5	28.6
23/07/18	11:30	27.6	27.7	27.6	57	18.3	0.9	WSW	0.27	2.2	WSW	27.6	28.5	28.5	760.2	0.00	0.0	0.000	0.032	27.7	62	19.8	29.1
23/07/18	11:35	27.7	27.8	27.7	57	18.4	0.9	SW	0.27	3.1	W	27.7	28.6	28.6	760.2	0.00	0.0	0.000	0.032	27.9	62	20.0	29.5
23/07/18	11:40	27.6	27.7	27.4	56	18.0	0.9	W	0.27	3.1	NW	27.6	28.4	28.4	760.1	0.00	0.0	0.000	0.032	28.3	61	20.0	29.9
23/07/18	11:45	27.2	27.4	26.9	57	18.0	0.9	WNW	0.27	2.2	W	27.2	27.9	27.9	760.0	0.00	0.0	0.000	0.031	28.6	61	20.4	30.6
23/07/18	11:50	26.7	26.9	26.3	59	18.0	0.9	WNW	0.27	2.7	WNW	26.7	27.3	27.3	760.0	0.00	0.0	0.000	0.029	28.8	60	20.3	30.8
23/07/18	11:55	26.2	26.2	26.0	60	17.8	0.9	WNW	0.27	2.2	SW	26.2	26.8	26.8	760.1	0.00	0.0	0.000	0.027	29.0	60	20.4	31.1
23/07/18	12:00	26.1	26.2	26.0	62	18.2	0.9	WNW	0.27	2.7	WNW	26.1	26.8	26.8	760.2	0.00	0.0	0.000	0.027	29.2	59	20.3	31.3
23/07/18	12:05	26.5	26.6	26.2	60	18.1	1.3	WSW	0.40	2.7	SW	26.5	27.2	27.2	760.1	0.00	0.0	0.000	0.028	29.3	59	20.4	31.4
23/07/18	12:10	26.8	27.1	26.6	60	18.4	0.9	WSW	0.27	2.7	SSE	26.8	27.6	27.6	760.1	0.00	0.0	0.000	0.030	29.4	59	20.5	31.6
23/07/18	12:15	27.3	27.4	27.1	57	18.0	1.3	SW	0.40	3.1	WNW	27.3	28.0	28.0	760.1	0.00	0.0	0.000	0.031	29.6	59	20.7	31.9
23/07/18	12:20	27.6	27.8	27.4	56	18.0	1.3	WSW	0.40	4.9	W	27.6	28.4	28.4	760.2	0.00	0.0	0.000	0.032	29.7	59	20.9	32.3
23/07/18	12:25	27.8	27.8	27.7	57	18.5	0.9	SW	0.27	2.7	S	27.8	28.7	28.7	760.2	0.00	0.0	0.000	0.033	29.9	59	21.1	32.7

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Hi Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
23/07/18	12:30	27.9	28.1	27.8	54	17.8	0.9	SW	0.27	3.1	S	27.9	28.7	28.7	760.1	0.00	0.0	0.000	0.033	30.2	59	21.3	33.2
23/07/18	12:35	28.2	28.2	28.1	53	17.7	1.3	SSW	0.40	3.1	W	28.2	29.0	29.0	760.0	0.00	0.0	0.000	0.034	30.4	59	21.5	33.7
23/07/18	12:40	28.1	28.1	28.0	55	18.2	0.9	SW	0.27	2.2	SSW	28.1	29.0	29.0	760.0	0.00	0.0	0.000	0.034	30.7	59	21.7	34.2
23/07/18	12:45	27.9	28.1	27.9	55	18.1	1.8	WSW	0.54	3.1	WSW	27.9	28.8	28.8	760.0	0.00	0.0	0.000	0.033	30.9	59	21.9	34.4
23/07/18	12:50	28.3	28.4	28.1	53	17.8	1.3	S	0.40	4.9	ESE	28.3	29.2	29.2	760.2	0.00	0.0	0.000	0.035	31.2	59	22.3	35.0
23/07/18	12:55	28.7	28.9	28.4	52	17.8	1.8	SSW	0.54	4.5	WSW	28.7	29.7	29.7	760.1	0.00	0.0	0.000	0.036	31.4	59	22.5	35.6
23/07/18	13:00	28.8	28.9	28.7	51	17.6	1.3	S	0.40	4.0	WSW	28.8	29.8	29.8	759.9	0.00	0.0	0.000	0.036	31.7	59	22.7	36.1
23/07/18	13:05	28.2	28.6	27.7	54	18.0	1.3	SW	0.40	5.4	SW	28.2	29.1	29.1	759.7	0.00	0.0	0.000	0.034	31.9	59	22.9	36.6
23/07/18	13:10	27.3	27.7	27.1	55	17.5	1.3	SW	0.40	3.1	SW	27.3	27.9	27.9	759.9	0.00	0.0	0.000	0.031	32.1	58	22.8	36.7
23/07/18	13:15	26.7	26.9	26.4	58	17.7	0.9	SW	0.27	2.2	SW	26.7	27.3	27.3	759.8	0.00	0.0	0.000	0.029	32.2	58	22.9	37.1
23/07/18	13:20	26.0	26.4	25.7	60	17.6	1.3	W	0.40	4.5	SW	26.0	26.6	26.6	759.9	0.00	0.0	0.000	0.027	32.3	57	22.7	37.0
23/07/18	13:25	25.4	25.6	25.1	62	17.6	1.3	W	0.40	3.1	WSW	25.4	26.0	26.0	760.0	0.00	0.0	0.000	0.024	32.3	57	22.7	37.0
23/07/18	13:30	24.9	25.1	24.8	62	17.2	1.3	W	0.40	3.1	W	24.9	25.5	25.5	760.0	0.00	0.0	0.000	0.023	32.2	56	22.3	36.5
23/07/18	13:35	24.7	24.8	24.6	63	17.2	1.3	SW	0.40	3.1	SW	24.7	25.3	25.3	759.9	0.00	0.0	0.000	0.022	32.1	56	22.2	36.3
23/07/18	13:40	24.4	24.6	24.3	64	17.2	1.3	W	0.40	4.9	WSW	24.4	25.1	25.1	760.1	0.00	0.0	0.000	0.021	31.9	55	21.8	35.8
23/07/18	13:45	24.2	24.3	23.9	65	17.2	0.9	SW	0.27	4.0	SSW	24.2	24.9	24.9	760.1	0.00	0.0	0.000	0.020	31.8	55	21.7	35.6
23/07/18	13:50	23.8	23.9	23.7	66	17.0	0.9	WSW	0.27	3.6	SW	23.8	24.6	24.6	760.2	0.00	0.0	0.000	0.019	31.7	55	21.5	35.2
23/07/18	13:55	23.7	23.7	23.7	67	17.2	0.4	WSW	0.13	2.7	WSW	23.7	24.4	24.4	760.2	0.00	0.0	0.000	0.019	31.5	55	21.4	34.8
23/07/18	14:00	23.7	23.7	23.7	67	17.2	0.4	W	0.13	3.1	W	23.7	24.4	24.4	760.2	0.00	0.0	0.000	0.019	31.4	55	21.3	34.6
23/07/18	14:05	23.6	23.7	23.4	67	17.1	0.9	SW	0.27	3.1	SSW	23.6	24.4	24.4	760.3	0.00	0.0	0.000	0.018	31.2	55	21.1	34.2
23/07/18	14:10	23.3	23.4	23.3	67	16.9	0.4	W	0.13	4.0	W	23.3	24.1	24.1	760.2	0.00	0.0	0.000	0.017	31.1	54	20.7	33.7
23/07/18	14:15	23.2	23.3	23.2	67	16.8	0.9	WSW	0.27	3.1	WSW	23.2	23.9	23.9	760.2	0.00	0.0	0.000	0.017	30.9	54	20.5	33.4
23/07/18	14:20	23.3	23.3	23.2	68	17.0	0.9	WSW	0.27	3.1	SW	23.3	24.1	24.1	760.2	0.00	0.0	0.000	0.017	30.7	54	20.3</	

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Wind Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
23/07/18	15:05	23.7	23.8	23.7	67	17.2	0.9	WNW	0.27	2.2	W	23.7	24.5	24.5	760.2	0.00	0.0	0.000	0.019	29.6	54	19.3	31.2
23/07/18	15:10	23.9	24.1	23.8	67	17.4	0.4	SW	0.13	1.8	WNW	23.9	24.8	24.8	760.2	0.00	0.0	0.000	0.019	29.6	55	19.6	31.3
23/07/18	15:15	23.9	24.1	23.9	65	17.0	0.9	SW	0.27	2.7	W	23.9	24.7	24.7	760.1	0.00	0.0	0.000	0.019	29.6	55	19.6	31.3
23/07/18	15:20	23.8	23.9	23.7	64	16.6	1.3	WNW	0.40	3.1	WNW	23.8	24.5	24.5	760.1	0.00	0.0	0.000	0.019	29.5	55	19.5	31.2
23/07/18	15:25	23.7	23.7	23.7	66	17.0	0.9	SW	0.27	4.0	WSW	23.7	24.5	24.5	760.0	0.00	0.0	0.000	0.019	29.5	55	19.5	31.2
23/07/18	15:30	23.6	23.7	23.6	65	16.6	1.3	SW	0.40	2.7	SW	23.6	24.3	24.3	760.0	0.00	0.0	0.000	0.018	29.4	55	19.4	31.0
23/07/18	15:35	23.6	23.6	23.6	66	16.8	0.9	WSW	0.27	2.7	SW	23.6	24.3	24.3	759.9	0.00	0.0	0.000	0.018	29.3	55	19.4	30.9
23/07/18	15:40	23.4	23.6	23.3	66	16.7	1.8	WNW	0.54	4.0	NW	23.4	24.2	24.2	760.0	0.00	0.0	0.000	0.018	29.2	54	19.0	30.7
23/07/18	15:45	23.3	23.3	23.3	66	16.6	0.9	WNW	0.27	2.7	WSW	23.3	23.9	23.9	760.0	0.00	0.0	0.000	0.017	29.1	54	18.9	30.5
23/07/18	15:50	23.3	23.3	23.3	66	16.6	0.9	WNW	0.27	2.7	W	23.3	23.9	23.9	759.9	0.00	0.0	0.000	0.017	29.0	54	18.8	30.4
23/07/18	15:55	23.3	23.3	23.3	67	16.8	0.9	WNW	0.27	2.7	NW	23.3	24.0	24.0	759.9	0.00	0.0	0.000	0.017	28.9	54	18.6	30.2
23/07/18	16:00	23.4	23.4	23.3	64	16.2	0.9	W	0.27	2.7	WSW	23.4	24.0	24.0	759.8	0.00	0.0	0.000	0.018	28.8	54	18.5	30.1
23/07/18	16:05	23.6	23.7	23.4	64	16.3	0.9	WSW	0.27	4.5	W	23.6	24.2	24.2	759.7	0.00	0.0	0.000	0.018	28.7	54	18.4	29.9
23/07/18	16:10	23.7	23.8	23.7	63	16.3	1.3	W	0.40	2.7	SW	23.7	24.3	24.3	759.6	0.00	0.0	0.000	0.018	28.6	54	18.3	29.7
23/07/18	16:15	24.1	24.3	23.9	60	15.9	1.3	WSW	0.40	4.9	SW	24.1	24.6	24.6	759.7	0.00	0.0	0.000	0.020	28.5	55	18.6	29.7
23/07/18	16:20	24.6	24.7	24.4	59	16.0	0.9	WSW	0.27	3.1	WSW	24.6	24.9	24.9	759.6	0.00	0.0	0.000	0.022	28.5	55	18.6	29.7
23/07/18	16:25	25.1	25.4	24.7	57	15.9	0.9	SW	0.27	3.1	SE	25.1	25.3	25.3	759.8	0.00	0.0	0.000	0.023	28.5	55	18.6	29.7
23/07/18	16:30	25.8	26.2	25.5	54	15.8	1.3	SW	0.40	4.5	SW	25.8	26.1	26.1	759.7	0.00	0.0	0.000	0.026	28.7	55	18.7	29.9
23/07/18	16:35	26.4	26.6	26.2	52	15.7	1.3	WSW	0.40	5.4	SE	26.4	26.6	26.6	759.6	0.00	0.0	0.000	0.028	28.8	56	19.2	30.3
23/07/18	16:40	26.4	26.6	26.2	54	16.3	1.3	SSW	0.40	4.0	WSW	26.4	26.7	26.7	759.4	0.00	0.0	0.000	0.028	29.2	56	19.5	30.8
23/07/18	16:45	25.9	26.2	25.6	55	16.2	1.3	S	0.40	3.1	SSW	25.9	26.3	26.3	759.3	0.00	0.0	0.000	0.026	29.4	56	19.7	31.2
23/07/18	16:50	25.3	25.5	25.2	57	16.2	1.3	SSW	0.40	4.5	S	25.3	25.7	25.7	759.3	0.00	0.0	0.000	0.024	29.6	55	19.6	31.3
23/07/18	16:55	25.3	25.3	25.2	57	16.1	0.9	WSW	0.27	2.7	SSE	25.3	25.6	25.6	759.4	0.00	0.0	0.000	0.024	29.6	55	19.6	31.3
23/07/18	17:00	25.4	25.4	25.3	57	16.3	0.9	WSW	0.27	2.7	SSW	25.4	25.7	25.7	759.4	0.00	0.0	0.000	0.024	29.7	55	19.7	31.6
23/07/18	17:05	25.3	25.4	25.2	57	16.2	1.3	WSW	0.40	2.7	S	25.3	25.7	25.7	759.4	0.00	0.0	0.000	0.024	29.7	55	19.7	31.6
23/07/18	17:10	25.1	25.2	24.9	59	16.5	1.3	S	0.40	3.1	WSW	25.1	25.4	25.4	759.4	0.00	0.0	0.000	0.023	29.8	55	19.8	31.8
23/07/18	17:15	24.9	24.9	24.8	59	16.3	0.9	SSW	0.27	2.2	SE	24.9	25.3	25.3	759.3	0.00	0.0	0.000	0.023	29.8	55	19.8	31.7
23/07/18	17:20	24.7	24.8	24.7	59	16.2	0.4	SSW	0.13	2.7	SSW	24.7	25.1	25.1	759.3	0.00	0.0	0.000	0.022	29.7	55	19.7	31.6
23/07/18	17:25	24.6	24.7	24.5	60	16.3	0.4	S	0.13	2.7	SW	24.6	25.0	25.0	759.2	0.00	0.0	0.000	0.022	29.7	55	19.7	31.6
23/07/18	17:30	24.5	24.5	24.4	60	16.2	0.9	SSW	0.27	2.7	S	24.5	24.9	24.9	759.3	0.00	0.0	0.000	0.021	29.6	54	19.3	31.2
23/07/18	17:35	24.4	24.4	24.4	60	16.2	0.9	S	0.27	3.1	WSW	24.4	24.8	24.8	759.2	0.00	0.0	0.000	0.021	29.6	54	19.3	31.1

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Wind Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
23/07/18	17:40	24.3	24.4	24.3	61	16.3	0.4	WSW	0.13	2.7	S	24.3	24.8	24.8	759.3	0.00	0.0	0.000	0.021	29.4	54	19.2	30.9
23/07/18	17:45	24.3	24.3	24.3	60	16.1	0.9	WSW	0.27	2.7	SSW	24.3	24.7	24.7	759.2	0.00	0.0	0.000	0.021	29.4	54	19.1	30.9
23/07/18	17:50	24.3	24.3	24.3	60	16.1	1.3	SW	0.40	2.7	SW	24.3	24.7	24.7	759.2	0.00	0.0	0.000	0.021	29.3	54	19.0	30.7
23/07/18	17:55	24.3	24.4	24.3	60	16.1	0.9	SSW	0.27	2.2	SSW	24.3	24.7	24.7	759.2	0.00	0.0	0.000	0.021	29.2	54	18.9	30.6
23/07/18	18:00	24.7	25.0	24.4	61	16.6	0.9	WSW	0.27	1.8	S	24.7	25.1	25.1	759.3	0.00	0.0	0.000	0.022	29.1	54	18.8	30.4
23/07/18	18:05	25.3	25.6	25.0	57	16.1	0.9	SSW	0.27	2.7	SW	25.3	25.6	25.6	759.2	0.00	0.0	0.000	0.024	29.0	54	18.8	30.4
23/07/18	18:10	25.7	25.7	25.6	56	16.2	0.9	WSW	0.27	3.1	SSW	25.7	26.0	26.0	759.2	0.00	0.0	0.000	0.025	28.9	54	18.7	30.3
23/07/18	18:15	25.5	25.7	25.3	57	16.4	0.9	SW	0.27	3.1	SW	25.5	25.8	25.8	759.2	0.00	0.0	0.000	0.025	28.9	54	18.7	30.3
23/07/18	18:20	25.1	25.3	24.9	57	16.0	0.9	SSW	0.27	2.7	SSE	25.1	25.4	25.4	759.1	0.00	0.0	0.000	0.024	28.9	54	18.7	30.3
23/07/18	18:25	24.7	24.9	24.5	58	15.8	0.9	S	0.27	2.7	SSW	24.7	25.0	25.0	759.1	0.00	0.0	0.000	0.022	28.8	54	18.6	30.2
23/07/18	18:30	24.4	24.5	24.2	60	16.1	0.9	SSE	0.27	2.7	S	24.4	24.8	24.8	759.1	0.00	0.0	0.000	0.022	28.7	54	18.5	29.9
23/07/18	18:35	24.1	24.2	24.1	60	15.9	0.9	SW	0.27	2.7	S	24.1	24.6	24.6	759.1	0.00	0.0	0.000	0.020	28.6	54	18.4	29.8
23/07/18	18:40	24.1	24.1	24.1	60	15.8	0.9	SW	0.27	3.1	SSW	24.1	24.5	24.5	759.1	0.00	0.0	0.000	0.020	28.4	54	18.2	29.5
23/07/18	18:45	24.1	24.2	24.1	60	15.9	1.3	SW	0.40	3.6	SW	24.1	24.6	24.6	759.2	0.00	0.0	0.000	0.020	28.3	54	18.1	29.3
23/07/18	18:50	24.3	24.4	24.2	60	16.0	0.9	SSW	0.27	3.1	W	24.3	24.7	24.7	759.1	0.00	0.0	0.000	0.021	28.2	54	18.0	29.1
23/07/18	18:55	24.5	24.5	24.4	59	16.0	1.3	SSW	0.40	3.1	SW	24.5	24.8	24.8	759.1	0.00	0.0	0.000	0.021	28.1	54	17.9	28.9
23/07/18	19:00	24.4	24.5	24.3	60	16.2	1.3	SSW	0.40	2.7	SW	24.4	24.8	24.8	759.1	0.00	0.0	0.000	0.021	27.9	54	17.8	28.7
23/07/18	19:05	24.1	24.3	23.9	61	16.1	1.3	SW	0.40	4.5	S	24.1	24.6	24.6	759.1	0.00	0.0	0.000	0.020	27.8	54	17.7	28.6
23/07/18	19:10	23.8	23.9	23.7	62	16.1	1.3	SSW	0.40	2.2	WSW	23.8	24.3	24.3	759.1	0.00	0.0	0.000	0.019	27.8	54	17.6	28.4
23/07/18	19:15	23.5	23.7	23.3	63	16.0	1.3	SW	0.40	3.1	S	23.5	24.1	24.1	759.2	0.00	0.0	0.000	0.018	27.6	54	17.5	28.2
23/07/18	19:20	23.2	23.3	23.1	63	15.8	2.2	SW	0.67	4.9	WSW	23.2	23.7	23.7	759.2	0.00	0.0	0.000	0.017	27.4	54	17.3	28.0
23/07/18	19:25	22.9	23.1	22.9	64	15.8	1.8	SW	0.54	4.9	WSW	22.9	23.4	23.4	759.3	0.00	0.0	0.000	0.016	27.3	54	17.2	27.7
23/07/18	19:30	22.7	22.9	22.7	65	15.8	1.3	SW	0.40	4.9	SW	22.7	23.1	23.1	759.4	0.00	0.0	0.000	0.015	27.1	54	16.9	



WeatherLink 5.9.2 07/08/18 14:46: Deans

File Setup Reports Browse Window Help

Browse Records

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Wind Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
23/07/18	20:15	20.8	21.0	20.6	75	16.2	1.3	SW	0.40	3.1	SSW	20.8	21.2	21.2	759.6	0.00	0.0	0.000	0.008	25.3	54	15.3	25.4
23/07/18	20:20	20.5	20.6	20.3	76	16.1	0.9	SW	0.27	3.1	W	20.5	21.1	21.1	759.5	0.00	0.0	0.000	0.008	25.1	54	15.1	25.2
23/07/18	20:25	20.3	20.3	20.2	77	16.1	0.4	SW	0.13	2.7	WSW	20.3	20.9	20.9	759.4	0.00	0.0	0.000	0.007	24.9	54	14.9	25.0
23/07/18	20:30	20.2	20.2	20.1	77	16.0	0.4	SW	0.13	2.2	SW	20.2	20.8	20.8	759.5	0.00	0.0	0.000	0.006	24.7	54	14.7	24.8
23/07/18	20:35	20.0	20.1	19.9	78	16.0	0.4	WSW	0.13	1.8	WSW	20.0	20.6	20.6	759.5	0.00	0.0	0.000	0.006	24.4	54	14.5	24.6
23/07/18	20:40	19.9	19.9	19.8	79	16.1	0.4	SW	0.13	1.8	WSW	19.9	20.6	20.6	759.5	0.00	0.0	0.000	0.005	24.2	54	14.3	24.4
23/07/18	20:45	19.8	19.8	19.8	79	16.0	0.4	SW	0.13	1.8	SW	19.8	20.4	20.4	759.5	0.00	0.0	0.000	0.005	24.0	54	14.1	24.2
23/07/18	20:50	19.7	19.8	19.7	79	15.9	0.4	SW	0.13	1.8	SSE	19.7	20.3	20.3	759.6	0.00	0.0	0.000	0.005	23.8	54	14.0	24.1
23/07/18	20:55	19.7	19.7	19.7	79	15.9	0.0	SW	0.00	1.3	SW	19.7	20.3	20.3	759.6	0.00	0.0	0.000	0.005	23.6	54	13.8	23.8
23/07/18	21:00	19.7	19.7	19.6	80	16.1	0.4	SW	0.13	1.8	SSW	19.7	20.3	20.3	759.5	0.00	0.0	0.000	0.005	23.4	54	13.6	23.6
23/07/18	21:05	19.6	19.6	19.6	80	16.1	0.4	SW	0.13	1.8	SSE	19.6	20.3	20.3	759.4	0.00	0.0	0.000	0.004	23.3	54	13.4	23.3
23/07/18	21:10	19.6	19.6	19.6	80	16.1	0.4	SW	0.13	1.3	SW	19.6	20.3	20.3	759.5	0.00	0.0	0.000	0.004	23.1	54	13.3	23.1
23/07/18	21:15	19.6	19.6	19.5	80	16.0	0.4	WSW	0.13	1.8	WSW	19.6	20.2	20.2	759.5	0.00	0.0	0.000	0.004	22.9	54	13.1	22.9
23/07/18	21:20	19.5	19.5	19.5	80	16.0	0.4	WSW	0.13	1.3	WSW	19.5	20.1	20.1	759.5	0.00	0.0	0.000	0.004	22.8	54	13.0	22.7
23/07/18	21:25	19.4	19.4	19.4	79	15.7	0.9	SW	0.27	2.7	SSW	19.4	20.0	20.0	759.5	0.00	0.0	0.000	0.004	22.6	55	13.1	22.5
23/07/18	21:30	19.4	19.4	19.4	78	15.5	0.9	SW	0.27	2.2	WSW	19.4	19.9	19.9	759.6	0.00	0.0	0.000	0.004	22.4	55	13.0	22.3
23/07/18	21:35	19.4	19.5	19.4	77	15.3	0.9	WSW	0.27	2.2	WSW	19.4	19.9	19.9	759.6	0.00	0.0	0.000	0.004	22.3	55	12.9	22.1
23/07/18	21:40	19.5	19.5	19.5	78	15.6	0.0	WSW	0.00	0.9	WSW	19.5	20.1	20.1	759.7	0.00	0.0	0.000	0.004	22.2	55	12.7	21.9
23/07/18	21:45	19.5	19.5	19.5	78	15.6	0.0	SSW	0.00	1.8	W	19.5	20.1	20.1	759.7	0.00	0.0	0.000	0.004	22.1	55	12.6	21.7
23/07/18	21:50	19.5	19.5	19.5	78	15.6	0.0	WSW	0.00	2.2	WSW	19.5	20.1	20.1	759.6	0.00	0.0	0.000	0.004	21.9	55	12.4	21.4
23/07/18	21:55	19.4	19.5	19.3	77	15.3	0.4	SW	0.13	2.2	SW	19.4	19.8	19.8	759.6	0.00	0.0	0.000	0.004	21.8	55	12.3	21.3
23/07/18	22:00	19.3	19.3	19.2	77	15.1	0.4	WSW	0.13	1.8	SSW	19.3	19.7	19.7	759.5	0.00	0.0	0.000	0.003	21.7	55	12.2	21.1
23/07/18	22:05	19.1	19.2	19.1	77	15.0	0.4	SW	0.13	1.8	SW	19.1	19.5	19.5	759.5	0.00	0.0	0.000	0.003	21.5	55	12.1	20.9
23/07/18	22:10	18.9	19.1	18.9	78	15.0	0.4	WSW	0.13	1.8	WSW	18.9	19.4	19.4	759.6	0.00	0.0	0.000	0.002	21.4	55	12.0	20.7
23/07/18	22:15	18.7	18.9	18.7	78	14.8	0.0	WSW	0.00	1.3	WSW	18.7	19.1	19.1	759.5	0.00	0.0	0.000	0.001	21.2	55	11.8	20.6
23/07/18	22:20	18.6	18.7	18.5	79	14.8	0.0	SW	0.00	1.3	W	18.6	18.9	18.9	759.5	0.00	0.0	0.000	0.001	21.0	55	11.6	20.3
23/07/18	22:25	18.4	18.5	18.3	80	14.9	0.4	WSW	0.13	1.8	SW	18.4	18.8	18.8	759.5	0.00	0.0	0.000	0.000	20.9	55	11.5	20.2
23/07/18	22:30	18.2	18.2	18.2	80	14.7	0.4	WSW	0.13	1.8	SW	18.2	18.6	18.6	759.5	0.00	0.0	0.000	0.000	20.7	55	11.3	20.1
23/07/18	22:35	18.1	18.2	18.1	80	14.6	0.4	SW	0.13	1.8	SW	18.1	18.4	18.4	759.5	0.00	0.0	0.001	0.000	20.5	55	11.1	19.9
23/07/18	22:40	17.9	18.1	17.9	81	14.6	0.0	WSW	0.00	0.9	SW	17.9	18.3	18.3	759.4	0.00	0.0	0.001	0.000	20.3	55	10.9	19.8
23/07/18	22:45	17.8	17.9	17.8	81	14.5	0.0	WSW	0.00	0.9	WSW	17.8	18.1	18.1	759.4	0.00	0.0	0.002	0.000	20.1	55	10.8	19.7

