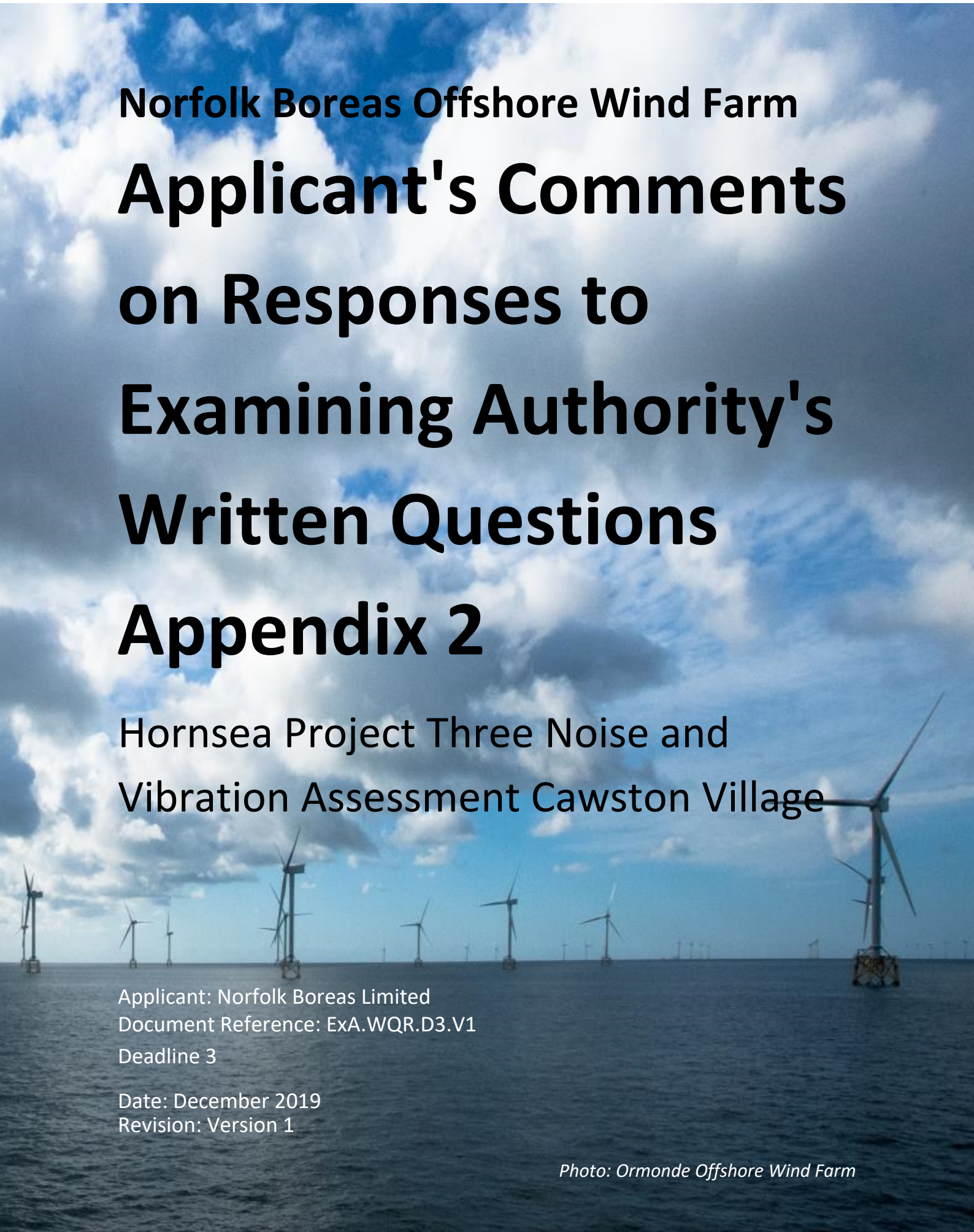
VATTENFALL



Norfolk Boreas Offshore Wind Farm

Applicant's Comments on Responses to Examining Authority's Written Questions Appendix 2

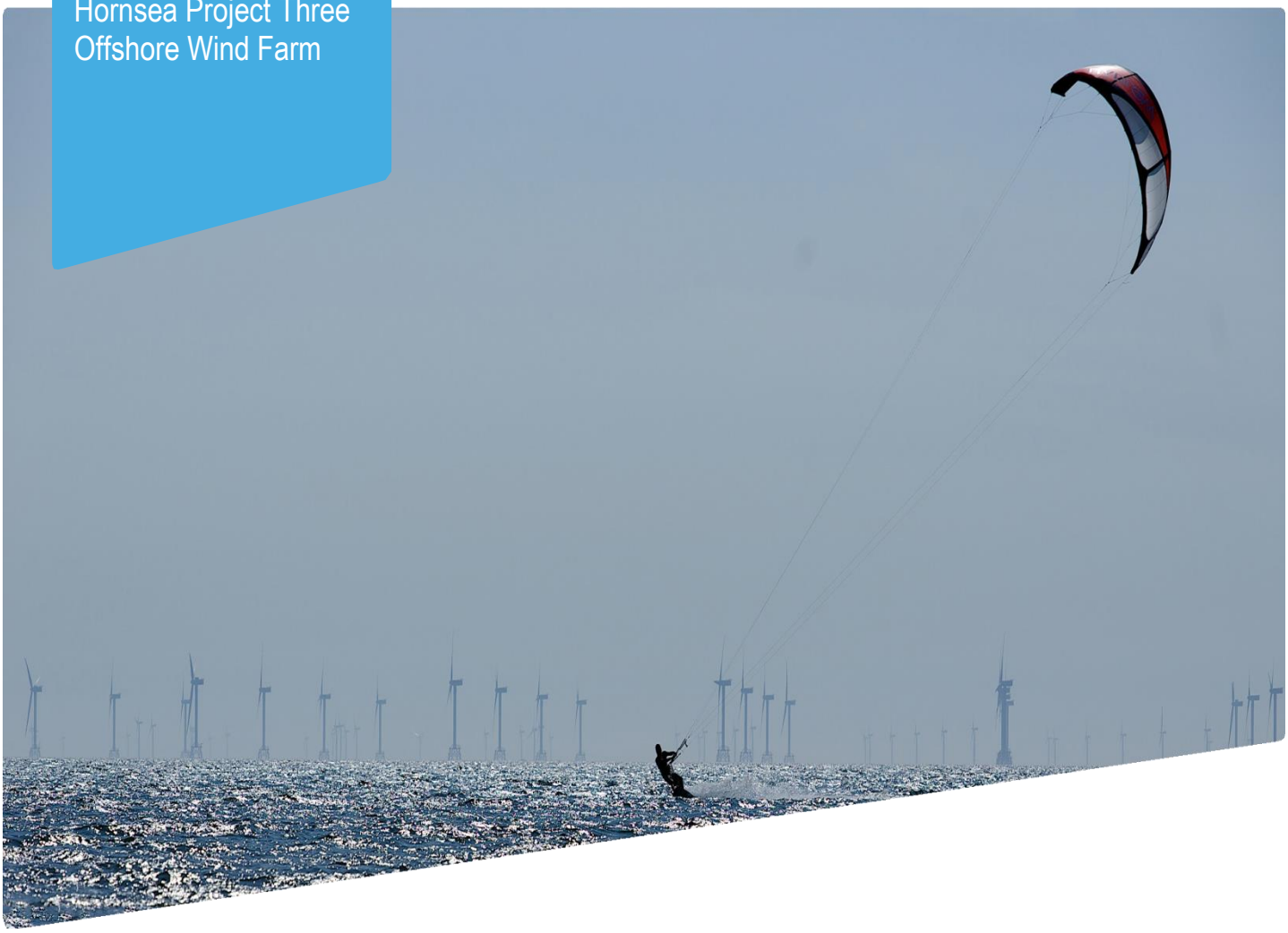
Hornsea Project Three Noise and Vibration Assessment Cawston Village

Applicant: Norfolk Boreas Limited
Document Reference: ExA.WQR.D3.V1
Deadline 3

Date: December 2019
Revision: Version 1

Photo: Ormonde Offshore Wind Farm

Hornsea Project Three
Offshore Wind Farm



Hornsea Project Three

Offshore Wind Farm

Appendix 26 to Deadline 7 submission - Construction Traffic Noise and Vibration Assessment for Cawston Village

Date: 14th March 2019

Hornsea 3
Offshore Wind Farm

Ørsted

Document Control			
Document Properties			
Organisation	Ørsted Hornsea Project Three		
Author	Create Consulting Ltd.		
Checked by	Sarah Drljaca		
Approved by	Andrew Guyton		
Title	Appendix 26 to Deadline 7 submission - Construction Traffic Noise and Vibration Assessment for Cawston Village		
PINS Document Number	n/a		
Version History			
Date	Version	Status	Description / Changes
14/03/2019	A	Final	Submitted at Deadline 7 (14th Mar 2019)

Ørsted

5 Howick Place,

London, SW1P 1WG

Front cover picture: Kite surfer near a UK offshore wind farm © Ørsted Hornsea Project Three (UK) Ltd., 2019.

Table of Contents

List of Tables

List of Figures

Acronyms

Acronyms	Definition
ATC	Automatic Traffic Count
BS	British Standard
CRTN	Calculation of Road Traffic Noise
dB(A)	Decibels A-Weighted
DMRB	Design Manual for Roads and Bridges
eVDV	Estimated Vibration Dose Value
HGVs	Heavy Goods Vehicles
$L_{10,T}$ & $L_{90,T}$	Level Exceeded For 10% or 90% Of Time Period
$L_{eq,T}$	Equivalent Sound Pressure Level For Time Period (T)
L_{fmax}	Maximum Sound Pressure Level
NIR	Noise Insulation Regulations
NSRs	Noise Sensitive Receptors
PPV	Peak Particle Velocity
RMS	Root Mean Squared
RMQ	Root Mean Quad
SEL	Sound Exposure Level or Single Event Noise Exposure Level
VDV	Vibration Dose Value
WHO	World Health Organisation

1. Introduction

1.1 This document sets out the methodology and results of the assessment of traffic noise and vibration from vehicles that need to travel through the village of Cawston in order to serve sections of the proposed onshore export cable corridor during the construction of the Hornsea Project Three offshore wind farm (Planning Inspectorate reference EN10080) (hereafter referred to as Hornsea Three). The Hornsea Three main construction compound is the former Oulton Airfield in the village of Oulton Street, Near Cawston, Norwich, as shown on sheet 35 of the Onshore Order Limits plan (REP4-101).

1.2 Within the village, there are several noise sensitive receptors (NSRs), which comprise residential properties situated along the roadway, some of which have the front façade directly at the side of the road, with little or no pedestrian walkway. Residents of Cawston village and Cawston Parish Council have raised concerns about additional noise and vibration levels associated with the additional HGV traffic along the B1145.

1.3 Create Consulting Engineers Ltd have been commissioned by Orsted to determine the noise and vibrations associated with the existing quantities of vehicular traffic and to predict the potential for significant effects relating to noise and vibration as a result of the additional vehicular movements of HGV traffic caused by the construction of Hornsea Three, as well as the potential for cumulative effects in combination with other cumulative projects including Norfolk Vanguard which may also be under construction at the same time as Hornsea Three.

1.4 The assessment has been informed by baseline noise and vibration surveys (see Section 3), existing traffic flow data (through the use of automated traffic counts (ATCs)), construction traffic forecasts for this section of the road network and the outline access strategy as set out in Appendix 27 submitted at Deadline 7.

2. Assessment Methodology and Criteria

2.1 This section outlines the assessment methodology and the significance criteria that have been used to assess the significance of risk associated with the proposed additional HGV traffic required to travel through the village of Cawston in order to serve sections of the proposed onshore export cable corridor during the construction of Hornsea Three farm. It also sets out the relevant guidance and standards used for the assessment.

Guidance Related to Sound

2.2 Guidance relating to the prediction and assessment of the construction phase noise effects was taken from BS 5228-1: 2009+A1:2014 'Code of practice for noise and vibration control on construction and open sites' Part 1: 'Noise'[1] which provides recommendations for basic methods of noise control relating to construction and open sites where work activities/operations generate significant noise levels.

2.3 Amongst other things, the annexes to BS 5228 provide information on the following:

- relevant legislation (Annex A);
- typical noise sources and advice on mitigating them (Annex B);
- sound level data for use in the prediction methods described in the standard (Annexes C and D);
- assessing the significance of noise effects (Annex E);
- estimating noise levels (Annex F); and Implementing noise monitoring (Annex G).

Site Suitability - Internal and External Noise Levels

2.4 In considering the assessment of the internal and external noise levels the following guidance has been used.

2.5 BS 8233:2014 Guidance on sound insulation and noise reduction for buildings[2] provides criteria for the assessment of noise affecting various uses including residential dwellings.

2.6 WHO 'Guidelines for Community Noise' provides criteria for the assessment of internal and external noise levels affecting various used including residential dwellings.

2.7 The current BS 8233:2014 standard has revised the 'good' and 'reasonable' noise level criterion that were set out in BS 8233:1999, and replaces it with a recommendation of a single standard:

[1] British Standards Institute. (2009). BS 5228:-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites. Part 1: Noise. BSI, London.
[2] British Standard Institute (2014). BS 8233:2014 Sound Insulation and Noise Reduction for Buildings. BSI, London.

Activity	Location	07:00 to 23:00 $L_{Aeq, 16hr}$	23:00 to 07:00 $L_{Aeq, 8hr}$
Resting	Living Room	35 dB	-
Dining	Dining Room/Area	40 dB	-
Sleeping (Daytime Resting)	Bedroom	35 dB	30 dB

Table 2.1: Design Characteristics For Internal Sound Levels

2.8 It also suggests that "for traditional external areas that are used for amenity space, such as gardens and patios, it is desirable that the external noise level does not exceed 50dB $L_{Aeq,T}$, with an upper guideline value of 55dB $L_{Aeq,T}$ which would be acceptable in noisier environments. However, it also recognized that these guideline values are not achievable in all circumstances where development might be desirable".

Design Manual for Roads and Bridges (2011)

2.9 The Design Manual for Roads and Bridges (DMRB) provides guidance on the subjective importance of changes in road traffic sound level on people and relates to the magnitude of the change, when it occurs.

2.10 A change of sound level from road traffic of 1 dB $L_{A10,18h}$ in the short term (e.g. when a project is opened) is the smallest that is considered perceptible. In the long term (typically 15 years after project opening), a 3 dB $L_{A10,18h}$ change is considered perceptible. The magnitude of impact should, therefore, be considered different in the short term and long term. Table 4.5 presents the recommended criteria from DMRB.

Magnitude of Impact	Short Term Change dB $L_{A10,18h}$	Long Term Change dB $L_{A10,18h}$
No change	0	0
Negligible	< 1	< 3
Minor	1 – 3	3 – 5
Moderate	3 – 5	5 – 10
Major	> 5	> 10

Table 2.2: Classification of Magnitude of Noise Impacts in Short and Long Term

Guidance Related to Vibration

2.11 BS6472-1:2008 "Guide to Evaluation of Human Exposure to Vibration in Buildings Part 1" provides guidance on how to assess the vibration in buildings, between the frequency range of 0.5Hz to 80Hz, and how these levels are perceived by the average human.

2.12 Frequency weighting W_b curves are added for vertical motion and W_d curves are used for horizontal motion. These are defined in BS6841.

2.13 In terms of vibration levels the following table shows the criteria in terms of vibration dose values (VDV). These values represent the best judgement currently available and may be used for both vertical and horizontal vibration, provided that they are correctly weighted. This table has been obtained from the standard BS 6472-1:2008.

Place and period	Low Probability of Adverse Comment $m/s^{1.75}$	Adverse Comment Possible $m/s^{1.75}$	Adverse Comment Probable $m/s^{1.75}$
Residential buildings 16h day	0.2 to 0.4	0.4 to 0.8	0.8 to 1.6
Residential buildings 8h night	0.1 to 0.2	0.2 to 0.4	0.4 to 0.8

Table 2.3: Vibration dose value ranges which might result in probability of adverse comment within residential buildings.

2.14 BS 5228-2:2009+A1:2014 'Code of Practice for noise and vibration control on construction and open sites – Part 2: Vibration' provides useful guidance and information and recommendations for basic methods of vibration control relating to construction and open sites where work activities/operations generate significant vibration levels. It includes sections on community relations; vibration and persons on site, neighbourhood nuisance; project supervision, control of vibration and measurement.

2.15 This document offers the following advice on community relations, which is generally considered to be good practice for both noise and vibration:

"4 Community Relations

Good relations with people living and working in the vicinity of site operations are of paramount importance. Early establishment and maintenance of these relations throughout the carrying out of site operations will go some way towards allaying people's fears.

It is suggested that good relations can be developed by keeping people informed of progress by treating complaints fairly and expeditiously. The person, company or organisation carrying out work on site should appoint a responsible person to liaise with the public. The formation of liaison committees with members of public can be considered for longer term projects when relatively large numbers of people are involved."

"6.3 e) Attitude to the Site Operator.

It is well established that people's attitudes to vibration can be influenced by their attitudes to the source or activity itself. Vibration from a site will tend to be accepted more readily by local residents, if they consider that the contractor is taking all possible measures to avoid unnecessary vibration. The attitude to the contractor can also be improved through good community liaison and information distribution and the provision of a helpline to respond to queries or complaints. The acceptability of the project itself can also be a factor in determining community reaction."

2.16 The vibration magnitude assessment criteria given in Table 2.2 has been based on human response to vibration, as opposed to building damage, as these are the more stringent (i.e. lower) criteria. These magnitudes are expressed in terms of Peak Particle Velocity (PPV) and have been included within Table 2.3, based on guidance contained within BS5228-2:2009+A1:2014.

Vibration Level	Effect (BS5228)	Classification
< 0.14 mm/s	Vibration unlikely to be perceptible.	None
0.14 – 0.3 mm/s	Vibration might just be perceptible in the most sensitive situation for most vibration frequencies associated with construction.	Negligible
0.3 – 1.0 mm/s	Vibration might just be perceptible in residential environments.	Minor
1.0 – 10 mm/s	It is likely that vibration of this level in residential environments will cause complaint, but can be tolerated if prior warning and explanation has been given to the residents.	Moderate
> 10 mm/s	Vibration is likely to be intolerable for any more than a brief exposure to this level.	Substantial

Table 2.4: Guidance on Effects of Vibration Levels

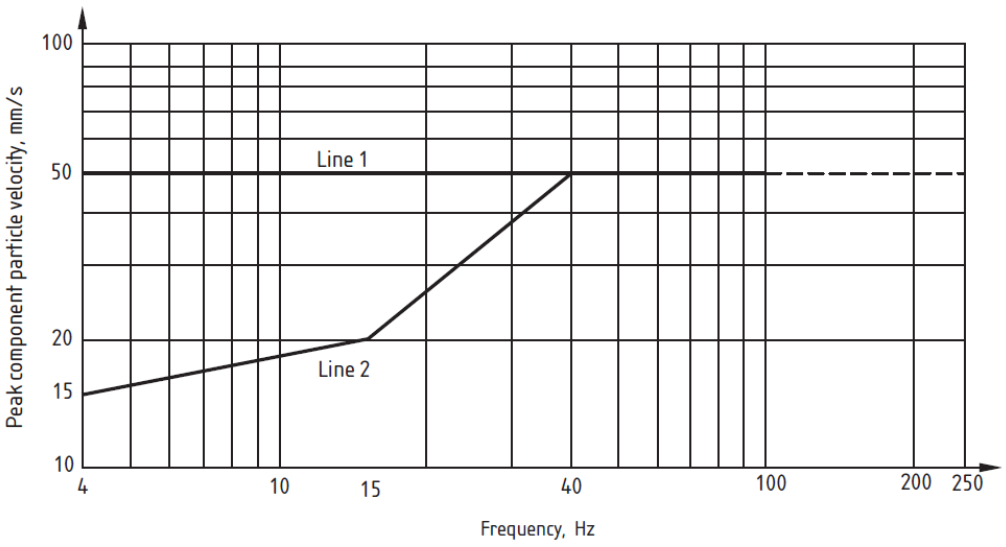
2.17 Also within BS5228-2 are details on how buildings react to vibration structurally. These have been included within Table 2.4 below and the reference curves included within Graph 2.1;

Line (see Figure B.1)	Type of building	Peak component particle velocity in frequency range of predominant pulse	
		4 Hz to 15 Hz	15 Hz and above
1	Reinforced or framed structures Industrial and heavy commercial buildings	50 mm/s at 4 Hz and above	50 mm/s at 4 Hz and above
2	Unreinforced or light framed structures Residential or light commercial buildings	15 mm/s at 4 Hz increasing to 20 mm/s at 15 Hz	20 mm/s at 15 Hz increasing to 50 mm/s at 40 Hz and above

NOTE 1 Values referred to are at the base of the building.

NOTE 2 For line 2, at frequencies below 4 Hz, a maximum displacement of 0.6 mm (zero to peak) is not to be exceeded.

Table 2.5: Transient Vibration Guide Values for Cosmetic Damage



Graph 2.1: Transient Vibration Guide Values for Cosmetic Damage

2.18 BS5228-2 continues to state that minor damage is possible at vibration magnitudes which are greater than twice those given in table 2.4, and major damage to a building structure can occur at values greater than four times the tabulated values.

2.19 Relevant glossary of acoustic terminology is provided in Annex A.

3. Surveys

Survey Description

3.1 In order to establish the prevailing acoustic environment through Cawston, baseline noise and vibration surveys were conducted between the 11th and 13th February 2019. The surveys were conducted at a set of four predefined locations along the B1145 to establish the existing levels of sound and vibration. The scope and location of the baseline noise and vibration surveys were determined based on professional judgement and feedback from Cawston Parish Council and local. The final monitoring locations were agreed with the Environmental Health Officer at Broadland District Council.

3.2 For vibration, both PPV and VDV were measured. There was a mixture of external and internal vibration levels at four properties, along with external sound levels outside each of these properties.

3.3 The existing acoustic environment within Cawston was dominated by road traffic noise from the B1145 with the general sound levels remaining low between vehicle passes, which was as anticipated given the rural setting. There were no signs of any commercial noise sources (fixed plant) within 25m of any of the monitoring locations with the exception of a single open electrical transformer serving the village of Cawston at the junction of the B1145 and Church Lane.

3.4 The details of the monitoring equipment used has been tabulated below;

Location	Equipment	Manufacturer / Model	Serial Number
Old Forge High Street	Sound Level Meter	Norsonic 140 RTA	1404355
	Outdoor Microphone Kit	GRA 41/AL	44958
	Vibration Monitor	Vibrock V901	1098
20 High Street	Sound Level Meter	Norsonic 140 RTA	1403328
	Outdoor Microphone Kit	GRA 41/AL	36015
	Vibration Monitor	Vibrock V901	1601
27 High Street	Sound Level Meter	Norsonic 140 RTA	1406178
	Outdoor Microphone Kit	GRA 41/AL	21091
	Vibration Monitor	Vibrock V901	887
Whitehouse Farm High Street	Sound Level Meter	Norsonic 140 RTA	1403354
	Outdoor Microphone Kit	GRA 41/AL	63150
	Vibration Monitor	Vibrock V901	1001
All Locations	Acoustic Calibrator	Norsonic 1251	34963

Table 3.1: List of Monitoring Equipment Used In Cawston

3.5 The receptors monitored included The Old Forge (1), 20 High Street (2), 27 High Street (3) and Whitehouse Farm (4), as shown in Figure 3.1. Two ATC units were also deployed and have been included to consider the traffic levels, vehicle type and speeds during the survey period. Given the spread along the High Street, these locations were considered to be representative of the properties within the village of Cawston.

3.6 All sound level and vibration monitoring equipment had previously been laboratory calibrated and all units held valid laboratory UKAS calibration certificates. Due to the large amount of data, the calibration documentation has not been included within this report, but they are available upon request.

3.7 Whilst on site, the weather was noted to be dry and sunny (approximately 20% cloud coverage), 12ºC and the wind speed was below the maximum allowable speed for environmental noise monitoring, which is 5m/s (approximately 11mph). During the remainder of the monitoring duration, the weather was reviewed via various web sites and was reported to remain dry and calm for the entire duration.

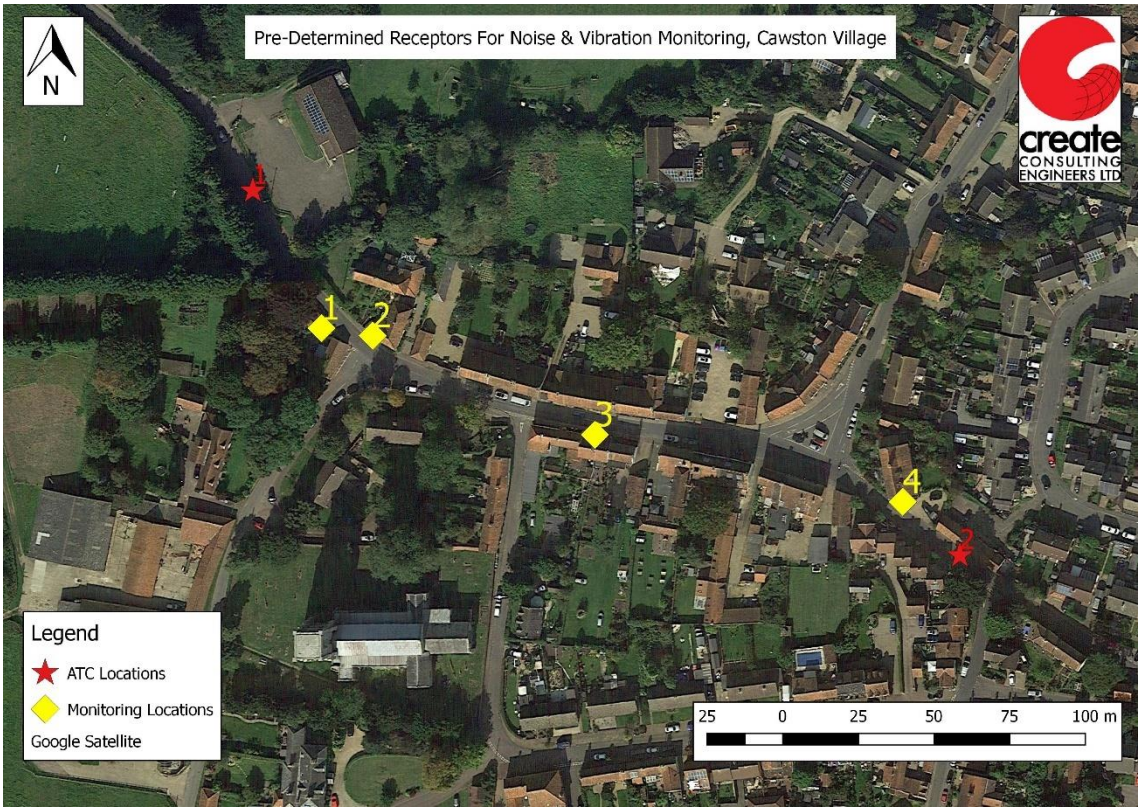


Figure 3.1: Overview of Monitoring Locations at Cawston Village

Baseline Noise Survey Methodology

3.8 Four sets of measurements were taken as part of this acoustic assessment using semi-permanent noise monitor installations at representative distances for the front façades of each of the properties between the 11th and 13th February 2019 by Mr J Blacklock, BEng(Hons), CEng, PGDipIoA, MIoA, MCIBSE and Mr B Dixon, BA(Hons), PGDipIoA, AMIoA.

3.9 The semi-permanent noise monitors were assembled in line with the manufacturer's specifications and once the unit had stabilised, the units were field calibrated to a level of 114.7dB at 1kHz, as required when using the GRAS outdoor microphone kit. Once the measurements were completed, the noise meters were retrieved, re-calibrated and then switched off. In all instances, there were no variations greater than 0.1dB.

3.10 The microphones were either positioned on tripods or on extending booms, depending on the space availability at the time of installation. The mounting method can be seen in the photographs below.

Figure 3.2: Sound Level Meter at Old Forge

Figure 3.3: Sound Level Meter at 20 High Street

Figure 3.4: Sound Level Meter at 27 High Street

Figure 3.5: Sound Level Meter at Whitehouse Farm

3.11 The microphone was positioned in general accordance with the monitoring procedure detailed within Calculation of Road Traffic Noise 1998 (CRTN). The equipment was set up to record the sound levels every second in terms of $L_{Aeq,T}$, $L_{Amax,F}$ and $L_{feq,T}$ (from 6.3 Hz to 20 kHz). The Norsonic software NorReview was used to post process and calculate the SEL, $L_{A90,T}$ and $L_{A10,T}$ values.

Baseline Vibration Survey Methodology

3.12 Vibration measurements were also taken with dual channel Vibrocks set up at each of the four pre-determined receptors. The sound level meters and vibration monitors were set to run continuously for the same duration, measuring both VDV and PPV, as the sound monitoring. The longitudinal (X) axis on each of the accelerometers was lined up approximately parallel to the direction of the B1145 at the closest point for reference.

Figure 3.6: Vibration Monitor at Old Forge

Figure 3.7: Vibration Monitor at 20 High Street

Figure 3.8: Vibration Monitor at 27 High Street (Inside)

Figure 3.9: Vibration Monitor at Whitehouse Farm

3.13 The Vibrocks used at each of the properties were set up with the two transducers mounted and levelled on either a heavy paving slab or on solid ground, with the transducers weighted down with sand bags to restrict movement in order to accurately measure both VDV and PPV simultaneously. The Longitudinal (X) axis was generally parallel to the direction of the road.

Baseline Sound Measurement Results

3.14 This section summarises the results of the sound measurements undertaken during the baseline acoustic survey at the four measurement locations and considered to be representative for the High Street corridor where the sound values are expected to be at their highest. Tables 3.2 to 3.5 present the ambient and background sound levels expressed as overall single figure values in dB(A) which have been rounded to the nearest whole integer. The bracketed figure in the first column of each table refers to the measurement duration period which the calculations have been assessed over. Detailed results of the sound measurements are provided in Annex B.

3.15 Note, the highest night time $L_{AF(Max)}$ values were actually measured higher than shown within the tables, but in accordance with the WHO Guidelines for Community Noise and BS8233:2014, the 10th highest peak values have been used for each of the individual night time period.

Old Forge	dB $L_{Aeq,T}$	dB $L_{Amax,f}$	dB $L_{A10,T}$	dB $L_{A90,T}$
11th February 2019 Day (9h)	62	N/A	66	40
12th February 2019 Day (16h)	63	N/A	67	32
13th February 2019 Day (4.5h)	64	N/A	68	44
11th February 2019 Night (8h)	54	80	47	34
12th February 2019 Night (8h)	53	78	48	23

Table 3.2: Measured Sound Levels for All Day and Night Times at The Old Forge

20 High Street	dB $L_{Aeq,T}$	dB $L_{Amax,f}$	dB $L_{A10,T}$	dB $L_{A90,T}$
11th February 2019 Day (11h)	63	N/A	68	31
12th February 2019 Day (16h)	65	N/A	70	34
13th February 2019 Day (5h)	66	N/A	71	44
11th February 2019 Night (8h)	56	83	46	26
12th February 2019 Night (8h)	55	80	47	23

Table 3.3: Measured Sound Levels for All Day and Night Times at 20 High Street

27 High Street	dB $L_{Aeq,T}$	dB $L_{Amax,f}$	dB $L_{A10,T}$	dB $L_{A90,T}$
11th February 2019 Day (10h)	65	N/A	69	33

27 High Street	dB $L_{Aeq,T}$	dB $L_{Amax,f}$	dB $L_{A10,T}$	dB $L_{A90,T}$
12th February 2019 Day (16h)	67	N/A	70	34
13th February 2019 Day (5h)	67	N/A	72	43
11th February 2019 Night (8h)	58	84	42	25
12th February 2019 Night (8h)	56	81	41	22

Table 3.4: Measured Sound Levels for All Day and Night Times at 27 High Street

Whitehouse Farm	dB $L_{Aeq,T}$	dB $L_{Amax,f}$	dB $L_{A10,T}$	dB $L_{A90,T}$
11th February 2019 Day (9.75h)	63	N/A	68	35
12th February 2019 Day (16h)	64	N/A	69	36
13th February 2019 Day (5.5h)	65	N/A	70	41
11th February 2019 Night (8h)	56	81	44	24
12th February 2019 Night (8h)	55	80	42	21

Table 3.5: Measured Sound Levels for All Day and Night Times at Whitehouse Farm

3.16 The logarithmic averages of the individual days' activities have been tabulated into a single line for day and night times, with the highest of the 10th highest nightly $L_{AF(max),1min}$ readings used.

Location	Time Period	dB $L_{Aeq,T}$	dB $L_{Amax,f}$	dB $L_{A10,T}$	dB $L_{A90,T}$
The Old Forge	Day (07:00 – 23:00)	63	N/A	67	41
	Night (23:00 – 07:00)	54	80	47	31
20 High Street	Day (07:00 – 23:00)	65	N/A	70	40
	Night (23:00 – 07:00)	56	83	47	25
27 High Street	Day (07:00 – 23:00)	67	N/A	70	39
	Night (23:00 – 07:00)	57	84	42	24
Whitehouse Farm	Day (07:00 – 23:00)	64	N/A	69	39
	Night (23:00 – 07:00)	56	81	43	23

Table 3.6: Measured Sound Levels for All Day and Night Times at All Locations

3.17 The Old Forge was the only location where the sound was found to not reverberate between buildings. In all other locations, the sound levels were slightly higher due to this "channelling" phenomenon.

Baseline HGV Noise Measurements

3.18 With the exception of The Old Forge, there were in excess of 3,300 individual events where the sound level exceeded 70dB L_{Aeq} outside the properties. Several HGV movements were witnessed and the levels exceeded 80dB L_{Aeq} for each recording as the vehicle passed the monitoring location. As a result an audio trigger level was set at 83dB L_{Aeq}. This meant that when a vehicle passed by the microphone and the sound level exceeded 83dB L_{Aeq}, an audio recording was automatically triggered. These audio files were saved onto the internal SD card for later post processing, along with the individual measurement files and can be made available on request to property owners and stakeholders.

3.19 Traffic noise level measurements and sound exposure level (SEL) calculations were conducted through the use of listening to audio recordings and the use of the NorReview software. Due to the high quantities of events where the traffic noise level exceeded 70dB $L_{Aeq,T}$, it was decided that investigating the types of traffic flow over set periods would be a suitable calculation methodology.

3.20 The periods for investigation were chosen as being between 16:00h and 17:00h on the 11th February and between 10:00h and 11:00h on the 12th February. These periods were chosen specifically to avoid the peak hours, whilst still measuring representative sample time periods. The same sample time periods were investigated for each of the four locations to fully understand the duration, the equivalent sound level and the resultant SEL for each vehicle movement. These events were corroborated through the use of the triggered audio recordings. The quantity of HGVs was also checked against an ATC which was deployed over the same duration. These ATCs were located at either end of the village, Unit 1 being outside the Village Hall and Unit 2 located just along from Whitehouse Farm.

3.21 Both methods of tracking the quantity of HGVs between these hours were accurate and within acceptable parameters, with both methods resulting in the recording of 14 HGVs between 16:00h and 17:00h on the 11th and 22 HGVs between the hours of 10:00h and 11:00h on the 12th February. This resulted in several measurements of the SEL of each HGV movement and then factoring the number of anticipated HGV movements for the assessment period. The SEL is the sum of the sound energy produced by the HGV movement condensed into a period of one second.

3.22 A series of SEL measurements were obtained for various HGV passes between the hours stated above using the sound level meters that were described in the earlier section of the report. The SEL measurements from all receptors have been included in the Appendices of this report, but the SEL measurements from The Old Forge only have been included in the following table:

Date	Start Time	End Time	Duration (s)	dB SEL	dB $L_{Aeq,T}$	dB $L_{A(Max)}$
11/02/2019	16:03:59	16:04:16	18	85.4	72.8	83.0
11/02/2019	16:07:51	16:08:07	17	78.4	66.1	72.8
11/02/2019	16:09:28	16:10:11	44	85.4	69.0	83.1
11/02/2019	16:11:14	16:11:39	26	80.1	66.0	75.1

Date	Start Time	End Time	Duration (s)	dB SEL	dB $L_{Aeq,T}$	dB $L_{A(Max)}$
11/02/2019	16:20:47	16:21:14	28	78.2	63.8	75.2
11/02/2019	16:33:23	16:33:54	32	77.8	62.7	70.1
11/02/2019	16:34:29	16:35:06	38	81.5	65.7	80.1
11/02/2019	16:41:57	16:42:26	30	82.3	67.5	79.5
11/02/2019	16:44:20	16:44:47	28	79.7	65.2	73.7
11/02/2019	16:45:09	16:45:45	37	78.5	62.8	73.2
11/02/2019	16:47:42	16:48:05	24	80.2	66.4	76.7
11/02/2019	16:50:16	16:50:52	37	82.0	66.3	73.4
11/02/2019	16:53:43	16:54:28	46	85.0	68.4	76.0
11/02/2019	16:58:09	16:58:38	30	81.3	66.5	73.8
12/02/2019	10:03:52	10:04:16	25	80.9	66.9	73.9
12/02/2019	10:09:11	10:09:30	20	79.4	66.4	75.6
12/02/2019	10:11:08	10:11:39	32	82.0	66.9	77.8
12/02/2019	10:11:55	10:12:33	39	83.9	68.0	73.6
12/02/2019	10:12:50	10:13:03	14	79.5	68.0	74.1
12/02/2019	10:13:06	10:13:17	12	79.1	68.4	74.5
12/02/2019	10:13:23	10:13:40	18	80.1	67.5	74.3
12/02/2019	10:13:57	10:14:27	31	80.1	65.2	73.6
12/02/2019	10:15:32	10:16:16	45	80.9	64.4	73.3
12/02/2019	10:18:05	10:18:36	32	80.3	65.2	72.5
12/02/2019	10:26:16	10:26:47	32	80.3	65.2	72.0
12/02/2019	10:28:26	10:28:49	24	77.9	64.1	76.0
12/02/2019	10:32:50	10:33:14	25	82.2	68.3	76.2
12/02/2019	10:40:23	10:40:56	34	85.4	70.1	82.6
12/02/2019	10:52:01	10:52:27	27	83.4	69.1	79.6
12/02/2019	10:58:58	10:59:24	27	78.3	64.0	72.7
12/02/2019	10:07:09	10:07:52	44	82.4	65.9	74.4
12/02/2019	10:22:48	10:23:02	15	80.5	68.8	77.3
12/02/2019	10:23:08	10:23:31	24	79.8	66.0	74.5
12/02/2019	10:38:35	10:39:01	27	79.9	65.6	72.9

Date	Start Time	End Time	Duration (s)	dB SEL	dB $L_{Aeq,T}$	dB $L_{A(Max)}$
12/02/2019	10:34:32	10:34:54	23	79.6	66.0	72.1
12/02/2019	10:56:06	10:56:29	24	80.5	66.7	75.2

Table 3.7: Average SEL, $L_{Aeq,T}$ and $L_{A(Max),f}$ Values For HGV Movements dB (re 20 µPa)

Baseline Vibration Measurement Results

3.23 This section summarises the results of the vibration measurements undertaken at the measurement locations, either outside the front façade of the property, or in the case of 27 High Street, within the property.

3.24 The results from the measured vibration dose values and peak particle velocity from the receptors have been shown in the tables below, with detailed results presented in Annex C;

Day Time Vibrational Levels						Night Time Vibrational Levels					
16 Hour VDV			16 Hour PPV			8 Hour VDV			8 Hour PPV		
X	Y	Z	Max	Time	Date	X	Y	Z	Max	Time	Date
0.04	0.03	0.04	1.12	14:33	11/02/19	0.03	0.03	0.03	0.88	06:28	12/02/19
0.03	0.04	0.04	0.88	14:55	12/02/19	0.03	0.03	0.03	0.24	23:18	12/02/19

Table 3.8: VDV and PPV Levels Measured Outside The Old Forge, Cawston.

Day Time Vibrational Levels						Night Time Vibrational Levels					
16 Hour VDV			16 Hour PPV			8 Hour VDV			8 Hour PPV		
X	Y	Z	Max	Time	Date	X	Y	Z	Max	Time	Date
0.04	0.04	0.05	.775	16:11	11/02/19	0.04	0.03	0.05	.725	03:16	12/02/19
0.04	0.04	0.05	.600	18:39	12/02/19	0.03	0.03	0.05	.625	01:12	13/02/19

Table 3.9: VDV and PPV Levels Measured Outside 20 High Street, Cawston.

Day Time Vibrational Levels						Night Time Vibrational Levels					
16 Hour VDV			16 Hour PPV			8 Hour VDV			8 Hour PPV		
X	Y	Z	Max	Time	Date	X	Y	Z	Max	Time	Date
0.03	0.03	0.04	.575	14:14	11/02/19	0.02	0.02	0.03	.400	03:08	12/02/19
0.03	0.03	0.04	.375	07:03	12/02/19	0.02	0.02	0.03	.200	02:14	13/02/19

Table 3.10: VDV and PPV Levels Measured Inside 27 High Street, Cawston.

Day Time Vibrational Levels						Night Time Vibrational Levels					
16 Hour VDV			16 Hour PPV			8 Hour VDV			8 Hour PPV		
X	Y	Z	Max	Time	Date	X	Y	Z	Max	Time	Date
0.03	0.03	0.03	0.88	15:15	11/02/19	0.02	0.03	0.02	0.32	03:19	12/02/19
0.03	0.03	0.03	0.40	07:05	12/02/19	0.03	0.03	0.02	0.16	00:55	12/02/19

Table 3.11: VDV and PPV Levels Measured Outside Whitehouse Farm, Cawston.

3.25 With the exception of 27 High Street, the current VDV levels are all within the permitted levels as stipulated by BS6472-1:2008 suggesting that the current level of vibration would be less than "Adverse Comment Possible" for both day time and night time.

3.26 The majority of the measured maximum PPV levels were all less than 1mm/s. There was a single incident measured at The Old Forge, which exceeded this level, which was 1.124mm/s. Therefore, for the majority of the time, the existing PPV levels would be classified as being "Minor", with the single incident being classed as moderate taking account of the BS classification. That said, it should be noted that the single incident was classified at the threshold limit between minor and moderate.

Existing Traffic Flow Survey

3.27 As specified in paragraph 3.20, two ATCs were used to capture the traffic flow through the village of Cawston from the 11th February 2019 through to 17th February 2019. The HGV data has been extrapolated and included in Table 3.12, which captured a total average of 235 HGV vehicles per day at Unit 1 and 281 HGV vehicles per day at Unit 2, between the hours of 07:00h and 23:00h Monday to Friday. The full ATC data is provided in Annex E.

	Unit 1 – Opposite Village Hall			**Unit 2 – Next To Whitehouse Farm**		
	Eastbound	Westbound	Total	Eastbound	Westbound	Total
11-Feb	107	119	226	132	144	276
12-Feb	113	126	239	129	145	274
13-Feb	112	140	252	140	177	317
14-Feb	115	127	242	133	155	288
15-Feb	103	113	216	117	132	249
16-Feb	54	65	119	67	65	132
17-Feb	31	37	68	34	43	77
Week Day Average	**110**	**125**	**235**	**130**	**151**	**281**

Table 3.12: Overall HGV Data Retrieved From ATC Units Deployed in Cawston.

Note: Data only relates to the traffic flow between 07:00h and 23:00h.

4. Construction Traffic Noise and Vibration Effects for Hornsea Three

Future Traffic Sound Level Calculations

4.1 The maximum peak daily two way HGV traffic associated with Hornsea Three is predicted to be 127 additional two way HGV movements (as stated in REP6-039). For the purpose of this assessment, it has been assumed that the additional HGV movements would be spread over the cable corridor working time with exclusions of HGV movements between 0800 – 0900 and 1500 – 1600.

4.2 As a result this would equate to additional Hornsea three two way HGV traffic of 12 (11.54) HGVs per hour, which equates to approximately one additional HGV movement every 5 minutes. Details of the cumulative construction vehicle movements are presented in Annex F.

4.3 Following discussions at ISH9 and the subsequent site visit, the Applicant has agreed to commit to a morning HGV restriction which begins at 0730 am and extends to 0900 am, as requested by NCC. These minor changes to the HGV restriction period will have no effect on the conclusions contained in this report.

4.4 Using the surveyed total existing average daily levels of 235 and 281 HGVs from Table 3.12, the effect of the potential increase of HGV traffic from the associated Hornsea Three works would result in temporary total two way daily HGV traffic flows of 362 and 408 HGVs in the west and east of the village respectively accounting for the Hornsea Three numbers defined above (i.e. 235+127 = 362; 281+127 = 408).

4.5 The predicted impact of the HGV movements has been derived through the use of the data in Table 3.7. The average of the SELs at The Old Forge was calculated to be 80.9dB (A) and the maximum was 85.4dB(A). To form a fully robust impact assessment, the maximum values have been used for the subsequent calculations using the following equation;

$$L_{Aeq,T} = SEL + 10log_{10}(1/T) + 10log_{10}(N)$$

4.6 Where:

- SEL is the equivalent L_{Aeq} over a one second period for the noise event;
- T is the reference time period in seconds and
- N is the number of movements in the time period, T.

4.7 Table 4.1 below shows the anticipated increase to the day time ambient sound levels at each of the four locations. For the Hornsea Three, as stated in the (REP6-014 and REP6-015), the onshore cable corridor and core working hours are 07.00 to 18.00 on weekdays and 07.00 to 13.00 on Saturdays. Up to one hour before and after for mobilisation ("mobilisation period"), i.e. 06:00 to 19:00 weekdays and 06:00 to 14:00 Saturdays; and Maintenance period 13:00 to 17:00 Saturdays. These movements are effectively controlled to 'daytime; hours.

Location	Time Period	dB $L_{Aeq,T}$ (Existing)	dB $L_{Aeq,T}$ (Predicted)	Predicted Increase
The Old Forge	Day (07:00 – 23:00)	63	63.4	0.4
	Night (23:00 – 07:00)	54	54	0.0
20 High Street	Day (07:00 – 23:00)	65	65.4	0.4
	Night (23:00 – 07:00)	56	56	0.0
27 High Street	Day (07:00 – 23:00)	67	68.5	1.5
	Night (23:00 – 07:00)	57	57	0.0
Whitehouse Farm	Day (07:00 – 23:00)	64	65.8	1.8
	Night (23:00 – 07:00)	56	56	0.0

Table 4.1: Predicted Sound Levels for Cawston Village Due To Increased HGV Traffic Flow

This slight increase in sound levels would be classed as a "Minor" increase in sound levels in line with Table 4.5 from the DMRB in the short term and "Negligible" in the long term.

Assessment of Predicted Vibration Levels

4.9 The highest related VDV for the individual HGV movements was measured at each property and reported to be as follows;

Location	Date	Time	X Axis ($m.s^{-1.75}$)	Y Axis ($m.s^{-1.75}$)	Z Axis ($m.s^{-1.75}$)	Wgtd RMS ($m.s^{-1.75}$)	PPV (mm/s)
Old Forge	12/02/19	15:49	0.005	0.006	0.022	0.0233	0.803
20 High Street	11/02/19	16:11	0.006	0.006	0.012	0.0147	0.723
27 High Street	11/02/19	14:14	0.004	0.004	0.01	0.0115	0.402
Whitehouse Farm	12/02/19	11:09	0.005	0.005	0.019	0.0203	0.482

Table 4.2: Measured Highest VDV Reading For HGV Movements

4.10 In a similar fashion to predicting the noise levels, the additional effect of the Hornsea Three HGV movements can be calculated using the following equation;

$$_{e}VDV_{Total} = (N)^{0.25} \times V$$

4.11 Where 'N' is the quantity of HGV movements inclusive of the existing and proposed levels and V is the vibration dose value for each HGV movement. For this assessment, we have used the highest level of vibration measured at each location. In all instances, the most affected axis was the vertical.

4.12 The following table includes the anticipated vibration dose value for each property for the entire 16h day time period, during the period where Hornsea Three construction traffic is moving through Cawston:

Location	X Axis (m.s^1.75)	Y Axis (m.s^1.75)	Z Axis (m.s^1.75)	V	N	$eVDV_{Total}$
Old Forge Max VDV	0.005	0.006	0.022	0.023	362	**0.102**
20 High Street Max VDV	0.006	0.006	0.012	0.015	362	**0.064**
27 High Street Max VDV	0.004	0.004	0.01	0.011	408	**0.052**
Whitehouse Farm Max VDV	0.005	0.005	0.019	0.020	408	**0.091**

Table 4.3: Predicted VDV Levels Due to Additional HGV Movements

4.13 As can be seen in Table 4.3, the highest level of estimated vibrational dose value was 0.102m.s$^{-1.75}$ at The Old Forge, followed by Whitehouse Farm.

4.14 For all of these locations, the anticipated level of vibration would be slightly higher than has been measured to date which would, in accordance with Table 1 of BS6472-1, (Table 2.2 within this report) classify the increase as being an indication of a "Low Probability of Adverse Comment" at all tested receptors.

4.15 Accordingly, the $_{e}$VDV has been calculated using the highest measured individual vibration dose value. As Hornsea Three construction traffic has committed not to exceed the 44 tonne load limit for any HGV movements along link 89 (wording to be included in the Outline CTMP at Deadline 8) and therefore these values are not expected to change.

4.16 The PPV levels are not to increase purely due to an increased number of vehicles. This is due to the peak velocity of the vibrational transfer being measured, which would remain constant, although would be experienced on a more frequent basis.

5. Cumulative Traffic Calculations from Hornsea Three and Norfolk Vanguard

Future Traffic Sound Level Calculations

5.1 As stated in Hornsea Three and Norfolk Vanguard Cumulative Link Impact Assessment Relating to Traffic [REP6-039], a 367 additional total two way maximum peak HGV is calculated. For the purpose of this assessment, it has been assumed that the additional HGV movements would be spread across the working day as set out in paragraph 4.1 and 4.3 above, resulting in additional HGV traffic of 33 (33.4) HGVs per hour, which equates to approximately one additional HGV movement every 1 minute and 48 seconds.

5.2 Using the total existing average daily two way levels of 235 and 281 HGVs, the effect of the potential increase of HGV traffic from both sets of associated works would result in temporary total HGV traffic flows of 602 and 648 HGVs in the west and east of the village respectively.

5.3 The predicted impact of the HGV movements has been derived through the use of the data in Table 3.7. The average of the SELs at The Old Forge was calculated to be 80.9dB (A) and the maximum was 85.4dB (A). To form a fully robust impact assessment, the maximum values have been used for the subsequent calculations using the following equation;

$$L_{Aeq,T} = SEL + 10log_{10}(1/T) + 10log_{10}(N)$$

5.4 Where:

- SEL is the equivalent L_{Aeq} over a one second period for the noise event;
- T is the reference time period in seconds and
- N is the number of movements in the time period, T.

5.5 Table 6.1 below shows the anticipated increase to the day time ambient sound levels at each of the four locations, For the Hornsea Three, as stated in the Appendix 3 - Outline Construction Traffic Management Plan (REP6 -015), the onshore cable corridor and core working hours are 07.00 to 18.00 on weekdays and 07.00 to 13.00 on Saturdays. Up to one hour before and after for mobilisation ("mobilisation period"), i.e. 06:00 to 19:00 weekdays and 06:00 to 14:00 Saturdays; and Maintenance period 13:00 to 17:00 Saturdays. These movements are effectively controlled to 'daytime; hours. A similar commitment is provided for Norfolk Vanguard within their Environmental Statement Chapter 5 (APP- 329).

Location	Time Period	dB $L_{Aeq,T}$ (Existing)	dB $L_{Aeq,T}$ (Predicted)	Predicted Increase
The Old Forge	Day (07:00 – 23:00)	63	65.6	**2.6**
20 High Street	Day (07:00 – 23:00)	65	67.6	**2.6**

Location	Time Period	dB $L_{Aeq,T}$ (Existing)	dB $L_{Aeq,T}$ (Predicted)	Predicted Increase
27 High Street	Day (07:00 – 23:00)	67	70.7	**3.7**
Whitehouse Farm	Day (07:00 – 23:00)	64	67.5	**3.5**

Table 6.1: Predicted Sound Levels for Cawston Village Due To Increased HGV Traffic Flow

5.6 Without mitigation, this increase in sound levels would be classed as a "Minor" increase at The Old Forge and 20 High Street and a "Moderate" increase at 27 High Street and Whitehouse Farm when assessed against the DMRB in the short term and "Minor" in the long term.

5.7 This potential impact could be effectively mitigated through a reduction of HGVs through Cawston village, as set out in section 6 of this report, such that no significant noise effects are predicted under the cumulative scenario.

Assessment of Predicted Vibration Levels

5.8 In a similar fashion to predicting the noise levels, the additional effect of the HGV movements can be calculated using the following equation;

$$_{e}VDV_{Total} = (N)^{0.25} \times V$$

5.9 Where 'N' is the quantity of HGV movements inclusive of the existing and proposed levels and V is the vibration dose value for each HGV movement. For this assessment, we have used the highest level of vibration measured at each location. In all instances, the most affected axis was the vertical.

5.10 The following table includes the anticipated vibration dose value for each property for the entire 16h day time period, once the construction works have begun;

Location	X Axis (m.s^1.75)	Y Axis (m.s^1.75)	Z Axis (m.s^1.75)	V	N	$eVDV_{Total}$
Old Forge Max VDV	0.005	0.006	0.022	0.023	602	**0.116**
20 High Street Max VDV	0.006	0.006	0.012	0.015	602	**0.073**
27 High Street Max VDV	0.004	0.004	0.01	0.011	648	**0.057**
Whitehouse Farm Max VDV	0.005	0.005	0.019	0.020	648	**0.100**

Table 6.2: Predicted VDV Levels Due to Additional HGV Movements

5.11 As can be seen in Table 6.2, the highest level of estimated vibrational dose value would be 0.116m.s$^{-1.75}$ at The Old Forge, followed by Whitehouse Farm at 0.1m.s$^{-1.75}$.

5.12 For all of these locations, the anticipated level of vibration would be slightly higher than has been measured to date which would, in accordance with Table 1 of BS6472-1, (Table 2.2 within this report) classify the increase as being an indication of a "Low Probability of Adverse Comment" at all tested receptors.

5.13 It must be noted that the $_{e}$VDV has been calculated on the highest measured individual vibration dose value. Link 89 is deemed suitable for up to 44 tonne vehicles, as confirmed by NCC, and therefore it is reasonable to assume that NV will also adhere to this as an upper weight limit. Therefore, it can reasonably be assumed that neither project will exceed the 44 tonne load limit for any HGV movements, and thus the defined values are not expected to change

5.14 The PPV levels are not to increase purely due to an increased number of vehicles. This is due to the peak velocity of the vibrational transfer being measured, which would remain constant, although would be experienced on a more frequent basis

6. Mitigation

6.1 Based on the assessment undertaken in section 4, it can be concluded that Hornsea Three alone would not result in noise or vibration threshold levels being exceeded. As such, no significant effects are predicted and no additional mitigation beyond those designed-in to the project through the intervention scheme (see Appendix 27 submitted at Deadline 7 which provides an update of the progress on this element), Outline CoCP and Outline CTMP (both of which are updated and provided as Appendix 39 and 25 respectively at Deadline 7) are required for Hornsea Three alone.

6.2 However, based on the assessment undertaken in section 5, the results of the cumulative noise assessment indicate that the sound levels would be subject to a +3.7dB increase at the most affected properties, in close proximity to 27 High Street. As this would be classified as being a "Moderate" increase in sound levels, the Applicant has considered mitigation in the form of additional traffic management measures. This would be seeking to reduce the resultant noise increase to less than 3dB, which would not be significant. This increase would then be classified as being "Minor" and further mitigation would not be required.

6.3 In order to achieve a reduction of 0.7dB, to levels below a 3 dB noise increase, the Applicant is proposing to include a cumulative traffic threshold within the Outline CTMP which would restrict the cumulative HGV traffic flows on a daily basis along link 89 to a level which would avoid significant effects relating to noise and vibration. This will be subject to discussions with Norfolk Vanguard, with an aim to include a commitment in the Outline CTMP at Deadline 8. The Applicant is confident this will be agreeable and could be achieved through construction programming of both projects to avoid peak activities of both projects overlapping in this location.

6.4 The Applicant is also committed to undertaking noise monitoring at a noise sensitive receptor within Cawston (location to be agreed with the BDC Environmental Health Officer through Requirement 18) should the construction of both Hornsea Three and Norfolk Vanguard overlap such that traffic from both projects are travelling through Cawston at the same time. This would be to verify that noise levels do not reach significant levels as a result of cumulative construction traffic; should an exceedance be identified through this monitoring, additional traffic management measures would be discussed and agreed with NCC and BDC.

6.5 With this commitment in place, no significant effects would be predicted within the cumulative scenario.

7. Conclusions

7.1 The additional daily maximum peak two way heavy goods vehicular traffic predicted to travel through the village of Cawston on the B1145 as a direct result of the construction traffic associated with Hornsea Three is 127 HGVs.

7.2 The additional daily maximum peak two way heavy goods vehicular traffic predicted to travel through the village of Cawston on the B1145 as a direct result of the construction traffic for Norfolk Vanguard has been reported to be 240 HGVs.

7.3 Create Consulting Engineers Ltd have attended Cawston and conducted a series of airborne sound and groundborne vibration measurements at four properties within the village. These properties are referred to as The Old Forge, 20 High Street, 27 High Street and Whitehouse Farm. All properties are located along the B1145, some separated with a pavement and some directly adjacent to the main carriageway.

7.4 The additional HGVs for the Hornsea Three construction traffic through Cawston would result in a "**Minor"** increase to the sound and VDV levels at the locations monitored. There would be no increase to the PPV levels, but the regularity of the peak occurrences would be more frequent.

7.5 Cumulatively, the additional HGVs for both the Hornsea Three and Norfolk Vanguard construction traffic would result in a "Moderate" increase to the sound levels at the two most affected locations monitored. The other two locations would result in a "Minor" increase to sound levels. The VDV levels would only see a "Minor" increase in level and the PPV levels would not increase, although the regularity of the peak occurrences would be more frequent. To mitigation the potential moderate increase, the Applicant is exploring additional traffic management measures to be agreed with Norfolk Vanguard to reduce the resultant noise increase to less than 3dB, which would be classified as being "Minor". Subject to this additional mitigation, the noise increase would not be significant and further mitigation would not be required.

7.6 Based on the results for Hornsea Three alone, as well as under the cumulative scenario, the increase in vibration levels are far less than which would generate cosmetic or structural damage to properties adjacent to the highway.

7.7 The Applicant is also committed to undertaking noise monitoring at a noise sensitive receptor within Cawston (location to be agreed with the BDC Environmental Health Officer through Requirement 18) should the construction of both Hornsea Three and Norfolk Vanguard overlap such that traffic from both projects are travelling through Cawston at the same time. This would be to verify that noise levels do not reach significant levels as a result of cumulative construction traffic; should an exceedance be identified through this monitoring, additional traffic management measures would be discussed and agreed with NCC and BDC.

Annex A - Glossary of Acoustic Terminology

dB(A)

The human ear is less sensitive to low (below 125Hz) and high (above 16kHz) frequency sounds. A sound level meter can be used to duplicate the ear's variable sensitivity to sound across a spectrum of frequencies. This is achieved by building a filter into the instrument with a similar frequency response to that of the average ear. This is called an "A-weighting filter". Measurements of sound made with this filter are called A-weighted sound level measurements and the unit is dB(A).

$L_{eq,T}$

The sound from noise sources often fluctuates widely during a given period of time. An average value can be measured, the equivalent sound pressure level L_{eq}. The L_{eq} is the equivalent sound level which would deliver the same sound energy as the actual fluctuating sound measured in the same time period (T).

$L_{10,T}$

This is the minimum level exceeded for not more than 10% of the time period (T). This parameter is often used as a "not to exceed" criterion for noise.

$L_{90,T}$

This is the minimum level exceeded for not more than 90% of the time period (T). This parameter is often used as a descriptor of "background noise" for environmental impact studies.

L_{fmax}

This is the maximum sound pressure level that has been measured over a period using a fast time constant.

Octave Bands

In order to completely determine the composition of a sound it is necessary to determine the sound level at each frequency individually. Usually, values are stated in octave bands. The audible frequency region is divided into 10 such octave bands whose centre frequencies are defined in accordance with international standards.

Addition of noise from several sources

Noise from different sound sources combine, on a logarithmic scale, to produce a sound level higher than that from any individual source. Two equally intense sound sources operating together produce a sound level which is 3dB higher than one alone and 3 identical sources produce a 5dB higher sound level.

Attenuation by distance

Sound which propagates from a point source in free air attenuates by 6dB for each doubling of distance from the noise source. Sound energy from line sources (e.g. stream of cars) drops off by 3dB for each doubling of distance.

Subjective impression of noise

Sound intensity is not perceived directly at the ear; rather it is transferred by the complex hearing mechanism to the brain where acoustic sensations can be interpreted as loudness. This makes hearing perception highly individualised. Sensitivity to noise also depends on frequency content, time of occurrence, duration of sound and psychological factors such as emotion and expectations. The following table is a reasonable guide to help explain increases or decreases in sound levels for many acoustic scenarios.

Change in sound level (dB)	Change in perceived loudness
1	Imperceptible
3	Just barely perceptible
6	Clearly noticeable
10	About twice as loud
20	About 4 times as loud

Barriers

Outdoor barriers can be used to reduce environmental noises, such as traffic noise. The effectiveness of barriers is dependent on factors such as its distance from the noise source and the receiver, its height and its construction.

Reverberation control

When sound falls on the surfaces of a room, part of its energy is absorbed and part is reflected back into the room. The amount of reflected sound defines the reverberation of a room, a characteristic that is critical for spaces of different uses as it can affect the quality of audio signals such as speech or music. Excess reverberation in a room can be controlled by the effective use of sound-absorbing treatment on the surfaces, such as fibrous ceiling boards, curtains and carpets.