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Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Wind Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
23/07/18	22:50	17.7	17.8	17.6	82	14.6	0.0	W	0.00	1.3	WSW	17.7	18.0	18.0	759.4	0.00	0.0	0.002	0.000	19.9	55	10.6	19.5
23/07/18	22:55	17.5	17.6	17.4	82	14.4	0.4	W	0.13	1.3	WNW	17.5	17.8	17.8	759.4	0.00	0.0	0.003	0.000	19.8	55	10.5	19.3
23/07/18	23:00	17.3	17.4	17.3	83	14.4	0.0	W	0.00	0.9	WSW	17.3	17.6	17.6	759.3	0.00	0.0	0.003	0.000	19.6	55	10.3	19.1
23/07/18	23:05	17.2	17.3	17.2	83	14.3	0.0	W	0.00	0.4	W	17.2	17.4	17.4	759.3	0.00	0.0	0.004	0.000	19.4	55	10.1	18.9
23/07/18	23:10	17.1	17.2	17.1	84	14.3	0.0	SW	0.00	1.3	WSW	17.1	17.3	17.3	759.4	0.00	0.0	0.004	0.000	19.3	55	10.0	18.7
23/07/18	23:15	17.1	17.1	17.1	84	14.3	0.0	WSW	0.00	0.9	WSW	17.1	17.3	17.3	759.3	0.00	0.0	0.004	0.000	19.1	56	10.1	18.6
23/07/18	23:20	17.1	17.1	17.1	85	14.5	0.0	WSW	0.00	0.9	WSW	17.1	17.3	17.3	759.4	0.00	0.0	0.004	0.000	18.9	56	10.0	18.4
23/07/18	23:25	17.1	17.1	17.1	85	14.5	0.0	---	0.00	0.0	---	17.1	17.3	17.3	759.4	0.00	0.0	0.004	0.000	18.8	56	9.9	18.3
23/07/18	23:30	17.1	17.1	17.1	85	14.5	0.0	---	0.00	0.0	---	17.1	17.3	17.3	759.4	0.00	0.0	0.004	0.000	18.7	56	9.8	18.2
23/07/18	23:35	17.0	17.1	17.0	85	14.5	0.0	WSW	0.00	0.4	WSW	17.0	17.2	17.2	759.4	0.00	0.0	0.005	0.000	18.6	56	9.6	17.9
23/07/18	23:40	17.0	17.0	17.0	85	14.5	0.0	WSW	0.00	1.3	WSW	17.0	17.2	17.2	759.4	0.00	0.0	0.005	0.000	18.5	56	9.6	17.9
23/07/18	23:45	17.1	17.1	17.0	85	14.5	0.0	SW	0.00	0.9	SW	17.1	17.3	17.3	759.4	0.00	0.0	0.004	0.000	18.4	56	9.4	17.8
23/07/18	23:50	17.2	17.3	17.1	85	14.6	0.9	SW	0.27	2.2	WSW	17.2	17.4	17.4	759.4	0.00	0.0	0.004	0.000	18.3	56	9.3	17.7
23/07/18	23:55	17.3	17.3	17.3	84	14.6	0.9	WSW	0.27	2.2	WSW	17.3	17.6	17.6	759.3	0.00	0.0	0.003	0.000	18.2	56	9.3	17.6
24/07/18	00:00	17.4	17.5	17.3	83	14.5	0.9	SW	0.27	2.2	SW	17.4	17.7	17.7	759.4	0.00	0.0	0.003	0.000	18.2	56	9.2	17.5
24/07/18	0:05	17.5	17.6	17.5	83	14.6	0.4	WSW	0.13	1.3	WSW	17.5	17.8	17.8	759.4	0.00	0.0	0.003	0.000	18.1	57	9.5	17.5
24/07/18	0:10	17.6	17.6	17.6	82	14.5	0.4	WSW	0.13	1.3	S	17.6	17.9	17.9	759.4	0.00	0.0	0.003	0.000	18.1	57	9.5	17.5
24/07/18	0:15	17.6	17.6	17.6	82	14.5	0.0	NW	0.00	0.9	WSW	17.6	17.9	17.9	759.4	0.00	0.0	0.003	0.000	18.1	57	9.4	17.4
24/07/18	0:20	17.6	17.6	17.5	82	14.5	0.0	NW	0.00	0.9	NW	17.6	17.9	17.9	759.5	0.00	0.0	0.003	0.000	18.1	57	9.4	17.4
24/07/18	0:25	17.5	17.5	17.4	83	14.6	0.4	W	0.13	1.8	W	17.5	17.8	17.8	759.4	0.00	0.0	0.003	0.000	18.0	57	9.3	17.4
24/07/18	0:30	17.4	17.4	17.4	83	14.5	0.0	W	0.00	0.9	W	17.4	17.7	17.7	759.4	0.00	0.0	0.003	0.000	17.9	57	9.3	17.3
24/07/18	0:35	17.3	17.4	17.3	83	14.4	0.0	W	0.00	0.9	W	17.3	17.6	17.6	759.4	0.00	0.0	0.003	0.000	17.9	57	9.2	17.3
24/07/18	0:40	17.3	17.3	17.3	83	14.4	0.0	W	0.00	0.4	W	17.3	17.6	17.6	759.3	0.00	0.0	0.003	0.000	17.8	57	9.2	17.2
24/07/18	0:45	17.3	17.3	17.2	83	14.4	0.0	SW	0.00	1.8													

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Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Wind Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
24/07/18	1:25	17.2	17.2	17.2	83	14.3	0.0	WSW	0.00	0.4	WSW	17.2	17.4	17.4	759.0	0.00	0.0	0.004	0.000	17.4	58	9.1	16.8
24/07/18	1:30	17.2	17.2	17.2	83	14.3	0.0	---	0.00	0.0	---	17.2	17.4	17.4	759.1	0.00	0.0	0.004	0.000	17.4	58	9.0	16.7
24/07/18	1:35	17.2	17.2	17.2	83	14.3	0.4	WSW	0.13	1.8	W	17.2	17.4	17.4	759.1	0.00	0.0	0.004	0.000	17.4	58	9.0	16.7
24/07/18	1:40	17.2	17.3	17.2	82	14.1	0.0	WSW	0.00	0.9	WSW	17.2	17.4	17.4	759.0	0.00	0.0	0.004	0.000	17.4	58	9.0	16.7
24/07/18	1:45	17.2	17.3	17.2	82	14.1	0.0	WSW	0.00	1.3	WSW	17.2	17.4	17.4	759.0	0.00	0.0	0.004	0.000	17.3	58	9.0	16.7
24/07/18	1:50	17.2	17.2	17.2	81	13.9	0.0	WSW	0.00	0.9	WSW	17.2	17.3	17.3	758.9	0.00	0.0	0.004	0.000	17.3	58	9.0	16.7
24/07/18	1:55	17.1	17.2	17.0	81	13.8	0.4	SW	0.13	1.8	SW	17.1	17.2	17.2	759.0	0.00	0.0	0.004	0.000	17.3	58	9.0	16.7
24/07/18	2:00	16.9	17.0	16.9	81	13.7	0.4	SW	0.13	1.8	SW	16.9	17.1	17.1	759.0	0.00	0.0	0.005	0.000	17.2	58	8.9	16.6
24/07/18	2:05	16.8	16.9	16.7	80	13.4	0.4	WSW	0.13	1.8	SW	16.8	16.9	16.9	758.9	0.00	0.0	0.005	0.000	17.2	58	8.8	16.5
24/07/18	2:10	16.7	16.7	16.6	80	13.2	0.4	SW	0.13	2.2	S	16.7	16.8	16.8	758.9	0.00	0.0	0.006	0.000	17.1	58	8.8	16.4
24/07/18	2:15	16.6	16.6	16.6	79	12.9	0.4	SSW	0.13	2.2	WSW	16.6	16.6	16.6	758.9	0.00	0.0	0.006	0.000	17.0	58	8.7	16.3
24/07/18	2:20	16.6	16.6	16.6	79	12.9	0.4	SW	0.13	1.8	SSW	16.6	16.6	16.6	759.0	0.00	0.0	0.006	0.000	16.9	58	8.6	16.2
24/07/18	2:25	16.5	16.6	16.4	79	12.8	0.0	SW	0.00	1.3	WSW	16.5	16.6	16.6	758.9	0.00	0.0	0.006	0.000	16.8	58	8.5	16.1
24/07/18	2:30	16.4	16.4	16.4	79	12.8	0.0	SW	0.00	1.3	SW	16.4	16.4	16.4	758.9	0.00	0.0	0.007	0.000	16.8	58	8.5	16.1
24/07/18	2:35	16.4	16.4	16.4	79	12.7	0.0	SW	0.00	1.3	SW	16.4	16.4	16.4	759.0	0.00	0.0	0.007	0.000	16.7	58	8.4	15.9
24/07/18	2:40	16.3	16.4	16.3	79	12.6	0.0	SE	0.00	0.4	SE	16.3	16.3	16.3	759.0	0.00	0.0	0.007	0.000	16.6	58	8.3	15.9
24/07/18	2:45	16.3	16.4	16.3	79	12.6	0.0	SE	0.00	0.4	SE	16.3	16.3	16.3	759.1	0.00	0.0	0.007	0.000	16.6	58	8.3	15.8
24/07/18	2:50	16.4	16.4	16.4	78	12.5	0.0	SW	0.00	1.3	SW	16.4	16.4	16.4	759.1	0.00	0.0	0.007	0.000	16.4	58	8.2	15.7
24/07/18	2:55	16.4	16.4	16.4	78	12.5	0.4	SW	0.13	1.8	SW	16.4	16.4	16.4	759.0	0.00	0.0	0.007	0.000	16.4	58	8.2	15.7
24/07/18	3:00	16.4	16.4	16.4	77	12.4	0.0	WSW	0.00	0.9	WSW	16.4	16.4	16.4	759.0	0.00	0.0	0.007	0.000	16.3	58	8.0	15.6
24/07/18	3:05	16.4	16.4	16.4	76	12.2	0.4	SW	0.13	1.8	S	16.4	16.3	16.3	759.0	0.00	0.0	0.007	0.000	16.3	58	8.0	15.6
24/07/18	3:10	16.5	16.5	16.4	76	12.3	0.0	SW	0.00	0.9	SW	16.5	16.4	16.4	759.0	0.00	0.0	0.006	0.000	16.3	58	8.0	15.6
24/07/18	3:15	16.4	16.4	16.4	76	12.2	0.0	SW	0.00	1.3	SW	16.4	16.3	16.3	759.0	0.00	0.0	0.007	0.000	16.3	58	8.0	15.6
24/07/18	3:20	16.4	16.4	16.4	76	12.2	0.0	WSW	0.00	1.8	WSW	16.4	16.3	16.3	759.0	0.00	0.0	0.007	0.000	16.3	58	8.0	15.6
24/07/18	3:25	16.4	16.4	16.4	76	12.2	0.0	SW	0.00	0.9	WSW	16.4	16.3	16.3	759.0	0.00	0.0	0.007	0.000	16.2	58	7.9	15.4
24/07/18	3:30	16.4	16.4	16.4	77	12.4	0.0	---	0.00	0.0	---	16.4	16.4	16.4	759.0	0.00	0.0	0.007	0.000	16.2	58	7.9	15.4
24/07/18	3:35	16.4	16.4	16.4	77	12.4	0.0	SW	0.00	1.3	SW	16.4	16.4	16.4	759.0	0.00	0.0	0.007	0.000	16.2	58	7.9	15.4
24/07/18	3:40	16.6	16.6	16.6	77	12.5	0.0	SW	0.00	1.3	S	16.6	16.5	16.5	759.0	0.00	0.0	0.006	0.000	16.2	58	7.9	15.4
24/07/18	3:45	16.6	16.6	16.6	77	12.5	0.0	S	0.00	0.9	S	16.6	16.5	16.5	759.0	0.00	0.0	0.006	0.000	16.2	58	7.9	15.4
24/07/18	3:50	16.7	16.7	16.7	77	12.6	0.0	WSW	0.00	1.3	WSW	16.7	16.7	16.7	759.0	0.00	0.0	0.006	0.000	16.2	58	7.9	15.4
24/07/18	3:55	16.7	16.7	16.7	77	12.6	0.0	WSW	0.00	1.3	SW	16.7	16.7	16.7	759.0	0.00	0.0	0.006	0.000	16.2	58	7.9	15.4

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File Setup Reports Browse Window Help

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Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Wind Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
24/07/18	4:00	16.7	16.7	16.7	77	12.6	0.0	WSW	0.00	0.4	WSW	16.7	16.7	16.7	759.0	0.00	0.0	0.006	0.000	16.2	58	7.9	15.4
24/07/18	4:05	16.7	16.7	16.7	78	12.8	0.0	---	0.00	0.0	---	16.7	16.7	16.7	758.9	0.00	0.0	0.006	0.000	16.2	58	7.9	15.4
24/07/18	4:10	16.7	16.7	16.7	78	12.8	0.0	---	0.00	0.0	---	16.7	16.7	16.7	759.0	0.00	0.0	0.006	0.000	16.2	58	7.9	15.4
24/07/18	4:15	16.7	16.7	16.7	78	12.8	0.0	---	0.00	0.0	---	16.7	16.7	16.7	758.9	0.00	0.0	0.006	0.000	16.2	58	7.9	15.4
24/07/18	4:20	16.6	16.7	16.6	78	12.7	0.0	---	0.00	0.0	---	16.6	16.6	16.6	758.9	0.00	0.0	0.006	0.000	16.2	58	7.9	15.4
24/07/18	4:25	16.5	16.6	16.4	78	12.6	0.0	---	0.00	0.0	---	16.5	16.5	16.5	758.9	0.00	0.0	0.006	0.000	16.1	58	7.8	15.3
24/07/18	4:30	16.4	16.4	16.4	78	12.6	0.0	---	0.00	0.0	---	16.4	16.4	16.4	758.9	0.00	0.0	0.007	0.000	16.1	58	7.8	15.3
24/07/18	4:35	16.4	16.4	16.4	78	12.5	0.0	---	0.00	0.0	---	16.4	16.4	16.4	758.9	0.00	0.0	0.007	0.000	16.1	58	7.8	15.3
24/07/18	4:40	16.4	16.4	16.4	78	12.5	0.0	---	0.00	0.0	---	16.4	16.4	16.4	758.9	0.00	0.0	0.007	0.000	16.1	58	7.8	15.3
24/07/18	4:45	16.4	16.4	16.4	79	12.7	0.0	---	0.00	0.0	---	16.4	16.4	16.4	758.8	0.00	0.0	0.007	0.000	16.1	58	7.8	15.3
24/07/18	4:50	16.3	16.4	16.3	79	12.6	0.0	---	0.00	0.0	---	16.3	16.3	16.3	758.8	0.00	0.0	0.007	0.000	16.1	58	7.8	15.3
24/07/18	4:55	16.3	16.3	16.3	79	12.6	0.0	SW	0.00	0.9	SW	16.3	16.3	16.3	758.8	0.00	0.0	0.007	0.000	16.1	58	7.8	15.3
24/07/18	5:00	16.3	16.3	16.3	79	12.6	0.0	SW	0.00	0.4	SW	16.3	16.3	16.3	758.8	0.00	0.0	0.007	0.000	16.0	58	7.7	15.2
24/07/18	5:05	16.2	16.3	16.2	79	12.6	0.0	---	0.00	0.0	---	16.2	16.2	16.2	758.9	0.00	0.0	0.007	0.000	16.0	58	7.7	15.2
24/07/18	5:10	16.2	16.2	16.2	79	12.6	0.0	---	0.00	0.0	---	16.2	16.2	16.2	758.9	0.00	0.0	0.007	0.000	16.0	58	7.7	15.2
24/07/18	5:15	16.2	16.2	16.1	79	12.5	0.0	---	0.00	0.0	---	16.2	16.2	16.2	758.9	0.00	0.0	0.008	0.000	15.9	58	7.7	15.2
24/07/18	5:20	16.1	16.1	16.1	79	12.5	0.0	---	0.00	0.0	---	16.1	16.1	16.1	758.9	0.00	0.0	0.008	0.000	15.9	58	7.7	15.2
24/07/18	5:25	16.1	16.1	16.1	80	12.7	0.0	---	0.00	0.0	---	16.1	16.1	16.1	758.8	0.00	0.0	0.008	0.000	15.9	58	7.7	15.2
24/07/18	5:30	16.1	16.1	16.1	80	12.6	0.0	SE	0.00	1.8	SE	16.1	16.1	16.1	758.9	0.00	0.0	0.008	0.000	15.9	58	7.6	15.1
24/07/18	5:35	16.2	16.2	16.1	80	12.7	0.0	WSW	0.00	0.9	WSW	16.2	16.2	16.2	758.8	0.00	0.0	0.008	0.000	15.8	58	7.6	15.1
24/07/18	5:40	16.3	16.4	16.2	80	12.8	0.0	WSW	0.00	1.8	WSW	16.3	16.3	16.3	758.9	0.00	0.0	0.007	0.000	15.8	58	7.6	15.1
24/07/18	5:45	16.4	16.4	16.4	79	12.7	0.0	SW	0.00	1.3	SW	16.4	16.4	16.4	758.9	0.00	0.0	0.007	0.000	15.8	58	7.8	15.1
24/07/18	5:50	16.6	16.7	16.4	79	12.9	0.0	SW	0.00	1.8	SW	16.6	16.6	16.6	758.9	0.00	0.0	0.006	0.000	15.8	58	7.8	15.1
24/07/18	5:55	16.7	16.7	16.7	78	12.8	0.0	S	0.00	0.9	S	16.7	16.7	16.7	758.9	0.00	0.0	0.006</					

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File Setup Reports Browse Window Help

Browse Records

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Wind Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
24/07/18	6:35	17.6	17.7	17.5	76	13.3	0.9	SSW	0.27	2.2	SW	17.6	17.7	17.7	759.0	0.00	0.0	0.003	0.000	16.3	59	8.2	15.6
24/07/18	6:40	17.8	17.8	17.7	76	13.5	1.3	SW	0.40	2.7	W	17.8	17.9	17.9	759.0	0.00	0.0	0.002	0.000	16.4	59	8.4	15.7
24/07/18	6:45	17.8	17.8	17.8	76	13.5	0.9	SW	0.27	2.2	SSW	17.8	17.9	17.9	759.0	0.00	0.0	0.002	0.000	16.6	59	8.5	15.8
24/07/18	6:50	17.8	17.8	17.8	76	13.5	0.9	SW	0.27	2.2	S	17.8	17.9	17.9	759.0	0.00	0.0	0.002	0.000	16.6	59	8.6	15.9
24/07/18	6:55	17.8	17.9	17.8	76	13.5	0.9	SW	0.27	2.7	SSE	17.8	17.9	17.9	758.9	0.00	0.0	0.002	0.000	16.7	59	8.7	16.0
24/07/18	7:00	17.9	18.1	17.9	76	13.7	1.3	S	0.40	4.0	SSW	17.9	18.1	18.1	759.0	0.00	0.0	0.001	0.000	16.8	59	8.7	16.1
24/07/18	7:05	18.1	18.2	18.1	76	13.8	0.9	SW	0.27	4.0	SSW	18.1	18.3	18.3	759.0	0.00	0.0	0.001	0.000	16.9	59	8.8	16.2
24/07/18	7:10	18.3	18.3	18.2	76	14.0	0.9	SSW	0.27	1.8	S	18.3	18.5	18.5	759.0	0.00	0.0	0.000	0.000	17.0	59	8.9	16.3
24/07/18	7:15	18.4	18.5	18.3	75	13.9	0.9	SW	0.27	2.7	SW	18.4	18.6	18.6	759.1	0.00	0.0	0.000	0.000	17.2	59	9.1	16.5
24/07/18	7:20	18.6	18.6	18.5	75	14.0	0.9	SW	0.27	2.7	WSW	18.6	18.8	18.8	759.0	0.00	0.0	0.000	0.001	17.3	59	9.2	16.7
24/07/18	7:25	18.6	18.7	18.6	74	13.9	1.3	SW	0.40	2.2	SW	18.6	18.8	18.8	759.1	0.00	0.0	0.000	0.001	17.4	59	9.3	16.8
24/07/18	7:30	18.7	18.7	18.7	74	13.9	1.3	SW	0.40	2.7	SSW	18.7	18.9	18.9	759.1	0.00	0.0	0.000	0.001	17.6	60	9.7	17.0
24/07/18	7:35	18.7	18.7	18.7	75	14.1	0.9	SSW	0.27	2.2	SW	18.7	18.9	18.9	759.2	0.00	0.0	0.000	0.001	17.8	60	9.9	17.3
24/07/18	7:40	18.7	18.8	18.7	76	14.4	0.9	WSW	0.27	4.0	SSW	18.7	19.0	19.0	759.0	0.00	0.0	0.000	0.001	17.9	60	10.0	17.4
24/07/18	7:45	18.7	18.8	18.7	77	14.6	0.4	WSW	0.13	2.2	SW	18.7	19.0	19.0	758.5	0.00	0.0	0.000	0.001	18.1	60	10.2	17.7
24/07/18	7:50	18.6	18.7	18.6	78	14.7	0.9	SSW	0.27	1.8	SW	18.6	18.9	18.9	759.1	0.25	0.0	0.000	0.001	18.3	60	10.4	17.8
24/07/18	7:55	18.6	18.6	18.6	77	14.5	0.4	SE	0.13	1.8	SW	18.6	18.9	18.9	759.0	0.00	0.0	0.000	0.001	18.4	59	10.2	17.9
24/07/18	8:00	18.7	18.8	18.6	77	14.6	0.9	WSW	0.27	2.2	SSE	18.7	19.0	19.0	759.0	0.00	0.0	0.000	0.001	18.6	59	10.4	18.1
24/07/18	8:05	18.8	18.9	18.8	76	14.5	1.3	SW	0.40	4.0	W	18.8	19.2	19.2	758.9	0.00	0.0	0.000	0.002	18.7	59	10.5	18.2
24/07/18	8:10	19.1	19.1	18.9	76	14.7	1.3	SW	0.40	4.5	S	19.1	19.4	19.4	758.9	0.00	0.0	0.000	0.003	18.8	59	10.6	18.3
24/07/18	8:15	19.2	19.2	19.1	75	14.7	0.9	SSW	0.27	2.7	WSW	19.2	19.6	19.6	758.8	0.00	0.0	0.000	0.003	18.9	59	10.7	18.4
24/07/18	8:20	19.3	19.3	19.2	74	14.5	1.3	SW	0.40	3.1	SW	19.3	19.6	19.6	758.9	0.00	0.0	0.000	0.003	19.0	59	10.8	18.6
24/07/18	8:25	19.4	19.5	19.3	74	14.6	1.3	SW	0.40	4.0	SW	19.4	19.7	19.7	758.8	0.00	0.0	0.000	0.004	19.1	59	10.9	18.7
24/07/18	8:30	19.6	19.7	19.5	74	14.8	1.3	SW	0.40	3.1	WSW	19.6	19.9	19.9	758.8	0.00	0.0	0.000	0.004	19.2	59	11.0	18.8
24/07/18	8:35	19.7	19.8	19.7	73	14.7	0.9	S	0.27	4.0	WSW	19.7	20.1	20.1	758.7	0.00	0.0	0.000	0.005	19.3	59	11.1	19.0
24/07/18	8:40	19.8	19.9	19.8	73	14.9	1.8	SSW	0.54	4.9	WSW	19.8	20.2	20.2	758.8	0.00	0.0	0.000	0.005	19.4	59	11.2	19.1
24/07/18	8:45	19.9	19.9	19.9	72	14.7	1.8	S	0.54	4.9	WSW	19.9	20.3	20.3	758.8	0.00	0.0	0.000	0.006	19.6	59	11.3	19.3
24/07/18	8:50	20.0	20.1	19.9	72	14.8	1.8	S	0.54	3.1	SSW	20.0	20.4	20.4	758.8	0.00	0.0	0.000	0.006	19.7	59	11.5	19.4
24/07/18	8:55	20.1	20.2	20.1	72	14.9	1.3	SW	0.40	4.5	SW	20.1	20.5	20.5	758.9	0.00	0.0	0.000	0.006	19.9	59	11.6	19.7
24/07/18	9:00	20.2	20.3	20.2	71	14.8	1.3	SSE	0.40	4.5	SW	20.2	20.6	20.6	758.8	0.00	0.0	0.000	0.007	20.1	59	11.8	19.8
24/07/18	9:05	20.4	20.5	20.3	71	15.0	0.9	SSE	0.27	2.7	SSW	20.4	20.7	20.7	758.7	0.00	0.0	0.000	0.007	20.3	59	12.1	20.0

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File Setup Reports Browse Window Help

Browse Records

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Wind Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
24/07/18	9:10	20.6	20.7	20.5	71	15.2	0.9	SSW	0.27	3.1	SW	20.6	20.9	20.9	758.8	0.00	0.0	0.000	0.008	20.6	59	12.3	20.2
24/07/18	9:15	20.8	20.9	20.7	70	15.1	1.8	SW	0.54	5.4	W	20.8	20.9	20.9	758.7	0.00	0.0	0.000	0.008	20.8	59	12.5	20.3
24/07/18	9:20	21.0	21.1	20.9	70	15.3	1.8	SSW	0.54	4.9	SW	21.0	21.1	21.1	758.7	0.00	0.0	0.000	0.009	21.1	59	12.7	20.6
24/07/18	9:25	21.1	21.2	21.1	70	15.4	1.3	SW	0.40	3.1	SW	21.1	21.2	21.2	758.8	0.00	0.0	0.000	0.010	21.3	59	12.9	20.8
24/07/18	9:30	21.2	21.3	21.2	70	15.5	1.8	SW	0.54	4.9	WSW	21.2	21.3	21.3	758.7	0.00	0.0	0.000	0.010	21.5	59	13.1	21.1
24/07/18	9:35	21.3	21.4	21.3	70	15.6	1.3	S	0.40	2.2	WSW	21.3	21.4	21.4	758.6	0.00	0.0	0.000	0.010	21.7	59	13.4	21.4
24/07/18	9:40	21.5	21.6	21.4	69	15.6	1.8	SW	0.54	4.0	SW	21.5	21.6	21.6	758.6	0.00	0.0	0.000	0.011	22.0	59	13.6	21.8
24/07/18	9:45	21.6	21.6	21.6	69	15.7	1.8	S	0.54	4.0	S	21.6	21.8	21.8	758.6	0.00	0.0	0.000	0.011	22.2	59	13.8	22.1
24/07/18	9:50	21.7	21.7	21.6	69	15.7	1.8	SW	0.54	4.0	SW	21.7	21.8	21.8	758.6	0.00	0.0	0.000	0.012	22.4	58	13.7	22.3
24/07/18	9:55	21.8	22.0	21.7	69	15.9	1.8	SW	0.54	4.0	SW	21.8	22.1	22.1	758.6	0.00	0.0	0.000	0.012	22.6	58	13.9	22.6
24/07/18	10:00	22.0	22.0	22.0	69	16.0	1.8	SSW	0.54	4.0	S	22.0	22.3	22.3	758.7	0.00	0.0	0.000	0.013	22.7	58	14.0	22.8
24/07/18	10:05	21.9	22.0	21.8	69	16.0	1.8	S	0.54	4.9	WSW	21.9	22.2	22.2	758.7	0.00	0.0	0.000	0.013	22.8	58	14.1	23.0
24/07/18	10:10	21.8	21.8	21.8	70	16.1	1.8	SW	0.54	4.9	SW	21.8	22.1	22.1	758.7	0.00	0.0	0.000	0.012	22.9	58	14.2	23.1
24/07/18	10:15	22.0	22.2	21.8	70	16.3	1.3	S	0.40	4.0	WSW	22.0	22.3	22.3	758.8	0.00	0.0	0.000	0.013	23.1	58	14.3	23.3
24/07/18	10:20	22.6	22.9	22.3	67	16.2	1.3	WSW	0.40	4.0	WSW	22.6	23.0	23.0	758.8	0.00	0.0	0.000	0.015	23.2	58	14.4	23.4
24/07/18	10:25	23.2	23.4	22.9	66	16.5	1.3	SW	0.40	3.1	SW	23.2	23.8	23.8	758.7	0.00	0.0	0.000	0.017	23.3	58	14.6	23.6
24/07/18	10:30	23.6	23.8	23.4	63	16.2	1.3	SSW	0.40	4.0	SSW	23.6	24.2	24.2	758.7	0.00	0.0	0.000	0.018	23.6	58	14.8	23.9
24/07/18	10:35	23.9	24.1	23.9	62	16.2	1.3	SW	0.40	4.0	SW	23.9	24.5	24.5	758.6	0.00	0.0	0.000	0.019	23.8	59	15.3	24.2
24/07/18	10:40	24.3	24.6	24.1	60	16.0	1.3	S	0.40	3.1	ESE	24.3	24.7	24.7	758.7	0.00	0.0	0.000	0.021	24.0	59	15.5	24.4
24/07/18	10:45	24.7	24.7	24.6	60	16.4	1.3	S	0.40	4.9	SE	24.7	25.2	25.2	758.6	0.00	0.0	0.000	0.022	24.2	59	15.7	24.6
24/07/18	10:50	24.7	24.8	24.6	60	16.4	1.8	WSW	0.54	4.5	WSW	24.7	25.2	25.2	758.8	0.00	0.0	0.000	0.022	24.6	59	16.1	24.9
24/07/18	10:55	24.8	24.8	24.8	60	16.5	0.9	SSW	0.27	4.0	SSW	24.8	25.3	25.3	758.6	0.00	0.0	0.000	0.023	25.0	60	16.7	25.4
24/07/18	11:00	24.7	24.8	24.6	60	16.4	1.3	SW	0.40	4.0	SSW	24.7	25.2	25.2	758.6	0.00	0.0	0.000	0.022	25.4	60	17.1	25.9
24/07/18	11:05	24.5	24.6	24.3	61	16.5																	

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Wind Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
24/07/18	11:45	20.4	20.5	20.3	81	17.1	0.4	SW	0.13	1.8	SW	20.4	21.3	21.3	758.9	0.00	0.0	0.000	0.007	26.3	56	16.8	26.7
24/07/18	11:50	20.4	20.4	20.3	83	17.4	0.0	W	0.00	1.3	W	20.4	21.3	21.3	758.9	0.00	0.0	0.000	0.007	26.0	56	16.5	26.4
24/07/18	11:55	20.4	20.4	20.4	83	17.5	0.4	S	0.13	1.3	SE	20.4	21.3	21.3	758.9	0.00	0.0	0.000	0.007	25.8	56	16.4	26.2
24/07/18	12:00	20.5	20.6	20.4	84	17.7	0.4	SE	0.13	1.3	SE	20.5	21.4	21.4	758.9	0.00	0.0	0.000	0.008	25.7	56	16.2	26.0
24/07/18	12:05	20.7	20.8	20.6	83	17.7	0.0	SW	0.00	0.9	SW	20.7	21.6	21.6	759.0	0.00	0.0	0.000	0.008	25.6	56	16.1	25.9
24/07/18	12:10	20.9	20.9	20.8	83	17.9	0.4	WSW	0.13	2.2	W	20.9	21.7	21.7	758.8	0.00	0.0	0.000	0.009	25.5	56	16.1	25.8
24/07/18	12:15	20.8	20.9	20.7	80	17.3	0.9	WSW	0.27	3.1	SSW	20.8	21.6	21.6	759.0	0.00	0.0	0.000	0.009	25.4	56	16.0	25.7
24/07/18	12:20	20.6	20.7	20.4	77	16.4	0.9	WSW	0.27	2.7	WSW	20.6	21.2	21.2	759.0	0.00	0.0	0.000	0.008	25.4	56	16.0	25.7
24/07/18	12:25	20.4	20.4	20.3	76	16.1	0.9	SW	0.27	2.7	SSW	20.4	21.1	21.1	759.0	0.00	0.0	0.000	0.007	25.3	56	15.9	25.6
24/07/18	12:30	20.4	20.6	20.3	78	16.5	1.3	WSW	0.40	3.1	SSE	20.4	21.2	21.2	759.1	0.00	0.0	0.000	0.007	25.3	56	15.9	25.6
24/07/18	12:35	20.8	21.0	20.6	74	16.0	0.9	W	0.27	3.1	SW	20.8	21.2	21.2	759.1	0.00	0.0	0.000	0.008	25.3	56	15.9	25.6
24/07/18	12:40	21.2	21.4	21.0	72	15.9	1.8	SW	0.54	4.9	WSW	21.2	21.3	21.3	759.2	0.00	0.0	0.000	0.010	25.4	56	16.0	25.7
24/07/18	12:45	21.7	22.0	21.4	69	15.8	1.3	SSW	0.40	4.9	SSW	21.7	21.9	21.9	759.1	0.00	0.0	0.000	0.012	25.5	56	16.1	25.8
24/07/18	12:50	22.2	22.4	22.0	66	15.5	1.3	SW	0.40	4.0	SSW	22.2	22.3	22.3	759.2	0.00	0.0	0.000	0.013	25.8	57	16.6	26.2
24/07/18	12:55	22.4	22.4	22.3	64	15.2	1.8	SW	0.54	5.5	SW	22.4	22.6	22.6	759.2	0.00	0.0	0.000	0.014	26.1	57	16.9	26.5
24/07/18	13:00	22.2	22.3	22.1	64	15.1	1.8	SW	0.54	5.4	S	22.2	22.3	22.3	759.1	0.00	0.0	0.000	0.014	26.3	57	17.1	26.7
24/07/18	13:05	21.9	22.1	21.8	66	15.3	1.3	SSW	0.40	2.7	SSW	21.9	22.1	22.1	759.1	0.00	0.0	0.000	0.013	26.4	56	17.0	26.9
24/07/18	13:10	21.8	22.1	21.7	66	15.1	1.3	WSW	0.40	4.5	W	21.8	21.8	21.8	759.2	0.00	0.0	0.000	0.012	26.6	56	17.1	27.1
24/07/18	13:15	21.9	22.0	21.7	64	14.8	1.3	SW	0.40	3.1	W	21.9	21.9	21.9	759.3	0.00	0.0	0.000	0.012	26.7	56	17.2	27.2
24/07/18	13:20	22.2	22.3	22.0	64	15.0	1.3	SW	0.40	3.6	SSW	22.2	22.3	22.3	759.4	0.00	0.0	0.000	0.013	26.8	56	17.3	27.3
24/07/18	13:25	22.3	22.3	22.2	62	14.6	1.8	SW	0.54	4.5	WSW	22.3	22.3	22.3	759.3	0.00	0.0	0.000	0.014	26.9	56	17.4	27.4
24/07/18	13:30	22.1	22.2	22.0	63	14.7	1.3	WSW	0.40	4.9	WNW	22.1	22.1	22.1	759.3	0.00	0.0	0.000	0.013	27.0	56	17.5	27.6
24/07/18	13:35	21.9	21.9	21.8	65	15.1	1.3	SW	0.40	3.1	SSW	21.9	22.0	22.0	759.2	0.00	0.0	0.000	0.013	27.1	56	17.6	27.7
24/07/18	13:40	22.1	22.3	21.9	64	14.9	1.8	SW	0.54	5.8	SSW	22.1	22.1	22.1	759.3	0.00	0.0	0.000	0.013	27.2	56	17.7	27.8
24/07/18	13:45	22.6	22.8	22.3	61	14.7	1.3	W	0.40	3.1	SW	22.6	22.7	22.7	759.3	0.00	0.0	0.000	0.015	27.3	56	17.7	27.9
24/07/18	13:50	22.7	22.8	22.6	62	15.1	1.8	SW	0.54	4.5	WSW	22.7	23.0	23.0	759.3	0.00	0.0	0.000	0.015	27.4	56	17.9	28.2
24/07/18	13:55	22.5	22.6	22.4	62	14.9	1.8	SW	0.54	4.0	WSW	22.5	22.7	22.7	759.3	0.00	0.0	0.000	0.014	27.6	56	18.0	28.3
24/07/18	14:00	22.2	22.3	22.0	62	14.5	1.8	SW	0.54	4.0	SW	22.2	22.2	22.2	759.3	0.00	0.0	0.000	0.013	27.7	55	17.8	28.4
24/07/18	14:05	21.8	22.0	21.6	64	14.7	1.8	SW	0.54	4.5	WSW	21.8	21.8	21.8	759.3	0.00	0.0	0.000	0.012	27.8	55	17.9	28.6
24/07/18	14:10	21.4	21.6	21.2	64	14.3	1.8	SSW	0.54	5.4	S	21.4	21.2	21.2	759.4	0.00	0.0	0.000	0.011	27.8	55	18.0	28.7
24/07/18	14:15	20.9	21.1	20.8	65	14.1	1.8	WSW	0.54	3.1	S	20.9	20.8	20.8	759.4	0.00	0.0	0.000	0.009	27.8	55	18.0	28.7

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Wind Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
24/07/18	14:20	20.6	20.7	20.5	66	14.0	0.9	SW	0.27	3.1	WSW	20.6	20.6	20.6	759.4	0.00	0.0	0.000	0.008	27.8	55	17.9	28.6
24/07/18	14:25	20.4	20.5	20.3	66	13.9	1.3	SW	0.40	3.1	WSW	20.4	20.5	20.5	759.4	0.00	0.0	0.000	0.007	27.7	54	17.5	28.3
24/07/18	14:30	20.3	20.3	20.2	67	13.9	1.8	SW	0.54	4.9	SSW	20.3	20.4	20.4	759.5	0.00	0.0	0.000	0.007	27.5	54	17.4	28.1
24/07/18	14:35	19.9	20.1	19.9	68	13.9	1.3	W	0.40	4.0	WSW	19.9	20.2	20.2	759.6	0.00	0.0	0.000	0.006	27.3	54	17.2	27.8
24/07/18	14:40	19.8	19.9	19.8	68	13.8	1.3	WSW	0.40	4.5	SW	19.8	20.1	20.1	759.6	0.00	0.0	0.000	0.005	27.1	54	17.0	27.5
24/07/18	14:45	19.9	20.1	19.9	67	13.6	1.3	WSW	0.40	4.0	SW	19.9	20.1	20.1	759.5	0.00	0.0	0.000	0.006	26.9	54	16.8	27.3
24/07/18	14:50	20.3	20.4	20.1	67	13.9	1.3	SW	0.40	4.0	WSW	20.3	20.4	20.4	759.6	0.00	0.0	0.000	0.007	26.8	54	16.7	27.1
24/07/18	14:55	20.6	20.8	20.4	66	14.0	1.3	WSW	0.40	3.1	SW	20.6	20.6	20.6	759.6	0.00	0.0	0.000	0.008	26.7	54	16.6	27.0
24/07/18	15:00	20.9	21.0	20.8	64	13.8	0.9	SW	0.27	3.1	SW	20.9	20.7	20.7	759.6	0.00	0.0	0.000	0.009	26.6	54	16.5	26.9
24/07/18	15:05	21.2	21.3	21.1	63	13.8	1.3	WSW	0.40	4.0	W	21.2	20.9	20.9	759.7	0.00	0.0	0.000	0.010	26.6	54	16.5	26.9
24/07/18	15:10	21.3	21.4	21.1	62	13.8	1.3	SSW	0.40	3.6	SW	21.3	21.1	21.1	759.7	0.00	0.0	0.000	0.010	26.7	54	16.6	27.1
24/07/18	15:15	21.4	21.4	21.4	61	13.6	1.3	SW	0.40	5.4	SSW	21.4	21.2	21.2	759.7	0.00	0.0	0.000	0.011	26.7	54	16.6	27.1
24/07/18	15:20	21.5	21.6	21.4	60	13.4	1.3	WNW	0.40	4.5	NW	21.5	21.2	21.2	759.6	0.00	0.0	0.000	0.011	26.8	54	16.7	27.2
24/07/18	15:25	21.7	21.8	21.6	60	13.6	0.9	W	0.27	3.1	WSW	21.7	21.4	21.4	759.7	0.00	0.0	0.000	0.012	26.9	54	16.8	27.3
24/07/18	15:30	22.1	22.2	21.9	58	13.4	1.3	SW	0.40	4.0	W	22.1	21.8	21.8	759.7	0.00	0.0	0.000	0.013	27.0	54	16.9	27.4
24/07/18	15:35	22.3	22.5	22.2	59	13.9	1.3	SW	0.40	4.0	WNW	22.3	22.3	22.3	759.7	0.00	0.0	0.000	0.014	27.2	55	17.3	27.7
24/07/18	15:40	22.8	23.1	22.5	56	13.5	1.3	SSW	0.40	3.6	SSW	22.8	22.8	22.8	759.6	0.00	0.0	0.000	0.015	27.4	55	17.5	28.0
24/07/18	15:45	23.4	23.7	23.2	56	14.2	0.9	SW	0.27	2.2	SSW	23.4	23.7	23.7	759.6	0.00	0.0	0.000	0.018	27.7	55	17.8	28.4
24/07/18	15:50	23.8	23.9	23.7	54	14.0	1.3	SW	0.40	4.0	SSW	23.8	24.1	24.1	759.5	0.00	0.0	0.000	0.019	27.9	55	18.1	28.8
24/07/18	15:55	24.0	24.1	23.9	53	13.8	1.3	SW	0.40	4.0	SW	24.0	24.2	24.2	759.5	0.00	0.0	0.000	0.020	28.3	55	18.4	29.3
24/07/18	16:00	24.2	24.2	24.1	52	13.7	1.8	SW	0.54	4.0	SW	24.2	24.3	24.3	759.4	0.00	0.0	0.000	0.020	28.6	55	18.7	29.9
24/07/18	16:05	23.8	24.1	23.7	53	13.7	1.3	SW	0.40	4.0	SW	23.8	24.0	24.0	759.4	0.00	0.0	0.000	0.019	28.9	55	19.0	30.4
24/07/18	16:10	23.3	23.7	23.2	55	13.8	1.3	SW	0.40	3.1	WSW	23.3	23.4	23.4	759.3	0.00	0.0	0.000	0.017	29.2	55	19.2	30.7
24/07/18	16:15	23.1	23.2	23.1	55	13.5	0.9	SSW	0.27	2.2	SW	23.1											



Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Wind Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
24/07/18	16:55	21.3	21.4	21.3	57	12.5	1.8	WSW	0.54	4.5	S	21.3	20.8	20.8	759.5	0.00	0.0	0.000	0.010	29.7	52	18.8	31.1
24/07/18	17:00	21.3	21.3	21.3	57	12.5	1.3	W	0.40	2.7	SW	21.3	20.8	20.8	759.6	0.00	0.0	0.000	0.010	29.4	52	18.6	30.7
24/07/18	17:05	21.5	21.6	21.3	56	12.4	0.9	SW	0.27	2.7	WSW	21.5	20.9	20.9	759.7	0.00	0.0	0.000	0.011	29.2	52	18.4	30.4
24/07/18	17:10	21.7	21.7	21.6	56	12.5	0.4	WNN	0.13	2.7	W	21.7	21.2	21.2	759.8	0.00	0.0	0.000	0.012	29.0	52	18.1	30.2
24/07/18	17:15	21.9	22.0	21.7	55	12.4	0.9	WNN	0.27	3.6	WSW	21.9	21.4	21.4	759.7	0.00	0.0	0.000	0.012	28.9	52	18.0	30.1
24/07/18	17:20	22.1	22.2	22.0	55	12.6	0.9	SW	0.27	3.1	SW	22.1	21.8	21.8	759.7	0.00	0.0	0.000	0.013	28.8	52	18.0	30.0
24/07/18	17:25	22.4	22.6	22.2	54	12.6	0.9	WNN	0.27	2.7	SW	22.4	22.2	22.2	759.8	0.00	0.0	0.000	0.014	28.8	53	18.3	30.1
24/07/18	17:30	22.7	22.9	22.6	53	12.6	1.3	SW	0.40	4.0	SW	22.7	22.6	22.6	759.7	0.00	0.0	0.000	0.015	28.8	53	18.3	30.1
24/07/18	17:35	22.8	22.9	22.8	52	12.5	1.3	W	0.40	4.5	SSW	22.8	22.7	22.7	759.7	0.00	0.0	0.000	0.016	28.9	53	18.4	30.2
24/07/18	17:40	22.7	22.8	22.7	53	12.6	0.9	W	0.27	2.7	WSW	22.7	22.6	22.6	759.7	0.00	0.0	0.000	0.015	29.0	53	18.5	30.3
24/07/18	17:45	22.8	22.8	22.8	53	12.7	1.3	WSW	0.40	4.5	SW	22.8	22.7	22.7	759.6	0.00	0.0	0.000	0.015	29.1	53	18.5	30.3
24/07/18	17:50	22.8	22.8	22.7	51	12.1	1.3	SW	0.40	4.0	SW	22.8	22.6	22.6	759.7	0.00	0.0	0.000	0.015	29.1	53	18.5	30.3
24/07/18	17:55	22.6	22.7	22.6	52	12.3	1.3	WSW	0.40	4.5	WNN	22.6	22.4	22.4	759.7	0.00	0.0	0.000	0.015	29.2	53	18.6	30.4
24/07/18	18:00	22.6	22.7	22.6	52	12.3	0.9	W	0.27	3.1	W	22.6	22.4	22.4	759.7	0.00	0.0	0.000	0.015	29.2	52	18.3	30.5
24/07/18	18:05	22.5	22.6	22.4	52	12.2	0.9	W	0.27	2.7	WSW	22.5	22.2	22.2	759.6	0.00	0.0	0.000	0.014	29.1	52	18.2	30.3
24/07/18	18:10	22.2	22.4	22.1	53	12.2	0.9	SW	0.27	3.1	WSW	22.2	21.8	21.8	759.6	0.00	0.0	0.000	0.014	28.9	52	18.1	30.1
24/07/18	18:15	22.0	22.1	22.0	51	11.4	1.3	SW	0.40	4.9	SW	22.0	21.4	21.4	759.7	0.00	0.0	0.000	0.013	28.8	52	18.0	30.0
24/07/18	18:20	21.9	22.0	21.9	53	11.9	0.9	SW	0.27	4.0	SE	21.9	21.4	21.4	759.6	0.00	0.0	0.000	0.013	28.7	52	17.8	29.7
24/07/18	18:25	21.9	22.0	21.9	53	11.9	1.3	W	0.40	3.1	SW	21.9	21.4	21.4	759.6	0.00	0.0	0.000	0.013	28.4	52	17.6	29.3
24/07/18	18:30	22.0	22.0	22.0	52	11.7	0.9	WSW	0.27	2.2	WSW	22.0	21.5	21.5	759.6	0.00	0.0	0.000	0.013	28.3	52	17.5	29.1
24/07/18	18:35	22.1	22.1	22.0	51	11.4	0.9	SW	0.27	2.2	WNN	22.1	21.5	21.5	759.6	0.00	0.0	0.000	0.013	28.0	52	17.2	28.6
24/07/18	18:40	22.2	22.2	22.1	52	11.8	0.9	SW	0.27	2.2	WSW	22.2	21.7	21.7	759.6	0.00	0.0	0.000	0.013	27.8	52	17.0	28.3
24/07/18	18:45	22.2	22.2	22.2	51	11.6	0.9	WSW	0.27	2.7	WSW	22.2	21.8	21.8	759.6	0.00	0.0	0.000	0.014	27.6	52	16.8	27.9
24/07/18	18:50	22.1	22.2	22.1	51	11.5	0.9	WNN	0.27	3.6	WNN	22.1	21.6	21.6	759.7	0.00	0.0	0.000	0.013	27.3	52	16.6	27.7
24/07/18	18:55	22.1	22.1	22.0	51	11.4	0.9	W	0.27	3.6	WSW	22.1	21.5	21.5	759.7	0.00	0.0	0.000	0.013	27.1	52	16.4	27.3
24/07/18	19:00	21.9	22.0	21.8	50	11.0	1.3	SW	0.40	3.1	WSW	21.9	21.3	21.3	759.8	0.00	0.0	0.000	0.013	26.8	52	16.1	27.1
24/07/18	19:05	21.7	21.8	21.6	51	11.1	1.3	SW	0.40	3.1	SW	21.7	20.9	20.9	759.8	0.00	0.0	0.000	0.012	26.6	52	15.9	26.8
24/07/18	19:10	21.3	21.4	21.2	53	11.4	0.9	SW	0.27	2.7	SSW	21.3	20.6	20.6	759.9	0.00	0.0	0.000	0.010	26.3	52	15.7	26.6
24/07/18	19:15	21.1	21.2	21.0	54	11.4	0.9	SSW	0.27	2.2	WSW	21.1	20.3	20.3	759.9	0.00	0.0	0.000	0.010	26.1	52	15.5	26.3
24/07/18	19:20	20.9	21.0	20.8	54	11.2	0.9	SW	0.27	4.0	SW	20.9	20.2	20.2	760.0	0.00	0.0	0.000	0.009	25.8	52	15.2	25.9
24/07/18	19:25	20.7	20.8	20.6	55	11.3	0.9	WSW	0.27	2.7	W	20.7	20.1	20.1	760.0	0.00	0.0	0.000	0.008	25.6	52	15.0	25.7