Vibration Dose Value

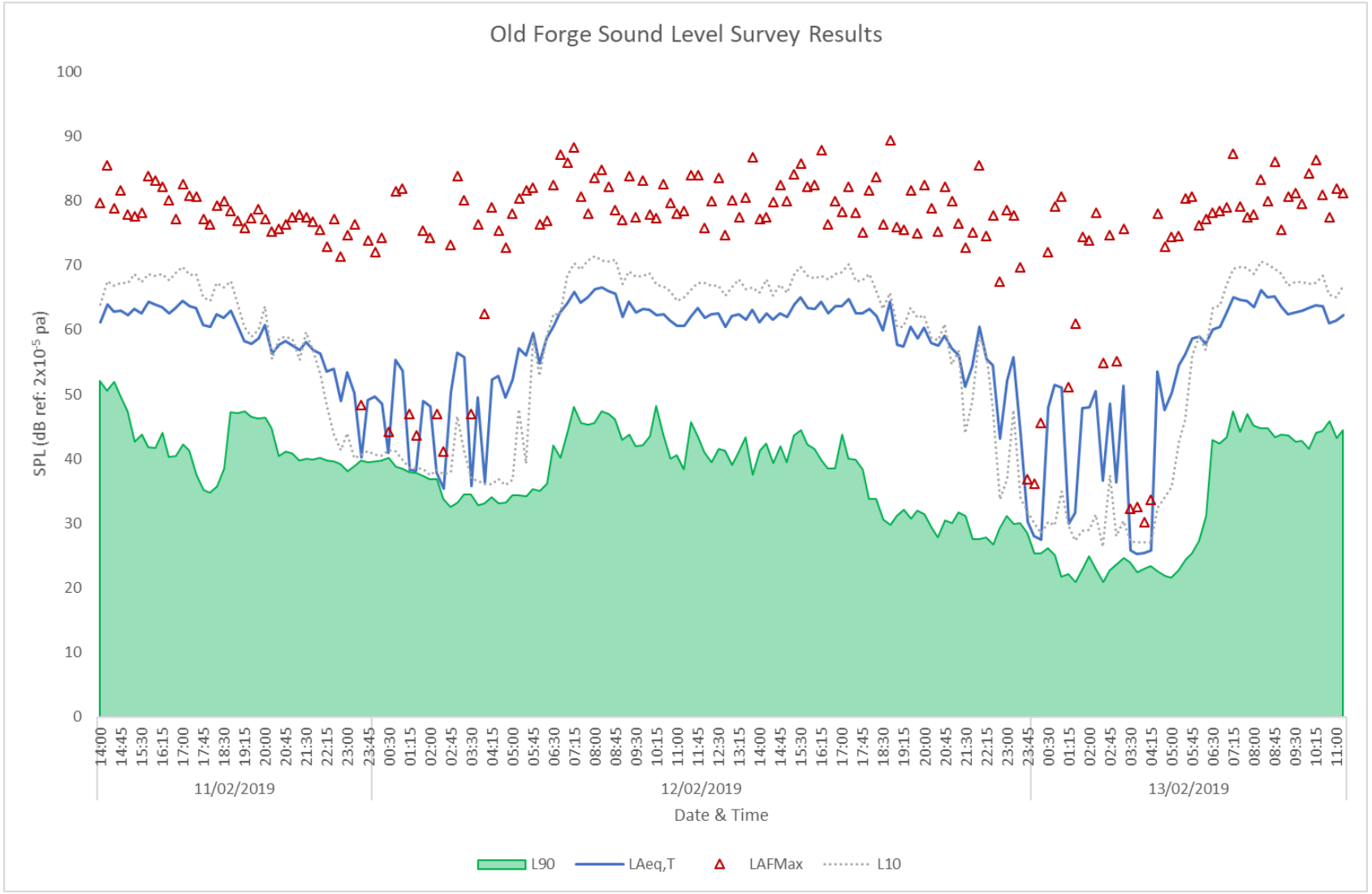
Vibration Dose Value (VDV) is a parameter that combines the magnitude of vibration and the time for which it occurs. When assessing intermittent vibration it is necessary to use the VDV, a cumulative measurement of the vibration level received over an 8-hour or 16-hour period.

Peak Particle Velocity

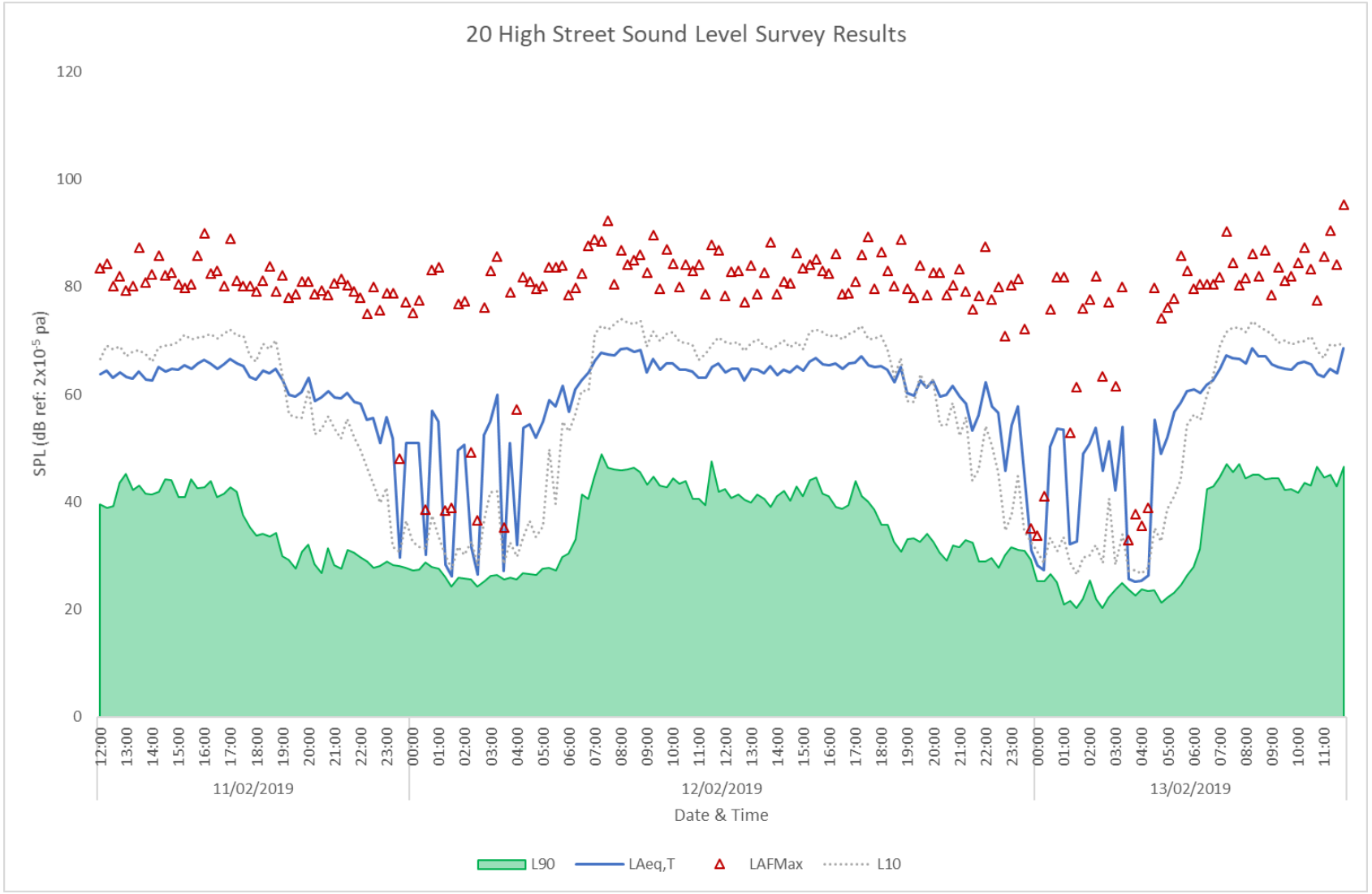
Peak Particle Velocity (PPV) is the greatest instantaneous particle velocity during a given time interval.

Annex B - Detailed Results of the Acoustic Survey - Noise

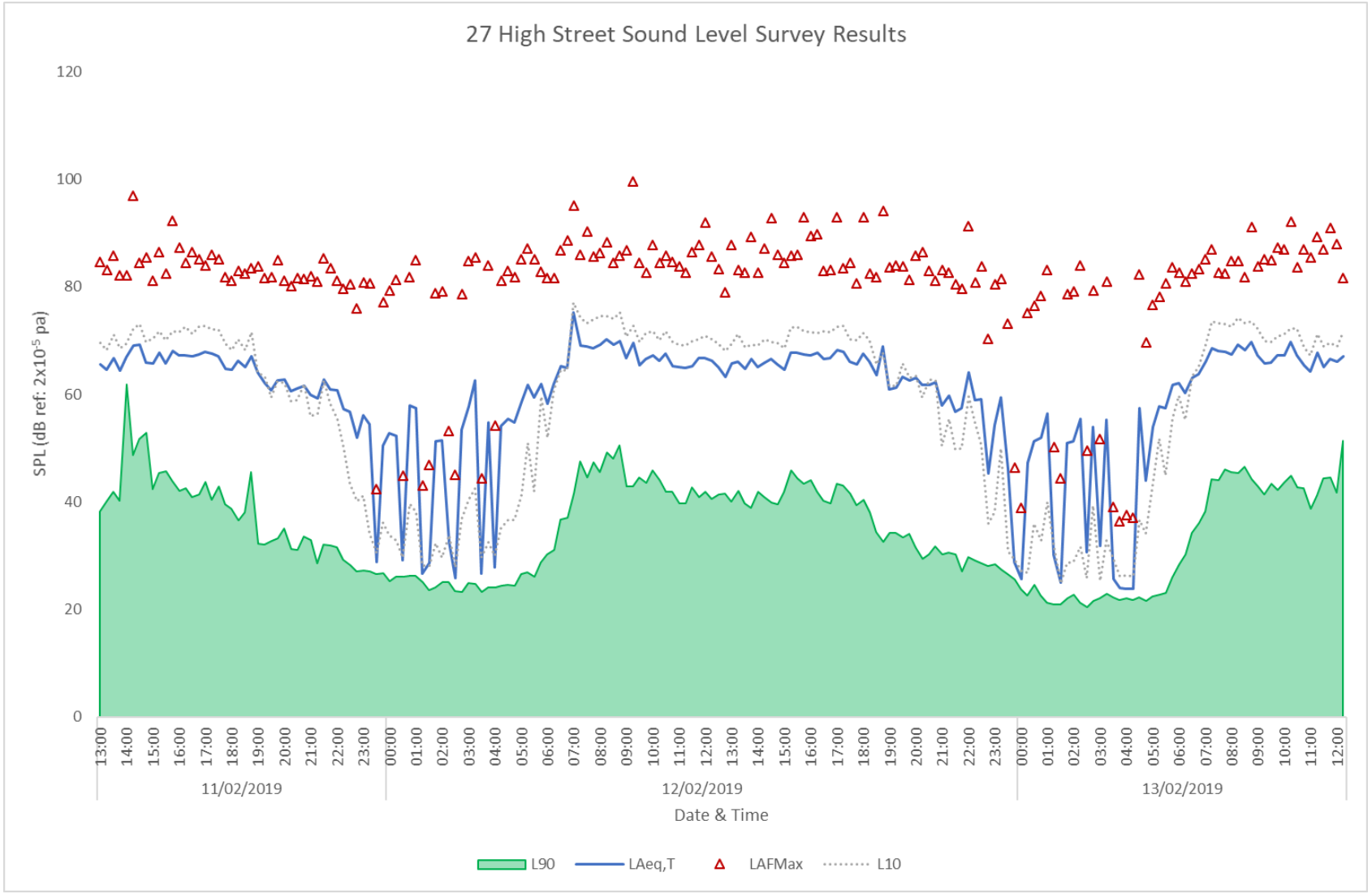
The Old Forge, Cawston



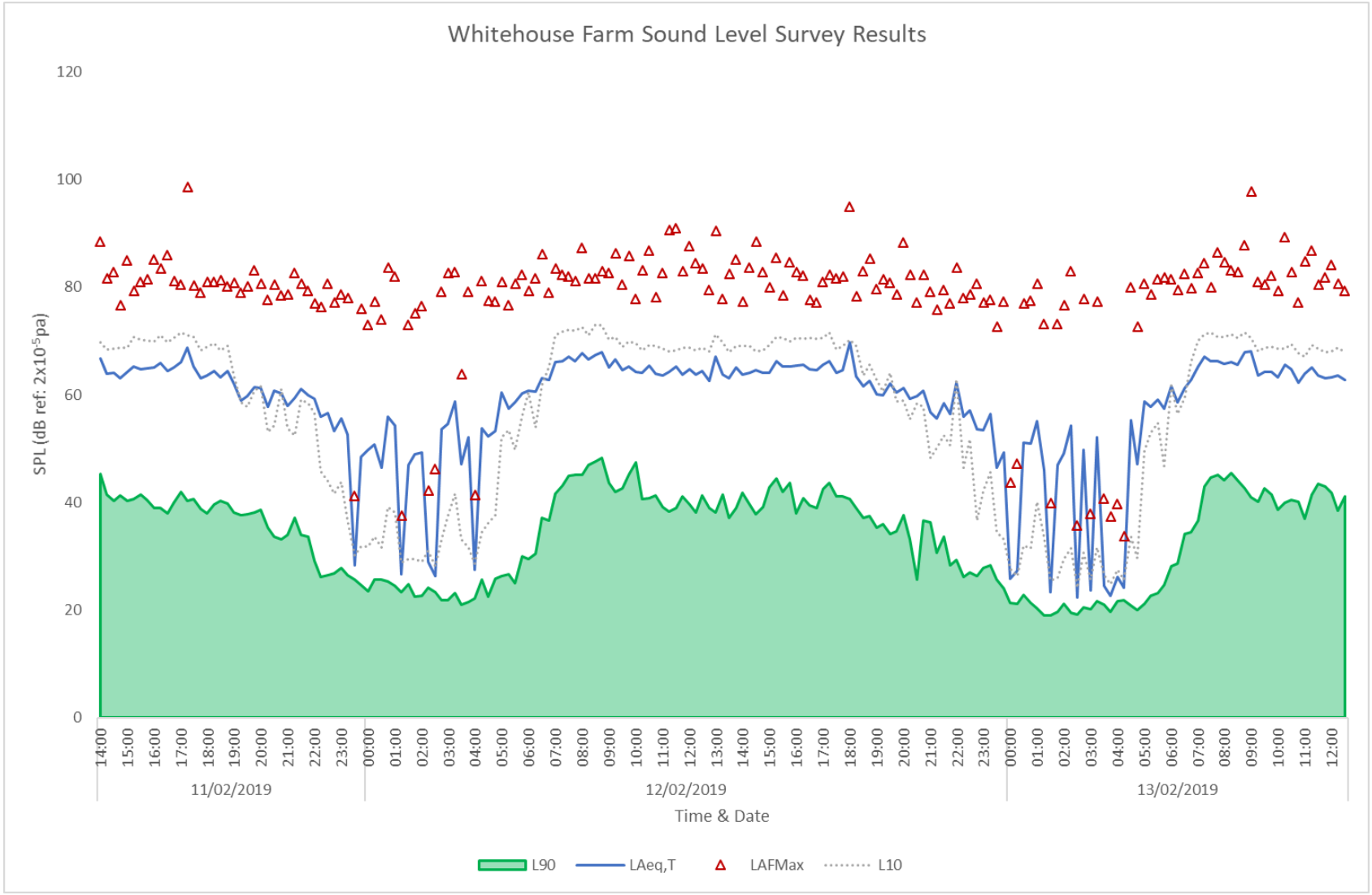
20 High Street, Cawston



27 High Street, Cawston

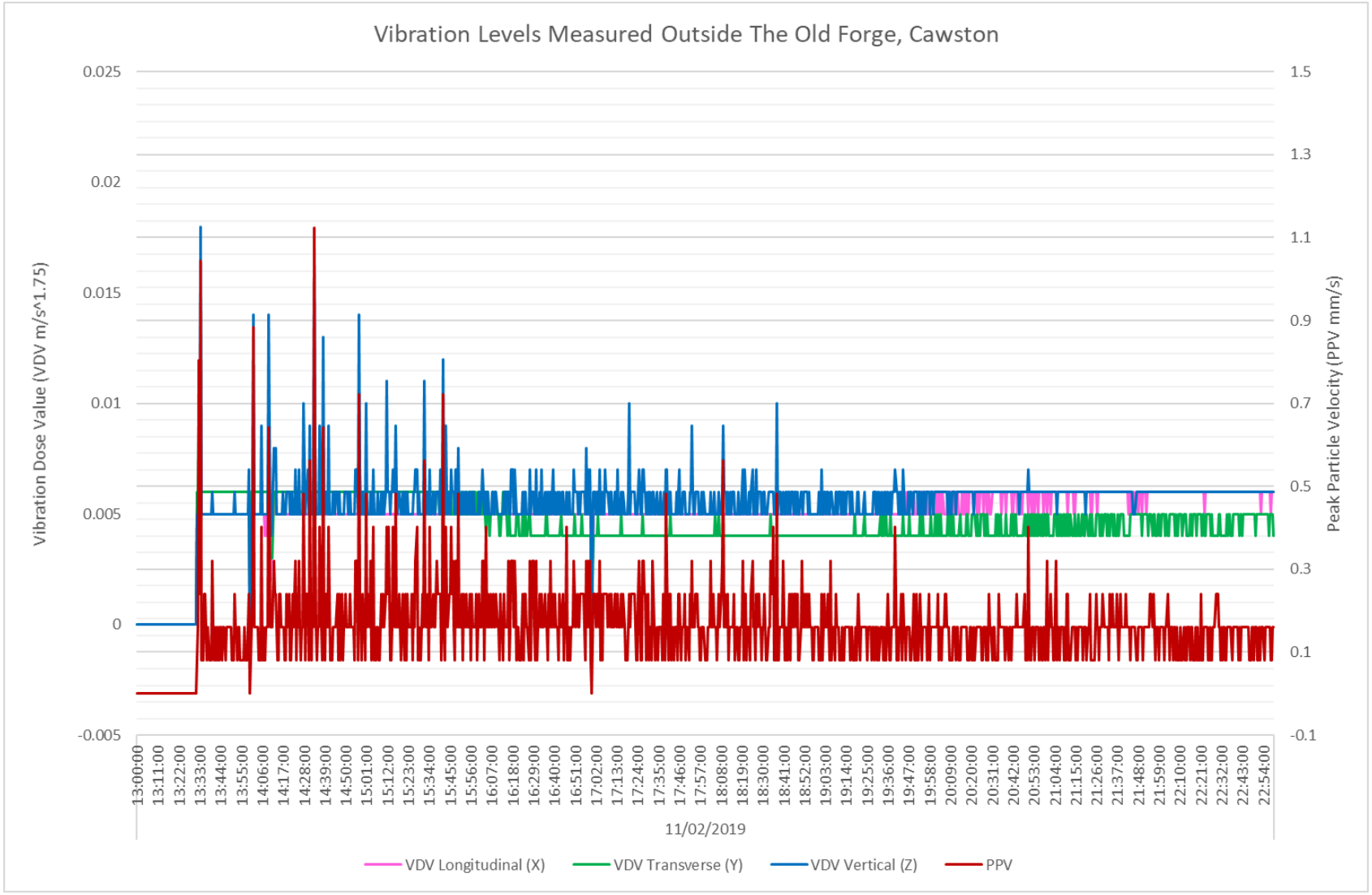


Whitehouse Farm, Cawston

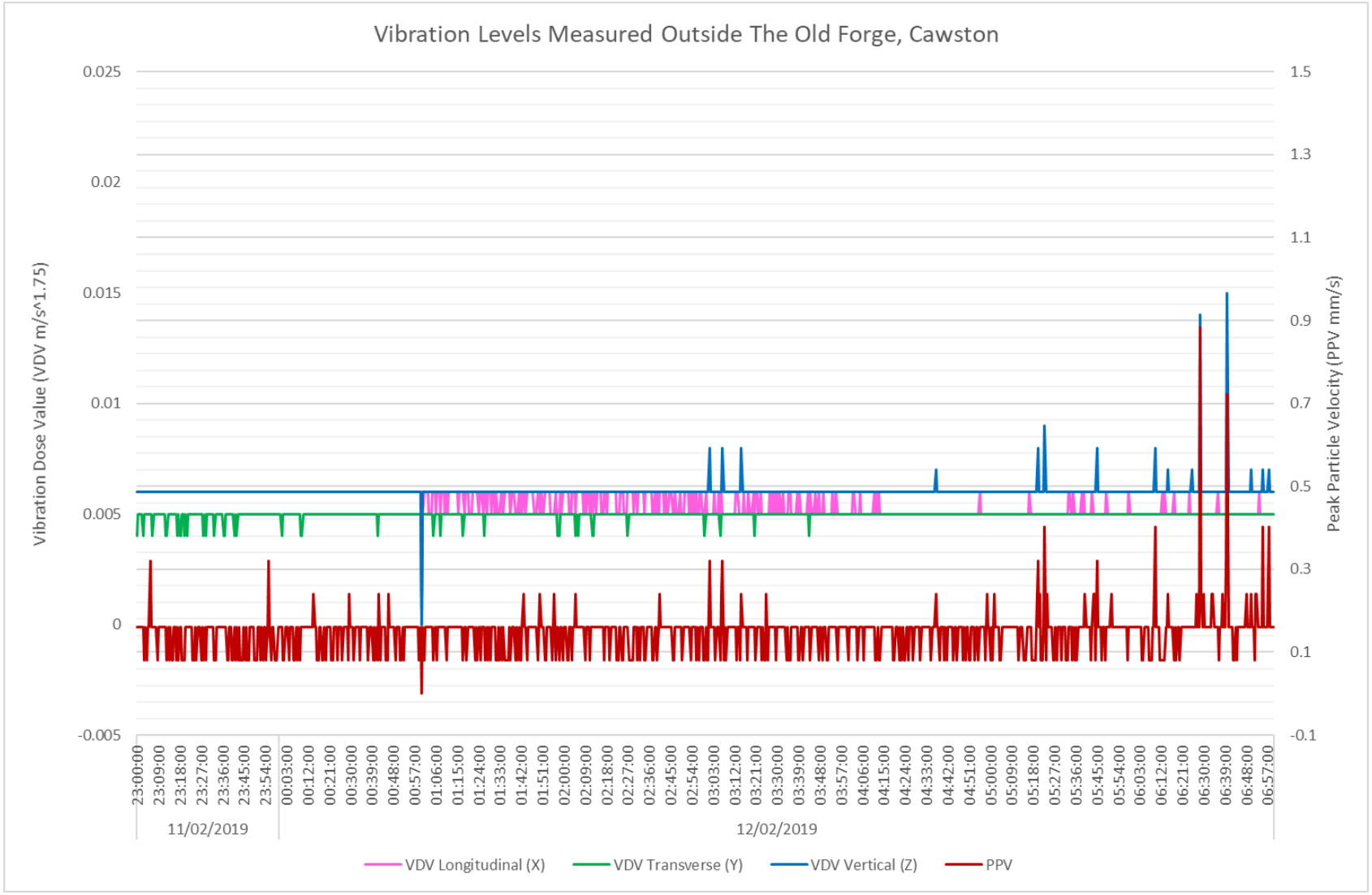


Annex C - Detailed Results of the Acoustic Survey - Vibration

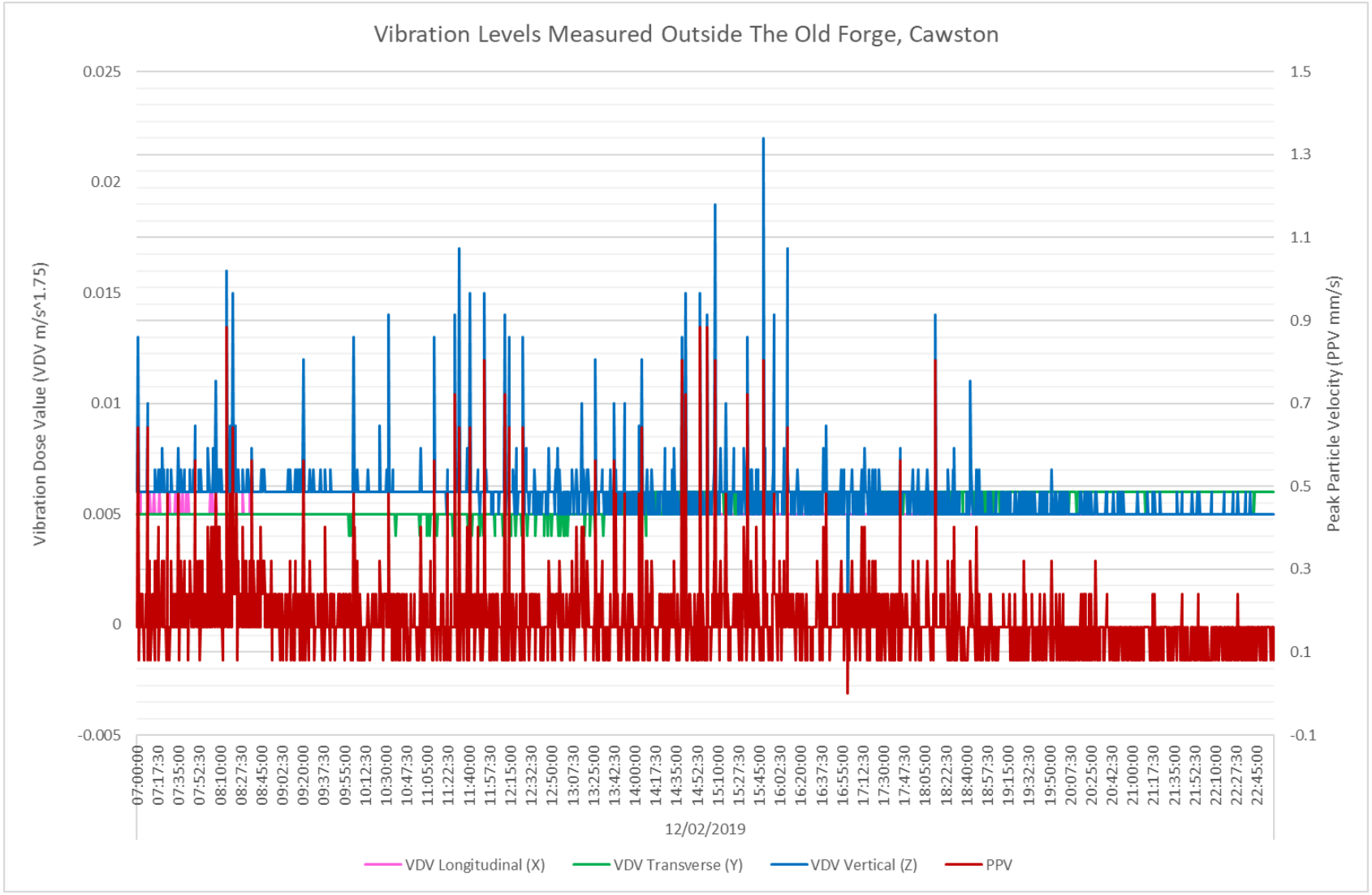
Old Forge, Cawston – 11th February 2019 Day Time Hours



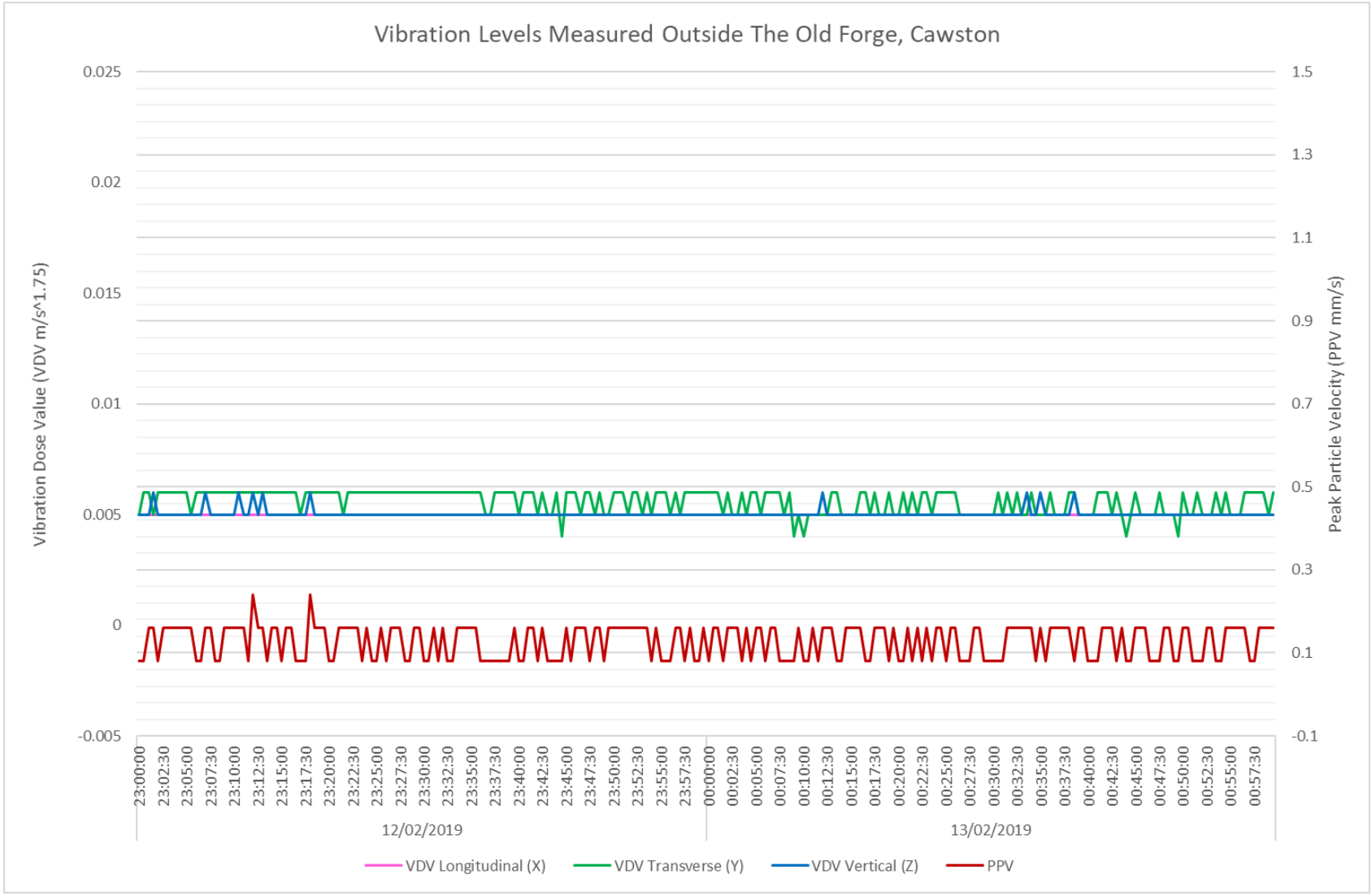
Old Forge, Cawston – 11th February 2019 Night Time Hours



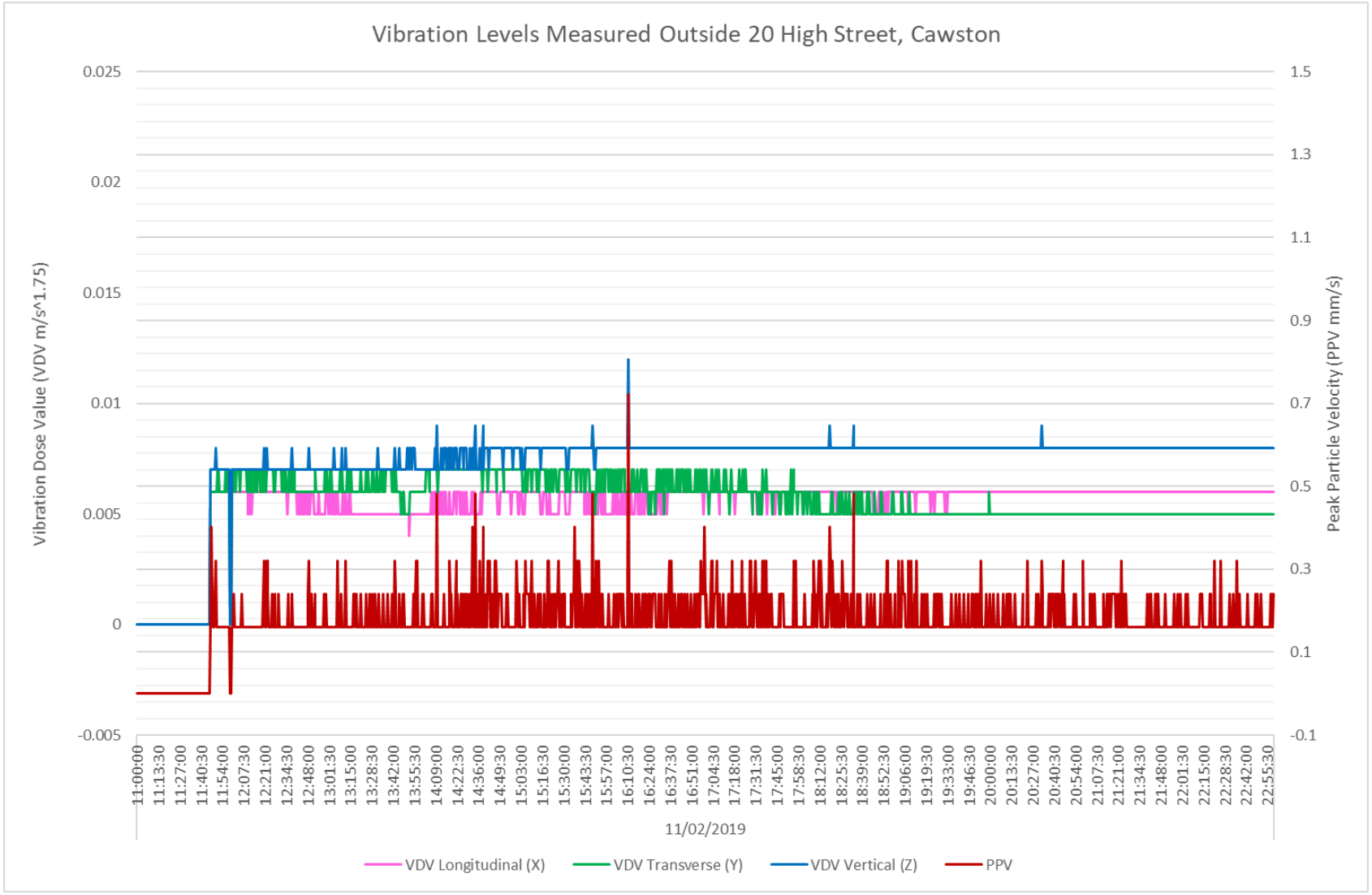
Old Forge, Cawston – 12th February 2019 Day Time Hours