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Wind Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
24/07/18	19:30	20.5	20.6	20.4	56	11.4	0.4	SW	0.13	2.2	NNW	20.5	20.0	20.0	760.0	0.00	0.0	0.000	0.008	25.3	52	14.7	25.3
24/07/18	19:35	20.4	20.4	20.4	55	11.1	0.4	WNN	0.13	1.8	WNN	20.4	19.9	19.9	760.0	0.00	0.0	0.000	0.007	25.1	52	14.5	25.1
24/07/18	19:40	20.4	20.4	20.4	56	11.4	0.4	WSW	0.13	2.2	WSW	20.4	19.9	19.9	760.0	0.00	0.0	0.000	0.007	24.8	52	14.3	24.8
24/07/18	19:45	20.4	20.4	20.2	56	11.3	0.4	SW	0.13	2.2	SW	20.4	19.9	19.9	760.0	0.00	0.0	0.000	0.007	24.5	53	14.3	24.6
24/07/18	19:50	20.2	20.2	20.2	56	11.2	0.9	SW	0.27	2.2	SW	20.2	19.8	19.8	760.1	0.00	0.0	0.000	0.007	24.2	53	14.0	24.3
24/07/18	19:55	20.1	20.2	19.9	56	11.1	0.4	SW	0.13	2.2	SSW	20.1	19.7	19.7	760.2	0.00	0.0	0.000	0.006	23.9	53	13.8	24.1
24/07/18	20:00	19.9	19.9	19.9	57	11.1	0.4	WSW	0.13	2.2	W	19.9	19.6	19.6	760.0	0.00	0.0	0.000	0.005	23.7	53	13.5	23.8
24/07/18	20:05	19.7	19.9	19.7	59	11.2	0.4	W	0.13	1.3	W	19.7	19.4	19.4	760.2	0.00	0.0	0.000	0.005	23.4	53	13.3	23.4
24/07/18	20:10	19.6	19.7	19.6	58	11.1	0.0	W	0.00	1.8	WSW	19.6	19.3	19.3	760.1	0.00	0.0	0.000	0.004	23.1	53	13.0	23.1
24/07/18	20:15	19.4	19.6	19.3	59	11.2	0.4	SW	0.13	1.8	SW	19.4	19.1	19.1	760.3	0.00	0.0	0.000	0.004	22.9	53	12.8	22.8
24/07/18	20:20	19.2	19.3	19.1	60	11.3	0.4	SSW	0.13	2.2	SW	19.2	18.9	18.9	760.4	0.00	0.0	0.000	0.003	22.6	53	12.5	22.4
24/07/18	20:25	18.9	19.1	18.8	61	11.3	0.4	SW	0.13	1.8	SW	18.9	18.6	18.6	760.4	0.00	0.0	0.000	0.002	22.3	53	12.3	22.0
24/07/18	20:30	18.6	18.8	18.4	60	10.7	0.9	SW	0.27	2.7	SW	18.6	18.2	18.2	760.5	0.00	0.0	0.000	0.001	22.1	54	12.4	21.7
24/07/18	20:35	18.3	18.4	18.2	62	10.9	0.4	SW	0.13	2.2	SSW	18.3	18.0	18.0	760.4	0.00	0.0	0.000	0.000	21.8	54	12.1	21.3
24/07/18	20:40	18.1	18.2	17.9	63	10.9	0.4	SW	0.13	2.7	WSW	18.1	17.7	17.7	760.5	0.00	0.0	0.001	0.000	21.6	54	11.9	21.0
24/07/18	20:45	17.8	17.9	17.6	64	10.9	0.0	SSW	0.00	0.9	SSW	17.8	17.4	17.4	760.5	0.00	0.0	0.002	0.000	21.3	54	11.6	20.6
24/07/18	20:50	17.5	17.6	17.4	65	10.8	0.0	SSW	0.00	0.4	SSW	17.5	17.2	17.2	760.5	0.00	0.0	0.003	0.000	21.1	54	11.4	20.3
24/07/18	20:55	17.3	17.3	17.1	65	10.6	0.0	SSW	0.00	1.3	SSW	17.3	16.9	16.9	760.5	0.00	0.0	0.004	0.000	20.8	54	11.1	20.1
24/07/18	21:00	16.9	17.1	16.8	66	10.5	0.0	SSW	0.00	0.4	SSW	16.9	16.6	16.6	760.6	0.00	0.0	0.005	0.000	20.5	54	10.9	19.9
24/07/18	21:05	16.7	16.8	16.6	66	10.3	0.0	SSW	0.00	0.4	SSW	16.7	16.4	16.4	760.7	0.00	0.0	0.006	0.000	20.2	54	10.6	19.7
24/07/18	21:10	16.4	16.6	16.3	67	10.2	0.0	SSW	0.00	0.4	SSW	16.4	16.0	16.0	760.7	0.00	0.0	0.007	0.000	19.9	54	10.4	19.4
24/07/18	21:15	16.2	16.3	16.1	68	10.3	0.0	SSW	0.00	0.4	SSW	16.2	15.8	15.8	760.8	0.00	0.0	0.007	0.000	19.7	54	10.1	19.1
24/07/18	21:20	16.0	16.1	15.8	69	10.3	0.0	SSW	0.00	0.4	SSW	16.0	15.7	15.7	760.9	0.00	0.0	0.008	0.000	19.4			

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Hi Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
24/07/18	22:05	14.7	14.7	14.6	74	10.1	0.0	---	0.00	0.0	---	14.7	14.3	14.3	761.1	0.00	0.0	0.013	0.000	17.1	55	7.9	16.3
24/07/18	22:10	14.5	14.6	14.4	75	10.1	0.0	---	0.00	0.0	---	14.5	14.2	14.2	761.2	0.00	0.0	0.013	0.000	16.8	55	7.7	16.0
24/07/18	22:15	14.3	14.4	14.2	76	10.2	0.0	---	0.00	0.0	---	14.3	14.1	14.1	761.1	0.00	0.0	0.014	0.000	16.7	55	7.6	15.8
24/07/18	22:20	14.1	14.2	13.9	76	9.9	0.0	---	0.00	0.0	---	14.1	13.8	13.8	761.1	0.00	0.0	0.015	0.000	16.4	56	7.6	15.6
24/07/18	22:25	13.8	13.9	13.7	78	10.0	0.0	SSW	0.00	0.4	SSW	13.8	13.6	13.6	761.0	0.00	0.0	0.016	0.000	16.2	56	7.4	15.4
24/07/18	22:30	13.6	13.7	13.6	78	9.8	0.0	SSW	0.00	0.4	SSW	13.6	13.4	13.4	761.0	0.00	0.0	0.016	0.000	16.1	56	7.3	15.2
24/07/18	22:35	13.5	13.6	13.5	79	9.9	0.0	---	0.00	0.0	---	13.5	13.3	13.3	760.9	0.00	0.0	0.017	0.000	15.8	56	7.1	15.0
24/07/18	22:40	13.5	13.5	13.4	79	9.9	0.0	---	0.00	0.0	---	13.5	13.3	13.3	760.9	0.00	0.0	0.017	0.000	15.7	56	6.9	14.8
24/07/18	22:45	13.5	13.5	13.5	79	9.9	0.0	SSW	0.00	0.4	SSW	13.5	13.3	13.3	761.0	0.00	0.0	0.017	0.000	15.4	56	6.7	14.6
24/07/18	22:50	13.4	13.5	13.3	79	9.9	0.0	SSW	0.00	0.4	SSW	13.4	13.2	13.2	761.1	0.00	0.0	0.017	0.000	15.3	56	6.6	14.5
24/07/18	22:55	13.3	13.3	13.3	80	10.0	0.0	SSW	0.00	0.9	SSW	13.3	13.2	13.2	761.0	0.00	0.0	0.017	0.000	15.2	56	6.4	14.3
24/07/18	23:00	13.3	13.3	13.3	80	9.9	0.0	---	0.00	0.0	---	13.3	13.1	13.1	761.0	0.00	0.0	0.018	0.000	15.0	56	6.3	14.2
24/07/18	23:05	13.2	13.3	13.2	80	9.8	0.0	---	0.00	0.0	---	13.2	13.1	13.1	761.1	0.00	0.0	0.018	0.000	14.8	56	6.1	14.0
24/07/18	23:10	13.1	13.2	13.1	81	9.9	0.0	---	0.00	0.0	---	13.1	12.9	12.9	761.2	0.00	0.0	0.018	0.000	14.7	57	6.2	13.8
24/07/18	23:15	13.1	13.1	13.1	81	9.9	0.0	SSW	0.00	0.4	SSW	13.1	12.9	12.9	761.2	0.00	0.0	0.018	0.000	14.6	57	6.1	13.7
24/07/18	23:20	13.1	13.1	13.0	81	9.9	0.0	SSW	0.00	0.4	SSW	13.1	12.9	12.9	761.2	0.00	0.0	0.018	0.000	14.4	57	6.0	13.6
24/07/18	23:25	13.0	13.0	13.0	81	9.8	0.0	SSW	0.00	0.9	SSW	13.0	12.8	12.8	761.3	0.00	0.0	0.019	0.000	14.2	57	5.8	13.4
24/07/18	23:30	12.9	13.0	12.9	82	9.9	0.0	SSW	0.00	0.9	SSW	12.9	12.8	12.8	761.3	0.00	0.0	0.019	0.000	14.1	57	5.7	13.2
24/07/18	23:35	13.0	13.0	12.9	82	10.0	0.4	SSW	0.13	1.3	SSW	13.0	12.9	12.9	761.3	0.00	0.0	0.019	0.000	13.9	57	5.6	13.1
24/07/18	23:40	13.0	13.1	13.0	81	9.8	0.0	SSW	0.00	1.3	SSW	13.0	12.8	12.8	761.4	0.00	0.0	0.019	0.000	13.8	57	5.5	13.0
24/07/18	23:45	13.1	13.1	13.1	81	9.9	0.0	SSW	0.00	1.3	SSW	13.1	12.9	12.9	761.5	0.00	0.0	0.018	0.000	13.7	57	5.3	12.9
24/07/18	23:50	13.1	13.1	13.1	81	9.9	0.0	SSW	0.00	0.9	SSW	13.1	12.9	12.9	761.4	0.00	0.0	0.018	0.000	13.6	57	5.2	12.8
24/07/18	23:55	13.1	13.1	13.0	82	10.1	0.4	SSW	0.13	1.3	SSW	13.1	12.9	12.9	761.4	0.00	0.0	0.018	0.000	13.6	57	5.2	12.7
25/07/18	00:00	13.0	13.0	13.0	81	9.8	0.0	SSW	0.00	0.9	SSW	13.0	12.8	12.8	761.5	0.00	0.0	0.019	0.000	13.4	57	5.1	12.6
25/07/18	0:05	13.0	13.0	13.0	81	9.8	0.0	SSW	0.00	0.9	SSW	13.0	12.8	12.8	761.5	0.00	0.0	0.019	0.000	13.3	58	5.2	12.6
25/07/18	0:10	13.0	13.0	13.0	82	10.0	0.0	SSW	0.00	0.9	SSW	13.0	12.9	12.9	761.6	0.00	0.0	0.019	0.000	13.2	58	5.1	12.4
25/07/18	0:15	12.9	12.9	12.9	82	9.9	0.0	SSW	0.00	0.9	SSW	12.9	12.8	12.8	761.6	0.00	0.0	0.019	0.000	13.2	58	5.1	12.4
25/07/18	0:20	12.9	12.9	12.9	82	9.9	0.4	SSW	0.13	1.3	SSW	12.9	12.8	12.8	761.6	0.00	0.0	0.019	0.000	13.1	58	5.0	12.3
25/07/18	0:25	12.9	12.9	12.9	82	9.9	0.4	SSW	0.13	1.3	SSW	12.9	12.8	12.8	761.6	0.00	0.0	0.019	0.000	13.0	58	4.9	12.2
25/07/18	0:30	12.9	12.9	12.8	82	9.9	0.0	SSW	0.00	0.9	SSW	12.9	12.8	12.8	761.6	0.00	0.0	0.019	0.000	12.9	58	4.8	12.1
25/07/18	0:35	12.8	12.8	12.8	82	9.8	0.0	SSW	0.00	1.3	SSW	12.8	12.7	12.7	761.6	0.00	0.0	0.019	0.000	12.8	58	4.8	12.1

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Hi Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
25/07/18	0:40	12.8	12.8	12.8	82	9.8	0.0	SSW	0.00	1.3	SSW	12.8	12.7	12.7	761.7	0.00	0.0	0.019	0.000	12.8	58	4.7	12.0
25/07/18	0:45	12.8	12.8	12.8	82	9.8	0.0	SSW	0.00	1.3	SE	12.8	12.7	12.7	761.7	0.00	0.0	0.019	0.000	12.7	58	4.7	11.9
25/07/18	0:50	12.8	12.8	12.7	83	10.0	0.0	SE	0.00	0.9	SE	12.8	12.7	12.7	761.6	0.00	0.0	0.019	0.000	12.7	58	4.6	11.9
25/07/18	0:55	12.7	12.7	12.7	83	9.9	0.0	SE	0.00	0.9	SE	12.7	12.6	12.6	761.6	0.00	0.0	0.020	0.000	12.6	58	4.5	11.8
25/07/18	1:00	12.7	12.7	12.6	83	9.9	0.0	SE	0.00	0.4	SE	12.7	12.6	12.6	761.6	0.00	0.0	0.020	0.000	12.5	58	4.5	11.8
25/07/18	1:05	12.6	12.6	12.6	83	9.8	0.0	SE	0.00	0.9	SE	12.6	12.5	12.5	761.5	0.00	0.0	0.020	0.000	12.4	58	4.4	11.7
25/07/18	1:10	12.6	12.6	12.6	83	9.8	0.0	SE	0.00	0.9	SE	12.6	12.5	12.5	761.5	0.00	0.0	0.020	0.000	12.4	59	4.6	11.7
25/07/18	1:15	12.6	12.6	12.5	83	9.7	0.0	SE	0.00	0.9	SE	12.6	12.4	12.4	761.5	0.00	0.0	0.020	0.000	12.3	59	4.5	11.6
25/07/18	1:20	12.5	12.5	12.5	84	9.9	0.0	SE	0.00	0.4	SE	12.5	12.4	12.4	761.6	0.00	0.0	0.020	0.000	12.2	59	4.4	11.6
25/07/18	1:25	12.4	12.4	12.3	84	9.8	0.0	SE	0.00	0.9	SE	12.4	12.4	12.4	761.7	0.00	0.0	0.020	0.000	12.2	59	4.4	11.5
25/07/18	1:30	12.3	12.3	12.3	84	9.7	0.0	SE	0.00	0.9	SE	12.3	12.2	12.2	761.6	0.00	0.0	0.021	0.000	12.1	59	4.3	11.4
25/07/18	1:35	12.2	12.3	12.1	84	9.5	0.0	---	0.00	0.0	---	12.2	12.1	12.1	761.6	0.00	0.0	0.021	0.000	12.1	59	4.3	11.4
25/07/18	1:40	12.0	12.1	11.9	84	9.4	0.0	---	0.00	0.0	---	12.0	11.9	11.9	761.7	0.00	0.0	0.022	0.000	12.0	59	4.2	11.3
25/07/18	1:45	11.8	11.8	11.7	85	9.3	0.0	---	0.00	0.0	---	11.8	11.7	11.7	761.7	0.00	0.0	0.023	0.000	11.9	59	4.1	11.2
25/07/18	1:50	11.7	11.7	11.6	85	9.2	0.0	SE	0.00	0.4	SE	11.7	11.6	11.6	761.7	0.00	0.0	0.023	0.000	11.8	59	4.1	11.2
25/07/18	1:55	11.5	11.6	11.4	86	9.2	0.0	---	0.00	0.0	---	11.5	11.5	11.5	761.7	0.00	0.0	0.024	0.000	11.7	59	4.0	11.1
25/07/18	2:00	11.4	11.4	11.4	86	9.1	0.0	---	0.00	0.0	---	11.4	11.4	11.4	761.9	0.00	0.0	0.024	0.000	11.7	59	3.9	11.0
25/07/18	2:05	11.3	11.4	11.2	86	9.0	0.0	SE	0.00	0.4	SE	11.3	11.3	11.3	761.8	0.00	0.0	0.024	0.000	11.6	59	3.8	10.9
25/07/18	2:10	11.2	11.3	11.2	86	9.0	0.0	---	0.00	0.0	---	11.2	11.2	11.2	761.8	0.00	0.0	0.025	0.000	11.5	59	3.8	10.9
25/07/18	2:15	11.2	11.2	11.1	86	8.9	0.0	---	0.00	0.0	---	11.2	11.2	11.2	761.8	0.00	0.0	0.025	0.000	11.4	59	3.7	10.8
25/07/18	2:20	11.1	11.1	11.1	87	9.0	0.0	---	0.00	0.0	---	11.1	11.1	11.1	761.8	0.00	0.0	0.025	0.000	11.3	59	3.6	10.7
25/07/18	2:25	11.0	11.1	10.9	87	8.9	0.0	SE	0.00	1.3	SE	11.0	11.1	11.1	761.8	0.00	0.0	0.025	0.000	11.3	59	3.5	10.7
25/07/18	2:30	10.9	10.9	10.9	88	9.0	0.4	SE	0.13	1.3	SE	10.9	11.0	11.0	761.8	0.00	0.0	0.026	0.000	11.2	59	3.4	10.6
25/07/18	2:35	10.9	10.9	10.9	88	9.0	0.4	SE	0.13	1.3	SE	10.9	11.0	11.0	761.9								

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Hi Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
25/07/18	3:15	10.4	10.4	10.4	89	8.7	0.0	---	0.00	0.0	---	10.4	10.6	10.6	762.0	0.00	0.0	0.027	0.000	10.6	59	2.9	10.1
25/07/18	3:20	10.3	10.4	10.3	89	8.6	0.0	---	0.00	0.0	---	10.3	10.4	10.4	762.0	0.00	0.0	0.028	0.000	10.6	59	2.9	10.1
25/07/18	3:25	10.2	10.3	10.1	89	8.5	0.0	---	0.00	0.0	---	10.2	10.3	10.3	761.9	0.00	0.0	0.028	0.000	10.5	59	2.8	10.0
25/07/18	3:30	10.1	10.1	9.9	89	8.3	0.0	---	0.00	0.0	---	10.1	10.2	10.2	762.1	0.00	0.0	0.029	0.000	10.4	59	2.7	9.9
25/07/18	3:35	9.9	9.9	9.9	89	8.2	0.0	SE	0.00	0.4	SE	9.9	10.1	10.1	762.2	0.00	0.0	0.029	0.000	10.3	59	2.7	9.8
25/07/18	3:40	9.9	9.9	9.9	89	8.2	0.0	---	0.00	0.0	---	9.9	10.1	10.1	762.2	0.00	0.0	0.029	0.000	10.3	59	2.6	9.8
25/07/18	3:45	9.9	9.9	9.9	89	8.2	0.0	---	0.00	0.0	---	9.9	10.1	10.1	762.2	0.00	0.0	0.029	0.000	10.2	59	2.5	9.7
25/07/18	3:50	9.8	9.8	9.7	89	8.1	0.0	---	0.00	0.0	---	9.8	9.9	9.9	762.2	0.00	0.0	0.030	0.000	10.1	59	2.5	9.6
25/07/18	3:55	9.7	9.7	9.7	89	8.0	0.0	---	0.00	0.0	---	9.7	9.9	9.9	762.2	0.00	0.0	0.030	0.000	10.0	59	2.3	9.6
25/07/18	4:00	9.6	9.7	9.5	89	7.8	0.0	---	0.00	0.0	---	9.6	9.7	9.7	762.3	0.00	0.0	0.030	0.000	9.9	59	2.3	9.5
25/07/18	4:05	9.4	9.5	9.3	89	7.7	0.0	---	0.00	0.0	---	9.4	9.6	9.6	762.3	0.00	0.0	0.031	0.000	9.8	59	2.2	9.4
25/07/18	4:10	9.2	9.2	9.2	90	7.7	0.0	---	0.00	0.0	---	9.2	9.4	9.4	762.4	0.00	0.0	0.032	0.000	9.8	59	2.1	9.3
25/07/18	4:15	9.1	9.2	9.1	90	7.6	0.0	---	0.00	0.0	---	9.1	9.2	9.2	762.4	0.00	0.0	0.032	0.000	9.7	59	2.0	9.2
25/07/18	4:20	9.1	9.1	9.1	90	7.5	0.0	---	0.00	0.0	---	9.1	9.2	9.2	762.4	0.00	0.0	0.032	0.000	9.6	59	2.0	9.2
25/07/18	4:25	9.0	9.1	9.0	90	7.4	0.0	---	0.00	0.0	---	9.0	9.1	9.1	762.4	0.00	0.0	0.032	0.000	9.6	59	2.0	9.2
25/07/18	4:30	9.0	9.1	9.0	90	7.4	0.0	---	0.00	0.0	---	9.0	9.1	9.1	762.5	0.00	0.0	0.032	0.000	9.6	59	1.9	9.1
25/07/18	4:35	9.1	9.2	9.1	90	7.6	0.0	---	0.00	0.0	---	9.1	9.2	9.2	762.5	0.00	0.0	0.032	0.000	9.5	59	1.9	9.1
25/07/18	4:40	9.2	9.2	9.2	91	7.8	0.0	---	0.00	0.0	---	9.2	9.3	9.3	762.4	0.00	0.0	0.032	0.000	9.4	60	2.1	9.0
25/07/18	4:45	9.2	9.3	9.2	91	7.8	0.0	---	0.00	0.0	---	9.2	9.4	9.4	762.3	0.00	0.0	0.032	0.000	9.4	60	2.1	9.0
25/07/18	4:50	9.3	9.3	9.3	91	7.9	0.0	---	0.00	0.0	---	9.3	9.5	9.5	762.2	0.00	0.0	0.031	0.000	9.4	60	2.1	9.0
25/07/18	4:55	9.3	9.3	9.3	91	7.9	0.0	---	0.00	0.0	---	9.3	9.5	9.5	762.2	0.00	0.0	0.031	0.000	9.4	60	2.1	9.0
25/07/18	5:00	9.3	9.3	9.3	91	7.9	0.0	---	0.00	0.0	---	9.3	9.5	9.5	762.3	0.00	0.0	0.031	0.000	9.4	60	2.1	9.0
25/07/18	5:05	9.3	9.3	9.3	91	7.9	0.0	---	0.00	0.0	---	9.3	9.5	9.5	762.4	0.00	0.0	0.031	0.000	9.4	60	2.1	9.0
25/07/18	5:10	9.2	9.3	9.2	91	7.8	0.0	SE	0.00	0.9	SE	9.2	9.4	9.4	762.5	0.00	0.0	0.032	0.000	9.4	60	2.1	9.0
25/07/18	5:15	9.3	9.3	9.2	91	7.9	0.4	SE	0.13	1.3	SE	9.3	9.4	9.4	762.5	0.00	0.0	0.031	0.000	9.4	60	2.0	8.9
25/07/18	5:20	9.4	9.4	9.3	91	8.0	0.0	SE	0.00	0.4	SE	9.4	9.6	9.6	762.5	0.00	0.0	0.031	0.000	9.4	60	2.0	8.9
25/07/18	5:25	9.4	9.4	9.4	91	8.0	0.0	---	0.00	0.0	---	9.4	9.6	9.6	762.5	0.00	0.0	0.031	0.000	9.4	60	2.0	8.9
25/07/18	5:30	9.4	9.5	9.4	91	8.0	0.0	---	0.00	0.0	---	9.4	9.6	9.6	762.4	0.00	0.0	0.031	0.000	9.4	60	2.0	8.9
25/07/18	5:35	9.4	9.4	9.4	91	8.0	0.0	---	0.00	0.0	---	9.4	9.6	9.6	762.5	0.00	0.0	0.031	0.000	9.3	60	1.9	8.8
25/07/18	5:40	9.3	9.4	9.3	91	7.9	0.0	---	0.00	0.0	---	9.3	9.5	9.5	762.5	0.00	0.0	0.031	0.000	9.3	60	1.9	8.8
25/07/18	5:45	9.3	9.3	9.3	91	7.9	0.0	---	0.00	0.0	---	9.3	9.5	9.5	762.6	0.00	0.0	0.031	0.000	9.3	60	1.9	8.8

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Hi Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
25/07/18	5:50	9.3	9.3	9.3	91	7.9	0.0	---	0.00	0.0	---	9.3	9.5	9.5	762.7	0.00	0.0	0.031	0.000	9.3	60	1.9	8.8
25/07/18	5:55	9.4	9.4	9.3	92	8.2	0.0	---	0.00	0.0	---	9.4	9.6	9.6	762.8	0.00	0.0	0.031	0.000	9.3	60	1.9	8.8
25/07/18	6:00	9.5	9.6	9.4	92	8.3	0.0	---	0.00	0.0	---	9.5	9.7	9.7	762.8	0.00	0.0	0.031	0.000	9.3	60	2.0	8.9
25/07/18	6:05	9.7	9.7	9.6	92	8.4	0.0	---	0.00	0.0	---	9.7	9.9	9.9	762.8	0.00	0.0	0.030	0.000	9.4	60	2.0	8.9
25/07/18	6:10	9.8	9.9	9.8	92	8.6	0.0	---	0.00	0.0	---	9.8	10.1	10.1	762.8	0.00	0.0	0.030	0.000	9.4	60	2.1	9.0
25/07/18	6:15	10.0	10.1	9.9	92	8.8	0.0	SE	0.00	0.4	SE	10.0	10.2	10.2	762.8	0.00	0.0	0.029	0.000	9.6	60	2.2	9.1
25/07/18	6:20	10.1	10.1	10.1	92	8.9	0.0	SE	0.00	0.4	SE	10.1	10.3	10.3	762.8	0.00	0.0	0.029	0.000	9.6	60	2.2	9.2
25/07/18	6:25	10.2	10.3	10.1	92	9.0	0.0	SE	0.00	0.4	SE	10.2	10.4	10.4	762.9	0.00	0.0	0.028	0.000	9.7	60	2.3	9.2
25/07/18	6:30	10.3	10.4	10.3	92	9.1	0.0	SE	0.00	0.4	SE	10.3	10.5	10.5	762.9	0.00	0.0	0.028	0.000	9.8	60	2.4	9.3
25/07/18	6:35	10.4	10.6	10.4	92	9.2	0.0	SE	0.00	0.4	SE	10.4	10.6	10.6	763.0	0.00	0.0	0.027	0.000	9.9	60	2.5	9.4
25/07/18	6:40	10.6	10.7	10.6	92	9.4	0.0	SE	0.00	0.4	SE	10.6	10.8	10.8	762.9	0.00	0.0	0.027	0.000	10.0	60	2.6	9.6
25/07/18	6:45	10.7	10.8	10.7	92	9.5	0.0	---	0.00	0.0	---	10.7	10.9	10.9	762.9	0.00	0.0	0.026	0.000	10.1	60	2.7	9.7
25/07/18	6:50	10.9	10.9	10.8	92	9.6	0.0	---	0.00	0.0	---	10.9	11.1	11.1	763.0	0.00	0.0	0.026	0.000	10.2	60	2.8	9.8
25/07/18	6:55	11.1	11.1	10.9	92	9.8	0.0	---	0.00	0.0	---	11.1	11.2	11.2	762.9	0.00	0.0	0.025	0.000	10.4	60	3.0	9.9
25/07/18	7:00	11.2	11.2	11.1	92	9.9	0.0	---	0.00	0.0	---	11.2	11.3	11.3	762.9	0.00	0.0	0.025	0.000	10.6	61	3.3	10.1
25/07/18	7:05	11.3	11.4	11.2	92	10.0	0.0	SE	0.00	0.4	SE	11.3	11.4	11.4	762.9	0.00	0.0	0.024	0.000	10.7	61	3.4	10.2
25/07/18	7:10	11.4	11.6	11.4	92	10.2	0.0	SE	0.00	0.9	SE	11.4	11.6	11.6	763.0	0.00	0.0	0.024	0.000	10.8	61	3.6	10.3
25/07/18	7:15	11.6	11.6	11.6	92	10.3	0.0	SE	0.00	0.9	SE	11.6	11.7	11.7	762.9	0.00	0.0	0.024	0.000	11.0	61	3.8	10.5
25/07/18	7:20	11.7	11.7	11.6	91	10.2	0.0	SE	0.00	0.4	SE	11.7	11.7	11.7	762.9	0.00	0.0	0.023	0.000	11.1	61	3.9	10.6
25/07/18	7:25	11.8	11.8	11.7	91	10.4	0.0	SE	0.00	0.9	SE	11.8	11.8	11.8	763.0	0.00	0.0	0.023	0.000	11.3	61	4.0	10.7
25/07/18	7:30	11.8	11.8	11.8	91	10.4	0.0	SE	0.00	1.8	SE	11.8	11.9	11.9	763.0	0.00	0.0	0.023	0.000	11.4	61	4.1	10.8
25/07/18	7:35	11.9	11.9	11.8	91	10.5	0.0	SE	0.00	0.9	SE	11.9	11.9	11.9	763.0	0.00	0.0	0.022	0.000	11.5	61	4.2	10.9
25/07/18	7:40	11.9	12.0	11.9	91	10.5	0.0	SE	0.00	0.9	SE	11.9	12.0	12.0	762.9	0.00	0.0	0.022	0.000	11.6	61	4.3	11.0
25/07/18	7:45	12.1	12.2	12.0	91	10.7	0.0	SE	0.00	0.4	SE	12.1	12.2	12.2	763.0	0.00	0.0	0.022	0.000	11.7	61	4.4	11.1
25/07/18	7:50	12.2	12.3	12.2	91	10.8	0.0	SE	0.00	0.4	SE	12.2	12.3	12.3	763.1	0.00	0.0	0.021	0.000	11.8	61	4.5	11.2
25/07/18	7:55	12.4	12.5	12.3	90	10.8	0.0	SE															

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Hi Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
25/07/18	8:25	13.8	14.0	13.7	88	11.9	0.0	WSW	0.00	1.8	WSW	13.8	13.8	13.8	763.0	0.00	0.0	0.016	0.000	12.7	61	5.3	12.0
25/07/18	8:30	14.0	14.1	14.0	87	11.9	0.0	WSW	0.00	0.9	WSW	14.0	14.0	14.0	763.0	0.00	0.0	0.015	0.000	12.8	61	5.5	12.2
25/07/18	8:35	14.1	14.2	14.1	86	11.8	0.0	WSW	0.00	0.9	WSW	14.1	14.1	14.1	763.1	0.00	0.0	0.015	0.000	12.9	61	5.6	12.3
25/07/18	8:40	14.3	14.3	14.2	85	11.8	0.4	WSW	0.13	1.8	WSW	14.3	14.2	14.2	763.1	0.00	0.0	0.014	0.000	13.1	61	5.7	12.4
25/07/18	8:45	14.4	14.6	14.3	84	11.8	0.0	WSW	0.00	1.3	WSW	14.4	14.4	14.4	763.1	0.00	0.0	0.014	0.000	13.2	61	5.9	12.6
25/07/18	8:50	14.8	14.9	14.6	84	12.1	0.4	WSW	0.13	1.3	WSW	14.8	14.7	14.7	763.1	0.00	0.0	0.012	0.000	13.3	61	6.0	12.7
25/07/18	8:55	15.1	15.2	14.9	82	12.0	0.4	WSW	0.13	1.3	WSW	15.1	15.0	15.0	763.1	0.00	0.0	0.011	0.000	13.5	61	6.1	12.8
25/07/18	9:00	15.4	15.5	15.2	81	12.1	0.4	WSW	0.13	1.3	WSW	15.4	15.3	15.3	763.2	0.00	0.0	0.010	0.000	13.7	61	6.3	13.0
25/07/18	9:05	15.6	15.7	15.5	79	12.0	0.0	SW	0.00	0.9	SW	15.6	15.5	15.5	763.1	0.00	0.0	0.009	0.000	13.8	61	6.4	13.2
25/07/18	9:10	15.7	15.8	15.7	78	11.9	0.4	SW	0.13	1.8	SW	15.7	15.6	15.6	763.1	0.00	0.0	0.009	0.000	14.0	61	6.6	13.3
25/07/18	9:15	15.8	15.8	15.8	77	11.8	0.0	SW	0.00	1.3	SSW	15.8	15.7	15.7	763.2	0.00	0.0	0.009	0.000	14.2	61	6.8	13.6
25/07/18	9:20	15.9	15.9	15.8	76	11.7	0.4	WSW	0.13	1.8	WSW	15.9	15.7	15.7	763.1	0.00	0.0	0.008	0.000	14.4	61	7.0	13.7
25/07/18	9:25	15.9	16.1	15.9	76	11.7	0.0	WSW	0.00	0.9	WSW	15.9	15.8	15.8	763.2	0.00	0.0	0.008	0.000	14.5	61	7.1	13.8
25/07/18	9:30	16.2	16.2	16.1	74	11.5	0.4	WNW	0.13	2.2	WSW	16.2	15.9	15.9	763.1	0.00	0.0	0.008	0.000	14.7	60	7.0	13.9
25/07/18	9:35	16.3	16.4	16.2	73	11.4	0.4	WNW	0.13	2.2	WNW	16.3	16.1	16.1	763.0	0.00	0.0	0.007	0.000	14.8	60	7.0	14.0
25/07/18	9:40	16.4	16.6	16.4	70	11.0	0.4	SW	0.13	1.8	SW	16.4	16.2	16.2	763.0	0.00	0.0	0.007	0.000	14.8	60	7.1	14.1
25/07/18	9:45	16.7	16.9	16.6	69	11.0	0.4	W	0.13	1.8	W	16.7	16.4	16.4	763.0	0.00	0.0	0.006	0.000	14.9	60	7.2	14.2
25/07/18	9:50	17.0	17.2	16.9	66	10.6	0.4	WSW	0.13	2.2	WSW	17.0	16.7	16.7	762.9	0.00	0.0	0.005	0.000	15.0	60	7.3	14.3
25/07/18	9:55	17.3	17.5	17.2	65	10.6	0.4	WSW	0.13	1.8	SW	17.3	16.9	16.9	762.9	0.00	0.0	0.004	0.000	15.1	60	7.4	14.4
25/07/18	10:00	17.8	17.9	17.5	61	10.2	0.9	SE	0.27	2.2	SE	17.8	17.3	17.3	762.9	0.00	0.0	0.002	0.000	15.2	60	7.5	14.5
25/07/18	10:05	18.0	18.1	17.9	63	10.8	0.4	SW	0.13	2.2	SW	18.0	17.7	17.7	763.0	0.00	0.0	0.001	0.000	15.3	60	7.6	14.6
25/07/18	10:10	18.2	18.3	18.1	63	11.0	0.4	SW	0.13	1.8	SSW	18.2	17.9	17.9	763.0	0.00	0.0	0.001	0.000	15.4	60	7.7	14.7
25/07/18	10:15	18.4	18.4	18.3	60	10.5	0.0	SW	0.00	0.9	SW	18.4	18.0	18.0	762.9	0.00	0.0	0.000	0.000	15.5	60	7.8	14.8
25/07/18	10:20	18.3	18.4	18.3	62	10.9	0.0	SW	0.00	0.9	SW	18.3	18.0	18.0	762.8	0.00	0.0	0.000	0.000	15.7	60	7.9	14.9
25/07/18	10:25	18.3	18.3	18.3	62	10.9	0.4	SW	0.13	1.3	SW	18.3	18.0	18.0	762.8	0.00	0.0	0.000	0.000	15.8	60	8.0	15.1
25/07/18	10:30	18.3	18.3	18.2	61	10.6	0.0	SSW	0.00	1.3	SSW	18.3	17.9	17.9	762.9	0.00	0.0	0.000	0.000	15.9	60	8.2	15.3
25/07/18	10:35	18.4	18.4	18.3	60	10.5	0.4	S	0.13	1.3	S	18.4	18.0	18.0	762.7	0.00	0.0	0.000	0.000	16.1	60	8.3	15.4
25/07/18	10:40	18.4	18.4	18.4	61	10.8	0.0	S	0.00	0.9	S	18.4	18.1	18.1	762.8	0.00	0.0	0.000	0.000	16.2	60	8.4	15.6
25/07/18	10:45	18.3	18.4	18.2	60	10.4	0.0	S	0.00	0.9	S	18.3	17.8	17.8	762.8	0.00	0.0	0.000	0.000	16.4	60	8.6	15.7
25/07/18	10:50	18.4	18.8	18.2	60	10.5	0.4	NNW	0.13	1.8	NNW	18.4	18.0	18.0	762.9	0.00	0.0	0.000	0.000	16.6	60	8.8	15.9
25/07/18	10:55	19.2	19.8	18.8	59	11.0	0.0	SSW	0.00	1.3	SSW	19.2	18.8	18.8	762.8	0.00	0.0	0.000	0.003	16.7	60	8.9	16.0

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Hi Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
25/07/18	11:00	20.3	20.8	19.8	56	11.2	0.4	W	0.13	1.8	NW	20.3	19.8	19.8	762.8	0.00	0.0	0.000	0.007	16.8	61	9.3	16.2
25/07/18	11:05	21.3	21.6	20.8	50	10.4	0.4	WSW	0.13	1.3	WSW	21.3	20.4	20.4	762.7	0.00	0.0	0.000	0.010	17.1	61	9.5	16.6
25/07/18	11:10	21.9	22.2	21.6	50	11.0	0.4	S	0.13	1.3	S	21.9	21.3	21.3	762.7	0.00	0.0	0.000	0.013	17.4	61	9.8	16.9
25/07/18	11:15	22.3	22.5	22.2	50	11.4	0.4	N	0.13	2.7	NNW	22.3	21.9	21.9	762.7	0.00	0.0	0.000	0.014	17.8	62	10.4	17.4
25/07/18	11:20	22.8	22.9	22.5	45	10.2	0.4	NNE	0.13	2.2	NNE	22.8	22.3	22.3	762.7	0.00	0.0	0.000	0.015	18.2	62	10.8	17.8
25/07/18	11:25	23.1	23.1	23.1	45	10.5	0.9	N	0.27	2.2	N	23.1	22.7	22.7	762.7	0.00	0.0	0.000	0.016	18.6	62	11.1	18.2
25/07/18	11:30	23.1	23.2	23.1	43	9.8	1.3	N	0.40	3.1	N	23.1	22.6	22.6	762.8	0.00	0.0	0.000	0.017	19.0	63	11.8	18.8
25/07/18	11:35	23.0	23.1	22.9	45	10.4	0.4	N	0.13	1.8	N	23.0	22.6	22.6	762.6	0.00	0.0	0.000	0.016	19.4	63	12.2	19.3
25/07/18	11:40	23.1	23.2	23.1	38	8.0	0.4	N	0.13	1.8	N	23.1	22.4	22.4	762.6	0.00	0.0	0.000	0.017	19.8	63	12.6	19.8
25/07/18	11:45	22.9	23.2	22.8	41	9.0	0.9	N	0.27	2.7	N	22.9	22.3	22.3	762.6	0.00	0.0	0.000	0.016	20.3	63	13.0	20.2
25/07/18	11:50	22.8	22.9	22.8	40	8.5	0.0	N	0.00	0.9	N	22.8	22.1	22.1	762.5	0.00	0.0	0.000	0.016	20.8	63	13.5	20.6
25/07/18	11:55	22.9	23.1	22.9	44	10.0	0.0	N	0.00	0.4	N	22.9	22.4	22.4	762.5	0.00	0.0	0.000	0.016	21.2	63	13.8	20.9
25/07/18	12:00	23.3	23.3	23.2	42	9.6	0.4	SE	0.13	1.8	N	23.3	22.8	22.8	762.5	0.00	0.0	0.000	0.017	21.6	63	14.3	21.4
25/07/18	12:05	23.4	23.4	23.3	42	9.7	1.3	NNW	0.40	2.7	NNW	23.4	22.9	22.9	762.5	0.00	0.0	0.000	0.018	22.1	63	14.7	22.2
25/07/18	12:10	23.5	23.6	23.4	41	9.5	0.4	N	0.13	1.8	NNW	23.5	23.1	23.1	762.5	0.00	0.0	0.000	0.018	22.5	63	15.1	22.7
25/07/18	12:15	23.5	23.7	23.4	39	8.7	0.0	N	0.00	1.3	N	23.5	22.9	22.9	762.4	0.00	0.0	0.000	0.018	22.9	63	15.5	23.3
25/07/18	12:20	23.8	24.1	23.7	41	9.8	0.9	N	0.27	2.2	N	23.8	23.4	23.4	762.5	0.00	0.0	0.000	0.019	23.4	63	15.9	23.9
25/07/18	12:25	24.2	24.3	24.1	34	7.4	0.4	N	0.13	1.3	N	24.2	23.5	23.5	762.3	0.00	0.0	0.000	0.020	23.8	63	16.4	24.4
25/07/18	12:30	24.3	24.3	24.3	37	8.7	0.4	N	0.13	2.2	N	24.3	23.7	23.7	762.5	0.00	0.0	0.000	0.021	24.3	63	16.8	24.8
25/07/18	12:35	24.3	24.3	24.3	36	8.3	1.3	N	0.40	2.2	N	24.3	23.7	23.7	762.4	0.00	0.0	0.000	0.021	24.7	63	17.2	25.2
25/07/18	12:40	24.3	24.3	24.3	37	8.7	1.3	N	0.40	2.7	N	24.3	23.7	23.7	762.5	0.00	0.0	0.000	0.021	25.1	63	17.6	25.7
25/07/18	12:45	24.2	24.3	24.1	38	9.0	0.9	NNE	0.27	2.7	NNE	24.2	23.7	23.7	762.3	0.00	0.0	0.000	0.020	25.6	63	18.0	26.2
25/07/18	12:50	24.2	24.2	24.1	38	8.9	0.4	NNW	0.13	1.8	NNW	24.2	23.6	23.6	762.4	0.00	0.0	0.000	0.020	26.0	62	18.2	26.7
25/07/18	12:55	24.3	24.3	24.2	36	8.3	0.4	NE	0.13	1.8													



Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Hi Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
25/07/18	13:35	25.1	25.1	25.0	37	9.4	0.4	N	0.13	1.8	N	25.1	24.6	24.6	762.3	0.00	0.0	0.000	0.024	28.8	59	20.0	30.6
25/07/18	13:40	25.0	25.1	25.0	35	8.5	0.4	N	0.13	1.3	N	25.0	24.4	24.4	762.3	0.00	0.0	0.000	0.023	28.9	59	20.1	30.9
25/07/18	13:45	25.1	25.2	25.0	35	8.6	0.0	NE	0.00	1.3	NE	25.1	24.5	24.5	762.3	0.00	0.0	0.000	0.024	29.1	59	20.3	31.2
25/07/18	13:50	25.4	25.5	25.3	36	9.2	0.9	N	0.27	2.7	N	25.4	24.8	24.8	762.2	0.00	0.0	0.000	0.024	29.2	59	20.4	31.4
25/07/18	13:55	25.7	25.7	25.5	34	8.6	1.3	N	0.40	2.7	NNW	25.7	24.9	24.9	762.2	0.00	0.0	0.000	0.025	29.4	59	20.5	31.6
25/07/18	14:00	25.5	25.7	25.3	34	8.5	1.3	N	0.40	3.1	NNW	25.5	24.8	24.8	762.1	0.00	0.0	0.000	0.025	29.5	59	20.6	31.8
25/07/18	14:05	25.4	25.4	25.3	34	8.4	1.8	N	0.54	3.1	NE	25.4	24.7	24.7	762.1	0.00	0.0	0.000	0.024	29.6	59	20.7	32.1
25/07/18	14:10	25.3	25.4	25.3	34	8.3	1.8	N	0.54	3.1	NNW	25.3	24.7	24.7	762.1	0.00	0.0	0.000	0.024	29.8	60	21.2	32.6
25/07/18	14:15	25.3	25.4	25.3	36	9.2	1.3	N	0.40	2.7	N	25.3	24.7	24.7	762.1	0.00	0.0	0.000	0.024	29.9	60	21.3	32.9
25/07/18	14:20	25.3	25.3	25.1	34	8.3	1.3	N	0.40	2.7	N	25.3	24.6	24.6	762.1	0.00	0.0	0.000	0.024	30.1	60	21.5	33.3
25/07/18	14:25	25.1	25.1	25.0	36	8.9	1.8	NNW	0.54	3.1	NNW	25.1	24.5	24.5	762.1	0.00	0.0	0.000	0.023	30.3	61	22.0	34.0
25/07/18	14:30	25.1	25.1	25.1	35	8.6	1.3	N	0.40	2.7	N	25.1	24.5	24.5	762.0	0.00	0.0	0.000	0.024	30.6	61	22.2	34.4
25/07/18	14:35	25.2	25.3	25.1	39	10.2	0.9	N	0.27	2.7	N	25.2	24.7	24.7	762.0	0.00	0.0	0.000	0.024	30.8	61	22.4	34.8
25/07/18	14:40	25.6	25.7	25.4	32	7.6	0.9	SW	0.27	2.2	N	25.6	24.7	24.7	762.1	0.00	0.0	0.000	0.025	31.2	62	23.1	35.7
25/07/18	14:45	25.9	26.1	25.7	33	8.4	0.9	NW	0.27	2.2	NW	25.9	25.1	25.1	762.0	0.00	0.0	0.000	0.026	31.6	62	23.4	36.7
25/07/18	14:50	26.3	26.4	26.1	33	8.7	0.9	W	0.27	2.7	W	26.3	25.4	25.4	761.8	0.00	0.0	0.000	0.028	31.9	62	23.8	37.6
25/07/18	14:55	26.6	26.8	26.6	33	9.0	0.4	NNW	0.13	2.2	W	26.6	25.7	25.7	761.9	0.00	0.0	0.000	0.029	32.4	61	23.9	38.4
25/07/18	15:00	26.9	27.1	26.8	33	9.3	1.3	WSW	0.40	3.1	NW	26.9	26.0	26.0	761.8	0.00	0.0	0.000	0.030	32.7	61	24.2	39.3
25/07/18	15:05	26.9	27.1	26.7	32	8.8	0.9	N	0.27	2.7	N	26.9	25.9	25.9	761.9	0.00	0.0	0.000	0.030	33.1	61	24.6	40.3
25/07/18	15:10	26.6	26.7	26.6	32	8.6	0.9	NNW	0.27	1.8	NW	26.6	25.6	25.6	761.9	0.00	0.0	0.000	0.029	33.4	60	24.6	40.8
25/07/18	15:15	26.6	26.6	26.6	33	9.0	0.4	NW	0.13	2.7	N	26.6	25.7	25.7	761.9	0.00	0.0	0.000	0.029	33.7	60	24.9	41.6
25/07/18	15:20	26.8	27.1	26.6	35	10.0	1.3	NW	0.40	2.7	N	26.8	25.9	25.9	761.8	0.00	0.0	0.000	0.029	34.1	59	24.9	42.2
25/07/18	15:25	27.2	27.3	27.1	31	8.6	0.4	NNW	0.13	1.8	NNW	27.2	26.1	26.1	761.9	0.00	0.0	0.000	0.031	34.3	59	25.2	43.0
25/07/18	15:30	27.3	27.4	27.3	35	10.5	0.4	NNW	0.13	1.8	NNW	27.3	26.5	26.5	761.8	0.00	0.0	0.000	0.031	34.7	58	25.2	43.6
25/07/18	15:35	27.3	27.4	27.2	32	9.2	0.4	NNW	0.13	1.8	NNW	27.3	26.3	26.3	761.7	0.00	0.0	0.000	0.031	34.9	57	25.2	44.0
25/07/18	15:40	26.9	27.2	26.7	32	8.8	0.9	NNW	0.27	2.2	N	26.9	25.9	25.9	761.7	0.00	0.0	0.000	0.030	35.1	57	25.3	44.5
25/07/18	15:45	26.6	26.7	26.6	33	9.0	1.3	W	0.40	2.2	W	26.6	25.7	25.7	761.6	0.00	0.0	0.000	0.029	35.4	56	25.3	44.9
25/07/18	15:50	26.6	26.6	26.6	32	8.5	0.9	N	0.27	2.7	N	26.6	25.6	25.6	761.7	0.00	0.0	0.000	0.029	35.6	55	25.1	44.9
25/07/18	15:55	26.6	26.6	26.4	31	8.0	0.9	N	0.27	1.8	N	26.6	25.5	25.5	761.5	0.00	0.0	0.000	0.029	35.7	55	25.2	45.3
25/07/18	16:00	26.4	26.4	26.3	32	8.4	0.4	NNE	0.13	1.8	NE	26.4	25.4	25.4	761.4	0.00	0.0	0.000	0.028	35.8	54	25.0	45.1
25/07/18	16:05	26.2	26.3	26.0	34	9.1	1.3	NNW	0.40	2.7	N	26.2	25.4	25.4	761.6	0.00	0.0	0.000	0.027	35.9	54	25.1	45.4

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Hi Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
25/07/18	16:10	26.1	26.2	26.0	35	9.4	0.9	NW	0.27	2.2	NW	26.1	25.4	25.4	761.6	0.00	0.0	0.000	0.027	36.0	54	25.2	45.7
25/07/18	16:15	26.5	26.6	26.3	34	9.4	0.4	NNW	0.13	2.7	N	26.5	25.7	25.7	761.5	0.00	0.0	0.000	0.028	36.1	53	25.0	45.4
25/07/18	16:20	26.7	26.7	26.6	31	8.1	0.4	NNW	0.13	1.3	NNW	26.7	25.6	25.6	761.5	0.00	0.0	0.000	0.029	36.3	53	25.2	45.9
25/07/18	16:25	26.8	26.8	26.7	31	8.3	0.0	NNW	0.00	1.3	NNW	26.8	25.8	25.8	761.5	0.00	0.0	0.000	0.030	36.4	53	25.3	46.3
25/07/18	16:30	26.8	26.8	26.7	31	8.2	0.4	NNE	0.13	1.3	NNE	26.8	25.7	25.7	761.4	0.00	0.0	0.000	0.029	36.5	52	25.1	45.9
25/07/18	16:35	26.6	26.7	26.4	35	9.8	0.4	SSE	0.13	2.2	SE	26.6	25.8	25.8	761.4	0.00	0.0	0.000	0.029	36.6	52	25.2	46.3
25/07/18	16:40	26.4	26.4	26.4	33	8.9	0.4	S	0.13	1.8	WNW	26.4	25.6	25.6	761.5	0.00	0.0	0.000	0.028	36.6	51	24.8	45.5
25/07/18	16:45	26.4	26.4	26.4	34	9.3	0.0	W	0.00	0.9	W	26.4	25.6	25.6	761.4	0.00	0.0	0.000	0.028	36.5	51	24.7	45.3
25/07/18	16:50	26.4	26.6	26.2	31	7.9	0.4	SE	0.13	1.8	SE	26.4	25.4	25.4	761.4	0.00	0.0	0.000	0.028	36.4	51	24.6	45.0
25/07/18	16:55	26.2	26.2	26.1	34	9.1	0.0	SE	0.00	1.3	SE	26.2	25.4	25.4	761.4	0.00	0.0	0.000	0.027	36.2	51	24.5	44.6
25/07/18	17:00	26.1	26.1	25.9	32	8.1	0.4	S	0.13	1.3	SW	26.1	25.2	25.2	761.3	0.00	0.0	0.000	0.027	36.1	50	24.4	43.7
25/07/18	17:05	25.7	25.9	25.6	35	9.1	0.0	S	0.00	0.9	S	25.7	25.0	25.0	761.2	0.00	0.0	0.000	0.026	35.9	50	23.9	43.2
25/07/18	17:10	25.6	25.7	25.6	34	8.6	0.4	SW	0.13	2.2	NW	25.6	24.8	24.8	761.4	0.00	0.0	0.000	0.025	35.8	50	23.8	42.9
25/07/18	17:15	25.9	26.2	25.7	33	8.4	0.4	WSW	0.13	1.8	WSW	25.9	25.2	25.2	761.4	0.00	0.0	0.000	0.026	35.7	50	23.7	42.7
25/07/18	17:20	26.4	26.6	26.2	35	9.7	0.9	WNW	0.27	2.2	W	26.4	25.7	25.7	761.3	0.00	0.0	0.000	0.028	35.7	50	23.7	42.7
25/07/18	17:25	27.0	27.3	26.6	33	9.4	0.4	WNW	0.13	2.2	NW	27.0	26.1	26.1	761.3	0.00	0.0	0.000	0.030	35.8	50	23.8	42.9
25/07/18	17:30	27.3	27.3	27.3	30	8.2	0.4	WNW	0.13	1.8	WNW	27.3	26.2	26.2	761.2	0.00	0.0	0.000	0.031	35.8	50	23.8	42.9
25/07/18	17:35	27.3	27.3	27.3	31	8.7	0.4	WNW	0.13	1.8	WNW	27.3	26.3	26.3	761.2	0.00	0.0	0.000	0.031	35.8	50	23.8	42.9
25/07/18	17:40	27.3	27.3	27.3	30	8.2	0.4	WNW	0.13	1.3	WNW	27.3	26.2	26.2	761.2	0.00	0.0	0.000	0.031	35.8	50	23.8	42.9
25/07/18	17:45	27.3	27.3	27.3	30	8.2	0.4	WNW	0.13	1.8	WNW	27.3	26.2	26.2	761.1	0.00	0.0	0.000	0.031	35.7	49	23.3	42.3
25/07/18	17:50	27.1	27.3	26.9	31	8.5	0.4	W	0.13	1.8	WNW	27.1	26.1	26.1	761.1	0.00	0.0	0.000	0.030	35.6	49	23.2	41.9
25/07/18	17:55	26.8	26.9	26.7	31	8.3	0.4	W	0.13	1.8	W	26.8	25.8	25.8	761.0	0.00	0.0	0.000	0.030	35.4	49	23.0	41.6
25/07/18	18:00	26.6	26.7	26.6	33	9.0	0.0	SSW	0.00	1.8	SSW	26.6	25.7	25.7	761.1	0.00	0.0	0.000	0.029	35.1	49	22.7	40.8
25/07/18	18:05	26.5	26.6	26.4	32	8.5	0.4	SSW	0.13														