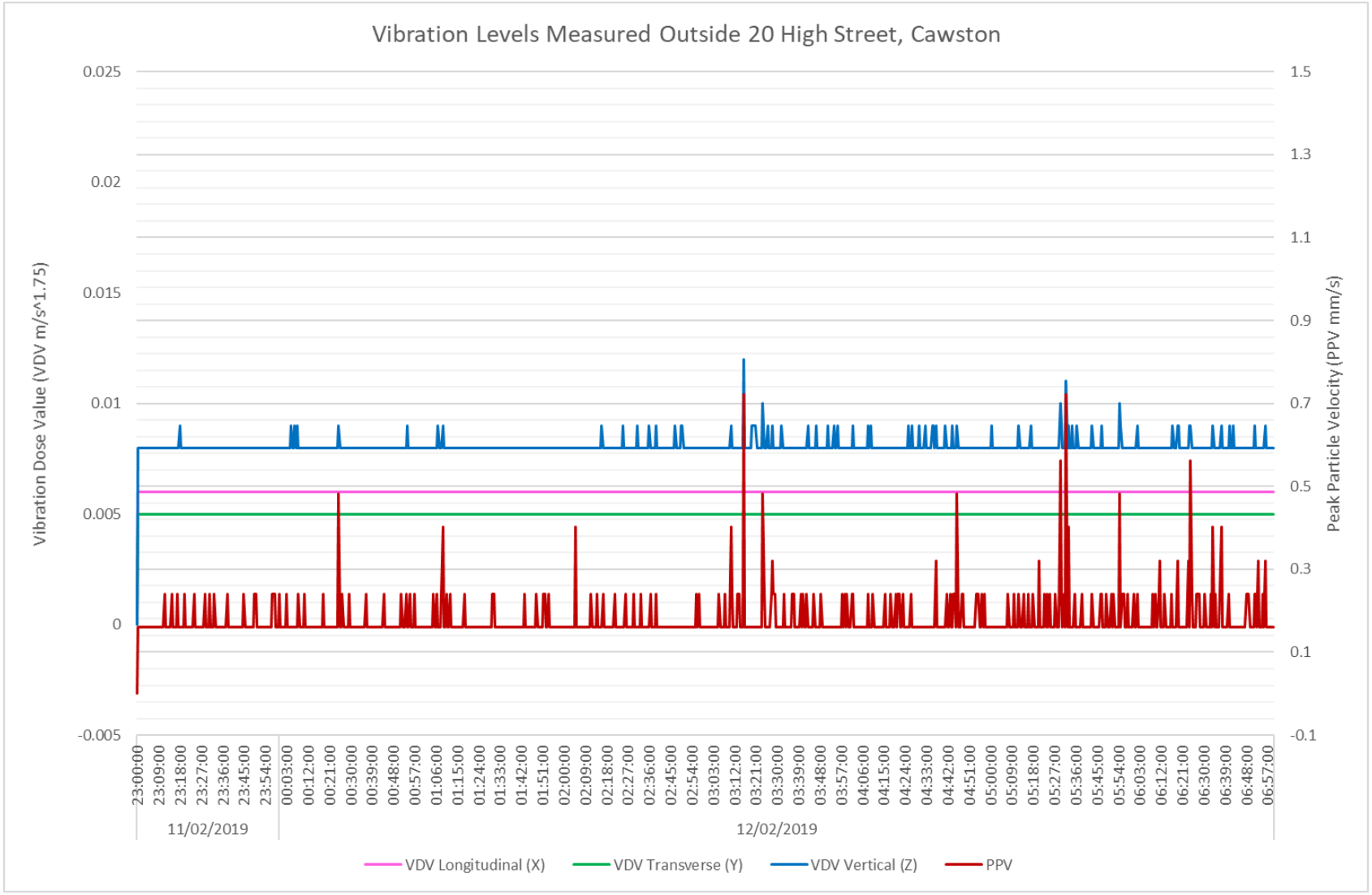
Old Forge, Cawston – 12th February 2019 Night Time Hours



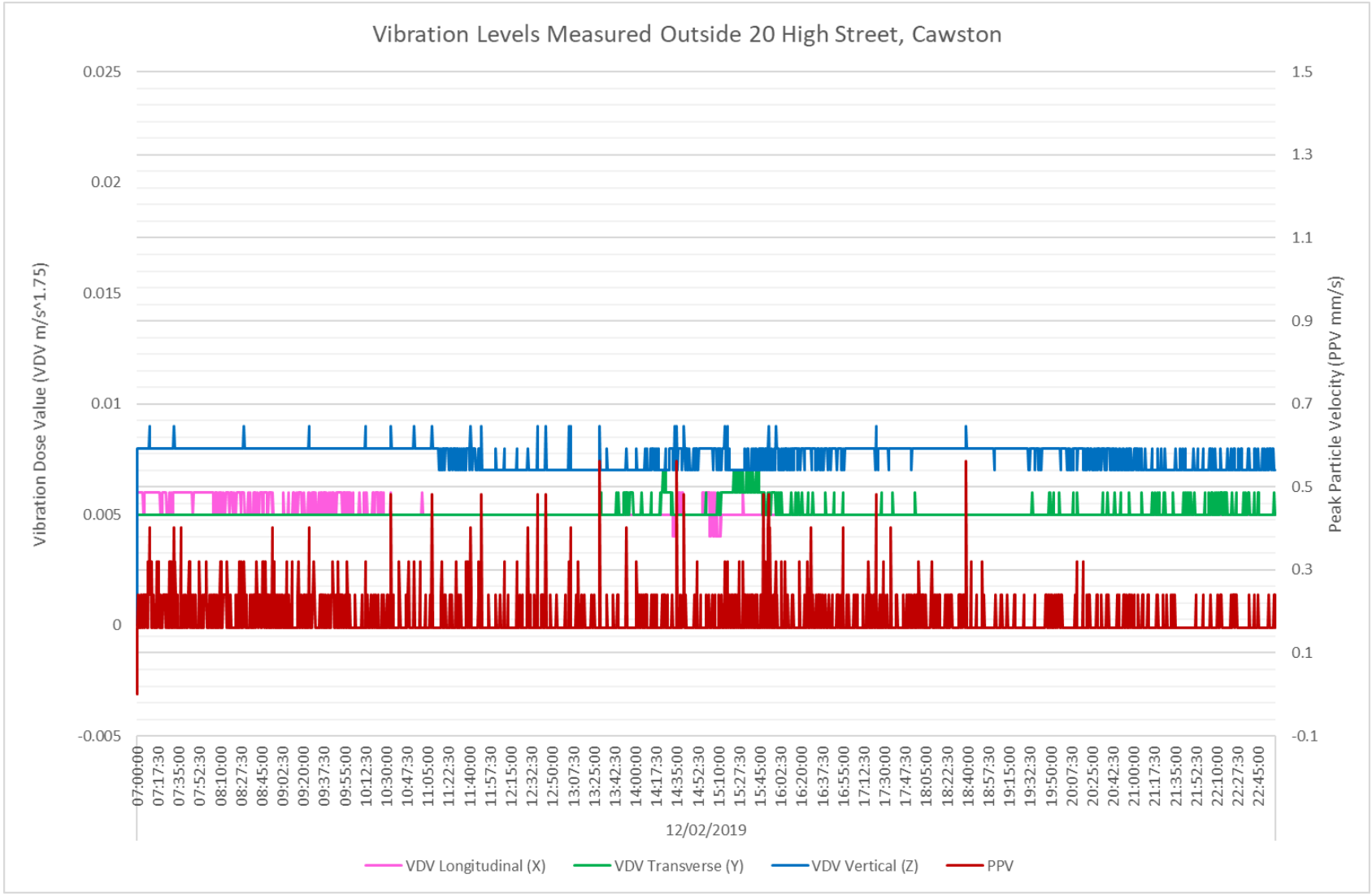
20 High Street, Cawston – 11th February 2019 Day Time Hours



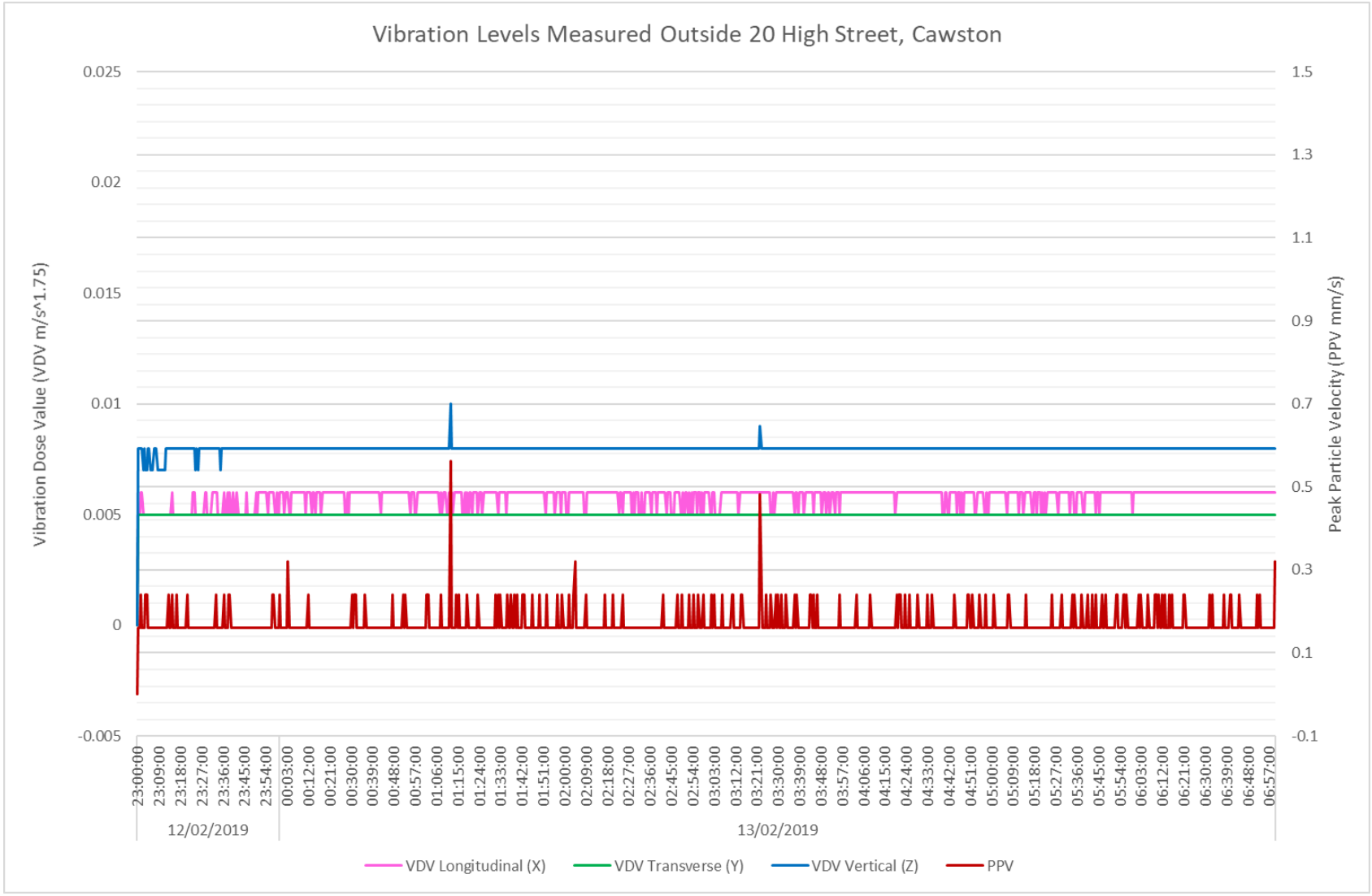
20 High Street, Cawston – 11th February 2019 Night Time Hours



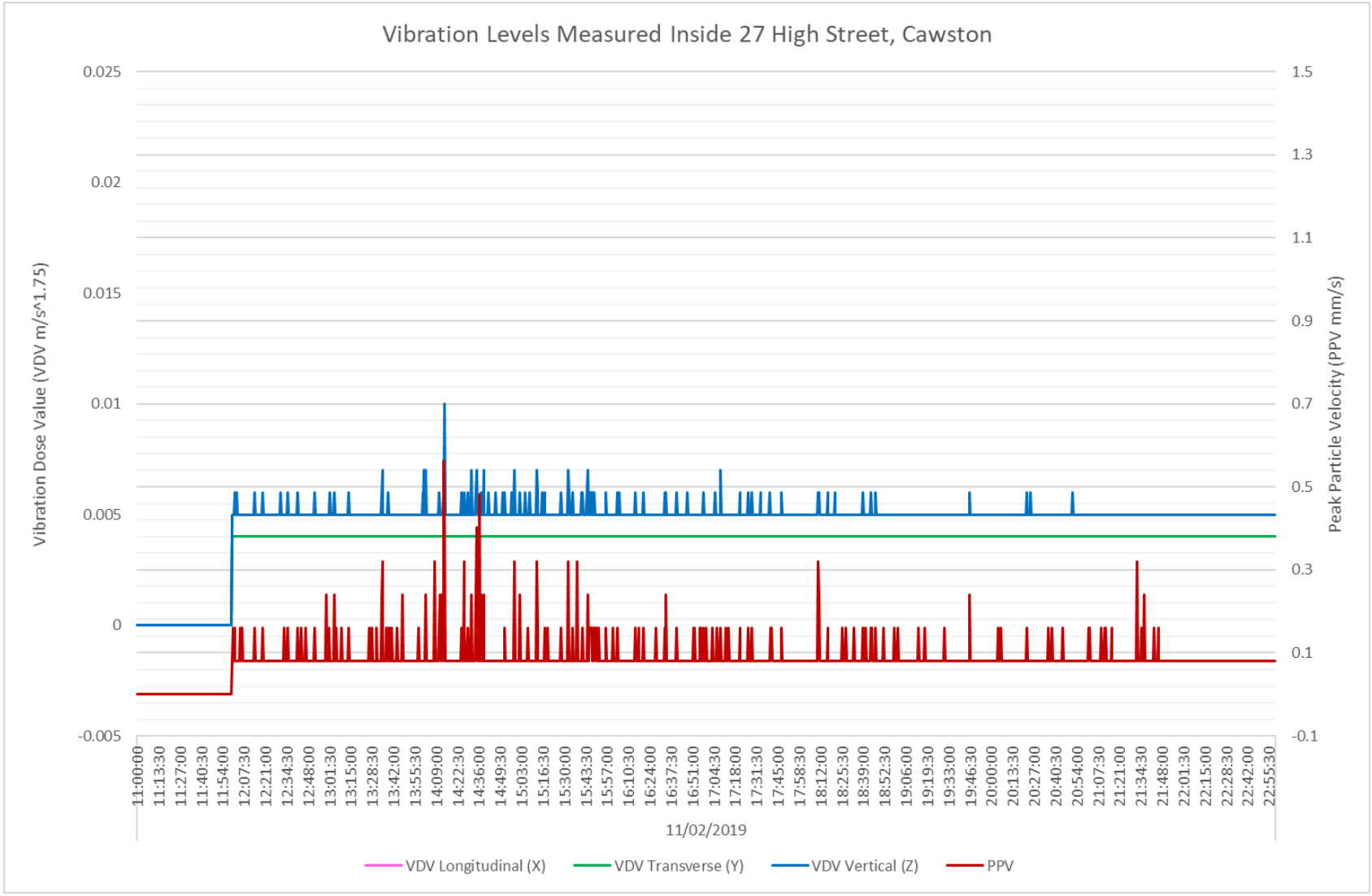
20 High Street, Cawston – 12th February 2019 Day Time Hours



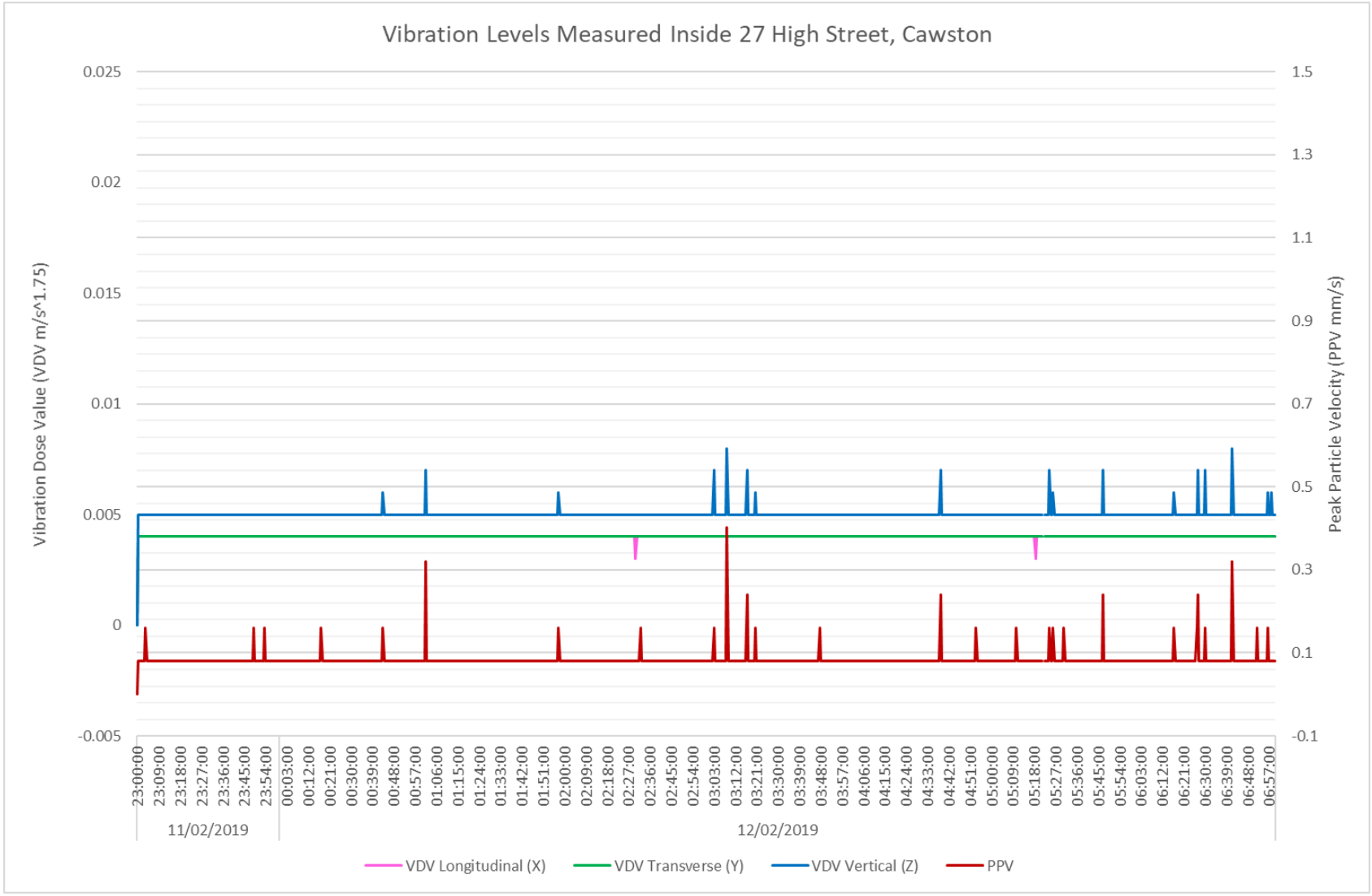
20 High Street, Cawston – 12th February 2019 Night Time Hours



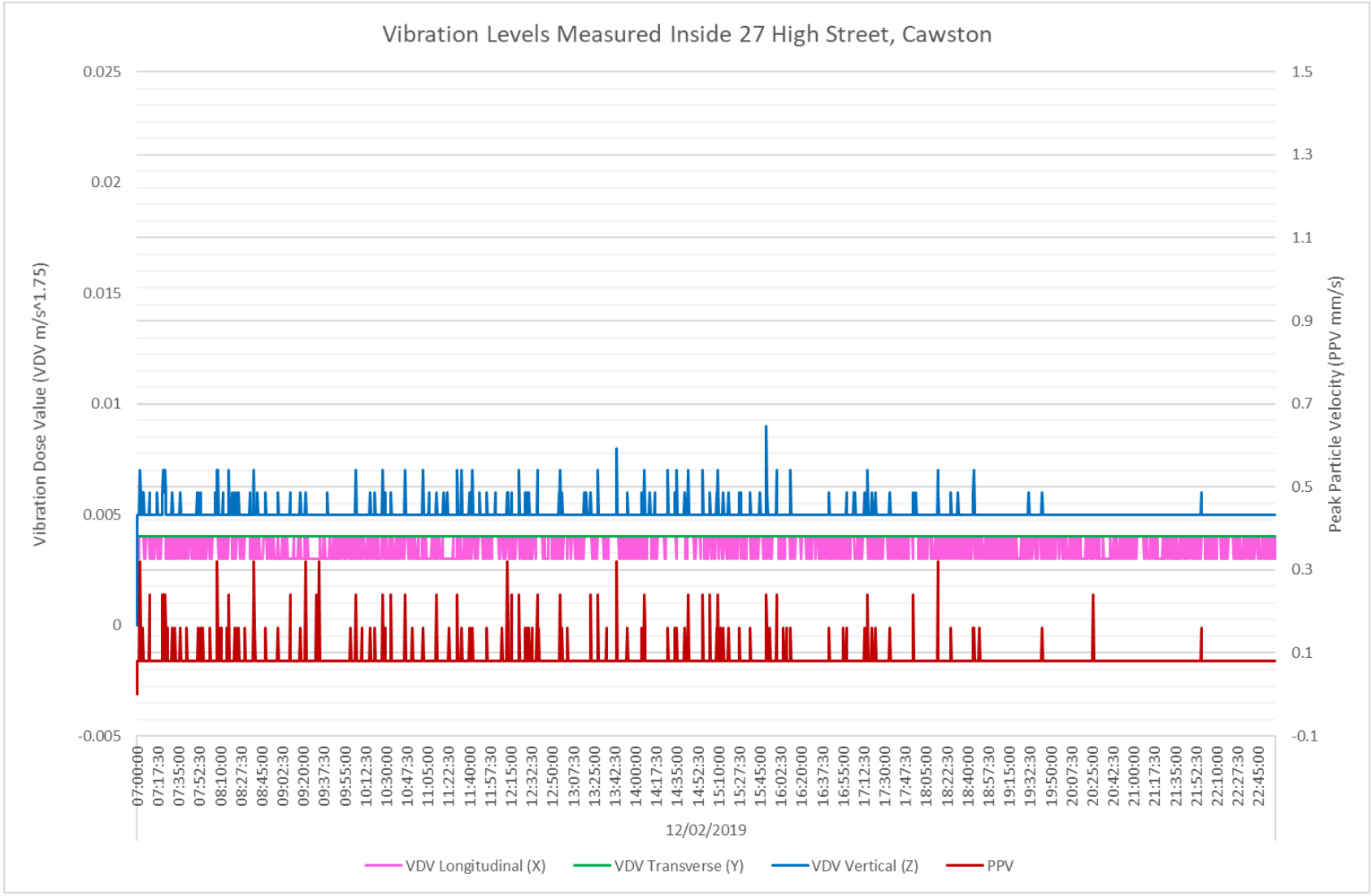
27 High Street, Cawston – 11th February 2019 Day Time Hours



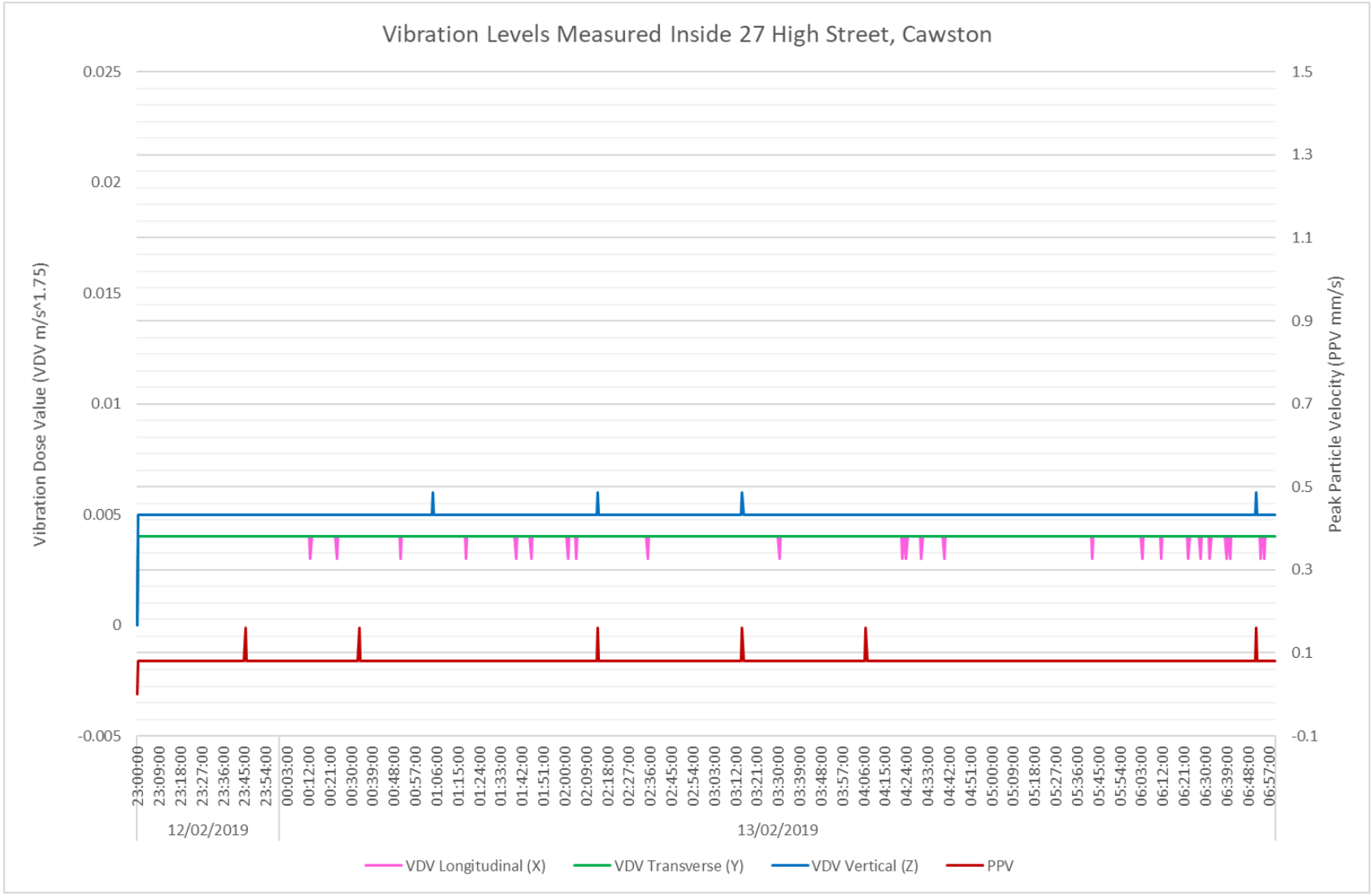
27 High Street, Cawston – 11th February 2019 Night Time Hours



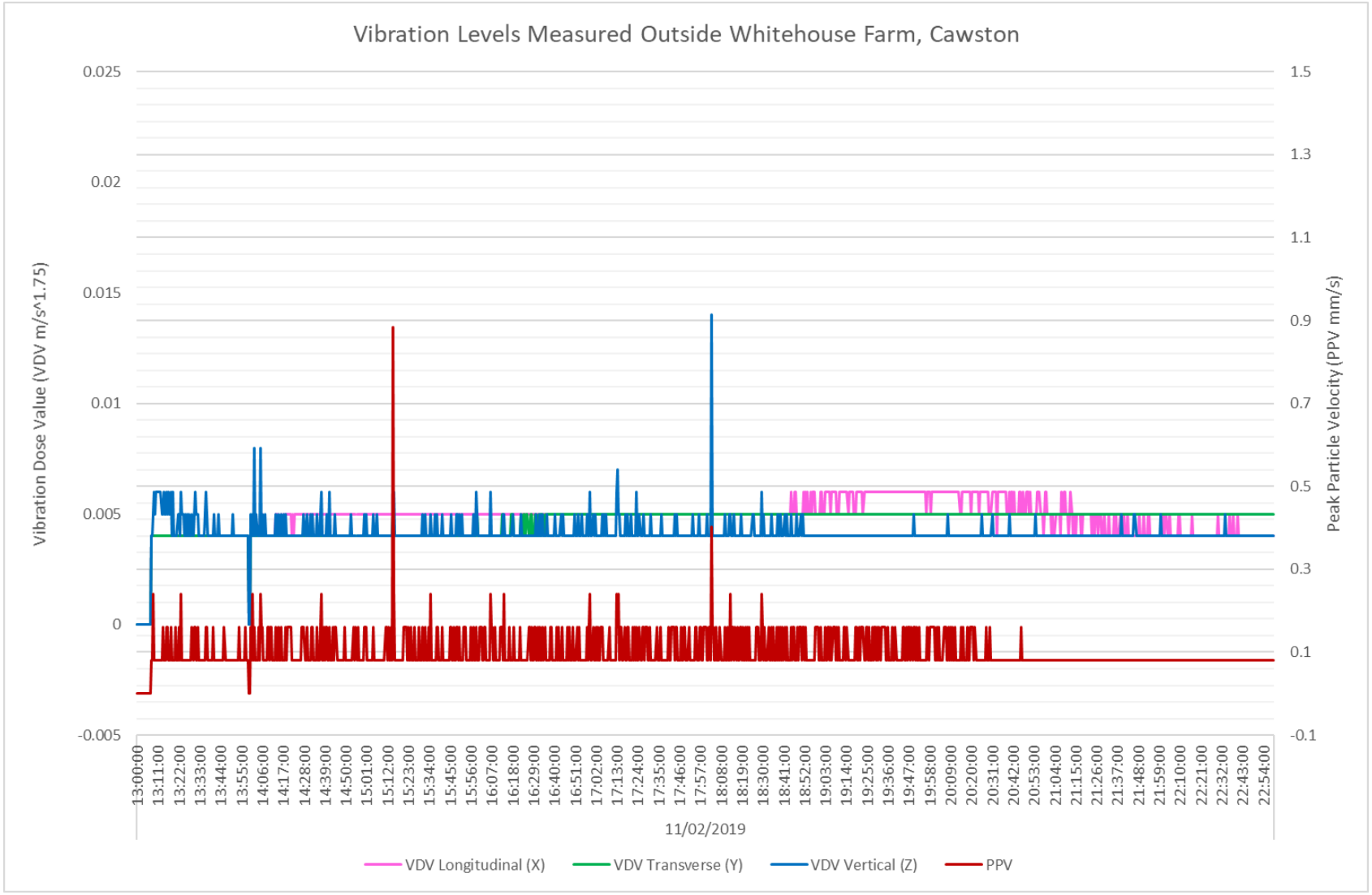
27 High Street, Cawston – 12th February 2019 Day Time Hours