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Hi Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
25/07/18	18:45	25.6	25.6	25.5	34	8.5	0.4	WSW	0.13	0.9	SW	25.6	24.8	24.8	760.9	0.00	0.0	0.000	0.025	31.7	50	20.0	34.3
25/07/18	18:50	25.6	25.6	25.5	36	9.4	0.0	WSW	0.00	1.3	WSW	25.6	24.9	24.9	760.8	0.00	0.0	0.000	0.025	31.3	50	19.7	33.5
25/07/18	18:55	25.7	25.8	25.6	34	8.7	0.4	WSW	0.13	1.3	WSW	25.7	25.0	25.0	760.8	0.00	0.0	0.000	0.026	30.9	50	19.3	32.8
25/07/18	19:00	25.8	25.8	25.8	35	9.2	0.4	N	0.13	1.8	NNW	25.8	25.2	25.2	760.7	0.00	0.0	0.000	0.026	30.6	51	19.3	32.6
25/07/18	19:05	25.8	25.8	25.7	34	8.7	0.4	N	0.13	1.3	N	25.8	25.1	25.1	760.8	0.00	0.0	0.000	0.026	30.3	51	19.0	31.9
25/07/18	19:10	25.6	25.7	25.5	34	8.6	0.4	N	0.13	1.3	N	25.6	24.8	24.8	760.8	0.00	0.0	0.000	0.025	29.9	51	18.7	31.3
25/07/18	19:15	25.5	25.5	25.5	37	9.7	0.4	N	0.13	1.3	N	25.5	24.9	24.9	760.8	0.00	0.0	0.000	0.025	29.7	51	18.5	30.9
25/07/18	19:20	25.4	25.5	25.3	35	8.8	0.0	N	0.00	1.3	N	25.4	24.7	24.7	760.7	0.00	0.0	0.000	0.024	29.4	52	18.5	30.6
25/07/18	19:25	25.2	25.3	25.1	35	8.7	0.4	N	0.13	0.9	N	25.2	24.6	24.6	760.7	0.00	0.0	0.000	0.024	29.1	52	18.2	30.3
25/07/18	19:30	24.9	25.1	24.9	38	9.6	0.0	N	0.00	0.4	N	24.9	24.4	24.4	760.7	0.00	0.0	0.000	0.023	28.8	52	17.9	29.9
25/07/18	19:35	24.8	24.9	24.8	40	10.3	0.0	N	0.00	0.4	N	24.8	24.4	24.4	760.7	0.00	0.0	0.000	0.023	28.5	52	17.7	29.4
25/07/18	19:40	24.7	24.8	24.6	36	8.6	0.0	N	0.00	0.9	N	24.7	24.1	24.1	760.8	0.00	0.0	0.000	0.022	28.2	52	17.4	28.9
25/07/18	19:45	24.6	24.6	24.5	38	9.3	0.0	N	0.00	0.4	N	24.6	24.0	24.0	760.7	0.00	0.0	0.000	0.022	27.9	52	17.1	28.4
25/07/18	19:50	24.5	24.5	24.4	41	10.4	0.0	---	0.00	0.0	---	24.5	24.1	24.1	760.7	0.00	0.0	0.000	0.021	27.6	53	17.1	28.1
25/07/18	19:55	24.4	24.4	24.3	38	9.1	0.0	---	0.00	0.0	---	24.4	23.8	23.8	760.7	0.00	0.0	0.000	0.021	27.2	53	16.8	27.6
25/07/18	20:00	24.3	24.3	24.2	39	9.5	0.0	---	0.00	0.0	---	24.3	23.8	23.8	760.7	0.00	0.0	0.000	0.021	26.9	53	16.6	27.2
25/07/18	20:05	24.2	24.2	24.1	40	9.8	0.0	---	0.00	0.0	---	24.2	23.7	23.7	760.7	0.00	0.0	0.000	0.020	26.7	53	16.3	26.9
25/07/18	20:10	24.1	24.1	23.9	43	10.7	0.0	N	0.00	0.4	N	24.1	23.8	23.8	760.7	0.00	0.0	0.000	0.020	26.3	53	16.0	26.6
25/07/18	20:15	23.7	23.8	23.6	43	10.4	0.0	---	0.00	0.0	---	23.7	23.4	23.4	760.7	0.00	0.0	0.000	0.019	26.0	53	15.7	26.2
25/07/18	20:20	23.3	23.6	23.1	44	10.4	0.0	---	0.00	0.0	---	23.3	22.9	22.9	760.6	0.00	0.0	0.000	0.017	25.7	53	15.4	25.8
25/07/18	20:25	22.6	23.1	22.1	48	11.0	0.0	---	0.00	0.0	---	22.6	22.2	22.2	760.8	0.00	0.0	0.000	0.015	25.4	53	15.1	25.5
25/07/18	20:30	21.6	22.1	21.3	48	10.1	0.0	N	0.00	1.3	N	21.6	20.7	20.7	760.7	0.00	0.0	0.000	0.011	25.1	54	15.1	25.2
25/07/18	20:35	20.9	21.3	20.8	50	10.1	0.0	N	0.00	1.3	N	20.9	20.1	20.1	760.8	0.00	0.0	0.000	0.009	24.7	54	14.8	24.8
25/07/18	20:40	20.6	20.7	20.4	51	10.1	0.0	N	0.00	0.4	N	20.6	19.8	19.8	760.9	0.00	0.0	0.000	0.008	24.4	54	14.5	24.6
25/07/18	20:45	20.3	20.4	20.1	51	9.8	0.0	N	0.00	0.9	N	20.3	19.6	19.6	760.8	0.00	0.0	0.000	0.007	24.1	54	14.2	24.3
25/07/18	20:50	19.9	20.1	19.8	52	9.8	0.0	N	0.00	0.9	N	19.9	19.3	19.3	760.8	0.00	0.0	0.000	0.006	23.8	54	13.9	24.0
25/07/18	20:55	19.7	19.8	19.6	53	9.8	0.0	---	0.00	0.0	---	19.7	19.1	19.1	760.9	0.00	0.0	0.000	0.005	23.4	54	13.6	23.6
25/07/18	21:00	19.4	19.6	19.3	53	9.6	0.0	N	0.00	1.3	N	19.4	18.8	18.8	761.0	0.00	0.0	0.000	0.004	23.1	54	13.3	23.1
25/07/18	21:05	19.2	19.3	19.1	54	9.6	0.0	N	0.00	0.9	N	19.2	18.6	18.6	761.0	0.00	0.0	0.000	0.003	22.8	54	13.0	22.7
25/07/18	21:10	19.0	19.1	18.9	54	9.5	0.0	N	0.00	1.3	N	19.0	18.3	18.3	761.1	0.00	0.0	0.000	0.002	22.5	54	12.7	22.3
25/07/18	21:15	18.9	18.9	18.8	55	9.6	0.0	N	0.00	0.4	N	18.9	18.3	18.3	761.1	0.00	0.0	0.000	0.002	22.2	54	12.4	21.8

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Hi Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
25/07/18	21:20	18.7	18.8	18.6	56	9.7	0.0	N	0.00	0.4	N	18.7	18.1	18.1	761.2	0.00	0.0	0.000	0.001	21.9	55	12.4	21.4
25/07/18	21:25	18.4	18.6	18.3	57	9.8	0.0	N	0.00	0.9	N	18.4	17.9	17.9	761.2	0.00	0.0	0.000	0.000	21.6	55	12.2	21.1
25/07/18	21:30	18.2	18.3	18.1	58	9.8	0.0	---	0.00	0.0	---	18.2	17.7	17.7	761.1	0.00	0.0	0.000	0.000	21.3	55	11.9	20.7
25/07/18	21:35	17.9	18.1	17.7	59	9.8	0.0	---	0.00	0.0	---	17.9	17.3	17.3	761.2	0.00	0.0	0.002	0.000	21.1	55	11.7	20.3
25/07/18	21:40	17.6	17.7	17.4	60	9.7	0.0	---	0.00	0.0	---	17.6	17.0	17.0	761.2	0.00	0.0	0.003	0.000	20.7	55	11.4	20.1
25/07/18	21:45	17.3	17.4	17.1	61	9.7	0.0	---	0.00	0.0	---	17.3	16.7	16.7	761.2	0.00	0.0	0.004	0.000	20.4	55	11.1	19.9
25/07/18	21:50	16.9	17.1	16.7	63	9.8	0.0	N	0.00	0.4	N	16.9	16.5	16.5	761.2	0.00	0.0	0.005	0.000	20.2	55	10.8	19.7
25/07/18	21:55	16.6	16.7	16.4	64	9.7	0.0	N	0.00	0.4	N	16.6	16.1	16.1	761.2	0.00	0.0	0.006	0.000	19.9	55	10.6	19.4
25/07/18	22:00	16.2	16.4	16.1	66	9.8	0.0	N	0.00	0.9	N	16.2	15.7	15.7	761.2	0.00	0.0	0.008	0.000	19.6	55	10.3	19.1
25/07/18	22:05	15.9	16.1	15.6	67	9.8	0.0	N	0.00	0.4	N	15.9	15.5	15.5	761.3	0.00	0.0	0.008	0.000	19.3	56	10.3	18.8
25/07/18	22:10	15.6	15.8	15.6	67	9.5	0.0	N	0.00	0.4	N	15.6	15.2	15.2	761.3	0.00	0.0	0.009	0.000	19.1	56	10.1	18.6
25/07/18	22:15	15.5	15.6	15.4	68	9.6	0.0	N	0.00	0.9	N	15.5	15.1	15.1	761.3	0.00	0.0	0.010	0.000	18.9	56	9.9	18.3
25/07/18	22:20	15.3	15.4	15.3	68	9.5	0.0	---	0.00	0.0	---	15.3	14.9	14.9	761.3	0.00	0.0	0.010	0.000	18.7	56	9.7	18.1
25/07/18	22:25	15.2	15.3	15.1	69	9.5	0.0	---	0.00	0.0	---	15.2	14.8	14.8	761.4	0.00	0.0	0.011	0.000	18.4	56	9.4	17.8
25/07/18	22:30	15.0	15.1	14.9	69	9.4	0.0	N	0.00	0.4	N	15.0	14.6	14.6	761.3	0.00	0.0	0.012	0.000	18.2	56	9.2	17.5
25/07/18	22:35	14.9	14.9	14.8	70	9.5	0.0	N	0.00	0.4	N	14.9	14.5	14.5	761.4	0.00	0.0	0.012	0.000	17.9	56	9.0	17.3
25/07/18	22:40	14.8	14.8	14.8	71	9.6	0.4	N	0.13	0.9	N	14.8	14.4	14.4	761.4	0.00	0.0	0.012	0.000	17.7	56	8.8	17.0
25/07/18	22:45	14.7	14.8	14.7	73	9.9	0.0	N	0.00	0.9	N	14.7	14.4	14.4	761.4	0.00	0.0	0.013	0.000	17.4	56	8.6	16.7
25/07/18	22:50	14.7	14.8	14.7	74	10.1	0.0	N	0.00	0.4	N	14.7	14.4	14.4	761.4	0.00	0.0	0.013	0.000	17.3	57	8.7	16.6
25/07/18	22:55	14.8	14.8	14.8	74	10.2	0.0	N	0.00	0.4	N	14.8	14.5	14.5	761.4	0.00	0.0	0.012	0.000	17.1	57	8.5	16.3
25/07/18	23:00	14.7	14.8	14.7	74	10.1	0.0	---	0.00	0.0	---	14.7	14.4	14.4	761.4	0.00	0.0	0.013	0.000	16.9	57	8.3	16.2
25/07/18	23:05	14.7	14.7	14.6	75	10.3	0.0	---	0.00	0.0	---	14.7	14.4	14.4	761.3	0.00	0.0	0.013	0.000	16.7	57	8.2	15.9
25/07/18	23:10	14.6	14.6	14.5	76	10.4	0.0	---	0.00	0.0	---	14.6	14.3	14.3	761.3	0.00	0.0	0.013	0.000	16.6	57	8.0	15.8
25/07/18	23:15	14.4	14.5	14.4	76	10.3	0.0	---	0.00	0.0	---	14.4	14.2	14.2	761.3	0.00	0.0	0.014	0.00				

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Hi Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
25/07/18	23:55	13.3	13.4	13.3	79	9.8	0.0	---	0.00	0.0	---	13.3	13.1	13.1	761.5	0.00	0.0	0.017	0.000	15.1	58	6.8	14.3
26/07/18	00:00	13.3	13.3	13.2	80	9.9	0.0	---	0.00	0.0	---	13.3	13.1	13.1	761.4	0.00	0.0	0.018	0.000	14.9	58	6.7	14.2
26/07/18	0:05	13.2	13.2	13.1	80	9.8	0.0	---	0.00	0.0	---	13.2	13.0	13.0	761.4	0.00	0.0	0.018	0.000	14.8	58	6.6	14.1
26/07/18	0:10	13.1	13.1	13.0	80	9.7	0.0	---	0.00	0.0	---	13.1	12.9	12.9	761.5	0.00	0.0	0.018	0.000	14.7	58	6.5	13.9
26/07/18	0:15	13.0	13.0	12.9	81	9.8	0.0	N	0.00	0.4	N	13.0	12.8	12.8	761.5	0.00	0.0	0.019	0.000	14.6	58	6.4	13.8
26/07/18	0:20	12.9	12.9	12.8	81	9.7	0.0	---	0.00	0.0	---	12.9	12.7	12.7	761.5	0.00	0.0	0.019	0.000	14.4	58	6.3	13.7
26/07/18	0:25	12.8	12.8	12.8	82	9.8	0.0	N	0.00	0.4	N	12.8	12.7	12.7	761.4	0.00	0.0	0.019	0.000	14.3	58	6.1	13.5
26/07/18	0:30	12.7	12.8	12.7	82	9.7	0.0	---	0.00	0.0	---	12.7	12.6	12.6	761.4	0.00	0.0	0.019	0.000	14.2	59	6.3	13.4
26/07/18	0:35	12.6	12.7	12.6	82	9.6	0.0	---	0.00	0.0	---	12.6	12.5	12.5	761.4	0.00	0.0	0.020	0.000	14.1	59	6.2	13.3
26/07/18	0:40	12.5	12.6	12.4	82	9.5	0.0	---	0.00	0.0	---	12.5	12.4	12.4	761.5	0.00	0.0	0.020	0.000	13.9	59	6.0	13.1
26/07/18	0:45	12.4	12.4	12.4	81	9.3	0.0	---	0.00	0.0	---	12.4	12.3	12.3	761.5	0.00	0.0	0.020	0.000	13.8	59	5.9	13.0
26/07/18	0:50	12.3	12.4	12.3	82	9.3	0.0	---	0.00	0.0	---	12.3	12.2	12.2	761.5	0.00	0.0	0.021	0.000	13.7	59	5.8	12.9
26/07/18	0:55	12.2	12.3	12.1	82	9.2	0.0	---	0.00	0.0	---	12.2	12.1	12.1	761.4	0.00	0.0	0.021	0.000	13.6	59	5.7	12.8
26/07/18	1:00	12.1	12.1	11.9	82	9.1	0.0	---	0.00	0.0	---	12.1	11.9	11.9	761.4	0.00	0.0	0.022	0.000	13.5	59	5.6	12.7
26/07/18	1:05	11.9	11.9	11.9	83	9.1	0.0	---	0.00	0.0	---	11.9	11.8	11.8	761.4	0.00	0.0	0.022	0.000	13.4	59	5.5	12.6
26/07/18	1:10	11.8	11.8	11.8	83	9.0	0.0	---	0.00	0.0	---	11.8	11.7	11.7	761.3	0.00	0.0	0.023	0.000	13.3	59	5.4	12.5
26/07/18	1:15	11.8	11.8	11.8	83	9.0	0.0	---	0.00	0.0	---	11.8	11.7	11.7	761.3	0.00	0.0	0.023	0.000	13.2	59	5.3	12.4
26/07/18	1:20	11.8	11.8	11.8	83	9.0	0.0	N	0.00	0.4	N	11.8	11.7	11.7	761.3	0.00	0.0	0.023	0.000	13.1	59	5.2	12.3
26/07/18	1:25	11.7	11.8	11.7	83	8.9	0.0	---	0.00	0.0	---	11.7	11.6	11.6	761.3	0.00	0.0	0.023	0.000	12.9	59	5.1	12.2
26/07/18	1:30	11.7	11.7	11.6	84	9.1	0.0	N	0.00	0.4	N	11.7	11.7	11.7	761.3	0.00	0.0	0.023	0.000	12.8	59	5.0	12.1
26/07/18	1:35	11.6	11.6	11.6	84	9.0	0.0	---	0.00	0.0	---	11.6	11.6	11.6	761.3	0.00	0.0	0.023	0.000	12.8	59	5.0	12.1
26/07/18	1:40	11.6	11.6	11.6	83	8.8	0.0	---	0.00	0.0	---	11.6	11.4	11.4	761.2	0.00	0.0	0.024	0.000	12.7	59	4.9	11.9
26/07/18	1:45	11.4	11.6	11.4	84	8.8	0.0	---	0.00	0.0	---	11.4	11.4	11.4	761.2	0.00	0.0	0.024	0.000	12.6	59	4.8	11.8
26/07/18	1:50	11.4	11.4	11.4	84	8.8	0.0	---	0.00	0.0	---	11.4	11.4	11.4	761.1	0.00	0.0	0.024	0.000	12.5	59	4.7	11.8
26/07/18	1:55	11.4	11.4	11.3	84	8.8	0.0	---	0.00	0.0	---	11.4	11.3	11.3	761.2	0.00	0.0	0.024	0.000	12.4	59	4.6	11.7
26/07/18	2:00	11.3	11.3	11.3	84	8.7	0.0	---	0.00	0.0	---	11.3	11.2	11.2	761.2	0.00	0.0	0.024	0.000	12.3	59	4.5	11.6
26/07/18	2:05	11.2	11.2	11.1	84	8.6	0.0	---	0.00	0.0	---	11.2	11.1	11.1	761.1	0.00	0.0	0.025	0.000	12.2	59	4.4	11.6
26/07/18	2:10	11.1	11.1	10.9	84	8.5	0.0	---	0.00	0.0	---	11.1	11.1	11.1	761.0	0.00	0.0	0.025	0.000	12.1	59	4.3	11.4
26/07/18	2:15	10.9	10.9	10.8	84	8.3	0.0	---	0.00	0.0	---	10.9	10.9	10.9	760.9	0.00	0.0	0.026	0.000	12.0	59	4.2	11.3
26/07/18	2:20	10.7	10.8	10.6	85	8.2	0.0	---	0.00	0.0	---	10.7	10.7	10.7	760.9	0.00	0.0	0.027	0.000	11.9	59	4.1	11.2
26/07/18	2:25	10.4	10.6	10.4	85	8.0	0.0	---	0.00	0.0	---	10.4	10.4	10.4	760.9	0.00	0.0	0.027	0.000	11.8	59	4.1	11.2

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Hi Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
26/07/18	2:30	10.3	10.4	10.2	86	8.0	0.0	---	0.00	0.0	---	10.3	10.3	10.3	760.9	0.00	0.0	0.028	0.000	11.7	59	3.9	11.0
26/07/18	2:35	10.2	10.2	10.2	86	8.0	0.0	---	0.00	0.0	---	10.2	10.3	10.3	760.9	0.00	0.0	0.028	0.000	11.6	59	3.8	10.9
26/07/18	2:40	10.1	10.2	10.1	86	7.9	0.0	---	0.00	0.0	---	10.1	10.2	10.2	760.9	0.00	0.0	0.029	0.000	11.5	60	4.0	10.9
26/07/18	2:45	10.0	10.1	9.9	87	7.9	0.0	---	0.00	0.0	---	10.0	10.1	10.1	760.8	0.00	0.0	0.029	0.000	11.4	60	3.9	10.8
26/07/18	2:50	9.9	9.9	9.9	87	7.9	0.0	---	0.00	0.0	---	9.9	10.1	10.1	760.9	0.00	0.0	0.029	0.000	11.3	60	3.8	10.7
26/07/18	2:55	9.9	9.9	9.9	87	7.9	0.0	---	0.00	0.0	---	9.9	10.1	10.1	760.9	0.00	0.0	0.029	0.000	11.2	60	3.7	10.6
26/07/18	3:00	10.0	10.1	9.9	88	8.1	0.0	---	0.00	0.0	---	10.0	10.1	10.1	760.8	0.00	0.0	0.029	0.000	11.1	60	3.6	10.6
26/07/18	3:05	10.1	10.1	9.9	87	8.0	0.0	---	0.00	0.0	---	10.1	10.2	10.2	760.9	0.00	0.0	0.029	0.000	11.0	60	3.5	10.4
26/07/18	3:10	9.9	9.9	9.8	87	7.8	0.0	---	0.00	0.0	---	9.9	10.0	10.0	760.8	0.00	0.0	0.029	0.000	10.9	60	3.5	10.4
26/07/18	3:15	9.7	9.8	9.7	88	7.8	0.0	---	0.00	0.0	---	9.7	9.8	9.8	760.7	0.00	0.0	0.030	0.000	10.8	60	3.4	10.3
26/07/18	3:20	9.7	9.7	9.7	88	7.8	0.0	---	0.00	0.0	---	9.7	9.8	9.8	760.7	0.00	0.0	0.030	0.000	10.8	60	3.3	10.3
26/07/18	3:25	9.7	9.7	9.7	88	7.8	0.0	---	0.00	0.0	---	9.7	9.8	9.8	760.7	0.00	0.0	0.030	0.000	10.7	60	3.2	10.2
26/07/18	3:30	9.7	9.7	9.7	89	8.0	0.0	---	0.00	0.0	---	9.7	9.9	9.9	760.7	0.00	0.0	0.030	0.000	10.6	60	3.2	10.1
26/07/18	3:35	9.7	9.7	9.7	89	8.0	0.0	---	0.00	0.0	---	9.7	9.9	9.9	760.6	0.00	0.0	0.030	0.000	10.5	60	3.1	10.0
26/07/18	3:40	9.7	9.7	9.6	88	7.8	0.0	---	0.00	0.0	---	9.7	9.8	9.8	760.6	0.00	0.0	0.030	0.000	10.4	60	3.0	9.9
26/07/18	3:45	9.6	9.6	9.5	88	7.7	0.0	---	0.00	0.0	---	9.6	9.7	9.7	760.6	0.00	0.0	0.030	0.000	10.3	60	2.9	9.8
26/07/18	3:50	9.4	9.4	9.4	89	7.7	0.0	---	0.00	0.0	---	9.4	9.6	9.6	760.5	0.00	0.0	0.031	0.000	10.3	60	2.8	9.8
26/07/18	3:55	9.3	9.4	9.3	89	7.6	0.0	---	0.00	0.0	---	9.3	9.4	9.4	760.5	0.00	0.0	0.031	0.000	10.2	60	2.7	9.7
26/07/18	4:00	9.2	9.3	9.2	89	7.5	0.0	---	0.00	0.0	---	9.2	9.3	9.3	760.5	0.00	0.0	0.032	0.000	10.1	60	2.7	9.7
26/07/18	4:05	9.3	9.3	9.2	89	7.6	0.0	---	0.00	0.0	---	9.3	9.4	9.4	760.5	0.00	0.0	0.031	0.000	10.0	60	2.6	9.6
26/07/18	4:10	9.2	9.3	9.2	89	7.5	0.0	---	0.00	0.0	---	9.2	9.3	9.3	760.4	0.00	0.0	0.032	0.000	9.9	60	2.5	9.5
26/07/18	4:15	9.2	9.2	9.2	89	7.5	0.0	---	0.00	0.0	---	9.2	9.3	9.3	760.5	0.00	0.0	0.032	0.000	9.8	60	2.4	9.4
26/07/18	4:20	9.2	9.2	9.2	89	7.4	0.0	N	0.00	0.4	N	9.2	9.3	9.3	760.5	0.00	0.0	0.032	0.000	9.8	60	2.4	9.3
26/07/18	4:25	9.2	9.3	9.2	90	7.7	0.0	N	0.00	0.9	N	9.2	9.4	9.4	760.4	0.00	0.0	0.032	0.000	9.7	60	2.3	9.2
26/07/18	4:30	9.4	9.6	9.3	90	7.9	0.0	N	0.00	0.4	N	9.4	9.6	9.6	760.5	0.00	0.0	0.031	0.000	9.6	60	2.2	9.2
26/07/18	4:35	9.6	9.7	9.6	90	8.0	0.0	---	0.00	0.0	---	9.6	9.7	9.7	760.5</								

WeatherLink 5.9.2 07/08/18 14:53: Deans

File Setup Reports Browse Window Help

Browse Records

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Hi Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
26/07/18	5:05	8.9	8.9	8.8	89	7.2	0.0	---	0.00	0.0	---	8.9	9.0	9.0	760.3	0.00	0.0	0.033	0.000	9.3	60	1.9	8.8
26/07/18	5:10	8.8	8.8	8.7	89	7.1	0.0	---	0.00	0.0	---	8.8	8.9	8.9	760.3	0.00	0.0	0.033	0.000	9.2	60	1.9	8.8
26/07/18	5:15	8.7	8.7	8.7	90	7.2	0.0	---	0.00	0.0	---	8.7	8.8	8.8	760.3	0.00	0.0	0.033	0.000	9.1	60	1.7	8.7
26/07/18	5:20	8.7	8.7	8.7	90	7.1	0.0	---	0.00	0.0	---	8.7	8.8	8.8	760.4	0.00	0.0	0.034	0.000	9.1	60	1.7	8.6
26/07/18	5:25	8.6	8.7	8.6	90	7.1	0.0	---	0.00	0.0	---	8.6	8.7	8.7	760.4	0.00	0.0	0.034	0.000	9.1	60	1.7	8.6
26/07/18	5:30	8.6	8.6	8.6	90	7.0	0.0	---	0.00	0.0	---	8.6	8.7	8.7	760.4	0.00	0.0	0.034	0.000	8.9	60	1.6	8.5
26/07/18	5:35	8.5	8.6	8.5	90	7.0	0.0	---	0.00	0.0	---	8.5	8.6	8.6	760.4	0.00	0.0	0.034	0.000	8.9	60	1.5	8.4
26/07/18	5:40	8.5	8.6	8.5	90	7.0	0.0	---	0.00	0.0	---	8.5	8.6	8.6	760.3	0.00	0.0	0.034	0.000	8.9	60	1.5	8.4
26/07/18	5:45	8.6	8.7	8.6	90	7.1	0.0	---	0.00	0.0	---	8.6	8.7	8.7	760.3	0.00	0.0	0.034	0.000	8.8	60	1.5	8.4
26/07/18	5:50	8.7	8.7	8.7	90	7.1	0.0	---	0.00	0.0	---	8.7	8.8	8.8	760.3	0.00	0.0	0.034	0.000	8.8	61	1.7	8.3
26/07/18	5:55	8.8	8.8	8.7	91	7.4	0.0	---	0.00	0.0	---	8.8	8.9	8.9	760.3	0.00	0.0	0.033	0.000	8.8	61	1.7	8.3
26/07/18	6:00	8.9	9.0	8.8	91	7.5	0.0	---	0.00	0.0	---	8.9	9.0	9.0	760.3	0.00	0.0	0.033	0.000	8.7	61	1.6	8.3
26/07/18	6:05	9.1	9.2	9.0	91	7.7	0.0	---	0.00	0.0	---	9.1	9.2	9.2	760.3	0.00	0.0	0.032	0.000	8.7	61	1.6	8.3
26/07/18	6:10	9.2	9.3	9.2	91	7.8	0.0	---	0.00	0.0	---	9.2	9.4	9.4	760.3	0.00	0.0	0.032	0.000	8.7	61	1.6	8.3
26/07/18	6:15	9.4	9.4	9.3	91	8.0	0.0	---	0.00	0.0	---	9.4	9.6	9.6	760.3	0.00	0.0	0.031	0.000	8.7	61	1.6	8.3
26/07/18	6:20	9.4	9.5	9.4	91	8.0	0.0	N	0.00	1.3	N	9.4	9.6	9.6	760.4	0.00	0.0	0.031	0.000	8.7	61	1.6	8.3
26/07/18	6:25	9.6	9.6	9.5	91	8.2	0.0	N	0.00	0.4	N	9.6	9.7	9.7	760.3	0.00	0.0	0.030	0.000	8.7	61	1.6	8.3
26/07/18	6:30	9.7	9.7	9.7	91	8.3	0.0	---	0.00	0.0	---	9.7	9.8	9.8	760.4	0.00	0.0	0.030	0.000	8.8	61	1.7	8.3
26/07/18	6:35	9.7	9.7	9.7	91	8.3	0.0	N	0.00	0.4	N	9.7	9.8	9.8	760.3	0.00	0.0	0.030	0.000	8.8	61	1.7	8.3
26/07/18	6:40	9.7	9.7	9.7	91	8.3	0.0	---	0.00	0.0	---	9.7	9.8	9.8	760.4	0.00	0.0	0.030	0.000	8.8	61	1.7	8.3
26/07/18	6:45	9.7	9.7	9.7	91	8.3	0.0	---	0.00	0.0	---	9.7	9.8	9.8	760.4	0.00	0.0	0.030	0.000	8.9	61	1.8	8.4
26/07/18	6:50	9.7	9.7	9.7	91	8.3	0.0	---	0.00	0.0	---	9.7	9.8	9.8	760.4	0.00	0.0	0.030	0.000	8.9	61	1.8	8.4
26/07/18	6:55	9.7	9.8	9.7	91	8.3	0.0	---	0.00	0.0	---	9.7	9.9	9.9	760.3	0.00	0.0	0.030	0.000	8.9	61	1.8	8.5
26/07/18	7:00	9.9	10.1	9.8	91	8.5	0.0	N	0.00	0.4	N	9.9	10.1	10.1	760.3	0.00	0.0	0.029	0.000	8.9	61	1.8	8.5
26/07/18	7:05	10.1	10.2	10.1	91	8.7	0.0	---	0.00	0.0	---	10.1	10.3	10.3	760.3	0.00	0.0	0.029	0.000	9.1	61	1.9	8.6
26/07/18	7:10	10.3	10.4	10.2	91	8.9	0.0	N	0.00	0.9	N	10.3	10.4	10.4	760.2	0.00	0.0	0.028	0.000	9.1	61	2.0	8.7
26/07/18	7:15	10.4	10.6	10.4	91	9.0	0.0	N	0.00	0.4	N	10.4	10.6	10.6	760.2	0.00	0.0	0.027	0.000	9.2	61	2.0	8.7
26/07/18	7:20	10.6	10.6	10.6	91	9.2	0.0	N	0.00	0.9	N	10.6	10.7	10.7	760.3	0.00	0.0	0.027	0.000	9.2	61	2.1	8.8
26/07/18	7:25	10.7	10.8	10.6	91	9.3	0.0	---	0.00	0.0	---	10.7	10.8	10.8	760.2	0.00	0.0	0.026	0.000	9.3	61	2.2	8.9
26/07/18	7:30	10.8	10.9	10.8	91	9.4	0.0	---	0.00	0.0	---	10.8	10.9	10.9	760.2	0.00	0.0	0.026	0.000	9.4	61	2.2	8.9
26/07/18	7:35	10.9	11.1	10.9	90	9.4	0.0	N	0.00	0.4	N	10.9	11.1	11.1	760.2	0.00	0.0	0.026	0.000	9.5	61	2.3	9.1

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14:53 07/08/2018

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File Setup Reports Browse Window Help

Browse Records

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Hi Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
26/07/18	7:40	11.1	11.1	11.1	90	9.5	0.0	---	0.00	0.0	---	11.1	11.2	11.2	760.1	0.00	0.0	0.025	0.000	9.6	61	2.4	9.1
26/07/18	7:45	11.2	11.3	11.1	90	9.6	0.0	---	0.00	0.0	---	11.2	11.3	11.3	760.1	0.00	0.0	0.025	0.000	9.7	61	2.5	9.2
26/07/18	7:50	11.4	11.6	11.3	90	9.9	0.0	---	0.00	0.0	---	11.4	11.5	11.5	760.1	0.00	0.0	0.024	0.000	9.7	61	2.6	9.3
26/07/18	7:55	11.7	11.8	11.6	90	10.1	0.0	N	0.00	0.9	N	11.7	11.8	11.8	760.0	0.00	0.0	0.023	0.000	9.8	61	2.7	9.4
26/07/18	8:00	11.9	12.1	11.8	90	10.4	0.0	N	0.00	0.9	N	11.9	12.0	12.0	760.1	0.00	0.0	0.022	0.000	10.0	61	2.8	9.6
26/07/18	8:05	12.2	12.3	12.1	89	10.4	0.0	---	0.00	0.0	---	12.2	12.2	12.2	760.1	0.00	0.0	0.021	0.000	10.1	61	2.9	9.7
26/07/18	8:10	12.4	12.4	12.3	89	10.6	0.0	N	0.00	0.4	N	12.4	12.4	12.4	760.0	0.00	0.0	0.021	0.000	10.2	62	3.3	9.8
26/07/18	8:15	12.6	12.7	12.4	89	10.8	0.0	N	0.00	1.3	N	12.6	12.6	12.6	760.0	0.00	0.0	0.020	0.000	10.3	62	3.4	9.9
26/07/18	8:20	12.8	12.8	12.7	88	10.8	0.0	---	0.00	0.0	---	12.8	12.8	12.8	759.9	0.00	0.0	0.019	0.000	10.5	62	3.5	10.1
26/07/18	8:25	13.0	13.1	12.8	87	10.9	0.0	N	0.00	0.9	N	13.0	13.0	13.0	759.9	0.00	0.0	0.019	0.000	10.6	62	3.6	10.2
26/07/18	8:30	13.2	13.3	13.1	86	10.9	0.0	N	0.00	0.4	N	13.2	13.2	13.2	759.9	0.00	0.0	0.018	0.000	10.7	62	3.7	10.3
26/07/18	8:35	13.5	13.6	13.3	86	11.2	0.4	WNW	0.13	1.3	N	13.5	13.4	13.4	759.9	0.00	0.0	0.017	0.000	10.8	62	3.8	10.3
26/07/18	8:40	13.7	13.8	13.6	85	11.2	0.0	WSW	0.00	0.9	WSW	13.7	13.7	13.7	759.9	0.00	0.0	0.016	0.000	11.0	62	4.0	10.5
26/07/18	8:45	13.9	14.2	13.8	83	11.1	0.0	WNW	0.00	1.3	WNW	13.9	13.8	13.8	759.8	0.00	0.0	0.015	0.000	11.1	62	4.1	10.6
26/07/18	8:50	14.3	14.4	14.2	82	11.2	0.0	WNW	0.00	0.9	WNW	14.3	14.2	14.2	759.9	0.00	0.0	0.014	0.000	11.2	62	4.2	10.7
26/07/18	8:55	14.6	14.8	14.4	80	11.2	0.0	WNW	0.00	1.3	WNW	14.6	14.5	14.5	759.9	0.00	0.0	0.013	0.000	11.4	62	4.4	10.8
26/07/18	9:00	14.9	15.0	14.8	78	11.1	0.0	WSW	0.00	1.3	WSW	14.9	14.7	14.7	759.9	0.00	0.0	0.012	0.000	11.5	62	4.5	10.9
26/07/18	9:05	15.2	15.3	15.0	77	11.2	0.4	WSW	0.13	1.3	WSW	15.2	14.9	14.9	759.8	0.00	0.0	0.011	0.000	11.6	62	4.6	11.1
26/07/18	9:10	15.4	15.6	15.3	76	11.2	0.4	WSW	0.13	1.3	WSW	15.4	15.2	15.2	759.8	0.00	0.0	0.010	0.000	11.7	62	4.7	11.2
26/07/18	9:15	15.7	15.8	15.6	73	10.9	0.0	WSW	0.00	0.9	WSW	15.7	15.4	15.4	759.8	0.00	0.0	0.009	0.000	11.8	62	4.8	11.3
26/07/18	9:20	16.0	16.1	15.8	73	11.2	0.0	WSW	0.00	0.9	WSW	16.0	15.8	15.8	759.7	0.00	0.0	0.008	0.000	11.9	62	4.9	11.3
26/07/18	9:25	16.3	16.4	16.1	71	11.0	0.0	WSW	0.00	0.4	WSW	16.3	16.0	16.0	759.6	0.00	0.0	0.007	0.000	12.1	62	5.0	11.5
26/07/18	9:30	16.6	16.7	16.4	70	11.1	0.0	WSW	0.00	0.9	WSW	16.6	16.3	16.3	759.6	0.00	0.0	0.006	0.000	12.2	62	5.1	11.6
26/07/18	9:35	16.8	17.0	16.7	70	11.3	0.0	WSW	0.00	0.9	WSW	16.8	16.6	16.6	759.6	0.00	0.0	0.005	0.000	12.4	62	5.3	11.8
26/07/18	9:40	17.1	17.2	17.0	69	11.3	0.4	WSW	0.13	1.3	WSW	17.1	16.8	16.8	759.6	0.00	0.0	0.004	0.000	12.5	62	5.4	11.8
26/07/18	9:45	17.3	17.3	17.2	67	11.1	0.0	WSW	0														



Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Hi Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
26/07/18	10:15	20.0	20.2	19.8	60	12.0	0.4	NW	0.13	2.2	NW	20.0	19.8	19.8	759.4	0.00	0.0	0.000	0.006	13.7	62	6.6	13.1
26/07/18	10:20	20.6	20.9	20.2	61	12.8	0.4	NW	0.13	1.3	NW	20.6	20.3	20.3	759.6	0.00	0.0	0.000	0.008	14.0	62	6.8	13.3
26/07/18	10:25	21.3	21.6	21.0	58	12.7	0.0	NW	0.00	0.4	NW	21.3	20.8	20.8	759.4	0.00	0.0	0.000	0.010	14.3	63	7.3	13.7
26/07/18	10:30	21.8	22.1	21.6	54	12.1	0.4	NW	0.13	1.8	NNW	21.8	21.3	21.3	759.3	0.00	0.0	0.000	0.012	14.7	63	7.7	14.1
26/07/18	10:35	22.3	22.5	22.1	55	12.8	0.4	NNW	0.13	1.8	NNW	22.3	22.0	22.0	759.3	0.00	0.0	0.000	0.014	15.2	63	8.2	14.6
26/07/18	10:40	22.7	22.9	22.5	54	12.9	0.0	NNW	0.00	0.9	NNW	22.7	22.7	22.7	759.3	0.00	0.0	0.000	0.015	15.6	64	8.8	15.0
26/07/18	10:45	23.2	23.4	22.9	51	12.5	0.4	NNW	0.13	1.3	NNW	23.2	23.1	23.1	759.2	0.00	0.0	0.000	0.017	16.1	64	9.3	15.6
26/07/18	10:50	23.7	23.9	23.4	50	12.7	0.4	NNW	0.13	1.3	NNW	23.7	23.7	23.7	759.3	0.00	0.0	0.000	0.019	16.6	64	9.7	16.1
26/07/18	10:55	24.2	24.4	23.9	48	12.5	0.0	NNW	0.00	1.3	NNW	24.2	24.1	24.1	759.1	0.00	0.0	0.000	0.020	17.1	64	10.2	16.7
26/07/18	11:00	24.6	24.7	24.4	47	12.5	0.0	NNW	0.00	0.9	NNW	24.6	24.4	24.4	759.1	0.00	0.0	0.000	0.022	17.5	64	10.6	17.2
26/07/18	11:05	24.9	24.9	24.8	46	12.5	0.4	NNW	0.13	1.8	NNW	24.9	24.7	24.7	759.0	0.00	0.0	0.000	0.023	18.0	65	11.3	17.8
26/07/18	11:10	24.9	25.0	24.9	46	12.5	0.0	NNW	0.00	0.9	NNW	24.9	24.7	24.7	759.0	0.00	0.0	0.000	0.023	18.5	65	11.8	18.3
26/07/18	11:15	25.3	25.5	25.0	44	12.1	0.0	NNW	0.00	1.3	NNW	25.3	25.0	25.0	758.9	0.00	0.0	0.000	0.024	18.9	65	12.2	18.8
26/07/18	11:20	25.8	26.0	25.5	44	12.6	0.4	NNW	0.13	1.3	NNW	25.8	25.5	25.5	758.9	0.00	0.0	0.000	0.026	19.4	65	12.6	19.4
26/07/18	11:25	26.2	26.4	26.0	43	12.7	0.0	NNW	0.00	0.9	NNW	26.2	25.9	25.9	758.8	0.00	0.0	0.000	0.027	19.8	65	13.1	19.9
26/07/18	11:30	26.7	26.9	26.4	42	12.7	0.4	NNW	0.13	1.3	NNW	26.7	26.2	26.2	758.7	0.00	0.0	0.000	0.029	20.3	65	13.5	20.3
26/07/18	11:35	27.2	27.3	26.9	39	12.0	0.0	NNW	0.00	1.8	SSW	27.2	26.6	26.6	758.5	0.00	0.0	0.000	0.031	20.8	65	14.0	20.7
26/07/18	11:40	27.4	27.4	27.3	38	11.8	0.4	S	0.13	1.8	SSE	27.4	26.8	26.8	758.6	0.00	0.0	0.000	0.031	21.3	65	14.5	21.2
26/07/18	11:45	27.4	27.4	27.3	40	12.6	0.0	SSW	0.00	0.4	SSW	27.4	26.9	26.9	758.4	0.00	0.0	0.000	0.032	21.8	65	14.9	21.8
26/07/18	11:50	27.3	27.3	27.3	39	12.1	0.0	SSW	0.00	0.4	SSW	27.3	26.7	26.7	758.4	0.00	0.0	0.000	0.031	22.3	65	15.4	22.4
26/07/18	11:55	27.1	27.3	27.1	40	12.3	0.0	NE	0.00	1.8	NE	27.1	26.6	26.6	758.4	0.00	0.0	0.000	0.030	22.7	65	15.8	23.1
26/07/18	12:00	27.0	27.1	26.9	41	12.6	0.0	NE	0.00	1.3	NE	27.0	26.5	26.5	758.3	0.00	0.0	0.000	0.030	23.1	65	16.2	23.7
26/07/18	12:05	27.1	27.1	26.9	40	12.3	0.4	NE	0.13	1.3	NE	27.1	26.5	26.5	758.2	0.00	0.0	0.000	0.030	23.6	65	16.6	24.3
26/07/18	12:10	26.8	26.9	26.6	41	12.4	0.9	NNW	0.27	2.7	NNW	26.8	26.3	26.3	758.1	0.00	0.0	0.000	0.029	24.1	64	16.8	24.7
26/07/18	12:15	26.6	26.6	26.6	38	11.1	0.0	SE	0.00	1.3	ESE	26.6	25.9	25.9	758.3	1.27	770.1	0.000	0.029	24.5	65	17.5	25.2
26/07/18	12:20	26.9	27.3	26.6	38	11.4	0.0	---	0.00	0.0	---	26.9	26.2	26.2	758.5	0.25	8.1	0.000	0.030	25.1	66	18.3	25.8
26/07/18	12:25	27.5	27.7	27.3	38	11.9	0.0	---	0.00	0.0	---	27.5	26.9	26.9	757.8	0.00	2.3	0.000	0.032	25.7	66	18.8	26.6
26/07/18	12:30	27.8	28.0	27.7	36	11.3	0.0	---	0.00	0.0	---	27.8	27.1	27.1	758.1	0.00	1.3	0.000	0.033	26.2	66	19.4	27.3
26/07/18	12:35	28.2	28.2	28.0	48	16.1	0.0	---	0.00	0.0	---	28.2	28.6	28.6	759.7	0.00	1.0	0.000	0.034	26.7	66	19.8	27.9
26/07/18	12:40	28.3	28.4	28.2	44	14.9	0.0	---	0.00	0.0	---	28.3	28.5	28.5	759.7	0.00	0.0	0.000	0.035	27.1	66	20.2	28.4
26/07/18	12:45	28.6	28.7	28.4	43	14.8	0.0	---	0.00	0.0	---	28.6	28.8	28.8	759.4	0.00	0.0	0.000	0.035	27.3	66	20.4	28.9

Date	Time	Temp Out	Hi Temp	Low Temp	Out Hum	Dew Pt.	Wind Speed	Wind Dir	Wind Run	Hi Speed	Hi Dir	Hi Chill	Heat Index	THW Index	Bar	Rain	Rain Rate	Heat D-D	Cool D-D	In Temp	In Hum	In Dew	In Heat
26/07/18	12:50	28.8	28.9	28.7	41	14.3	0.0	---	0.00	0.0	---	28.8	29.1	29.1	759.5	0.00	0.0	0.000	0.036	27.5	65	20.3	29.1
26/07/18	12:55	28.9	28.9	28.9	28	8.6	0.0	---	0.00	0.0	---	28.9	27.8	27.8	758.7	0.00	0.0	0.000	0.037	27.7	65	20.5	29.4
26/07/18	13:00	28.9	28.9	28.9	33	11.0	0.0	---	0.00	0.0	---	28.9	28.3	28.3	758.7	0.00	0.0	0.000	0.037	27.8	65	20.6	29.7
26/07/18	13:05	29.0	29.1	28.9	35	12.0	0.0	---	0.00	0.0	---	29.0	28.6	28.6	758.6	0.00	0.0	0.000	0.037	27.9	64	20.4	29.6
26/07/18	13:10	29.2	29.4	29.1	36	12.6	0.0	---	0.00	0.0	---	29.2	28.9	28.9	758.5	0.00	0.0	0.000	0.038	28.0	64	20.6	29.8
26/07/18	13:15	29.4	29.5	29.4	28	9.0	0.0	---	0.00	0.0	---	29.4	28.3	28.3	758.6	0.00	0.0	0.000	0.039	28.1	64	20.7	30.0
26/07/18	13:20	29.1	29.4	28.9	27	8.2	0.0	---	0.00	0.0	---	29.1	27.9	27.9	758.8	0.00	0.0	0.000	0.037	28.2	64	20.8	30.2
26/07/18	13:25	28.4	28.8	28.1	28	8.2	0.0	---	0.00	0.0	---	28.4	27.2	27.2	753.9	0.00	0.0	0.000	0.035	28.3	63	20.6	30.2
26/07/18	13:30	27.7	28.1	27.3	28	7.5	0.0	---	0.00	0.0	---	27.7	26.4	26.4	755.0	0.00	0.0	0.000	0.032	28.4	63	20.7	30.5
26/07/18	13:35	27.1	27.3	26.7	28	7.0	0.0	---	0.00	0.0	---	27.1	25.8	25.8	758.3	0.00	0.0	0.000	0.030	28.5	63	20.8	30.6
26/07/18	13:40	26.0	26.6	25.4	29	6.0	0.0	---	0.00	0.0	---	26.0	25.0	25.0	758.0	0.00	0.0	0.000	0.027	28.6	63	20.9	30.8
26/07/18	13:45	24.7	25.3	24.2	30	6.0	0.0	---	0.00	0.0	---	24.7	24.0	24.0	761.3	0.00	0.0	0.000	0.022	28.7	63	21.0	31.1
26/07/18	13:50	23.7	24.1	23.3	31	5.6	0.0	---	0.00	0.0	---	23.7	22.8	22.8	760.0	0.00	0.0	0.000	0.019	28.8	62	20.8	31.1
26/07/18	13:55	22.9	23.3	22.6	32	5.4	0.0	---	0.00	0.0	---	22.9	21.9	21.9	757.6	0.00	0.0	0.000	0.016	28.8	62	20.8	31.2
26/07/18	14:00	22.2	22.5	21.9	34	5.6	0.0	---	0.00	0.0	---	22.2	20.8	20.8	757.3	0.00	0.0	0.000	0.014	28.8	62	20.8	31.2
26/07/18	14:05	21.7	21.9	21.6	35	5.6	0.0	---	0.00	0.0	---	21.7	20.2	20.2	758.1	0.00	0.0	0.000	0.012	28.8	62	20.8	31.2
26/07/18	14:10	21.3	21.6	21.1	34	4.8	0.0	---	0.00	0.0	---	21.3	19.6	19.6	756.1	0.00	0.0	0.000	0.010	28.8	62	20.8	31.2
26/07/18	14:15	20.7	21.1	20.4	36	5.1	0.0	---	0.00	0.0	---	20.7	19.1	19.1	757.5	0.00	0.0	0.000	0.008	28.8	61	20.6	31.0
26/07/18	14:20	20.3	20.4	20.2	37	5.1	0.0	---	0.00	0.0	---	20.3	18.7	18.7	757.8	0.00	0.0	0.000	0.007	28.8	61	20.6	31.0
26/07/18	14:25	20.1	20.2	20.1	37	5.0	0.0	---	0.00	0.0	---	20.1	18.6	18.6	756.6	0.00	0.0	0.000	0.006	28.8	61	20.6	31.0
26/07/18	14:30	19.9	20.1	19.9	36	4.4	0.0	---	0.00	0.0	---	19.9	18.3	18.3	756.6	0.00	0.0	0.000	0.006	28.7	61	20.5	30.8
26/07/18	14:35	19.8	19.9	19.7	37	4.7	0.0	---	0.00	0.0	---	19.8	18.2	18.2	759.5	0.00	0.0	0.000	0.005	28.7	61	20.4	30.7
26/07/18	14:40	19.5	19.6	19.4	37	4.4	0.0	---	0.00	0.0	---	19.5	17.9	17.9	758.6	0.00	0.0	0.000	0.004	28.6	61	20.3	30.4
26/07/18	14:45	19.2	19.4	18.9	39	4.9	0.0	---	0.00	0.0	---												