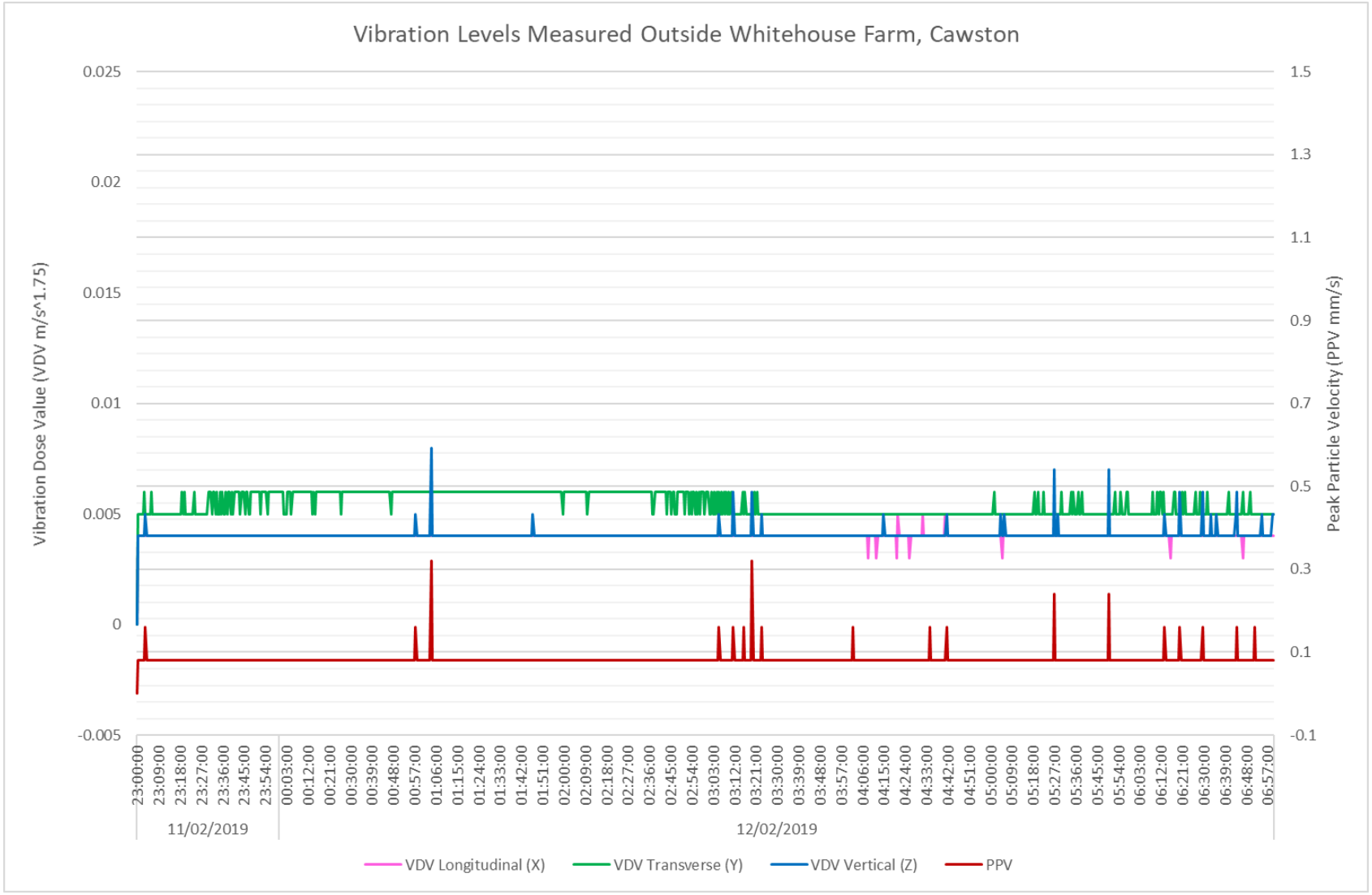
27 High Street, Cawston – 12th February 2019 Night Time Hours



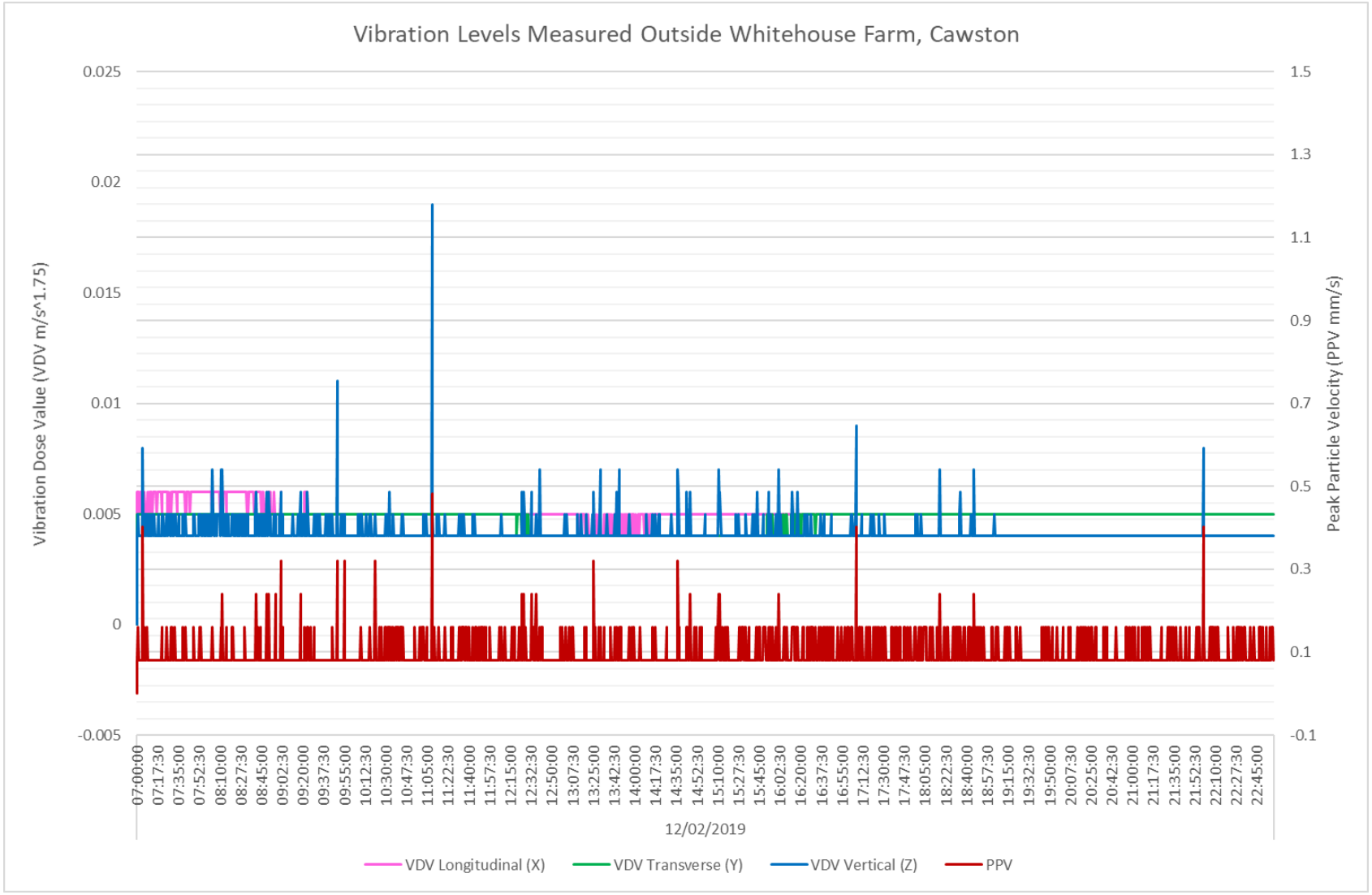
Whitehouse Farm, Cawston – 11th February 2019 Day Time Hours



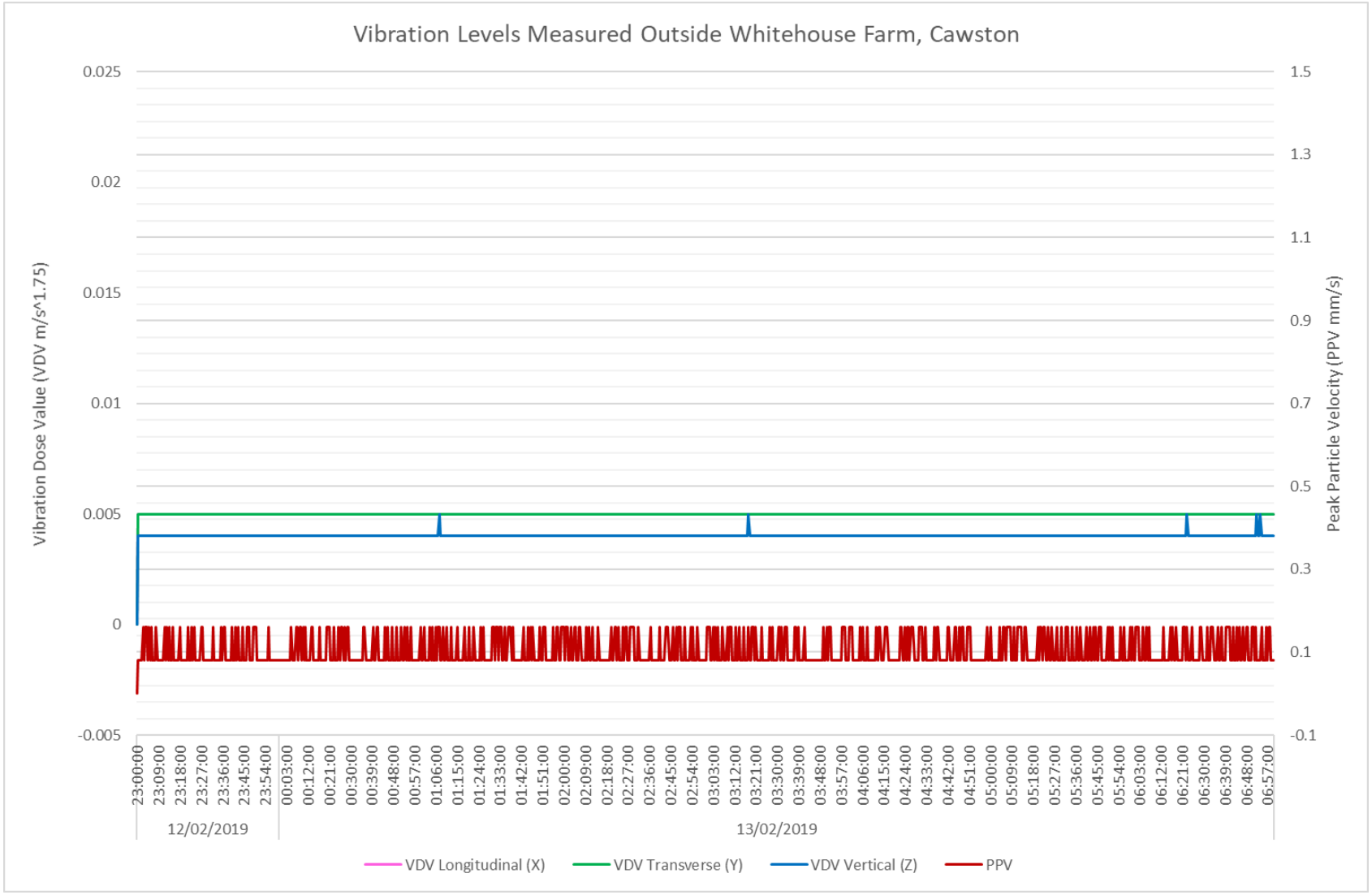
Whitehouse Farm, Cawston – 11th February 2019 Night Time Hours



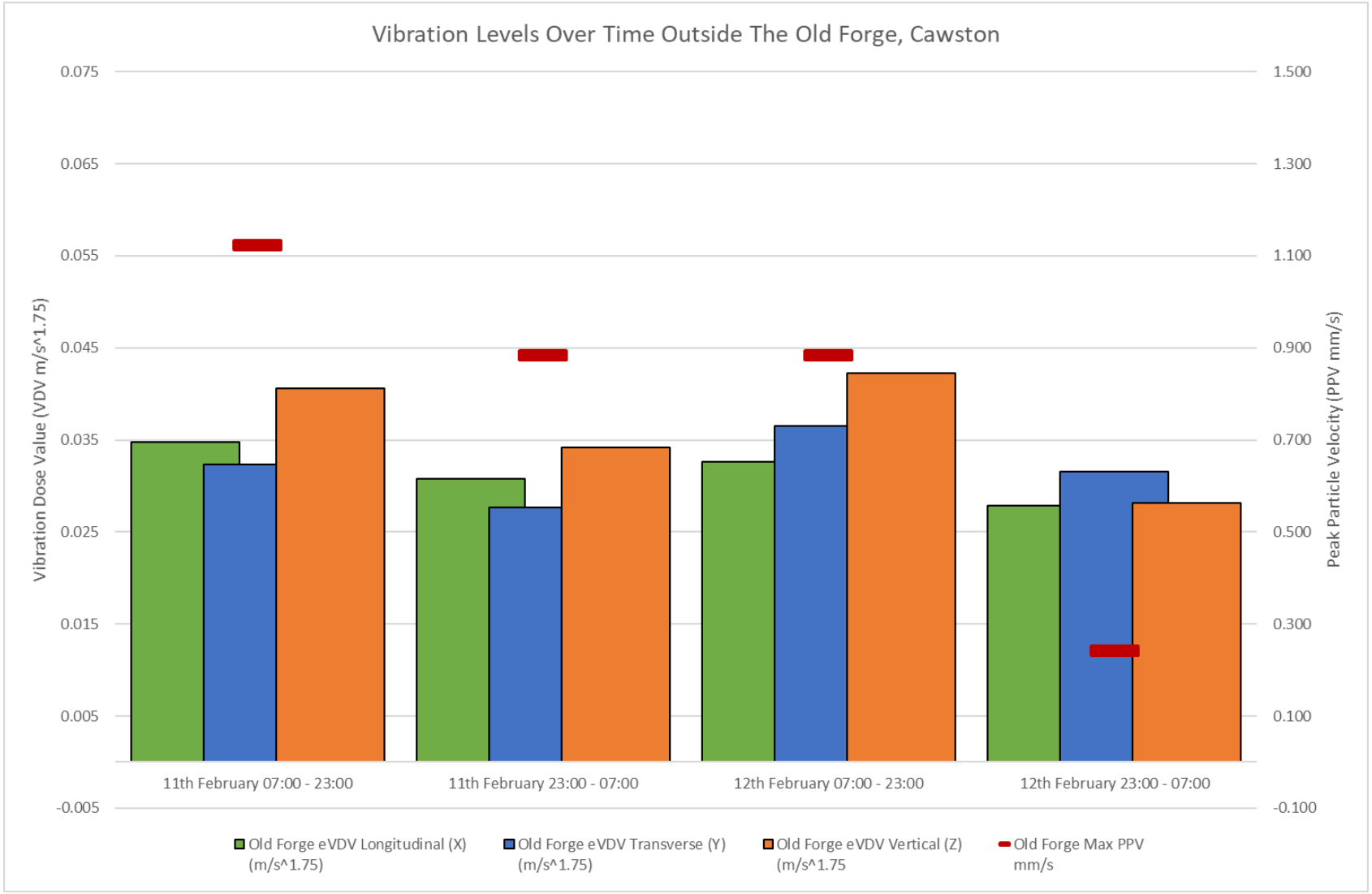
Whitehouse Farm, Cawston – 12th February 2019 Day Time Hours



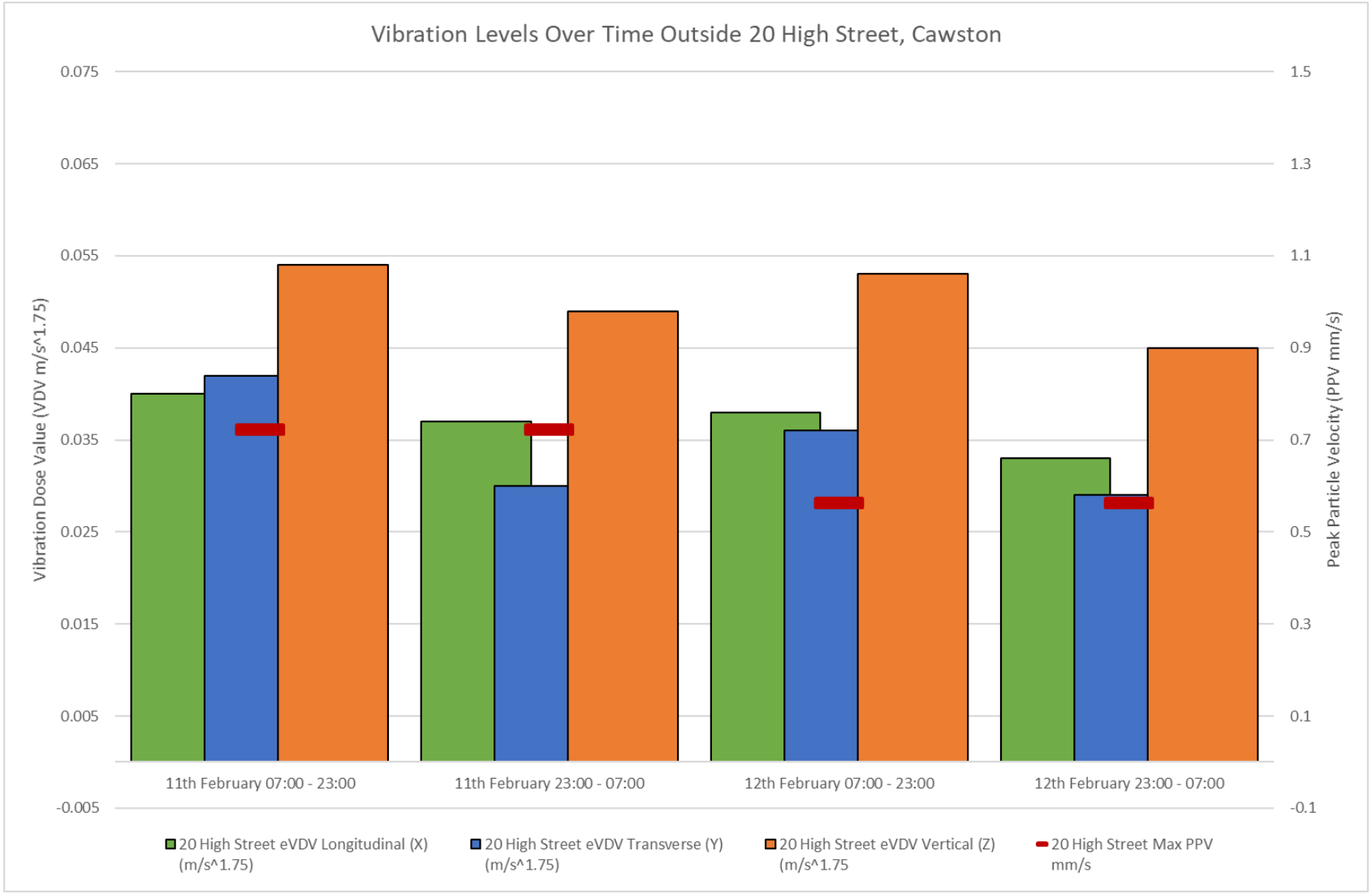
Whitehouse Farm, Cawston – 12th February 2019 Night Time Hours



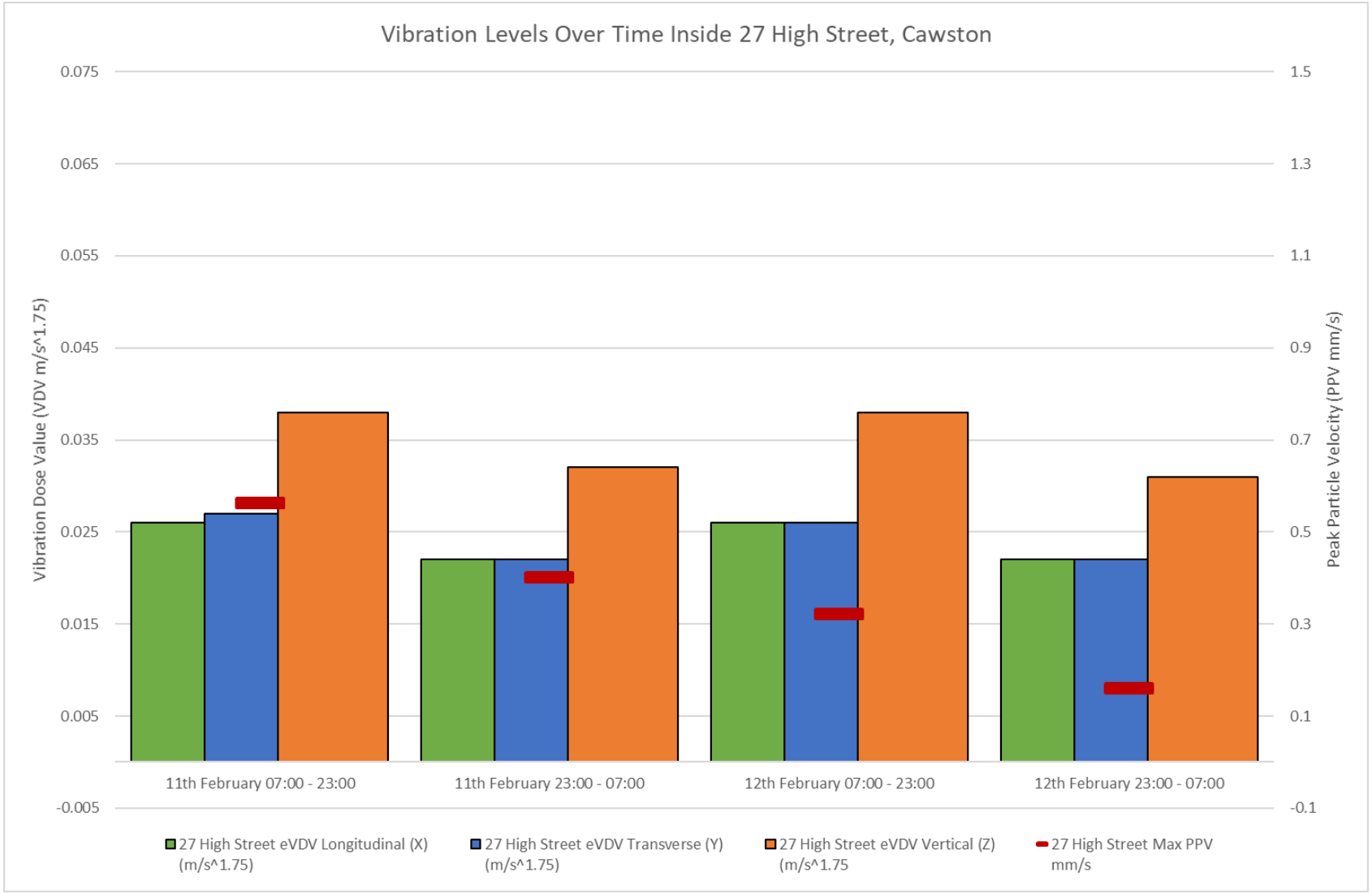
The Old Forge, Cawston – Overall Vibration over Time



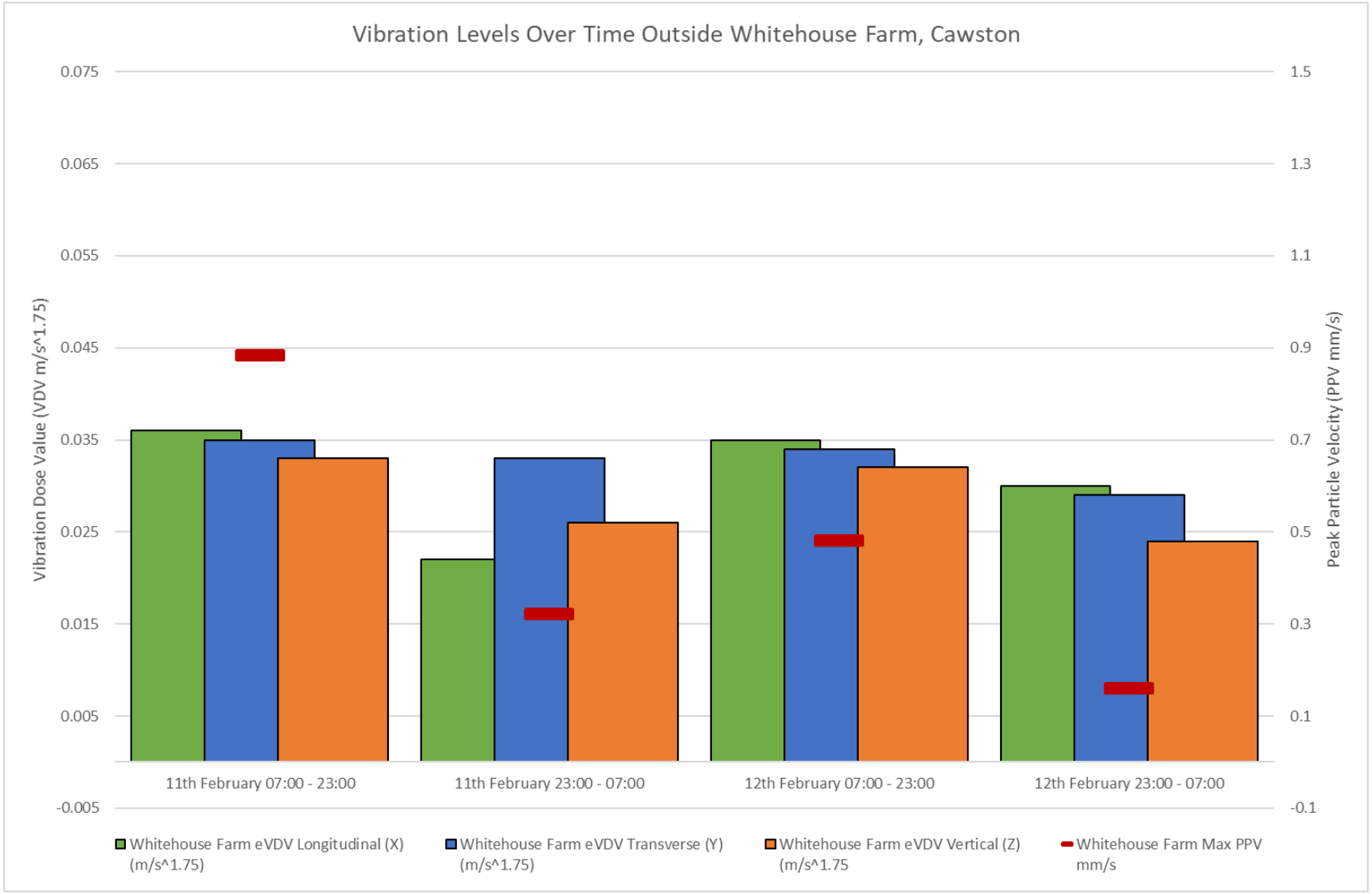
20 High Street, Cawston – Overall Vibration over Time



27 Hight Street, Cawston – Overall Vibration over Time



Whitehouse Farm, Cawston – Overall Vibration over Time



Annex D - SEL Calculations For All Properties

The Old Forge, Cawston

HGV	Date	Start Time	End Time	Duration (s)	SEL	LAeq,T	LA(Max)
HGV	11/02/2019	16:03:59	16:04:16	18.00	85.4	72.8	83.0
HGV	11/02/2019	16:07:51	16:08:07	17.00	78.4	66.1	72.8
HGV	11/02/2019	16:09:28	16:10:11	44.00	85.4	69.0	83.1
HGV	11/02/2019	16:11:14	16:11:39	26.00	80.1	66.0	75.1
HGV	11/02/2019	16:20:47	16:21:14	28.00	78.2	63.8	75.2
HGV	11/02/2019	16:33:23	16:33:54	32.00	77.8	62.7	70.1
HGV	11/02/2019	16:34:29	16:35:06	38.00	81.5	65.7	80.1
HGV	11/02/2019	16:41:57	16:42:26	30.00	82.3	67.5	79.5
HGV	11/02/2019	16:44:20	16:44:47	28.00	79.7	65.2	73.7
HGV	11/02/2019	16:45:09	16:45:45	37.00	78.5	62.8	73.2
HGV	11/02/2019	16:47:42	16:48:05	24.00	80.2	66.4	76.7
HGV	11/02/2019	16:50:16	16:50:52	37.00	82.0	66.3	73.4
HGV	11/02/2019	16:53:43	16:54:28	46.00	85.0	68.4	76.0
HGV	11/02/2019	16:58:09	16:58:38	30.00	81.3	66.5	73.8
HGV	12/02/2019	10:03:52	10:04:16	25.00	80.9	66.9	73.9
HGV	12/02/2019	10:09:11	10:09:30	20.00	79.4	66.4	75.6
HGV	12/02/2019	10:11:08	10:11:39	32.00	82.0	66.9	77.8
HGV	12/02/2019	10:11:55	10:12:33	39.00	83.9	68.0	73.6
HGV	12/02/2019	10:12:50	10:13:03	14.00	79.5	68.0	74.1
HGV	12/02/2019	10:13:06	10:13:17	12.00	79.1	68.4	74.5
HGV	12/02/2019	10:13:23	10:13:40	18.00	80.1	67.5	74.3
HGV	12/02/2019	10:13:57	10:14:27	31.00	80.1	65.2	73.6
HGV	12/02/2019	10:15:32	10:16:16	45.00	80.9	64.4	73.3
HGV	12/02/2019	10:18:05	10:18:36	32.00	80.3	65.2	72.5
HGV	12/02/2019	10:26:16	10:26:47	32.00	80.3	65.2	72.0
HGV	12/02/2019	10:28:26	10:28:49	24.00	77.9	64.1	76.0
HGV	12/02/2019	10:32:50	10:33:14	25.00	82.2	68.3	76.2
HGV	12/02/2019	10:40:23	10:40:56	34.00	85.4	70.1	82.6
HGV	12/02/2019	10:52:01	10:52:27	27.00	83.4	69.1	79.6
HGV	12/02/2019	10:58:58	10:59:24	27.00	78.3	64.0	72.7
HGV	12/02/2019	10:07:09	10:07:52	44.00	82.4	65.9	74.4
HGV	12/02/2019	10:22:48	10:23:02	15.00	80.5	68.8	77.3
HGV	12/02/2019	10:23:08	10:23:31	24.00	79.8	66.0	74.5
HGV	12/02/2019	10:38:35	10:39:01	27.00	79.9	65.6	72.9
HGV	12/02/2019	10:34:32	10:34:54	23.00	79.6	66.0	72.1
HGV	12/02/2019	10:56:06	10:56:29	24.00	80.5	66.7	75.2
				Average	**80.9**	**66.6**	**75.4**
				Max	**85.4**	**72.8**	**83.1**

20 High Street, Cawston

HGV	Date	Start Time	End Time	Duration (s)	SEL	LAeq,T	LA(Max)
HGV	11/02/2019	16:03:16	16:03:34	00:00:18	78.5	65.7	73.7
HGV	11/02/2019	16:08:05	16:08:22	00:00:17	79.9	67.4	75.7
HGV	11/02/2019	16:09:44	16:10:00	00:00:16	85.7	73.4	83.1
HGV	11/02/2019	16:10:01	16:10:20	00:00:19	80.8	67.8	74
HGV	11/02/2019	16:11:25	16:11:54	00:00:29	82.4	67.7	77.9
HGV	11/02/2019	16:15:01	16:15:16	00:00:15	79.3	67.3	73.8
HGV	11/02/2019	16:15:26	16:15:40	00:00:14	77.6	65.9	72.2
HGV	11/02/2019	16:16:03	16:16:17	00:00:14	80.9	69.2	73.5
HGV	11/02/2019	16:21:06	16:21:23	00:00:17	80.4	67.8	77.3
HGV	11/02/2019	16:21:39	16:21:54	00:00:15	84.1	72	82.4
HGV	11/02/2019	16:25:42	16:26:05	00:00:23	83.4	69.6	75.6
HGV	11/02/2019	16:26:36	16:26:52	00:00:16	80.3	68	79.3
HGV	11/02/2019	16:27:11	16:27:44	00:00:33	81.7	66.4	73
HGV	11/02/2019	16:29:40	16:29:51	00:00:11	80.4	69.6	78.5
HGV	11/02/2019	16:32:19	16:32:39	00:00:20	80.3	67.1	76.2
HGV	11/02/2019	16:33:41	16:34:01	00:00:20	80.1	66.8	72.6
HGV	11/02/2019	16:34:46	16:35:04	00:00:18	82	69.2	80.5
HGV	11/02/2019	16:38:14	16:38:36	00:00:22	81.6	68	73.7
HGV	11/02/2019	16:41:02	16:41:22	00:00:20	82.4	69.2	75.1
HGV	11/02/2019	16:41:27	16:41:48	00:00:21	80.2	66.8	74.7
HGV	11/02/2019	16:42:16	16:42:33	00:00:17	84	71.4	83
HGV	11/02/2019	16:43:18	16:43:36	00:00:18	80.2	67.4	76.8
HGV	11/02/2019	16:45:28	16:45:56	00:00:28	80.1	65.5	75.2
HGV	11/02/2019	16:47:18	16:47:39	00:00:21	83.2	69.8	75.4
HGV	11/02/2019	16:47:58	16:48:13	00:00:15	81.5	69.5	80.1
HGV	11/02/2019	16:48:24	16:48:47	00:00:23	84.5	70.6	80
HGV	11/02/2019	16:49:28	16:49:58	00:00:30	81.3	66.4	74
HGV	11/02/2019	16:54:12	16:54:42	00:00:30	86.7	71.8	80.1
HGV	11/02/2019	16:55:39	16:56:10	00:00:31	83.6	68.6	75.6
HGV	11/02/2019	16:57:43	16:58:05	00:00:22	83.3	69.7	80
HGV	11/02/2019	16:58:25	16:58:46	00:00:21	83.3	69.9	77.3
HGV	12/02/2019	10:04:08	10:04:44	00:00:36	84.3	68.6	77
HGV	12/02/2019	10:05:12	10:05:40	00:00:28	81.1	66.4	75.2
HGV	12/02/2019	10:07:42	10:07:58	00:00:16	81.2	68.9	76.3
HGV	12/02/2019	10:11:22	10:11:49	00:00:27	85.3	70.8	84.3
HGV	12/02/2019	10:12:11	10:12:43	00:00:32	86.5	71.3	77.4
HGV	12/02/2019	10:13:20	10:13:54	00:00:34	85.9	70.5	78.6
HGV	12/02/2019	10:14:23	10:14:35	00:00:12	78.2	67	75.3
HGV	12/02/2019	10:15:45	10:16:03	00:00:18	81.5	68.7	76.3
HGV	12/02/2019	10:17:45	10:18:01	00:00:16	78.1	65.8	75.5
HGV	12/02/2019	10:18:16	10:18:44	00:00:28	82.9	68.2	75.3
HGV	12/02/2019	10:23:23	10:23:48	00:00:25	82.4	68.2	78.6
HGV	12/02/2019	10:26:32	10:26:58	00:00:26	81.9	67.6	75.9

HGV	Date	Start Time	End Time	Duration (s)	SEL	LAeq,T	LA(Max)
HGV	12/02/2019	10:27:12	10:27:28	00:00:16	79.3	67	76.3
HGV	12/02/2019	10:33:02	10:33:26	00:00:24	84.4	70.4	79.5
HGV	12/02/2019	10:34:46	10:35:07	00:00:21	81.5	68.1	75
HGV	12/02/2019	10:35:08	10:35:28	00:00:20	81.1	67.9	73.9
HGV	12/02/2019	10:37:27	10:37:44	00:00:17	81	68.5	74.6
HGV	12/02/2019	10:38:50	10:39:14	00:00:24	81.9	68	76.9
HGV	12/02/2019	10:40:09	10:40:24	00:00:15	79.3	67.3	76.2
HGV	12/02/2019	10:40:37	10:41:11	00:00:34	87.4	72	84.2
HGV	12/02/2019	10:48:02	10:48:34	00:00:32	82.5	67.3	74.9
HGV	12/02/2019	10:51:38	10:51:55	00:00:17	80.3	67.8	82.9
HGV	12/02/2019	10:52:12	10:52:58	00:00:46	86.5	69.8	81.9
HGV	12/02/2019	10:57:05	10:57:32	00:00:27	80.6	66.1	74.7
HGV	12/02/2019	10:59:07	10:59:36	00:00:29	80.5	65.8	76.1
				Average	**82.0**	**68.5**	**77.0**
				Max	**87.4**	**73.4**	**84.3**

27 High Street, Cawston

HGV	Date	Start Time	End Time	Duration (s)	SEL	LAeq,T	LA(Max)
HGV	11/02/2019	16:03:03	16:03:38	00:00:35	85.4	69.8	78.3
HGV	11/02/2019	16:07:51	16:08:10	00:00:19	78.1	65.1	74.8
HGV	11/02/2019	16:09:37	16:09:55	00:00:18	80.2	67.5	78.2
HGV	11/02/2019	16:09:56	16:10:15	00:00:19	80.2	67.2	76.2
HGV	11/02/2019	16:10:50	16:11:16	00:00:26	89.9	75.6	87.2
HGV	11/02/2019	16:15:06	16:15:32	00:00:26	78.6	64.3	76.7
HGV	11/02/2019	16:15:57	16:16:24	00:00:27	79.3	64.8	74.3
HGV	11/02/2019	16:21:47	16:22:13	00:00:26	82.7	68.4	79
HGV	11/02/2019	16:22:14	16:22:37	00:00:23	87.1	73.3	84.4
HGV	11/02/2019	16:25:37	16:25:59	00:00:22	81.8	68.1	78
HGV	11/02/2019	16:26:37	16:26:55	00:00:18	83	70.2	79.4
HGV	11/02/2019	16:27:05	16:27:26	00:00:21	84.1	70.7	80.8
HGV	11/02/2019	16:32:29	16:32:48	00:00:19	78.3	65.3	76.9
HGV	11/02/2019	16:34:26	16:35:00	00:00:34	80.7	65.3	73.9
HGV	11/02/2019	16:38:49	16:39:08	00:00:19	82.9	69.9	77.6
HGV	11/02/2019	16:41:09	16:41:33	00:00:24	80.7	66.7	76.8
HGV	11/02/2019	16:41:34	16:41:59	00:00:25	84.5	70.3	81.3
HGV	11/02/2019	16:43:10	16:43:28	00:00:18	87.9	75.1	85.7
HGV	11/02/2019	16:45:10	16:45:34	00:00:24	83.5	69.5	78.1
HGV	11/02/2019	16:47:46	16:48:15	00:00:29	85.2	70.4	78.5
HGV	11/02/2019	16:48:32	16:48:45	00:00:13	84.6	73.1	85.2
HGV	11/02/2019	16:49:11	16:49:22	00:00:11	77.3	66.5	74.7
HGV	11/02/2019	16:55:01	16:55:30	00:00:29	88.1	73.3	81.8
HGV	11/02/2019	16:56:37	16:57:04	00:00:27	82.2	67.7	75.2
HGV	11/02/2019	16:58:32	16:58:58	00:00:26	84.3	70	79.6
HGV	12/02/2019	10:05:05	10:05:22	00:00:17	80.8	68.3	73.7
HGV	12/02/2019	10:06:12	10:06:23	00:00:11	80.1	69.3	77.1
HGV	12/02/2019	10:07:35	10:07:53	00:00:18	82.6	69.8	81.9
HGV	12/02/2019	10:08:34	10:08:46	00:00:12	80.7	69.6	77
HGV	12/02/2019	10:10:12	10:10:37	00:00:25	80.3	66.1	76.9
HGV	12/02/2019	10:13:08	10:13:34	00:00:26	85.7	71.4	78.3
HGV	12/02/2019	10:14:10	10:14:26	00:00:16	83.3	71	77.3
HGV	12/02/2019	10:18:30	10:18:52	00:00:22	82.8	69.2	81.1
HGV	12/02/2019	10:19:09	10:19:43	00:00:34	82.9	67.5	75.9
HGV	12/02/2019	10:23:32	10:23:53	00:00:21	82.5	69.1	78.1
HGV	12/02/2019	10:27:30	10:27:48	00:00:18	86.2	73.4	84.4
HGV	12/02/2019	10:34:11	10:34:44	00:00:33	90.5	75.2	85.8
HGV	12/02/2019	10:36:01	10:36:17	00:00:16	87.9	75.6	83.5
HGV	12/02/2019	10:37:58	10:38:22	00:00:24	82.7	68.8	75.5
HGV	12/02/2019	10:39:22	10:39:46	00:00:24	83.8	69.8	79.1
HGV	12/02/2019	10:41:01	10:41:30	00:00:29	88.3	73.5	82.9
HGV	12/02/2019	10:47:58	10:48:18	00:00:20	80.6	67.4	74.8
HGV	12/02/2019	10:49:01	10:49:23	00:00:22	80.9	67.3	75.5

HGV	Date	Start Time	End Time	Duration (s)	SEL	LAeq,T	LA(Max)
HGV	12/02/2019	10:53:08	10:53:42	00:00:34	89.4	74	84.7
HGV	12/02/2019	10:56:02	10:56:19	00:00:17	80.7	68.1	76.1
HGV	12/02/2019	10:57:55	10:58:26	00:00:31	81.3	66.2	78.5
				Average	**83.1**	**69.5**	**78.9**
				Max	**90.5**	**75.6**	**87.2**

Whitehouse Farm, Cawston

HGV	Date	Start Time	End Time	Duration (s)	SEL	LAeq,T	LA(Max)
HGV	11/02/2019	16:03:29	16:04:00	00:00:31	83.7	68.7	74.5
HGV	11/02/2019	16:10:15	16:10:35	00:00:20	79.9	66.7	73.3
HGV	11/02/2019	16:11:06	16:11:15	00:00:09	85.8	75.8	85.1
HGV	11/02/2019	16:12:30	16:13:00	00:00:30	82.5	67.5	74.9
HGV	11/02/2019	16:17:11	16:17:23	00:00:12	82.2	71	75.7
HGV	11/02/2019	16:18:06	16:18:26	00:00:20	78.8	65.6	73
HGV	11/02/2019	16:21:55	16:22:07	00:00:12	84.3	73.2	83.4
HGV	11/02/2019	16:22:15	16:22:28	00:00:13	81.4	69.9	76.8
HGV	11/02/2019	16:22:31	16:22:43	00:00:12	84.7	73.6	82
HGV	11/02/2019	16:26:44	16:26:56	00:00:12	77.3	66.2	75.5
HGV	11/02/2019	16:26:58	16:27:10	00:00:12	79.1	68	75.3
HGV	11/02/2019	16:27:40	16:27:54	00:00:14	80.8	69	76
HGV	11/02/2019	16:28:21	16:28:44	00:00:23	83	69.2	77.2
HGV	11/02/2019	16:34:38	16:35:03	00:00:25	79.2	65.1	73.1
HGV	11/02/2019	16:35:06	16:35:21	00:00:15	84.1	72	86
HGV	11/02/2019	16:36:59	16:37:27	00:00:28	81.4	66.8	75.5
HGV	11/02/2019	16:38:35	16:38:52	00:00:17	80.7	68.2	76
HGV	11/02/2019	16:39:25	16:39:37	00:00:12	77.6	66.5	72.9
HGV	11/02/2019	16:40:11	16:40:25	00:00:14	79	67.3	75.5
HGV	11/02/2019	16:42:23	16:42:42	00:00:19	79.8	66.8	74.9
HGV	11/02/2019	16:43:25	16:43:41	00:00:16	83.7	71.4	81.4
HGV	11/02/2019	16:44:58	16:45:17	00:00:19	81.8	68.7	76.7
HGV	11/02/2019	16:47:42	16:47:59	00:00:17	82.2	69.6	74.5
HGV	11/02/2019	16:48:40	16:48:58	00:00:18	80.7	68	73.6
HGV	11/02/2019	16:54:21	16:54:38	00:00:17	81.4	68.9	75.1
HGV	11/02/2019	16:55:12	16:55:37	00:00:25	86.7	72.6	81.1
HGV	11/02/2019	16:56:52	16:57:13	00:00:21	82.6	69.1	76.7
HGV	11/02/2019	16:58:23	16:58:47	00:00:24	81.6	67.6	73.9
HGV	12/02/2019	10:02:23	10:02:50	00:00:27	82.1	67.7	76.2
HGV	12/02/2019	10:04:11	10:04:31	00:00:20	82.3	69.1	76
HGV	12/02/2019	10:12:21	10:12:40	00:00:19	81.6	68.5	74.8
HGV	12/02/2019	10:12:58	10:13:13	00:00:15	77.9	65.9	74.2
HGV	12/02/2019	10:14:18	10:14:37	00:00:19	82.7	69.7	77.8
HGV	12/02/2019	10:18:14	10:18:33	00:00:19	85.9	72.9	82.9
HGV	12/02/2019	10:20:57	10:21:36	00:00:39	85.7	69.7	83.1
HGV	12/02/2019	10:22:14	10:22:28	00:00:14	78	66.2	74.3
HGV	12/02/2019	10:23:07	10:23:24	00:00:17	77.5	65	74
HGV	12/02/2019	10:23:50	10:24:06	00:00:16	79.3	67	76.2
HGV	12/02/2019	10:27:43	10:27:58	00:00:15	80.8	68.8	77.4
HGV	12/02/2019	10:28:56	10:29:12	00:00:16	78.6	66.3	75.3
HGV	12/02/2019	10:33:29	10:33:41	00:00:12	75.9	64.7	71.1
HGV	12/02/2019	10:34:42	10:34:59	00:00:17	87.3	74.7	85

HGV	Date	Start Time	End Time	Duration (s)	SEL	LAeq,T	LA(Max)
HGV	12/02/2019	10:35:37	10:35:53	00:00:16	84.8	72.5	83
HGV	12/02/2019	10:36:13	10:36:32	00:00:19	81.1	68.1	77.9
HGV	12/02/2019	10:37:30	10:38:03	00:00:33	84	68.7	77.9
HGV	12/02/2019	10:40:45	10:41:18	00:00:33	86.9	71.6	86.7
HGV	12/02/2019	10:42:28	10:42:58	00:00:30	81.1	66.2	76.4
HGV	12/02/2019	10:44:22	10:44:37	00:00:15	79.5	67.5	74.8
HGV	12/02/2019	10:48:14	10:48:29	00:00:15	81.1	69.1	75.4
HGV	12/02/2019	10:49:13	10:49:31	00:00:18	81	68.2	76.1
HGV	12/02/2019	10:49:33	10:49:44	00:00:11	77.7	66.9	73.4
HGV	12/02/2019	10:57:18	10:57:44	00:00:26	81.2	66.9	76.9
				Average	**81.5**	**68.7**	**77.0**
				Max	**87.3**	**75.8**	**86.7**

Annex E - Traffic Flow Data From ATC

Unit 1 (Outside Village Hall) East Bound

11 February 2019

Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Mean	Vpp 85	SD
0000	0	0	0	0	0	0	0	0	0	0	0	-	-	-
0100	2	0	0	0	2	0	0	0	0	0	0	31.4	-	2.8
0200	0	0	0	0	0	0	0	0	0	0	0	-	-	-
0300	0	0	0	0	0	0	0	0	0	0	0	-	-	-
0400	6	0	6	0	0	0	0	0	0	0	0	28.1	-	2.9
0500	26	0	22	0	4	0	0	0	0	0	0	28.2	30.8	3.9
0600	105	0	89	0	16	0	0	0	0	0	0	26.1	30	3.6
0700	131	1	116	0	12	0	0	0	1	0	1	24.5	28.1	3.6
0800	93	3	80	1	8	0	0	0	1	0	0	24.9	27.9	3.4
0900	73	0	61	1	9	1	0	0	0	0	1	24.1	28.6	4.4
1000	82	0	67	2	11	1	0	0	1	0	0	23.8	28	4.4
1100	66	0	63	0	2	1	0	0	0	0	0	25.3	28.3	3.4
1200	74	1	64	1	8	0	0	0	0	0	0	24.9	29.1	3.9
1300	67	1	56	0	10	0	0	0	0	0	0	24.6	29.6	4.7
1400	114	0	101	1	11	0	1	0	0	0	0	24.6	28.5	4.2
1500	104	1	97	0	5	0	1	0	0	0	0	25.3	28.8	3.3
1600	100	1	90	1	8	0	0	0	0	0	0	25.1	29	3.8
1700	53	0	47	0	6	0	0	0	0	0	0	24.9	28.2	3.8
1800	31	0	28	0	3	0	0	0	0	0	0	27.6	31.5	3
1900	31	0	29	1	1	0	0	0	0	0	0	27.2	31.1	3.5
2000	21	0	20	0	1	0	0	0	0	0	0	25.5	30.6	3.4
2100	4	0	4	0	0	0	0	0	0	0	0	24.4	-	1.4
2200	3	0	3	0	0	0	0	0	0	0	0	24.7	-	2
2300	2	0	0	0	2	0	0	0	0	0	0	32.2	-	2.4
00-07	**139**	**0**	**117**	**0**	**22**	**0**	**0**	**0**	**0**	**0**	**0**	**26.7**	**30.4**	**3.8**
07-19	**988**	**8**	**870**	**7**	**93**	**3**	**2**	**0**	**3**	**0**	**2**	**24.8**	**28.6**	**3.9**
19-00	**61**	**0**	**56**	**1**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**26.5**	**30.9**	**3.5**
00-00	**1188**	**8**	**1043**	**8**	**119**	**3**	**2**	**0**	**3**	**0**	**2**	**25.1**	**29**	**3.9**

12 February 2019

Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Mean	Vpp 85	SD
0000	0	0	0	0	0	0	0	0	0	0	0	-	-	-
0100	2	0	1	0	1	0	0	0	0	0	0	28.9	-	0
0200	3	0	0	0	3	0	0	0	0	0	0	30.8	-	5.2
0300	3	0	2	0	1	0	0	0	0	0	0	29.2	-	4.8
0400	10	0	7	0	2	0	1	0	0	0	0	29.4	-	3.5
0500	22	1	17	0	3	0	0	0	0	0	1	26.3	32.9	4.6
0600	109	1	95	1	12	0	0	0	0	0	0	26.3	29.4	3.5
0700	161	0	141	0	18	1	0	0	0	0	1	24.7	28.4	4
0800	79	1	69	1	7	0	1	0	0	0	0	25.5	28.8	3.4
0900	98	1	87	0	7	1	0	1	0	0	1	24.9	28.4	3.5
1000	71	0	59	2	10	0	0	0	0	0	0	24.7	28.2	4
1100	92	0	82	0	9	0	1	0	0	0	0	24.7	27.9	3.2
1200	76	1	68	0	5	1	0	0	0	1	0	25	28.5	3.7
1300	83	2	72	0	9	0	0	0	0	0	0	25.3	28.4	3.3
1400	109	0	98	0	10	0	0	0	1	0	0	24.6	27.9	3.3
1500	109	0	95	1	12	0	0	1	0	0	0	24.5	28.7	3.5
1600	108	1	100	0	7	0	0	0	0	0	0	25	28.1	3.1
1700	62	0	56	3	3	0	0	0	0	0	0	26.1	29	3
1800	38	0	36	0	2	0	0	0	0	0	0	25.7	29.6	3.6
1900	31	0	29	0	2	0	0	0	0	0	0	25.5	29.6	4.1
2000	12	0	12	0	0	0	0	0	0	0	0	26.1	29.5	4.1
2100	16	0	15	0	1	0	0	0	0	0	0	25.8	30.3	3.9
2200	1	0	1	0	0	0	0	0	0	0	0	27.7	-	-
2300	1	0	1	0	0	0	0	0	0	0	0	21.1	-	-
00-07	**149**	**2**	**122**	**1**	**22**	**0**	**1**	**0**	**0**	**0**	**1**	**26.7**	**30.2**	**3.8**
07-19	**1086**	**6**	**963**	**7**	**99**	**3**	**2**	**2**	**1**	**1**	**2**	**25**	**28.4**	**3.5**
19-00	**61**	**0**	**58**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**25.7**	**29.4**	**3.9**
00-00	**1296**	**8**	**1143**	**8**	**124**	**3**	**3**	**2**	**1**	**1**	**3**	**25.2**	**28.6**	**3.6**

13 February 2019

Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Mean	Vpp 85	SD
0000	1	0	0	0	1	0	0	0	0	0	0	26	-	-
0100	3	0	1	0	2	0	0	0	0	0	0	32.3	-	4.1
0200	1	0	0	0	1	0	0	0	0	0	0	23.8	-	-
0300	2	0	2	0	0	0	0	0	0	0	0	27	-	5.7
0400	6	0	5	0	1	0	0	0	0	0	0	28.2	-	2.2
0500	22	0	20	0	2	0	0	0	0	0	0	28.4	33.2	3.9
0600	100	1	90	0	9	0	0	0	0	0	0	26.4	29.6	3.1
0700	127	1	114	0	12	0	0	0	0	0	0	25.2	29.2	4.2
0800	100	0	92	0	7	1	0	0	0	0	0	24.2	28.4	4.2
0900	81	0	70	0	10	0	1	0	0	0	0	23.4	27	4.1
1000	82	0	73	0	8	0	0	0	1	0	0	24.5	28.3	4.2
1100	82	0	70	1	11	0	0	0	0	0	0	24.7	27.8	3.4
1200	75	1	67	2	5	0	0	0	0	0	0	25.6	28.3	2.9
1300	102	1	86	0	14	0	1	0	0	0	0	25.3	28.5	3.3
1400	120	0	104	0	16	0	0	0	0	0	0	26.1	29.6	3.3
1500	121	1	114	0	6	0	0	0	0	0	0	25.8	29.3	3.7
1600	109	0	100	0	9	0	0	0	0	0	0	25.1	28.8	3.4
1700	75	0	70	0	5	0	0	0	0	0	0	26.2	29.8	3.3
1800	47	0	46	0	1	0	0	0	0	0	0	26.6	30.5	3.6
1900	39	0	37	0	2	0	0	0	0	0	0	27	30	3.4
2000	31	0	30	0	1	0	0	0	0	0	0	27.1	30.4	3.6
2100	10	0	10	0	0	0	0	0	0	0	0	28.3	-	3.6
2200	4	0	3	0	1	0	0	0	0	0	0	29.7	-	3.7
2300	2	0	2	0	0	0	0	0	0	0	0	24.6	-	4.9
00-07	**135**	**1**	**118**	**0**	**16**	**0**	**0**	**0**	**0**	**0**	**0**	**26.9**	**30.1**	**3.4**
07-19	**1121**	**4**	**1006**	**3**	**104**	**1**	**2**	**0**	**1**	**0**	**0**	**25.2**	**28.8**	**3.7**
19-00	**86**	**0**	**82**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**27.3**	**30.5**	**3.6**
00-00	**1342**	**5**	**1206**	**3**	**124**	**1**	**2**	**0**	**1**	**0**	**0**	**25.5**	**29.1**	**3.8**

14 February 2019

Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Mean	Vpp 85	SD
0000	1	0	0	0	1	0	0	0	0	0	0	37.9	-	-
0100	3	0	3	0	0	0	0	0	0	0	0	30.2	-	3.8
0200	1	0	1	0	0	0	0	0	0	0	0	30.7	-	-
0300	3	0	2	0	1	0	0	0	0	0	0	32.2	-	3.5
0400	9	0	6	0	3	0	0	0	0	0	0	26.7	-	1.7
0500	33	0	30	0	3	0	0	0	0	0	0	26.7	30.7	4
0600	100	0	86	1	12	0	0	0	1	0	0	26.5	30.6	3.9
0700	156	2	132	2	19	0	0	0	1	0	0	24.3	29	4.9
0800	96	0	78	4	13	0	0	0	0	1	0	25	28.5	3.5
0900	87	0	76	0	9	1	1	0	0	0	0	25.1	28.9	3.9
1000	81	0	71	1	8	0	0	0	0	1	0	25.5	28.1	3.3
1100	89	0	76	1	10	1	1	0	0	0	0	24.3	27.7	3.1
1200	104	0	98	0	5	0	0	0	1	0	0	25	27.5	2.9
1300	81	0	70	0	10	0	0	0	0	0	1	24.5	29.5	4.5
1400	108	1	95	0	12	0	0	0	0	0	0	25.4	28.2	3.1
1500	104	1	95	1	7	0	0	0	0	0	0	25.7	29.7	4.3
1600	115	0	108	0	6	0	0	0	0	1	0	25.3	28.8	3.6
1700	65	0	62	1	2	0	0	0	0	0	0	26.1	30	3.8
1800	45	0	44	0	1	0	0	0	0	0	0	25.9	29.7	3.3
1900	29	0	28	0	1	0	0	0	0	0	0	26.9	30.1	3.2
2000	20	0	20	0	0	0	0	0	0	0	0	26	29.2	2.9
2100	21	0	19	0	2	0	0	0	0	0	0	24.7	29.6	5
2200	6	0	6	0	0	0	0	0	0	0	0	26.5	-	5
2300	2	0	2	0	0	0	0	0	0	0	0	28	-	0.2
00-07	**150**	**0**	**128**	**1**	**20**	**0**	**0**	**0**	**1**	**0**	**0**	**26.8**	**30.8**	**4**
07-19	**1131**	**4**	**1005**	**10**	**102**	**2**	**2**	**0**	**2**	**3**	**1**	**25.1**	**28.7**	**3.8**
19-00	**78**	**0**	**75**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**26.1**	**29.3**	**3.9**
00-00	**1359**	**4**	**1208**	**11**	**125**	**2**	**2**	**0**	**3**	**3**	**1**	**25.3**	**29**	**3.9**

15 February 2019

Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Mean	Vpp 85	SD
0000	1	0	1	0	0	0	0	0	0	0	0	26.2	-	-
0100	3	0	2	0	1	0	0	0	0	0	0	28.9	-	5.8
0200	5	0	4	0	1	0	0	0	0	0	0	26.4	-	2.1
0300	3	0	0	0	3	0	0	0	0	0	0	27.6	-	4.4
0400	8	0	8	0	0	0	0	0	0	0	0	29.4	-	5.9
0500	26	0	21	0	5	0	0	0	0	0	0	27.2	32.1	3.6
0600	87	0	77	1	8	0	0	0	0	0	1	27.2	30	3.3
0700	146	1	126	0	15	1	0	0	0	0	3	24.3	28.4	3.9
0800	95	1	81	1	10	0	1	0	1	0	0	25.3	28.4	2.9
0900	83	1	73	1	8	0	0	0	0	0	0	25.9	29.6	3.5
1000	85	0	79	0	6	0	0	0	0	0	0	25.3	29.7	3.6
1100	84	0	77	0	7	0	0	0	0	0	0	24	27.4	3.9
1200	73	0	67	1	5	0	0	0	0	0	0	23.7	28	4.5
1300	85	1	80	0	4	0	0	0	0	0	0	25.5	28.9	3.4
1400	110	1	96	0	13	0	0	0	0	0	0	25.3	28.7	3.6
1500	113	3	99	1	9	0	0	1	0	0	0	26	29.6	3.9
1600	92	1	82	2	5	0	0	0	1	0	1	24.7	28.4	4.3
1700	64	2	57	0	5	0	0	0	0	0	0	27.1	30.3	3.1
1800	48	0	45	1	2	0	0	0	0	0	0	27.2	31.7	3.5
1900	30	0	28	0	2	0	0	0	0	0	0	26.3	30.2	4.6
2000	22	1	21	0	0	0	0	0	0	0	0	26.4	32.1	5.2
2100	23	0	19	1	1	2	0	0	0	0	0	25.9	31.1	4.6
2200	8	1	7	0	0	0	0	0	0	0	0	25.3	-	3.9
2300	5	0	5	0	0	0	0	0	0	0	0	28.9	-	3.6
00-07	**133**	**0**	**113**	**1**	**18**	**0**	**0**	**0**	**0**	**0**	**1**	**27.3**	**30.5**	**3.6**
07-19	**1078**	**11**	**962**	**7**	**89**	**1**	**1**	**1**	**2**	**0**	**4**	**25.2**	**28.9**	**3.8**
19-00	**88**	**2**	**80**	**1**	**3**	**2**	**0**	**0**	**0**	**0**	**0**	**26.3**	**30.5**	**4.6**
00-00	**1299**	**13**	**1155**	**9**	**110**	**3**	**1**	**1**	**2**	**0**	**5**	**25.5**	**29.2**	**3.9**

16 February 2019

Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Mean	Vpp 85	SD
0000	1	0	1	0	0	0	0	0	0	0	0	30	-	-
0100	1	0	0	0	1	0	0	0	0	0	0	34.6	-	-
0200	0	0	0	0	0	0	0	0	0	0	0	-	-	-
0300	1	0	0	0	1	0	0	0	0	0	0	36.7	-	-
0400	3	0	2	0	1	0	0	0	0	0	0	30	-	1.4
0500	7	0	6	0	1	0	0	0	0	0	0	28.4	-	2.2
0600	22	0	19	0	3	0	0	0	0	0	0	26.8	30.7	3.1
0700	60	0	54	0	5	0	1	0	0	0	0	27.3	30.3	2.8
0800	68	1	60	1	6	0	0	0	0	0	0	26.7	29.7	2.8
0900	107	1	99	1	4	1	1	0	0	0	0	25.1	28.8	3.9
1000	109	3	100	2	4	0	0	0	0	0	0	25.9	29.3	4.2
1100	119	3	110	1	4	0	1	0	0	0	0	24.1	28	4.4
1200	97	1	94	0	2	0	0	0	0	0	0	25.4	28.8	3.4
1300	91	1	87	1	2	0	0	0	0	0	0	25.1	28.3	3.3
1400	69	1	61	0	7	0	0	0	0	0	0	26.5	29.7	3.7
1500	89	0	81	1	7	0	0	0	0	0	0	25.2	28.5	3
1600	61	1	58	0	1	0	0	0	1	0	0	24.8	28.3	3.3
1700	47	0	44	0	3	0	0	0	0	0	0	25.7	29.6	3.7
1800	31	1	29	0	1	0	0	0	0	0	0	25.4	30.2	3.6
1900	8	0	7	0	1	0	0	0	0	0	0	27.6	-	3.2
2000	17	0	17	0	0	0	0	0	0	0	0	26.1	30	3.1
2100	11	0	9	0	2	0	0	0	0	0	0	26.6	31.2	4.7
2200	8	0	8	0	0	0	0	0	0	0	0	23.6	-	6.5
2300	6	0	6	0	0	0	0	0	0	0	0	23.4	-	4.5
00-07	**35**	**0**	**28**	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**28**	**31.2**	**3.4**
07-19	**948**	**13**	**877**	**7**	**46**	**1**	**3**	**0**	**1**	**0**	**0**	**25.5**	**28.9**	**3.7**
19-00	**50**	**0**	**47**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**25.7**	**30.1**	**4.4**
00-00	**1033**	**13**	**952**	**7**	**56**	**1**	**3**	**0**	**1**	**0**	**0**	**25.6**	**29.2**	**3.7**