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**Technical Appendix 14-4  
Construction Plant Inventory**

## Construction Plant Inventory

### Demolition:

Plant Type	Sound Power Level	% Operating Time	Distance Ratio
Dozer	106	100	1.0
Excavator/Loader	103	100	1.0
Dump Truck	107	100	1.0
Mobile Crane	98	100	1.0
Lorry	103	20	1.0

### Soil Movements:

Plant Type	Sound Power Level	% Operating Time	Distance Ratio
Dozer	106	100	1.0
Excavator/Loader	103	100	1.0
Dump Truck	107	100	1.0
8 Wheel Tipper	107	100	1.0
Lorry	98	10	1.0

### Piling:

Plant Type	Sound Power Level	% Operating Time	Distance Ratio
Piling Rig (percussive)	116	80	1.0
Truck Mixer	107	80	1.0
Concrete Pump	110	100	1.0
Poker Vibrator	106	80	1.0
Lorry	103	20	1.0

### General Site Noisy Activities:

Plant Type	Sound Power Level	% Operating Time	Distance Ratio
Excavator	104	100	1.0
HGV	103	20	1.0
Dumper	104	100	1.0
Telehandler	105	100	1.0
Compressor	95	100	n/a
Generator	103	100	n/a
Mobile Crane	98	100	1.0

**Infrastructure Construction:**

<b>Plant Type</b>	<b>Sound Power Level</b>	<b>% Operating Time</b>	<b>Distance Ratio</b>
Asphalt Melter	103	80	1.0
Asphalt Spreader	96	80	1.0
Road Roller	102	100	1.0
Dumper	104	100	1.0
Truck Mixer	112	80	1.0
Lorry	103	50	1.0
Mobile Crane	110	80	1.0
Poker Vibrator	106	80	n/a
Concrete pump	107	100	n/a
Compressor	102	100	n/a

**Building Construction:**

<b>Plant Type</b>	<b>Sound Power Level</b>	<b>% Operating Time</b>	<b>Distance Ratio</b>
Excavator	106	100	1.0
Steelwork Erection	108	100	1.0
Concrete Pump	103	100	1.0
Concrete Vibrators	106	100	1.0
HGV	103	50	1.0
Cutting/Grinding	107	100	n/a
Hydraulic Pump	106	100	n/a



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## **Technical Appendix 14-5 Assumed Noise Levels for Site Plant and Cladding**

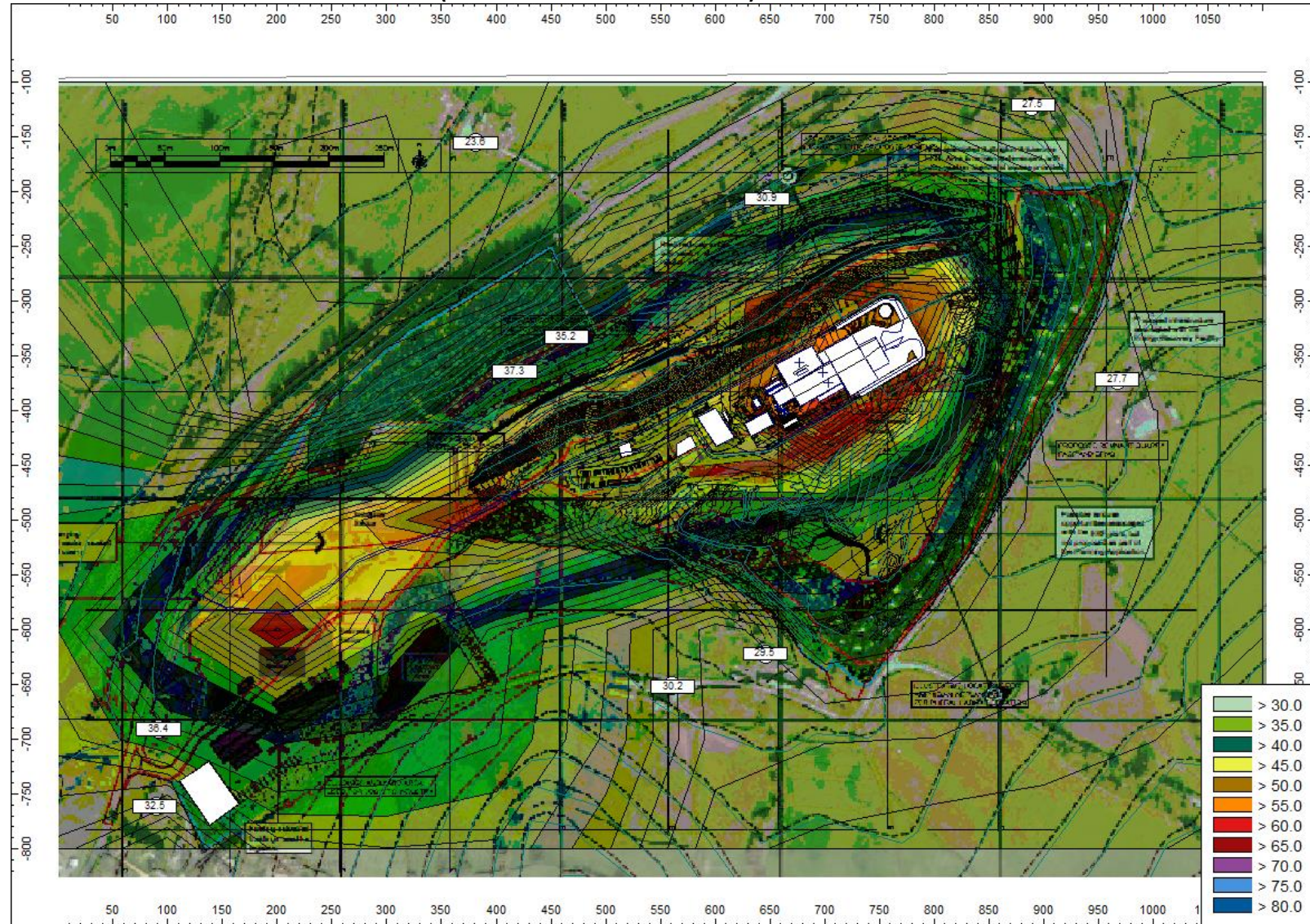
**Assumed Noise Levels for Site Plant & Cladding Performance  
(including noise mitigation measures)**

Plant Type or Area	Treatment (Cladding Performance Rw) dB	Sound Power (SWL) Sound Pressure Level (SPL) at roof/walls	Assumed % Operating Time	Period of Operation
Bunker	42 (walls) 40 (roof)	85 (SPL)	100	Daytime/Night-time
Furnace & Boiler Room (walls/roof)	42 (walls) 40 (roof)	85 (SPL)	100	Daytime/Night-time
Tipping Hall (walls/roof)	42 (walls) 40 (roof)	80 (SPL) 70 (SPL)	100 100	Daytime Night-time
Fan Stack (top)	Silencer	80 (SWL)	100	Daytime/Night-time
Flue Gas Treatment (walls/roof)	42 (walls) 40 (roof)	85 (SPL)	100	Daytime/Night-time
Turbine Hall (walls/roof)	42 (walls) 40 (roof)	95 (SPL)	100	Daytime/Night-time
Ash Handling (walls/roof)	42 (walls) 40 (roof)	75 (SPL)	100	Daytime/Night-time
Transformer	-	80 (SWL)	100	Daytime/Night-time
HGV	-	103 (SWL)	16 per hour (day)	Daytime/Night-time
Ventilation louvres on north western side or where 10m or higher above ground	25dB Rw (double bank acoustic louvres or attenuators)	-	100	Daytime/Night-time
Other ventilation louvres	17dB Rw acoustic louvres or attenuators	-	100	Daytime/Night-time
Tipping Hall Doors facing northeast	Doors (auto action type) Rw 12dB	-	100	Daytime/Night-time
Turbine Access Doors Doors on NW facade	Turbine Door Rw 29dB Acoustic Door Rw 24dB	-	100	Daytime/Night-time
Other Access Doors	Minimum Rw 18dB	-	100	Daytime/Night-time
Mobile Plant	Fitted with non-tonal reversing alarms	-	Variable	Daytime/Night-time
Air Cooled Condenser Fans	Wind Screen above fans	90 (SWL) 6 fans – max overall 98 (SWL)	100	Daytime/Night-time
Turbine Air Cooler Fans	Acoustic Screen on 3 sides	85 (SWL) Overall from unit	100	Daytime/Night-time
Boiler roof vents	Silencer	80 (SWL)	100	Daytime/Night-time
Turbine roof vent	Silencer	80 (SWL)	100	Daytime/Night-time
Safety Valve	Silencer	96 (silenced SWL)	Occasional	Daytime (where non Emergency)
Noise Character (i.e. tonal, impulsivity and intermittency)	Design of plant to ensure no perceptible noise character at NSRs	-	100	Daytime/Night-time

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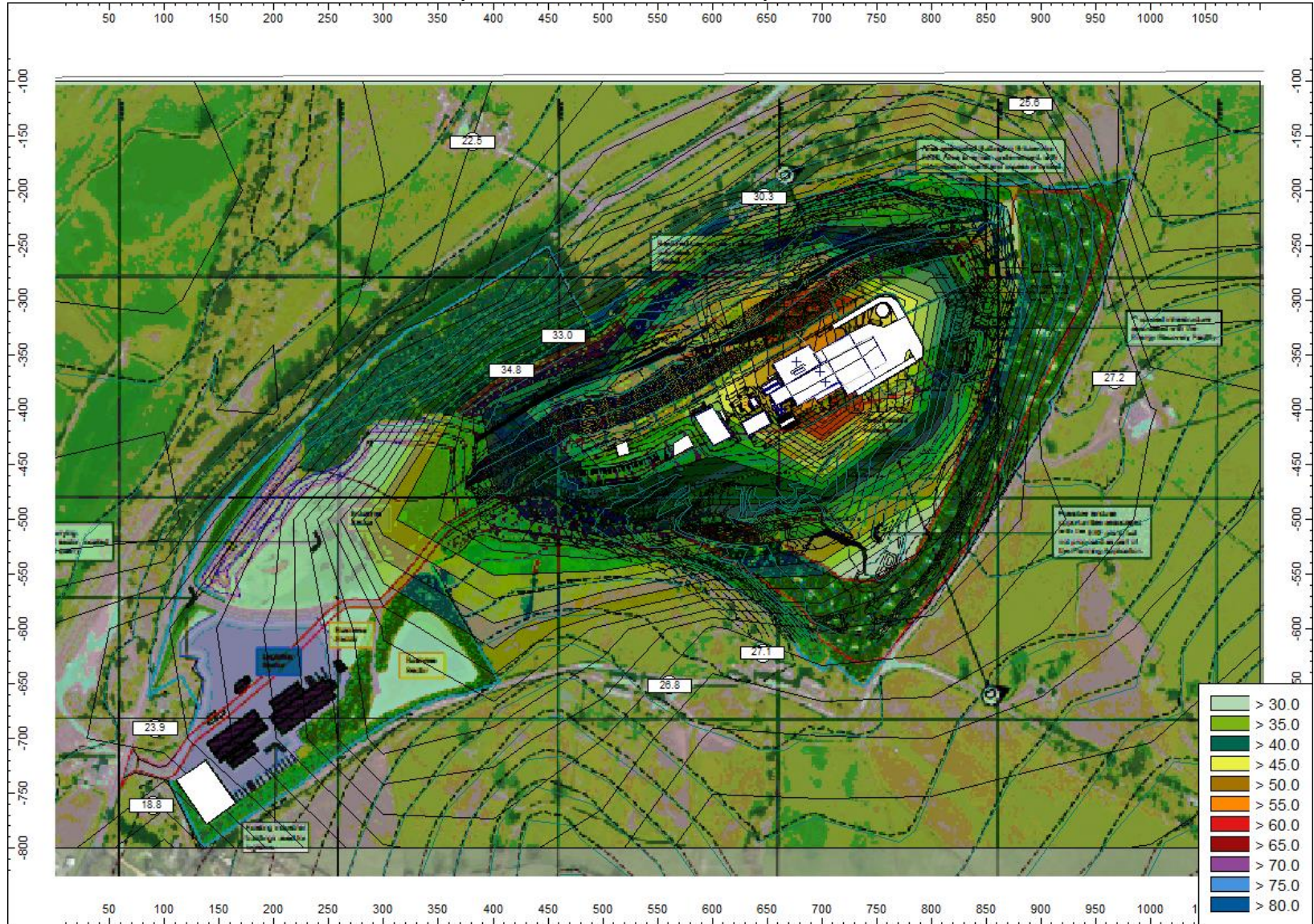
## Technical Appendix 14-6 Noise Mapping

**NOISE MAP 1: DAYTIME NOISE CONTOURS (WITH MITIGATION MEASURES)**





## NOISE MAP 2: NIGHT-TIME NOISE CONTOURS (WITH MITIGATION MEASURES)



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**Technical Appendix 14-7**  
**Response to Pre-Application Consultation Comments**

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## Response to Comments from Powys County Council EHO

### 1. Introduction

- 1.1. Comments received from Powys CCC EHO, in relation to operational noise, were as follows:

*Night-time background sound levels can be very low at those properties which are shielded from the trunk road traffic noise. Background sound levels as low as 20dB were recorded.*

*Whereby I am in agreement that an upper limit for the night-time rating level of 30dB would be acceptable at sensitive locations, I have concerns that in calculating the predicted rating level, the full effect of low frequency tonal noise may not have been incorporated into the assessment. It is my understanding that generators and other machinery at these types of plant can be a significant source of low frequency noise.*

*The BS 4142 methodology allows for a penalty of up to +6dB to be applied to the rating level in order to consider the effect of a low frequency tonal noise (and further penalties should be applied for other characteristics), however this has not been included in the assessment because according to the report "noise characteristics... will be eliminated by design." I do not agree with this approach. In my opinion the tonal noise should be assessed as part of the BS 4142 process, then any exceedances of the rating level should be addressed using appropriate mitigation. I have concerns that low frequency tonal noise cannot be completely eliminated by design, and therefore I recommend that this aspect in particular (and other noise characteristics in general) should be the subject of further study.*

- 1.2. Further to Chapter 14, NVC have provided further detail on the approach taken in the noise impact assessment which it is anticipated will demonstrate compliance with best practice within the limitations of a detailed planning application submission. The clarification has been requested in order to provide further information in respect of the EHO's request for further definitive detail on specific mitigation measures relating to low frequency and noise character.
- 1.3. It is anticipated that following consideration of this further detail, suitable noise conditions can be drafted to provide absolute confidence that noise from the ERF will not have any significant impact on local amenity.

### 2. Summary of Assessment

- 2.1. The development of an ERF involves the interaction of a significant number of plant equipment, operating independently and in conjunction with different parts of the overall facility. Much of the plant operates within different plant buildings and in some cases within enclosures within the main buildings. Other plant may be located external to buildings or ventilated to outside. This means that there will be several hundred pieces of equipment generating noise, the finer details of which need to be considered, when the plant has permission to be built.
- 2.2. As is normally the case, reasonable assumptions are made in respect of the expectations of the levels of noise generated within specific building areas and from any external plant. This information is based on many years of experience and empirical data obtained of typical plant from Technology Providers (TP) and the writer's own experience in dealing with many similar sites that have already been designed in detail and operating in the UK.



- 2.3. The assessment presented within Chapter 14 takes into account the following detail:
- a) Utilises empirical data obtained from TPs (in this case HZI) for this type of development and used in many other operational ERFs in the UK at the planning stage, which have subsequently been shown to be accurate and reasonable assumptions.
  - b) This is also supported by the writer who has undertaken detailed noise measurements at ERF's in operation and who has been involved in the design assessment and measurement of over 30 similar sites in the UK.
  - c) The noise assessment has considered all aspects of the development that are required at this stage of development, which includes:
    - (i) Baseline conditions at nearest sensitive receptors ("NSRs") recorded over a complete week at five fixed positions around the site under appropriate weather conditions and methodology as agreed with the EHO.
    - (ii) Construction and decommissioning noise in accordance with relevant guidance and standards (i.e. BS5228-1:2009+A1:2014).
    - (iii) Construction road traffic noise impacts on local roads in accordance with relevant guidance (i.e. DMRB LA111).
    - (iv) Construction vibration on the basis of applying best practicable means ("BPM") in accordance with BS5228-2:2009+A1:2014. This was scoped out of the assessment in agreement with the EHO due to the separation distance to NSRs.
    - (v) Operational noise during daytime and night-time periods, which has been assessed in accordance with relevant guidance and standards (i.e. BS4142:2014+A1:2019, BS8233: 2014, WHO Night Noise Guidelines for Europe, IPPC - Technical Guidance Note IPPC H3 Part 2 – Noise Assessment & Control) and agreed absolute noise limits with EHO.
    - (vi) Operational road traffic noise impacts on local roads in accordance with relevant guidance (i.e. DMRB LA111).
    - (vii) Operational vibration scoped out as agreed with EHO and writer has empirical data and experience to show this is not a consideration.
    - (viii) Cumulative noise effects from proposed and existing noise sources in the vicinity of the development have been considered within the assessment.
    - (ix) Interactive effects on other disciplines being considered in the ES.
    - (x) Consideration of effects on residential, commercial and ecological receptors adjacent to the site.
  - d) The operational noise from the ERF has been predicted using reasonable and accurate assumptions on noise levels from the various plant buildings and from external plant and ventilation openings, doors and vents to atmosphere. The input empirical levels have provided input into a noise prediction model using noise modelling software and international recognised calculation methodology (i.e. ISO 9613-2). The noise model has utilised appropriate settings to ensure the predicted noise levels are accurate and proven to be robust and borne out in practice following compliance noise monitoring over many years of experience. This approach is consistent with industry standard and best practice.
  - e) Consideration of any noise character that would be relevant to the proposed development is covered under the provisions of BS4142:2014+A1:2019. It is the writer's experience of assessing ERF development that noise character can, and is, controlled by the application of appropriate noise mitigation measures. These can



include for example, enclosing specific plant, plant selection by imposition of purchasing specifications, silencers on stack and ventilation openings and vents.

f) The results of predictions have considered an example of mitigation measures which would include standard commonly applied forms of mitigation applied at other similar facilities operating in the UK to show that the noise limits can be achieved. Whilst the site design is provided in detail, following a planning submission approval, the developer would need to finalise a contractual agreement with HZI in order for them to refine the detailed design and comply with the planning noise conditional limits and the Environmental Permit conditions to ensure compliance with BAT. At this point the available Technology would be considered, and the finer details of design established that would ensure compliance with planning and permitting requirements in terms of noise. This is an industry standard and best practice approach.

g) The example of mitigation measures considered in the assessment uses octave band centre frequency analysis. The results of noise predictions at the closest sensitive receptor to the Site (i.e. Cefn Cottage) shows the following spectra resultant from the ERF at the receptor during night-time operations:

Frequency (Hz)	31.5	63	125	250	500	1k	2k	4k	8k	LAeq
Leq (dB)	48	48	41	33	26	21	17	8	0	30

The reduction through an open window is typically between 10-15dB(A) according to WHO and BS8233:2014. The reduction at low frequency is typically around 5dB to 6dB at 31.5 Hz and 7dB to 8dB at 63Hz and 10dB to 12dB at 125Hz.

The NANR45 guidance for internal levels at night-time, within sensitive rooms at the specific low frequencies is as follows:

Frequency (Hz)	31.5	63	125
Leq dB	56	42	36

The likely internal noise level with an open window would therefore typically give the following level:

Frequency (Hz)	31.5	63	125
Leq dB	43	41	31

The above analysis indicates that low frequency noise levels within sensitive rooms at the closest sensitive receptor would comply with the NANR45 guidance for low frequency noise, for the example provided. As explained above, following detailed design, the resultant noise levels at NSRS would be determined to show compliance with any noise conditions via the planning permission and associated permit.

h) The requirements of complying with specific noise limits at specific NSRs would normally be set out in a planning noise condition, which would be subject to some form of compliance monitoring scheme following normal site operational conditions. Following consultation with the EHO, the following noise limits were agreed:

- Daytime at residential receptors: Rating level not exceeding 4dB(A) above the representative background sound levels (LA90) as a 1-hour LAeq as assessed in accordance with BS4142: 2014.

- Night-time residential receptors: Not exceeding 30dB LAeq<sub>15mins</sub> or a rating level not exceeding 4dB(A) above the representative background sound levels (LA90) whichever is higher [rating level as a 15-minute LAeq as assessed in accordance with BS4142: 2014].

The above would be written into a planning noise condition and the use of the word 'rating' level ensures the development has to consider all aspects of noise character and the absolute limit ensures noise levels would be well below sleep disturbance criteria according to WHO and BS8233:2014 guidelines with an open window.

In terms of dealing with low frequency noise concerns, there is no specific legislative guidance on this aspect of noise. BS4142: 2019 refers to the use of NANR45 at section 1.3, page 2. To cover this, it has already been proposed to the EHO, that the use of a noise condition relating to the DEFRA NANR45 guidelines for low frequency noise could be introduced. This would be presented prior to commencement of operations and agreed in writing with the LPA.

- i) Trying to define the exact noise mitigation strategy to control noise character and low frequency noise for example, would depend on a number of factors affected by the selection of TP, specific plant selection (which could vary with time as new technology becomes available), selection of type of mitigation chosen (e.g. enclosed within building or not enclosed within a building), position of plant relative to NSRs, design of plant which could eliminate noise character etc. This aspect of the design is normally and reasonably controlled at the planning stage by noise conditions imposed on the development.
- j) The detailed mitigation strategy is normally conditioned at the planning stage whereby this level of detail is submitted and agreed in writing prior to the commencement of site construction or operation.

### 3. Concluding Remarks

- 3.1. All relevant noise and vibration aspects of the proposed development have been considered in the assessment that would form part of normal site operations.
- 3.2. All reasonable assumptions have been made based on empirical data and an approach which is in line with industry standard and best practice.
- 3.3. Mitigation that is expected has been presented, based on realistic assumptions and any variation in its finer detail would be controlled normally in practice by conditional control and further by the subsequent environmental permit requirements to comply with BAT.
- 3.4. Empirical data used for the assessment, produces an example of a mitigation strategy which shows that the noise limits can be achieved and the type of mitigation is commonly used in practice. This is an industry standard and best practice approach to showing compliance. Detailed design in respect of appropriate mitigation, would normally be controlled by condition.
- 3.5. The exact mitigation relating to control of noise character control cannot be provided for the reasons provided in Point 2.3.i). An outline approach to the control of noise character and low frequency could be provided in outline however, the detail, in terms of strategy, may change over time, for the reasons given.

- 3.6. In terms of normal and typical operations, the assessment uses empirical data for the input to the noise model and the industry standard calculation method and noise model setting provides a robust assessment of noise at NSRs, as borne out in practice over many years of assessing this type of development.
- 3.7. Incorporated mitigation has been modelled using robust noise prediction modelling software.
- 3.8. Low frequency noise and tonal noise is normally controlled by design and mitigation strategy and would be controlled by condition by the LPA or NRW. Experience has shown that modern ERF sites with appropriate mitigation do not normally generate any noise character or significant low frequency noise issues (as demonstrated during a site visit to a similar ERF during the early consultation undertaken with various stakeholders). We have provided further analysis in this response to show that with appropriate mitigation measures
- 3.9. The proposed mitigation strategy would in theory provide control of low frequency noise and character. We have provided further analysis in the response 2.3 g), to show with appropriate mitigation measures and the adoption of relevant low frequency noise limits within sensitive rooms, that these limits can be achieved. With the adoption of a purchasing policy, which sets out the necessary requirements to ensure all plant guarantees include control of noise character, then this would provide suitable protection. However, a suitable noise condition would enable the provision of details of the mitigation strategy to be defined and agreed.
- 3.10. It has been clearly demonstrated that in absolute terms the site can be designed such that the agreed noise levels could be achieved. A suitably worded condition would ensure noise character is covered and assured.
- 3.11. All mitigation is detailed in Chapter 14 and the supporting appendices. The example of mitigation measures are all practicable measures that could be introduced at the final detailed design stage, but there may be some variation in approach for the reasons described in section 2.3. i) above. It is considered the Industry Standard the ERF developments have mitigation schemes conditioned at the planning approval stage, which can be subject to agreement prior to commencement conditions.
- 3.12. It should be noted that this approach is not deferment of mitigation, a mitigation strategy, that is based on a set of reasonable and robust assumptions, has been provided to demonstrate that agreed noise limits would be achievable.
- 3.13. All assessments that are reasonable at this stage of the development have been undertaken. Typically, TPs would not be prepared to provide this level of detail commercially, until such time as the site has permission with conditions applied that focus on what level of noise is required and where it is required. Once this is defined then following commercial agreement with the developer, then they would then be prepared to commit to this level of work detail and analysis and knowledge of the latest technology and control options that arise at that point in time.
- 3.14. The use of appropriately worded conditions would provide a means of ensuring all noise character is controlled. The following, in conjunction with the noise limits set out in 2.3.h) is suggested:  
*“Prior to any commencement of work on site, an updated Noise Assessment Report including details of proposed mitigation shall be submitted to and approved in writing by this Planning*

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*Authority to show compliance with noise limits provided in condition XXX. Thereafter the approved plan and mitigation shall be implemented in full before the site becomes operational and shall be retained for the lifetime of the development. For the avoidance of doubt the report shall also include tonal analysis and low frequency noise assessment, along with any recommended mitigation measures where required.”*