17 February 2019

Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Mean	Vpp 85	SD
0000	3	0	3	0	0	0	0	0	0	0	0	29.9	-	6.3
0100	1	0	1	0	0	0	0	0	0	0	0	26.4	-	-
0200	0	0	0	0	0	0	0	0	0	0	0	-	-	-
0300	2	0	2	0	0	0	0	0	0	0	0	33.4	-	3.1
0400	2	0	2	0	0	0	0	0	0	0	0	33	-	4.3
0500	1	0	1	0	0	0	0	0	0	0	0	27.9	-	-
0600	20	0	17	0	3	0	0	0	0	0	0	28.7	32	3
0700	26	1	25	0	0	0	0	0	0	0	0	26.8	29.6	2.8
0800	66	1	61	2	2	0	0	0	0	0	0	26.9	29.9	3
0900	119	0	114	0	5	0	0	0	0	0	0	25.3	28.7	3.8
1000	131	0	129	0	2	0	0	0	0	0	0	24.4	28	3.6
1100	125	0	119	2	4	0	0	0	0	0	0	25.2	28.2	3.6
1200	101	2	95	1	3	0	0	0	0	0	0	25.8	29	3.2
1300	82	1	77	0	3	0	1	0	0	0	0	24.5	28	3.8
1400	75	1	73	1	0	0	0	0	0	0	0	23.8	26.8	3.6
1500	67	1	62	1	3	0	0	0	0	0	0	25.1	28.3	3
1600	54	1	52	0	1	0	0	0	0	0	0	26.3	29.9	3.5
1700	36	0	33	0	2	1	0	0	0	0	0	25.8	29.6	3.8
1800	22	0	22	0	0	0	0	0	0	0	0	27.1	31.4	4
1900	17	0	15	0	1	1	0	0	0	0	0	27.8	32.5	3.9
2000	18	0	17	0	1	0	0	0	0	0	0	26.7	30.6	3.2
2100	10	0	10	0	0	0	0	0	0	0	0	29.1	-	3.7
2200	4	0	4	0	0	0	0	0	0	0	0	29.7	-	2.8
2300	2	0	1	0	1	0	0	0	0	0	0	27	-	2.3
00-07	**29**	**0**	**26**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**29.4**	**33.4**	**3.6**
07-19	**904**	**8**	**862**	**7**	**25**	**1**	**1**	**0**	**0**	**0**	**0**	**25.3**	**28.6**	**3.6**
19-00	**51**	**0**	**47**	**0**	**3**	**1**	**0**	**0**	**0**	**0**	**0**	**27.8**	**31.6**	**3.5**
00-00	**984**	**8**	**935**	**7**	**31**	**2**	**1**	**0**	**0**	**0**	**0**	**25.5**	**29**	**3.7**

Unit 1 (Outside Village Hall) West Bound

11 February 2019

Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Mean	Vpp 85	SD
0000	1	0	1	0	0	0	0	0	0	0	0	26.4	-	-
0100	3	0	2	0	1	0	0	0	0	0	0	29.9	-	5.2
0200	1	0	1	0	0	0	0	0	0	0	0	25.4	-	-
0300	2	0	1	0	1	0	0	0	0	0	0	33.2	-	4.5
0400	11	0	10	0	1	0	0	0	0	0	0	29	31.5	2.1
0500	22	0	20	0	2	0	0	0	0	0	0	29.6	33.1	3.2
0600	57	0	52	1	4	0	0	0	0	0	0	28.2	30.7	2.5
0700	115	1	102	0	10	1	0	0	1	0	0	27	30.2	3.6
0800	84	1	72	0	11	0	0	0	0	0	0	27.3	30.4	2.8
0900	79	1	71	0	4	2	1	0	0	0	0	26.4	29.8	4.2
1000	76	0	65	0	11	0	0	0	0	0	0	26.5	29.6	3.6
1100	83	2	71	1	6	1	0	0	2	0	0	25.8	29	3.4
1200	72	2	58	0	10	0	1	0	1	0	0	26.2	31	5.1
1300	88	0	70	0	17	1	0	0	0	0	0	26.3	29.6	3.8
1400	120	0	108	1	11	0	0	0	0	0	0	26.9	30.6	3.7
1500	110	0	99	0	11	0	0	0	0	0	0	28.3	31.9	3.3
1600	116	0	109	1	6	0	0	0	0	0	0	27.8	30.4	3.2
1700	87	1	79	0	7	0	0	0	0	0	0	27.3	31	4
1800	31	1	27	0	3	0	0	0	0	0	0	27.8	30.8	3.7
1900	21	0	21	0	0	0	0	0	0	0	0	27.5	30.4	3
2000	19	1	17	0	1	0	0	0	0	0	0	28.1	31.5	3
2100	18	0	18	0	0	0	0	0	0	0	0	27.4	30.8	3
2200	3	0	3	0	0	0	0	0	0	0	0	28.2	-	3.4
2300	4	0	4	0	0	0	0	0	0	0	0	28.5	-	4
00-07	**97**	**0**	**87**	**1**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**28.7**	**32**	**2.9**
07-19	**1061**	**9**	**931**	**3**	**107**	**5**	**2**	**0**	**4**	**0**	**0**	**27**	**30.5**	**3.8**
19-00	**65**	**1**	**63**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**27.7**	**30.6**	**3**
00-00	**1223**	**10**	**1081**	**4**	**117**	**5**	**2**	**0**	**4**	**0**	**0**	**27.2**	**30.6**	**3.7**

12 February 2019

Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Mean	Vpp 85	SD
0000	2	0	0	0	2	0	0	0	0	0	0	28.4	-	2.6
0100	1	0	1	0	0	0	0	0	0	0	0	28.9	-	-
0200	3	0	2	0	1	0	0	0	0	0	0	31.4	-	3.9
0300	1	0	1	0	0	0	0	0	0	0	0	34.9	-	-
0400	12	0	9	1	2	0	0	0	0	0	0	29.1	34	3.1
0500	23	0	20	0	2	0	0	0	0	1	0	28.7	32.1	3.3
0600	81	0	71	1	9	0	0	0	0	0	0	28.6	31.8	3.5
0700	146	0	125	0	19	1	1	0	0	0	0	27.4	30.9	3.8
0800	83	0	73	2	8	0	0	0	0	0	0	27.5	30.8	3.3
0900	73	0	64	1	7	0	0	0	0	0	1	26.2	29.7	3.7
1000	85	1	71	1	10	1	1	0	0	0	0	26.5	30.7	3.8
1100	84	1	70	0	12	0	0	0	1	0	0	27.4	30.4	3.1
1200	99	1	85	0	12	0	1	0	0	0	0	26.8	29.8	3.1
1300	83	0	69	3	10	0	0	0	0	0	1	26.4	29.9	3.7
1400	115	0	106	1	7	0	0	0	0	1	0	27.9	31.2	3.7
1500	118	0	103	0	12	1	1	0	0	0	1	27.3	31.2	3.6
1600	115	1	108	0	6	0	0	0	0	0	0	28.3	32.3	3.8
1700	73	0	68	1	4	0	0	0	0	0	0	28.1	30.8	3.4
1800	38	0	36	0	2	0	0	0	0	0	0	27.8	31.6	3.7
1900	26	1	22	0	3	0	0	0	0	0	0	26.7	32.1	4.2
2000	15	0	14	0	1	0	0	0	0	0	0	27.3	32	4.9
2100	12	1	11	0	0	0	0	0	0	0	0	27.4	33.5	4.6
2200	8	0	7	0	1	0	0	0	0	0	0	30.8	-	4.3
2300	2	0	2	0	0	0	0	0	0	0	0	32.6	-	4.5
00-07	**123**	**0**	**104**	**2**	**16**	**0**	**0**	**0**	**0**	**1**	**0**	**28.8**	**32.1**	**3.4**
07-19	**1112**	**4**	**978**	**9**	**109**	**3**	**4**	**0**	**1**	**1**	**3**	**27.3**	**30.7**	**3.6**
19-00	**63**	**2**	**56**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**27.7**	**32.9**	**4.6**
00-00	**1298**	**6**	**1138**	**11**	**130**	**3**	**4**	**0**	**1**	**2**	**3**	**27.5**	**30.9**	**3.7**

13 February 2019

Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Mean	Vpp 85	SD
0000	1	0	0	0	1	0	0	0	0	0	0	27.1	-	-
0100	0	0	0	0	0	0	0	0	0	0	0	-	-	-
0200	1	0	1	0	0	0	0	0	0	0	0	30.7	-	-
0300	2	0	2	0	0	0	0	0	0	0	0	33.8	-	4.5
0400	13	0	12	1	0	0	0	0	0	0	0	29.9	36.7	4
0500	28	0	27	0	1	0	0	0	0	0	0	29.9	32.7	2.9
0600	81	0	68	1	11	0	0	0	1	0	0	28.6	32	3.4
0700	125	0	109	0	13	1	1	0	1	0	0	26.5	30.6	4.3
0800	78	1	68	0	9	0	0	0	0	0	0	27.1	30.9	3.7
0900	90	0	75	1	12	2	0	0	0	0	0	26.8	29.9	3.5
1000	69	1	55	0	10	1	1	0	0	1	0	25.7	29.2	3.6
1100	90	3	71	1	14	0	1	0	0	0	0	26.6	29.6	3
1200	83	0	67	0	14	2	0	0	0	0	0	27	30.9	3.6
1300	107	2	89	0	15	0	0	1	0	0	0	27.1	30.8	3.2
1400	123	1	109	0	11	1	1	0	0	0	0	27.6	31.2	3.7
1500	134	0	123	1	8	0	1	0	1	0	0	28	31.1	3.4
1600	121	0	112	1	8	0	0	0	0	0	0	27.7	30.4	2.9
1700	77	0	70	0	6	0	0	0	1	0	0	27.2	30.2	3.2
1800	51	0	50	0	1	0	0	0	0	0	0	27.1	30.7	3.5
1900	32	0	31	0	1	0	0	0	0	0	0	28.6	31.3	2.3
2000	34	0	33	0	1	0	0	0	0	0	0	27.1	31.4	4.7
2100	9	0	9	0	0	0	0	0	0	0	0	29.6	-	2.7
2200	7	0	7	0	0	0	0	0	0	0	0	34	-	4.7
2300	3	0	3	0	0	0	0	0	0	0	0	29.5	-	6.5
00-07	**126**	**0**	**110**	**2**	**13**	**0**	**0**	**0**	**1**	**0**	**0**	**29.1**	**32.5**	**3.4**
07-19	**1148**	**8**	**998**	**4**	**121**	**7**	**5**	**1**	**3**	**1**	**0**	**27.1**	**30.4**	**3.5**
19-00	**85**	**0**	**83**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**28.6**	**32.1**	**4.2**
00-00	**1359**	**8**	**1191**	**6**	**136**	**7**	**5**	**1**	**4**	**1**	**0**	**27.4**	**30.8**	**3.6**

14 February 2019

Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Mean	Vpp 85	SD
0000	2	0	1	1	0	0	0	0	0	0	0	35.8	-	7.3
0100	0	0	0	0	0	0	0	0	0	0	0	-	-	-
0200	4	0	2	0	2	0	0	0	0	0	0	27.3	-	2.4
0300	2	0	1	0	1	0	0	0	0	0	0	37.3	-	6.2
0400	10	0	8	0	2	0	0	0	0	0	0	27.4	-	1.9
0500	31	0	27	1	3	0	0	0	0	0	0	29	32.5	3.6
0600	67	0	59	0	7	0	0	0	1	0	0	29.1	32.6	3.7
0700	123	0	107	1	11	1	1	0	1	1	0	25.8	30.9	5.2
0800	98	1	85	1	11	0	0	0	0	0	0	26.4	28.8	3.8
0900	78	0	62	2	11	1	2	0	0	0	0	26.6	30.5	3.6
1000	115	0	102	0	13	0	0	0	0	0	0	26.8	29.9	3.3
1100	76	0	67	3	5	1	0	0	0	0	0	26.4	31	5.3
1200	99	1	85	0	12	0	1	0	0	0	0	27	30.3	3
1300	102	2	88	0	12	0	0	0	0	0	0	26.5	30.1	3.5
1400	129	2	110	0	16	1	0	0	0	0	0	27.2	30.8	3.5
1500	115	3	102	1	8	0	0	1	0	0	0	27.1	31.5	5.4
1600	128	2	116	1	9	0	0	0	0	0	0	28	31.7	3.9
1700	73	1	68	1	3	0	0	0	0	0	0	27.4	31.1	4.3
1800	52	0	48	0	4	0	0	0	0	0	0	26.2	30	5.1
1900	24	0	24	0	0	0	0	0	0	0	0	27.9	32.7	4.3
2000	25	0	25	0	0	0	0	0	0	0	0	28.9	34.5	3.5
2100	26	0	25	0	1	0	0	0	0	0	0	28.6	33.4	3.9
2200	5	0	5	0	0	0	0	0	0	0	0	29.7	-	2.8
2300	1	0	1	0	0	0	0	0	0	0	0	25.7	-	-
00-07	**116**	**0**	**98**	**2**	**15**	**0**	**0**	**0**	**1**	**0**	**0**	**29.1**	**32.5**	**3.9**
07-19	**1188**	**12**	**1040**	**10**	**115**	**4**	**4**	**1**	**1**	**1**	**0**	**26.8**	**30.7**	**4.2**
19-00	**81**	**0**	**80**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**28.5**	**33**	**3.8**
00-00	**1385**	**12**	**1218**	**12**	**131**	**4**	**4**	**1**	**2**	**1**	**0**	**27.1**	**31**	**4.2**

15 February 2019

Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Mean	Vpp 85	SD
0000	2	0	2	0	0	0	0	0	0	0	0	28.8	-	5.1
0100	6	0	3	0	3	0	0	0	0	0	0	26.3	-	2.8
0200	4	0	3	0	1	0	0	0	0	0	0	25.7	-	2.1
0300	5	0	2	0	3	0	0	0	0	0	0	27.9	-	6.6
0400	11	0	7	0	3	0	0	0	0	0	1	28.5	31.8	2.4
0500	32	0	30	1	1	0	0	0	0	0	0	29.5	34.3	4.9
0600	81	0	70	0	11	0	0	0	0	0	0	28.8	31.8	3.1
0700	122	0	104	1	14	1	1	0	1	0	0	26.7	30	3.5
0800	90	2	83	1	4	0	0	0	0	0	0	27.6	31.9	4.5
0900	78	1	62	1	12	0	0	0	1	0	1	27.2	30.2	3.8
1000	84	1	71	0	11	0	0	0	0	1	0	26.5	30.5	4
1100	101	3	90	1	6	0	0	0	1	0	0	25.8	29	3.5
1200	103	5	85	1	12	0	0	0	0	0	0	26.8	30.1	3.8
1300	81	0	67	0	13	1	0	0	0	0	0	26.3	29.6	3.1
1400	133	0	122	1	10	0	0	0	0	0	0	27.5	30.8	3.6
1500	122	1	110	2	8	0	0	0	1	0	0	27.8	30.8	3.2
1600	116	0	109	1	6	0	0	0	0	0	0	28.4	31.6	3.3
1700	75	0	70	0	5	0	0	0	0	0	0	27	30.8	5.3
1800	53	2	49	0	2	0	0	0	0	0	0	26.7	31.7	4.8
1900	32	0	31	0	1	0	0	0	0	0	0	27.6	31.9	4.5
2000	15	0	15	0	0	0	0	0	0	0	0	28.1	34.1	4.9
2100	19	0	19	0	0	0	0	0	0	0	0	27.4	32.5	3.4
2200	7	0	7	0	0	0	0	0	0	0	0	28	-	4
2300	2	0	2	0	0	0	0	0	0	0	0	29.3	-	0.4
00-07	**141**	**0**	**117**	**1**	**22**	**0**	**0**	**0**	**0**	**0**	**1**	**28.7**	**32**	**3.7**
07-19	**1158**	**15**	**1022**	**9**	**103**	**2**	**1**	**0**	**4**	**1**	**1**	**27.1**	**30.5**	**3.9**
19-00	**75**	**0**	**74**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**27.7**	**32.3**	**4.2**
00-00	**1374**	**15**	**1213**	**10**	**126**	**2**	**1**	**0**	**4**	**1**	**2**	**27.3**	**30.7**	**3.9**

16 February 2019

Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Mean	Vpp 85	SD
0000	1	0	1	0	0	0	0	0	0	0	0	32.4	-	-
0100	2	0	1	0	1	0	0	0	0	0	0	28.9	-	7.6
0200	0	0	0	0	0	0	0	0	0	0	0	-	-	-
0300	1	0	1	0	0	0	0	0	0	0	0	34.9	-	-
0400	7	0	5	0	2	0	0	0	0	0	0	29.3	-	4.3
0500	9	0	7	1	1	0	0	0	0	0	0	30.2	-	3.5
0600	26	1	23	1	1	0	0	0	0	0	0	28.4	33.1	3.8
0700	48	0	39	1	6	0	1	0	1	0	0	28.2	32.2	3.8
0800	73	1	62	1	8	0	0	0	1	0	0	27.2	30.4	4.1
0900	89	1	80	1	7	0	0	0	0	0	0	27.1	31	3.9
1000	95	2	84	1	7	0	0	0	1	0	0	27.5	30.5	4.4
1100	124	2	111	0	11	0	0	0	0	0	0	26.6	29.4	3.1
1200	83	2	77	0	2	0	1	0	0	0	1	27.9	31.9	4
1300	85	1	80	2	2	0	0	0	0	0	0	27.3	31.4	3.8
1400	86	1	83	1	1	0	0	0	0	0	0	27.2	31.1	3.5
1500	80	2	74	0	4	0	0	0	0	0	0	28.3	32.1	3.9
1600	64	1	58	0	5	0	0	0	0	0	0	25.3	29	3.6
1700	53	0	49	0	4	0	0	0	0	0	0	25.9	30.9	4.1
1800	36	0	36	0	0	0	0	0	0	0	0	26.7	31	4.4
1900	20	0	19	0	1	0	0	0	0	0	0	28.5	34.3	4
2000	25	0	25	0	0	0	0	0	0	0	0	27.3	30.9	3.6
2100	24	0	23	0	1	0	0	0	0	0	0	29.8	34.6	5.4
2200	12	0	12	0	0	0	0	0	0	0	0	27.6	32.3	4.1
2300	5	0	5	0	0	0	0	0	0	0	0	28.1	-	1.2
00-07	**46**	**1**	**38**	**2**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**29.1**	**33.2**	**3.9**
07-19	**916**	**13**	**833**	**7**	**57**	**0**	**2**	**0**	**3**	**0**	**1**	**27.1**	**30.9**	**3.9**
19-00	**86**	**0**	**84**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**28.4**	**32.3**	**4.3**
00-00	**1048**	**14**	**955**	**9**	**64**	**0**	**2**	**0**	**3**	**0**	**1**	**27.3**	**31.1**	**4**

17 February 2019

Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Mean	Vpp 85	SD
0000	1	0	1	0	0	0	0	0	0	0	0	25.9	-	-
0100	3	0	2	0	1	0	0	0	0	0	0	26.4	-	3.1
0200	1	0	1	0	0	0	0	0	0	0	0	29.6	-	-
0300	1	0	1	0	0	0	0	0	0	0	0	28.9	-	-
0400	2	0	2	0	0	0	0	0	0	0	0	28.3	-	2.3
0500	2	0	2	0	0	0	0	0	0	0	0	30.8	-	0.4
0600	11	0	8	2	1	0	0	0	0	0	0	28.7	32.7	3.6
0700	26	0	24	1	1	0	0	0	0	0	0	27.7	32	4.1
0800	72	1	65	0	6	0	0	0	0	0	0	27.3	30.8	3.6
0900	70	2	65	0	3	0	0	0	0	0	0	27.4	30.5	3.3
1000	96	3	87	1	4	0	1	0	0	0	0	26.4	30.2	4
1100	113	4	104	0	4	0	1	0	0	0	0	26.7	29.6	2.9
1200	120	7	108	0	4	0	1	0	0	0	0	26.7	30.3	4.4
1300	98	3	95	0	0	0	0	0	0	0	0	26.9	30.2	3.6
1400	95	1	93	0	1	0	0	0	0	0	0	26.8	30	3.6
1500	100	1	96	0	3	0	0	0	0	0	0	26.6	30.1	3.3
1600	71	1	68	0	2	0	0	0	0	0	0	28.5	32.3	3.4
1700	34	0	32	0	2	0	0	0	0	0	0	28.6	33	4.3
1800	20	0	20	0	0	0	0	0	0	0	0	28.1	34.8	4.1
1900	26	0	22	0	4	0	0	0	0	0	0	29.1	33.7	5
2000	22	0	22	0	0	0	0	0	0	0	0	29.2	31.9	4.9
2100	12	0	12	0	0	0	0	0	0	0	0	29.6	33	3.1
2200	1	0	1	0	0	0	0	0	0	0	0	22.7	-	-
2300	1	0	1	0	0	0	0	0	0	0	0	23.8	-	-
00-07	**21**	**0**	**17**	**2**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**28.4**	**31.1**	**3**
07-19	**915**	**23**	**857**	**2**	**30**	**0**	**3**	**0**	**0**	**0**	**0**	**27.1**	**30.5**	**3.7**
19-00	**62**	**0**	**58**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**29.1**	**32.4**	**4.6**
00-00	**998**	**23**	**932**	**4**	**36**	**0**	**3**	**0**	**0**	**0**	**0**	**27.2**	**30.5**	**3.8**

Unit 2 (Close to Whitehouse Farm) East Bound

11 February 2019

Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Mean	Vpp 85	SD
0000	0	0	0	0	0	0	0	0	0	0	0	-	-	-
0100	3	0	1	0	2	0	0	0	0	0	0	27.6	-	3.9
0200	0	0	0	0	0	0	0	0	0	0	0	-	-	-
0300	0	0	0	0	0	0	0	0	0	0	0	-	-	-
0400	10	0	9	0	1	0	0	0	0	0	0	23.3	-	6.1
0500	46	0	42	0	4	0	0	0	0	0	0	24.9	31.2	5.7
0600	129	0	117	0	12	0	0	0	0	0	0	24.9	29.6	5.5
0700	182	1	161	0	16	0	1	0	1	1	1	22.8	27.6	4.5
0800	119	5	102	0	10	2	0	0	0	0	0	23.4	27.7	4.4
0900	87	0	75	1	10	1	0	0	0	0	0	23.1	27.4	4.4
1000	100	1	82	2	14	0	0	0	1	0	0	22	27.1	5.2
1100	104	3	93	0	6	1	1	0	0	0	0	22.6	27.6	5
1200	95	1	84	1	8	0	0	0	0	0	1	23.5	28.7	5.1
1300	108	3	87	0	17	1	0	0	0	0	0	22.7	28.1	4.8
1400	133	0	124	0	9	0	0	0	0	0	0	24	29.2	5.3
1500	147	4	130	1	11	1	0	0	0	0	0	23.8	29.3	5.2
1600	153	3	139	1	10	0	0	0	0	0	0	24.2	29.1	4.9
1700	67	0	63	0	4	0	0	0	0	0	0	23.8	28.3	4.7
1800	42	0	40	0	2	0	0	0	0	0	0	25.6	31.9	5.9
1900	38	1	35	1	1	0	0	0	0	0	0	23.3	30.8	7.1
2000	21	0	20	0	1	0	0	0	0	0	0	23.9	30.5	6
2100	16	0	16	0	0	0	0	0	0	0	0	23.5	27.7	4.2
2200	5	0	5	0	0	0	0	0	0	0	0	20.2	-	3.5
2300	2	0	2	0	0	0	0	0	0	0	0	24.9	-	0.4
00-07	**188**	**0**	**169**	**0**	**19**	**0**	**0**	**0**	**0**	**0**	**0**	**24.8**	**30.1**	**5.6**
07-19	**1337**	**21**	**1180**	**6**	**117**	**6**	**2**	**0**	**2**	**1**	**2**	**23.4**	**28.4**	**4.9**
19-00	**82**	**1**	**78**	**1**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**23.3**	**30.3**	**6**
00-00	**1607**	**22**	**1427**	**7**	**138**	**6**	**2**	**0**	**2**	**1**	**2**	**23.5**	**28.7**	**5.1**

12 February 2019

Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Mean	Vpp 85	SD
0000	1	0	1	0	0	0	0	0	0	0	0	23.5	-	-
0100	2	0	1	0	1	0	0	0	0	0	0	30.4	-	3.7
0200	3	0	0	0	3	0	0	0	0	0	0	30	-	2.1
0300	4	0	3	0	1	0	0	0	0	0	0	23	-	6.2
0400	12	0	10	0	1	0	1	0	0	0	0	23.8	34.2	8.3
0500	42	0	38	0	3	0	0	0	0	0	1	24.9	31.4	5.3
0600	144	1	130	1	10	1	0	0	1	0	0	24.3	29.1	5
0700	195	1	169	1	21	1	1	0	0	1	0	23.5	28.1	4.7
0800	99	2	86	0	9	0	2	0	0	0	0	23.6	28.9	5.4
0900	101	1	89	2	7	2	0	0	0	0	0	23.2	27	4
1000	107	0	91	1	14	0	1	0	0	0	0	22.3	27.7	5.1
1100	100	1	88	0	9	0	1	0	1	0	0	23.3	28.1	4.7
1200	88	1	80	0	6	1	0	0	0	0	0	22.7	27.7	5.4
1300	125	9	107	0	9	0	0	0	0	0	0	22.4	26.8	5.2
1400	136	2	122	0	11	0	0	0	0	1	0	23.2	27.8	4.8
1500	142	1	129	0	10	1	0	1	0	0	0	23.8	28.4	4.7
1600	154	3	143	1	6	1	0	0	0	0	0	24	28.1	4.7
1700	75	1	67	2	5	0	0	0	0	0	0	24.8	29	4.6
1800	52	2	47	0	3	0	0	0	0	0	0	23.6	30.7	6.2
1900	34	0	32	0	2	0	0	0	0	0	0	25	33.6	6.9
2000	10	0	10	0	0	0	0	0	0	0	0	25	-	5.4
2100	28	0	26	0	1	1	0	0	0	0	0	22.1	27.7	5
2200	4	0	4	0	0	0	0	0	0	0	0	24.7	-	2.8
2300	1	0	1	0	0	0	0	0	0	0	0	25.2	-	-
00-07	**208**	**1**	**183**	**1**	**19**	**1**	**1**	**0**	**1**	**0**	**1**	**24.5**	**29.9**	**5.3**
07-19	**1374**	**24**	**1218**	**7**	**110**	**6**	**5**	**1**	**1**	**2**	**0**	**23.4**	**28.1**	**4.9**
19-00	**77**	**0**	**73**	**0**	**3**	**1**	**0**	**0**	**0**	**0**	**0**	**23.9**	**30.3**	**5.9**
00-00	**1659**	**25**	**1474**	**8**	**132**	**8**	**6**	**1**	**2**	**2**	**1**	**23.5**	**28.5**	**5**

13 February 2019

Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Mean	Vpp 85	SD
0000	3	0	2	0	1	0	0	0	0	0	0	21.2	-	0.7
0100	3	0	1	0	2	0	0	0	0	0	0	33.2	-	5.2
0200	1	0	0	0	1	0	0	0	0	0	0	16.9	-	-
0300	1	0	1	0	0	0	0	0	0	0	0	32.2	-	-
0400	8	0	7	0	1	0	0	0	0	0	0	22.9	-	6.1
0500	45	0	41	0	3	1	0	0	0	0	0	24.8	32.3	5.5
0600	143	4	127	1	9	1	1	0	0	0	0	23.4	28.9	5.5
0700	159	3	143	0	13	0	0	0	0	0	0	22.2	28.1	5.8
0800	109	0	98	1	9	0	0	0	0	0	1	23.5	27.8	4.8
0900	100	3	81	0	14	1	1	0	0	0	0	22.3	28	5.7
1000	103	2	90	2	9	0	0	0	0	0	0	23.1	28	5
1100	107	3	89	1	14	0	0	0	0	0	0	23.1	27.4	4.8
1200	99	3	81	2	13	0	0	0	0	0	0	23.2	27.6	4.6
1300	152	3	131	0	17	1	0	0	0	0	0	22	27.1	5
1400	151	1	133	0	17	0	0	0	0	0	0	23.7	28.8	4.8
1500	159	5	144	0	10	0	0	0	0	0	0	24	29.1	5.4
1600	160	2	150	0	8	0	0	0	0	0	0	24.3	28	4.3
1700	86	0	79	1	6	0	0	0	0	0	0	23.2	28.8	5.4
1800	59	0	57	0	2	0	0	0	0	0	0	24.9	29.6	5.3
1900	39	0	38	0	1	0	0	0	0	0	0	24.4	29.3	5.5
2000	32	0	30	0	2	0	0	0	0	0	0	24.1	30.1	5.8
2100	26	0	26	0	0	0	0	0	0	0	0	25.2	29.4	5.3
2200	6	0	5	0	1	0	0	0	0	0	0	25.8	-	6.9
2300	1	0	1	0	0	0	0	0	0	0	0	27.8	-	-
00-07	**204**	**4**	**179**	**1**	**17**	**2**	**1**	**0**	**0**	**0**	**0**	**23.8**	**29.3**	**5.6**
07-19	**1444**	**25**	**1276**	**7**	**132**	**2**	**1**	**0**	**0**	**0**	**1**	**23.2**	**28.1**	**5.1**
19-00	**104**	**0**	**100**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**24.6**	**29.5**	**5.5**
00-00	**1752**	**29**	**1555**	**8**	**153**	**4**	**2**	**0**	**0**	**0**	**1**	**23.4**	**28.3**	**5.2**

14 February 2019

Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Mean	Vpp 85	SD
0000	3	0	3	0	0	0	0	0	0	0	0	26.6	-	6.1
0100	2	0	2	0	0	0	0	0	0	0	0	30	-	5.6
0200	1	0	1	0	0	0	0	0	0	0	0	31.2	-	-
0300	3	0	2	0	1	0	0	0	0	0	0	27	-	8.1
0400	13	0	10	0	3	0	0	0	0	0	0	24.2	28.3	4.8
0500	53	0	48	0	4	1	0	0	0	0	0	26	31.6	5.1
0600	141	0	130	1	8	1	1	0	0	0	0	25.1	30.5	5.1
0700	162	3	144	1	14	0	0	0	0	0	0	21.8	26.7	5.8
0800	128	0	108	5	15	0	0	0	0	0	0	23.3	27.5	4.5
0900	122	0	106	1	12	2	1	0	0	0	0	23.1	26.6	3.6
1000	109	3	92	2	11	0	0	0	1	0	0	20.9	26.6	5.9
1100	104	2	90	1	8	2	1	0	0	0	0	22.4	26.5	4.9
1200	118	2	109	1	6	0	0	0	0	0	0	22.7	26.9	4.1
1300	132	4	111	0	15	0	1	0	0	0	1	22.4	27.6	5.3
1400	141	4	121	0	15	0	1	0	0	0	0	22.9	26.8	4.5
1500	135	2	124	2	6	1	0	0	0	0	0	24.7	28.7	4.5
1600	162	4	150	0	7	0	0	0	0	1	0	23.6	28.4	4.9
1700	77	0	73	1	1	2	0	0	0	0	0	24.5	29.9	5.6
1800	45	0	42	0	3	0	0	0	0	0	0	25.7	29.8	4.6
1900	45	0	42	0	3	0	0	0	0	0	0	23.8	28.5	5.7
2000	27	0	26	0	0	1	0	0	0	0	0	22.6	30.1	6.8
2100	29	0	28	0	1	0	0	0	0	0	0	23.9	27.7	3.5
2200	7	0	6	0	1	0	0	0	0	0	0	26.1	-	4.3
2300	4	0	4	0	0	0	0	0	0	0	0	26	-	2.8
00-07	**216**	**0**	**196**	**1**	**16**	**2**	**1**	**0**	**0**	**0**	**0**	**25.4**	**30.8**	**5.1**
07-19	**1435**	**24**	**1270**	**14**	**113**	**7**	**4**	**0**	**1**	**1**	**1**	**23**	**27.7**	**5**
19-00	**112**	**0**	**106**	**0**	**5**	**1**	**0**	**0**	**0**	**0**	**0**	**23.8**	**28.5**	**5.4**
00-00	**1763**	**24**	**1572**	**15**	**134**	**10**	**5**	**0**	**1**	**1**	**1**	**23.3**	**28.2**	**5.1**

15 February 2019

Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Mean	Vpp 85	SD
0000	1	0	1	0	0	0	0	0	0	0	0	26.9	-	-
0100	2	0	2	0	0	0	0	0	0	0	0	27	-	4.8
0200	3	0	3	0	0	0	0	0	0	0	0	26.3	-	1.8
0300	3	0	0	0	3	0	0	0	0	0	0	28.3	-	1.3
0400	12	0	10	0	1	1	0	0	0	0	0	26	31.5	8.7
0500	51	0	46	0	4	0	1	0	0	0	0	25.1	31	5.9
0600	141	2	125	1	11	1	0	0	0	0	1	23.9	29.5	6
0700	175	3	156	0	14	0	1	0	0	0	1	22.1	26.6	4.5
0800	110	2	95	2	9	1	1	0	0	0	0	22.3	26.8	4.9
0900	104	3	89	0	10	2	0	0	0	0	0	23.4	27.4	4.8
1000	106	2	97	1	6	0	0	0	0	0	0	23.2	28.3	5.1
1100	121	6	105	0	10	0	0	0	0	0	0	21.9	27.3	5
1200	109	3	91	2	11	0	2	0	0	0	0	22.7	27.3	4.5
1300	119	2	111	1	5	0	0	0	0	0	0	22.3	26.3	4.6
1400	134	1	120	0	13	0	0	0	0	0	0	23.8	28.1	5
1500	156	6	138	2	10	0	0	0	0	0	0	23.8	28.7	5.4
1600	135	3	121	3	8	0	0	0	0	0	0	23.6	28.4	4.9
1700	83	3	73	0	7	0	0	0	0	0	0	24.6	29.7	5.2
1800	58	0	55	1	2	0	0	0	0	0	0	24.9	29.8	5.2
1900	40	2	37	0	1	0	0	0	0	0	0	23.5	30.4	6.7
2000	36	2	34	0	0	0	0	0	0	0	0	23.9	32.5	6.9
2100	36	0	33	1	2	0	0	0	0	0	0	23.9	28	5.1
2200	11	1	10	0	0	0	0	0	0	0	0	23.6	31.5	7
2300	5	0	4	0	1	0	0	0	0	0	0	26.9	-	6.4
00-07	**213**	**2**	**187**	**1**	**19**	**2**	**1**	**0**	**0**	**0**	**1**	**24.4**	**29.8**	**6.1**
07-19	**1410**	**34**	**1251**	**12**	**105**	**3**	**4**	**0**	**0**	**0**	**1**	**23.1**	**27.7**	**5**
19-00	**128**	**5**	**118**	**1**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**23.9**	**30.4**	**6.3**
00-00	**1751**	**41**	**1556**	**14**	**128**	**5**	**5**	**0**	**0**	**0**	**2**	**23.3**	**28.2**	**5.2**

16 February 2019

Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Mean	Vpp 85	SD
0000	2	0	2	0	0	0	0	0	0	0	0	26.3	-	7.3
0100	0	0	0	0	0	0	0	0	0	0	0	-	-	-
0200	0	0	0	0	0	0	0	0	0	0	0	-	-	-
0300	1	0	1	0	0	0	0	0	0	0	0	22.4	-	-
0400	4	0	3	0	1	0	0	0	0	0	0	27.9	-	3.1
0500	13	0	12	0	1	0	0	0	0	0	0	24.9	32.3	5.9
0600	30	0	28	0	2	0	0	0	0	0	0	25	30.2	5.6
0700	70	1	62	0	6	0	1	0	0	0	0	19.8	24.8	4.7
0800	111	2	99	1	8	1	0	0	0	0	0	18.5	22.6	4.2
0900	134	4	120	2	6	0	2	0	0	0	0	22.4	27.2	4.7
1000	138	5	123	4	5	0	0	0	0	0	1	23.6	29.3	5.6
1100	136	5	124	2	4	0	1	0	0	0	0	22.9	28.1	4.9
1200	136	5	127	0	3	0	1	0	0	0	0	23.9	28.3	4.5
1300	122	4	113	1	3	0	1	0	0	0	0	22.7	27.8	5.5
1400	90	5	79	0	6	0	0	0	0	0	0	24.3	29.7	4.8
1500	102	2	94	1	5	0	0	0	0	0	0	23.6	28.8	5.2
1600	77	2	68	2	5	0	0	0	0	0	0	23.4	28.5	4.9
1700	61	1	58	0	2	0	0	0	0	0	0	25.2	29.3	4.9
1800	42	1	39	0	2	0	0	0	0	0	0	23.6	29.2	5.7
1900	17	0	15	0	2	0	0	0	0	0	0	23.5	31.6	6.3
2000	23	0	23	0	0	0	0	0	0	0	0	24.5	31.2	6.1
2100	16	0	14	0	2	0	0	0	0	0	0	25	30.1	5
2200	9	0	9	0	0	0	0	0	0	0	0	27	-	3.5
2300	5	0	5	0	0	0	0	0	0	0	0	23.1	-	5
00-07	**50**	**0**	**46**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**25.2**	**30.9**	**5.4**
07-19	**1219**	**37**	**1106**	**13**	**55**	**1**	**6**	**0**	**0**	**0**	**1**	**22.8**	**28**	**5.2**
19-00	**70**	**0**	**66**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**24.6**	**30.8**	**5.5**
00-00	**1339**	**37**	**1218**	**13**	**63**	**1**	**6**	**0**	**0**	**0**	**1**	**23**	**28.2**	**5.3**

17 February 2019

Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Mean	Vpp 85	SD
0000	3	0	3	0	0	0	0	0	0	0	0	32.5	-	6.3
0100	1	0	1	0	0	0	0	0	0	0	0	27.9	-	-
0200	1	0	1	0	0	0	0	0	0	0	0	18.4	-	-
0300	1	0	1	0	0	0	0	0	0	0	0	20.4	-	-
0400	3	0	3	0	0	0	0	0	0	0	0	27.8	-	10.5
0500	7	0	7	0	0	0	0	0	0	0	0	20.4	-	5.6
0600	25	0	23	0	2	0	0	0	0	0	0	25.7	30.6	5.2
0700	31	2	29	0	0	0	0	0	0	0	0	25.6	31	5.6
0800	84	5	77	1	1	0	0	0	0	0	0	25.3	31.1	5.6
0900	147	3	137	0	6	1	0	0	0	0	0	24	28.1	4.2
1000	152	7	143	0	2	0	0	0	0	0	0	24.1	28.7	5
1100	141	1	134	2	3	0	1	0	0	0	0	24.3	28.9	4.6
1200	102	1	96	1	2	0	1	0	1	0	0	23.8	28.2	4.9
1300	105	6	93	2	3	0	0	0	1	0	0	23.8	29.6	6
1400	97	5	89	1	0	0	2	0	0	0	0	22.8	29.3	6
1500	79	3	72	0	4	0	0	0	0	0	0	24.5	28.7	4.6
1600	65	1	63	0	1	0	0	0	0	0	0	23.3	29.3	5.7
1700	42	0	39	0	3	0	0	0	0	0	0	25.4	29.2	4.3
1800	30	0	30	0	0	0	0	0	0	0	0	22.8	27.2	4.6
1900	15	0	15	0	0	0	0	0	0	0	0	26.4	31.8	5.2
2000	21	0	20	0	1	0	0	0	0	0	0	22.5	29.4	6
2100	9	0	9	0	0	0	0	0	0	0	0	28.7	-	6.5
2200	3	0	3	0	0	0	0	0	0	0	0	29.6	-	2.1
2300	3	0	2	0	1	0	0	0	0	0	0	27.3	-	2.5
00-07	**41**	**0**	**39**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**25.2**	**30.8**	**6.2**
07-19	**1075**	**34**	**1002**	**7**	**25**	**1**	**4**	**0**	**2**	**0**	**0**	**24.1**	**28.8**	**5.1**
19-00	**51**	**0**	**49**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**25.4**	**32.5**	**6**
00-00	**1167**	**34**	**1090**	**7**	**29**	**1**	**4**	**0**	**2**	**0**	**0**	**24.2**	**29.1**	**5.2**

Unit 2 (Close to Whitehouse Farm) West Bound

11 February 2019

Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Mean	Vpp 85	SD
0000	1	0	1	0	0	0	0	0	0	0	0	24.8	-	-
0100	2	0	1	0	1	0	0	0	0	0	0	25.8	-	0.2
0200	1	0	1	0	0	0	0	0	0	0	0	24.8	-	-
0300	3	0	2	0	1	0	0	0	0	0	0	29	-	7.5
0400	29	1	26	0	2	0	0	0	0	0	0	23.5	30.1	6.4
0500	28	0	25	0	2	1	0	0	0	0	0	25.4	31.8	6.6
0600	106	2	90	1	11	1	0	0	0	0	1	22.2	26.9	5.7
0700	154	3	137	0	10	0	0	0	2	1	1	22.4	27.7	5.4
0800	113	2	99	0	10	1	0	0	1	0	0	23.4	27.4	4.8
0900	95	2	83	0	9	1	0	0	0	0	0	22.4	26.7	5.2
1000	111	1	94	1	13	2	0	0	0	0	0	20.4	25.5	5.1
1100	105	1	90	0	11	0	0	0	2	1	0	22.7	27.6	4.6
1200	101	2	85	0	12	0	0	0	1	0	1	23.3	27.2	4.7
1300	109	0	88	1	19	1	0	0	0	0	0	22.3	26.8	4.7
1400	144	1	126	0	17	0	0	0	0	0	0	22.9	28.1	5.2
1500	124	1	110	0	12	0	0	0	1	0	0	24.2	28.7	4.9
1600	130	1	124	0	5	0	0	0	0	0	0	24	28.2	4.7
1700	121	1	113	0	6	0	0	0	0	1	0	23.3	28.5	5.4
1800	43	1	39	0	3	0	0	0	0	0	0	24.4	28.7	4.8
1900	35	0	35	0	0	0	0	0	0	0	0	23.4	28.6	5.7
2000	36	1	35	0	0	0	0	0	0	0	0	24.6	30.2	5.9
2100	18	0	18	0	0	0	0	0	0	0	0	25.7	30.9	6.2
2200	4	0	4	0	0	0	0	0	0	0	0	26.4	-	4.7
2300	5	0	5	0	0	0	0	0	0	0	0	22.2	-	4.2
00-07	**170**	**3**	**146**	**1**	**17**	**2**	**0**	**0**	**0**	**0**	**1**	**23.1**	**28.3**	**6**
07-19	**1350**	**16**	**1188**	**2**	**127**	**5**	**0**	**0**	**7**	**3**	**2**	**22.9**	**27.5**	**5.1**
19-00	**98**	**1**	**97**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**24.3**	**29.4**	**5.7**
00-00	**1618**	**20**	**1431**	**3**	**144**	**7**	**0**	**0**	**7**	**3**	**3**	**23**	**27.6**	**5.2**

12 February 2019

Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Mean	Vpp 85	SD
0000	4	0	1	0	3	0	0	0	0	0	0	23.6	-	4.3
0100	1	0	1	0	0	0	0	0	0	0	0	30	-	-
0200	2	0	1	0	1	0	0	0	0	0	0	24	-	16.5
0300	2	0	2	0	0	0	0	0	0	0	0	27	-	9.6
0400	30	1	28	0	0	0	1	0	0	0	0	24.6	33.2	7.2
0500	25	0	23	0	1	0	0	0	0	1	0	25.2	28.8	5.6
0600	129	3	109	1	14	0	1	0	0	1	0	22.5	26.9	5.1
0700	173	0	151	0	18	2	1	0	0	1	0	22.5	27.5	5.2
0800	113	2	98	1	11	0	0	0	1	0	0	22.1	26.7	5.2
0900	107	2	84	1	15	0	1	1	0	2	1	20.9	25.5	5
1000	117	3	98	2	10	3	1	0	0	0	0	21.4	27	6.1
1100	100	2	88	0	8	0	0	0	1	0	1	23.1	27.2	5
1200	129	4	114	1	9	0	0	0	0	1	0	23.2	27.4	5.1
1300	87	1	71	1	12	1	0	0	1	0	0	23.7	27.2	4.3
1400	141	0	128	1	10	0	0	0	0	0	2	23	26.7	4.7
1500	144	1	130	0	10	2	1	0	0	0	0	23.4	27.6	5
1600	134	0	128	0	5	0	1	0	0	0	0	23.8	28.3	4.9
1700	94	2	85	1	5	1	0	0	0	0	0	23.1	28.1	5.3
1800	50	1	46	0	3	0	0	0	0	0	0	24.4	28.1	4.8
1900	34	1	31	0	2	0	0	0	0	0	0	22.9	28.8	6.1
2000	31	0	31	0	0	0	0	0	0	0	0	23.2	29.7	6.6
2100	21	1	20	0	0	0	0	0	0	0	0	22	28.5	6.7
2200	9	0	8	0	1	0	0	0	0	0	0	27.3	-	4.1
2300	2	0	2	0	0	0	0	0	0	0	0	29.8	-	0.7
00-07	**193**	**4**	**165**	**1**	**19**	**0**	**2**	**0**	**0**	**2**	**0**	**23.3**	**28.4**	**5.8**
07-19	**1389**	**18**	**1221**	**8**	**116**	**9**	**5**	**1**	**3**	**4**	**4**	**22.8**	**27.4**	**5.2**
19-00	**97**	**2**	**92**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**23.4**	**29.3**	**6.3**
00-00	**1679**	**24**	**1478**	**9**	**138**	**9**	**7**	**1**	**3**	**6**	**4**	**22.9**	**27.6**	**5.3**

13 February 2019

Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Mean	Vpp 85	SD
0000	3	0	2	0	1	0	0	0	0	0	0	23.9	-	1.1
0100	0	0	0	0	0	0	0	0	0	0	0	-	-	-
0200	1	0	1	0	0	0	0	0	0	0	0	25.7	-	-
0300	3	0	3	0	0	0	0	0	0	0	0	30.1	-	7.7
0400	32	1	30	1	0	0	0	0	0	0	0	24.2	29.3	6.6
0500	33	0	32	0	1	0	0	0	0	0	0	25.3	30.8	5.8
0600	135	3	114	0	16	0	0	0	1	1	0	22	27.9	6
0700	167	2	146	0	16	1	1	0	0	0	1	20.6	25.9	5.4
0800	106	1	92	0	12	1	0	0	0	0	0	21.5	26.7	5.7
0900	112	1	90	0	17	2	0	1	1	0	0	22	27.2	5
1000	93	2	70	1	14	2	2	1	0	1	0	22.5	27.9	5.1
1100	113	3	90	2	16	1	0	0	0	1	0	22.1	26.8	5.5
1200	137	6	110	0	18	2	1	0	0	0	0	22.5	27.5	4.9
1300	121	2	103	0	15	0	0	0	0	1	0	23	26.9	4.5
1400	150	2	133	0	13	1	1	0	0	0	0	22.8	27.6	5.7
1500	166	0	152	1	10	1	1	0	1	0	0	23.1	27.6	5.4
1600	138	1	128	1	8	0	0	0	0	0	0	23.8	27.9	5
1700	107	2	97	0	8	0	0	0	0	0	0	23.3	27.3	4.9
1800	62	0	61	0	1	0	0	0	0	0	0	23.5	28.6	5.1
1900	42	1	39	0	2	0	0	0	0	0	0	23.9	29.3	5.6
2000	51	0	49	0	2	0	0	0	0	0	0	24.3	27.7	4.5
2100	17	0	17	0	0	0	0	0	0	0	0	25.3	29.9	5.1
2200	7	0	7	0	0	0	0	0	0	0	0	23.5	-	7.6
2300	4	0	4	0	0	0	0	0	0	0	0	26.2	-	3.1
00-07	**207**	**4**	**182**	**1**	**18**	**0**	**0**	**0**	**1**	**1**	**0**	**23.1**	**28.3**	**6.2**
07-19	**1472**	**22**	**1272**	**5**	**148**	**11**	**6**	**2**	**2**	**3**	**1**	**22.5**	**27.3**	**5.3**
19-00	**121**	**1**	**116**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**24.3**	**28.9**	**5.1**
00-00	**1800**	**27**	**1570**	**6**	**170**	**11**	**6**	**2**	**3**	**4**	**1**	**22.7**	**27.6**	**5.4**

14 February 2019

Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Mean	Vpp 85	SD
0000	3	0	2	1	0	0	0	0	0	0	0	29.1	-	10.1
0100	0	0	0	0	0	0	0	0	0	0	0	-	-	-
0200	3	0	1	0	2	0	0	0	0	0	0	25.2	-	3.3
0300	3	0	2	0	1	0	0	0	0	0	0	24.8	-	14.2
0400	30	1	27	0	2	0	0	0	0	0	0	22.8	27	6
0500	35	0	32	1	2	0	0	0	0	0	0	25.8	30.5	5.9
0600	113	4	93	1	13	0	1	0	0	1	0	23.6	29.3	5.7
0700	163	1	149	0	5	4	1	0	1	2	0	20.7	27.1	6.5
0800	136	1	116	1	17	1	0	0	0	0	0	21.3	26.1	4.8
0900	110	3	90	2	10	1	3	0	0	1	0	22.3	27.8	5.9
1000	138	2	119	0	17	0	0	0	0	0	0	21	25.7	5.4
1100	100	2	85	3	7	2	0	0	0	1	0	22.3	27.3	5.3
1200	133	4	112	0	16	0	1	0	0	0	0	23.3	27.2	4.6
1300	111	5	87	1	16	0	2	0	0	0	0	23.1	27.4	4.9
1400	161	1	144	0	14	2	0	0	0	0	0	22.6	26.7	4.9
1500	142	2	129	1	8	1	1	0	0	0	0	23.1	28.4	5.7
1600	144	2	132	1	9	0	0	0	0	0	0	23.6	27.7	4.8
1700	106	2	99	1	4	0	0	0	0	0	0	23.6	28	4.9
1800	55	0	49	0	6	0	0	0	0	0	0	24.3	28.9	5.2
1900	38	0	37	0	1	0	0	0	0	0	0	24	29.5	4.5
2000	44	0	43	0	1	0	0	0	0	0	0	24.3	29.3	5.8
2100	25	0	25	0	0	0	0	0	0	0	0	25.7	30.6	4.7
2200	4	0	4	0	0	0	0	0	0	0	0	27	-	1.9
2300	1	0	1	0	0	0	0	0	0	0	0	14.4	-	-
00-07	**187**	**5**	**157**	**3**	**20**	**0**	**1**	**0**	**0**	**1**	**0**	**24**	**29.5**	**6**
07-19	**1499**	**25**	**1311**	**10**	**129**	**11**	**8**	**0**	**1**	**4**	**0**	**22.5**	**27.2**	**5.4**
19-00	**112**	**0**	**110**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**24.5**	**29.4**	**5.1**
00-00	**1798**	**30**	**1578**	**13**	**151**	**11**	**9**	**0**	**1**	**5**	**0**	**22.7**	**27.6**	**5.5**

15 February 2019

Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Mean	Vpp 85	SD
0000	3	0	3	0	0	0	0	0	0	0	0	26.5	-	2.8
0100	6	0	3	0	3	0	0	0	0	0	0	26.4	-	3.5
0200	5	0	3	0	1	0	0	0	0	1	0	21.2	-	6.8
0300	4	0	3	0	1	0	0	0	0	0	0	27	-	11.1
0400	28	2	23	0	2	0	0	0	0	0	1	22.8	27.9	5.8
0500	33	0	31	1	1	0	0	0	0	0	0	27.2	33.9	6.5
0600	125	2	109	0	9	3	2	0	0	0	0	23	27.9	5.7
0700	152	2	131	3	13	1	0	0	1	1	0	20.8	25.8	5
0800	109	4	91	1	10	2	0	0	0	0	1	21.4	27.1	5.7
0900	109	1	94	1	12	0	0	0	1	0	0	22.5	27	4.9
1000	101	0	89	0	10	1	0	0	1	0	0	21.6	26.3	5
1100	139	9	119	1	8	1	0	0	0	0	1	22.5	26.6	5.1
1200	136	5	113	1	17	0	0	0	0	0	0	23.8	27.1	4.1
1300	102	2	85	0	14	0	0	0	0	1	0	22.4	27.3	5.3
1400	148	2	133	1	12	0	0	0	0	0	0	23.1	28.6	4.8
1500	159	5	142	4	7	0	0	0	1	0	0	23.1	27.5	5.1
1600	129	0	122	1	6	0	0	0	0	0	0	24.3	28.7	4.9
1700	104	0	98	0	6	0	0	0	0	0	0	22.9	27.9	5.1
1800	76	4	70	0	2	0	0	0	0	0	0	24.9	29.4	5.6
1900	41	0	40	0	1	0	0	0	0	0	0	24.3	28.9	5.6
2000	26	1	25	0	0	0	0	0	0	0	0	23.9	32.1	7.1
2100	20	0	19	0	1	0	0	0	0	0	0	23.9	27.5	4.6
2200	11	0	11	0	0	0	0	0	0	0	0	21.5	29.5	6.6
2300	4	0	4	0	0	0	0	0	0	0	0	25.4	-	5.3
00-07	**204**	**4**	**175**	**1**	**17**	**3**	**2**	**0**	**0**	**1**	**1**	**23.8**	**29.9**	**6.1**
07-19	**1464**	**34**	**1287**	**13**	**117**	**5**	**0**	**0**	**4**	**2**	**2**	**22.7**	**27.3**	**5.1**
19-00	**102**	**1**	**99**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**23.9**	**28.9**	**5.9**
00-00	**1770**	**39**	**1561**	**14**	**136**	**8**	**2**	**0**	**4**	**3**	**3**	**22.9**	**27.6**	**5.3**

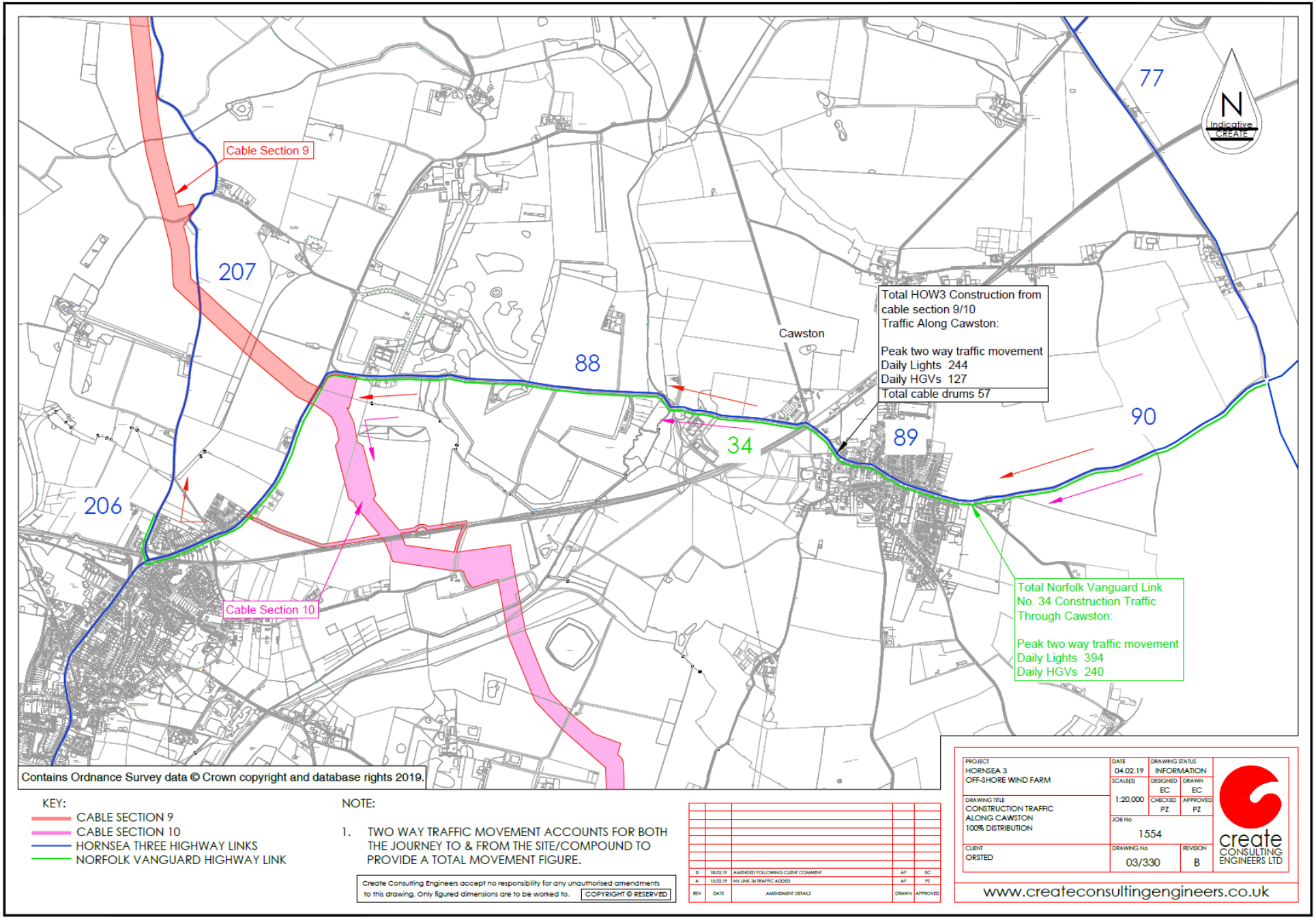
16 February 2019

Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Mean	Vpp 85	SD
0000	2	0	2	0	0	0	0	0	0	0	0	26.2	-	2.6
0100	2	0	1	0	1	0	0	0	0	0	0	29	-	8.8
0200	0	0	0	0	0	0	0	0	0	0	0	-	-	
0300	1	0	1	0	0	0	0	0	0	0	0	35.1	-	-
0400	11	1	9	0	1	0	0	0	0	0	0	23.7	30.1	6
0500	10	0	7	1	2	0	0	0	0	0	0	23.7	-	6.9
0600	33	3	27	0	2	0	0	0	1	0	0	24.7	31.3	6.2
0700	61	0	54	0	6	0	0	0	1	0	0	21.5	27.6	6
0800	88	4	74	1	9	0	0	0	0	0	0	20.5	25.2	5.1
0900	119	2	108	2	7	0	0	0	0	0	0	21.5	26.7	5.1
1000	118	4	106	1	6	0	0	0	1	0	0	22.7	27.2	4.7
1100	144	3	132	1	8	0	0	0	0	0	0	23.7	27.9	4.9
1200	110	5	102	0	2	1	0	0	0	0	0	22.7	28.5	6.1
1300	102	1	94	2	2	2	0	0	0	0	1	23.7	28.8	5.4
1400	105	2	101	1	1	0	0	0	0	0	0	22.9	27.7	5.7
1500	96	3	89	0	4	0	0	0	0	0	0	24.3	28.7	5
1600	93	1	86	1	5	0	0	0	0	0	0	23.8	27.6	4.5
1700	63	0	58	0	5	0	0	0	0	0	0	24.9	28.2	4.3
1800	46	0	45	0	1	0	0	0	0	0	0	25.7	30.4	5.4
1900	28	0	27	0	1	0	0	0	0	0	0	23.8	30.4	6.7
2000	33	0	32	0	1	0	0	0	0	0	0	25.6	28.8	3.5
2100	26	0	25	0	1	0	0	0	0	0	0	25.1	32	6.4
2200	15	0	15	0	0	0	0	0	0	0	0	24.9	29.4	4.7
2300	8	0	8	0	0	0	0	0	0	0	0	20.1	-	7.6
00-07	**59**	**4**	**47**	**1**	**6**	**0**	**0**	**0**	**1**	**0**	**0**	**24.7**	**31**	**6.2**
07-19	**1145**	**25**	**1049**	**9**	**56**	**3**	**0**	**0**	**2**	**0**	**1**	**23.1**	**27.7**	**5.3**
19-00	**110**	**0**	**107**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**24.5**	**29.5**	**5.7**
00-00	**1314**	**29**	**1203**	**10**	**65**	**3**	**0**	**0**	**3**	**0**	**1**	**23.3**	**28**	**5.4**

17 February 2019

Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Mean	Vpp 85	SD
0000	1	0	1	0	0	0	0	0	0	0	0	30.1	-	-
0100	3	0	2	0	1	0	0	0	0	0	0	21.9	-	3.4
0200	2	0	2	0	0	0	0	0	0	0	0	23.9	-	0.1
0300	1	0	1	0	0	0	0	0	0	0	0	30.2	-	-
0400	4	0	4	0	0	0	0	0	0	0	0	21.8	-	8.6
0500	3	0	3	0	0	0	0	0	0	0	0	30.3	-	0.3
0600	10	0	8	1	1	0	0	0	0	0	0	25.2	-	7.5
0700	32	0	30	1	1	0	0	0	0	0	0	25.1	29.1	5.3
0800	84	5	74	0	5	0	0	0	0	0	0	23.1	28	5.9
0900	86	5	80	0	0	1	0	0	0	0	0	23.1	27.1	4.7
1000	114	8	97	2	5	0	2	0	0	0	0	23.3	27.6	4.9
1100	146	7	134	0	4	0	1	0	0	0	0	22.2	26.6	5.2
1200	151	6	136	1	6	0	2	0	0	0	0	23.3	28.3	5.9
1300	109	5	101	1	1	0	1	0	0	0	0	22	27.1	5.3
1400	102	2	99	0	1	0	0	0	0	0	0	23.9	28.4	4.8
1500	111	1	108	0	2	0	0	0	0	0	0	24.7	28.6	4.5
1600	91	0	87	0	4	0	0	0	0	0	0	24.4	29.1	5.4
1700	47	0	45	0	2	0	0	0	0	0	0	24.7	28.5	4.2
1800	32	0	29	0	3	0	0	0	0	0	0	22.8	29.1	5.6
1900	25	0	24	0	1	0	0	0	0	0	0	24.8	30.1	5.8
2000	34	0	34	0	0	0	0	0	0	0	0	24.7	27.9	4.7
2100	20	0	19	0	1	0	0	0	0	0	0	23.3	28.4	6.4
2200	2	0	2	0	0	0	0	0	0	0	0	26.6	-	0.1
2300	0	0	0	0	0	0	0	0	0	0	0	-	-	-
00-07	**24**	**0**	**21**	**1**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**25.2**	**30.7**	**6.5**
07-19	**1105**	**39**	**1020**	**5**	**34**	**1**	**6**	**0**	**0**	**0**	**0**	**23.4**	**27.9**	**5.3**
19-00	**81**	**0**	**79**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**24.4**	**28.6**	**5.4**
00-00	**1210**	**39**	**1120**	**6**	**38**	**1**	**6**	**0**	**0**	**0**	**0**	**23.5**	**28.1**	**5.3**

Annex F - Traffic Flow Diagram 03/330 Rev B


Cable Section 9
207
88
Cawston
77
N
Indicative
CREATE
Total HOW3 Construction from cable section 9/10 Traffic Along Cawston:
Peak two way traffic movement
Daily Lights 244
Daily HGVs 127
Total cable drums 57
34
89
90
206
Cable Section 10
Total Norfolk Vanguard Link No. 34 Construction Traffic Through Cawston:
Peak two way traffic movement
Daily Lights 394
Daily HGVs 240
Contains Ordnance Survey data © Crown copyright and database rights 2019.
KEY:
CABLE SECTION 9
CABLE SECTION 10
HORNSEA THREE HIGHWAY LINKS
NORFOLK VANGUARD HIGHWAY LINK
NOTE:
1. TWO WAY TRAFFIC MOVEMENT ACCOUNTS FOR BOTH THE JOURNEY TO & FROM THE SITE/COMPOUND TO PROVIDE A TOTAL MOVEMENT FIGURE.
B 18.02.19 AMENDED FOLLOWING CLIENT COMMENT AF EC
A 13.02.19 NV LINK 34 TRAFFIC ADDED AF PZ
REV DATE AMENDMENT DETAILS DRAWN APPROVED
Create Consulting Engineers accept no responsibility for any unauthorised amendments to this drawing. Only figured dimensions are to be worked to. COPYRIGHT © RESERVED
PROJECT
HORNSEA 3
OFF-SHORE WIND FARM
DRAWING TITLE
CONSTRUCTION TRAFFIC
ALONG CAWSTON
100% DISTRIBUTION
CLIENT
ORSTED
DATE
04.02.19
DRAWING STATUS
INFORMATION
SCALE(S)
1:20,000
DESIGNED
EC
DRAWN
EC
CHECKED
PZ
APPROVED
PZ
JOB No
1554
DRAWING No
03/330
REVISION
B
create
CONSULTING
ENGINEERS LTD
www.createconsultingengineers.co.uk
ORIGINAL SHEET SIZE - A3 Landscape
DO NOT SCALE